HEXAGON TRANSPORTATION CONSULTANTS, INC.

East Palo Alto Mobility Study

Final Report

Prepared for:

City of East Palo Alto

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1. Introduction

This study addresses two problems that are of concern to East Palo Alto residents: traffic and parking. These issues affect the quality of life for every East Palo Alto resident. Due to a lack of a direct freeway connection between the Dumbarton Bridge and US 101, many commuters who neither live nor work in East Palo Alto travel through the City en route to and from work. This traffic creates significant problems in East Palo Alto as residents are immobilized by regional traffic, and both regional and local traffic moves from the arterials to local streets further creating congestion in the neighborhoods. Besides the inconvenience and delays, the congestion on local City streets and associated vehicle emissions contributes to poor health outcomes for East Palo Alto residents.[1]

Since the institution of shelter in place orders in March 2020 due to the novel corona virus, most businesses and schools are closed, and people are working at home to the extent possible. As a result, current traffic volumes are a fraction of what they were prior to the virus outbreak. It is not known when traffic levels will return to pre-virus conditions. Many businesses will not reopen, and many people will be unemployed. Even when businesses reopen, people with health concerns will be reluctant to venture outside their homes. As a result, traffic volumes are expected to remain reduced for many months. Nevertheless, most agencies will not find it prudent to make planning decisions based on reduced traffic volumes. Thus, it is recommended that East Palo Alto move forward with the traffic and parking measures identified in this report based on pre-virus conditions.

Parking problems also are affecting many East Palo Alto neighborhoods. The problems are particularly acute in the Gardens neighborhood, which has narrow streets and rolled curbs. Due to the constrained street width, residents in this neighborhood routinely mount the curb to park with their vehicles partially or fully blocking the sidewalk. In addition to resident concerns regarding the lack of usable pedestrian facilities, on-street parking on both sides of the street is frequently full during peak periods, making it difficult for many residents to find parking near their home.

As part of the City Council's 2017 Strategic Priorities sessions, the Council identified the need for a comprehensive citywide transportation and mobility plan as one of the top items of the Council priorities for 2017. The Council directed staff to develop a Comprehensive Citywide Transportation / Mobility Study that addresses traffic congestion, parking problems, cut through traffic on city streets, and overall circulation and mobility issues in the city. This report presents the findings and recommendations of the East Palo Alto Mobility Study.

[1] Rates for asthma hospitalizations and emergency visits are roughly two to three higher for children in East Palo Alto compared to rates for San Mateo County (Source: OSHPD 2010 Emergency Dept and Patient Discharge Databases).

Scope of Study

The Mobility Study covers a broad range of topics including a discussion of existing cut-through traffic patterns and strategies for reducing cut-through traffic as well as neighborhood parking conditions and measures to address existing deficiencies related to on-street parking and circulation. The study also includes an evaluation of all-way stop sign warrants, an updated transportation demand management (TDM) Policy, a new Vehicle Miles Travelled (VMT) Policy, a Traffic Impact Fee Program, and a description of planned bicycle and pedestrian improvements.

Community Engagement

The Mobility Study included a significant effort to engage the community to solicit resident concerns, input, and comments on potential traffic and parking recommendations. To date, East Palo Alto residents have had an opportunity to provide public comments at the following meetings:

- September 27, 2017 – Community Meeting
- March 20, 2019 – Public Works & Transportation Commission Meeting
- April 16, 2019 – City Council Meeting
- June 5, 2019 – Gardens Neighborhood Community Meeting
- July 17, 2019 – Public Works & Transportation Commission Meeting
- August 14, 2019 – Gardens Neighborhood Community Meeting
- October 8, 2019 – City Council Meeting
- February 5, 2020 – Gardens Neighborhood Community Meeting
- July 7, 2020 – City Council Meeting (planned)

Furthermore, residents participated in a Citywide mobility survey, which was available both online and in hard copy form. The City also mailed postcards to all households in the Garden's neighborhood to advertise the August and February neighborhood meetings and to invite Gardens neighborhood residents to participate in a separate survey to express their reaction to potential parking actions that could be implemented in that neighborhood. Lastly, residents were encouraged to call or email Susan Barnes, the City's Mobility Project Manager, directly with any comments. Summaries of the meetings and results of the Citywide resident survey and Gardens Neighborhood resident survey are presented in Appendix A.

Report Organization

The remainder of this report is divided into three chapters. Chapter 2 quantifies existing cut-through traffic on East Palo Alto Streets, identifies major cut-through routes through the City, and evaluates potential short-term, mid-term, and long-term strategies to reduce cut-through traffic.
Chapter 3 describes neighborhood parking conditions and presents recommendations for possible measures to alleviate existing deficiencies related to on-street parking and circulation. Chapter 4 describes other transportation topics including all-way stop warrants, an updated TDM Policy, a new VMT Policy, a Traffic Impact Fee Program, and a description of planned bicycle and pedestrian improvements.

2. Cut-Through Traffic

Prior to the institution of the recent shelter in place orders, East Palo Alto was experiencing significant traffic congestion in large part due to regional traffic that travels through East Palo Alto on University Avenue between US 101 and the Dumbarton Bridge. In recent years, the congestion has caused an increasing number of drivers to divert from arterials to local streets, impacting the quality of life in East Palo Alto neighborhoods. This chapter quantifies existing cut-through traffic on East Palo Alto Streets based on pre-virus conditions, identifies major cut-through routes through the City, and evaluates potential short-term, mid-term, and long-term strategies to reduce cut-through traffic.

For the purpose of this study, cut-through traffic is defined as vehicular traffic passing through the City of East Palo Alto with neither an origin nor a destination in the City. For example, a vehicle that travels along University Avenue en route from Fremont to Palo Alto would be considered a cut-through trip. However, while the Belle Haven neighborhood is outside the City of East Palo Alto, trips to and from this neighborhood that use East Palo Alto streets were not counted as cut-through trips due to the neighborhood's proximity to East Palo Alto.

Data Collection

The percentage of cut-through traffic was estimated for 16 key roadway segments located throughout the City of East Palo Alto based on data obtained from StreetLight Data, Inc. The StreetLight InSight platform used in this study is based on big data resources created by a variety of sources including mobile phones and vehicle transponders. The individual travel records collected by StreetLight Data are anonymized to ensure privacy. Trips traveling through nine external zones at the edge of the City of East Palo Alto were analyzed as well as trips to and from Facebook. Figure 1 shows the external zones and cut-through segments evaluated for the study.

The analysis is based on data records during the AM and PM peak periods (7:00 - 10:00 AM and 4:00 - 7:00 PM) on a typical weekday (Tuesday, Wednesday, and Thursday) in typical months in 2017 and 2018. As requested by Council, Hexagon obtained data from StreetLight InSight for the fall of 2019 after the US 101/Willow Road interchange reconstruction project was completed to determine if this major roadway improvement affected traffic patterns on East Palo Alto Streets. However, the data were inconclusive with some streets showing increases in traffic and other showing decreases with no discernable pattern that could be attributed to the interchange improvement. C/CAG has recently executed a contract with StreetLight Data, Inc. that will allow member agencies including East Palo Alto to conduct queries of a variety of traffic data that may be useful to track future conditions after the shelter in place order is lifted.

Figure 1
External Zones and Cut-Through Segments

Quantifying Cut-Through Traffic

The study shows that University Avenue and Woodland Avenue experience the highest percentage of cut-through traffic of all the 16 study roadway segments (see Table 1). Figure 2 presents the estimated peak-hour cut-through traffic percentage on each study segment on a map.

Table 1
Estimated Cut-Through Traffic on Study Roadway Segments

Roadway Segment	Peak-Hour Traffic Volume[1]			% of Peak-Period Cut-Through Traffic[2]		Estimated Peak-Hour Cut-Through Volume	
	Count Date	AM	PM	AM[3]	PM[3]	AM	PM
E. Bayshore Rd east of Pulgas Ave	09/25/18	1,160	1,310	30%	24%	350	310
Pulgas Ave south of Bay Rd	02/28/19	600	770	20%	26%	120	200
Clarke Ave south of Bay Rd	02/14/17	690	700	25%	18%	170	120
Cooley Ave north of Donohoe St	03/09/16	510	600	27%	25%	140	150
Donohoe St west of Cooley Ave	03/09/16	1,600	2,100	19%	16%	310	340
Bay Rd east of University Ave	01/22/19	960	1,180	14%	22%	130	270
University Ave south of US 101	05/03/16	3,150	2,780	58%	52%	1,830	1,430
University Ave north of Donohoe St	03/09/16	1,690	2,210	44%	34%	740	760
University Ave south of SR 84	02/14/17	2,170	2,080	71%	67%	1,540	1,380
Bay Rd east of Glen Way	02/14/17	850	680	19%	13%	160	90
Newbridge St east of Willow Rd	02/14/17	730	970	20%	22%	150	210
E. Bayshore Rd west of Euclid Ave	01/22/19	640	840	27%	28%	170	240
O'Brien Dr south of Kavanaugh Dr	03/01/17	560	470	14%	16%	80	70
Woodland Ave west of Newell Rd	03/29/16	290	430	66%	74%	190	320
Woodland Ave east of Clarke Ave	03/29/16	110	120	27%	41%	30	50
W. Bayshore Rd east of Clarke Ave	03/29/16	290	420	54%	63%	160	270

Source: Cut-through percentages are estimated using data supplied by StreetLight Data, Inc.
Notes:
1. Peak-hour traffic volumes are derived from the recent intersection counts conducted at intersections adjacent to the study segments.
2. Cut-through percentages are estimated using data supplied by StreetLight Data, Inc. Traffic to and from the Belle Haven using East Palo Alto streets is not considered as cut-through traffic because it is directly adjacent to East Palo Alto.
3. Traffic occurring during the AM peak period (7:00 - 10:00 AM) and PM peak period (4:00 - 7:00 PM) on a typical weekday (Tuesday, Wednesday, and Thursday).

On University Avenue, the cut-through traffic percentage is greatest on the segment immediately south of SR 84, where 67% to 71% of all vehicles were generated by uses outside the City of East Palo Alto. The high percentage of cut-through trips on this segment is not surprising given that University Avenue is one of only three routes that regional commuters can use to travel between US 101 and the Dumbarton Bridge. On the segment of University Avenue south of US 101, cut-through traffic is somewhat lower but still outnumbers traffic to and from East Palo Alto with cut-through trips comprising 52% to 58% of all vehicles. Even the segment of University Avenue north of Donohoe Street at the heart of the City of East Palo Alto has a high degree of cut-through trips, ranging from 34% to 44% of all trips.

Woodland Avenue and West Bayshore Road also carry a high percentage of cut-through traffic. The proportion of cut-through trips is greatest on the segment of Woodland Avenue west of Newell Road, where approximately 66% to 74% of all vehicle trips neither originate nor terminate in East Palo Alto. This segment is used by many Palo Alto residents in order to access US 101. Cut-through trips

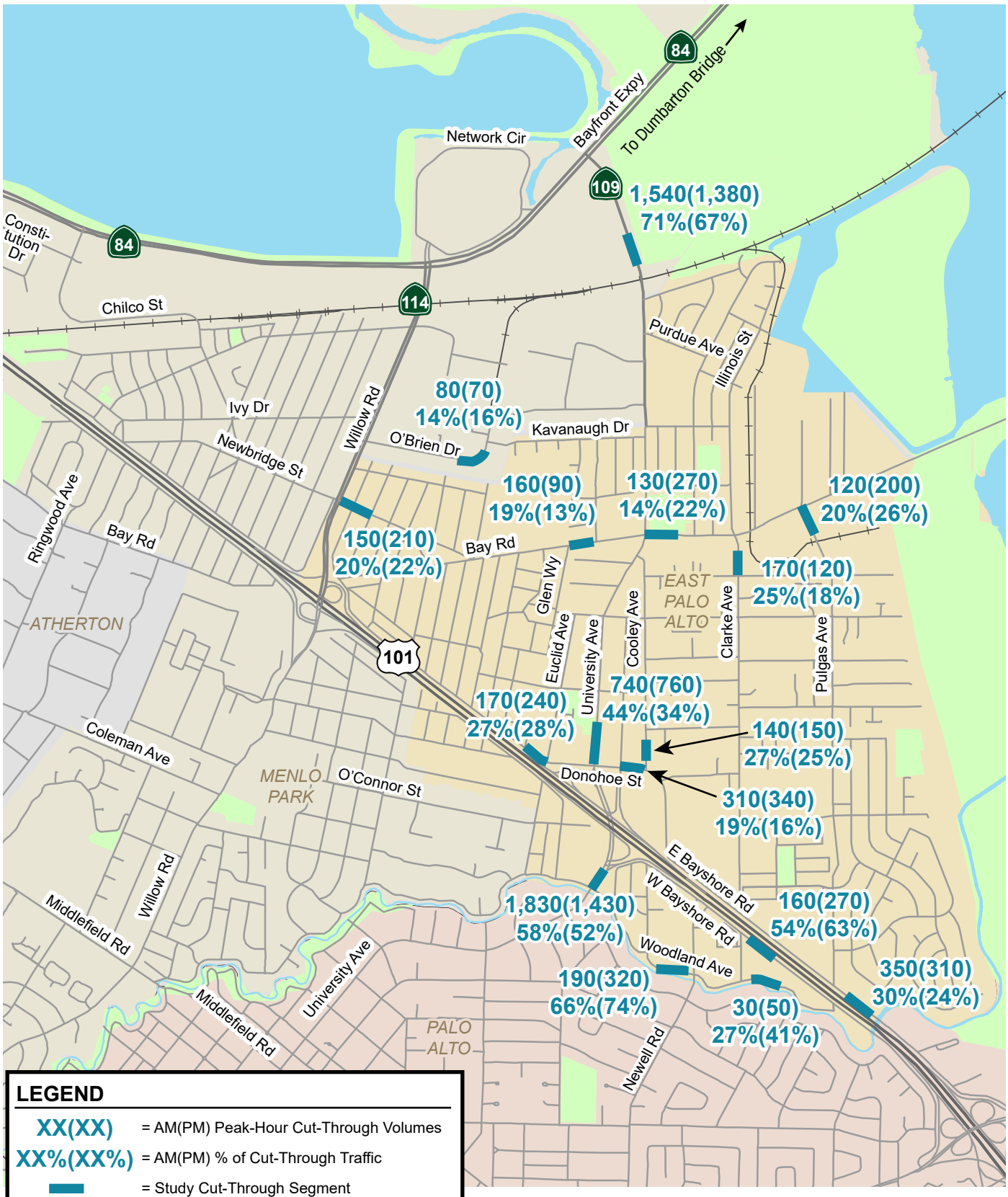


Figure 2
Estimated Peak-Hour Cut-Through Traffic on Study Roadway Segments

comprise a smaller proportion of the vehicle trips on the segment of Woodland Avenue east of Clarke Avenue, where 27% to 41% of all trips are not associated with East Palo Alto residents or workers. In the same area, more than one half of all vehicles (54% to 63%) on the segment of West Bayshore Road east of Clarke Avenue are cut-through trips. This local street is used by some motorists as an alternative to US 101.

The percentage of cut-through trips on other study roadway segments is low to moderate ranging from 13% to 30%.

To better understand the scale of the cut-through traffic problem on each study roadway segment, Table 1 and Figure 2 also present the estimated peak-hour cut-through traffic volume on each study roadway segment. University Avenue carries much more vehicle traffic than all other study roadways. The high traffic volumes combined with the high percentage of cut-through traffic on University Avenue results in a peak of approximately 1,830 cut-through trips during the AM peak hour on the segment of University Avenue south of US 101. The volume of cut-through traffic on University Avenue far outnumbers the cut-through traffic volume on other study roadways. By comparison, the volume of cut-through traffic on each other study roadway is estimated to be no more than 350 vehicles per hour. These estimates are useful in gauging the maximum possible traffic reductions on each roadway due to potential strategies that may be implemented to reduce cut-through traffic.

Major Cut-Through Routes

In addition to quantifying the percentage and number of cut-through trips on each study roadway segment, the StreetLight InSight platform was used to assess the major cut-through routes used by vehicles on each study roadway segment (See Table 2).

Cut-through traffic on East Palo Alto streets is primarily associated with vehicles traveling to and from the Dumbarton Bridge (SR 84 East) and to a lesser extent to and from Facebook. Trips to or from these external zones were analyzed to track the streets most used by these cut-through. Figures 3 and 4 present a graphical depiction of the streets used to and from SR 84 East and Facebook during the AM and PM peak periods, respectively. The line widths are proportional to the volume of trips using each route.

First, it should be noted that the total volume of trips to and from SR 84 East is more than three times greater than the volume of trips traveling to and from Facebook. Secondly, the analysis shows that most of the trips to both SR 84 East and Facebook approach from the south on US 101 and use either Willow Road or University Avenue. It is likely that many vehicles on northbound US 101 choose to exit at Willow Road en route to SR 84 East rather than via University Avenue in order to avoid the severe congestion within East Palo Alto. The graphic also depicts lesser used cut-through routes on local East Palo Alto streets including, Bay Road west of University Avenue, Newbridge Street, and O'Brien Drive.

As shown on Figures 3 and 4, the majority of cut-through trips on most study roadway segments are due to vehicles traveling to and from Dumbarton Bridge (SR 84 East). While University Avenue is not a designated state route within the City of East Palo Alto, it provides the most direct route for trips between Santa Clara County and the East Bay region. On the University Avenue segment north of Donohoe Street, of the approximately 740 total cut-through trips during the AM peak hour, it is estimated that 600 vehicles (about 80 percent) are traveling through East Palo Alto on their way to or from the East Bay via the Dumbarton Bridge.

Table 2
Cut Through Routes by Roadway Segment

Roadway Segment	Peak-Hour Traffic Volume[1]		Cut-Through Traffic to/from:								Total Cut-Through Volume	
			SR 84 East		Facebook		SR 84 West and Bayfront Area		Other Routes			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
E. Bayshore Rd east of Pulgas Ave	1,159	1,305	200	160	20	30	20	10	110[1]	110[1]	350	310
Pulgas Ave south of Bay Rd	602	770	80	160	0	20	20	0	20	20	120	200
Clarke Ave south of Bay Rd	688	697	140	90	10	20	10	0	10	10	170	120
Cooley Ave north of Donohoe St	508	604	100	120	20	10	0	0	20	20	140	150
Donohoe St west of Cooley Ave	1,604	2,103	140	160	30	20	10	10	130[1]	150[1]	310	340
Bay Rd east of University Ave	955	1,181	90	200	10	30	10	10	20	30	130	270
University Ave south of US 101	3,147	2,776	450	420	90	70	60	30	1,230[2]	910[2]	1,830	1,430
University Ave north of Donohoe St	1,694	2,213	600	620	80	60	10	10	50	70	740	760
University Ave south of SR 84	2,170	2,076	1,350	1,240	130	110	30	10	30	20	1,540	1,380
Bay Rd east of Glen Way	846	677	100	60	10	10	10	0	40	20	160	90
Newbridge St east of Willow Rd	733	965	50	90	30	60	20	20	50	40	150	210
E. Bayshore Rd west of Euclid Ave	635	840	90	120	30	60	20	10	30	50	170	240
O'Brien Dr south of Kavanaugh Dr	560	465	50	40	10	20	10	10	10	0	80	70
Woodland Ave west of Newell Rd	289	426	20	90	10	20	0	10	140[3]	180[3]	190	320
Woodland Ave east of Clarke Ave	110	115	0	0	0	0	0	0	30[3]	50[3]	30	50
W. Bayshore Rd east of Clarke Ave	294	420	10	20	0	10	0	10	150[4]	230[4]	160	270

Notes:
1. Cut-through traffic between E. Bayshore East and US 101 North/Willow South/University South.
2. Cut-through traffic between University South and US 101/E. Bayshore East.
3. Cut-through traffic between W. Bayshore East/Newell Rd and US 101 North/University South.
4. Cut-through traffic between W. Bayshore East and US 101 North/University South.

The congestion on University Avenue also causes cut-through traffic to and from the Dumbarton Bridge to divert to local streets, including Pulgas, Clarke, and Cooley Avenues, Illinois Street, and Michigan Avenue to the east of University Avenue and Glen Way and Euclid Avenue to the west of University Avenue. On the Clarke Avenue segment south of Bay Road, of the approximately 170 total cut-through trips during the AM peak hour, it is estimated that 140 vehicles (about 80 percent) are traveling to or from the Dumbarton Bridge.

Most of the study roadway segments also carry vehicle trips to and from Facebook, which is one of the largest employers in the immediate area. On the University Avenue segments north of US 101, about 10 percent of all cut-through trips (about 80 to 130 vehicles) are associated with Facebook during the AM peak hour. On the Newbridge Street segment east of Willow Road, about 30 cut-through trips (about 20 percent of all cut-through trips) are associated with Facebook during the AM peak hour.

Figure 3
AM Peak Period Cut-Through Traffic Patterns to/from SR 84 East and Facebook

Figure 4
PM Peak Period Cut-Through Traffic Patterns to/from SR 84 East and Facebook

Five study roadway segments have a significant number of cut-through trips via routes other than to and from the Dumbarton Bridge or Facebook. The majority of cut-through trips on the segment of University Avenue south of US 101 are trips between US 101 or East Bayshore Road and Palo Alto. While the majority of cut-through traffic on the segment of East Bayshore Road east of Pulgas Avenue and the segment of Donohoe Street west of Cooley Avenue are trips to and from SR 84 East, a significant number of cut-through trips on these segments are vehicles diverting from US 101 to avoid congestion on the freeway en route to Palo Alto, Menlo Park, or destinations farther north. Cut-through trips on Woodland Avenue and West Bayshore Road are primarily associated with vehicles diverting from US 101 or trips generated by the City of Palo Alto.

Existing Traffic Calming Measures

East Palo Alto conducted a *Commuter Mitigation/Traffic Calming Study* in 2001 and implemented measures to reduce commuter traffic on local streets over the years. These measures include:

- "No Right Turn" signs with time limit (3:00 PM - 8:00 PM on weekdays) on westbound Purdue, Notre Dame, and Michigan Avenues east of University Avenue to prohibit right turns from these streets to northbound University Avenue. Recent counts from February 2017 show that many vehicles ignore these turn restrictions, especially on Purdue Avenue where 66 vehicles made the prohibited right turn during the PM peak commute hour (between 4 – 6 PM).
- "No Through Traffic to Dumbarton Bridge" signs with time limit (3:00 PM - 8:00 PM on weekdays) on northbound Fordham, Gonzaga, and Illinois Streets north of Bay Road and on northbound Clarke and Pulgas Avenues north of East Bayshore Road.
- "No Right Turn" signs with time limit (3:00 PM - 8:00 PM on weekdays) on northbound Gen Way and Palo Verde Avenue south of Bay Road.
- "No Through Traffic to Dumbarton Bridge" signs with time limit (3:00 PM - 8:00 PM on weekdays) on northbound Gen Way south of Bay Road and on northbound Gloria Way north of Bay Road.
- Speed limit signs (25 mph) on Clarke and Pulgas Avenues
- All-way stop control at selected intersections.
- Bulb-out/curb extensions at selected intersections.

Figure 5 shows the existing traffic calming/cut-through traffic control measures.

Recommended Strategies to Reduce Cut-Through Traffic

Although University Avenue is not a designated state route within the City of East Palo Alto, the majority of cut-through trips in the City are due to vehicles traveling to and from the Dumbarton Bridge via University Avenue. The congestion on University Avenue causes the cut-through traffic to and from Dumbarton Bridge to divert to local streets. Additionally, a significant number of cut-through trips on East Bayshore Road, Donohoe Street, Woodland Avenue and West Bayshore Road are vehicles diverting from US 101 to avoid congestion on the freeway en route to Palo Alto, Menlo Park, or destinations farther north.

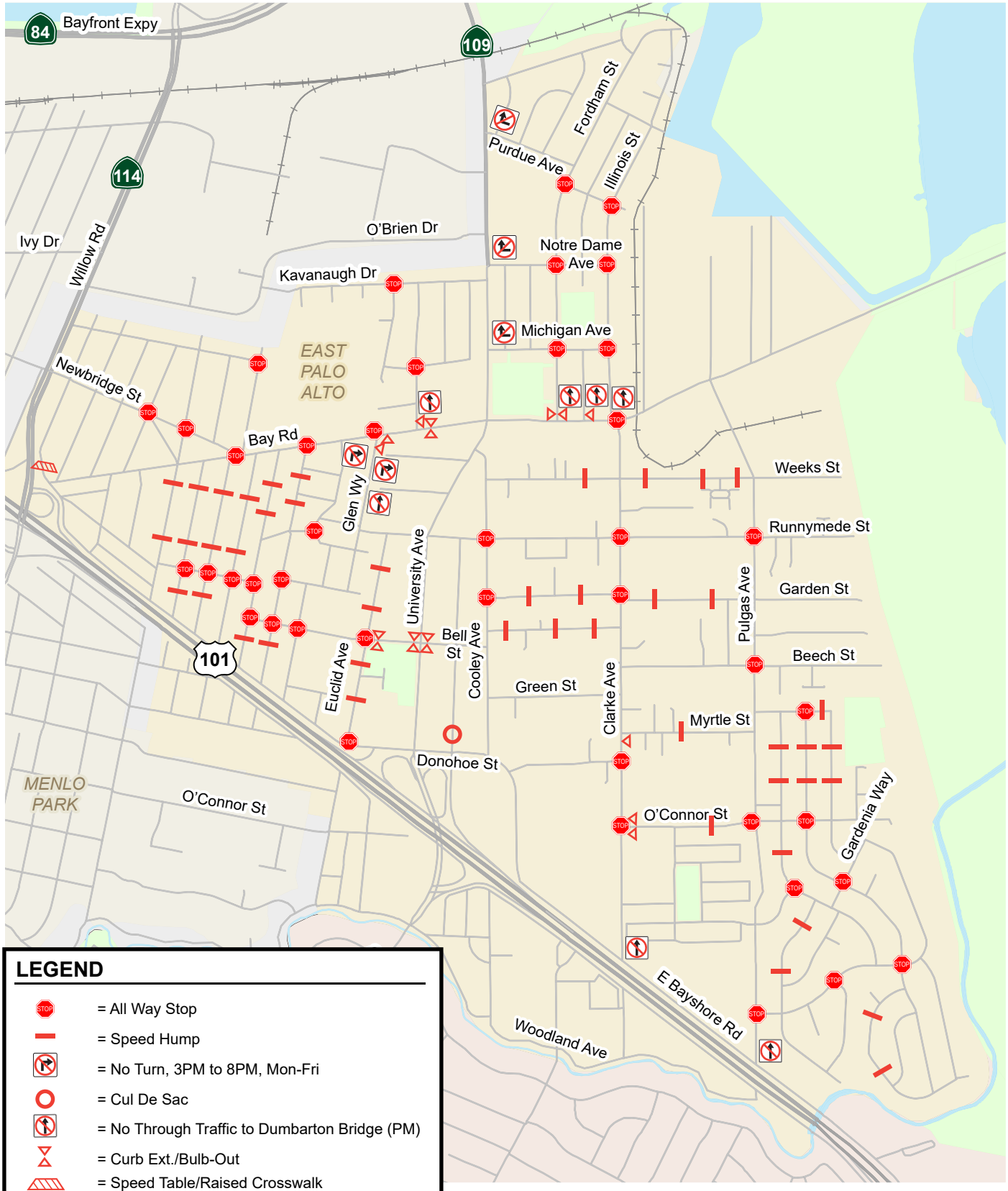


Figure 5
Existing Traffic Calming / Cut-Through Traffic Control Measures

Potential strategies to reduce the volume of cut-through traffic in East Palo Alto are grouped into short-term, mid-term, and long-term strategies that could be implemented within one year, five years, and greater than five years, respectively. The short-term strategies focus on localized measures that would reduce cut-through traffic on local streets while the long-term strategies focus on planning-level measures that would improve congestion on University Avenue or reduce regional traffic traveling through East Palo Alto streets.

Short-Term Strategies

The short-term strategies to reduce cut-through traffic on local streets were developed to improve the effectiveness of the existing traffic calming measures. The current measures include “No Right Turn” and “No Through Traffic to Dumbarton Bridge” signs to prohibit cut through traffic to the Dumbarton Bridge during the PM commute period. However, the cut through traffic also occurs in the AM commute period in the opposite direction. Therefore, “No Left Turn” and “No Through Traffic to US 101” signs with time limit are needed at selected locations. Additional traffic calming measures including speed cushions and curb extensions/bulb-outs/median islands are recommended at selected locations. Although all-way stop control is not recommended merely as a traffic calming measure, several local intersections warrant the installation of all-way stop control due to their traffic volume, accident history, and/or limited sight distance. The short-term traffic control measures and the recommended locations of each measure are described below and shown in Figure 6.

It should be noted that some traffic control measures, including turn restrictions, speed cushions, curb extensions/bulb-outs/median islands and signal timing modifications, will result in an increase in travel times for all vehicles on the road, including residents in East Palo Alto. Based on the responses received on the citywide resident survey, approximately one half of all residents support speed cushions and other traffic calming measures. In contrast, only about one quarter of all residents support the imposition of new turn restrictions.

While emergency vehicles can disregard signage used to impose turn restrictions during peak hours, response times may be affected by some of the other recommended measures. The City should work with the Menlo Park Fire Protection District and the East Palo Alto Police Department to ensure that the design of such measures does not result in unacceptable emergency response times. The locations and designs of speed cushions and curb extensions/bulb-outs/median islands on primary emergency response routes should be reviewed by the Menlo Park Fire District to ensure that appropriate emergency response time is maintained.

- **University/Donohoe Signal Synchronization Project**. The City completed a joint project with the City of Palo Alto, Caltrans, and Metropolitan Transportation Commission (MTC) in June 2019 to synchronize the traffic signals at 18 intersections along University Avenue between Middlefield Road and Bayfront Expressway and along Donohoe Street/East Bayshore Road between University Avenue and the Ravenswood 101 Shopping Center. The project improved travel time on University Avenue, which may have reduced cut-through traffic diverting from University Avenue to the local City streets.

- **Install “No Left Turn” signs with time limit.** The signs are recommended for installation at the following locations with a time limit of 6:00 AM - 10:00 AM on weekdays to prohibit traffic on southbound University Avenue from cutting through local streets.

    - On southbound University Avenue (in the center median facing southbound left-turn lanes) approaching Purdue, Notre Dame, and Michigan Avenues and Runnymede Street.
    - On westbound Bay Road (in the westbound sidewalk) approaching Glen Way.

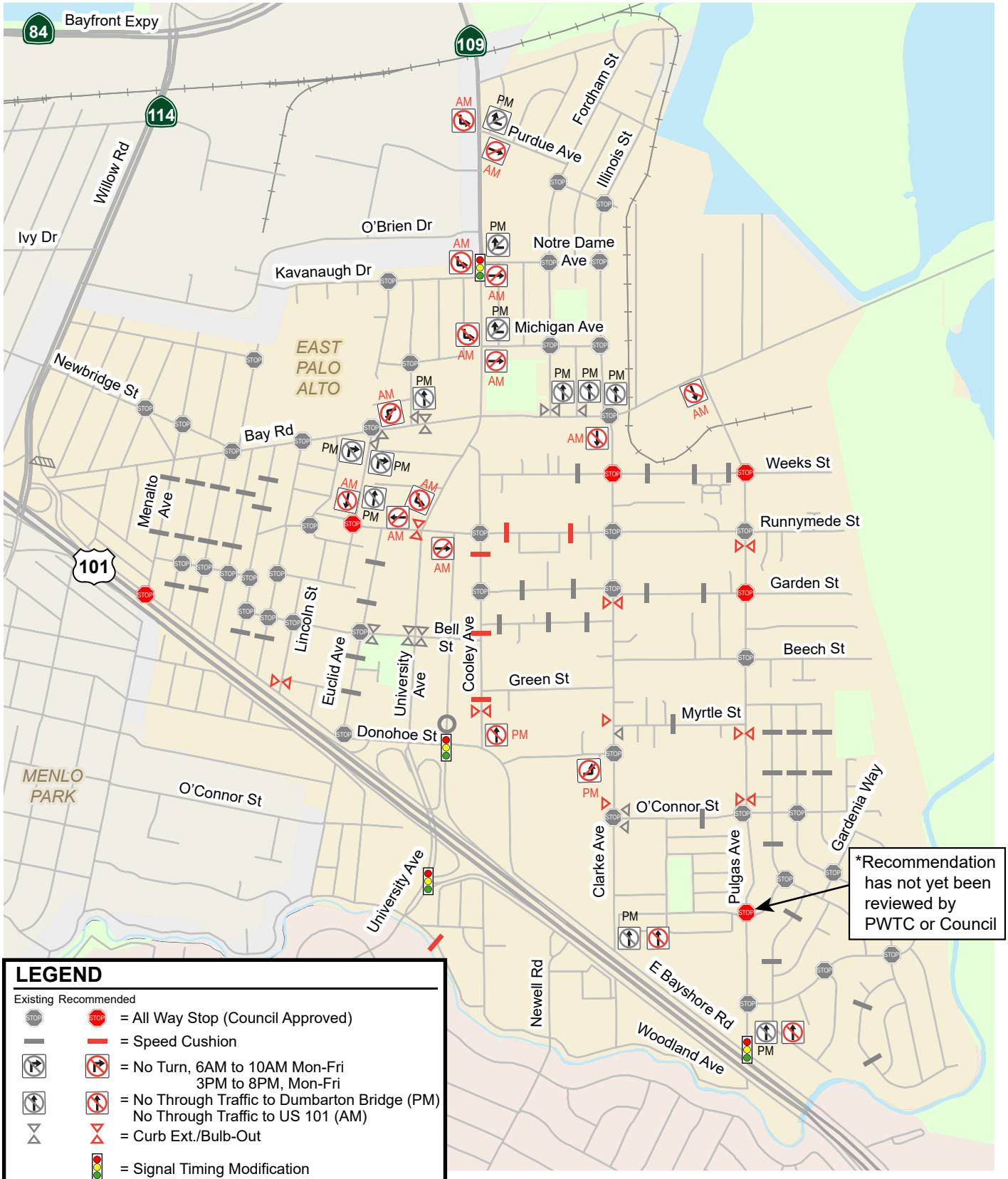


Figure 6
Recommended Short-Term Traffic Control Measures

This measure would require a sustained enforcement effort by the City of East Palo Alto since no measures would be implemented to physically prevent vehicles from making the subject turn movements. As previously mentioned, this measure is supported by only about one quarter of all East Palo Alto residents. Given the lack of widespread support, if the Council wishes to move forward with this measure, it may want to implement the turn restrictions on a trial basis and commission a before and after study to evaluate the effects of the restrictions on traffic patterns in the area and gauge resident reactions. Since this measure would require only new signage to implement, it could be easily removed after the trial period if it is not effective in reducing cut-through traffic or if residents do not support the continuation of this measure.

- **Install "No Through Traffic to US 101" signs with time limit.** The signs are recommended at the following locations with a time limit of 6:00 AM - 10:00 AM on weekdays to prohibit southbound University Avenue traffic cutting through local streets.
    - On eastbound Purdue, Notre Dame, and Michigan Avenues and Runnymede Street, east of University Avenue.
    - On southbound Clarke and Pulgas Avenues, south of Bay Road.
    - On westbound Runnymede Street, west of University Avenue.
    - On southbound Glen Way, south of Bay Road.

  This measure would send a visual message to regional commuters that they are not to use local streets in order to avoid congestion on major streets such as University Avenue and Willow Road. While this measure would be difficult to enforce and may have a minor effect on cut-through traffic, the cost of adding these signs is quite low and thus warrants this minimal investment. The signage also would assist the City in working with navigation applications to prevent use of these local streets by regional trips bound for the Dumbarton Bridge or US 101.

- **Install additional signs to prohibit PM cut-through traffic.** Additional signs are recommended at the following locations with a time limit of 3:00 PM - 8:00 PM on weekdays to prohibit northbound University Avenue traffic and US 101 northbound off-ramp traffic cutting through local streets.
    - "No Left Turn" sign on eastbound Donohoe Street approaching Clarke Avenue.
    - "No Through Traffic to Dumbarton Bridge" sign on northbound Cooley Avenue, north of Donohoe Street.

  Like the recommended AM turn restrictions described above, the recommended PM turn restriction on Donohoe Street at Clarke Avenue could be implemented on a trial basis as it would require only new signage. A before and after study could help the City to determine if this measure should be continued on a permanent basis.

- **Refresh existing traffic calming signs.** Many of the traffic calming signs originally installed in 2001 (e.g. the "No Through Traffic to Dumbarton Bridge" signs on Clarke and Pulgas Avenues) are faded and/or missing and should be refreshed to ensure they are visible by drivers. This low-cost item would remind motorists that these streets are collectors rather than arterial roadways and not intended to serve regional trips.

- **Install all-way stop control at intersections that meet warrants.** A warrant analysis determined that all-way stop control is warranted at twelve intersections. A detailed description of the all-way stop warrant analysis is presented in Chapter 4. While stop signs are generally not recommended merely as a traffic calming measure, installation of all-way stop control on local streets could slow traffic and discourage cut-through traffic from using these streets.The need for all-way stop control at many of these intersections is based on the lack of adequate sight distance due to on-street parking. In lieu of installing all-way stop control, the City has chosen to remove on-street parking at

selected locations to improve the sight distance. Following the recommendations of the Public Works and Transportation Commission, the City Council approved the installation of all-way stop control at the following intersections:

- Menalto Avenue and East Bayshore Road
- Glen Way and Runnymede Street
- Pulgas Avenue and Garden Street
- Pulgas Avenue and Weeks Street
- Clarke Avenue and Weeks Street

The evaluation of sight distance at the Pulgas Avenue and Oaks Street/Gallardia Way intersection was completed subsequent to the Council's action on the above listed intersections. The installation of all-way stop control or new parking restrictions at this intersection would require a similar approval process.

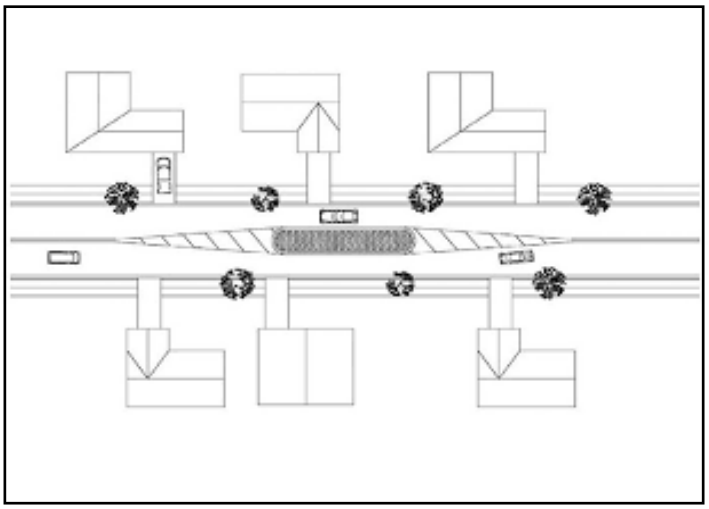
- **Install traffic curb extensions (bulb-outs) or median islands.** A curb extension, also known as a bulb-out, is a traffic calming measure that extends the sidewalk or curb line out into the parking lane and reduces the effective street width. Figure 7 illustrates a bulb-out. Detached bulb-outs maintain existing drainage patterns while attached bulb-outs may require installation of additional storm drains. Medians are raised islands in the center of the roadway that separate traffic directions. Physical measures including curb extensions (bulb-outs) or a median island could slow traffic on local streets and discourage the cut-through traffic from using the streets. These traffic calming measures narrow the travel lane used by motorists and break up the driver's sight line, which may contribute to a reduction of speeds. In addition, these devices reduce the crossing distance for pedestrians. Furthermore, as these features often include landscaping or decorative pavers, they serve as a visual indication to motorists that the street is a neighborhood street rather than a commuter route. Curb extensions or a median island are recommended at selected locations on Pulgas, Clarke, and Cooley Avenues because these streets are frequently used by cut-through traffic to by-pass the congestion on University Avenue. Additionally, curb extensions or a median island are recommended on Runnymede Street west of University Avenue and on Lincoln Street north of East Bayshore Road.
- **Install speed cushions.** Like a speed hump, a speed cushion is a raised portion of a road that creates a vertical motion for vehicles and discomfort that leads the driver to slow down. Unlike speed bumps, which feature abrupt slopes that jar vehicles and motorists, the length of a speed hump or speed cushion is greater than the wheelbase of vehicles and the slope is gradual. A speed hump covers the entire width of the road while speed cushions are usually configured two or three across with a space between. The width of each cushion is designed so that the wider axle of an emergency vehicle can pass unaffected but that smaller passenger vehicles must ride over the raised area. The speed cushion design recommended by the Menlo Park Fire Protection District is shown in Figure 8. Speed cushions typically have pavement markings, advisory signs and advanced warning signs. Speed cushions are not permitted on streets with SamTrans bus service since busses would not be able to travel down the center of the roadway to avoid the raised speed cushion like an emergency vehicle can. Resident reactions to speed cushions was mixed with about one half of all residents supporting this measure.

  In addition to slowing traffic, speed cushions have been demonstrated to reduce cut-through traffic. Thus, speed cushions are recommended at selected locations on Cooley Avenue, Runnymede Street, and Woodland Avenue.

Source: Google Earth

Source: Google Earth

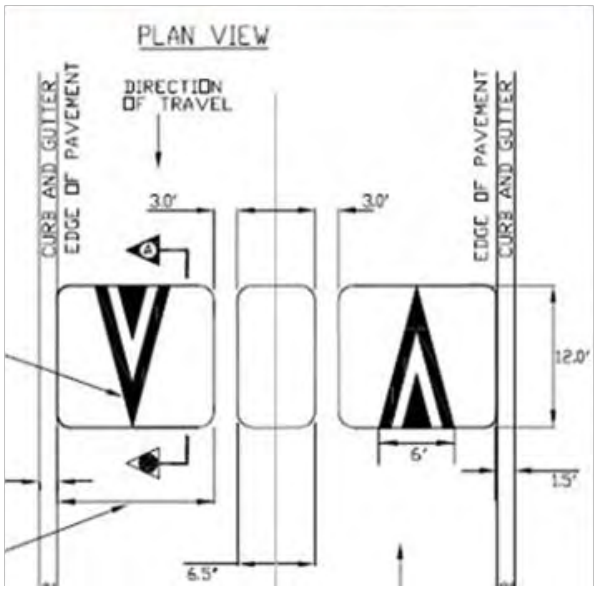
Source: City of San Jose Traffic Calming Toolkit



Source: https://safety.fhwa.dot.gov/speedmgt/ePrimer_modules/images/tceprimer86.jpg

Figure 7
Curb Extensions (Bulb-Outs) and Median Islands

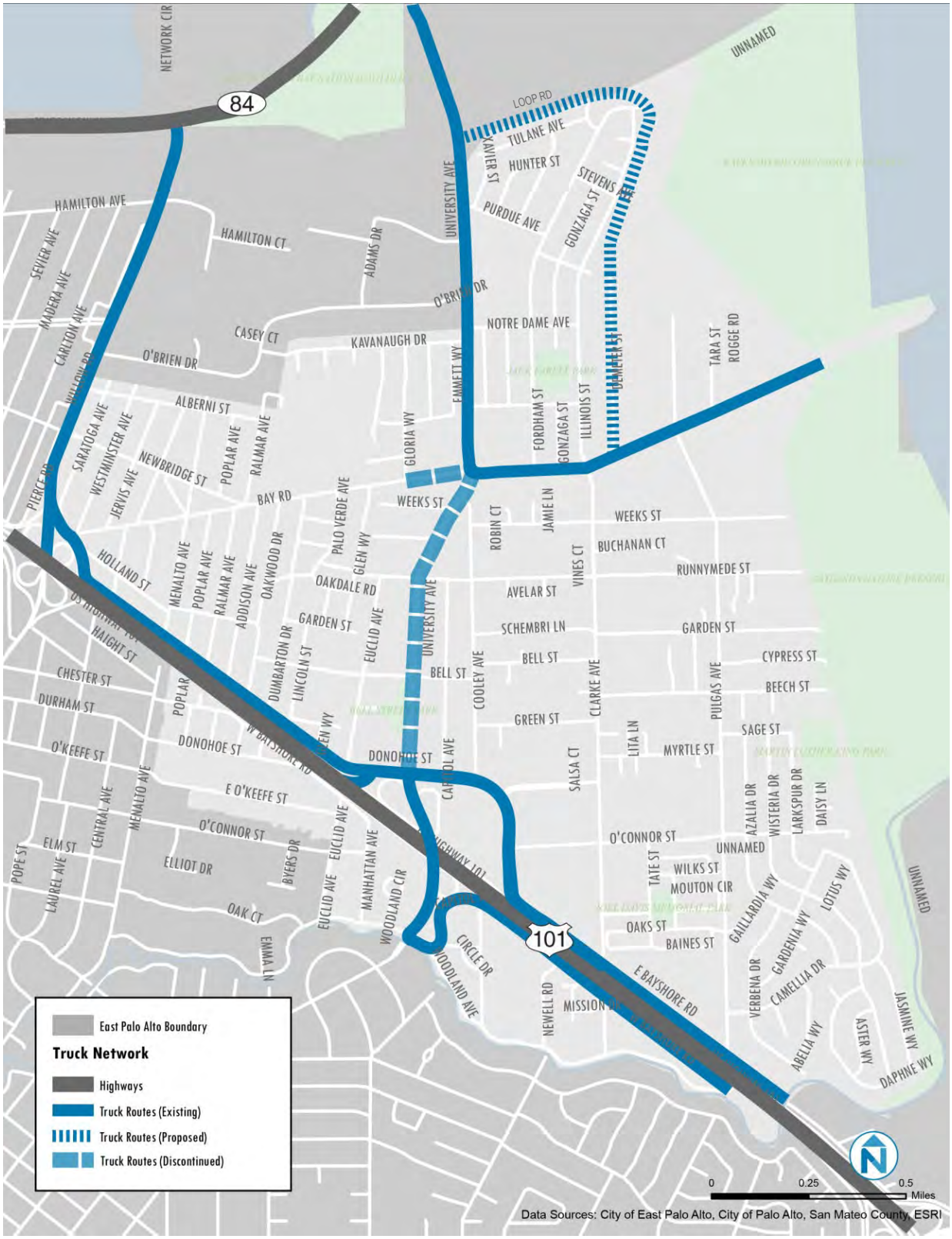
Figure 8
Speed Cushion Example



- **Use traffic signals to meter traffic at gateway intersections.** The City of East Palo Alto could modify the traffic signal timing at the following gateway intersections to reduce the green time provided to inbound traffic entering the City thereby discouraging regional traffic from using East Palo Alto roadways.
    - University Avenue/Notre Dame Avenue
    - US 101 northbound off-ramp/Donohoe Street
    - University Avenue/US 101 southbound off-ramp
    - Pulgas Avenue/East Bayshore Road
- **Install speed feedback signs.** Installing speed feedback signs on the major cut-through routes would discourage speeding and educate drivers on the low-speed function of local streets. Figure 9 shows an example of a speed feedback sign. The signs would be connected to the cloud and would be able to collect speed and volume data to enable the City to measure traffic conditions and the effectiveness of the recommended cut-through traffic measures.

Figure 9
Speed Feedback Sign

- **Eliminate truck route on University Avenue between Donohoe Street and Bay.** Per the City of East Palo Alto's General Plan, University Avenue between Donohoe Street and Bay Road will be discontinued as a local truck route (See Figure 10). With this restriction, through truck traffic with neither an origin nor destination in East Palo Alto would have to use Willow Road or Marsh Road to travel between the Dumbarton Bridge and US 101. Per East Palo Alto Municipal Code Section 10.36.060, trucks with origins or destinations within East Palo Alto are permitted to use restricted (not local truck route) streets only if it is the shortest and most direct route between the origin or destination and the nearest local truck route or if it will result in a shorter distance being traveled on restricted streets. "Truck" means any vehicle exceeding a maximum gross weight of three tons (East Palo Alto Municipal Code Section 10.36.020). According to the latest data available on the Caltrans website, between two and three percent of the vehicles on University Avenue at its junction with Bayfront Expressway (SR 84) are classified as trucks. Thus, it is estimated that the elimination of trucks would reduce the commute period traffic on this segment of University Avenue by approximately 40 to 60 vehicles per hour.



Source: City of East Palo Alto General Plan 2035

Note: Truck routes on existing streets within East Palo Alto include portions of University Avenue, East Bayshore Road, West Bayshore Road, Donohoe Street, Willow Road and Bay Road. The new street to be constructed as part of the Ravenswood/4 Corners TOD Specific Plan is a proposed future truck route.

Figure 10
Truck Network in East Palo Alto

NORTH
Not to Scale

- **Other Short-Term Strategies.** Additional short-term strategies that could be implemented to reduce cut-through traffic on local streets include increasing enforcement and engaging with Google maps, WAZE, and other online navigation applications to prevent regional traffic from being directed to use local City streets. Enhanced enforcement of existing and proposed traffic restrictions is a key element to the success of the recommended traffic calming measures and has received broad support by East Palo Alto residents (64 percent in favor). Furthermore, the adoption of an updated Travel Demand Management (TDM) Policy is a short-term action that will help to improve traffic operations of City streets by reducing the vehicle trips generated by new East Palo Alto developments. The updated TDM Policy is further described in Chapter 4.
- **US 101/Willow Road Interchange Reconstruction Project.** Lastly, the recent completion of the US 101/Willow Road Interchange Reconstruction Project could cause some traffic to shift from University Avenue to Willow Road thereby alleviating congestion on University Avenue and reducing cut-through traffic on other local East Palo Alto streets. Hexagon used the StreetLight InSight platform to evaluate whether traffic patterns have changed following the opening of the US 101/Willow Road interchange. The limited traffic data available after construction was completed are not conclusive to identify clear shifts in traffic resulting from the US 101/Willow interchange reconstruction. Given the saturation of the available travel routes between US 101 and the Dumbarton Bridge, it is possible that while some drivers who had shifted from Willow Road to University Avenue during the construction period may have reverted to Willow Road, other drivers may have changed their travel patterns to take advantage of any capacity newly available on University Avenue offsetting any trips that may have shifted to Willow Road.

The estimated cost and expected completion timeframe of the short-term traffic calming measures described above is listed in Table 3.

Mid-Term Strategies

Mid-term strategies include measures/actions that could be implemented within 5 years.

- **Close median on University Avenue**. If the “No Left Turn” signs and enforcement do not effectively reduce the southbound left-turn traffic at Purdue, Notre Dame, and Michigan Avenues and Runnymede Street, the City could consider closing the median on University Avenue at these streets to eliminate the left-turn traffic.

  It should be noted that this measure would affect all southbound left-turn traffic traveling through the subject intersections, including residents of East Palo Alto, 24 hours a day. This physical measure would be considerably more costly to install than the recommended short-term measure of installing signage to prohibit left turns during the AM peak commute period. Likewise, removal of the median would be a costly should the City later choose to allow left turns again. Therefore, it is important to ensure that there is broad support by neighborhood residents prior to implementing this measure. The Citywide resident survey shows a majority of residents oppose turn restrictions.

Table 3
Estimated Cost of Short-Term Traffic Calming Measures

	Measure	Expected Completion	Quantity	Unit Price	Cost
1	Signal Synchronization *(completed)*	Summer 2019	-	n/a	n/a
2	Modify Signal Timing to Meter Traffic at Gateway Intersections	Fall 2020	-	/1/	$0
3	No Turn Signs by location (2 signs per location)	Fall 2020	6	$1,000	$6,000
4	No Through Traffic Signs	Fall 2020	9	$500	$4,500
5	Refresh Existing Traffic Calming Signs	Fall 2020	10	$500	$5,000
6	All-Way Stop Control/No Parking Improvements *(completed)*	Spring 2020	12	n/a	n/a
7	Curb Extensions/Bulb-Outs/Median Island	Winter 2021	16	$10,000	$160,000
8	Speed Cushions	Winter 2021	6	$6,000	$36,000
9	Speed Feedback Signs /2/	Fall 2020	8	$8,000	$64,000
10	Eliminate truck route on University between Donohoe and Bay (No Trucks Signs)	Fall 2020	5	$500	$2,500
11	Communicate with Navigation Apps to Prevent Regional Use of Local Streets	Spring 2020	-	/1/	$0
12	Increase Enforcement (per officer/vehicle)	TBD	1	$240,000	$240,000
13	Adopt Updated TDM Policy	Spring 2020	-	n/a	n/a
14	US 101/Willow Rd Interchange Reconstruction *(completed)*	July 2019	-	n/a	n/a
		Total		**Total**	**$518,000**

/1/ Project to be implemented using existing Public Works staff and/or FUSE Executive Fellow.

/2/ Cost is $5,000 per location for equipment that is connected to the cloud and can record speed/volume data. City staff to get quote from CalWest for installation costs. Above estimate assumes $3,000 for installation per location.

- **Work with nearby companies and jurisdictions**. The Facebook Willow Village development that would be located on O'Brien Drive would potentially generate a significant amount cut-through traffic on East Palo Alto streets. The City of East Palo Alto should work with Menlo Park to identify measures to reduce the cut-through traffic resulting from the development.
- **Evaluate feasibility of road pricing.** Road pricing has been suggested as a possible measure to address cut-through traffic and congestion within the City. A majority of East Palo Alto residents (54 percent) support the idea of charging commuters to travel through the City during peak periods. At the direction of the City Council, Hexagon Transportation Consultants, Inc. has prepared a draft work scope and budget for a road pricing study to assess the feasibility of local road pricing with regards to transportation, environmental, and financial performance considerations (See Appendix B).

  There are many forms of road pricing including cordon pricing, area pricing, congestion point charging, distance-based charging, full-facility tolling, managed lanes, high occupancy/toll (HOT) lanes, and express lanes. The fee could be either a flat rate toll charged throughout the day or fees may be set using dynamic or variable pricing. The term congestion pricing is often used to describe such a program involving charging a fee to enter and/or exit a congested area during the most congested times of day. Road pricing should be implemented in the context of a comprehensive transportation system management strategy, which not only contemplates congestion charging, but also focuses on the improvement of competitive alternatives to driving by using the revenues generated through pricing to support investments in transit, bicycling, and walking. This integrated approach will improve the program's effectiveness in terms of reducing congestion while also improving the City's quality of life and economy.

Prior to deciding to implement road pricing, the City would need to undertake substantial community outreach, coordinate with local and regional public agencies regarding potential inter-agency partnerships and conduct additional engineering and environmental studies. Furthermore, existing state law (California Streets and Highways Code) provides that a local agency may not impose a new tax, permit fee, or other charge for the privilege of using streets and roads on or after June 1, 1989, except a permit fee for extra-legal loads. Therefore, any road pricing program, whether conducted on a pilot or permanent basis, would require authorizing legislation at the state level.

New York is set to become the first American city to implement a congestion pricing plan for Manhattan. Because some roads within the designated congestion zone have used federal aid for construction, the New York plan must be approved by the Federal Highway Administration before it can take effect in 2021.

- **Enhance transit service.** City staff are working on multiple fronts to enhance the transit service within the City of East Palo Alto. In June 2019, the City of East Palo Alto along with other partners was awarded an Affordable Housing Sustainable Communities (AHSC) Grant that includes $2.25 M for a new SamTrans express bus route that will link East Palo Alto with the San Bruno BART station. Staff are currently preparing another AHSC Grant application that could fund sidewalks or other mobility improvements including transit enhancements. Furthermore, East Palo Alto staff are engaged in on-going talks regarding the possible extension of the Marguerite shuttle to East Palo Alto. Lastly, the City is exploring participation in a sub-regional TMA that could provide local shuttle services to improve connectivity to transit and employment centers.

Long-Term Strategies

The long-term strategies focus on planning-level measures that would reduce congestion on University Avenue and decrease the level of regional traffic traveling through East Palo Alto streets.

- **Construct Loop Road (University Avenue to Demeter Street).** The General Plan and Ravenswood/4 Corners TOD Specific Plan identifies a new loop road that connects University Avenue at the northern part of the Plan Area to the existing northern terminus of Demeter Street (See Figure 10, above). Creating this new connection will help to alleviate traffic congestion at the Bay Road/University Avenue intersection, which is expected to reduce cut-through traffic on the local streets.
- **Create reversible lane on University Avenue.** The City of East Palo Alto's General Plan identifies reversible lanes as one of several design options for University Avenue. Creating a reversible lane on University Avenue would increase the road capacity to serve directional commute traffic and alleviate traffic congestion. Hexagon evaluated the existing traffic volumes on each segment of University Avenue to determine which segments are candidates for a reversible lane. Figure 11 shows the directional split (% of all traffic in each direction) on University Avenue. Traffic flow is highly imbalanced in favor of the peak commute direction (southbound in the AM and northbound in the PM) near SR 84 and becomes more evenly split farther south near US 101. Based on the current traffic patterns, a reversible lane is most applicable on the segment of University Avenue from SR 84 through the University Avenue/Bay Road intersection. The segment of University Avenue between Notre Dame Avenue and SR 84 is within the City of Menlo Park and is classified as State Route 109. Thus, implementation of a reversible lane on University Avenue would require coordination with Menlo Park and Caltrans.

  Figures 12 and 13 present the University Avenue cross section with reversible lane(s) under two options: Option A, a five-lane cross section with three through lanes in the peak direction, one turn lane, and one through lane in the off-peak direction; and Option B, a three-lane cross section with on-street parking and two through lanes in the peak direction and one through lane in the off-peak direction. While the effects of a reversible lane have not yet been studied in detail, the City Council

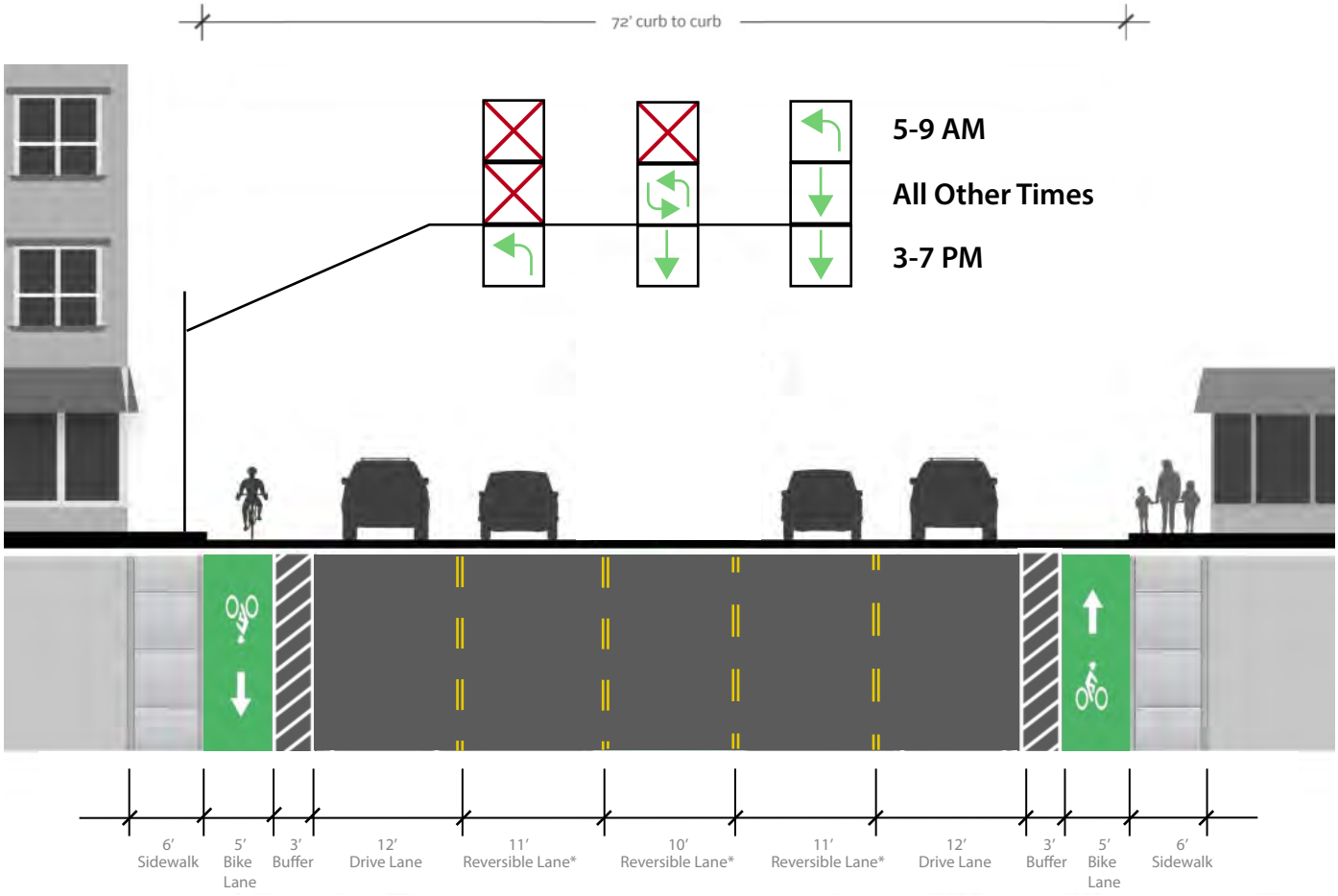
LEGEND

XX%(XX%) = AM(PM) Peak-Hour Directional Flow

= Potential Reversible Lanes Controlled by East Palo Alto

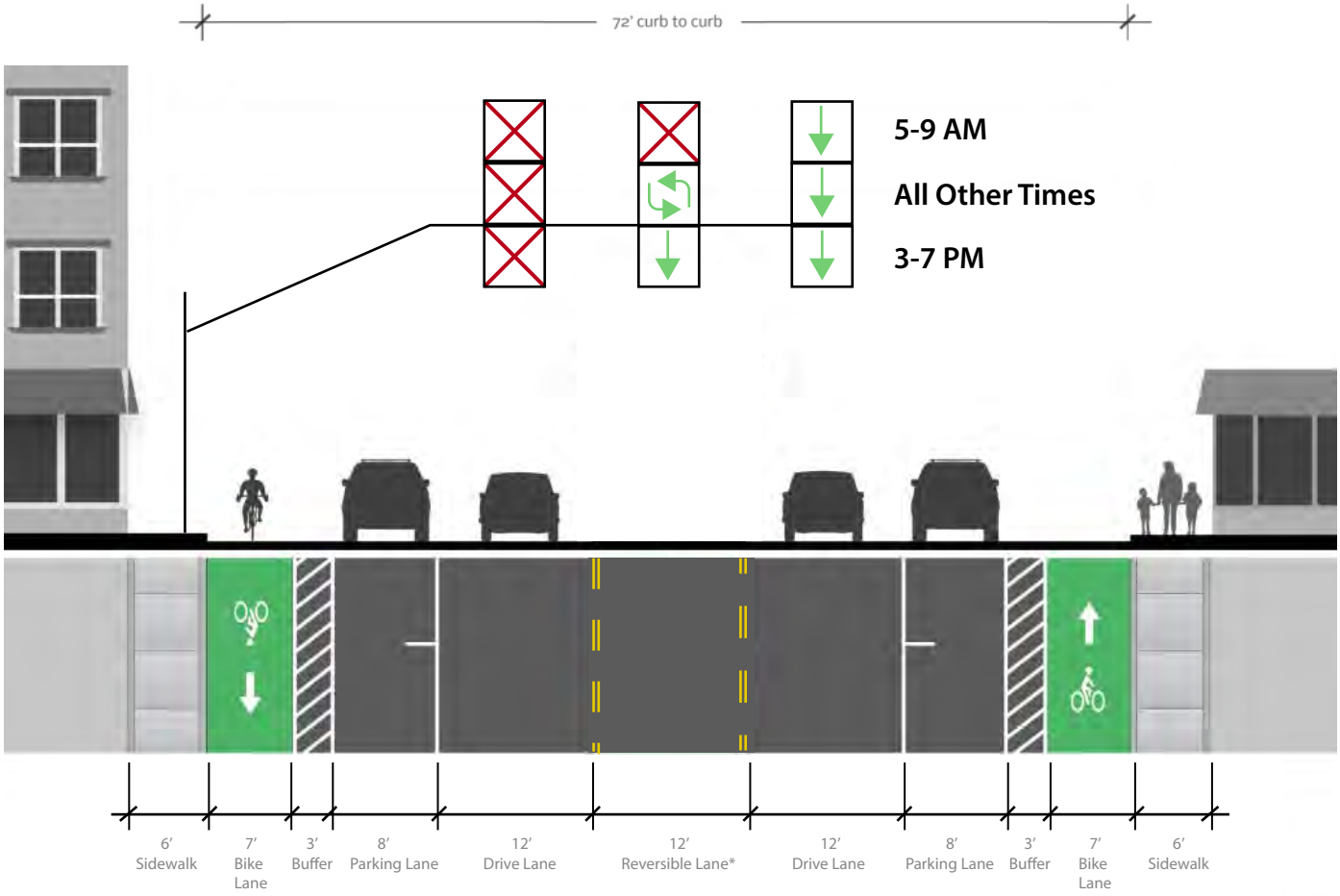
= Potential Reversible Lanes Controlled by Other Jurisdictions (Menlo Park, Caltrans)

Figure 11
Directional Split on University Avenue



*Reversible lane control and hours subject to change pending further study.

Figure 12
University Ave - Reversible Lane Option A
(5 Lane Cross Section)



*Reversible lane control and hours subject to change pending further study.

Figure 13
University Ave - Reversible Lane Option B
(3 Lane Cross Section)

requested a cost estimate of implementing a reversible lane in East Palo Alto. Including materials, labor, planning, engineering, administration, environmental review, and a contingency, it is estimated that implementing this long-range measure would cost approximately $4.6 million. Appendix C presents sketches labeling the modifications required on each segment to implement the reversible lane concept and a breakdown of the cost estimate.

- **Create transit priority lane on University Avenue.** Similar to the reversible lane concept, a transit priority lane would be used by transit vehicles traveling in the peak direction in order to reduce travel times via public transportation and provide attractive alternatives drive-alone vehicle trips. In order to be effective, this measure would need to be implemented not only on the segment of University Avenue within the City of East Palo Alto, but also in combination with similar improvements on the University Avenue segment within Menlo Park and on SR 84 across the Dumbarton Bridge. Thus, this measure would require coordination and approval of other jurisdictions/entities. Creation of a transit priority lane on University Avenue would complement the preferred alternative identified in the Dumbarton Transportation Corridor Study (DTCS), dated November 2017, which would convert one general purpose lane to an express lane in each direction of SR 84 from the Highway Bridge to Willow Road. The Metropolitan Transportation Commission is undertaking a study, known as Dumbarton Forward, to evaluate HOV/transit priority treatments and express lanes in the Dumbarton Corridor. The MTC study will examine further operational details beyond that evaluated in the DTCS.
- **Grade separation at Bayfront Expressway/Willow Road.** The DTCS also identified grade separations at both the University/Bayfront and Willow/Bayfront intersections as part of the preferred alternative to reduce traffic congestion on the approaches to the Dumbarton Bridge. East Palo Alto should work with Menlo Park and Caltrans in support of the Willow/Bayfront grade separation as improving this connection from Bayfront Expressway (SR 84) to Willow Road (SR 114) would encourage regional commute traffic to remain on state routes and reduce cut-through traffic on University Avenue, which is a local, city-controlled street within the City of East Palo Alto.
- **Willow Road Express Lanes.** The DTCS also recommended the construction of express lanes in a tunnel under Willow Road as part of the preferred alternative. The improvements also would include a direct connection from the SR 84 express lanes and a flyover connection to the planned express lanes on US 101. These improvements would increase the roadway capacity for commute traffic between US 101 and Bayfront Expressway. East Palo Alto should work with Menlo Park and Caltrans to pursue this long-term improvement project as it would encourage regional commute traffic to use Willow Road and reduce cut-through traffic on University Avenue.
- **Dumbarton Rail Service.** The DTCS preferred alternative also includes the creation of double-track and bidirectional commuter rail service from the Union City BART station to the Caltrain Sequoia/Redwood City station via the Dumbarton rail bridge with midpoint stations in Fremont, Newark, East Palo Alto, Menlo Park and Atherton (See Figure 14). In 2018, following the completion of the DTCS, the San Mateo County Transit District began partnering with Cross Bay Transit Partners (CBTP), a joint venture between Facebook and Plenary Group, to explore the feasibility of potentially providing passenger service and facilitating mixed-use transit-oriented development at key transit connections along the Dumbarton rail corridor. Providing a new rail transit connection across the Bay would reduce the vehicle traffic traveling within the Dumbarton corridor and thus reduce the cut-through traffic in East Palo Alto. The project is currently in the environmental scoping process and a public draft environmental document is anticipated in summer 2021. The City of East Palo Alto should continue to be engaged throughout the planning process to ensure the rail service provides direct transit service to East Palo Alto residents and workers, provides adequate circulation at the University Avenue Station, and avoids new impacts to East Palo Alto roadways that may be associated with regional commuters that drive to or from the University Avenue Station.

Source: http://www.samtrans.com/Planning/Planning_and_Research/Dumbarton_Rail_Corridor.html

Figure 14
Dumbarton Rail Corridor

NORTH
Not to Scale

3. Neighborhood Parking Study

Parking problems are occurring in many East Palo Alto neighborhoods. The problems are particularly acute in the Gardens neighborhood east of Pulgas Avenue, which has narrow streets and rolled curbs. Due to the narrow street width, vehicles mount the rolled curb to park on both sides of the street and partially or fully block the sidewalk impeding pedestrian use of the sidewalk. This is especially concerning for students and disabled residents who must walk in the street because the sidewalks are not available for pedestrians.

In addition to the lack of safe pedestrian walkways, residents on many residential streets throughout the City have a difficult time finding a space to park on the street near their home. Many households have large extended families or multiple families with many vehicles. Furthermore, garage conversions and other accessory dwelling units are common. According to Census data, East Palo Alto has significantly more persons per household and vehicles per household than the neighboring cities and San Mateo County overall.[2] As a result of the high density found in East Palo Alto, driveway and garage parking is inadequate to accommodate the number of vehicles owned by many households. Residents also report that inoperable and abandoned vehicles are parked on the street for weeks at a time in violation of the City's municipal code (Section 10.04.120) that limits vehicles from parking on the street for more than 72 consecutive hours without moving. Lastly, residents complain that vehicles often park illegally in front of driveways and hydrants and on corners blocking visibility at intersections and that enforcement of existing parking regulations is lacking. The citywide resident survey shows that increased traffic and parking enforcement is supported by 64 percent of all respondents, the highest level of support among all of the measures listed in our survey.

This chapter describes parking conditions in select East Palo Alto neighborhoods and potential measures that could be implemented to alleviate resident concerns. The analysis focuses on the Gardens neighborhood with the intent that it would serve as a pilot project and that similar measures to address parking could be implemented in other neighborhoods pending the results of the Gardens Neighborhood Pilot Parking Program.

[2] The U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates show that East Palo Alto has an average of 3.93 persons per household and approximately 2.22 vehicles per household. In comparison, Palo Alto has an average of 2.56 persons per household and 1.57 vehicles per household, while San Mateo County has an average of 2.92 persons per household and 1.99 vehicles per household.

Parking Occupancy Counts

Parking occupancy counts were conducted in the Gardens neighborhood both east and west of Pulgas Avenue to quantify existing parking conditions late at night, which is the peak time for residential parking demand. The counts were conducted at midnight on two weekdays (Wednesday, 11/28/18, and Tuesday, 12/4/18) and two Saturdays (12/1/18 and 12/8/18) to quantify the number of vehicles parked on each street segment within the neighborhood. The count indicated that about one half of all street segments in the neighborhood were parked at or near capacity (90% occupancy or higher). On average, the on-street parking spaces were 84% occupied (approximately 1,830 vehicles versus an on-street parking capacity of approximately 2,180). Dividing the number of vehicles parked on street (approximately 1,830) by the number of dwelling units (approximately 1,500) yields an average of 1.22 vehicles per dwelling unit parking on the street on an average night.

Similar parking occupancy counts were conducted in the Woodland, Weeks, and Palo Alto Park neighborhoods to better understand parking conditions in other areas of the City. The Woodland counts were conducted on the same dates as the Gardens neighborhood and included each street segment within the neighborhood. The counts found that all of the streets in the Woodland neighborhood were fully parked and many vehicles were parked illegally such that the number of parked vehicles (565) exceeded the number of on-street parking spaces (approximately 560) resulting in an average occupancy of 101%.

The parking counts in the Weeks and Palo Alto Park neighborhoods were less comprehensive. Vehicles parked on a limited sample of street segments in each neighborhood were counted on two weekdays (Thursday, 4/18/19 and Thursday, 5/2/19) and two Saturdays (4/13/19 and 4/27/19). The results show that while certain streets in the Weeks neighborhood were nearly full, most streets had parking available. In contrast, the majority of streets in the Palo Alto Park Neighborhood were parked at or near capacity (90% occupancy or higher). On average, the parking occupancy was 75% in the Weeks neighborhood and 94% in the Palo Alto Park neighborhood.

The detailed parking count data from all neighborhoods studied are presented in Appendix D. Figure 15 illustrates the average night-time parking occupancy on each street within the Gardens and Woodland neighborhoods. Figure 16 illustrates the average night-time parking occupancy on selected street segments within the Weeks and Palo Alto Park neighborhoods.

Gardens Neighborhood Pilot Parking Program

A variety of measures to address existing deficiencies related to on-street parking and circulation in the Gardens neighborhood have been evaluated. The measures address two primary issues: lack of safe pedestrian walkways due to vehicles parking on the sidewalk and a shortage of on-street parking.

Pedestrian Solutions

The City Council has expressed a strong desire to ensure pedestrians are able to safely walk on sidewalks within the Gardens neighborhood. Three possible solutions to the pedestrian issue are described below. Note that these measures would be implemented only on narrow streets with rolled curbs east of Pulgas Avenue where vehicles are currently parking on the sidewalk. The Gardens neighborhood streets west of Pulgas Avenue and the following street segments east of Pulgas Avenue are wider and have barrier (straight) curbs: Garden Street, Beech Street, Shorebreeze Court, Daisy Lane, Hibiscus Court, and portions of O'Conner Street. Vehicles on these streets park on both sides of the street without blocking the sidewalk, and thus would not be subject to the measures listed below to reclaim the sidewalks for pedestrian use.

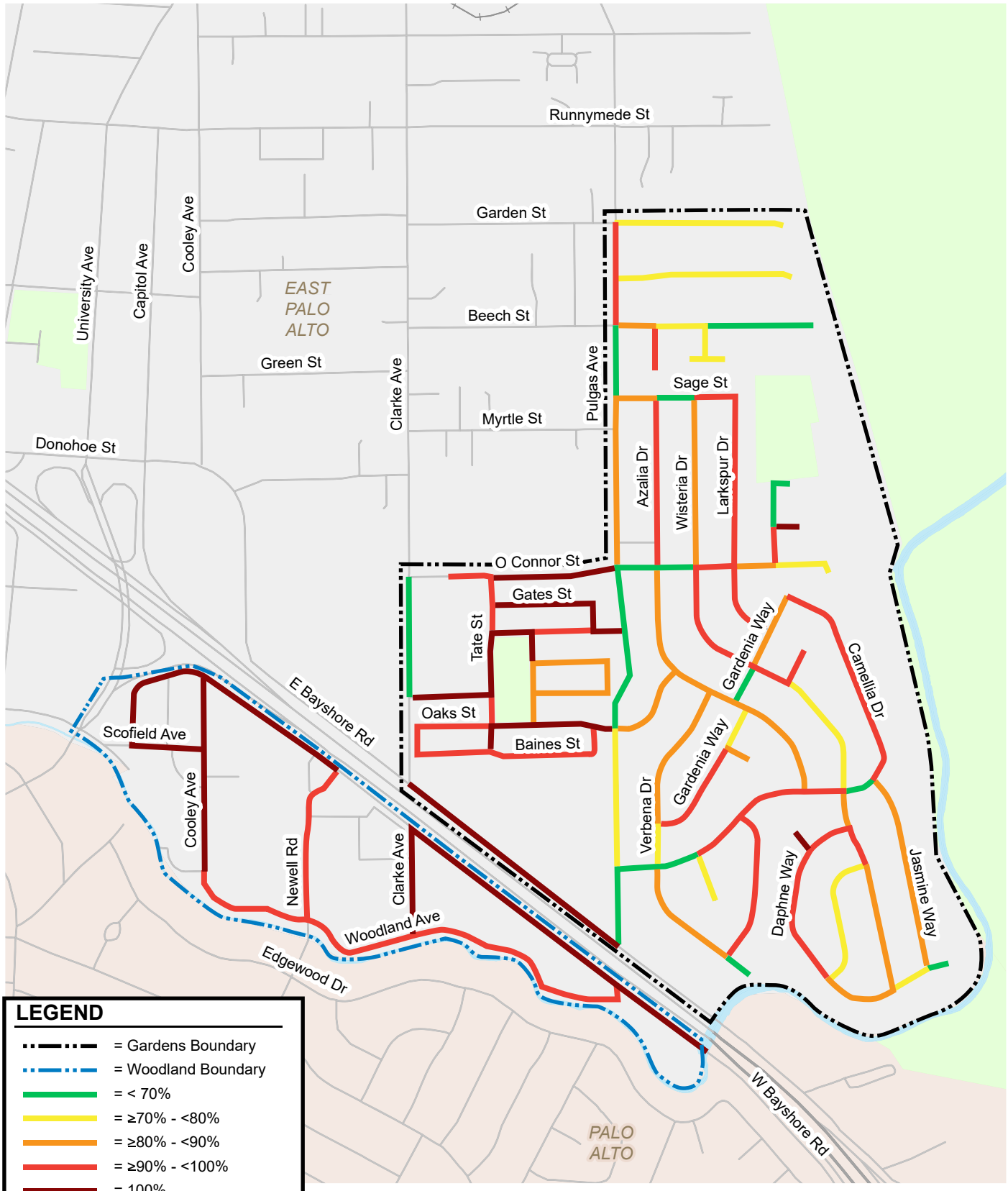


Figure 15
On-Street Parking Occupancy in Gardens and Woodland Neighborhoods

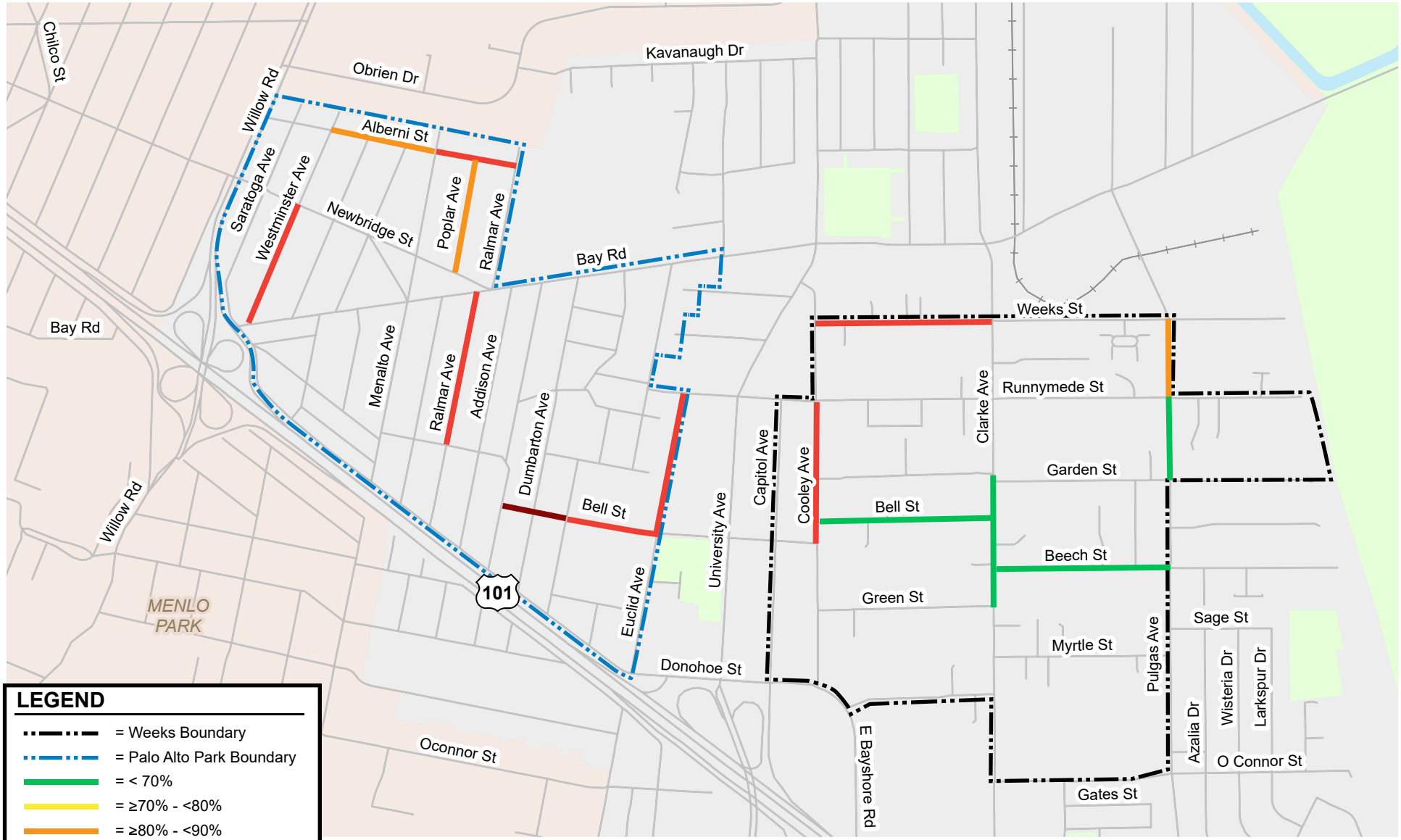


Figure 16
On- Street Parking Occupancy in Weeks and Palo Alto Park Neighborhoods

1. One-Way Streets

The first pedestrian solution would convert selected narrow streets with rolled curbs from two-way to one-way traffic flow. This measure would retain on-street parking on both sides of the one-way street without vehicles parking on the sidewalks. Thus, this option would improve pedestrian safety by clearing the sidewalks on both sides for pedestrian use. In addition, this solution is likely to result in reduced travel speeds as it would result in a single travel lane as narrow as 11 feet wide. Reduced lane widths are an effective traffic calming measure frequently used to discourage speeding. Figure 17 shows a possible one-way traffic flow pattern.

It would be necessary to maintain two-way traffic flow on cul-de-sac streets (i.e. Cyprus Street, Gardenia Court, Camellia Court, Daphne Court, Verbena Court, and Lotus Way) and on key streets that provide access to and from the neighborhood (i.e. segments of O'Conner Street and Camellia Drive). On-street parking would need to be limited to only one side of the street on two-way streets in order to keep the sidewalks clear for pedestrians. This would eliminate approximately 115 on-street parking spaces. Furthermore, on-street parking would need to be prohibited within approximately 25 feet of an intersection to ensure adequate sight distance and to ensure emergency vehicles, delivery trucks, and other large vehicles could negotiate the turn given the reduced lane width with one-way traffic flow, eliminating approximately 200 on-street spaces. While the East Gardens Neighborhood technically would have enough on-street parking spaces to meet the existing demand (approximately 1,400 vehicles in 1,400 parking spaces), there would be parking shortages on many street segments, especially on the two-way streets where parking was eliminated on one side, causing some residents to travel several blocks from their home to find a parking space.

This measure would increase vehicle travel distances within the neighborhood due to the one-way flow pattern. Furthermore, this measure would impair emergency access within the Gardens neighborhood with longer response times resulting from the increased travel distance and decreased travel speeds. The Menlo Park Fire Protection District and East Palo Alto Police Department have expressed opposition to this option due to its impact on emergency access. Furthermore, an online survey of 226 Gardens neighborhood residents shows that the majority of respondents (53%) oppose this solution. Therefore, this measure is not recommended.

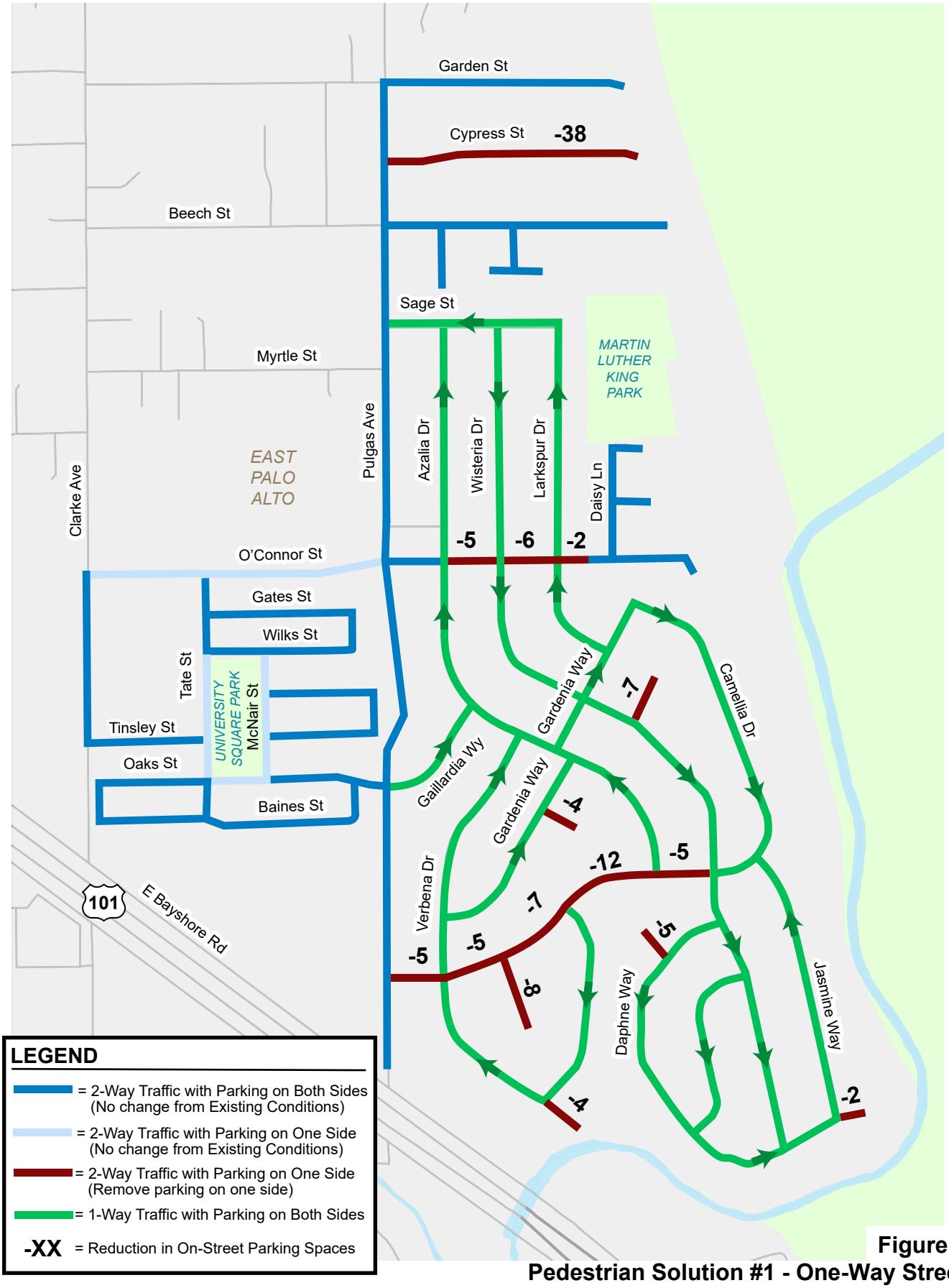


Figure 17
Pedestrian Solution #1 - One-Way Streets

2. Prohibit Parking on One Side of the Street

An alternative solution to the previous one-way street option that also would ensure a safe walkway for pedestrians is to prohibit parking on one side of the street on narrow streets with rolled curbs while maintaining two-way traffic flow. The parking restriction could be effective 24 hours a day or only during limited daytime hours. As stated above, this measure would not affect streets with barrier (straight) curbs, which are wide enough to allow parking on both sides of the street (i.e. Garden Street, Beech Street, Shorebreeze Court, Daisy Lane, Hibiscus Court, and portions of O'Conner Street). Figure 18 shows the streets that would be subject to this parking restriction.

With a 24-hour parking restriction in place, there would be sufficient width for vehicles to park on one side of the street without infringing on the sidewalk while leaving ample space (a minimum of 18 feet) for two-way traffic flow. Thus, pedestrians would be able to use the sidewalks on both sides of the street at any hour of the day or night. However, implementing a parking restriction at all hours would cause a severe parking deficit in the East Gardens neighborhood during the peak period when parking demand is highest (late at night) with a shortfall of approximately 310 spaces (approximately 1,400 vehicles and only 1,090 spaces). Aside from possible modifications to the City's zoning regulations that would allow residents to create more off-street parking in their front yard described below, other measures that would increase parking within the Gardens neighborhood (e.g. allowing residents to park in the street in front of their driveway, eliminating overnight parking restrictions, and implementing shared parking) have been found to be infeasible or rejected by the community. Therefore, restricting parking to one side of the street 24 hours a day is not recommended due to the parking impacts it would create.

One possible variation is to restrict parking to one side of the street only during daytime hours. This is a compromise solution that would provide pedestrians with a sidewalk on one side of the street during daytime hours when pedestrian activity peaks and retain parking on both sides of the street at night when residential parking demand peaks so as not to exacerbate the existing parking shortage on many streets in the neighborhood. Under this option, vehicles would continue to park up on the sidewalk as they do today in order to maintain sufficient space for two-way flow at night when parking would be permitted on both sides of the street. The side of the street where parking is permitted during the day would need to alternate to accommodate street sweeping on both sides of the street on different dates. A survey of 229 Gardens neighborhood residents shows that residents have mixed reactions to restricting parking to one side of the street during daytime hours with 53 percent of residents in favor and 47 percent of residents in opposition to this pedestrian solution.

Ideally, the parking restriction hours would ensure that a sidewalk is available for use by students walking to and from school and should ensure an adequate number of parking spaces are available for the anticipated demand each hour of the day. While restricting parking to only one side of the street is expected to result in a sufficient number of spaces in the neighborhood overall during the mid-day hours, there could be parking shortages on many street segments causing residents to park farther from their home. Furthermore, an overall shortage of parking spaces could occur during the shoulder hours (in the morning when the parking restriction goes into effect and late in the day before the parking restriction ends) depending upon the restricted hours.

The City of East Palo Alto staff conducted on-street parking counts during the daytime on a weekday on selected street segments to understand how parking demand in the Gardens neighborhood varies throughout the day. Figure 19 shows the variation in parking demand during the daytime in the East Gardens neighborhood on weekdays. In order to avoid an overall parking shortage within the Gardens neighborhood, the parking restriction would need to be in effect from 9 AM to 5 PM on weekdays. While these hours would reduce the potential parking impacts, sidewalks would not be available for

Figure 18
Pedestrian Solution #2 - Prohibit Parking on One Side of the Street

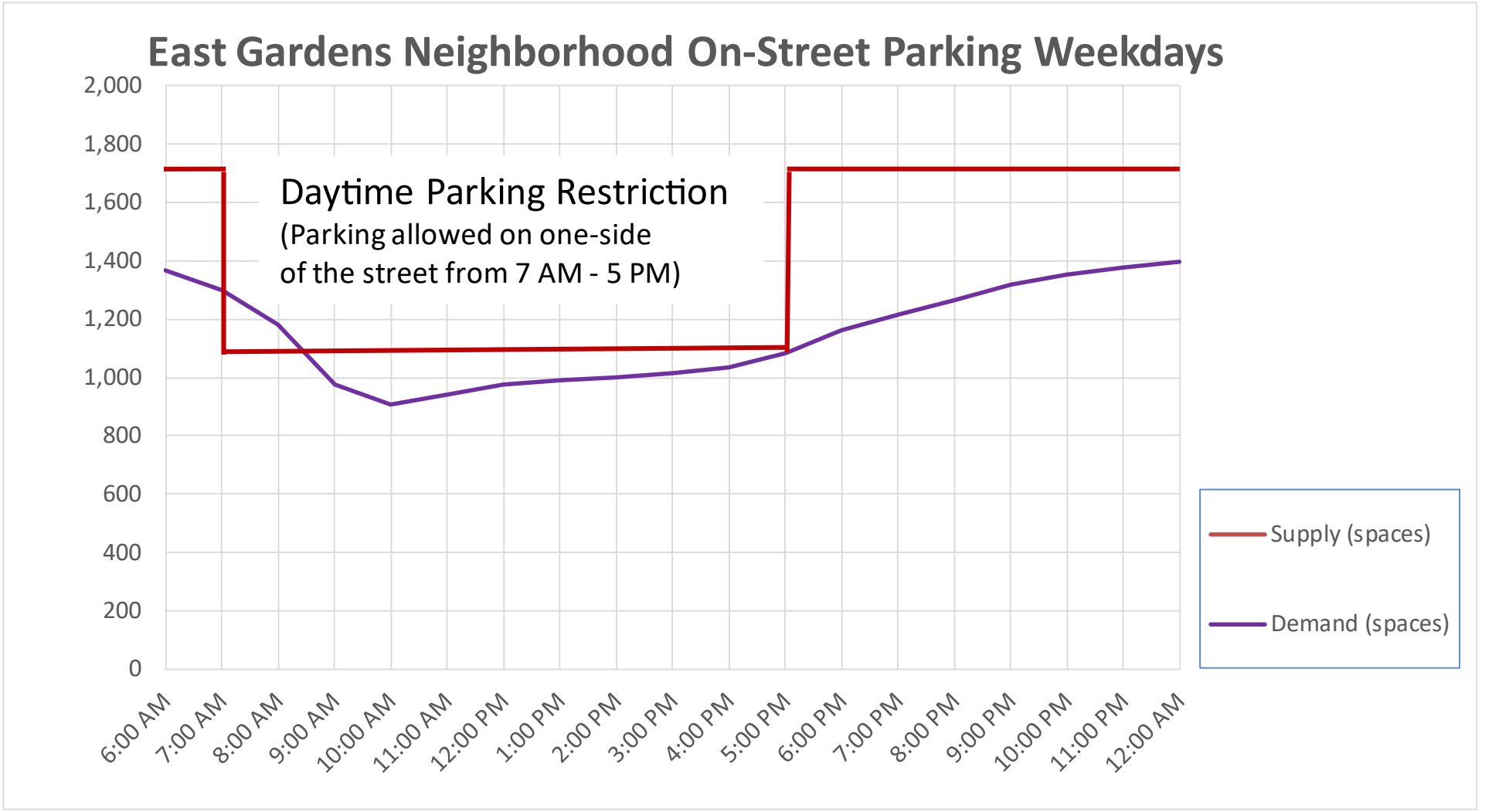


Figure 19
East Gardens Neighborhood On-Street Parking Demand by Hour on Weekdays

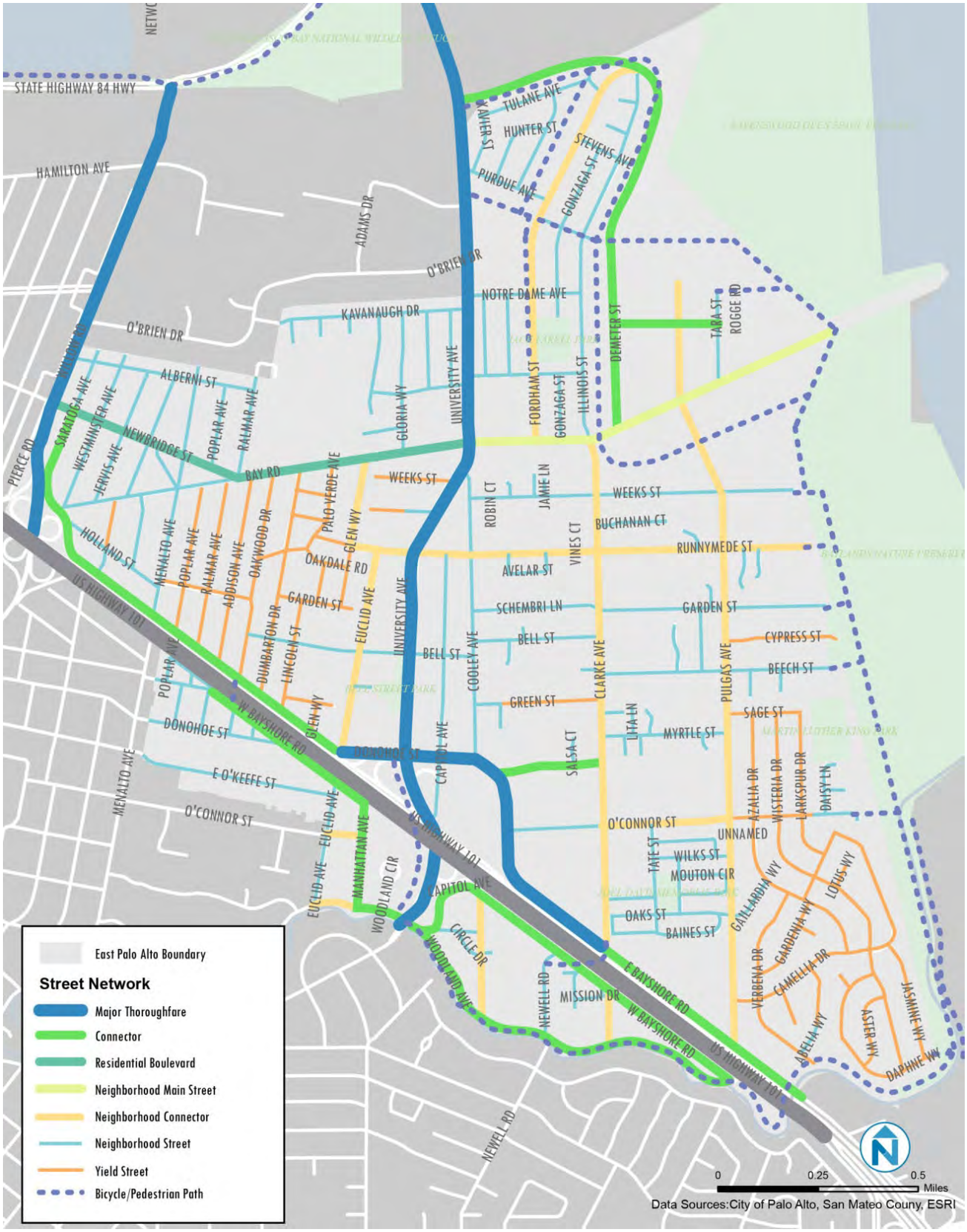
students to use when they walk to school in the morning. Several local schools (e.g. Phoenix Academy, KIPP Valiant, East Palo Alto Charter School) begin class between 7:30 and 8:00 AM, thus, the parking restriction would need to take effect by 7:00 AM in order to serve students walking to school in the morning. However, implementing a parking restriction at 7:00 AM would result in a parking shortfall of approximately 210 vehicles (parking demand at 7:00 AM of approximately 1,300 vehicles and only 1,090 parking spaces). A majority of Gardens neighborhood residents (52 percent) favored starting the daytime parking restriction at 7 AM, while 18 percent preferred starting the parking restriction at 8 AM and 30 percent think that the parking restriction should not begin until 9 AM. The survey also found that most Gardens neighborhood residents (66 percent) want the daytime parking restriction to end at 6 PM, while the remainder of residents surveyed favored maintaining the parking restriction until 7 or 8 PM. If this pedestrian solution is implemented, Council would need to prioritize either pedestrians or resident parking needs when choosing the hours of the daytime parking restriction.

3. Yield Street

According to the City of East Palo Alto General Plan, almost all of the streets in the East Gardens neighborhood are classified as yield streets (see Figure 20). Yield streets are described as narrow, low volume residential streets serving mostly local traffic. Drivers are expected to travel at low speeds, and pedestrian and bicycle comfort is prioritized in these residential environments. When vehicles travelling in opposite directions meet, one vehicle must pull over and stop in a parking lane, pull-out, or driveway area to let the other pass. While yield streets create an effective traffic calming measure, the yield operation cannot be sustained over a long segment of street as it requires breaks in the parking density, or numerous driveway curb cuts to provide space for drivers to pull over to allow vehicles to pass. A yield street with parking on both sides functions most effectively at 24 to 28 feet in width, where on-street parking utilization is 40 to 60 percent or less. This creates a “checkered” parking scheme to improve the functionality of a yield street.

The width of most streets in the East Gardens neighborhood, approximately 24 to 28 feet, would be sufficient for a yield street with parking on both sides of the street if parking utilization was low. However, the high utilization of on-street parking that currently occurs in the Gardens neighborhood does not leave space for vehicles to pull over when they meet an on-coming vehicle. Thus, to preserve two-way traffic flow, residents mount the rolled curb and park on the sidewalk on both sides of the street.

The City could restore the intended yield street functionality by implementing a “checkered” parking scheme using roadway striping or alternating red curbs to allow safe two-way travel while keeping the sidewalks clear for pedestrian use. Furthermore, like the one-way street option, due to the narrow travel lane, it would be necessary to restrict parking near intersections to accommodate turning movements of emergency vehicles, garbage trucks, and other large vehicles. Note that short block segments would not need any parking restrictions mid-block since the parking restrictions at intersections would provide sufficient space for on-coming vehicles to pass each other. Thus, only long street segments (over 400 feet long) and segments with a curve that blocks visibility would need to have a mid-block parking restriction. Yield street operation is not recommended on key street segments that provide access to and from the neighborhood (i.e. segments of Gallardia Way and Camellia Drive) due to the higher traffic volume on these streets. On-street parking would need to be limited to only one side of the street on these segments in order to maintain space for two-way traffic flow while keeping the sidewalks clear for pedestrians. Overall, it is estimated that this measure would result in the elimination of approximately 260 on-street parking spaces. The reduction in parking would result in a shortfall of about 60 parking spaces overall in the East Gardens Neighborhood (approximately 1,400 vehicles in 1,340 parking spaces).



Source: City of East Palo Alto General Plan 2035

Figure 20
East Palo Alto Street Network by Type

NORTH
Not to Scale

This pedestrian solution was developed in response to resident concerns regarding the potential one-way street solution and the parking impacts associated with prohibiting parking along one side of the street. The yield street option is recommended over the other options as it would provide sidewalks on both sides of the street 24 hours a day, maintain two-way traffic flow, and minimize the impact to on-street parking. While this option would feature a narrow travel lane like the one-way street option, it would have less impact on emergency response vehicles since two-way traffic flow would be retained. Nevertheless, all three pedestrian options would exacerbate the existing parking shortage that occurs on many streets in the Gardens neighborhood. Thus, the City should consider implementing one or more parking solutions described below in conjunction with the preferred pedestrian solution.

Parking Solutions

Counts of on-street parking within the Gardens neighborhood show that on average, the on-street parking spaces were 84% occupied (approximately 1,830 vehicles versus an on-street parking capacity of approximately 2,180). Furthermore, about one half of all street segments in the neighborhood were parked at or near capacity (90% occupancy or higher). Neighborhood residents complain that they have to park far from their home because their street is fully parked. Seven possible solutions to the parking shortage were explored to evaluate their feasibility and potential effectiveness. Unlike the above pedestrian solutions that would be implemented only on narrow streets with rolled curbs east of Pulgas Avenue, the parking solutions listed below are applicable to all streets within the Gardens neighborhood, including neighborhood streets west of Pulgas Avenue and streets with barrier (straight) curbs since the parking occupancy was high throughout the neighborhood.

1. Garbage Can Restrictions

Garbage service and recycling in East Palo Alto is provided by Recology of San Mateo County through a franchise agreement with the City. Pick up times vary from week to week depending on drivers, traffic, or route changes; thus residents are encouraged to bring their garbage and recycling bins out to the street the night before their collection day to prevent missed pickups. The bins can reduce the curb space available for on-street parking. The problem is exacerbated when residents set out their bins early or do not promptly remove their bins from the street after garbage collection occurs.

The City of East Palo Alto could follow the example of Santa Clara County and other local jurisdictions who have adopted ordinances requiring that containers must be placed in the street for collection not more than twenty-four hours preceding the scheduled collection time and removed from the street within twenty-four hours after collection. Although no data collection was conducted to quantify the number of parking spaces lost due to garbage and recycling bins remaining in the street for more than 24 hours before or after the designated collection time, it is anticipated that this measure would have a relatively small effect on overall parking conditions within the Gardens neighborhood. Furthermore, the effectiveness of this measure would be dependent upon the City's ability to enforce this restriction. Since the only downside of this measure is a minor inconvenience that may be perceived by some residents, new garbage can restrictions are recommended as a supplementary measure to address the parking shortage in the Gardens neighborhood.

2. Parking Blocking Driveways

The City of San Francisco allows residents to block their own driveway by parking parallel to the curb or street, only if the vehicle's license plate is registered to the building's address, and if the building has two or fewer units. This measure was investigated as a means to address the current parking challenges as it would increase the supply of on-street parking spaces in the Gardens neighborhood by approximately 1,150 new spaces (a 50% increase). The City Attorney determined that San Francisco could enact such a provision because it is a charter city. However, East Palo

Alto is not a charter city and thus is subject to State regulations that prohibit vehicles from parking in front of a driveway. Thus, this measure was deemed to be infeasible in East Palo Alto.

3. Remove Parking Restrictions

Currently, overnight parking is prohibited on certain street segments in the Gardens neighborhood (e.g. adjacent University Square Park). Removal of this parking restriction was considered in order to increase the parking supply in the Gardens neighborhood during the peak nighttime hours. This measure was met with strong opposition from both neighborhood residents and the East Palo Alto Police Department because allowing on-street parking adjacent to the park would reduce visibility of the park to law enforcement officers on patrol. Therefore, this measure is not recommended.

4. Shared Parking

One concept that has been successfully implemented in many mixed-use developments is shared parking. Shared parking takes advantage of the fact that the parking demand generated by different land uses peaks at different times of the day, allowing the same space to serve multiple uses. This shared parking concept could be implemented in the Gardens neighborhood by allowing residents to park in nearby church/business/park parking lots at night. While the shared lots would not be as convenient as on-street parking in front of a resident's home, it would be a welcome option for residents whose street is fully parked most nights. This potential parking solution would increase the parking supply available to neighborhood residents and create a potential revenue source for non-profit organizations from sale of parking permits for the use of their lot. Potential issues with this measure include safety concerns for residents walking to and from remote parking locations during late night hours and security and liability concerns for parking lot owners. Implementation of this measure would be subject to approval by the subject property owners. City staff reached out to organizations located in or adjacent to the Gardens neighborhood to explain the concept and explore their willingness to participate in a shared parking program. None of the organizations in the vicinity of the Gardens neighborhood expressed any support for the shared parking concept. Thus, this measure is considered to be infeasible at this time.

5. Increased Enforcement

Parking violations are common in the Gardens neighborhood due to the existing parking shortage. Vehicles are often parked illegally blocking other residents' driveways, parking within 15 feet of a fire hydrant or within other red curb areas, or double parked. Furthermore, there are inoperable vehicles and many other vehicles parked on the street for more than 72 hours without moving in violation of existing City code.

The lack of active parking enforcement and response to resident complaints about illegal parking was identified as a top concern expressed over and over by residents attending Gardens neighborhood meetings conducted as part of the Mobility Study outreach program. Furthermore, increased traffic and parking enforcement received the highest level of support (over 60 percent) of all measures listed in the citywide resident survey. This measure is a necessary complement to ensure the effectiveness of other parking measures that may be implemented such as garbage can restrictions and a neighborhood permit parking program. It is recommended that the City of East Palo Alto add police officers and/or community service officers to better enforce existing parking regulations as practical given the City's budget constraints.

6. Increase Off-Street Parking on Residential Properties

East Palo Alto's Municipal Code includes provisions that prevent homeowners from developing additional off-street parking on their lot. Per Section 18.30.080, vehicles are prohibited from parking in a front yard other than the legal driveway. Furthermore, paved areas within the front yard including the driveway and any walkways shall not exceed 50 percent of the front yard area with the

remaining area landscaped with live plant material. The paved driveway and walkway area on most lots in the Gardens neighborhood are at or near this maximum threshold making it illegal to construct additional paved areas to increase the off-street parking. Given the current parking shortage that exists on many streets in the neighborhood and the high number of vehicles per household in East Palo Alto, many residents may desire to provide additional parking on their property for their own use at their own expense. Concerns about aesthetics and storm water flow have led to the above restrictions. However, besides concrete, asphalt, or traditional pavers, pervious or partially pervious surfaces such as open grid pavers, grass block pavers (otherwise known as turf block pavers or grow-through pavers) could be used to provide additional off-street parking on private properties. Pervious surfaces have the advantage of reducing stormwater runoff and recharging ground water. It is recommended that the City of East Palo Alto consider changes to the municipal code to enable homeowners to construct additional parking on their property. This measure and the garbage can restrictions are the only measures available that could increase the parking supply within the Gardens neighborhood.

7. Neighborhood Permit Parking Program

Another parking solution that could be implemented in the Gardens neighborhood is a permit parking program. Such neighborhood permit parking programs have been implemented in many of the surrounding communities to control parking in residential areas. In most other cases, the purpose of the permit program is to prevent parking intrusion from a downtown commercial area or a special event venue that would otherwise result in employees or event attendees parking on residential streets. The parking shortage that occurs within the Gardens neighborhood is not the result of non-residents, but rather the by-product of the neighborhood's density in terms of households per acre and vehicles per household. Implementing a permit parking program in the Gardens neighborhood would serve the following purposes:

- Equitably allocate on-street parking spaces among neighborhood residents
- Encourage residents to use available off-street parking spaces (in garages and driveways)
- Encourage residents to sell/donate excess vehicles
- Generate revenue to fund parking enforcement

Most other permit parking programs require a permit to park on designated neighborhood streets during the daytime or evening hours coinciding with the peak parking demand associated with the nearby parking generator (downtown or special event venue). Because the Gardens Neighborhood Permit Parking Program would seek to control resident parking, the permit parking restriction would be enforced only at night when residential parking demand is highest. The hours of the permit parking program would be determined by the City Engineer and should align opposite the hours of a daytime parking restriction, if implemented (e.g. 5 PM to 7 AM parking allowed on both sides of the street with a permit only; 7 AM to 5 PM parking allowed on only one side of the street and no permit required). The Gardens Neighborhood Permit Parking Program area is shown on Figure 21.

A survey of Gardens neighborhood residents showed residents were concerned about the cost of a parking permit. Thus, if implemented, each residential property would receive one parking permit at no charge. A second parking permit may be purchased upon request subject to availability. Since the permit restriction would only be in effect at night, gardeners, housecleaners, and other most other visitors would not need a permit since they would be in the neighborhood during daytime hours when permits are not required. It is recommended that the permit program allow for a limited number of one-day guest permits for occasional visitors that may be present during the evening and night hours. Guest vehicles could also park in resident driveways. The fee schedule for a second parking permit and for one-day guest permits should be determined by the City Council. An

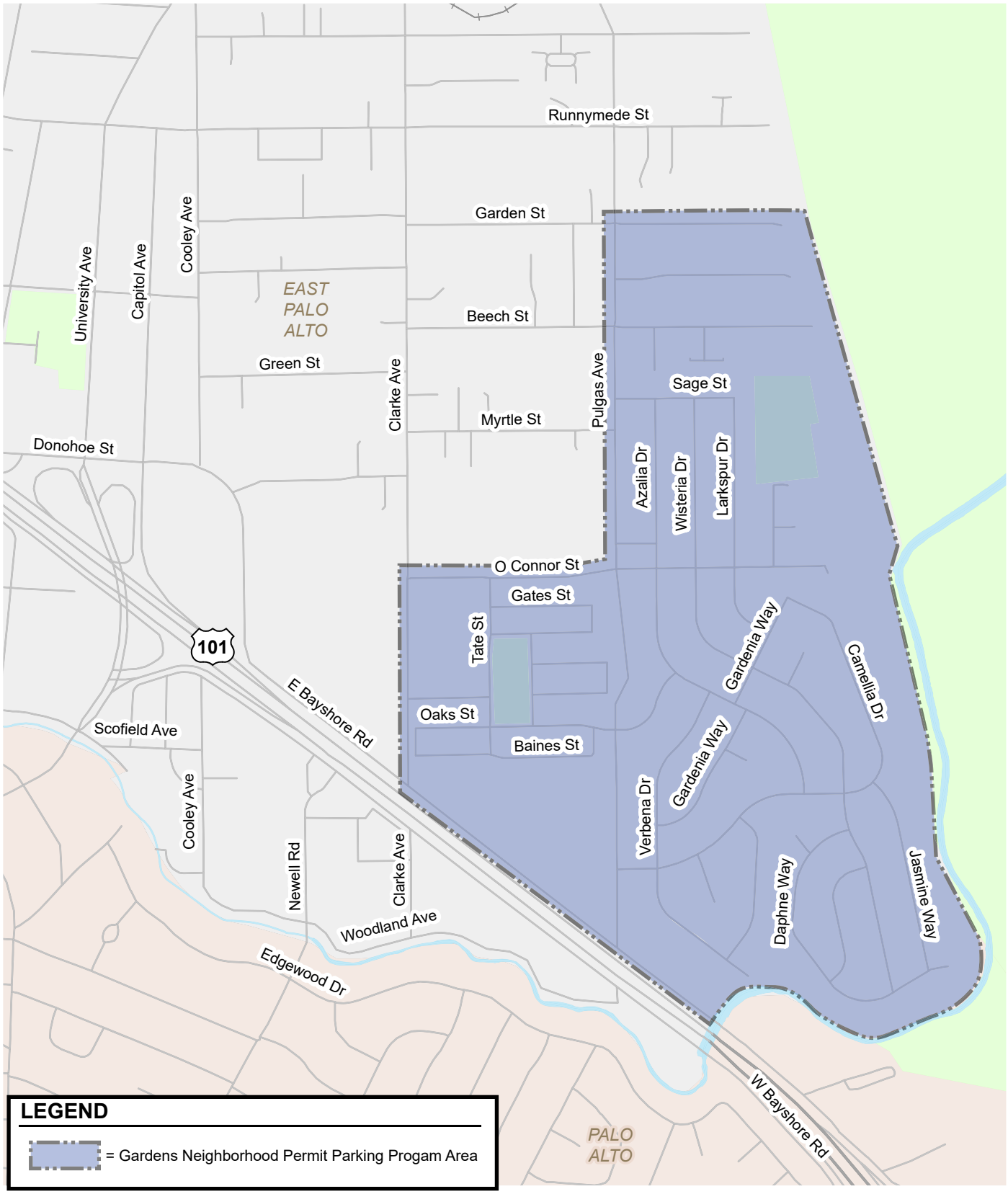


Figure 21
Gardens Neighborhood Permit Parking Progam Area

estimate of the revenue that may be generated by a permit parking program is presented in Table 4.

Table 4
Gardens Neighborhood Permit Parking Program Estimated Revenue

Scenario	Cost of 1st Permit	Cost of 2nd Permit	Permits/ Household	Permits/ Space	Total Permits*	Annual Permit Revenue†
1	$0	$100	1.22	0.84	1,831	**$32,700**
2	$0	$150	1.22	0.84	1,831	**$49,050**
3	$0	$200	1.22	0.84	1,831	**$65,400**
4	$0	$100	1.45	1.00	2,177	**$67,300**
5	$0	$150	1.45	1.00	2,177	**$100,950**
6	$0	$200	1.45	1.00	2,177	**$134,600**
7	$0	$100	1.52	1.05	2,286	**$78,200**
8	$0	$150	1.52	1.05	2,286	**$117,300**
9	$0	$200	1.52	1.05	2,286	**$156,400**
				Total Annual Revenue (Min/Max):		**$32,700-$156,400**

* Minimum permit sales expected to equal total number of vehicles parked on street at midnight (1,831) which reflects 84% occupancy of 2,177 total spaces (0.84 permits per space)

†Permit revenue assumes every household in neighborhood (1,504 households) receives 1 permit free and 2nd permit is sold on demand up to maximum # of permits listed (lottery to be used if demand exceeds permit supply).

Estimated Cost

Program Administrator	0.5	FTE	$72,800
Traffic & Parking Enforcement Officer	1.0	FTE	$200,000
Traffic & Parking Enforcement Vehicle			$40,000
		Total Annual Cost:	**$272,800**

It should be emphasized that a parking permit would not guarantee or reserve an on-street space for any resident but merely authorize the subject vehicle to park on any street in the neighborhood during the permit restricted hours. While having a permit would not guarantee a space, the total number of permits sold should reasonably match the number of on-street spaces. The restriction on the total number of parking permits should ensure that the total parking demand by permit holders does not exceed the total parking supply in the neighborhood.

It is recommended that the City adopt a residential parking permit program that sets forth criteria for designation of a permit parking area, program procedures, enforcement provisions, exemptions, and a process for removal of the permit parking program (see Appendix E). The establishment of a residential permit parking area should only be considered if it is supported by a super-majority (67 percent) of the neighborhood residents. A survey of 231 Gardens neighborhood residents found that just below one half of all respondents (49 percent) support the implementation of a neighborhood permit parking program. Based on the current low level of support, a permit parking program should not be implemented in the Gardens neighborhood. However, the implementation of one of the above described pedestrian solutions would exacerbate the parking shortage in the neighborhood. Thus, support for a permit parking program could increase. The recommended

residential parking permit program would allow neighborhood organizers to petition the City for implementation of a permit parking program if they can document adequate support by neighborhood residents.

4. Other Transportation Topics

This chapter presents other transportation topics addressed as part of the Mobility Study. Other transportation topics include the following:

- All-Way Stop Warrants
- Updated Transportation Demand Management (TDM) Policy
- Vehicle Miles Traveled (VMT) Policy
- Traffic Impact Fee Program
- Planned Bicycle and Pedestrian Improvements

All-Way Stop Warrants

Hexagon evaluated 13 intersections in East Palo Alto to determine if they warrant the installation of all-way stop control. The study intersections are currently under side-street stop control with no control on one or both major street approaches. The intersections were analyzed based on the criteria described in East Palo Alto's Guidelines for the Installation of Multi-Way Stop Signs on City Streets. Based on these criteria, all-way stop control is warranted at 12 of the 13 study intersections. The need for all-way stop control at many intersections is based on the lack of adequate sight distance due to on-street parking. In lieu of installing all-way stop control, the City could remove on-street parking at selected locations to improve the sight lines. The detailed study methodology and findings are presented below.

Study Intersections and Data Collection

Hexagon evaluated the following study intersections based on the criteria described in the City's stop warrant analysis guidelines (see Figure 22):

1. Menalto Avenue and Alberni Street
2. Menalto Avenue and E. Bayshore Road
3. Poplar Avenue and E. Bayshore Road
4. Addison Ave and E. Bayshore Road
5. Lincoln Street and E. Bayshore Road
6. Lincoln Street and Garden Street (west)
7. Glen Way and Runnymede Street
8. Fordham Street and Bay Road
9. Pulgas Avenue and Garden Street
10. Capitol Avenue and Scofield Avenue
11. Pulgas Avenue and Weeks Street
12. Clarke Avenue and Weeks Street

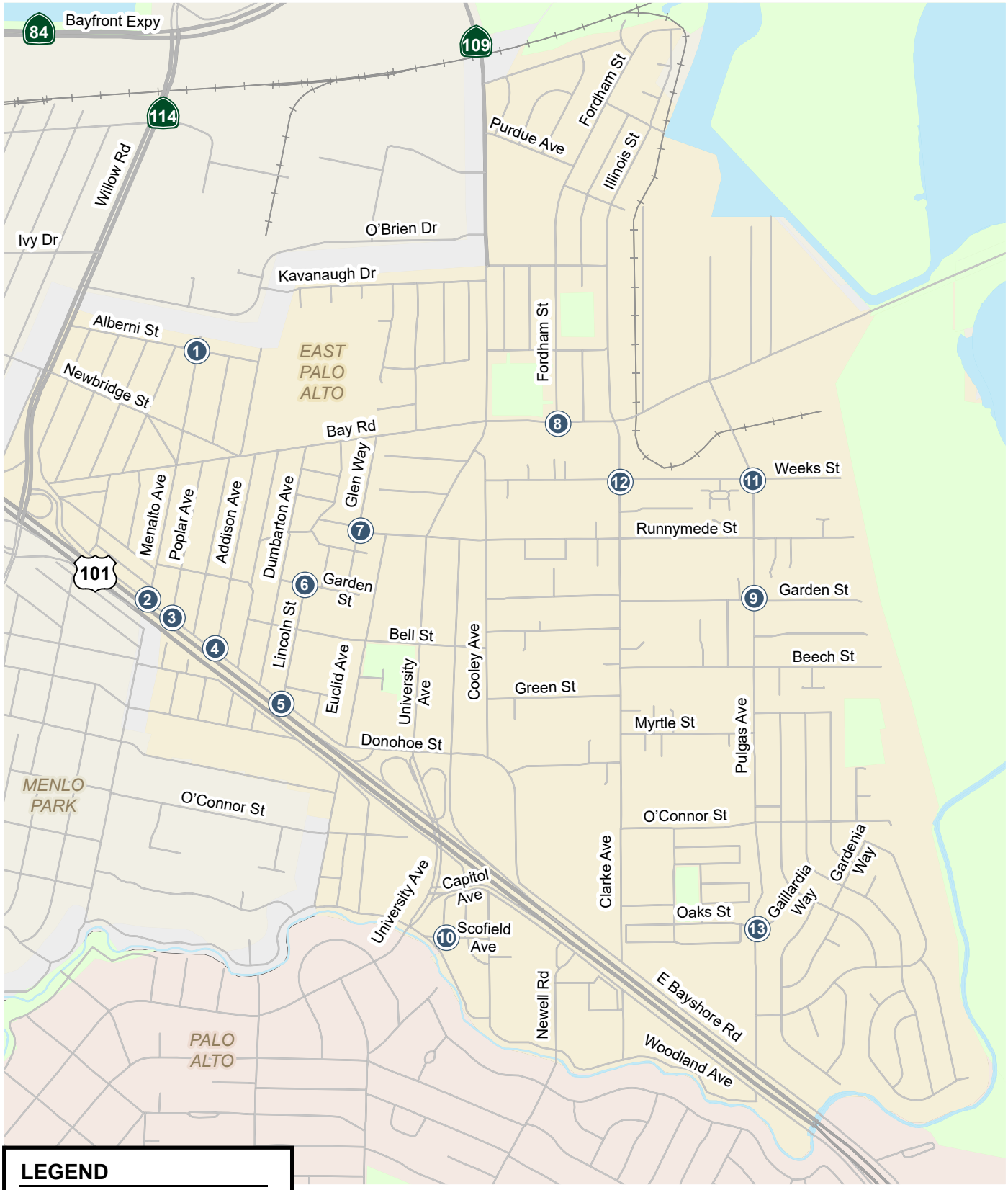


Figure 22
All-Way Stop Warrant Study Intersections

13. Pulgas Avenue and Oakes Street/Gaillardia Way

Data Requirements

The data required for the analysis were obtained from new traffic counts, the City of East Palo Alto Police Department, and satellite imagery. The following data were collected from these sources:

- 14-hour turning-movement counts (6 AM - 8 PM) conducted on Tuesday, January 22, 2019 at 10 study intersections
- AM and PM peak-hour counts (7-9 AM and 4-6 PM) conducted on February 14, 2017 at the Pulgas/Weeks and Clarke/Weeks intersections
- Vehicle accident data (2014 through January 2019)
- Line of sight distance on the major street

Warrant Analysis

The warrant analysis is based on the criteria described in East Palo Alto's Guidelines for the Installation of Multi-Way Stop Signs on City Streets. All-way stop sign installation may be considered if ANY of the following conditions exist:

I. **Volume Warrant:** The vehicular volume entering the intersection from all approaches is at least 300 vehicles per hour for any 8 hours of an average day, AND the combined vehicular volume entering the intersection from the minor street approaches is at least 100 vehicles per hour for the same 8 hours.

   OR

   The vehicular volume entering the intersection from all approaches is at least 300 vehicles per hour for any 8 hours of an average day, AND the total pedestrian volume entering the intersection is at least 100 pedestrians per hour for the same 8 hours.

   If the intersection is located in a residential area or if there are unusual conditions (steep hill or curves), the above volume thresholds are decreased by 40%.

II. **Accident Warrant:** 3 or more reported crashes/collisions (types susceptible to correction by stop signs) in a 12-month period with satisfactory observance and enforcement of less restrictive control.

III. **Line of Sight Warrant:** The straight-line sight distance on one or more approaches of the major street for vehicles or pedestrians crossing the intersection is less than 150 feet.

An intersection qualifies as a residential area, if ALL of the following conditions exist:

- Both streets have residential frontage and have a 25 mile per hour (mph) speed limit.
- Neither street is an adopted through street.
- Both streets are two-lane streets.
- No stop sign or traffic signal exists within 600 feet along the major street.
- Streets extend 600 feet or more away from the intersection on at least three sides.
- The installation of a 4-way stop sign is compatible with overall traffic circulation.

Table 5 shows that 12 out of the 13 study intersections meet at least one of the warrant criteria and, therefore, the installation of all-way stop control may be considered. The stop warrant analysis worksheets for each intersection are included in Appendix F.

Table 5
All-Way Stop Warrant Criteria

Intersection	Residential	Warrant Met		
		Volume	Accident	Line of Sight
Menalto Avenue & Alberni Street	No	No	No	Yes
Menalto Avenue & E. Bayshore Road	No	No	No	Yes
Poplar Avenue & E. Bayshore Road	No	No	No	Yes
Addison Avenue & E. Bayshore Road	No	No	No	Yes
Lincoln Street & E. Bayshore Road	No	No	Yes	Yes
Lincoln Street & Garden Street (west)	No	No	No	Yes
Glen Way & Runnymede Street	Yes	Yes	No	Yes
Fordham Street & Bay Road	No	No	Yes	Yes
Pulgas Avenue & Garden Street	No	No	Yes	Yes
Capitol Avenue & Scofield Avenue	No	No	No	No
Pulgas Avenue & Weeks Street	No	No	No	Yes
Clarke Avenue & Weeks Street	No	No	Yes	Yes
Pulgas Avenue & Oakes St/Gaillardia Wy	No	n/a*	n/a*	Yes

* Traffic volume counts and accident data were not obtained for this intersection. Analysis was limited to line of sight.

Volume Warrant

One study intersection, Glen Way and Runnymede Street, qualifies as a residential area and meets the volume warrant. The remaining study intersections did not meet the volume warrant.

Accident Warrant

Four study intersections meet the accident warrant with three or more reported accidents (types that are susceptible to correction by stop signs) in a 12-month period. Three intersections had three reported accidents in a 12-month period, and one intersection had five reported accidents.

Line of Sight Warrant

One study intersection, Capitol Avenue and Scofield Avenue, has adequate sight distance. The remaining twelve study intersections meet the line of sight warrant due to the presence of vehicles parked on or adjacent to the street. Line of sight may be improved by prohibiting parking in selected locations. Figures 23–34 show the sight triangle for the required 150-foot line of sight on the major approaches. Also shown are areas where parking is currently prohibited (due to driveways, fire hydrants, or red curbs) and areas where existing on-street parking impedes the line of sight to less than 150 feet. Table 6 summarizes the number of existing on-street parking spaces that would be lost at each intersection in order to increase sight distance to 150 feet. Between two and twelve on-street parking spaces would be lost at each intersection to ensure adequate sight distance.

Figure 23
Sight Distance for Menalto Avenue and Alberni Street

Figure 24
Sight Distance for Menalto Avenue and E. Bayshore Road

Figure 25
Sight Distance for Poplar Avenue and E. Bayshore Road

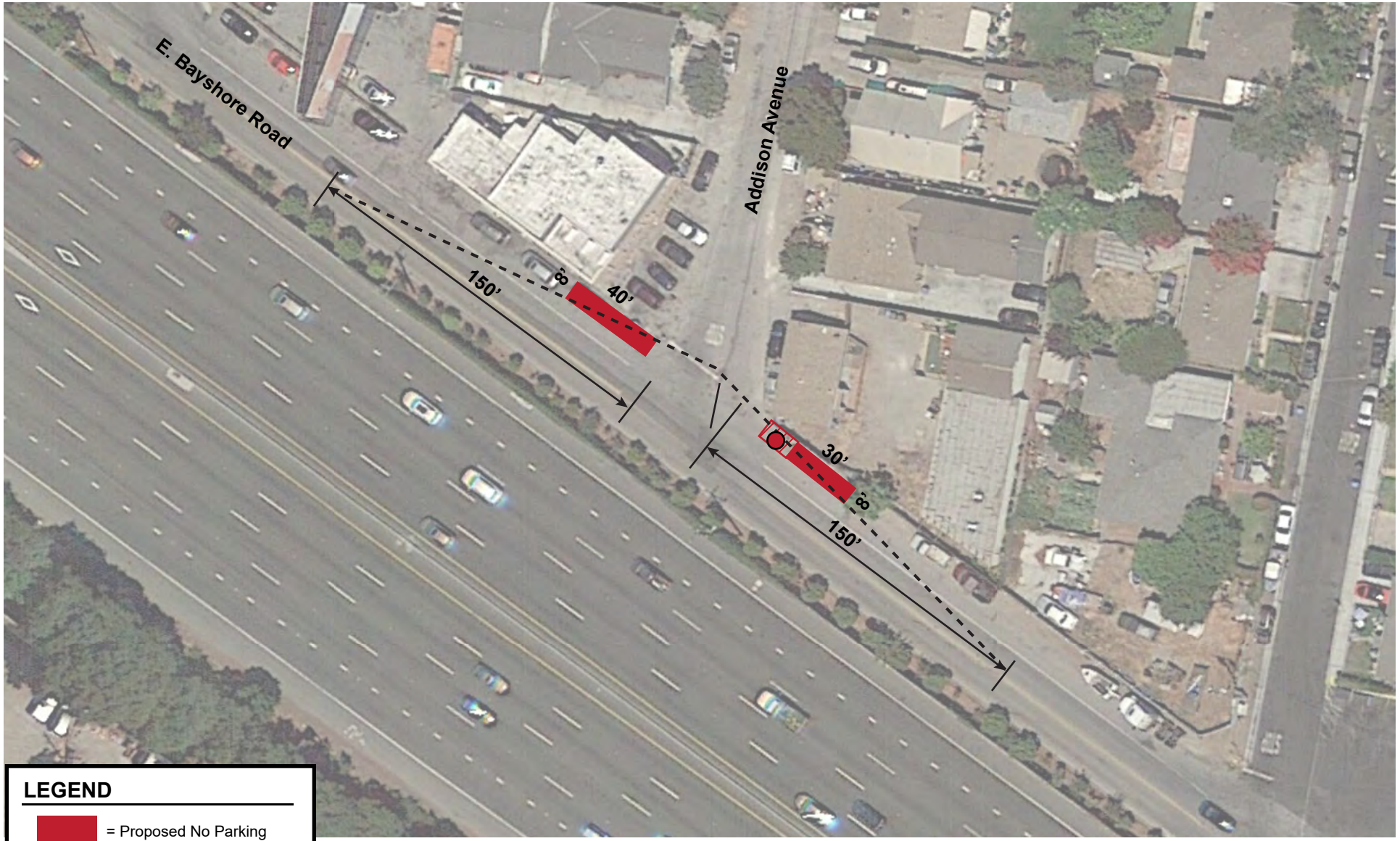


Figure 26
Sight Distance for Addison Avenue and E. Bayshore Road

NORTH
Not to Scale

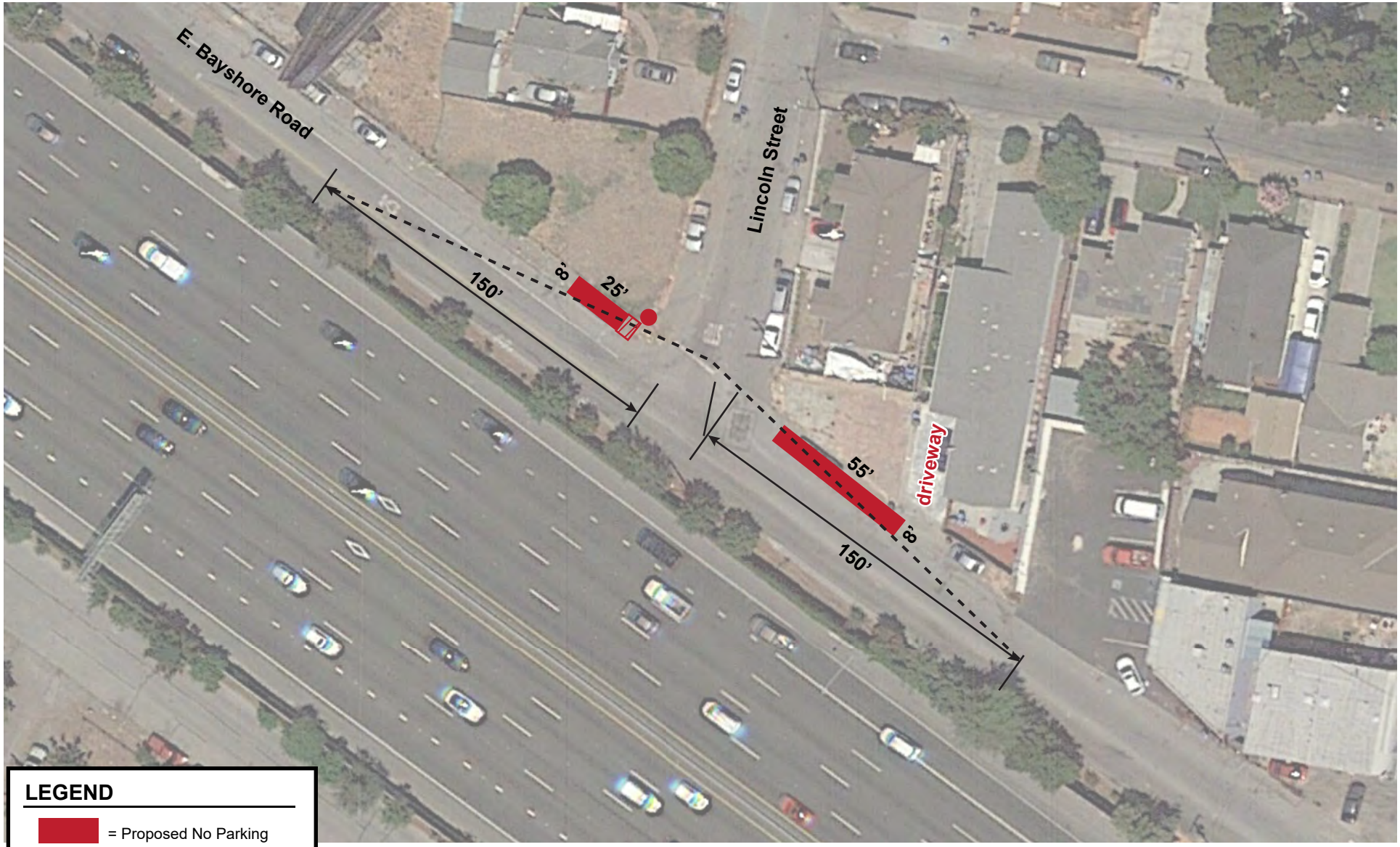


Figure 27
Sight Distance for Lincoln Street and E. Bayshore Road

NORTH
Not to Scale

Figure 28
Sight Distance for Lincoln Street and Garden Street (west)

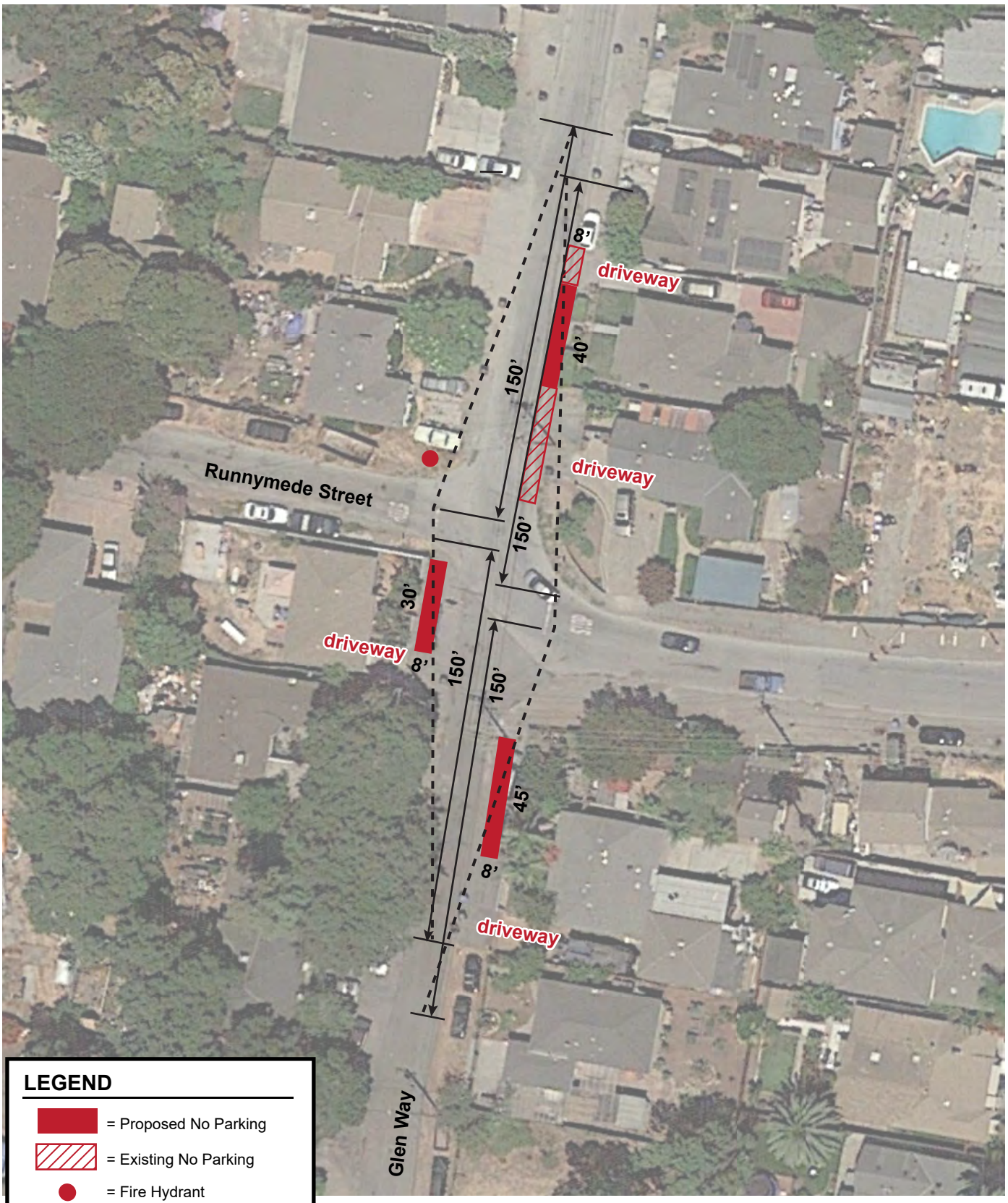


Figure 29
Sight Distance for Glen Way and Runnymede Street

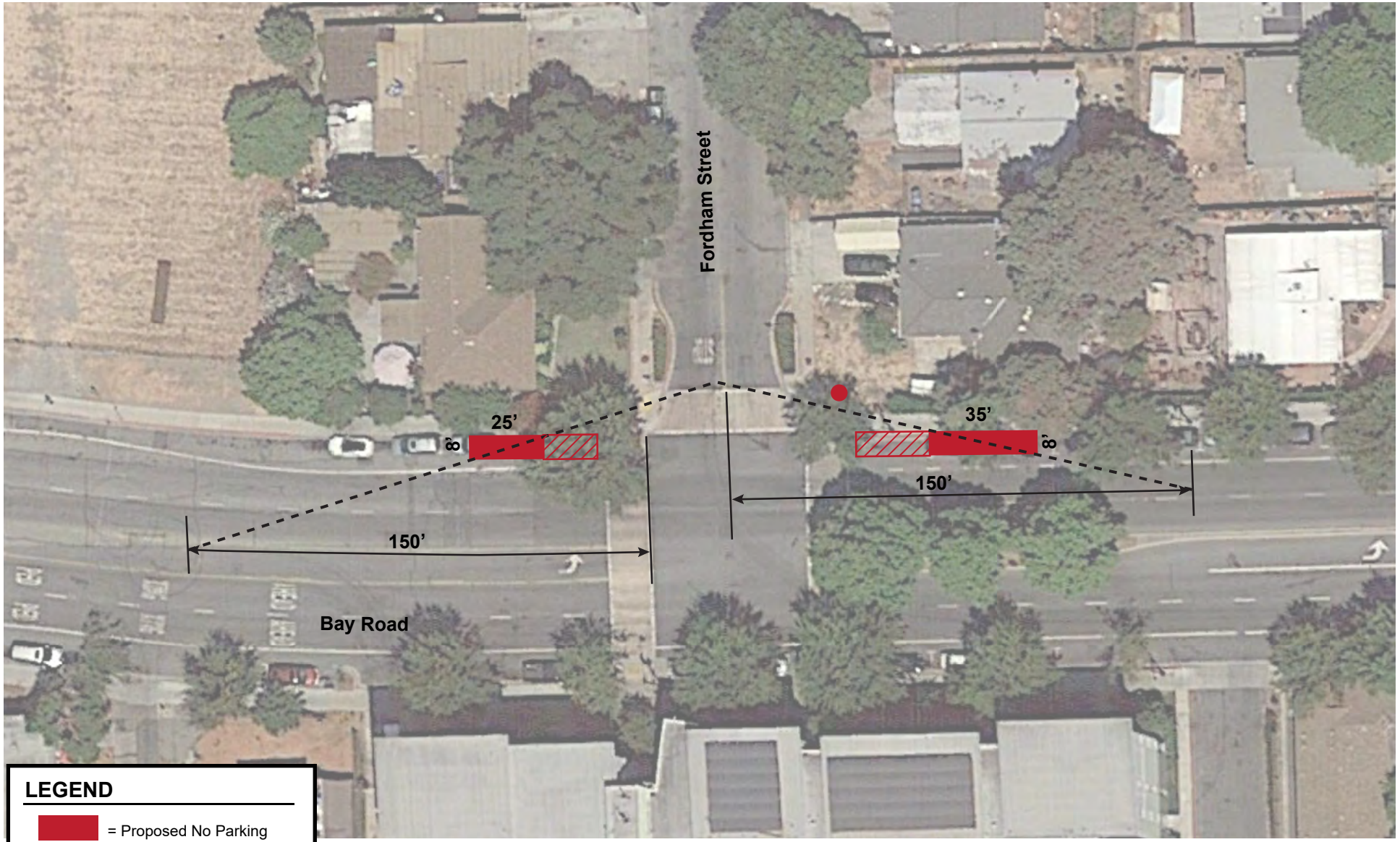


Figure 30
Sight Distance for Fordham Street and Bay Road

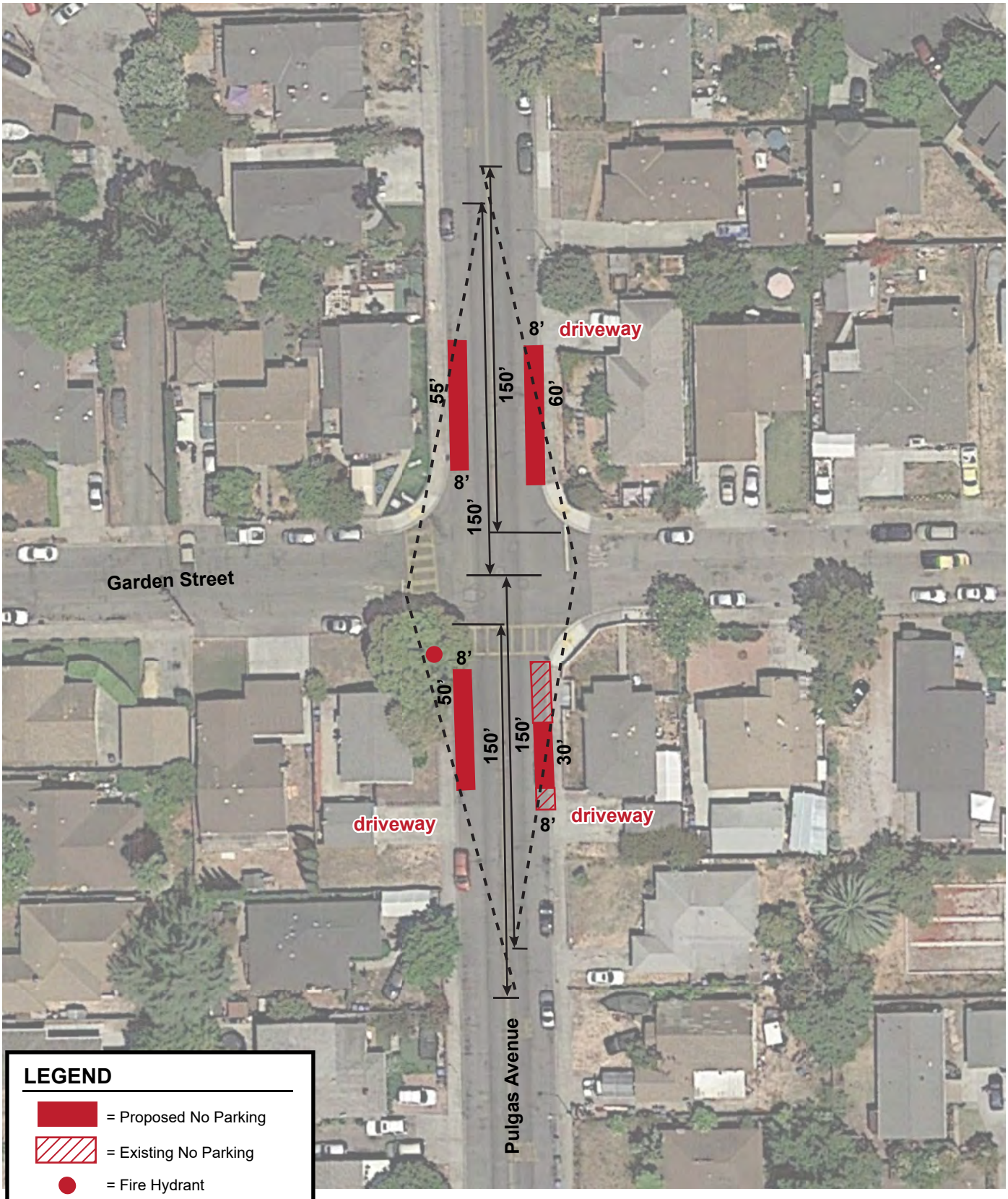


Figure 31
Sight Distance for Pulgas Avenue and Garden Street

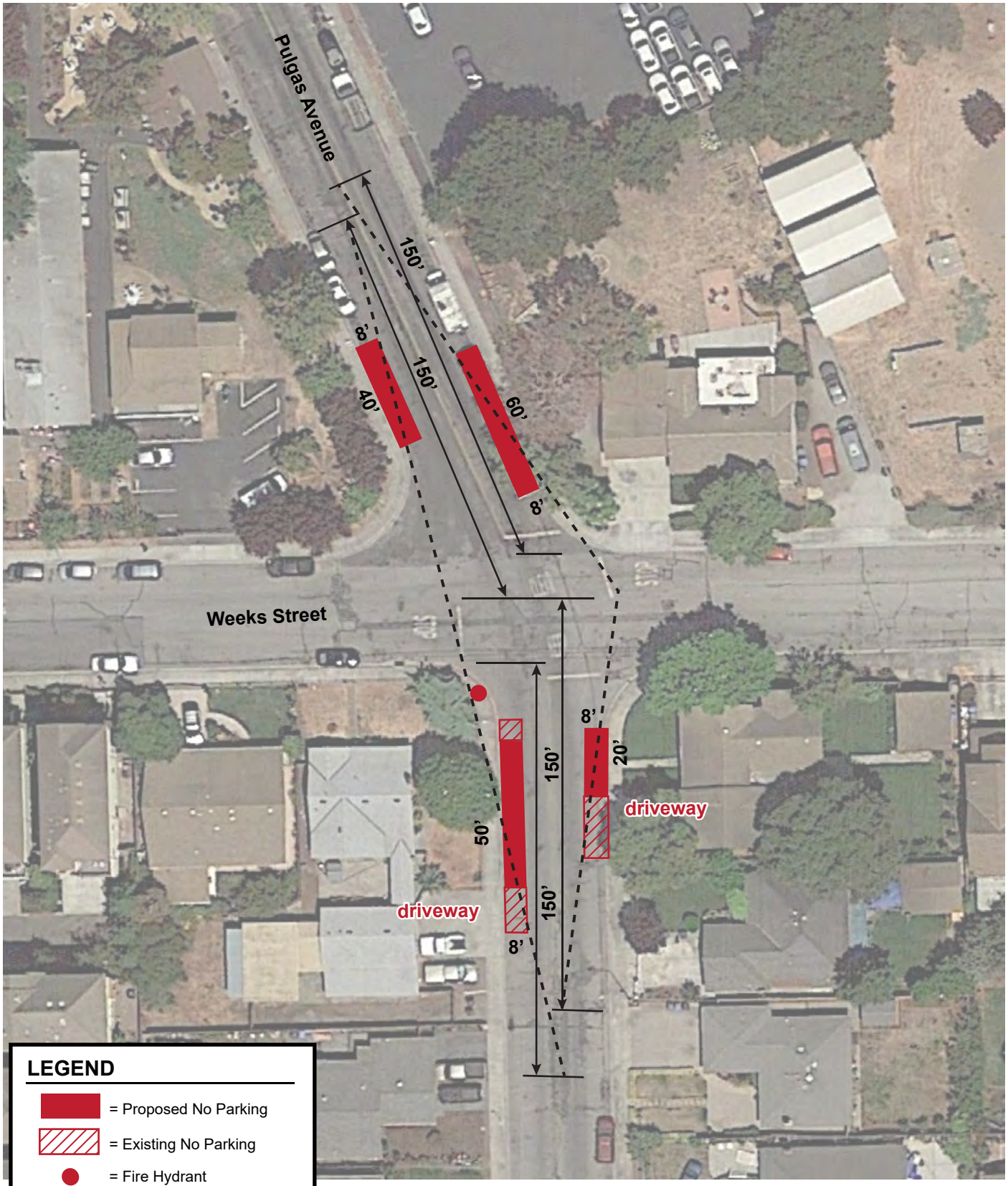


Figure 32
Sight Distance for Pulgas Avenue and Weeks Street

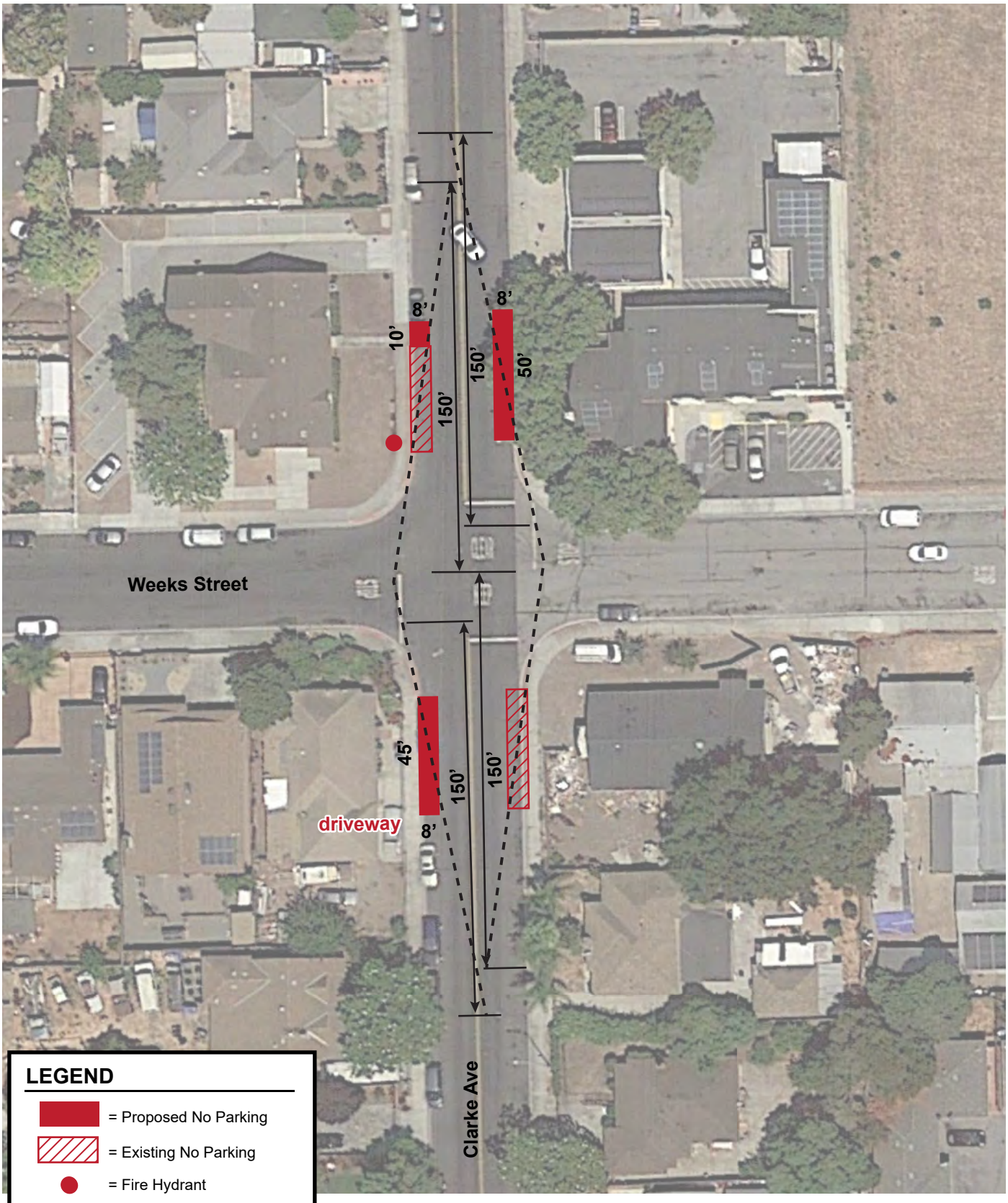


Figure 33
Sight Distance for Clarke Avenue and Weeks Street

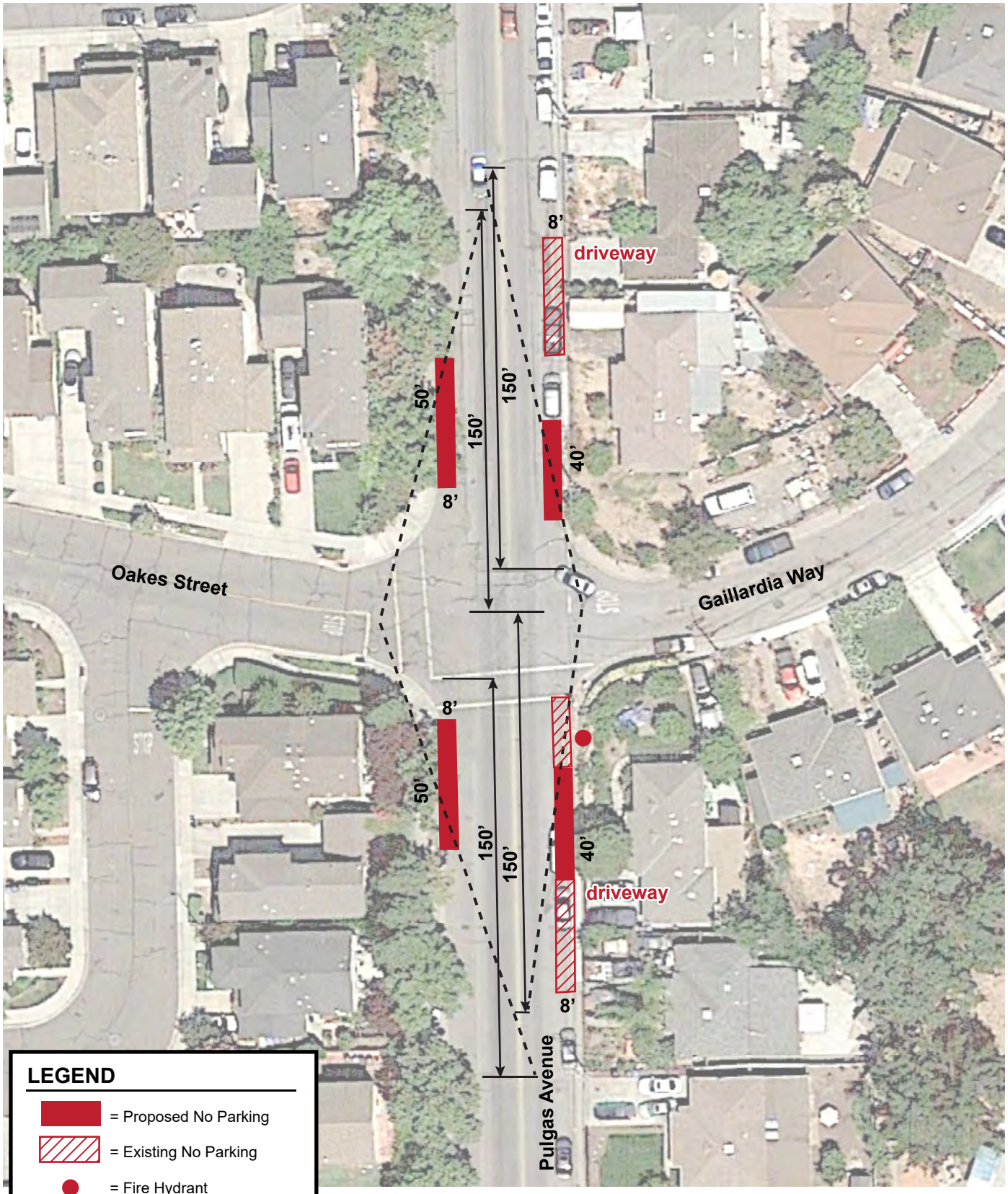


Figure 34
Sight Distance for Pulgas Avenue and Oakes Street/Gaillardia Way

Table 6
Potential Loss of On-Street Parking to Improve Sight Distance

Intersection	Parking Spaces
Menalto Avenue & Alberni Street	12
Menalto Avenue & E. Bayshore Road	2
Poplar Avenue & E. Bayshore Road	3
Addison Avenue & E. Bayshore Road	3
Lincoln Street & E. Bayshore Road	3
Lincoln Street & Garden Street (west)	5
Glen Way & Runnymede Street	5
Fordham Street & Bay Road	2
Pulgas Avenue & Garden Street	7
Capitol Avenue & Scofield Avenue	-
Pulgas Avenue & Weeks Street	7
Clarke Avenue & Weeks Street	4
Pulgas Avenue & Oakes St/Gaillardia Wy	8

At the intersection at E. Bayshore Road and S. Poplar Avenue, there is a private parking lot on the north side of the westbound E. Bayshore Road approach. Vehicles were observed to park in the northwest corner of the parking lot where they interfere with the intersection sight distance (see Figure 25). Hexagon recommends that striping or signage be added to the lot to ensure that parking does not interfere with sight distance.

Conclusions

Based on the City's stop warrant criteria, all-way stop control is warranted at 12 study intersections. One intersection meets the volume warrant, four intersections meet the accident warrant, and 12 intersections meet the line of sight warrant. Sight distance may be improved by prohibiting some on-street parking, thereby negating the need for all-way stop control at certain intersections. Between two and twelve parking spaces would need to be removed at each intersection in order to ensure adequate sight distance. In addition, Hexagon recommends that striping or signage be added to the private lot at the corner of E. Bayshore Road and S. Poplar Avenue to ensure that parking does not interfere with sight distance.

The Public Works and Transportation Commission (PWTC) considered the findings of the all-way stop warrant analysis and recommended the installation of all-way stop signs at the following five intersections:

- Menalto Avenue and East Bayshore Road,
- Glen Way and Runnymede Street,
- Pulgas Avenue and Garden Street,
- Pulgas Avenue and Weeks Street, and
- Clarke Avenue and Weeks Street.

The PWTC also authorized the installation of one-way stop signs at the following three intersections:

- southbound Menalto Avenue at Alberni Street,
- southbound Westminster Avenue at Alberni Street, and

- southbound Saratoga Avenue at Alberni Street.

Lastly, the PWTC recommended parking restrictions to improve sight distance at the following four intersections:

- East Bayshore Road and Poplar Avenue, and
- East Bayshore Road and Lincoln Street, and
- Garden Street and Lincoln Street, and
- Bay Road and Fordham Street.

The PWTC recommendations were accepted and approved by the City Council on December 3, 2019 and have subsequently been implemented by the City of East Palo Alto Public Works Department.

The evaluation of sight distance at the Pulgas Avenue and Oaks Street/Gallardia Way intersection was completed subsequent to the Council's action on the other 12 intersections. The installation of all-way stop control or new parking restrictions at this intersection would require a similar approval process.

Updated Transportation Demand Management (TDM) Policy

In 1990, the City of East Palo Alto adopted the Transportation Systems Management (TSM) Ordinance that identifies measures that would reduce peak-hour traffic congestion and establishes requirements for existing employers and future developments with 100 or more employees to achieve at least 25 percent of employees commuting via alternatives to single-occupant vehicles or requires alternative work hour schedules.

The City is currently updating this ordinance and plans to adopt an updated Transportation Demand Management (TDM) Policy that establishes more aggressive trip reduction targets and sets forth financial penalties for employers that fall short of the target.

Since TDM measures are one of the most common and effective measures used to reduce vehicle miles traveled (VMT), it is important that the updated TDM Policy align with the VMT Policy, which is described below.

Vehicle Miles Traveled (VMT) Policy

In 2013, Senate Bill 743 was signed by Governor Brown. SB 743 directed the State Office of Planning and Research (OPR) to develop new California Environmental Quality Act (CEQA) guidelines and to replace Level of Service (LOS) as the evaluation measure for transportation impacts under CEQA with another measure such as Vehicle Miles Traveled (VMT). VMT measures the amount of vehicle trip making and trip length and is a direct measurement of greenhouse gas emissions. A reduction in VMT would promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses that reduces the reliance on individual vehicles.

In December 2018, the California Natural Resources Agency certified and adopted the CEQA Guidelines update package, including the Guidelines section implementing Senate Bill 743. The guidelines potentially make it easier for developers to build residential, commercial and mixed-use infill projects that improve air quality by reducing the number of miles driven by automobiles, based on the land use and transportation characteristics of the project.

Recently reviewed projects in East Palo Alto have reported VMT data in their environmental documents for informational purposes, but LOS has been used for determining environmental impacts. Per OPR's guidelines, CEQA analysis of transportation impacts may no longer consider LOS or other measures of

vehicle delay starting July 1, 2020. In order to comply with the new CEQA Guidelines, the City needs to establish a VMT transportation analysis procedure that identifies the City's VMT metric(s), sets impact thresholds, and provides guidance on what analysis is required and how the analysis is to be done.

It should be noted that SB 743 does not preclude cities from retaining General Plan policies related to LOS. Furthermore, cities may continue to require transportation analyses of a project's consistency with the adopted LOS goals and/or other operational issues related to transportation. While the mitigation measures identified in the project's CEQA document will be based on VMT and not LOS, cities may require transportation improvements intended to address LOS deficiencies through project conditions of approval. While the previous CEQA process required a city to prepare and circulate an EIR and adopt a statement of overriding considerations if a project would result in a significant unavoidable impact related to level of service, under the new guidelines, the City may grant an exception to the adopted level of service standards at its discretion.

A summary of OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA and VMT policies adopted by other California cities was documented by Hexagon in a separate memorandum dated August 26, 2019 (see Appendix G). Subsequent memoranda dated June 9, 2020 and June 18, 2020 answer frequently asked questions regarding VMT and present the recommended VMT policy framework for the City of East Palo Alto (also provided in Appendix G).

Study sessions were recently held before the East Palo Alto Planning Commission, City Council, and Public Works & Transportation Commission to introduce the topic and consider the recommended VMT Policy framework. A similar meeting was held with key stakeholders in the East Palo Alto development community to solicit input and questions on the draft VMT Policy framework. Based on feedback from City of East Palo Alto's elected officials, City residents, and developers, Hexagon worked with staff to revise the VMT framework for land use developments and expand it to include policies for transportation projects and land use plans. Hexagon also prepared a VMT Policy document for consideration by the City Council.

Traffic Impact Fee Program

As new development occurs, it attracts new residents and employees, who, in turn, require new, expanded, and/or improved transportation infrastructure for both residents and employees to walk, commute, and travel. This relationship between new development, an influx of residents and workers, and an additional demand for roads and sidewalks provides the nexus for an impact fee.

Nelson/Nygaard prepared a transportation fee nexus study dated November 2018 for the City of East Palo Alto to assess the fair share contribution from projected new development to fund transportation improvement needs in the City and demonstrate a reasonable and proportional relationship or nexus between the fee rate and the impact of anticipated development in compliance with the Mitigation Fee Act. The Nelson/Nygaard study results were folded into a Development Impact Fee Program Nexus Study by AECOM that provides technical documentation and nexus analyses supporting impact fees designed to fund a fair share of transportation infrastructure as well as other types of improvements including parks and trails, public facilities, and storm drainage. Hexagon conducted a peer review of the Nelson/Nygaard and AECOM reports to ensure the accuracy of the transportation impact fee (TIF) calculation and to confirm the methodology for calculating trip reduction credits.

Capital Improvement Program (CIP) projects qualifying for the transportation impact fee include all roadway and streetscape infrastructure projects as well as other transportation-related projects such as sidewalks and trails. The current list of transportation-related CIP projects total $98.64 million. It is estimated that 24.64 percent of the project cost is attributable to new vehicle trips associated with future

developments. Including a 4 percent administrative fee, the total transportation infrastructure cost attributable to new developments is approximately $25.28 million ($98.64 million * 24.64% *1.04). The unit cost per trip ($6,898) was calculated by dividing the transportation infrastructure cost attributable to new development ($25.28 million) by the projected number of PM peak hour trips associated by new development (3,665)[3]. The impact fees for various common land uses were then calculated by multiplying the unit cost per trip by the PM peak hour trip rate for each use.

The City Council adopted a Citywide Development Impact Fee Program on April 2, 2019 based on the Development Impact Fee Program Nexus Study (revised February 28, 2019)[4] by AECOM and Nelson\Nygaard. The City of East Palo Alto chose to reduce the transportation impact fee for retail uses below the maximum supportable fee burden in order to incentivize retail development. The adopted transportation impact fee schedule is presented in Table 7. A fact sheet with the City of East Palo Alto's fee schedule for the four types of impact fees and a description of fee adjustments is provided in Appendix H.

Table 7
Transportation Impact Fee Schedule.

Land Use Category	Unit	Impact Fee
Detached Accessory Dwelling Unit	Dwelling Unit	$943
Single-Family/Townhouse	Dwelling Unit	$2,358
Multi-Family Housing	Dwelling Unit	$1,775
Office / Research & Development	Square Foot	$7.33
Industrial	Square Foot	$4.77
Retail	Square Foot	$7.33
Adopted by the East Palo Alto City Council on April 2, 2019.		

Planned and Completed Bicycle and Pedestrian Improvements

This section describes the bicycle and pedestrian improvements recently completed and planned for implementation throughout the City of East Palo Alto.

Clarke Avenue – US 101 Bicycle/Pedestrian Overcrossing

A pedestrian/bicycle overpass at US 101 and Clarke Avenue was completed in May 2019 (See Figure 35). The overpass provides connectivity from the Woodland residential neighborhood southwest of Highway 101 to the rest of East Palo Alto on the northeastern side of U.S. Highway 101, including access to shopping and community centers, schools, and the regional trail system.

In addition to a Class I Pedestrian/Bicycle Overcrossing Structure over U.S. Highway 101, sidewalk and bicycle signage and striping improvements along West Bayshore Road and a new pedestrian crossing of Newell Avenue were added.

[3] East Palo Alto Transportation Fee Nexus Study, Nelson\Nygaard, November 2018, Figure 19.
[4] http://www.ci.east-palo-alto.ca.us/DocumentCenter/View/4186

Figure 35
Clarke Avenue - US 101 Bicycle/Pedestrian Overcrossing

The southern ramp of the alignment begins on the northern side of West Bayshore Road and aligns with the existing sound wall before crossing the highway. The northern ramp of the alignment has a reverse “S” curve that terminates on Clarke Avenue (adjacent to the entrance of Home Depot). The project includes a connection to and crossing of West Bayshore at Newell Road with a new traffic signal with bike/pedestrian crossing lights and a high-visibility crosswalk. On the northeast side, the overcrossing ramp bridges East Bayshore Road and connects to Clarke Avenue at an existing sidewalk near a Home Depot delivery entrance. A new high-visibility crosswalk was implemented at the driveway, and a new high-visibility crosswalk with median refuge island was implemented at the crossing of Clarke Avenue. Clarke Avenue from East Bayshore to Tinsley Street has been signed and marked as a Class I bicycle path.

Addison Avenue Complete Green Street

The planned project encompasses the entire length of Addison Avenue (2,000 feet) between East Bayshore Road and Bay Road (See Figure 36). The project will improve pedestrian safety by building sidewalks along both sides of Addison Avenue. Curb ramps that meet current ADA standards will be provided at all comers. Pavement marking and signage will be provided to designate the road as a Class III bike route. Curb extensions will be incorporated at intersection comers as well as at intermediate mid-block locations. These will replace the speed humps that currently exist. The curb extensions will enhance pedestrian safety by improving pedestrians' visibility to approaching vehicles as well as by slowing vehicles on Addison Avenue. The project is intended to enhance safety and accessibility for children to walk and bike to neighborhood schools.

Construction of the Addison Avenue Complete Green Street project will be funded by a $250,000 grant from the City/County Association of Governments (C/CAG) along with $1.35 million in grant funding from the Affordable Housing and Sustainable Communities (AHSC) Program of the California Department of Housing and Community Development. A 15 percent match ($37,500) of the C/CAG Grant will be provided by the City of East Palo Alto’s Measure A funds.

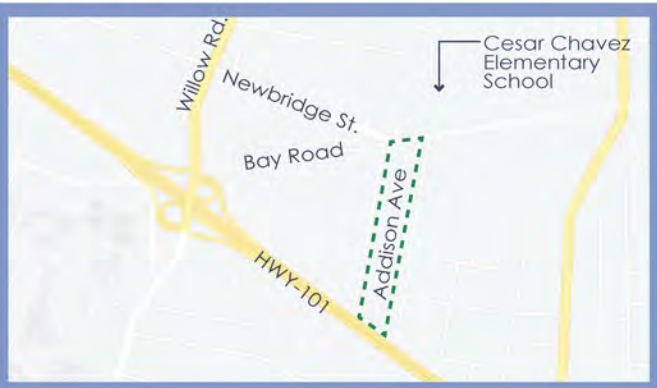
Clarke Avenue Sidewalks

AHSC grant funding also will be used to construct approximately 200 linear feet of sidewalk in accordance with the City's ADA (Americans with Disabilities Act) Plan along Clarke Avenue between Tinsley Street and O’Connor Street (See Figure 37). This pedestrian improvement will connect housing to Brentwood Elementary School.

University Avenue/US 101 Interchange Modification Project

The City of East Palo Alto, in cooperation with Caltrans and San Mateo County Transportation Authority (TA), is working to construct safety and traffic operational improvements at the University Avenue / US 101 Overcrossing (See Figure 38). The project will include a bike and pedestrian overpass and modifications to the southbound University Avenue off ramp to widen it to add a turn lane.

LOCATION



FUNDING

Construction is funded by a $250,000 grant from City/County Association of Government (CCAG) of San Mateo County, along with$1.35 million in grant funding from the Affordable Housing and Sustainable Communities (AHSC) program of the California Department of Housing and Community Development. A 15% match ($37,500) of the CCAG grant will be provided by the City of East Palo Alto's measure A funds.

SAFE ROUTE TO SCHOOL

Enhance safety and accessibility for children to walk and bike to neighborhood schools.

GREEN INFRASTRUCTURE

Absorb and slow the flow of stormwater runoff from paved surfaces to decrease flooding and remove pollutants before runoff enters creeks or the bay.

CONTINUOUS SIDEWALK | ADA CURB RAMP | CURB EXTENSIONS | HIGH VISIBILITY CROSSWALKS

PROVIDE SAFE PASSAGE • SLOW TRAFFIC • SHORTEN CROSSINGS

BIKE ROUTE SIGNAGE | BIKE SHARROW | SHARK TEETH MARKING | NEW ASPHALT

SHARE THE ROAD • IMPROVE VISIBILITY • REPAIR ROADWAY

PERMEABLE PARKING | PERMEABLE CROSSWALK | STORMWATER PLANTER | NEW CURB & GUTTER

REDUCE & SLOW RUNOFF • FILTER POLLUTANTS • IMPROVE DRAINAGE

Source: http://www.cityofepa.org/DocumentCenter/View/4559

Figure 36A
Addison Avenue Complete Street Project

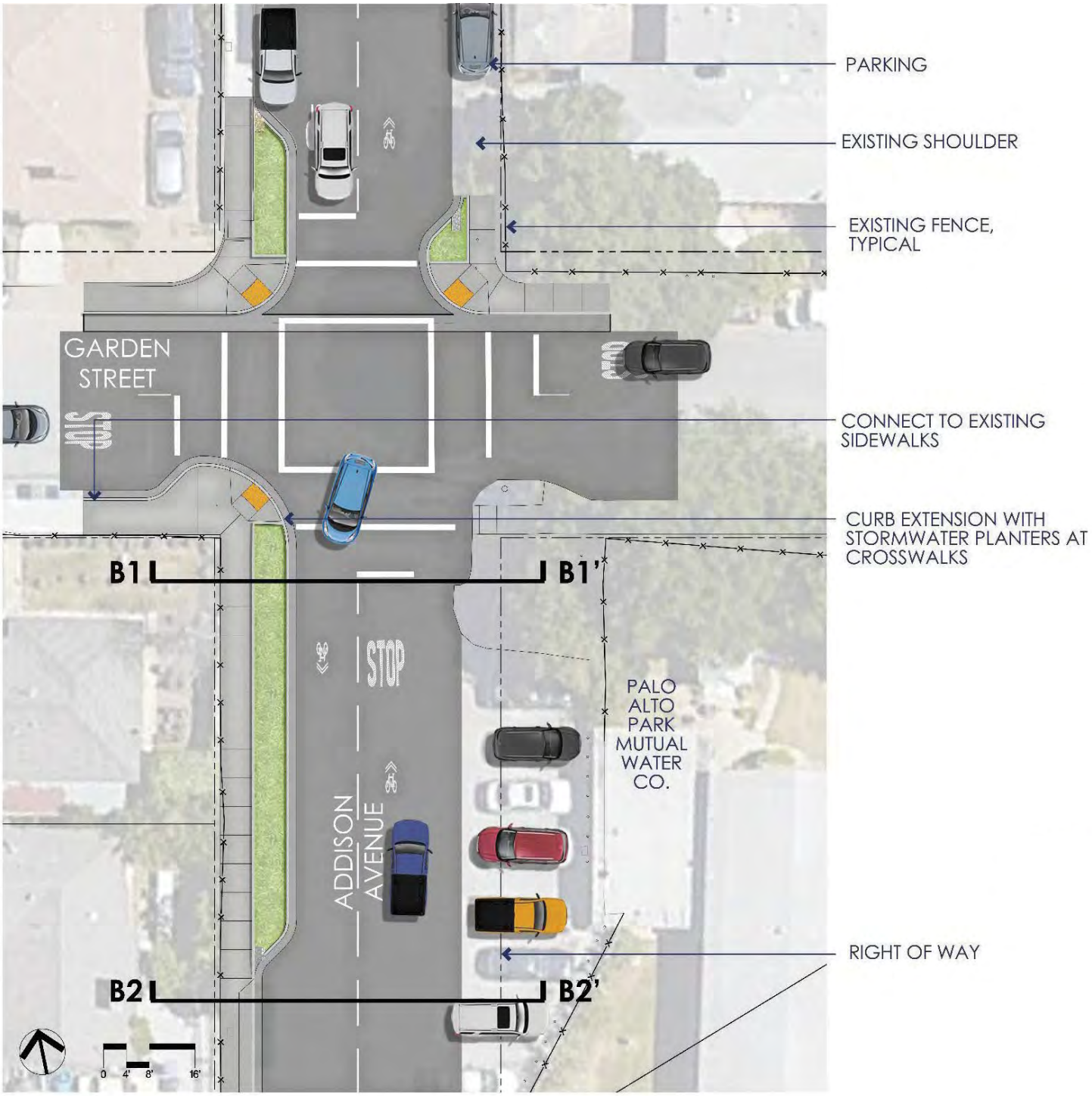


Figure 36B
Addison Avenue Complete Street Project

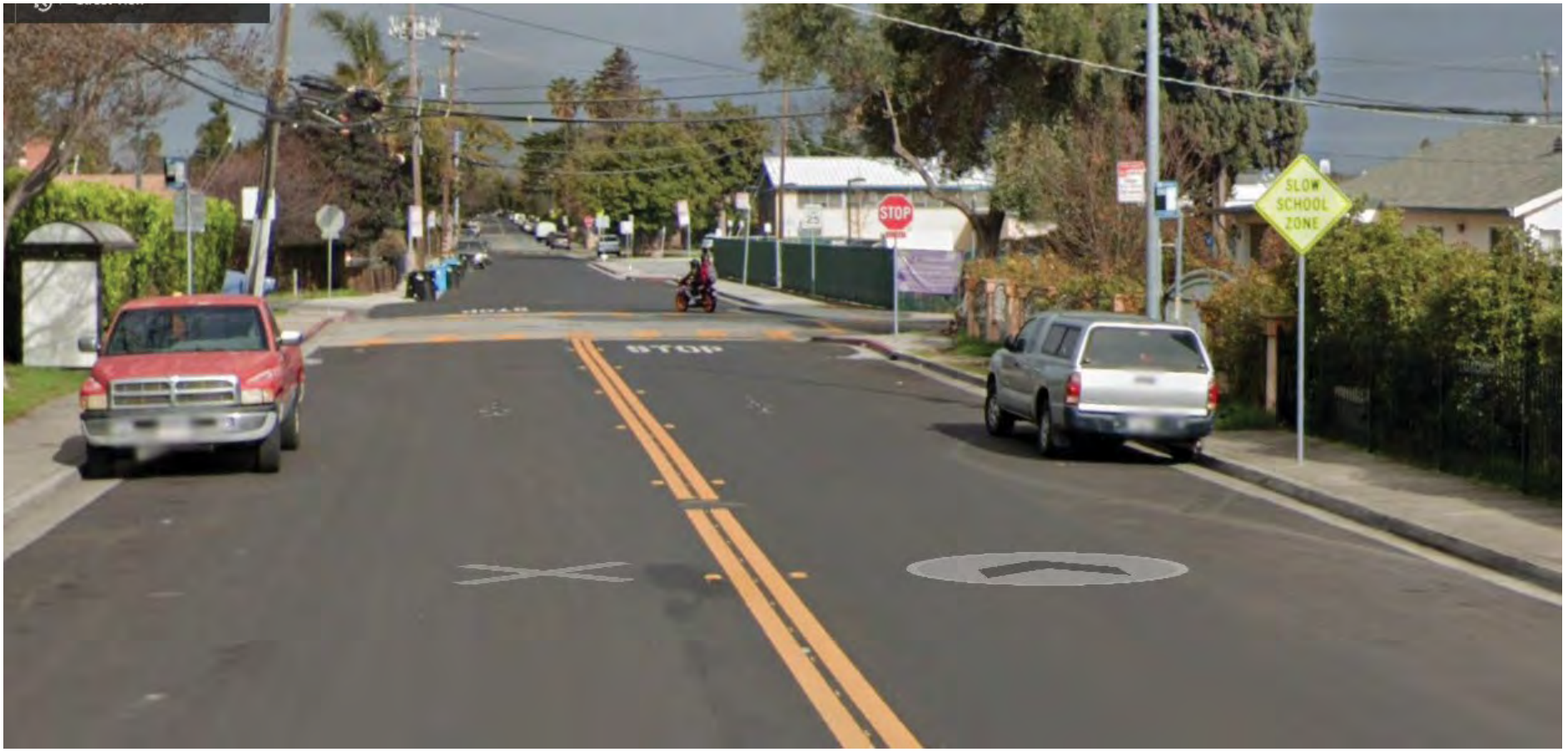


Figure 37
Clarke Avenue Sidewalks

Source: http://www.cityofepa.org/DocumentCenter/View/4559

Figure 38
University Avenue/US 101 Interchange Modification Project

Bay Road Phase II and III Improvement Project

The planned project consists of roadway improvements between Clarke Avenue and Cooley Landing to accommodate new and wider sidewalks, bike lanes, ADA accessibility, lighting, landscaping, and street furniture (See Figure 39). In addition to the improvements identified above, this project will include improvements to existing infrastructure and undergrounding of overhead utility lines. The project will enhance pedestrian and vehicular safety and create a "gateway" into the Ravenswood Business District. The intent is to create a walkable downtown with a mixture of residential, retail, commercial, and community uses that create a pleasant environment with street activities.

A contract for construction of the Phase II and III project was awarded in January 2020. The project is expected to be completed within two years.

San Francisquito Creek Joint Powers Authority (SFCJPA) Flood Protection Project

The SFCJPA Phase 1 project, completed December 2018, increased the creek flow capacity from San Francisco Bay to US 101 by widening the creek, excavating sediment, constructing levees and floodwalls, and creating new marsh habitat. The project also improved connections for pedestrians and bicyclists between the creek and adjacent marsh by adding a boardwalk at the Friendship Bridge between East Palo Alto and Palo Alto as well as resurfacing Bay trails (See Figure 40).

Ravenswood Bay Trail Project

The Midpeninsula Regional Open Space District is completing a 0.6-mile gap in the San Francisco Bay Trail in East Palo Alto between University Avenue and the Ravenswood Open Space Preserve. The project also will resurface the existing Bay Trail segment adjacent to the Ravenswood Open Space Preserve between the new trail segment north of the University Village neighborhood and Bay Road (See Figure 41). The new trail segment will provide improved access to the Bay, recreational opportunities for hikers, joggers, and bicyclists, and commute alternatives for cyclists. The project is funded by Midpen Measure AA funds with additional funding from the Association of Bay Area Governments/Coastal Conservancy, County of San Mateo Measure K, Santa Clara County Measure A, the California Natural Resources Agency, and Facebook. Project construction is expected to be completed in summer 2020.

East Palo Alto Bicycle Transportation Plan Improvements

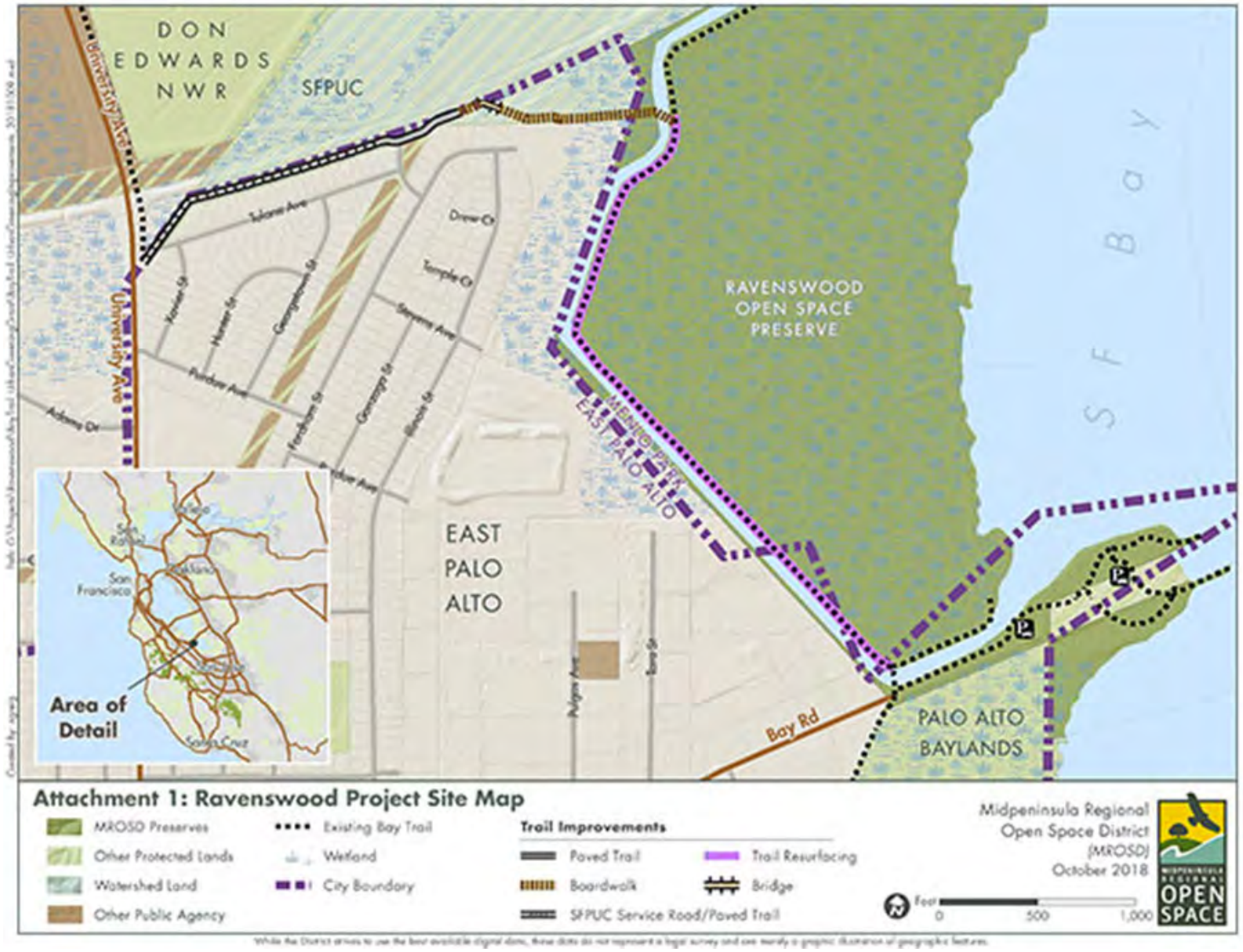
In 2017, the City of East Palo Alto adopted the Bicycle Transportation Plan to improve the bicycling environment in East Palo Alto. The Plan provides for a recommended citywide network of bicycle paths, lanes and routes, along with bicycle-related programs and support facilities. In June 2019, the City of East Palo Alto along with Eden Housing, EPA CAN DO, and San Mateo County Transit District (SamTrans) were awarded an AHSC grant that is expected to fund up to 8.6 miles (1.5 miles of Class II and 7.1 miles of Class III) of bikeways per the City's Bicycle Transportation Plan (See Figure 42) along with other projects including affordable housing, transit infrastructure improvements, and new electric buses for a future express bus route linking East Palo Alto with the San Bruno BART. The new bicycle facilities will provide connectivity to existing bike trails and a safe bikeway system throughout the City. Construction on the bikeway improvements is anticipated to begin in 2021 and conclude in 2023.

Source: https://www.ci.east-palo-alto.ca.us/DocumentCenter/View/43

Figure 39
Bay Road Improvement Project

NORTH
Not to Scale

Figure 40
SFCJPA Flood Protection and Trail Resurfacing Project



Source: https://www.openspace.org/our-work/projects/ravenswood-bay-trail

Figure 41
Ravenswood Bay Trail Project

Source: https://www.ci.east-palo-alto.ca.us/DocumentCenter/View/3496

Figure 42
East Palo Alto Bicycle Transportation Plan Improvements

NORTH
Not to Scale

Mobility Study
Technical Appendices

June 25, 2020

Appendix A
Meeting Summaries and Resident Survey Results

NOTES FROM 9/27/17 COMMUNITY MEETING

Public Forum – Mobility Study
September 27, 2017
6:30 PM – 8:30 PM

Specific Area Concerns for Residents:

- Weeks Neighborhood
  - Weeks & Runnymede
    - Plethora of garbage, human waste, spread of diseases ✓✓
    - RVs parked on Weeks for long periods of time
    - Some RV residents are participating in illicit drug activity
  - Runnymede & Elementary School
    - It currently takes 20 minutes to get in and out of the City
  - Weeks St to Bay Trail
    - Cannot walk to Bay Trail
    - Semi trucks on Pulgas Ave block sightview in order to make a safe turn
  - Bay Road
    - Overflow cars from towing yard are being parked on the street
  - Bell Street
    - Terrible traffic, speeding
    - People park at corners and block sight distance
- Willow Neighborhood
  - Complex at East O'Keefe St
    - Residents cannot park in assigned parking space and must sneak into Palo Alto to find parking
    - Airbnb/short term rentals bringing in additional vehicles
- Palo Alto Park Neighborhood
  - Bell Street
    - This area has non-owners living in the added units/homes (rentals)
  - Addison Ave
    - Lack of communication led resident to believe that vehicle was stolen when in fact it was towed away
    - Vehicles are double parking and does not allow enough space for vehicle to pass
    - This area does not have any sidewalks or speedbumps, vehicles speed and cause collisions
    - Boats are taking up parking spaces
  - Roads are not wide enough, cars park on the sidewalk forcing people to walk on the street
  - People park in front of the stores because stores do not have adequate parking. Sight distance issue going onto East Bayshore Road
    - Service trucks are forced to park in the middle of the road because stores do not have a loading area
- Gardens Neighborhood
  - Camellia Dr
    - Drag racing
    - People do not move their cars for street sweeping

    - Azalia Dr
        - Abandoned vehicles
        - Road width is very narrow that only one car can get through when cars are parked on both sides
    - Wisteria
        - Terrible air quality due to vehicles passing through EPA
- University Square Neighborhood
    - Baines St
        - Notice and influx of abandoned cars in the area such as junk cars and large commercial vehicles
- Woodland Neighborhood
    - Many residents park over to Palo Alto due to lack of available parking
- Ravenswood Business District Neighborhood
    - Traffic will be impacted significantly with the development on Bay Road, there will be a large influx of commuters
- Kavanaugh Neighborhood
    - Accident prone
    - Visibility issues of signage
- University Village
    - ADA issue because vehicles park on sidewalk
    - Landlord do not have any rights to enforce amount of vehicles tenants are allowed to have

General Concerns:

- Garbage, dumping, human waste ✓✓✓
- Traffic to get in and out of City ✓
- Speeding ✓
- Cars parking on sidewalks ✓
- Sight Distance due to cars parked at corners, double parking (illegal parking)✓✓
- Overcrowding or units/homes ✓✓✓✓
    - Each adult needs to have a vehicle in order to get to their jobs
    - Nonowners living in homes ✓
- Abandoned or Unused vehicles, RVs not moved for long periods of time
    - Vehicles currently can be cited if not moved after 72 hours, but many people just move the vehicle just enough to comply with the enforcement✓
- Cars do not move for street sweeping
- Regional/Neighboring City
    - Neighboring cities that do not allow overnight parking have overflow to East Palo Alto. ✓✓
    - Must park in neighboring cities because not enough EPA parking
- Overflow from legal/illegal businesses parking in the public ROW ✓✓
    - Illegal businesses are operating from homes that bring in vehicles into the community that utilize other residents' parking spaces.
- Lack of police response ✓
    - PD should also not be speeding
- Recology/Trash Pick up

    - Schedule is not accurate forcing residents to place trash bins one night or two nights prior to pick up ✓
    - Residents should be fined for not removing their trash bins within 24 hours of trash pick-up, but also ensure that it doesn't penalize residents who work long hours
- Safety
    - Lack of lighting within City
    - Walking within City

Suggestions/Ideas:

- Studies, the City needs to have data in order to analyze and draw conclusions ✓
    - Amount of vehicles in the City
    - Parking study
    - Creating a new road at the back side of Illinois
    - Parking should be analyzed per neighborhood, not all neighborhoods experience the same issues
- One way streets in University Village, Gardens, Palo Alto Park neighborhoods ✓
- Only allow parking on one side
- Red curb corners as a traffic calming measure ✓
- Designated RV parking just for existing EPA residents, not for outside use
- Find incentives for alternative transportation
- No right turns onto University Ave from internal streets during certain times, similar to north of Bay Road.
- Develop Regional transit
- CSA's should record license plates and find out where they live, where the car is registered
- Traffic is mostly due to Facebook, Stanford, and other tech companies, find a way to have them fund some of the infrastructure
- Most cities have a traffic division, the City should establish a large traffic division to maintain the parking and traffic within the City
- Speed bumps, current process requires residents to gather signatures for a petition but the City should be the one doing this leg work
- Stop sign at Pulgas Ave and Weeks St
- Underutilized Lots/Areas ✓
    - Create a private agreement with residents that allow parking and provide shuttling to private garages on empty lots
    - There are currently "No Parking" signs where there could be potential parking
- Find a way to charge commuters using University Avenue as a through street
- Develop a tax for Airbnb/short term rentals
- Enforcements
    - When residents add a second unit, the owner must also reside on the lot/unit. Absentee landlords should not be allowed and when such occurs, the landlord should pay an impact fee
    - City should enforce how many people are allowed to reside in homes
    - Increase in ticketing for vehicles that are not moved for street sweeping ✓
        - Source of income for the City
    - Increase towing ✓
    - Limit oversized vehicles
    - Boats should be required to be parked on-site and not on public ROW

    - Vehicles should be cited for corner, perpendicular, parallel parking at the corners ✓
    - No semitruck in residential areas
    - Ralmar Ave near school needs additional enforcement for no parking
- When residents/developers consider building, they should account and plan for parking on-site and should consider 3-4 cars per household instead of the existing 2.5 cars per household ✓✓✓✓
- Technological
    - Explore whether interior streets can be delisted from mapping apps ✓
    - Research parking technology
- Develop incentive program for people to report long term parked vehicles
- Develop better signal timing, since traffic is usually one way
- Develop a program that benefits the City when neighboring cities want to park in EPA
- Permit parking ✓✓✓✓✓✓✓✓
    - Raise revenue
    - Neighborhood stickers
- Provide bicycling alternatives ✓
- Striping ✓✓

Notes from April 16, 2019 City Council Meeting

- **Abrica**:
  - 1/3 of the City's population is on the West side, but the mitigations are blank on the map in that area
  - 2001 Study left the West side almost blank in terms of challenges, recommendations
  - Woodland needs to be studied more to look for solutions (Adrian can help with this)
  - Newell at University-speed humps
  - *Come back within a month with some actions to provide speed calming
  - Don't leave any area of the City blank-Woodland area especially is very dense
  - Has there been an estimate of the number of cars per home (answer: we looked at Census data which was incomplete, but the survey asks this question and should provide some good data)
  - Residential Permit Parking thoughts:
    - Empty spaces are available in different locations at night and in the shopping center
    - West end hotel (Four Seasons) parking could yield extra spaces
    - Spot Hero or other apps could be used to allow people to pay for parking in private lots that would otherwise go unused.
    - Reach out to businesses. Business people may have some options to suggest.
    - *How do we get a more representative sample of all neighborhoods?
  - Menlo Park has several speed humps to slow traffic. There are 0 in Woodland neighborhood (Kamal: Woodland is a bus route which limits traffic calming measures can be used but will investigate.)
  - It is very dangerous (trucks, cars, busses, passenger traffic from other areas) where he lives and these issues need to be addressed
  - West side can't be that blank-*look into this
  - Signal controllers at traffic signals at four gateway intersections
  - Study: no measurements of speed-but message about cut through traffic, which is the metric in the scope of services
  - Internet partnerships are critical to success
  - TMA is important as is working with school district. Parents are fighting for space and Charter schools are part of the cut through traffic problem. Many charter schools locate in East Palo Alto.
  - Long term, internal education in the City is important. Things are made worse by schools and must be addressed within the community structure.
- **Moody**:
  - Trucks only, not busses-eliminate truck routes (answer: Kamal indicated that this is being done in the near future)
  - Look at steps to take for congestion pricing (example: Lombard Street in SF). Identify what the local steps are
  - Number of cars: 30,000 each direction at peak hours on University (Kamal)

- Traffic patterns (sp?) Where do they land? Do we know? Want to see/understand resident traffic patterns along with cut-through traffic.
- TAZ/Red Strips: Gateway to gateways: grow large and unspecific
- Local residents: What is the number of local residents trying to move to a destination during peak times?
- *Share with community-identify local traffic patterns to Bayshore and 101

- **Regina Jones:**
  - Identify the measures that have the greatest impacts and lowest costs
  - Calling back dates from years ago
  - The community now has an appetite for quick fixes and responses
  - (Kamal) Gateway monitoring can be fast/evaluate in the Summer
  - (Sean) Staff can identify and bundle public improvements, come back with estimates, costs and relative timelines
- **Romero**:
  - Let's see about ABC
  - Act on a fully formed document with cost estimates, Measure A, Measure W: May not fund these projects
  - Can only do congestion pricing as part of a regional solution
  - Identify other projects that can be leveraged
  - Incorporate outcomes with safe routes to schools projects
  - Increase focus on pedestrian solutions/bike solutions-not just for residents but for commuters, as well
  - Staff is only focusing on the asphalt portion of the study
  - Remember Bay train, 2nd Pedestrian overcrossing
  - Final report needs to include bicycle circulation, pedestrian safety (e.g., projects currently underway)
  - There are six issues:
    - The TDM should increase by the proposed 40%
    - Commute.org is a valuable resource and could provide a sub-regional TMA as a resource
    - We need daily trip county monitoring
    - Can the TMA (& TDM requirements) be expanded to include schools?
    - Leases violate TDM implementation efforts
    - 100 Employee threshold is high, consider a lower threshold
- Michelle H.: Indicated that there will be more information on bike/pedestrian when we come back to City Council
- Michelle H. indicated that there are additional measures besides what the City is doing alone. Some are with other cities; some are other agencies, etc.
- **Additional comments from Council/Mayor**:
  - Not enough responses to the survey yet compared to City's population. Shoot for 1% response rate (300-400 responses total). % of responses from Woodland neighborhood is low compared to proportion of City residents who live in that area. Distribution of

responses is important to reflect all resident's views/concerns. (Answer: on-line survey has been live for only about 1 week so far. Online survey will remain open until May 31st. Susan welcomes suggestions on improving outreach to specific areas.)

- Question using survey data to quantify number of vehicles per household. Suggest other sources (e.g. Census).
- Research source of parking restriction adjacent University Square Park (Was it part of original development agreement? Did Police Department request for public safety reasons?)
- Participation in TMA should be mandatory.
- Penalties for non-compliance with TDM goal should be high to be an effective incentive.

- **Public comments**:
  - First speaker (Jack Bederman – sp?):
    - Affordable housing has an impact on outcomes and needs to be considered.
    - There is a parking problem.
    - Parking enforcement staff should grow (self-funded by ticket revenue)
    - Adjust pay scales for EPA police department & parking enforcement
  - Court Skinner
    - EPA should be "inconvenient" to people in cars
    - We are too focused on cars (e.g. 1-2ay flow is only inconvenient for cars)
    - Streets should be a source of wealth for cities (e.g., University Avenue in PA)
    - Presentation: Black on black is not a good presentation format (consider revising)
  - Michael Mashack
    - Traffic is a regional problem
    - Look at partnering with cities nearby: share solutions
    - *Euclid/Donohue –simple solution (Talked to Adrian about this solution)
    - Don't look at local EPA drivers, look at the commuters for solutions
  - Elizabeth Fabian
    - GPS: traffic is directed to locations that can't handle the sheer volume of traffic
    - Willow/University-there are 18 pathways
    - Cars can't get out of Woodland
    - Don't remove parking
    - Work within the region, cities, businesses and towns. This is not an EPA problem, it is a regional problem.
  - Gail
    - Capital, office where Amazon is-huge busses turn left on Cooley which closes off Capital all together, creating problems
    - Amazon busses should face same restrictions as trucks
    - Dumbarton+101+Oregon Expressway path is problematic
    - Opposed to additional residential
  - Mr. David Chang

        - Focus on creating Jobs and affordable housing. Allow residents to make money by working out of their homes.
    - Michelle
        - When she lived on the West side, her children could bike. Now she lives on the East side and her kids cannot bike because it is unsafe.
        - When the children take the bus, they are sometimes 2 hours late to school because of the traffic impacts
        - Prioritize alternative transportation and what can be done and then take action
- **<u>Council direction</u>**:
    - Integrate suggested recommendations into Mobility Study recommendations
    - Update the DRAFT TDM and present (May 21) for City Council review and recommendations
    - Abrica: positive, a lot of progress
    - *Provide estimates for short term items-try to do this to get into this year's budget cycle
    - Moody: Respond back to community-the POC provides "legs to it"
    - Parking study: King Street, West Side Village: Host conversations on Parking in the community where the site is comfortable and accessible to maximize a positive, meaningful conversation (Moody offered to assist)
- ***Mayor***:
    - Many residents are impacted by the lack of mobility in the community
    - She is looking forward to having staff, consultant coming back with cost estimates and a plan
    - Parking enforcement: make this a priority now
- ***Moody/Abrica***:
    - We need more conversation with the school district
    - By working together, we can leverage resources and come up with more favorable impacts and outcomes
    - Busses, kids to school is a priority-figure out how to do this efficiently and make everyone safe

SUMMARY OF JUNE 5, 2019 GARDENS NEIGHBORHOOD PARKING MEETING

Participants who attended the meeting were asked to indicate their support or lack of support for specific recommendations.

Below is the table of responses.

RECOMMENDATIONS	SUPPORT	DON'T SUPPORT	COMMENTS
Convert to one-way flow and prohibit parking on sidewalks		xxx	1 way=speedways for speed demons Parking in Gardens not broken, legacy 1950's Fire trucks can pass currently; pedestrians in new SJ condos share Minimum 2 guaranteed/house
Neighborhood on-street parking, permit program	xxxxxxxx	xx	
Remove overnight parking restrictions		xxxxxxx	
Shared use of church/business/park parking lots	xxxx	x	
Permit Program: Max 2 permits per dwelling unit	x		
Permit Program: Allow SF homes to block their own driveway	xxxxxx	x	
Permit Program: Costs $75 per year 1st permit $150 per year second permit	xxxx	xx	Higher cost/yr. needed
No on-street parking from 6 pm to 8 am except with permit	xxxxxxx		
20- 1 day permits per dwelling unit at $2 each			

In summary, residents support:

- ✓ A neighborhood on-street parking permit program
- ✓ Shared use of church/business/park parking lots
- ✓ A parking permit program that would allow single family homes to block their own driveways
- ✓ A permit program that has an estimated cost of $75 per year for the first permit and $150 per year for a second permit
- ✓ No on-street parking from 6pm to 8 am except with a permit

Residents did not support:

- ✓ Removing overnight parking restrictions
- ✓ Converting one-way flow and prohibiting parking on sidewalks

Additional discussion should be initiated on the following:

- ✓ Whether or not there should be a maximum of two permits per dwelling unit
- ✓ Whether or not there could be a provision which allows 20-1 day permits per dwelling unit at $2 each (this would allow for visitors and caregivers to get temporary permits as needed-costs could be evaluated and changed if supported by residents)

SUMMARY OF JULY 17, 2019 PUBLIC WORKS TRANSPORTATION COMMITTEE MEETING ITEM 6.1 - MOBILITY STUDY UPDATE

Nine residents provided comments on a variety of Mobility Study Topics. In summary, residents spoke in support of the following measures:

- ✓ One-way traffic flow pattern in the Gardens Neighborhood (1 resident)
- ✓ More/better enforcement (3 residents)
- ✓ Exemption for EPA residents from tolls/congestion pricing fees
- ✓ School bus transportation for EPA schools
- ✓ Prohibition of vehicle parking on sidewalks on streets with rolled curbs
- ✓ Shared use of church/business parking lots (2 residents)
- ✓ Permit parking (2 residents)
- ✓ Permits that allow only residents to park in front of their house
- ✓ Daytime parking restriction (parking allowed on only 1 side of the street)
- ✓ Speed humps (2 residents)

Residents spoke in opposition to the following measures:

- ✓ Eliminating truck route
- ✓ Shared parking at churches/businesses (2 residents)
- ✓ Permit parking (2 residents)
- ✓ Facebook Willow Village development in Menlo Park
- ✓ One-way traffic flow pattern in the Gardens Neighborhood (3 residents)

Residents expressed concerns or had questions about the following issues:

- ✓ Request for City to post details of proposed traffic/parking measures online
- ✓ Parking violations - double parking, blocking driveways (3 residents)
- ✓ Sidewalks are not designed to support vehicle parking
- ✓ School traffic is a big part of the problem
- ✓ Overcrowding from Airbnb, duplexes, apartments, garage conversions
- ✓ Permit parking fees should be higher to affect behavior
- ✓ Permit parking fees are too high (2 residents)
- ✓ New development is causing traffic and parking problems e.g. Amazon gateway (2 residents)
- ✓ Enforcement of permit parking program is difficult
- ✓ Safety when walking to/from shared church/business parking lots at night

PWTC Commissioners provided the following comments:

- ✓ Consider overnight shared use of City owned parking lot on Tate and school lots (2 commissioners)

- ✓ Better enforcement needed (4 commissioners)
- ✓ Use of EPA streets (e.g. Saratoga Avenue) by non-residents from Menlo Park & Palo Alto (2 commissioners)
- ✓ Signage is not effective
- ✓ Support working with online navigation apps to discourage use of local streets (2 commissioners)
- ✓ Oppose portable changeable message signs
- ✓ Support speed humps (2 commissioners). Suggest speed hump on Runnymede Street by school
- ✓ Will insurance cover damage to vehicles parked in front of driveways?
- ✓ Concern about Facebook Willow Village traffic on University Avenue
- ✓ Support daytime parking restriction (parking allowed on only 1 side of the street)
- ✓ Encourage residents to dispose of non-operable vehicles
- ✓ Need to reduce single-occupant vehicles (SOVs)
- ✓ Make University Avenue a source of wealth for EPA like in Palo Alto
- ✓ Support 1-way traffic to allow pedestrians the use of sidewalks to reduce the City's liability
- ✓ Daytime parking restriction with pedestrian use of sidewalk on one side of the street would cause jaywalking
- ✓ Consider lower priced options for enforcement than police officer

City of East Palo Alto

Memorandum

To: Kamal Fallaha, Public Works Director
From: Susan Barnes, Mobility Project Manager
CC: Michelle Hunt, Hexagon
Subject: *October 8, 2019 City Council Study Session on Mobility Study and Recommendations and Transportation Demand Management Ordinance including next steps*

Attached is the staff report from the October 8, 2019 City Council Study Session. After listening to public comments regarding the Mobility Study Update and Recommendations, City staff and consultants provided a PowerPoint Presentation on the Mobility Study (Michelle Hunt) and Transportation Demand Management Ordinance (Douglas Kim).

City Council direction provided direction on the questions asked during the presentation.

A summary of those responses/direction follows below:

Topics for Council Discussion: Traffic Calming		
Question	Council Direction	Comments
1. Meter traffic at key gateway intersections?	Yes 4:1	Meter gateways (get more data) where residents are impacted most

2. Left turn restrictions?	Yes	Left turn restrictions where needed
3. Curb extensions/bulb outs/median islands?	Yes 4:1	Consider bulb outs especially. Curb extensions and median islands could be more problematic
4. Speed humps?	Yes	What is possible? Measure W $. Complete Streets. Should this be a locally driven process? *Would the Police chief be in support?
5. Eliminate University Avenue truck route south of Bay Road?	Yes	Unless local trucks
6. Speed feedback signs?	Yes	Collect additional data through signs-purchase this type of sign
7. Additional funding for traffic enforcement?	Yes	Could initially begin with parking enforcement and then expand to moving violations-would keep costs of employees down. (Ideas: focus on school neighborhoods. Suggestion: Senior ambassadors)
8. Local tolls/congestion pricing? a. Invite other entities to participate in the study? b. Staff develop a draft work scope and budget?	Yes Yes Yes	Need more information. What is the difference to the City between a toll road and congestion pricing? What is happening in other jurisdictions-best practices?
9. Reversible lane on University Avenue?	Unsure	Need more information-are there examples from elsewhere?

		Cost out what a reversible lane would cost.
10. Transit priority lane on University Avenue	Yes	HOV? Would have to take out trees/vehicle on University Avenue. MTC/SAMTRANS could support. Could include congestion pricing.

Topics for Council Discussion: Residential Permit Parking		
Question	Council Direction	Comments
1. Clear sidewalks of parking?	Yes, can't continue to allow parking on sidewalks. This is what is needed for public safety and what the City should do-have to figure out best path	Additional neighborhood outreach needed. Be proactive-especially in Gardens, direction is not clear. Educate residents that parking on sidewalk is illegal. Present 2 options: remove parking on both sides of the street with 1-way traffic flow or implement daytime parking restriction allowing parking on 1 side and 2-way traffic flow. Explain how pkg restriction would work with street sweeping.
2. Gardens Neighborhood Permit Parking Program?	Yes	. Permit revenue to fund parking enforcement. Staff to expand upon application process, income qualification, etc. Research Phil Ting's bill (AB68) to determine

		law regarding provision of parking permits to ADU's (refer to staff memo on this subject).
3. Allow Construction of Additional Off-Street Parking?	Yes (if in combination with Permit Parking)	Research what this would look like. Consider storm water flow… impact of increasing impervious surfaces and potential need for permeable pavement or retention of storm water. EPA Development Code, Title 18 (Sections 18.30.080.A.3 and 4) state "It is unlawful to park any vehicles in any front yard area of a single-family residential use other than the legal driveway." and "Paved areas within the front yard, including the driveway and an walkways, shall not exceed 50 percent of the front yard area with the remaining area landscaped with live plant material. The use of pervious materials for driveways… is strongly encouraged." Speed bump on University and Azalea?
4. Allow on-street parking in front of resident driveways?	City attorney stated that California Vehicle Code may prohibit this. (SF can get	Attorney to explore and confirm.

	around this since it is a charter city.)	
Additional funding for citywide parking enforcement?	Yes	

The police chief and city attorney pointed out that it is not legal to park in a private driveway according to State Law section 22500.e1. This option will be removed. EPA is not a charter city which is why San Francisco (SF is a charter city) is able to do this, but EPA cannot allow this.

Key Themes from City Council Comments:

- A great deal of information was presented, it would be good to digest information and then come back
- Council needs to digest community input and then come back
- More detail on the survey would be helpful (e.g., who exactly answered the survey?)
- Left hand turns make sense, enforcement is the only thing that will make them work effectively
- Why was the Gardens neighborhood chosen as the pilot? (explained by staff) Identify how long the pilot will be
- Cost and applicability of the permit parking needs to be modeled and put in place including community input-affordability is a key component for residents
- Tolls roads vs. Congestion pricing-this needs to be fleshed out and a plan needs to be put in place to consider implementation
- Concur with staff that more outreach needs to be done with development community
- Do we have numbers on bus ridership by EPA residents? Can we get these?
- "Line of sight" (Gloria Way) can impact decisions
- Costs needed for all proposed mitigations (Left turn signs, enforcement, speed calming measures, parking on one side changes)

- Do the small short-term things first
- Use StreetLight data and other data resources ensure implementation of actions/mitigations that will have the most impact on mobility
- Parking in driveways may not be allowed (discussed briefly above)
- It is hard to get people to use bikes when they don't feel safe
- Feasibility of reversible lane-cost, street width, sampling of streets where this would work
- Trash can enforcement needs to commence asap
- 72-hour notice requirements need to be met and then enforcement needs to start-this in an equity issue
- Truck route enforcement is needed
- Could be some issues with some the left turn lanes
- Woodland Avenue is confusion. The south side has cut through traffic and the north side inhibits cut through traffic (Willow ad University is a bottle neck) More signage on Woodland would be helpful University to Newell has 2/3 cut through traffic
- A conversation should be initiated with Menlo Park and Palo Alto regarding enforcement and determine how to leverage limited resources
- Speed humps added to O'Connor/Pulgas?
- Revisit the off-site parking at the Churches, even though there hasn't been a positive response thus far (include the School District and Boy's and Girl's Club)
-

Key Themes from Public Comments:

- Gardens resident believes walking is not practical, suggests continuing to allow vehicles to park on the sidewalk
- Gardens resident expressed opposition to permit parking program if it doesn't provide a reserved space for residents
- One-way streets may have safety concerns
- Parking permits are regressive and make renters who are mostly parking on the street pay more than their fair share

- Facebook expansion will have a net negative effect on nearby EPA residents
- Enforcement is critical—therefore people cut through the City and park wherever they wish
- Garbage cans need to be regulated---people leave them out more than 24 hours and often leave them out to hold a parking space (Enforcement should start immediately
- Sidewalks need to be freed up for pedestrian and safety issues
- The survey and meetings have been helpful to gather input, but it is critical that staff continue to reach out and hear from impacted EPA residents and Gardens community (regarding parking)
- One-way streets could help free up sidewalks and make them safe for pedestrians and disabled and children
- Permits for parking should only be for EPA residents to ensure that they have a place to park
- Need to focus on schools-more walkability, red curbs?
- Start daytime parking restriction at 7 AM to benefit students.

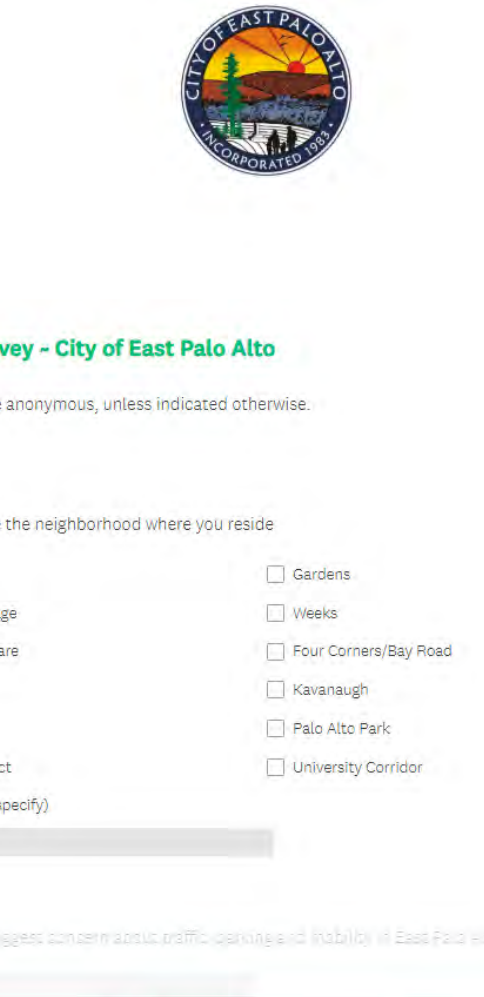
Council and public comments are not repeated if they are incorporated in the tables above.

Next Steps:

1. Return to City Council with Final Report on Mobility Study including detailed recommendations/cost estimates
2. Cost out reversible lane as an option (Kamal has another approach)
3. Additional outreach to Gardens neighborhood to add input regarding proposed parking pilot program, costs, etc.
4. Revisit churches to gauge possibilities for off-site parking
5. Add additional Dumbarton Corridor recommendations
6. Add information from StreetLight data gathering and queries requested as part of Manzanita talks
7. Provide estimate from Hexagon on costs for congestion pricing/toll road

8. Other items included as part of conversation with Hexagon on November 20, 2019

Community Input



Mobility Survey - City of East Palo Alto

All responses are anonymous, unless indicated otherwise.

1. Please indicate the neighborhood where you reside

- [ ] Ravenswood
- [ ] University Village
- [ ] University Square
- [ ] Willow
- [ ] Woodland
- [ ] Gateway District
- [ ] Other (please specify)
- [ ] Gardens
- [ ] Weeks
- [ ] Four Corners/Bay Road
- [ ] Kavanaugh
- [ ] Palo Alto Park
- [ ] University Corridor

0 of 26 answered

Citywide Resident Feedback

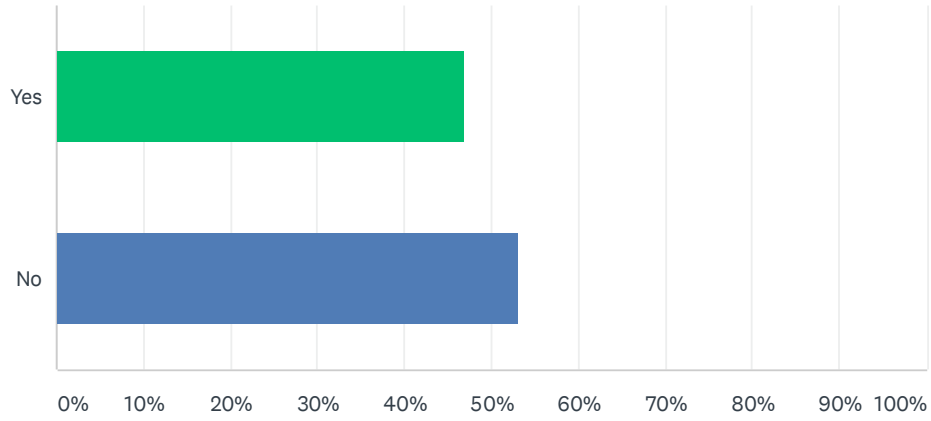
Option	Yes
More Traffic Enforcement	64.12%
Parking Permit Program	56.18%
Congestion pricing (charge commuters to travel through City during peak hours)	54.12%
Speed humps/traffic calming	49.41%
Converting narrow streets to one-way	31.18%
No turn/right turn signs	22.94%
More stop signs	22.06%
Switch from parallel to angled parking	20.88%
Allow on-street parking adjacent to parks	18.18%
More traffic signals	16.18%

Q1 What is your home address?

Answered: 200 Skipped: 32

Q2 Are you in favor of turning some of the narrow streets in the Gardens neighborhood into one-way streets to free up sidewalks for pedestrians and/or the disabled?

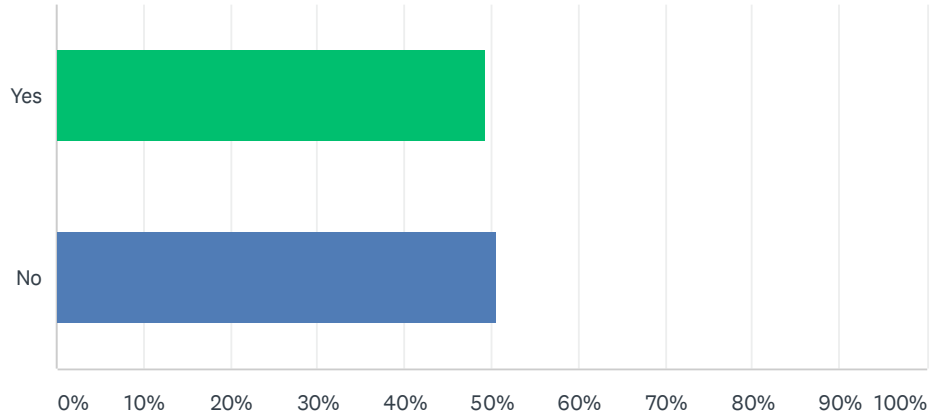
Answered: 226 Skipped: 6



ANSWER CHOICES	RESPONSES	
Yes	46.90%	106
No	53.10%	120
TOTAL		226

Q3 Do you support a parking permit program in the Gardens?

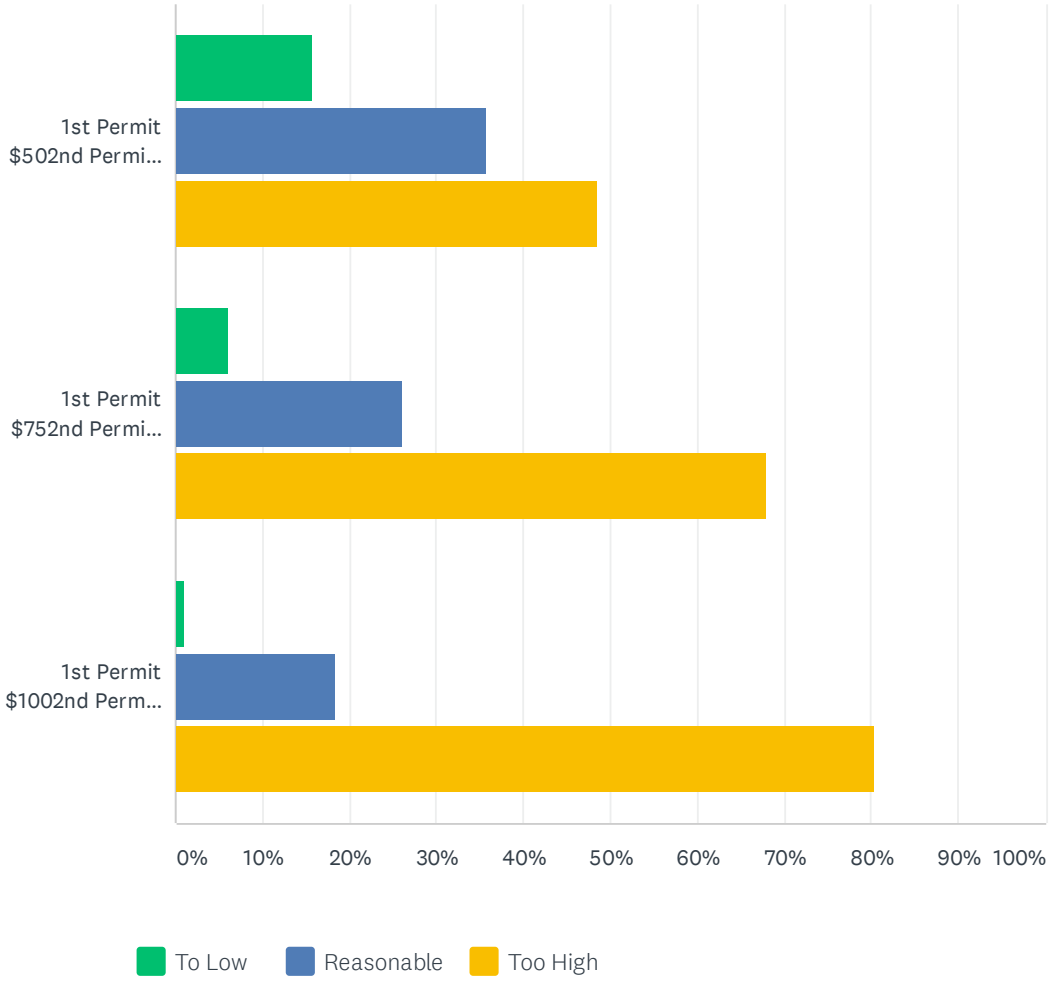
Answered: 231 Skipped: 1



ANSWER CHOICES	RESPONSES	
Yes	49.35%	114
No	50.65%	117
TOTAL		231

Q4 The City would use permit parking fees to enhance enforcement of traffic and parking regulations. Permit fees are also intended to encourage residents to park in their garage or their driveway if possible. Non=-residents will not be able to buy permits. The price of a parking permit hasn't been determined. What are your thoughts about the possible parking permit prices?

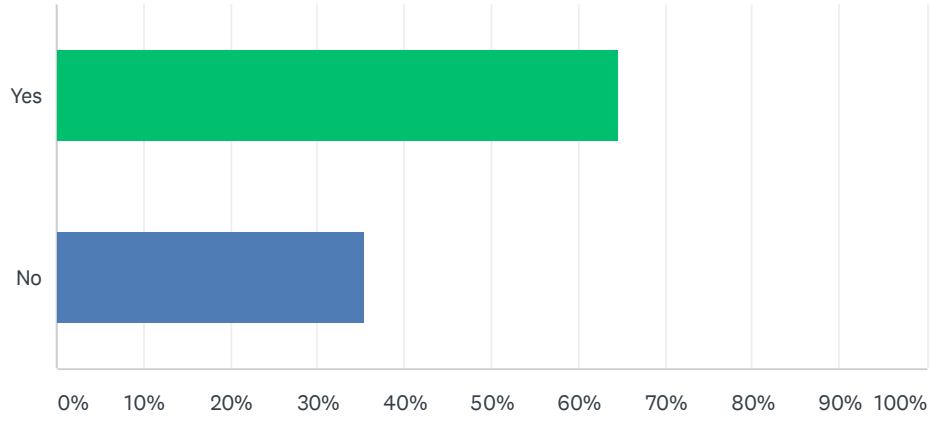
Answered: 203 Skipped: 29



	TO LOW	REASONABLE	TOO HIGH	TOTAL
1st Permit $502nd Permit $100	15.66% 31	35.86% 71	48.48% 96	198
1st Permit $752nd Permit $150	5.98% 11	26.09% 48	67.93% 125	184
1st Permit $1002nd Permit $200	1.09% 2	18.48% 34	80.43% 148	184

Q5 To increase the parking supply in the Gardens neighborhood, residents may be allowed to park on the street blocking their own driveway. Residents could call the City to tow a vehicle that is blocking a driveway if the vehicle is not registered to that address. Do you support this change?

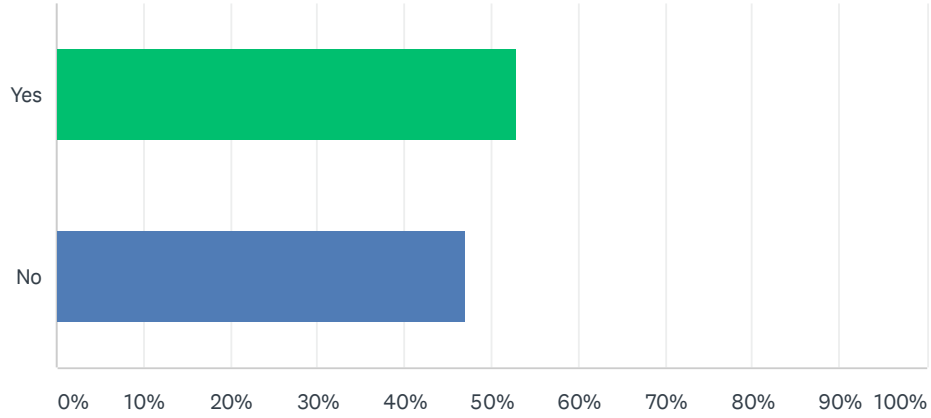
Answered: 229 Skipped: 3



ANSWER CHOICES	RESPONSES	
Yes	64.63%	148
No	35.37%	81
TOTAL		229

Q6 On narrow streets with rolled curbs where the vehicles currently park n the sidewalk, do you support restricting parking to only one side of the street during designated hours to allow pedestrians access to the sidewalk on the other side of the street?

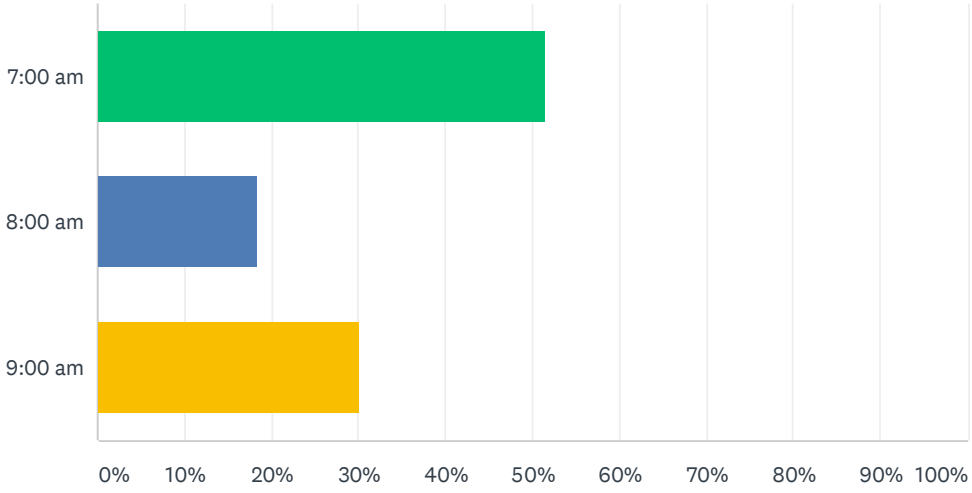
Answered: 229 Skipped: 3



ANSWER CHOICES	RESPONSES	
Yes	52.84%	121
No	47.16%	108
TOTAL		229

Q7 If the parking is restricted to one side of the street during designated hours for the benefit of students and other pedestrians, what time should the parking restriction BEGIN?

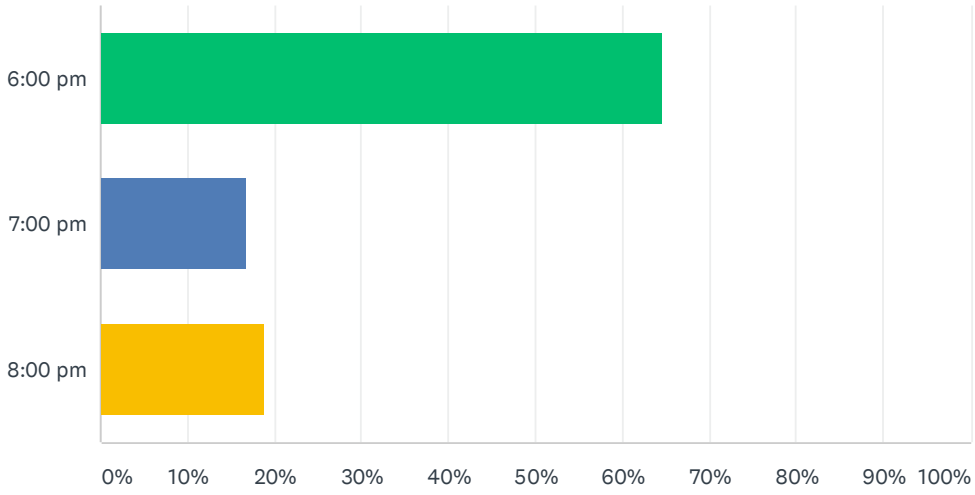
Answered: 196 Skipped: 36



ANSWER CHOICES	RESPONSES	
7:00 am	51.53%	101
8:00 am	18.37%	36
9:00 am	30.10%	59
TOTAL		196

Q8 If parking is restricted to one side of the street during designated hours for the benefit of students and other pedestrians, what time should the parking restriction END?

Answered: 192 Skipped: 40



ANSWER CHOICES	RESPONSES	
6:00 pm	64.58%	124
7:00 pm	16.67%	32
8:00 pm	18.75%	36
TOTAL		192

Q9 Please add any other insights or comments here:

Answered: 139 Skipped: 93

Appendix B
Draft Road Pricing Study Work Scope and Budget

HEXAGON TRANSPORTATION CONSULTANTS, INC.

Memorandum

Date: March 2, 2020

To: Ms. Susan Barnes, Mobility Project Manager

From: Michelle Hunt

Subject: East Palo Alto Road Pricing Study Draft Work Scope and Budget

The East Palo Alto Mobility Study identified road pricing as part of a comprehensive set of measures that could be used to address cut-through traffic and congestion within the City. At the direction of the City Council, Hexagon Transportation Consultants, Inc. has prepared this draft work scope and budget for a road pricing study to assess the feasibility of local road pricing with regards to transportation, environmental, and financial performance considerations.

Background and Purpose

The goal of implementing road pricing in East Palo Alto is to get traffic moving, increase street safety, reduce tailpipe emissions, improve transportation options, and make the transportation system more equitable. There are many forms of road pricing including cordon pricing, area pricing, congestion point charging, distance-based charging, full-facility tolling, managed lanes, high occupancy/toll (HOT) lanes, and express lanes. A pricing program that only imposes fees for vehicles that travel past one or more points on University Avenue is not recommended due to the potential negative impacts that may result from traffic diverting to other local roadways. Thus, it is anticipated that some form of cordon pricing would be most applicable in East Palo Alto. Under this scheme, motorists would pay a charge to enter and/or exit the City, typically using an electronic transponder in the vehicle or license plate readers at entry and/or exit points.

The fee could be either a flat rate toll charged throughout the day or fees may be set using dynamic or variable pricing. Given that congestion levels in East Palo Alto are significantly elevated during weekday commute periods, variable fees that are greatest during peak periods and reduced or eliminated during off-peak periods could smooth peak-period congestion and encourage some motorists to travel outside the most congested time periods. The term congestion pricing is often used to describe such a program involving charging a fee to enter and/or exit a congested area during the most congested times of day. When a congestion charge is in place, some motorists choose to pay the fee and enjoy improved travel times and reliability, while some drivers choose to shift the time of their trip to less congested periods. Other travelers take advantage of improved travel options that have been newly provided or enhanced using congestion fee revenue. Still others may shift their route or destination to avoid the charge.

Roadway congestion pricing should be implemented in the context of a comprehensive transportation system management strategy, which not only contemplates congestion charging, but also focuses on the improvement of competitive alternatives to driving by using the revenues generated through pricing to support investments in transit, bicycling, and walking. Transportation improvements funded by congestion pricing may include local East Palo Alto projects as well as regional projects such as those identified by the Dumbarton Transportation Corridor Study. This

integrated approach will improve the program's effectiveness in terms of reducing congestion while also improving the City's quality of life and economy.

The scope of work described below is not intended as the basis of an implementation decision but is merely designed to explore the feasibility of a congestion pricing program in East Palo Alto. Prior to deciding to implement congestion pricing, the City would need to undertake substantial community outreach, coordinate with local and regional public agencies regarding potential inter-agency partnerships, and conduct additional engineering and environmental studies. Furthermore, existing state law (California Streets and Highways Code) provides that a local agency may not impose a new tax, permit fee, or other charge for the privilege of using streets and roads on or after June 1, 1989, except a permit fee for extra-legal loads. Therefore, any congestion pricing program, whether conducted on a pilot or permanent basis, would require authorizing legislation to provide that this prohibition does not apply to the authorized program. In 2018, State Senator Scott Wiener and Assembly member Richard Bloom introduced legislation (Assembly Bill 3059) that would have authorized two "Go Zone" congestion pricing pilots in northern California and an additional two in southern California. Although the bill did not move forward in the last legislative session, it could be reintroduced in a future session.

Scope of Services

The scope of work for this study is divided into three tasks:

- Task 1: Program Development
- Task 2: Technical Analysis
- Task 3: Implementation Plan

Task 1: Program Development

Task 1.1: Research and Document Case Studies

In consultation with the project team, the selected consultant will use its experience with congestion and mobility pricing to identify relevant case studies and assist City staff in liaising with other cities' congestion or mobility pricing program planning and implementation efforts. The selected consultant will share and concisely document the experience of other cities with respect to key issues, other cities' degree of success in addressing them, and what insights and lessons learned may be applicable to any of the tasks in this study.

Task 1.2: Develop and Refine Program Definition, Identify Recommended Program

The selected consultant will develop and refine up to six potential congestion pricing concept(s) to identify a recommended congestion pricing program. Elements of the program definition should include the following:

- Congestion charging parameters, such as the type of charge (e.g. cordon, area, road user, etc.), fee amounts, days and hours they would be in effect, types of vehicles to be charged, and geographic limits of a charging zone;
- Discounts, subsidies, incentives, and travel demand management tools/programs to reduce the burden of pricing on East Palo Alto residents and vulnerable populations (e.g. low income and disabled motorists) and encourage the use of sustainable travel modes;
- A package of local and regional multimodal improvements to be funded with program revenues, such as Dumbarton Corridor improvements, increases to existing Samtrans

transit routes serving East Palo Alto and/or other local shuttles, street repaving, streetscape improvements, traffic and parking enforcement, and upgrades to transit, walking, and bicycling infrastructure; and
- Options for technology solutions that could be used to implement the program.

The selected consultant will identify a set of congestion pricing programs for testing. In addition, the effect of raising the Dumbarton bridge toll also will be tested as an alternative to the local road pricing programs.

City and SamTrans staffs will assist with developing program elements (including development of multimodal investment packages), identifying potential funding sources, and related interagency coordination.

Task 2: Technical Analysis

Task 2.1: Existing Conditions Data Gathering and Analysis

The existing conditions analysis will use data and analyses to consider the socioeconomic equity of the existing transportation system, such as by comparing the trip purposes, modes, travel costs, and reasons for mode selection for peak period East Palo Alto travelers by income group. The selected consultant will first inventory available sources of synthesized data and identify gaps where additional data collection and/or synthesis is needed. Existing data sources may be used to quantify traffic congestion, transit speeds, land use and expected growth, pollution, and public health and safety. However, gathering of additional observed data may be needed to complete the equity analysis.

Task 2.2: Analyze Impacts of Congestion Pricing

The selected consultant will conduct and document the potential impacts of each congestion pricing concept using the VTA-C/CAG travel demand model or other appropriate tool. The analysis will answer the following questions:
- How a proposed program would affect vehicle delay, transit speeds, vehicle miles traveled, and travel time by mode;
- How a proposed program would affect traffic volumes and vehicle delay on University Avenue and other East Palo Alto roadways as well as other roadways outside the pricing zone (e.g. Willow Road);
- How a proposed program would shift the time period of trips for different users;
- How a proposed program would change different users' total travel costs;
- How any effects of a proposed program would be distributed, e.g. between demographic groups, in Communities of Concern, among neighboring communities, and locally vs. regionally.

It is anticipated that multiple iterations of analysis may be required to evaluate each congestion pricing concept as the concept is further refined.

Task 2.3: Cost and Revenue Estimates

The selected consultant will prepare operating cost and revenue estimates for congestion pricing program scenarios. The Program Development task will likely need efficiently-provided rough estimates for various scenarios as part of the process of developing and refining potential congestion pricing concepts. The selected consultant will then provide a refined operating cost and revenue estimate for the recommended program.

The selected consultant will also estimate rough costs for each phase of program implementation in support of implementation plan development in Task 3.1. This includes estimates for program design, procurement, and capital costs for deployment of the recommended congestion pricing program including associated multimodal investments. City staff will assist with estimating costs for City staff time and multimodal investments.

Task 3: Implementation Plan

Task 3.1: Recommendation

The selected consultant will assess the potential impacts identified in Task 2.2 and the operating cost and revenue estimates developed in Task 2.3 to identify the recommended road pricing program. The recommended program documentation should be sufficient to support presentation of the recommendation to key decision-makers and the public.

Task 3.2: Implementation Plan

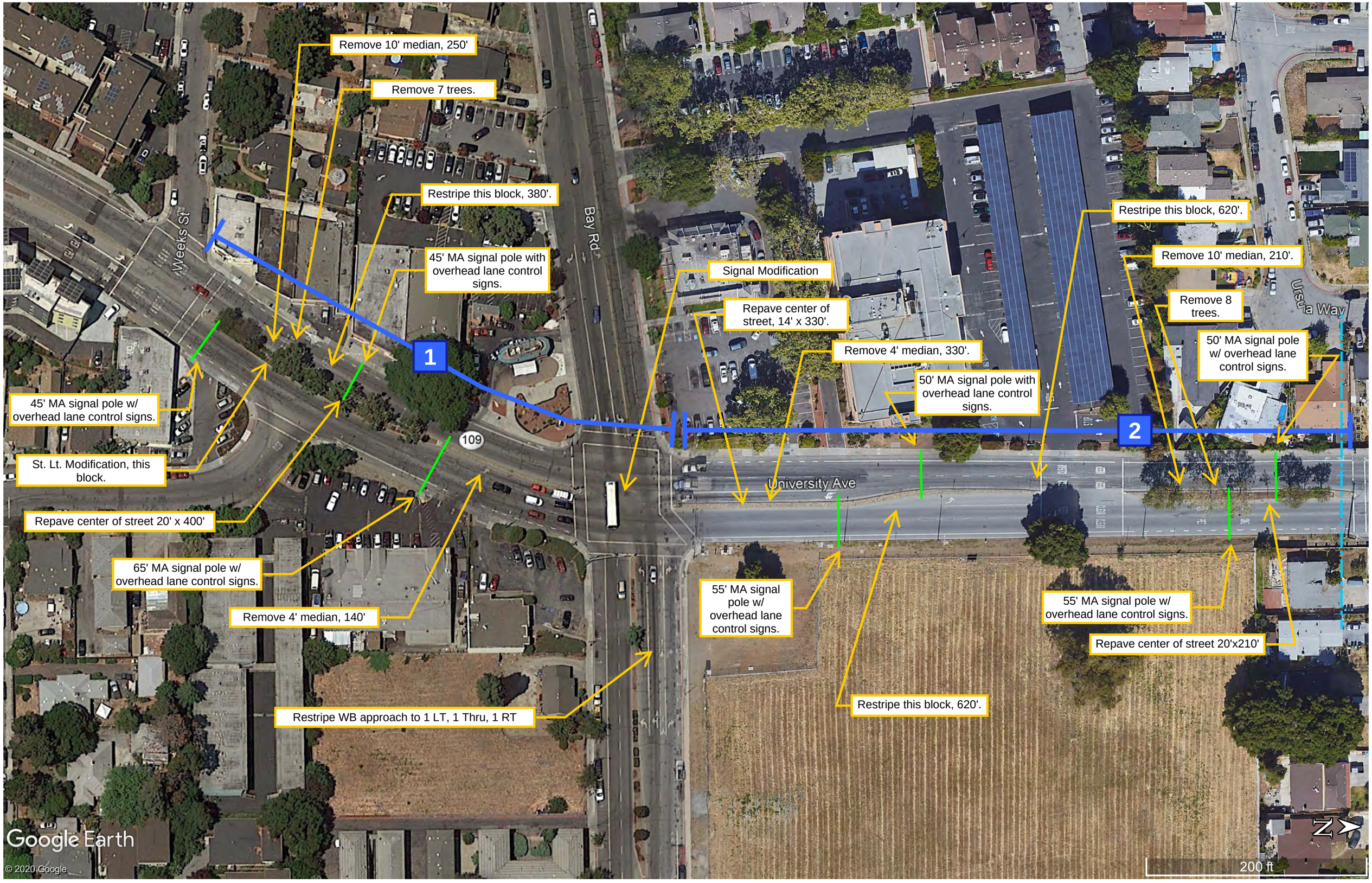
The selected consultant will prepare an implementation plan that identifies appropriate next steps and roles to secure the needed approvals and implement the recommended alternative. The plan will include a proposed timeline and level of effort needed (e.g. level of environmental review, required state legislation). The plan will incorporate an estimate of costs developed in Task 2.3 for each implementation phase and will identify potential funding sources for each phase. This plan should also include identification of any potential near-term pilot opportunities and/or other opportunities to shorten the timeline to program implementation.

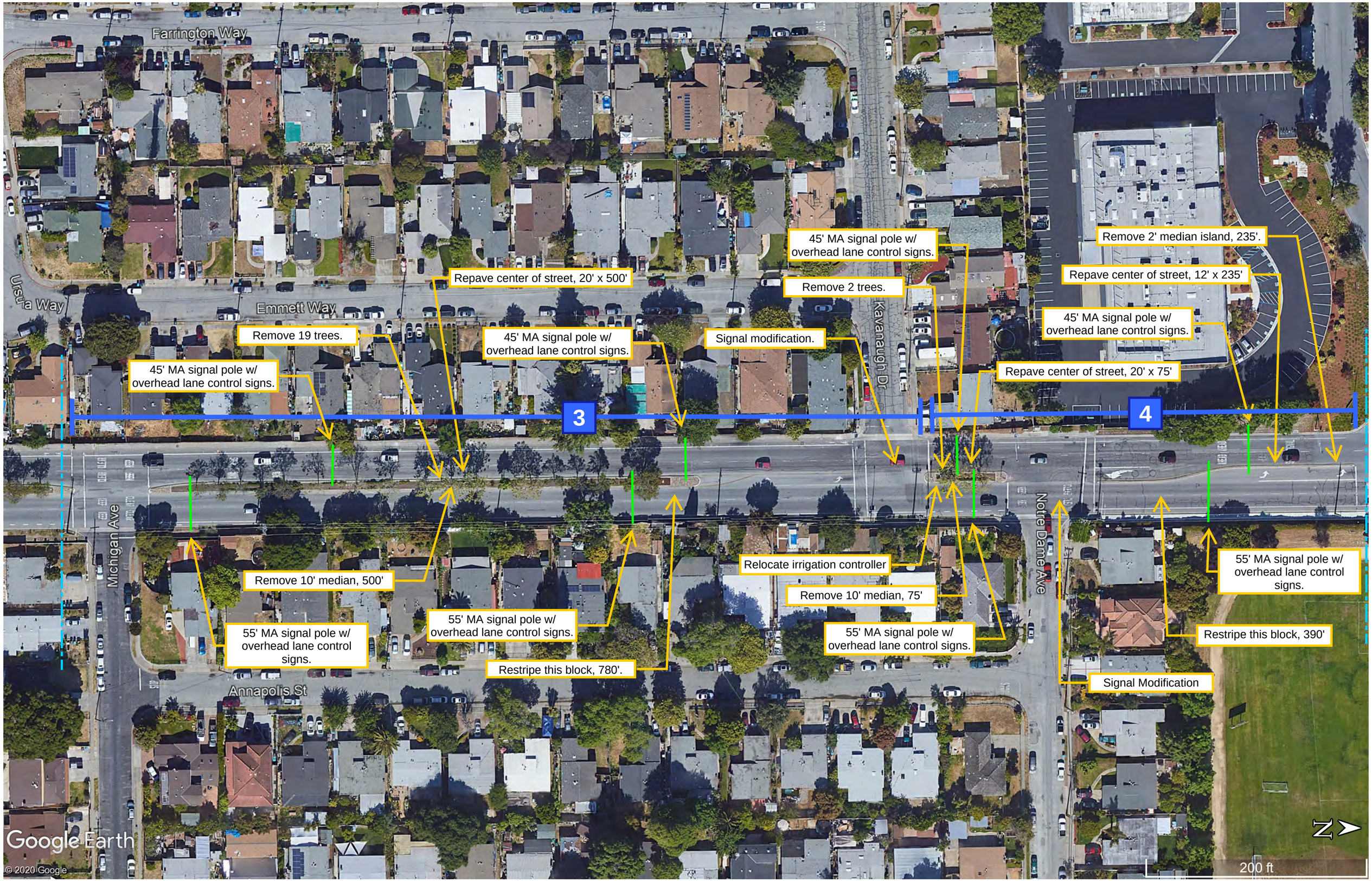
Budget

It is estimated that the cost of consultant fees associated with the above scope of services would be approximately $200,000. Note that this budget does not include the cost of City East Palo staff time or staff support from SamTrans or other agencies that may be necessary. For comparison, the estimated cost of the East Palo Alto Road Pricing Study is only about 10 percent of the cost of the San Francisco Downtown Congestion Pricing Study as the East Palo Alto study is meant to be a preliminary feasibility study and is thus less exhaustive and does not include the significant community outreach and stakeholder engagement that is included in the San Francisco study.

Appendix C

University Avenue Reversible Lane Sketches and Cost Estimate


Remove 10' median, 250'
Remove 7 trees.
Restripe this block, 380'.
45' MA signal pole with overhead lane control signs.
45' MA signal pole w/ overhead lane control signs.
St. Lt. Modification, this block.
Repave center of street 20' x 400'
65' MA signal pole w/ overhead lane control signs.
Remove 4' median, 140'
Restripe WB approach to 1 LT, 1 Thru, 1 RT
Signal Modification
Repave center of street, 14' x 330'.
Remove 4' median, 330'.
50' MA signal pole with overhead lane control signs.
55' MA signal pole w/ overhead lane control signs.
Restripe this block, 620'.
Restripe this block, 620'.
Remove 10' median, 210'.
Remove 8 trees.
50' MA signal pole w/ overhead lane control signs.
55' MA signal pole w/ overhead lane control signs.
Repave center of street 20'x210'
1
2
Weeks St
Bay Rd
University Ave
Ursula Way
109
Google Earth
© 2020 Google
200 ft


Farrington Way
Ursula Way
Emmett Way
Kavanaugh Dr
Michigan Ave
Annapolis St
Notre Dame Ave
Remove 19 trees.
45' MA signal pole w/ overhead lane control signs.
Repave center of street, 20' x 500'
45' MA signal pole w/ overhead lane control signs.
Signal modification.
45' MA signal pole w/ overhead lane control signs.
Remove 2 trees.
Remove 2' median island, 235'.
Repave center of street, 12' x 235'
45' MA signal pole w/ overhead lane control signs.
Repave center of street, 20' x 75'
3
4
Remove 10' median, 500'
55' MA signal pole w/ overhead lane control signs.
55' MA signal pole w/ overhead lane control signs.
Restripe this block, 780'.
Relocate irrigation controller
Remove 10' median, 75'
55' MA signal pole w/ overhead lane control signs.
55' MA signal pole w/ overhead lane control signs.
Restripe this block, 390'
Signal Modification
Google Earth
© 2020 Google
N
200 ft

Engineer's Opinion of Probable Construction Costs

PROJECT: **University Av. Reversible Lane Concept**
LOCATION: Segments 1 through 4 Total*

DATE: 2/14/2020

Segments 1 through 4 Total*

Rough Planning-Level Cost Estimate

Item Description	Unit	Qty.	Unit Price	Extension
Pole Types (Including Foundation)				
Signal Modification ($90k-$100k per corner, $30k for controller)	LS			**$ 740,000.00**
45' Mast Arm Signal Pole with Overhead Lane Control Signs	EA	6	$ 25,000.00	**$ 150,000.00**
50' Mast Arm Signal Pole with Overhead Lane Control Signs	EA	2	$ 33,000.00	**$ 66,000.00**
55' Mast Arm Signal Pole with Overhead Lane Control Signs	EA	6	$ 34,000.00	**$ 204,000.00**
60' Mast Arm Signal Pole with Overhead Lane Control Signs	EA	0	$ 46,000.00	**$ -**
65' Mast Arm Signal Pole with Overhead Lane Control Signs	EA	1	$ 46,000.00	**$ 46,000.00**
Signing and Striping Improvements, per lineal foot of street centerline	LF	2,170	$ 20.00	**$ 43,400.00**
Remove Median Island	SF	12,700	$ 15.00	**$ 190,500.00**
Remove Tree	EA	36	$ 1,800.00	**$ 64,800.00**
Repave Street	SF	31,140	$ 20.00	**$ 622,800.00**
Relocate Irrigation Controller	LS	1	$ 5,000.00	**$ 5,000.00**
Street Light System Modification	LS	1	$ 25,000.00	**$ 25,000.00**
Misc. Civil Eng. Improvements at Ints. (ramps, minor paving in int., drainage)	LS	3	$ 50,000.00	**$ 150,000.00**
Restripe WB Bay Road Approach	LS			**$ 1,700.00**
				$ -
				$ -
				$ -
				$ -
				$ -
				$ -
				$ -
				$ -
				$ -
Subtotal				**$ 2,309,200.00**
Total Materials & Labor Cost				**$ 2,309,200.00**

Other Costs				
Mobilization	LS	1	10% of Materials	**$ -**
Clearing and grubbing	LS	1	3% of Materials	**$ -**
Construction Staging, Traffic Control, and Construction Area Signs	LS	1	15% of Materials	**$ -**
Planning, Engineering, and Administration Costs	LS	1	50% of Materials	**$ 1,154,600.00**
Environmental Document (Notice of Exemption)	LS	1	$ 10,000.00	**$ 10,000.00**
Contingency	LS	1	50% of Materials	**$ 1,154,600.00**
Subtotal				**$ 2,319,200.00**

Total Project Cost	**$ 4,628,400.00**

Appendix D
Parking Occupancy Count Data

Gardens Neighborhood Parking Survey

Gardens Neighborhood Occupancy			Est HH			11/28/2018 (Wed)	12/4/2018 (Tue)	12/1/2018 (Sat)	12/8/2018 (Sat)	Average	Wkdy Avg	Sat Avg		Average
No	Street	Segment	(du)	spaces/du	veh/du	Parked	Parked	Parked	Parked	Parked	Parked	Parked	Capacity	Occupancy
A	Martin Luther King Park parking lot, end of Daisy Ln					0	0	0	0	0	0	0	25	
B	University Square parking lot, SE corner of Tate St/Wilks St					8	8	7	7	8	8	7	11	
1	Pulgas Ave	E Bayshore Rd - Camellia Dr	3	1.3333333	0.3333333	1	1	1	1	1	1	1	4	25%
2	Pulgas Ave	Camellia Dr - Oakes St	18.5	3.1891892	2.2837838	45	46	43	35	42	46	39	59	72%
3	Pulgas Ave	Oakes St - O' Conner St	15	3.9333333	2.2666667	33	37	36	30	34	35	33	59	58%
4	Pulgas Ave	O' Conner St - Myrtle St	17.5	1.3142857	1.1	13	25	17	22	19	19	20	23	84%
5	Pulgas Ave	Myrtle St - Sage St	2.5	3.2	2.6	4	7	7	8	7	6	8	8	81%
6	Pulgas Ave	Sage St - Beech St	7	4	1.3571429	9	9	7	13	10	9	10	28	34%
7	Pulgas Ave	Beech St - Cypress St	7.5	1.6	1.4666667	9	9	12	14	11	9	13	12	92%
8	Pulgas Ave	Cypress St - Garden St	10.5	1.8095238	1.6904762	18	18	18	17	18	18	18	19	93%
9	Garden St	East of Pulgas Ave	23.5	3.106383	2.3404255	51	54	59	56	55	53	58	73	75%
10	Cypress St	East of Pulgas Ave	34	2.2352941	1.6691176	55	51	60	61	57	53	61	76	75%
11	Beech St	Pulgas Ave - Vance Ln	7	1.5714286	1.3571429	10	10	9	9	10	10	9	11	86%
12	Beech St	Vance Ln - Shorebreeze Ct	7.5	2.8	1.9666667	15	13	15	16	15	14	16	21	70%
13	Beech St	East of Shorebreeze	10.5	3.6190476	2.047619	15	25	25	21	22	20	23	38	57%
14	Vance Ln	South of Beech St	4	2.75	2.625	11	11	10	10	11	11	10	11	95%
15	Shorebreeze Ct	South of Beech St	16	1.375	1.078125	17	16	18	18	17	17	18	22	78%
16	Sage St	Pulgas Ave - Azalia Dr	6.5	1.8461538	1.5769231	11	10	11	9	10	11	10	12	85%
17	Sage St	Azalia Dr - Wisteria Dr	6	2	1.25	9	8	9	4	8	9	7	12	63%
18	Sage St	Wisteria Dr - Larkspur Dr	8.5	1.7647059	1.7058824	14	14	15	15	15	14	15	15	97%
19	Azalia Dr	Sage St - O' Conner St	34	1.7352941	1.6838235	58	57	55	59	57	58	57	59	97%
20	Wisteria Dr	Sage St - O' Conner St	38	1.3684211	1.1578947	47	43	43	43	44	45	43	52	85%
21	Larkspur Dr	Sage St - O' Conner St	36	1.5833333	1.5277778	57	57	51	55	55	57	53	57	96%
22	O' Conner St	Pulgas Ave - Azalia Dr	0			8	3	7	8	7	6	8	12	54%
23	O' Conner St	Azalia Dr - Wisteria Dr	4	2.5	1.1875	4	4	4	7	5	4	6	10	48%
24	O' Conner St	Wisteria Dr - Larkspur Dr	2	6	5.5	10	12	10	12	11	11	11	12	92%
25	O' Conner St	Larkspur Dr - Daisy Ln	3	4.3333333	3.75	13	11	10	11	11	12	11	13	87%
26	O' Conner St	East of Daisy Ln	10	2.3	1.8	15	18	19	20	18	17	20	23	78%
27	Daisy Ln	O' Conner St - Hibiscus Ct	5.5	2.7272727	2.5454545	13	15	14	14	14	14	14	15	93%
28	Daisy Ln	Hibiscus Ct - Martin Luther King	11.5	1.7391304	1.173913	12	12	16	14	14	12	15	20	68%
29	Hibiscus Ct	East of Daisy Ln	6	1.6666667	1.9583333	12	10	13	12	12	11	13	10	118%
30	Azalia Dr	O' Conner St - Gaillardia Way	20	1.4	1.1875	21	28	25	21	24	25	23	28	85%
31	Azalia Dr	Gaillardia Way - Verbena Dr	6	2	1.625	9	12	10	8	10	11	9	12	81%
32	Azalia Dr	Verbena Dr - Gardenia Way	2.5	4.8	3.9	10	10	10	9	10	10	10	12	81%
33	Azalia Dr	Gardenia Way - Camellia Dr	22.5	1.6	1.4222222	34	32	30	32	32	33	31	36	89%
34	Wisteria Dr	O' Conner St - Gardenia Way	26	1.3076923	1.2403846	29	33	34	33	32	31	34	34	95%
35	Wisteria Dr	Gardenia Way - Lotus Way	6	1.1666667	1.0833333	7	7	6	6	7	7	6	7	93%
36	Wisteria Dr	Lotus Way - Camellia Dr	26	1.2307692	0.9326923	28	24	22	23	24	26	23	32	76%
37	Lotus Way	North of Wisteria Dr	7.5	2.2666667	2.1	17	16	15	15	16	17	15	17	93%
38	Larkspur Dr	O' Conner St - Gardenia Way	25.5	0.9411765	0.8529412	21	21	19	26	22	21	23	24	91%
39	Gardenia Way	Azalia Dr - Wisteria Dr	3.5	3.7142857	1.5	4	4	7	6	5	4	7	13	40%
40	Gardenia Way	Wisteria Dr - Larkspur Dr	5	2.4	2.15	10	11	11	11	11	11	11	12	90%
41	Gardenia Way	Larkspur Dr - Camellia Dr	8.5	1.4117647	1.2058824	9	9	12	11	10	9	12	12	85%
42	Camellia Dr	Gardenia Way - Jasmine Way	49	1.5102041	1.4081633	71	67	68	70	69	69	69	74	93%
43	Camellia Dr	Jasmine Way - Wisteria Dr	2	5	2.75	5	4	6	7	6	5	7	10	55%
44	Camellia Dr	Wisteria Dr - Azalia Dr	5.5	1.8181818	1.6818182	10	10	9	8	9	10	9	10	93%
45	Camellia Dr	Azalia Dr - Abelia Way	14	1.7142857	1.6428571	22	24	23	23	23	23	23	24	96%
46	Camellia Dr	Abelia Way - Camellia Ct	11.5	1.3043478	1.2826087	15	14	15	15	15	15	15	15	98%
47	Camellia Dr	Camellia Ct - Verbena Dr	6	1.5	0.9166667	5	8	5	4	6	7	5	9	61%
48	Camellia Dr	Verbena Dr - Pulgas Ave	2	6	1.625	3	4	2	4	3	4	3	12	27%
49	Camellia Ct	South of Camellia Dr	13	1.6153846	1.2692308	19	18	15	14	17	19	15	21	79%
50	Verbena Dr	Camellia Dr - Gardenia Way	6.5	2	1.5769231	11	10	11	9	10	11	10	13	79%
51	Verbena Dr	Gardenia Way - Azalia Dr	31.5	1.6190476	1.3253968	45	42	39	41	42	44	40	51	82%
52	Gardenia Way	Verbena Dr - Gardenia Ct	23	1.6086957	1.4891304	34	35	35	33	34	35	34	37	93%
53	Gardenia Way	Gardenia Ct - Azalia Dr	7	1.7142857	1.3214286	8	10	7	12	9	9	10	12	77%
54	Gardenia Ct	East of Gardenia Way	7	1.2857143	1.1071429	8	9	6	8	8	9	7	9	86%
55	Gaillardia Way	Pulgas - Azalia Dr	15.5	1.483871	1.2903226	20	19	20	21	20	20	21	23	87%
56	Verbena Dr	Camellia Dr - Abelia Way	26	1.4615385	1.2692308	34	33	29	36	33	34	33	38	87%
57	Verbena Dr	East of Abelia Way	5	2	1.2	6	5	7	6	6	6	7	10	60%

Gardens Neighborhood Parking Survey

Gardens Neighborhood Occupancy			Est HH			11/28/2018 (Wed)	12/4/2018 (Tue)	12/1/2018 (Sat)	12/8/2018 (Sat)	Average	Wkdy Avg	Sat Avg		Average
No	Street	Segment	(du)	spaces/du	veh/du	Parked	Parked	Parked	Parked	Parked	Parked	Parked	Capacity	Occupancy
58	Abelia Way	Verbena Dr - Camellia Dr	32	1.53125	1.453125	45	47	49	45	47	46	47	49	95%
59	Wisteria Dr	Camellia Dr - Daphne Way	4	2.75	2.0625	10	8	6	9	8	9	8	11	75%
60	Wisteria Dr	Daphne Way - Aster Way	7	1.8571429	1.7857143	13	13	12	12	13	13	12	13	96%
61	Wisteria Dr	Aster Way - Daphne Way	27	1.4814815	1.2685185	36	33	34	34	34	35	34	40	86%
62	Daphne Way	Wisteria Dr - Daphne Ct	6.5	1.8461538	1.6923077	10	12	11	11	11	11	11	12	92%
63	Daphne Way	Daphne Ct - Aster Way	29.5	1.6949153	1.5338983	41	47	47	46	45	44	47	50	91%
64	Daphne Way	Aster Way - Wisteria Dr	13	1.7692308	1.4615385	19	18	18	21	19	19	20	23	83%
65	Daphne Way	Wisteria Dr - Jasmine Way	6.5	1.3846154	1	6	7	6	7	7	7	7	9	72%
66	Daphne Way	East of Jasmine Way	3	2	1.25	4	2	5	4	4	3	5	6	63%
67	Daphne Ct	West of Daphne Way	7.5	1.6	1.6666667	14	14	10	12	13	14	11	12	104%
68	Aster Way	Daphne Way - Wisteria Dr	26	1.6153846	1.2788462	33	33	38	29	33	33	34	42	79%
69	Jasmine Way	Daphne Way - Camellia Dr	45	1.2666667	1.1333333	46	53	52	53	51	50	53	57	89%
70	Clarke Ave	Tinsley St - O' Conner St	4	12.75	5.5625	23	27	17	22	22	25	20	51	44%
87	O'Conner St	Clark Ave - Tate St	4	2	1.9375	8	8	8	7	8	8	8	8	97%
71	O' Conner St	Tate St - Pulgas Ave	14	1	1.1071429	14	16	17	15	16	15	16	14	111%
72	Tate St	O' Conner St - Gates St	25	0.44	0.41	10	11	10	10	10	11	10	11	93%
73	Tate St	Gates St - Wilks St	20	0.5	0.4875	9	11	10	9	10	10	10	10	98%
74	Tate St	Wilks St - Tinsley St	46	0.5	0.5652174	25	25	26	28	26	25	27	23	113%
75	Tate St	Tinsley St - Oakes St	3	2	1.9166667	6	5	6	6	6	6	6	6	96%
76	Tinsley St	Clarke Ave - Peninsula Park Apt	34.5	0.4927536	0.5289855	20	19	17	17	18	20	17	17	107%
77	Tinsley St	Peninsula Park Apt Drwy - Tate S	12.5	0.64	0.68	10	8	9	7	9	9	8	8	106%
78	McNair St	Wilks St - Mouton Cir	3	2.3333333	2.5	9	7	7	7	8	8	7	7	107%
79	McNair St	Mouton Cir - Mouton Cir	3	1.3333333	1.0833333	3	4	3	3	3	4	3	4	81%
80	McNair St	Mouton Cir - Oakes St	3	1.3333333	1.1666667	4	3	4	3	4	4	4	4	88%
81	Gates St	Tate St - Wilks St	27	1.2962963	1.3796296	34	35	40	40	37	35	40	35	106%
82	Wilks St	Tate St - McNair St	5	2.4	2.4	13	12	12	11	12	13	12	12	100%
83	Wilks St	McNair St - Gates St	15	1.2	1.1833333	19	19	16	17	18	19	17	18	99%
84	Wilks St	East of Gate St	2	3.5	4.375	9	9	8	9	9	9	9	7	125%
85	Mouton Cir	East of McNair St (north part)	19	1.4736842	1.2763158	24	28	26	19	24	26	23	28	87%
86	Mouton Cir	East of McNair St (south part)	19	1.5263158	1.2368421	26	27	23	18	24	27	21	29	81%
						10/3/2018 (Wed)	10/4/2018 (Thu)	10/6/2018 (Sat)						
88	Oakes St	Baines St - Tate St (west part)	19	1.5789474	1.5263158	31	26	30		29	29	30	30	97%
89	Oakes St	Tate St - Baines St (east part)	21	1.4285714	1.5714286	33	32	34		33	33	34	30	110%
90	Baines St	Oakes St - Tate St (west part)	20	1.05	1.0333333	20	20	22		21	20	22	21	98%
91	Baines St	Tate St - Oakes St (east part)	34	1.0588235	0.9803922	38	35	27		33	37	27	36	93%
92	Tate St	Baines St - Oakes St	3	2.6666667	2.7777778	8	9	8		8	9	8	8	104%
93	E. Bayshore Rd	Clarke Ave - Pulgas Ave	224	0.1919643	0.202381	46	45	45		45	46	45	43	105%
		Total	1504	1.4474734	1.2174202	1823	1853	1825	1823	1831	1838	1824	2177	84%
													Spaces lost by prohibiting parking on 1 side of 2-way streets	-115
		MF du	353											2062
													Count of segments >= 90% occupancy	42
													Count of all segments	93

Woodland Neighborhood Parking Survey

Woodland Neighborhood			11/28/2018 (Wed)	12/4/2018 (Tue)	12/1/2018 (Sat)	12/8/2018 (Sat)	Average		Average
No	Street	Segment	Parked	Parked	Parked	Parked	Parked	Capacity	Occupancy
1	Capitol Ave	Scofield Ave - 1934 Capitol Ave	19	13	21	17	18	16	109%
2	Capitol Ave	1934 Capitol Ave - Cooley Ave	21	20	20	21	21	20	103%
3	W Bayshore Rd	Cooley Ave - Newell Rd	35	34	34	34	34	33	104%
4	W Bayshore Rd	Newell Rd - Clarke Ave	Road Closed	Road Closed	Road Closed	Road Closed			
5	W Bayshore Rd	Clarke Ave - Woodland Rd	68	63	67	62	65	54	120%
6	W Bayshore Rd	Woodland Rd - San Francisquito Cree	22	22	21	18	21	20	104%
7	Scofield Ave	Capitol Ave - Circle Dr	17	19	16	16	17	17	100%
8	Scofield Ave	Circle Dr - Cooley Ave	4	6	5	6	5	5	105%
9	Cooley Ave	Capitol Ave - Scofield Ave	18	20	19	20	19	19	101%
10	Cooley Ave	Scofield Ave - woodland Ave	58	58	60	56	58	53	109%
11	Newell Rd	W Bayshore Rd - Woodland Ave	77	77	75	74	76	76	100%
12	Clarke Ave	W Bayshore Rd - Woodland Ave	47	43	45	43	45	40	111%
13	Woodland Ave	Cooley Ave - Newell Rd	28	28	30	23	27	28	97%
14	Woodland Ave	Newell Rd - Clarke Ave	32	34	28	29	31	31	99%
15	Woodland Ave	Clarke Ave - W Bayshore Rd	104	104	102	97	102	103	99%
		Total Street Parking	589	561	571	540	565	559	101%

	Reserved Parking								
No	Street	Segment	Reserved	Reserved	Reserved	Reserved	Average	Capacity	Occupancy
1	Capitol Ave	Scofield Ave - 1934 Capitol Ave	20	18	19	19	19	22	86%
8	Scofield Ave	Circle Dr - Cooley Ave	9	11	10	10	10	11	91%
9	Cooley Ave	Capitol Ave - Scofield Ave	60	57	54	65	59	70	84%
10	Cooley Ave	Scofield Ave - woodland Ave	8	6	8	6	7	8	88%
13	Woodland Ave	Cooley Ave - Newell Rd	2	2	3	0	2	3	58%

Weeks Palo Alto Park Neighborhood Parking Survey

Weeks Neighborhood Ocucupancy			4/18/2019 (Thu)		5/2/2019 (Thu)		4/13/2019 (Sat)		4/27/2019 (Sat)				
No	Street	Segment	Total Parked	Illegally Parked/ In front of Drwy	Total Parked	Illegally Parked/ In front of Drwy	Total Parked	Illegally Parked/ In front of Drwy	Total Parked	Illegally Parked/ In front of Drwy	Average Parked	Capacity	Average Occupancy
1	Cooley Ave	Bell St - Runnymede Dr	55	3	62	2	62	0	63	0	61	63	96%
2	Bell St	Cooley Ave - Clarke Ave	47	0	54	2	42	0	47	1	48	75	63%
3	Clarke Ave	Green St - Schembri Ln	35	1	37	0	33	1	34	0	35	53	66%
4	Beech St	Clarke Ave - Pulgas Ave	25	0	28	1	37	0	25	0	29	60	48%
5	Pulgas Ave	Garden St - Runnymede St	23	0	24	1	22	1	20	0	22	32	70%
6	Pulgas Ave	Runnymede St - Weeks St	26	1	25	1	25	0	29	1	26	30	88%
7	Weeks St	Cooley Ave - Clarke Ave	74	0	70	3	71	4	73	1	72	78	92%
											292	391	75%

Palo Alto Park Neighborhood Ocucupancy			4/18/2019 (Thu)		5/2/2019 (Thu)		4/13/2019 (Sat)		4/27/2019 (Sat)				
No	Street	Segment	Total Parked	Illegally Parked/ In front of Drwy	Total Parked	Illegally Parked/ In front of Drwy	Total Parked	Illegally Parked/ In front of Drwy	Total Parked	Illegally Parked/ In front of Drwy	Average Parked	Capacity	Average Occupancy
8	Euclid Ave	Bell St - Runnymede Dr	59	3	64	1	64	0	68	0	64	65	98%
9	Bell St	Lincoln St - Euclid Ave	38	4	42	1	43	1	41	0	41	43	95%
10	Bell St	Oakwood Dr - Lincoln St	32	1	35	3	32	2	31	1	33	32	102%
11	Ralmar Ave	Garden St - Bay Rd	58	7	57	6	64	3	62	3	60	61	99%
12	Westminister Ave	Bay Rd - Newbridge St	61	2	56	2	61	1	61	1	60	60	100%
13	Poplar Ave	Newbridge St - Alberni St	47	0	45	3	45	1	39	0	44	54	81%
14	Alberni St	Menalto Ave - Ralmar Ave	30	1	28	0	29	1	32	0	30	33	90%
15	Alberni St	Westminister Ave - Menalto Ave	37	2	37	0	38	2	42	1	39	46	84%

Appendix E
Residential Permit Parking Program

RESIDENTIAL PARKING PERMIT PROGRAM

Sections:

10.40.010 Title.

This chapter shall establish and shall be referred to as residential permit parking. (Prior code § 11-10.005)

10.40.020 Purpose.

The purpose of this chapter is to regulate and manage residential curb parking at locations at which a high demand for parking on residential streets has been determined by the City Council to be adverse to the health, safety, welfare, and interest of the adjoining residential property owners.

10.40.030 Designation of permit parking area.

The City Council may establish a residential permit parking area by resolution. Such resolution shall designate the boundaries of the area, shall establish a fee schedule for permits, and shall specify the nature of the parking limitations which apply within the designated area.

10.40.040 Procedures.

The establishment of a residential permit parking area shall only be considered after a city form petition, signed by residents representing sixty-seven (67) percent of the properties abutting the residential street upon which permit parking is proposed, has been presented to the city. The City Clerk shall review the petition and shall determine ownership by reference to the latest available assessment role, or by such proof of subsequent acquisition of title as may be provided by the owner. The City Council may refer consideration for establishment of a residential permit parking area to the City Public Works and Transportation Commission for recommendation.

10.40.050 Authority of City Engineer.

The City Engineer is authorized to establish rules and procedures and to produce signs, forms, and other materials necessary, or appropriate, to implement the provisions of this chapter.

10.40.060 Issuance of permits.

Applications to authorize parking within a residential permit parking area may be made by any resident of residential property abutting the residential permit parking area, and by private service personnel which routinely, in the performance of their business, provide a service to the residential property owner during permit restricted hours. Such application shall be the sole responsibility of the applicant, and shall be filed with the City Engineer, or his or her designated representative. Applications for a parking permit must include the following documentation:

1. A current DMV driver's license for each resident requesting a permit

2. A current DMV vehicle registration for each vehicle
3. Proof of residency in a parking permit area (required only if the address on the driver's license and/or vehicle registration is not located in a parking permit area). Acceptable proof of residency includes a utility bill, lease agreement, car insurance policy, or preprinted personal check with applicant's name and address.

Unless otherwise prescribed by the resolution establishing the residential permit parking area, each residential property will receive one permit parking decal. A second permit parking decal may be purchased by each residential property upon request subject to availability. Any permit decal issued pursuant to this section to a resident shall be valid so long as the person to whom the permit is issued owns the vehicle and resides within the residential parking permit area. Each private service vehicle will receive one permit parking decal and shall require annual renewal. Replacement of damaged or lost permits shall be the responsibility of the applicant. The City Council may, by resolution, establish a fee for the issuance or replacement of permits.

10.40.070 Guest parking permits.

Unless otherwise prescribed in the resolution establishing a residential permit parking area, each residential property shall be entitled to may receive twenty one-day guest parking permit placards from per year as approved by the City Engineer upon application. Guest parking permit placards shall require annual renewal. Upon application, residents may receive additional guest permit placards for one day special events as approved by the City Engineer.

10.40.080 Display of permit decals and placards.

A permit parking decal issued pursuant to this section, other than a guest parking placard, shall be permanently affixed to the left inside rear window of the vehicle for which it was issued. Guest or special event parking permit placards shall be displayed on the dashboard immediately above the steering wheel of the vehicle. Permits issued pursuant to this chapter are not transferrable.

10.40.090 Enforcement.

Except as otherwise provided in this section, it is unlawful for any person to stand or park any vehicle on any street, or portion thereof, established as a residential permit parking area by resolution of the City Council during all or certain hours as provided by signs giving notice of said restriction. The City Engineer shall cause appropriate signs to be erected at the entrance of a residential permit parking area and at intermediate locations as deemed necessary by the City Engineer. No person shall copy, produce, or otherwise counterfeit a residential or guest parking permit decal or placard issued pursuant to this section. It is unlawful for any person to falsely represent himself or herself as eligible for a parking permit or furnish false information to the City Engineer, or his or her representatives, in an application for a parking permit decal or placard. Violation of any provision of this section shall be an infraction.

10.40.100 Exempt vehicles.

The following vehicles are exempt from parking restrictions applicable to any residential permit parking area: (1) vehicles owned or operated by any government agency, or contractor of a government agency, being used in the course of business; (2) refuse collection, utility, or other public agency service vehicles being used in the course of business; (3) any authorized emergency vehicle as defined in the California Vehicle Code when such vehicle is responding to an emergency.

10.40.110 Removal of residential permit parking area.

The City Council may, by resolution, terminate and dissolve any previously established residential permit parking area. Such termination may be considered following receipt of a petition signed by residents of sixty-seven (67) percent or more of the residential property abutting a residential permit

parking area. The City Engineer shall remove permit parking signs in accordance with any such resolution.

Appendix F
All-Way Stop Warrant Worksheets

ALL-WAY STOP SIGN WARRANT
FOR
Menalto Avenue AND Alberni Street

I. VOLUME WARRANT

Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 vph** on MINOR STREET for the *same 8 hrs*.
OR
Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 pedestrians per hour** at the intersection for the *same 8 hrs*.
*If intersection is located in residential area (meets all six conditions) or if there are unusual conditions (steep hill or curves), then decrease above volumes by 40%

Time [hr]	8:00 AM	3:00 PM	7:00 AM	5:00 PM	4:00 PM	2:00 PM	7:00 PM	6:00 PM	Total
Major Street	121	95	80	62	49	49	52	47	555
Minor Street	32	18	17	25	21	19	13	14	159
Total	153	113	97	87	70	68	65	61	714
Pedestrian	5	17	7	3	10	0	3	8	53

WARRANT MET? No. The total approach volumes for the highest 8 hours are less than 300 vph and the intersection does not qualify as a residential area.

II. ACCIDENT WARRANT:

3 or more reported accidents (types susceptible to correction by stop signs) within *a 12-month period*.
Same criteria apply for intersection in residential areas.
Maximum number of actual correctable accidents in a 12-month period: There was a maximum of 1 accident in a 12-month period (9/1/2017 – 9/1/2018).

WARRANT MET? No

III. LINE OF SIGHT WARRANT:

Less than 150 feet on one or more approaches of the MAJOR STREET
Same criteria apply for intersection in residential areas.
Actual field conditions: On-street parking is permitted on both sides of Alberni Street at the intersection with Menalto Avenue. Vehicles legally parked on the street restrict the line of sight distance to less than 150 feet.

WARRANT MET? Yes

An intersection qualifies as a residential one, if ALL of the following conditions exist:
- Both streets have residential frontage and have a 25 mph speed limit.
- Neither street is an adopted through street.
- Both streets are two-lane streets.
- No existing stop sign or traffic signal within 600′ along the major street. A stop sign exists 590 feet from the center of Menalto/Alberni to the east.
- Streets extend 600′ or more away from the intersection on at least three sides.
- The installation of a multi-way stop sign is compatible with overall traffic circulation.

CONCLUSION: The intersection meets the line of sight warrant.

Date: February 15, 2019 Study done by: Hexagon Transportation Consultants

ALL-WAY STOP SIGN WARRANT
FOR
Menalto Avenue AND E. Bayshore Road

I. VOLUME WARRANT

Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 vph** on MINOR STREET for the *same 8 hrs*.
OR
Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 pedestrians per hour** at the intersection for the *same 8 hrs*.
*If intersection is located in residential area (meets all six conditions) or if there are unusual conditions (steep hill or curves), then decrease above volumes by 40%

Time	5:00 PM	6:00 PM	2:00 PM	4:00 PM	3:00 PM	7:00 PM	7:00 AM	8:00 AM	Total
Major Street	371	355	323	323	300	241	166	162	2241
Minor Street	29	45	50	40	42	31	81	45	363
Total	400	400	373	363	342	272	247	207	2604
Pedestrian	1	3	0	2	5	2	1	2	16

WARRANT MET? No. The total approach volumes for the highest 8 hours are not all greater than 300 vph and the intersection does not qualify as a residential area.

II. ACCIDENT WARRANT:

3 or more reported accidents (types susceptible to correction by stop signs) within *a 12-month period*.
Same criteria apply for intersection in residential areas.
Maximum number of actual correctable accidents in a 12-month period: There was a maximum of 1 accident in a 12-month period (6/1/2015 – 6/1/2016 and 12/1/2016 – 12/1/2017).

WARRANT MET? No

III. LINE OF SIGHT WARRANT:

Less than 150 feet on one or more approaches of the MAJOR STREET
Same criteria apply for intersection in residential areas.
Actual field conditions: On-street parking is permitted on the north side of E. Bayshore Road east of Menalto Avenue. Vehicles legally parked on the street restrict the line of sight distance for the westbound E. Bayshore Road approach to less than 150 feet.

WARRANT MET? Yes

An intersection qualifies as a residential one, if ALL of the following conditions exist:
- Both streets have residential frontage and have a 25 mph speed limit. E. Bayshore Road does not have residential frontage.
- Neither street is an adopted through street.
- Both streets are two-lane streets.
- No existing stop sign or traffic signal within 600′ along the major street.
- Streets extend 600′ or more away from the intersection on at least three sides.
- The installation of a multi-way stop sign is compatible with overall traffic circulation.

CONCLUSION: The intersection meets the line of sight warrant.

Date: February 15, 2019 Study done by: Hexagon Transportation Consultants

ALL-WAY STOP SIGN WARRANT
FOR
Poplar Avenue AND E. Bayshore Road

I. VOLUME WARRANT

Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 vph** on MINOR STREET for the *same 8 hrs*.
OR
Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 pedestrians per hour** at the intersection for the *same 8 hrs*.
*If intersection is located in residential area (meets all six conditions) or if there are unusual conditions (steep hill or curves), then decrease above volumes by 40%

Time	5:00 PM	6:00 PM	4:00 PM	2:00 PM	3:00 PM	7:00 PM	7:00 AM	8:00 AM	Total
Major Street	428	409	396	359	359	288	249	211	2699
Minor Street	19	11	11	22	7	14	27	21	132
Total	447	420	407	381	366	302	276	232	2831
Pedestrian	3	6	5	0	3	3	1	0	21

WARRANT MET? No. The total approach volumes for the highest 8 hours are not all greater than 300 vph and the intersection does not qualify as a residential area.

II. ACCIDENT WARRANT:

3 or more reported accidents (types susceptible to correction by stop signs) within *a 12-month period*.
Same numbers apply for intersection in residential areas.
Maximum number of actual correctable accidents in a 12-month period: There were 0 accidents in a 12-month period.

WARRANT MET? No

III. LINE OF SIGHT WARRANT:

Less than 150 feet on one or more approaches of the MAJOR STREET
Same numbers apply for intersection in residential areas.
Actual field conditions: On-street parking is permitted on the north side of E. Bayshore Road east of Poplar Avenue. Vehicles legally parked on the street restrict the line of sight distance for the eastbound E. Bayshore Road approach to less than 150 feet.

WARRANT MET? Yes

An intersection qualifies as a residential one, if ALL of the following conditions exist:
- Both streets have residential frontage and have a 25 mph speed limit. E. Bayshore Road does not have residential frontage.
- Neither street is an adopted through street.
- Both streets are two-lane streets.
- No existing stop sign or traffic signal within 600′ along the major street.
- Streets extend 600′ or more away from the intersection on at least three sides.
- The installation of a multi-way stop sign is compatible with overall traffic circulation.

CONCLUSION: The intersection meets the line of sight warrant.

Date: February 15, 2019 Study done by: Hexagon Transportation Consultants

ALL-WAY STOP SIGN WARRANT
FOR
Addison Avenue AND E. Bayshore Road

I. VOLUME WARRANT

Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 vph** on MINOR STREET for the *same 8 hrs*.
OR
Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 pedestrians per hour** at the intersection for the *same 8 hrs*.

*If intersection is located in residential area (meets all six conditions) or if there are unusual conditions (steep hill or curves), then decrease above volumes by 40%

Time	5:00 PM	6:00 PM	4:00 PM	3:00 PM	2:00 PM	7:00 AM	7:00 PM	8:00 AM	Total
Major Street	563	527	521	485	485	338	385	294	3598
Minor Street	31	28	30	52	30	72	18	35	296
Total	594	555	551	537	515	410	403	329	3894
Pedestrian	4	16	6	13	5	3	4	2	53

WARRANT MET? No. The total approach volumes for the highest 8 hours are greater than 300 vph, but the minor street approach volumes and total intersection pedestrian volumes are fewer than 100 units per hour. (The intersection does not qualify as a residential area.)

II. ACCIDENT WARRANT:

3 or more reported accidents (types susceptible to correction by stop signs) within *a 12-month period*.
Same numbers apply for intersection in residential areas.
Maximum number of actual correctable accidents in a 12-month period: There was a maximum of 1 accident in a 12-month period (7/1/2016 – 7/1/2017).

WARRANT MET? No

III. LINE OF SIGHT WARRANT:

Less than 150 feet on one or more approaches of the MAJOR STREET
Same numbers apply for intersection in residential areas.
Actual field conditions: On-street parking is permitted on the north side of E. Bayshore Road both east and west of Addison Street. Vehicles legally parked on the street restrict the line of sight distance to less than 150 feet.

WARRANT MET? Yes

An intersection qualifies as a residential one, if ALL of the following conditions exist:
- Both streets have residential frontage and have a 25 mph speed limit. E. Bayshore does not have residential frontage.
- Neither street is an adopted through street.
- Both streets are two-lane streets.
- No existing stop sign or traffic signal within 600′ along the major street.
- Streets extend 600′ or more away from the intersection on at least three sides.
- The installation of a multi-way stop sign is compatible with overall traffic circulation.

CONCLUSION: The intersection meets the line of sight warrant.

Date: February 15, 2019 Study done by: Hexagon Transportation Consultants

ALL-WAY STOP SIGN WARRANT
FOR
Lincoln Street AND E. Bayshore Road

I. VOLUME WARRANT

Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 vph** on MINOR STREET for the *same 8 hrs*.
OR
Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 pedestrians per hour** at the intersection for the *same 8 hrs*.
*If intersection is located in residential area (meets all six conditions) or if there are unusual conditions (steep hill or curves), then decrease above volumes by 40%

Time	4:00 PM	5:00 PM	6:00 PM	3:00 PM	7:00 AM	2:00 PM	8:00 AM	7:00 PM	Total
Major Street	825	777	696	691	497	539	410	502	4937
Minor Street	30	42	28	24	143	56	184	30	537
Total	855	819	724	715	640	595	594	532	5474
Pedestrian	8	7	12	4	6	1	3	1	42

WARRANT MET? No. The total approach volumes for the highest 8 hours are greater than 300 vph, but the minor street approach volumes and total intersection pedestrian volumes are fewer than 100 units per hour. (The intersection does not qualify as a residential area.)

II. ACCIDENT WARRANT:

3 or more reported accidents (types susceptible to correction by stop signs) within *a 12-month period*.
Same numbers apply for intersection in residential areas.
Maximum number of actual correctable accidents in a 12-month period: There were a maximum of 5 accidents in a 12-month period (1/1/2018 – 1/1/2019). All accidents are potentially correctable by an All-Way Stop.

WARRANT MET? Yes

III. LINE OF SIGHT WARRANT:

Less than 150 feet on one or more approaches of the MAJOR STREET
Same numbers apply for intersection in residential areas.
Actual field conditions: On-street parking is permitted on the north side of E. Bayshore Road both east and west of Lincoln Street. Vehicles legally parked on the street restrict the line of sight distance to less than 150 feet.

WARRANT MET? Yes

An intersection qualifies as a residential one, if ALL of the following conditions exist:
- Both streets have residential frontage and have a 25 mph speed limit. E. Bayshore Road does not have residential frontage.
- Neither street is an adopted through street.
- Both streets are two-lane streets.
- No existing stop sign or traffic signal within 600′ along the major street.
- Streets extend 600′ or more away from the intersection on at least three sides.
- The installation of a multi-way stop sign is compatible with overall traffic circulation.

CONCLUSION: The intersection meets the accident warrant and the line of sight warrant.

Date: February 15, 2019 Study done by: Hexagon Transportation Consultants

ALL-WAY STOP SIGN WARRANT
FOR
Lincoln Street AND Garden Street (west)

I. VOLUME WARRANT

Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 vph** on MINOR STREET for the *same 8 hrs*.
OR
Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 pedestrians per hour** at the intersection for the *same 8 hrs*.
*If intersection is located in residential area (meets all six conditions) or if there are unusual conditions (steep hill or curves), then decrease above volumes by 40%

Time	8:00 AM	7:00 AM	4:00 PM	2:00 PM	3:00 PM	5:00 PM	1:00 PM	9:00 AM	Total
Major Street	210	193	38	52	44	33	48	51	669
Minor Street	21	5	60	39	41	48	32	19	265
Total	231	198	98	91	85	81	80	70	934
Pedestrian	11	7	11	0	6	6	5	7	53

WARRANT MET? No. The total approach volumes for the highest 8 hours are less than 300 vph and the intersection does not qualify as a residential area.

II. ACCIDENT WARRANT:

3 or more reported accidents (types susceptible to correction by stop signs) within *a 12-month period*.
Same numbers apply for intersection in residential areas.
Maximum number of actual correctable accidents in a 12-month period: There was a maximum of 1 accident in a 12-month period (1/1/2018 – 1/1/2019).

WARRANT MET? No

III. LINE OF SIGHT WARRANT:

Less than 150 feet on one or more approaches of the MAJOR STREET
Same numbers apply for intersection in residential areas.
Actual field conditions: On-street parking is permitted on both sides of Garden Street at the intersection with Lincoln Street (W). Vehicles legally parked on the street restrict the line of sight distance to less than 150 feet.

WARRANT MET? Yes

An intersection qualifies as a residential one, if ALL of the following conditions exist:
- Both streets have residential frontage and have a 25 mph speed limit.
- Neither street is an adopted through street.
- Both streets are two-lane streets.
- No existing stop sign or traffic signal within 600′ along the major street. There is a stop sign less than 600′ on the west approach of Garden Street.
- Streets extend 600′ or more away from the intersection on at least three sides. Both Garden Street approaches are less than 600′.
- The installation of a multi-way stop sign is compatible with overall traffic circulation.

CONCLUSION: The intersection meets the line of sight warrant.

Date: February 15, 2019 Study done by: Hexagon Transportation Consultants

ALL-WAY STOP SIGN WARRANT
FOR
Glen Way AND Runnymede Street

I. VOLUME WARRANT

Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 vph** on MINOR STREET for the *same 8 hrs*.
OR
Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 pedestrians per hour** at the intersection for the *same 8 hrs*.
*If intersection is located in residential area (meets all six conditions) or if there are unusual conditions (steep hill or curves), then decrease above volumes by 40%

Time	8:00 AM	7:00 AM	5:00 PM	3:00 PM	4:00 PM	6:00 PM	7:00 PM	2:00 PM	Total
Major Street	415	351	146	114	122	93	70	75	1386
Minor Street	196	185	371	340	278	284	135	119	1908
Total	611	536	517	454	400	377	205	194	3294
Pedestrian	2	7	13	7	5	4	3	0	41

WARRANT MET? Yes. The total approach volumes for the highest 8 hours are greater than 180 vph and the minor street approach volumes are greater than 60 vph. (The intersection qualifies as a residential area.)

II. ACCIDENT WARRANT:

3 or more reported accidents (types susceptible to correction by stop signs) within *a 12-month period*.
Same numbers apply for intersection in residential areas.
Maximum number of actual correctable accidents in a 12-month period: There were a maximum of 2 accidents in a 12-month period (3/1/2015 – 3/1/2016 and 4/1/2016 – 4/1/2017).

WARRANT MET? No

III. LINE OF SIGHT WARRANT:

Less than 150 feet on one or more approaches of the MAJOR STREET
Same numbers apply for intersection in residential areas.
Actual field conditions: On-street parking is permitted on both sides of Glen Way at the intersection with Runnymede Street. Vehicles legally parked on the street restrict the line of sight distance to less than 150 feet.

WARRANT MET? Yes

An intersection qualifies as a residential one, if ALL of the following conditions exist:
- Both streets have residential frontage and have a 25 mph speed limit.
- Neither street is an adopted through street.
- Both streets are two-lane streets.
- No existing stop sign or traffic signal within 600′ along the major street.
- Streets extend 600′ or more away from the intersection on at least three sides.
- The installation of a multi-way stop sign is compatible with overall traffic circulation.

CONCLUSION: The intersection qualifies as a residential area and meets the volume warrant and line of sight warrant.

Date: February 15, 2019 Study done by: Hexagon Transportation Consultants

ALL-WAY STOP SIGN WARRANT
FOR
Fordham Street AND Bay Road

I. VOLUME WARRANT

Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 vph** on MINOR STREET for the *same 8 hrs*.
OR
Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 pedestrians per hour** at the intersection for the *same 8 hrs*.
*If intersection is located in residential area (meets all six conditions) or if there are unusual conditions (steep hill or curves), then decrease above volumes by 40%

Time	5:00 PM	4:00 PM	3:00 PM	6:00 PM	8:00 AM	2:00 PM	7:00 AM	7:00 PM	Total
Major Street	1201	1193	1110	1058	787	903	754	696	7702
Minor Street	115	88	111	100	242	64	194	69	983
Total	1316	1281	1221	1158	1029	967	948	765	8685
Pedestrian	51	42	37	30	45	15	27	5	252

WARRANT MET? No. The total approach volumes for the highest 8 hours are greater than 300 vph, but some minor street approach volumes and total intersection pedestrian volumes are fewer than 100 units per hour. (The intersection does not qualify as a residential area.)

II. ACCIDENT WARRANT:

3 or more reported accidents (types susceptible to correction by stop signs) within *a 12-month period*.
Same numbers apply for intersection in residential areas.
Maximum number of actual correctable accidents in a 12-month period: There were a maximum of 3 accidents in a 12-month period (7/1/2016 – 7/1/2017). All accidents are potentially correctable by an All-Way Stop.

WARRANT MET? Yes

III. LINE OF SIGHT WARRANT:

Less than 150 feet on one or more approaches of the MAJOR STREET
Same numbers apply for intersection in residential areas.
Actual field conditions: On-street parking is permitted on both sides of Bay Road except for a short segment (approx. 20-25 feet) on the north side of the east and west approaches, where the curb is painted red. Even so, vehicles legally parked on the street restrict the line of sight distance to less than 150 feet.

WARRANT MET? Yes

An intersection qualifies as a residential one, if ALL of the following conditions exist:

- Both streets have residential frontage and have a 25 mph speed limit.
- Neither street is an adopted through street.
- Both streets are two-lane streets. Bay Road is not two lanes
- No existing stop sign or traffic signal within 600′ along the major street. There is a stop sign within 600′ on Bay Road east approach
- Streets extend 600′ or more away from the intersection on at least three sides.
- The installation of a multi-way stop sign is compatible with overall traffic circulation.

CONCLUSION: The intersection meets the accident warrant and the line of sight warrant.

Date: February 15, 2019 Study done by: Hexagon Transportation Consultants

ALL-WAY STOP SIGN WARRANT

FOR

Pulgas Avenue AND Garden Street

I. VOLUME WARRANT

Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 vph** on MINOR STREET for the *same 8 hrs*.

OR

Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 pedestrians per hour** at the intersection for the *same 8 hrs*.

*If intersection is located in residential area (meets all six conditions) or if there are unusual conditions (steep hill or curves), then decrease above volumes by 40%

Time	5:00 PM	4:00 PM	3:00 PM	6:00 PM	8:00 AM	7:00 AM	2:00 PM	7:00 PM	Total
Major Street	773	743	687	701	684	524	469	383	4964
Minor Street	57	58	90	56	40	92	35	31	459
Total	830	801	777	757	724	616	504	414	5423
Pedestrian	17	19	51	10	11	27	8	2	145

WARRANT MET? No. The total approach volumes for the highest 8 hours are greater than 300 vph, but the minor street approach volumes and total intersection pedestrian volumes are fewer than 100 units per hour. (The intersection does not qualify as a residential area.)

II. ACCIDENT WARRANT:

3 or more reported accidents (types susceptible to correction by stop signs) within *a 12-month period*.

Same numbers apply for intersection in residential areas.

Maximum number of actual correctable accidents in a 12-month period: There were a maximum of 4 accidents in a 12-month period (10/1/2014 – 10/1/2015). However, only 3 accidents during this period are potentially correctable by an All-Way stop. Collison Factor 21460(a) (driving to the left of double parallel solid yellow lines) is not correctable by an All-Way Stop.

WARRANT MET? Yes

III. LINE OF SIGHT WARRANT:

Less than 150 feet on one or more approaches of the MAJOR STREET

Same numbers apply for intersection in residential areas.

Actual field conditions: On-street parking is permitted on both sides of Pulgas Avenue except for a short distance (approx. 25 ft) on the east side of the south approach, where the curb is painted red. Even so, vehicles legally parked on the street restrict the line of sight distance to less than 150 feet.

WARRANT MET? Yes

An intersection qualifies as a residential one, if ALL of the following conditions exist:

- Both streets have residential frontage and have a 25 mph speed limit.
- Neither street is an adopted through street.
- Both streets are two-lane streets.
- No existing stop sign or traffic signal within 600′ along the major street. There is a stop sign 580 feet from the center of Puglas/Garden to the north.
- Streets extend 600′ or more away from the intersection on at least three sides.
- The installation of a multi-way stop sign is compatible with overall traffic circulation.

CONCLUSION: The intersection meets the accident warrant and the line of sight warrant.

Date: February 15, 2019 Study done by: Hexagon Transportation Consultants

ALL-WAY STOP SIGN WARRANT
FOR
Capitol Avenue AND Scofield Avenue

I. VOLUME WARRANT

Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 vph** on MINOR STREET for the *same 8 hrs*.
OR
Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 pedestrians per hour** at the intersection for the *same 8 hrs*.
*If intersection is located in residential area (meets all six conditions) or if there are unusual conditions (steep hill or curves), then decrease above volumes by 40%

Time	3:00 PM	4:00 PM	7:00 AM	5:00 PM	8:00 AM	6:00 PM	2:00 PM	7:00 PM	Total
Major Street	402	334	279	271	249	265	253	215	2268
Minor Street	147	103	132	116	117	90	94	66	865
Total	549	437	411	387	366	355	347	281	3133
Pedestrian	51	53	56	44	19	19	20	16	278

WARRANT MET? No. The total approach volumes for the highest 8 hours are not all greater than 300 vph. (The intersection does not qualify as a residential area.)

II. ACCIDENT WARRANT:

3 or more reported accidents (types susceptible to correction by stop signs) within *a 12-month period*.
Same numbers apply for intersection in residential areas.
Maximum number of actual correctable accidents in a 12-month period: There were a maximum of 2 accidents in a 12-month period (2/1/2018 – 2/1/2019).

WARRANT MET? No

III. LINE OF SIGHT WARRANT:

Less than 150 feet on one or more approaches of the MAJOR STREET
Same numbers apply for intersection in residential areas.
Actual field conditions: On-street parking is prohibited on eastbound Scofield Avenue. Vehicles on the stop-controlled approaches can see vehicles approach on eastbound Scofield Avenue for at least 150 feet.

WARRANT MET? No

An intersection qualifies as a residential one, if ALL of the following conditions exist:
- Both streets have residential frontage and have a 25 mph speed limit.
- Neither street is an adopted through street.
- Both streets are two-lane streets.
- No existing stop sign or traffic signal within 600′ along the major street. There is a traffic signal less than 600′ away on the west approach of Scofield
- Streets extend 600′ or more away from the intersection on at least three sides. The east approach of Scofield is less than 600′
- The installation of a multi-way stop sign is compatible with overall traffic circulation.

CONCLUSION: The intersection does not meet the warrant criteria for all-way stop control.

Date: February 15, 2019 Study done by: Hexagon Transportation Consultants

ALL-WAY STOP SIGN WARRANT
FOR
Pulgas Avenue AND Weeks Street

I. VOLUME WARRANT

Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 vph** on MINOR STREET for the *same 8 hrs*.
OR
Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 pedestrians per hour** at the intersection for the *same 8 hrs*.
*If intersection is located in residential area (meets all six conditions) or if there are unusual conditions (steep hill or curves), then decrease above volumes by 40%

Time	5:00 PM	4:00 PM	8:00 AM	7:00 AM	Total
Major Street	668	585	420	358	2031
Minor Street	53	53	27	22	155
Total	721	638	447	380	2186
Pedestrian	26	10	2	7	45

WARRANT MET? No. The total approach volumes for the peak hours are greater than 300 vph, but the minor street approach volumes and total intersection pedestrian volumes are fewer than 100 units per hour. (The intersection does not qualify as a residential area.)

II. ACCIDENT WARRANT:

3 or more reported accidents (types susceptible to correction by stop signs) within *a 12-month period*.
Same numbers apply for intersection in residential areas.
Number of actual correctable accidents in a 12-month period: There were a maximum of 2 accidents in a 12-month period (11/1/2015 – 11/1/2016 and 4/1/2016 – 4/1/2017).

WARRANT MET? No

III. LINE OF SIGHT WARRANT:

Less than 150 feet on one or more approaches of the MAJOR STREET
Same numbers apply for intersection in residential areas.
Actual field conditions: On street parking is permitted on both sides of Pulgas Avenue except for a short distance (approximately 15 feet) on the west side of the south approach where the curb is painted red. Even so, vehicles legally parked on the street restrict the line of sight distance to less than 150 feet.

WARRANT MET? Yes

An intersection qualifies as a residential one, if ALL of the following conditions exist:

- Both streets have residential frontage and have a 25 mph speed limit.
- Neither street is an adopted through street.
- Both streets are two-lane streets.
- No existing stop sign or traffic signal within 600' along the major street. There is a stop sign 550 feet from the center of Puglas/Weeks to the south.
- Streets extend 600' or more away from the intersection on at least three sides.
- The installation of a multi-way stop sign is compatible with overall traffic circulation.

CONCLUSION: The intersection meets the line of sight warrant.

Date: February 15, 2019 Study done by: Hexagon Transportation Consultants

ALL-WAY STOP SIGN WARRANT
FOR
Clarke Avenue AND Weeks Street

I. VOLUME WARRANT

Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 vph** on MINOR STREET for the *same 8 hrs*.
OR
Min. **300 vph** on ALL APPROACHES for *any 8 hrs* AND min. **100 pedestrians per hour** at the intersection for the *same 8 hrs*.
*If intersection is located in residential area (meets all six conditions) or if there are unusual conditions (steep hill or curves), then decrease above volumes by 40%

Time	5:00 PM	4:00 PM	8:00 AM	7:00 AM	Total
Major Street	746	705	705	564	2720
Minor Street	76	75	39	55	245
Total	822	780	744	619	2965
Pedestrian	45	61	28	35	169

WARRANT MET? No. The total approach volumes for the peak hours are greater than 300 vph, but the minor street approach volumes and total intersection pedestrian volumes are fewer than 100 units per hour. (The intersection does not qualify as a residential area.)

II. ACCIDENT WARRANT:

3 or more reported accidents (types susceptible to correction by stop signs) within *a 12-month period*.
Same numbers apply for intersection in residential areas.
Number of actual correctable accidents in a 12-month period: There were a maximum of 3 accidents in a 12-month period (11/1/2017 – 11/1/2018). All accidents are potentially correctable by an All-Way Stop.

WARRANT MET? Yes

III. LINE OF SIGHT WARRANT:

Less than 150 feet on one or more approaches of the MAJOR STREET
Same numbers apply for intersection in residential areas.
Actual field conditions: On street parking is permitted on both sides of Clarke Avenue except for a short distance (approx. 40-45 feet) on the east side of the south approach and the west side of the north approach where the curb is painted red. Even so, vehicles legally parked on the street restrict the line of sight distance to less than 150 feet.

WARRANT MET? Yes

An intersection qualifies as a residential one, if ALL of the following conditions exist:

- Both streets have residential frontage and have a 25 mph speed limit.
- Neither street is an adopted through street.
- Both streets are two-lane streets.
- No existing stop sign or traffic signal within 600' along the major street. There is a stop sign 550 feet from the center of Clarke/Weeks to the south.
- Streets extend 600' or more away from the intersection on at least three sides.
- The installation of a multi-way stop sign is compatible with overall traffic circulation.

CONCLUSION: The intersection meets the accident warrant and the line of sight warrant.

Date: February 15, 2019 Study done by: Hexagon Transportation Consultants

Appendix G
Current Practices in VMT Analysis, FAQ, and VMT Policy Framework

Hexagon Transportation Consultants, Inc.

Memorandum

Date: August 26, 2019

To: Mr. Guido Persicone, City of East Palo Alto

From: Michelle Hunt; Ollie Zhou

Subject: Review of Current Practices in Incorporating Vehicle Miles Travelled (VMT) Analysis

Hexagon Transportation Consultants, Inc. has completed a high-level review of public agency's current practices in incorporating vehicle miles travelled (VMT) analysis into the transportation review procedure. In December 2018, the California Natural Resources Agency certified and adopted the CEQA Guidelines update package, including the Guidelines section implementing Senate Bill 743. The guidelines stated that Level of Service (LOS) will no longer be considered to be an environmental impact under CEQA and considers VMT the most appropriate measure of transportation impact. VMT measures the amount of vehicle trip making and trip length and is a direct measurement of greenhouse gas emissions. A reduction in VMT would promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses that reduces the reliance on individual vehicles. Lead agencies have until July 1, 2020 to implement the new CEQA Guidelines. Currently, the City of East Palo Alto evaluates transportation impacts based on level of service (LOS). In order to comply with the new CEQA Guidelines, the City needs to establish a VMT transportation analysis procedure. The purpose of this memorandum is to provide background knowledge on current practices in implementing VMT analysis guidelines for residential, office and retail developments. Hexagon will first work with City staff to fully develop the VMT policy for residential, office and retail projects. Afterwards, Hexagon will repeat the policy-development process to work with City staff to develop policies for transportation projects, land use plans and other types of developments.

Scope of Review

The Governor's Office of Planning and Research (OPR) published the *Technical Advisory on Evaluating Transportation Impacts in CEQA* in December 2018. The technical advisory provided high-level recommendations on the analysis methodology and significance thresholds for three types of land use projects (residential, office, and retail projects). This technical advisory essentially established the recommended framework for agencies to implement their VMT guidelines. Various cities within California (i.e. Pasadena, San Francisco, Oakland, San Jose and Los Angeles) have implemented VMT analysis procedures in compliance with the CEQA Guidelines. While each agency's approach is individually tailored, they all generally followed the OPR recommended framework. This memorandum focuses on discussing the policies developed by the five cities in the context of the overall VMT policy framework, listed below:

- Screening criteria
- Analysis methodology
- Mitigation

VMT for Residential, Office and Retail Projects

Screening Criteria for Residential, Office and Retail Projects

OPR's technical advisory recommends that various types of developments such as infill developments, small projects, and/or projects near major transit corridors may be presumed to have a less than significant impact on VMT. The current practice includes a combination of location-based screening and/or size-based screening.

Location-Based Screening

Location-based screening usually involves a map-based tool outlining areas within the City that are known to generate less VMT per capita than the relevant significance thresholds. As recommended by OPR, some cities such as Oakland also allow projects located within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor to be presumed to have a less than significant impact on VMT. Most cities have implemented location-based screening.

To qualify as a "major transit stop" or a "high-quality transit corridor", there has to be transit service headways of no longer than 15 minutes. The City of East Palo Alto does not have any transit services that qualify.
Given the relatively small size of East Palo Alto, Hexagon does not recommend the City utilize a location-based screening criterion.

Size-Based Screening

Size-based screening establishes policies that allows certain small projects the presumption of a less-than-significant VMT impact or precluded from transportation review. All five cities have implemented size-based screening policies, either based on the net square footage or units of the project or based on the net daily trip generation, listed below:

- City of Oakland: projects generating fewer than 100 daily vehicle trips
- City of Los Angeles: projects generating fewer than 250 net daily vehicle trips
- City of Pasadena: residential projects with fewer than 10 net units; non-residential projects with fewer than 10,000 square feet or 300 daily vehicle trips
- City of San Francisco: projects generating fewer than 100 daily vehicle trips
- City of San Jose: single-family housing with fewer than 15 units; multi-family housing with fewer than 25 units; office projects with fewer than 10,000 square feet; industrial projects with fewer than 30,000 square feet

OPR's technical advisory suggests that projects generating fewer than 110 daily trips may be assumed to cause a less-than-significant transportation impact.

Hexagon recommends the City develop a sized-based screening criterion to streamline the transportation review of small projects.

Locally-Serving Retail

OPR's technical advisory recommends locally-serving retail be presumed to have a less than significant VMT impact. The underlying assumption is that locally-serving retail will improve retail destination proximity, and thus shorten trips and reduce VMT. The City of San Jose defines locally-serving retail as retail projects with less than 100,000 square feet of total gross floor area and

without drive-through operations. The City of Los Angeles defines locally-serving retail as retail projects with less than a net 50,000 square feet.

Hexagon recommends the City develop a screening criterion for locally-serving retail.

Affordable Housing

OPR's technical advisory also recommends for certain types of affordable housing projects the presumption of a less-than-significant VMT impact. The City of San Jose has established policy screening out projects with 100% affordable housing units built in Planned Growth Areas at a minimum density level that supports transit and located within ½ mile of high-quality transit.

Hexagon recommends the City develop a screening criterion for 100% affordable housing projects. The City could further define the level of affordability and other conditions required to qualify for this screening criterion.

Analysis Methodology for Residential, Office and Retail Projects

OPR's technical advisory recommends utilizing a travel demand forecast model to evaluate VMT for residential and office projects. The advisory stresses the importance of an apples-to-apples comparison by using the same model that establishes the significance thresholds to evaluate project VMT. For cities such as San Jose and Los Angeles, a VMT estimation tool was developed. The tool calculates project-generated VMT using inputs such as project location (APN number), project size, and location-sensitive outputs (i.e. mode split, mix of use) from the respective citywide travel demand forecast models. Project-generated VMT for residential and office projects are estimated using the VMT estimation tool instead of running the model. Regional serving retail projects are analyzed for total VMT and would need to utilize the travel demand forecast model.

For residential and office projects, OPR's technical advisory recommends a significance threshold that is 15% below that of existing development but does not specify the region of existing development for evaluation. All cities except Pasadena established the VMT threshold at 15% below average for residential and office projects. The average is set at either the regional average or the citywide average, or Planning Area average for the City of Los Angeles.

For retail projects, OPR's technical advisory recommends a significance threshold of net increase in total VMT. The City of San Jose and City of Los Angeles both established VMT threshold at net increase in total regional VMT for retail projects. The City of San Francisco and the City of Oakland both established VMT threshold at 15% below regional average VMT per employee for retail projects.

The City of Pasadena set the existing (at the time of policy development) citywide 22.6 VMT per service population (population + jobs) as the significance threshold for all residential, office and retail projects.

Hexagon recommends the City use the C/CAG model to establish a citywide average home-based VMT per capita for existing residential land uses, and a citywide average home-based work trip VMT per employee for existing employment uses. Hexagon recommends the City develop a significance threshold at or below the existing citywide residential and office VMT averages for these projects, and a threshold of net increase in total VMT for retail projects.

Mixed-Use Developments

OPR's technical advisory suggests that each component of a mixed-use project be analyzed for VMT independently. Alternatively, the advisory suggests that the dominant use of a project may be analyzed. Most cities established guidelines requiring each component of the mixed-use projects be analyzed for VMT.

Hexagon recommends the City evaluate each component of a mixed-use development separately, while allowing trip reductions based on the mixed-use nature of these developments.

Mitigation

Mitigation of a significant VMT impact would require a shift in mode choice away from single occupant vehicles. Currently, this is typically accomplished through the preparation of a TDM Plan with a trip reduction commitment as part of the project's conditions of approval. The City of Los Angeles and the City of San Jose have also created a VMT evaluation tool to formalize the evaluation of the effectiveness of the proposed TDM measures. It is worth mentioning that OPR's technical advisory also indicate that in-lieu fees have been found to be valid mitigation where there is both a commitment to pay fees and evidence that mitigation will actually occur.

The City of East Palo Alto is currently developing an updated citywide TDM policy. The pending TDM policies could provide a framework for implementing potential VMT mitigation measures. The TDM policy should establish a citywide TDM reduction requirement and provide a menu of TDM measures along with their estimated effectiveness of reducing VMT for future developments to select their TDM strategies towards reaching the reduction requirement. The City could also establish a citywide TMA to provide citywide TDM measures (i.e. citywide shuttles, annual monitoring programs, etc.) and oversee the implementation of the TDM policy. The City could require future developments to contribute financially towards the TMA as the in-lieu fee to mitigate VMT impacts.

Level of Service Policy

While level of service will no longer be considered a CEQA impact, agencies can still require non-CEQA transportation analysis and require improvements to address the identified deficiencies. The City of Oakland, City of Los Angeles, City of San Jose and City of Pasadena continue to require intersection level of service analysis along with other non-CEQA transportation analysis. The City of East Palo Alto should determine whether they want to continue the requirement of level of service analysis along with other non-CEQA transportation analysis (i.e. vehicle queuing analysis, signal warrant analysis).

Conclusions and Next Steps

Hexagon provided an overview of the current practices in implementing VMT policies for residential, office and retail projects in compliance with the new CEQA guidelines. Hexagon recommends the City consider the following broad framework for its VMT policy for residential, office and retail projects:

1. Develop screening criteria for presumption of a less-than-significant VMT impact
    a. Small projects
    b. Locally-serving retail projects
    c. Affordable housing projects
2. Develop a methodology for analyzing project-generated VMT

   a. Use the C/CAG model to generate existing citywide average home-based VMT per capita for residential land use and home-based work trip VMT per employee for office land use.
   b. Evaluate total VMT for retail projects.
3. Develop VMT significance thresholds using the pending citywide TDM policy
   a. Threshold for residential and office projects should be at or below citywide average
   b. Threshold for retail projects should be net increase in total VMT.
4. Develop VMT mitigation measures using the forthcoming TDM policy
   a. Consider developing a menu of mitigation measures showing the corresponding mitigation effectiveness
   b. Consider establishing a citywide TMA to oversee the implementation of the TDM policy, and establishing an in-lieu fee program through the citywide TMA for VMT impacts

Hexagon will first work with City staff to fully develop the VMT policy for residential, office and retail projects. Afterwards, Hexagon will repeat the policy-development process to work with City staff to develop policies for transportation projects, land use plans and other types of developments.

Hexagon Transportation Consultants, Inc.

Memorandum

Date: June 9, 2020

To: Mr. Daniel Berumen, City of East Palo Alto

From: Michelle Hunt

Subject: Frequently Asked Questions Regarding Vehicle Miles Traveled

This memorandum answers frequently asked questions regarding Vehicle Miles Traveled (VMT).

FAQ #1: What is LOS? Level of Service (LOS) is a qualitative measure of transportation performance at a specific location that is based on traffic congestion and the ability to maneuver. For signalized intersections, LOS is measured by the average delay experienced by motorists during peak hour traffic. LOS is measured using a grading scale from LOS A, which represents free flow conditions with minimal delay to LOS F, where the vehicle demand exceeds roadway capacity and excessive delays are the result. Until now, LOS has been used to identify significant transportation impacts of proposed new development projects under the California Environmental Quality Act (CEQA). Mitigation measures to address LOS impacts have commonly included road widening projects and the installation of traffic signals to increase capacity and reduce delay for automobiles.

FAQ #2: What is VMT? Vehicle Miles Traveled (VMT) measures the amount of daily vehicle trip making and trip length across the entire system and is usually expressed per person. California Senate Bill 743 requires cities to replace LOS with VMT as the primary measure of transportation impacts under CEQA. Using VMT as a metric for transportation analysis incentivizes infrastructure and policies that support modes of transportation besides the vehicle. While the City is compelled to use VMT to measure transportation impacts under CEQA, the City has discretion to establish the VMT analysis methodology, thresholds and screening criteria to exempt certain developments from a detailed VMT analysis. Furthermore, the City may retain the LOS standard set forth in the General Plan, continue to require an assessment of intersection levels of service, and condition project approvals on improvements needed to maintain the adopted LOS standard and/or other operational issues related to transportation. However, since LOS will no longer be used to identify impacts under CEQA, the City may grant an exception to the adopted level of service standards at its discretion.

FAQ #3: What does it mean to be "screened out"? A development project may be "screened out" if the use or size support a presumption that, if analyzed, the project's impact under VMT would be less than significant. Thus, a screened project would not be required to conduct a detailed VMT analysis to quantify the project's VMT and would not need to implement trip reduction measures or multimodal improvements to mitigate a significant impact on VMT. Projects that do not meet the screening criteria adopted by the City are "screened in" and must complete a detailed analysis of VMT produced by the project.

FAQ #4: Does the 110 daily trip screening threshold for infill projects refer to the net increase or the total?

Where a project replaces existing VMT-generating land uses, if the replacement leads to a net overall decrease in VMT, the project would lead to a less-than-significant transportation impact. If the project leads to a net overall increase in VMT, then the screening criteria for small infill projects would apply based on gross trips with no trip reductions for existing or previous uses on the project site.

FAQ #5: How do we account for the cumulative impact of lots of small developments? Metrics such as VMT per capita or VMT per employee, i.e., metrics framed in terms of efficiency, cannot be summed because they employ a denominator. A project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa. To account for the cumulative impact of lots of small developments, it is recommended that the City continue to conduct traffic operational analysis to assess the combined effects of all projects (past, current, and probable future projects of all sizes) on intersection levels of service.

FAQ #6: Should the VMT Policy include schools when the City does not have jurisdiction over public schools? The local school district is the lead agency responsible for public school projects in the District. As the lead agency, the District may determine the VMT analysis methodology and significant thresholds to be used for public schools. However, in practice, school districts often apply the same methodology and significance thresholds adopted by the surrounding local jurisdiction. Thus, it is recommended that the City of Los Altos VMT policy clearly spell out which school projects should be screened out and how schools that are not screened out should be evaluated.

FAQ #7: Does affordable housing generate less VMT than market-rate housing? What about sites that have no or limited transit service nearby? Evidence suggests that affordable housing typically generates less VMT per capita than market-rate housing when located on infill sites. Within metro regions such as the San Francisco Bay Area, extremely low income households have 32% less VMT than median income households, while very low and low income households have 25% and 10% less VMT, respectively.[1] While lower VMT per capita is particularly evident in affordable residential projects near high quality transit, and is partly due to other non-income household variables (e.g. senior and disabled residents, auto ownership, etc.), studies have found that "…controlling for location efficiency and household variables, income remains a significant, positive predictor of VMT." Accordingly, OPR states that 100 percent affordable residential developments may be presumed to have a less than significant impact on VMT. Hexagon recommends that East Palo Alto screen out 100% affordable housing projects. As with other OPR recommendations, cities may develop their own affordable housing screening criteria, including the proportion of affordable units, the level of affordability, and/or other conditions required to qualify for this screening criterion.

FAQ #8: Why should we pick the 15% below the citywide average as the impact threshold for office uses? Why not the use the countywide or regional average as the baseline? OPR recommends a 15% reduction below existing VMT as it aligns with statewide greenhouse gas emissions goals and is achievable in most locations. The East Palo Alto citywide average employment VMT per capita (21.93) is substantially greater than the countywide average (17.94) and the 9-County regional average (15.51). Using a more stringent baseline of either the countywide or the 9-County regional average VMT would result in most proposed new employment uses being found to cause a significant unavoidable impact on VMT even if they implement an

[1] Newmark, Gregory, and Peter Haas. 2015. "Income, Location Efficiency, and VMT: Affordable Housing as a Climate Strategy." Chicago, Il: Center for Neighborhood Technology. https://www.cnt.org/sites/default/files/publications/CNT%20Working%20Paper%20revised%202015-12-18.pdf

extensive list of TDM measures. Although the recommended CEQA impact threshold of 15 percent below the citywide average would be more permissive, it would still require all proposed new office developments over 10,000 square feet to complete a detailed analysis of VMT and implement trip reduction measures. Because more development projects would be able to mitigate their impact on VMT, fewer projects would be required to complete an EIR. Regardless of the outcome of the VMT analysis, it is recommended that the City continue to require proposed new development projects to evaluate the potential effect on intersection levels of service and other operational issues related to transportation.

FAQ #9: Why should we pick the citywide average as the impact threshold for residential uses? Why not the use the countywide or regional average as the baseline? The East Palo Alto citywide average residential VMT per capita (10.23) is substantially lower than the countywide average (13.00) and the 9-County regional average (13.98). Because the existing citywide average residential VMT per capita is already more than 15% below the countywide average, it is recommended that the City of East Palo Alto adopt a CEQA impact threshold at the citywide average residential VMT per capita. Furthermore, because fewer TDM measures are applicable to residential developments, it is recommended that the impact threshold for residential developments require a more modest reduction in VMT. The recommended threshold would continue to require residential developments that do not meet the small infill project screening criteria or the affordable housing screening criteria to conduct a detailed VMT analysis and implement trip reduction measures to reduce VMT thereby leading to a reduction in the citywide average residential VMT per capita over time.

FAQ #10: Why should we use the same impact threshold for regional retail uses as for office uses? For regional retail projects, OPR's technical advisory recommends utilizing the travel demand forecast model to analyze total VMT. Typically, this involves adding the proposed new retail employment in the appropriate Traffic Analysis Zone (TAZ) where the proposed project is located and subtracting an equivalent about of retail jobs from other TAZs in order to retain consistency with the regional land use assumptions. However, the model is not well suited to measure changes in VMT due to shifts in the location of retail uses because random fluctuations that occur during the trip assignment process may obscure the project's actual effect on VMT. Furthermore, the vast majority of retail trips are made by customers, which are influenced less by TDM measures. Thus, it is unlikely that TDM measures could effectively mitigate a significant impact finding based on an analysis of a retail project's effect on total VMT. It is notable that most other jurisdictions that have adopted VMT policies have chosen to evaluate retail projects based on VMT per employee (San Francisco and Oakland) or VMT per capita (Pasadena). Thus, Hexagon recommends that proposed regional retail projects be evaluated based on VMT per employee. Furthermore, the VMT analysis for retail uses should be based on employee trips only and exclude customer trips. Hexagon recommends the City of East Palo Alto adopt a significance threshold of 15 percent below the existing citywide average VMT per employee for regional retail projects, should any be proposed in East Palo Alto.

FAQ #11: Please run through an example of how this would work for a recently approved project. Table 1 shows several examples of recent development projects in East Palo Alto. Note that many projects or retail components of mixed-use projects would be screened out (exempted from further CEQA VMT analysis) and presumed to have a less than significant impact on VMT.

FAQ #12: What are other cities doing? To date, only a few cities in California have adopted a VMT Policy. Table 2 presents a comparison of the VMT Policy adopted by other cities in California

as well as staff recommendations regarding the VMT Policy Framework currently being considered by the neighboring Cities of Menlo Park and Palo Alto.

FAQ #13: What happens if we do not adopt a policy before the July 1st deadline? The City will not be subject to any penalties or other consequences enforced by the State for failure to meet the July 1st deadline. However, CEQA documents may no longer consider LOS as a measure of transportation impacts. The City of East Palo Alto could follow one of the following courses of action:

1. Adopt an interim VMT Policy based on OPR guidelines while gathering additional information to allow the City to tailor the policy to local conditions and goals.
2. Process any environmental documents for proposed development projects that come forward after July 1 based on VMT analysis methodology and significance criteria developed by staff on a case-by-case basis.
3. Hold off on processing any environmental documents starting July 1st until the City adopts its VMT Policy.

Table 1
Example Project Analysis

Project	Project Type and Size (du or SF)	Meets Screening Criteria?	CEQA VMT Analysis
University Plaza Ph II - 2111 University Ave.	Mixed Use - 231,883 SF office + 4,102 SF community flex space	**Office:** no, project size exceeds the infill screening threshold (110 daily vehicle trips). CEQA VMT analysis required. **Community Flex:** yes, considered local serving retail.	Office analysis: CEQA VMT analysis required to show how project will reduce VMT to at least 15% below citywide average VMT per employee. Mitigation measures required to mitigate impact may include TDM Measures and multimodal transportation facilities (fill gap in sidewalk).
The Primary School - 1200 Weeks St.	Private School (511 pre-school - middle school students); Infant & Toddler Parent Programs; Community Programs	**Private school:** no, project exceeds infill screening threshold (110 daily vehicle trips) (treat as office use for screening). CEQA VMT analysis required.	CEQA VMT analysis required to show how project will reduce VMT to at least 15% below citywide average VMT per employee. Mitigation measures required to mitigate impact may include TDM Measures and multimodal transportation facilities (fill gap in sidewalk).
EPACenter Arts - 1950 Bay Rd.	Art & music studios, classrooms, performance theater, administrative offices, and community café totaling 25,000 SF	**Arts education/performance space:** yes, equivalent to local serving public facility. **Café:** yes, meets screening criteria for local serving retail. Therefore, project is screened out and assumed to have a less than significant transportation impact.	N/A
Light Tree Apartments - 1805 East Bayshore Rd.	Residential - Net addition of 91 mf affordable units	**Residential:** yes, affordable housing can be assumed to cause a less than significant transportation impact. (City may adopt specific screening criteria regarding level of affordability or other conditions.)	N/A
Clarum Corner - 2331 University Ave.	Mixed Use - residential 33 mf du + 2,500 SF retail	**Residential:** no, project size exceeds the infill screening threshold (110 daily vehicle trips). CEQA VMT analysis required. **Retail:** yes, considered local serving retail.	Residential analysis: CEQA VMT analysis required to show how project will reduce VMT to below citywide average VMT per capita. Internal (captured) trips due to mixed-use would reduce residential VMT. Incorporation of affordable housing, unbundled parking, TDM measures or multi-modal transportation improvements could further reduce the average VMT per capita.

Table 2
Adopted/Recommended VMT Policies for Other Cities

	East Palo Alto (recommended)	Menlo Park (recommended)	Palo Alto (recommended)	San Jose
Residential				
Methodology	VMT per resident	VMT per resident	VMT per resident	VMT per resident
VMT Threshold	citywide average	15% below regional avg	15% below countywide avg	15% below citywide average
Screening	Size, 100% affordable	Size, map-based (low VMT), transit proximity, 100% affordable	Size, map-based (low VMT), transit proximity, 100% affordable	Size, map-based (if both low VMT & near transit or if both affordable and near transit)
Office				
Methodology	VMT per employee	VMT per employee	VMT per employee	VMT per employee
VMT Threshold	15% below city average	15% below citywide avg	15% below regional avg	15% below regional average
Screening	Size	Size, map based (low VMT), transit proximity	Size, map based (low VMT), transit proximity	Size, map-based (if both low VMT & near transit)
Retail				
Methodology	VMT per employee	Total VMT	Total VMT	Total VMT
VMT Threshold	15% below city average	Net increase	Net increase	Net increase
Screening	local-serving (35 ksf)	local-serving (50 ksf)	local-serving (10 ksf)	local-serving (100 ksf)
Other Land Uses				
Categories	Fitness club/hotel/school/etc.	Hotel/School	Varies	Retail/hotel/school/etc.
Methodology	Treat as office or retail	Treat as retail	Ad hoc or treat as office/residential/retail	Varies
VMT Threshold	Treat as office or retail	Treat as retail	Treat as office/residential/retail	Varies
Screening	Size, local serving public facilites	Local-serving public facilities	Treat as office/residential/retail	Local-serving public facilities

Table 2 (continued)
Adopted/Recommended VMT Policies for Other Cities

	San Francisco	Oakland	Pasadena
Residential			
Methodology	VMT per resident	VMT per resident	VMT per capita
VMT Threshold	15% below regional average	15% below regional average	22.6 VMT/capita
Screening	Size, map-based (low VMT), transit proximity	Size, map-based (low VMT), transit proximity	Size
Office			
Methodology	VMT per employee	VMT per employee	VMT per capita
VMT Threshold	15% below regional average	15% below regional average	22.6 VMT/capita
Screening	Size, map-based (low VMT), transit proximity	Size, map-based (low VT), transit proximity	Size
Retail			
Methodology	VMT per employee	VMT per employee	VMT per capita
VMT Threshold	15% below regional average	15% below regional average	22.6 VMT/capita
Screening	Size, map-based	Map-based (low VMT), transit proximity, local-serving (determined on a case by case basis)	Size (10 ksf)
Other Land Uses			
Categories	Schools/student housing/hotels/etc.	Hotel/Institutions/Public services/etc.	None specified
Methodology	Treat as office/residential/retail	Treat as office/residential/retail	VMT per capita
VMT Threshold	Treat as office/residential/retail	Treat as office/residential/retail	22.6 VMT/capita
Screening	Local-serving public facilities	Size, map-based, local-serving public facilities	Size

HEXAGON TRANSPORTATION CONSULTANTS, INC.

Memorandum

Date: June 18, 2020

To: Mr. Daniel Berumen, City of East Palo Alto

From: Gary Black; Michelle Hunt

Subject: Vehicle Miles Traveled (VMT) Policy Framework for Common Land Uses

This memorandum presents the recommended VMT policy framework for the City of East Palo Alto. This memorandum addresses proposed development projects containing residential, office and retail uses. In addition, the VMT policy framework has been expanded to cover transportation projects, land use plans, and other types of developments.

Background

In 2013, Senate Bill 743 was signed by Governor Brown. SB 743 directed the State Office of Planning and Research (OPR) to develop new California Environmental Quality Act (CEQA) guidelines and to replace Level of Service (LOS) as the evaluation measure for transportation impacts under CEQA with another measure such as Vehicle Miles Traveled (VMT). VMT measures the amount of vehicle trip making and trip length and is a direct measurement of greenhouse gas emissions. A reduction in VMT would promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses that reduces the reliance on individual vehicles.

In December 2018, the California Natural Resources Agency certified and adopted the CEQA Guidelines update package, including the Guidelines section implementing Senate Bill 743. The guidelines potentially make it easier for developers to build residential, commercial and mixed-use infill projects that improve air quality by reducing the number of miles driven by automobiles, based on the land use and transportation characteristics of the project.

Recently reviewed projects in East Palo Alto have reported VMT data in their environmental documents for informational purposes, but LOS has been used for determining environmental impacts. Lead agencies have until July 1, 2020 to implement the new CEQA Guidelines. In order to comply with the new CEQA Guidelines, the City needs to establish a VMT transportation analysis procedure that identifies the City's VMT metric(s), sets impact thresholds, and provides guidance on what analysis is required and how the analysis is to be done. A summary of OPR's *Technical Advisory on Evaluating Transportation Impacts in CEQA* and VMT policies adopted by other California cities was documented by Hexagon in a separate memorandum dated August 26, 2019 (attached).

It should be noted that SB 743 does not preclude cities from retaining General Plan policies related to LOS. Furthermore, cities may continue to require transportation analyses of a project's consistency with the adopted LOS goals and/or other operational issues related to transportation. While the mitigation measures identified in the project's CEQA document will be based on VMT and not LOS, cities may require transportation improvements intended to address LOS deficiencies

through project conditions of approval. While the previous CEQA process required a city to prepare and circulate an EIR and adopt a statement of overriding considerations if a project would result in a significant unavoidable impact related to level of service, under the new guidelines, the City may grant an exception to the adopted level of service standards at its discretion.

Pertinent Plans and Policies

The new CEQA guidelines serve to implement two key state goals:

- Ensure that environmental impacts of traffic (e.g. noise, air pollution, safety) are properly addressed and mitigated, and
- Promote public health and the reduction in greenhouse gases.

City of East Palo Alto planning and policy documents that apply to the recommended VMT Policy are described below.

- The Draft VMT Policy is aligned with the following *City Council Strategic Priorities:*
    - #4: Improve Public Facilities and Infrastructure, and
    - *#6*: Create a Healthy and Safe Community.

- *City of East Palo Alto's Climate Action Plan,* adopted in 2011, set forth an emissions reduction goal of 15 percent below 2005 levels by 2020. More recently, the California Air Resources Board adopted an updated SB 375 emissions target for the San Francisco Bay Area of 19 percent below 2005 levels by 2035. In East Palo Alto, 14 percent of emissions stem from travel on local roads and 48 percent of emissions stem from state highway travel. The Draft VMT Policy would lead to a reduction in VMT and thereby reduce vehicle emissions.

- The Draft VMT Policy is also consistent with the following goals and community indicators set forth in the *City of East Palo Alto General Plan 2035*:

    - Maintain an urban form and land use pattern that enhances the quality of life and meets the community's vision for its future (LU-1)
    - Foster the creation of complete, multimodal streets (T-2)
    - Update transportation performance measures (T-7.2)
    - Adopt transportation demand management and roadway system efficiency strategies (T-8)
    - 20% Reduction in single occupancy commuting by 2035 (Table 12-12: Indicators)
    - 20% Bicycle/pedestrian mode share to work by 2035 (Table 12-12: Indicators)
    - 15% Bicycle/pedestrian mode share to school by 2035 (Table 12-12: Indicators)
    - Decrease per capita VMT (Table 12-12: Indicators)

VMT Policy Framework for Residential, Office and Retail Projects

The recommended VMT policy framework for residential, office and retail projects focuses on the elements listed below:

- Screening criteria
- Analysis methodology
- Mitigation

Screening Criteria

Various types of developments such as infill developments, small projects, and/or projects near major transit corridors may be presumed to have a less than significant impact on VMT. Screening criteria may be based on location, project size, or land use.

Locations near High Quality Transit

The City of East Palo Alto is quite small in area (approximately 2.5 square land miles). Due to its small size, the City is relatively homogeneous in its transportation characteristics. Unlike many other nearby cities, East Palo Alto is not directly served by rail transit, and existing bus service within the City is limited. Transit ridership in East Palo Alto does not differ substantially by location. Criteria sometimes used to screen out projects located within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor are not applicable in this City as there are no such locations in East Palo Alto. Thus, there is not a compelling rationale for implementation of location-based screening criteria.

Small Infill Projects

Size-based screening establishes policies that allows certain small projects the presumption of a less-than-significant VMT impact, which would streamline the transportation review of small infill projects. It is recommended that the City of East Palo Alto follow OPR's Technical Advisory and assume that projects generating fewer than 110 daily trips cause a less-than-significant transportation impact. Based on this screening criterion, the following developments would be "screened out" and not require a VMT analysis:

- Residential: 10 single family detached dwelling units, or 20 multifamily dwelling units
- Office: 10,000 square feet gross floor area
- Industrial: 20,000 square feet gross floor area
- Congregate Care/Assisted Living: 40 beds

Local-Serving Retail

OPR's Technical Advisory recommends local-serving retail be presumed to have a less than significant VMT impact. The underlying assumption is that local-serving retail will improve retail destination proximity, and thus shorten trips and reduce VMT. In recognition of this effect, it is recommended that the City of East Palo Alto assume local-serving retail projects cause a less-than-significant transportation impact. For context, the floor area of many big box retailers and local serving retailers in San Mateo and Santa Clara Counties is shown on Table 1. In recent years, many big-box retailers have turned to small-format stores (as small as 14,000 s.f.). Thus, there is some overlap in the size range of big box retail stores and traditionally local-serving retail stores. It is likely that the small-format big-box stores do not draw traffic from a large region like their full-size stores do and thus function as a local-serving use. Based on a review of the sizes of retail stores in East Palo Alto and surrounding communities, retail developments containing up to 35,000 gross square feet will be considered to be local-serving.

Table 1
Example Retail Uses in East Palo Alto and Surrounding Communities

Store Name	Address	Approx. Size (s.f.)
Big Box Stores (Kohl's, Walmart, Target, Best Buy)		
Walmart Supercenter	7150 Camino Arroyo, Gilroy	248,000
Walmart Supercenter	777 Story Rd, San Jose	182,000
Target	298 W McKinley Ave, Sunnyvale, CA	161,000
Target	533 Coleman Ave, San Jose, CA 95110	151,000
Target	450 N Capitol Ave, San Jose, CA 95133	149,000
Target	5001 Junipero Serra Blvd, Colma, CA 94014-3217	148,000
Target	2004 El Camino Real, Santa Clara, CA 95050	147,000
Walmart Supercenter	301 Ranch Dr, Milpitas	147,000
Target	2220 Bridgepointe Pkwy, San Mateo, CA 94404	142,000
Target	5630 Cottle Rd, San Jose, CA 95123	139,000
Target	3155 SilverCreek Rd, San Jose, CA 95121	139,000
Target	95 Holger Way, San Jose, CA 95134	137,000
Target	1811 Hillsdale Ave, San Jose, CA 95124	137,000
Target	2161 Monterey Rd, San Jose, CA 95125	136,000
Target	2485 El Camino Real, Redwood City, CA 94063	135,000
Walmart	600 Showers Dr, Mountian View	133,000
Target	20745 Stevens Creek Blvd, Cupertino, CA 95014	131,000
Target	133 Serramonte Ctr, Daly City, CA 94015	129,000
Target	1061 Cochrane Rd, Morgan Hill, CA 95037	126,000
Target	6705 Camino Arroyo, Gilroy, CA 95020	124,000
Target	555 Showers Dr, Mountain View, CA 94040	122,000
Target	2155 Morrill Ave, San Jose, CA	113,000
Target	1750 Story Rd, San Jose, CA 95122	112,000
Kohl's	890 Blossom Hill Rd, San Jose, CA 95123	105,000
Kohl's	1200 El Camino Real, Colma, CA 94014	99,000
Walmart Supercenter	5095 Almaden Expy, San Jose	98,000
Walmart Supercenter	170 Cochrane Plz, Morgan Hill	92,000

Table 1 (continued)
Example Retail Uses in East Palo Alto and Surrounding Communities

Store Name	Address	Approx. Size (s.f.)
Big Box Stores (Kohl's, Walmart, Target, Best Buy)		
Kohl's	6765 Camino Arroyo, Gilroy, CA 95020	89,000
Kohl's	1150 Great Mall Dr, Milpitas, CA 95035	88,000
Target	1600 Saratoga Ave, San Jose, CA 95129	88,000
Target	879 Blossom Hill Rd, San Jose, CA 95123	83,000
Kohl's	250 Walnut St, Redwood City, CA 94063	79,000
Walmart Neighborhood Market	4080 Stevens Creek Blvd, San Jose	72,000
Kohl's	350 Showers Dr, Mountain View, CA 94040	69,000
Target	1150 El Camino Real, San Bruno, CA 94066	64,000
Best Buy	3090 Stevens Creek Blvd, San Jose, CA 95128	58,000
Best Buy	5065 Almaden Expy, San Jose, CA 95118	54,000
Target	1775 E Bayshore Rd, East Palo Alto, CA 94303	53,000
Best Buy	63 Ranch Dr, Milpitas, CA 95035	51,000
Kohl's	525 E Hamilton Ave, Campbell, CA 95008	51,000
Walmart Neighborhood Market	1450 Monterey Rd, San Jose	50,000
Best Buy	715 E El Camino Real, Mountain View, CA 94040	50,000
Walmart Neighborhood Market	3255 Mission College Blvd, Santa Clara	47,000
Best Buy	1127 Industrial Rd, San Carlos, CA 94070	45,000
Best Buy	181 Curtner Ave, San Jose, CA 95125	45,000
Best Buy	200 Colma Blvd, Colma, CA 94014	43,000
Walmart Neighborhood Market	4055 Evergreen Village Sq Ste 140, San Jose	40,000
Best Buy	2460 E Charleston Rd, Mountain View, CA 94043	31,000
Best Buy	7011 Camino Arroyo, Gilroy, CA 95020	30,000
Target	19499 Stevens Creek Blvd, Cupertino, CA 95014	23,000
Best Buy	1250 El Camino Real, San Bruno, CA 94066	21,000
Target	100 Westlake Center, Daly City, CA 94015	14,000

Table 1 (continued)
Example Retail Uses in East Palo Alto and Surrounding Communities

Store Name	Address	Approx. Size (s.f.)
Local Retail Stores (Grocery & Drug Stores)		
Safeway	525 El Camino Real, Menlo Park, CA 94025	70,000
Cardenas Market	1731 E Bayshore Rd, East Palo Alto, CA 94303	29,000
CVS Pharmacy	855 El Camino Real, Palo Alto, CA 94301	25,000
Safeway	325 S Sharon Park Dr, Menlo Park, CA 94025	25,000
Draeger's	1010 University Dr., Menlo Park, CA 94025	23,000
Wholefoods	774 Emerson St, Palo Alto, CA 94301	21,000
Safeway	2811 Middlefield Rd, Palo Alto, CA 94306	21,000
Grocery Outlet	3445 Alma Street, Palo Alto, CA 94306	18,000
Trader Joe's	720 Menlo Ave, Menlo Park, CA 94025	18,000
CVS Pharmacy	352 University Avenue, Palo Alto, CA 94301	17,000
Walgreen's	2605 Middlefield Road, Palo Alto, CA 94306	17,000
CVS Pharmacy	325 Sharon Park Drive, Menlo Park, CA 94025	14,000
Walgreen's	643 Santa Cruz Avenue, Menlo Park, CA 94025	14,000
Walgreen's	4170 El Camino Real, Palo Alto, CA 94306	14,000
Chavez Supermarket	3282 Middlefield Rd., Menlo Park, CA 94025	14,000
Trader Joe's	855 El Camino Real, Palo Alto, CA 94301	12,000
CVS Pharmacy	2701 Middlefield Road, Palo Alto, CA 94306	12,000
Walgreen's	300 University Avenue, Palo Alto, CA 94301	10,000
CVS Pharmacy	700 El Camino Real, Menlo Park, CA 94025	10,000
Walgreen's Community Pharmacy	217 Alma Street, Palo Alto, CA 94301	6,000

Local-Serving Public Facilities

Local-serving public facilities either produce very low VMT or divert existing trips from established facilities to new facilities without measurably increasing trips outside of the area. For these reasons, it is recommended that local-serving public facilities (publicly owned or controlled), excluding private schools and high schools, be presumed to have a less than significant VMT impact. Examples of these projects include:

- Branch Library
- Community or Senior Center
- Fire Station
- Public Elementary School

Affordable Housing

Evidence suggests that affordable housing typically generates less VMT per capita than market-rate housing when located on infill sites. Within metro regions such as the San Francisco Bay Area, extremely low income households have 32% less VMT than median income households, while very low and low income households have 25% and 10% less VMT, respectively.[1] While lower VMT per capita is particularly evident in affordable residential projects near high quality transit, and is partly due to other non-income household variables (e.g. senior and disabled residents, auto ownership, etc.), studies have found that "…controlling for location efficiency and household variables, income remains a significant, positive predictor of VMT." Accordingly, OPR states that 100 percent affordable residential developments may be presumed to have a less than significant impact on VMT. Hexagon recommends that East Palo Alto screen out 100 percent affordable housing projects.

As with other OPR recommendations, cities may develop their own affordable housing screening criteria, including the proportion of affordable units, the level of affordability, the minimum density, the maximum parking, and/or other conditions required to qualify for this screening criterion. If affordable housing projects are "screened out", they would not need to do a detailed VMT analysis to show how they would reduce the VMT. Notwithstanding the VMT Policy, the City could still require affordable housing projects to incorporate certain TDM measures (e.g. subsidized transit passes, carshare subsidies, bike parking, etc.) through the new TDM policy.

Existing Uses

Per OPR's Technical Advisory, redevelopment projects that replace existing VMT-generating uses and result in a net decrease in total VMT can be presumed to cause a less than significant impact. For redevelopment projects that result in a net increase in total VMT, the screening criteria for each land use will be based on the size of the proposed development without any credit for the existing use.

Transportation Projects

Per OPR's Technical Advisory, transportation projects that reduce or do not increase VMT can be presumed to have a less than significant VMT impact. Examples include transportation projects that enhance pedestrian, bike, or transit infrastructure, and transportation projects that maintain current infrastructure, without adding new automobile capacity.

Analysis Methodology for Residential, Office and Retail Projects

OPR's Technical Advisory recommends utilizing a travel demand forecast model to estimate project-generated VMT for residential and office projects. Hexagon has used the C/CAG model to establish a citywide average home-based VMT per capita for existing residential land uses, and a citywide average home-based work trip VMT per employee for existing employment uses. Due to the City's small size and lack of rail transit service, the project-generated VMT for all residential developments will be assumed to be equal to the citywide average home-based VMT per capita. Likewise, the project-generated VMT for all office projects will be assumed to be equal to the citywide average home-based work trip VMT per employee. Project-generated VMT may be

[1] Newmark, Gregory, and Peter Haas. 2015. "Income, Location Efficiency, and VMT: Affordable Housing as a Climate Strategy." Chicago, Il: Center for Neighborhood Technology. https://www.cnt.org/sites/default/files/publications/CNT%20Working%20Paper%20revised%202015-12-18.pdf

adjusted from the Citywide average as appropriate to account for TDM measures proposed by the project or multi-modal transportation facilities constructed by the project (e.g. a new sidewalk to fill an existing gap or a new trail connection).

For residential and office projects, OPR's Technical Advisory recommends a significance threshold that is 15 percent below that of existing development but does not specify the region of existing development for evaluation. Hexagon recommends the City of East Palo Alto adopt a significance threshold equal to the existing (at the time of policy development) citywide average home-based VMT per capita for residential developments and 15 percent below the existing (at the time of policy development) citywide average home-based work trip VMT per employee for office developments.

For regional retail projects, OPR's Technical Advisory recommends utilizing the travel demand forecast model to analyze total VMT. Typically, this involves adding the proposed new retail employment in the appropriate Traffic Analysis Zone (TAZ) where the proposed project is located and subtracting an equivalent about of retail jobs from other TAZs in order to retain consistency with the regional land use assumptions. However, the model is not well suited to measure changes in VMT due to shifts in the location of retail uses because random fluctuations that occur during the trip assignment process may obscure the project's actual effect on VMT. Furthermore, the vast majority of retail trips are made by customers, which are influenced less by TDM measures. Thus, it is unlikely that TDM measures could effectively mitigate a significant impact finding based on an analysis of a retail project's effect on total VMT. It is notable that most other jurisdictions that have adopted VMT policies have chosen to evaluate retail projects based on VMT per employee (San Francisco and Oakland) or VMT per capita (Pasadena). Thus, Hexagon recommends that proposed regional retail projects be evaluated based on VMT per employee. Furthermore, the VMT analysis for retail uses should be based on employee trips only and exclude customer trips. This is consistent with C/CAG trip reduction guidelines, which apply only to retail employee trips and not customer trips. Furthermore, it would be consistent with the City's new TDM Policy, which focuses on worker commute trips. Hexagon recommends the City of East Palo Alto adopt a significance threshold of 15 percent below the existing citywide average VMT per employee for retail projects.

Screening Criteria and Analysis Methodology for Other Land Use Projects

The following identifies screening criteria and thresholds of significance to be used to determine if other types of land uses occasionally reviewed by the East Palo Alto Community and Economic Development Department would result in significant impacts as it relates to VMT:

- Private schools (all grades), public and private high schools, congregate care facilities/assisted living, medical/dental office, research and development space, industrial, manufacturing, and warehouse uses should be treated as office for screening and analysis.

- Childcare, religious institutions, business hotels, and athletic clubs should be treated as retail for screening and analysis.

Mixed-Use Developments

OPR's Technical Advisory suggests that each component of a mixed-use project be analyzed for VMT independently. Alternatively, the advisory suggests that the dominant use of a project may be analyzed. Hexagon recommends the City evaluate each component of a mixed-use development separately, while allowing trip reductions based on the mixed-use nature of these developments. Trip reductions for internalization could reduce the project-generated VMT below the citywide average.

Redevelopment Projects

Consistent with OPR's recommendations, Hexagon recommends that the City of East Palo Alto analyze changes of use or additions to existing development that are not screened out based on the significance thresholds for each land use component described above.

Specific Plans and Other Area Plans

OPR's Technical Advisory suggests that analysis of land use plans employ the same thresholds described above. Thus, Hexagon recommends that the City of East Palo Alto evaluate each land use component independently, applying the significance thresholds listed above for each land use component.

General Plan Amendments

Hexagon recommends that the City of East Palo Alto follow the City of San Jose's approach for the analysis of General Plan Amendments in comparison to the City's current adopted General Plan. Any increase in the VMT per service population (jobs plus residents) over the current adopted General Plan based on an analysis of 2040 horizon year conditions would be considered a significant transportation impact.

Transportation Projects

Many transportation projects change travel patterns. Projects that increase automobile capacity may lead to additional vehicle travel on the roadway network, commonly referred to as "induced vehicle travel". The VMT metric may be used to assess the transportation impacts of a transportation project. Hexagon recommends that the City of East Palo Alto adopt a threshold for determination of significant transportation impact for transportation projects as a net increase in VMT greater than that consistent with the Regional Sustainable Communities Strategy.

Mitigation

If a land use project is determined to have a significant impact on VMT, it must reduce that impact by modifying the project description (e.g. changing from a single-use to a mixed-use development) and/or implementing other mitigation measures to reduce project-generated VMT to an acceptable level that is below the established thresholds of significance applicable to the project. Mitigation of a significant VMT impact would require a shift in mode choice away from single occupant vehicles. Currently, this is typically accomplished through the preparation of a TDM Plan with a trip reduction commitment as part of the project's conditions of approval. Consistent with OPR's Technical Advisory, multimodal transportation network improvements (e.g. a new trail connection) may also be proposed as mitigation if it can be shown to reduce existing VMT by an amount equal to the project's VMT reduction goal.

The City of East Palo Alto is currently developing an updated citywide TDM policy. The size threshold used to establish which developments are required to implement a TDM Plan matches the City's recommended VMT screening criteria. However, the 40 percent trip reduction goal set forth in the TDM Policy exceeds the 15 percent VMT reduction threshold recommended for office uses. The TDM trip reduction goals are based on vehicle trips during the peak commute period(s) while VMT reduction goals are based on daily vehicle trips. Some TDM measures may successfully reduce peak period trips by shifting vehicle trips to off-peak periods, which would have no effect on daily trips. Thus, daily trip reduction goals are generally set at a lower level than peak period trip reduction goals. Furthermore, while the City may choose to set an aggressive TDM reduction goal as an aspirational value, such a goal may not be feasible for all projects. Adopting a lower VMT

reduction goal would allow the City flexibility to approve a lower TDM reduction goal for certain projects at its discretion without necessitating an EIR to override a significant unavoidable impact that may occur if the VMT threshold were set to match an aspirational TDM trip reduction goal. The pending TDM policy would establish a citywide TDM reduction requirement and provide a mechanism for implementing potential VMT mitigation measures.

For transportation projects that are found to have a significant VMT impact due to induced travel, potential mitigation and project alternatives could include the following:

- Implementing tolls to encourage carpools and fund transit improvements
- Converting existing general-purpose lanes to HOV or HOT lanes
- Implementing or funding off-site TDM measures

Level of Service Policy

While level of service will no longer be considered a CEQA impact, it is recommended that the City of East Palo Alto continue to require development projects that exceed the VMT screening criteria to conduct non-CEQA transportation analyses and require improvements to address the identified deficiencies. This will ensure that the City's transportation network meets residents' circulation needs.

Conclusions and Next Steps

Hexagon recommends the City of East Palo Alto adopt a VMT policy according to the following broad framework:

1. Screening criteria for presumption of a less-than-significant VMT impact
    a. Small projects
    b. Local-serving retail projects
    c. Local-serving public facilities
    d. Affordable housing
    e. Existing use (net decrease in total VMT)
    f. Transit and active transportation projects
2. Methodology for analyzing project-generated VMT for land use developments
    a. Use the C/CAG model to generate existing citywide average home-based VMT per capita for residential land use and home-based work trip VMT per employee for office and regional retail land uses
    b. Adjust project-generated VMT to account for unique project characteristics (e.g. TDM measures, multi-modal transportation facilities, or internal trips for mixed-use developments)
    c. Other land uses such as private schools, hotels, childcare and others will be evaluated using the screening criteria and thresholds of significance for either office or retail uses as appropriate
3. VMT significance thresholds
    a. Threshold for residential projects should be equal to citywide average VMT per capita
    b. Threshold for office and regional retail projects should be 15 percent below citywide average VMT per employee

   c. Mixed-use developments, redevelopment projects, Specific Plans, and other area plans should be analyzed for each land use component based on the above significance thresholds
   d. Threshold for General Plan Amendments should be any increase in the VMT per service population over the current adopted General Plan
   e. Threshold for transportation projects should be a net increase in VMT greater than that consistent with the Regional Sustainable Communities Strategy
4. VMT mitigation measures
   a. TDM Plan to reduce project-generated VMT for land use developments
   b. Multimodal transportation network improvements to reduce existing VMT
   c. Alternatives involving tolls, HOV lanes, or other measures to encourage carpools and/or transit use for transportation projects found to increase VMT

A study session with the East Palo Alto Planning Commission was held on March 9, 2020 to introduce the recommended VMT Policy framework. A similar study session with the Public Works & Transportation Committee scheduled for March 18, 2020 was subsequently cancelled due to the shelter in place order. A Zoom meeting was conducted on April 6, 2020 to solicit input and questions on the VMT Analysis Framework from key stakeholders in East Palo Alto's development community. The City Council held a study session on the VMT Analysis Framework on April 28, 2020. Hexagon made a similar presentation to the Public Works & Transportation Committee on May 20, 2020. Based on feedback received from the Council, other elected officials, residents, and the development community, Hexagon has been working with staff to revise the VMT Framework for land use developments and expand it to include policies for transportation projects and land use plans. Hexagon has also prepared a supplementary document to answer frequently asked questions regarding VMT and drafted a VMT Policy for consideration by the City Council. Per OPR's guidelines, CEQA analysis of transportation impacts may no longer consider LOS or other measures of vehicle delay starting July 1, 2020. The timeframe for adoption of the City's VMT Policy is presented in Table 2.

Table 2
VMT Policy Timeframe

Work Product	Reviewing Body	Date
VMT Policy Framework	Planning Commission Study Session	Mar-20
VMT Policy Framework	EPA Development Community	Apr-20
VMT Policy Framework	City Council Study Session	Apr-20
VMT Policy Framework	Public Works & Transportation Committee	May-20
VMT Policy Adoption	City Council Public Hearing	Jul-20

Appendix H
Development Impact Fee Fact Sheet and Fee Schedule

City of East Palo Alto
Community and Economic Development Department
Engineering Division
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DEVELOPMENT IMPACT FEES

Effective **July 2, 2019**, applicable development projects will be subject to payment of impact fees to fund future parks and trails, public facilities, storm drainage and transportation infrastructure improvements that will benefit future development (Chapter 13.28 of Municipal Code and Resolution No. 5093). See attached Fee Schedule for the current impact fees.

PROJECTS SUBJECT TO DEVELOPMENT IMPACT FEES

- RESIDENTIAL UNITS: new single-family (SF) homes, townhouses, multi-family dwelling units, and detached accessory dwelling units; storm drainage fee also applies to expansion of a SF home.
- NON-RESIDENTIAL PROJECTS: new and expanded buildings for office space, retail and restaurant uses, mixed use projects, industrial uses, and other land uses, including but not limited to, private schools, hotels, and public assembly buildings.
- CHANGE OF USE: existing buildings that are adapted or converted to another more intensive use (e.g., from industrial to office or residential) based on the net change in residential or employee population or net increase in vehicle trips.

(Exception: projects with a valid building permit or recognized by the City as a vested development project on July 2, 2018, are not subject to the development impact fees.)`

PAYMENT OF FEES

Impact fees are one-time fees that shall be paid in full at the time of building permit issuance. Where construction of a project is phased, fees can be paid for each residential unit or building when the applicable building permit is issued. The amount of fees due shall be calculated from the fee schedule in effect at time of building permit issuance unless otherwise agreed upon in writing by the City.

ADDITIONAL IMPACT FEES

Development projects may also be subject to water capacity fees (Chapter 13.24), affordable housing fees (Res. No. 4539 and Ord. No. 397), street improvements and dedications (Ordinance 288), and/or Quimby Act park in-lieu fees (Ordinance 288). Please consult with City staff for more information.

For questions, please contact _____

PARKS AND TRAILS IMPACT FEE

a. FEE SCHEDULE:

Land Use Category	Unit	Impact Fee
Detached Accessory Dwelling Unit	Dwelling Unit	$1,653
Single-family/Townhouse*	Dwelling Unit	$4,133
Multi-family Housing*	Dwelling Unit	$2,847
Office/Research & Development	Square Foot	$1.15
Industrial	Square Foot	$0.46
Retail	Square Foot	$0.77

*Applies to rental housing projects ONLY. Quimby Act park in-lieu fees apply to single-family/town house subdivisions and multi-family condominiums.

b. For other non-residential projects that are not included in the above land use categories, the impact fee shall be calculated as follows:

Peak Service Population x 0.5* x $918 = Parks and Trails Impact Fee

* One employee/visitor is assumed to equal 0.5 service population for purpose of calculating the impact fee.

c. The following fee adjustments can be allowed:

i. Credit for land uses that are/were on the project site during the two-year period (24 months) prior to filing a complete planning or building permit application, whichever date is earlier; credit shall be calculated based on (a) or (b) above, whichever is applicable.

ii. Subject to City Council approval, a reduction in the impact fee can be considered when a project will include parkland dedication, public recreational facilities or improvements, or related long-term community benefits that exceed city requirements in effect at the time a complete planning application is filed. The allowable credit can be based on the estimated value of the land dedication or recreational amenity or another methodology acceptable to the City.

PUBLIC FACILITIES IMPACT FEE

a. FEE SCHEDULE:

Land Use Category	Unit	Impact Fee
Detached Accessory Dwelling Unit	Dwelling Unit	$2,899
Single-family/Townhouse	Dwelling Unit	$7,248
Multi-family Housing	Dwelling Unit	$4,993
Office/Research & Development	Square Foot	$2.01
Industrial	Square Foot	$0.81
Retail	Square Foot	$1.34

b. For other non-residential projects that are not included in the above land use categories, the impact fee shall be calculated as follows:

Peak Service Population x 0.5* x $1,611 = Public Facilities Impact Fee

* One employee/visitor is assumed to equal 0.5 service population for purpose of calculating the impact fee.

c. The following fee adjustments can be allowed:

i. Credit for land uses that are/were on the project site during the two-year period (24 months) prior to filing a complete planning or building permit application, whichever date is earlier; credit shall be calculated based on (a) or (b) above, whichever is applicable.

ii. Subject to City Council approval, a reduction in the public facilities impact fee can be considered when a project will include land dedication, public facilities or improvements, or related long-term community benefits that exceed city requirements in effect at the time a complete planning application is filed. The allowable credit can be based on the established value of the land dedication or public amenity or another methodology acceptable to the City.

STORM DRAINAGE IMPACT FEE

a. FEE SCHEDULE:

Land Use Category	Unit	Impact Fee (within RBD)	Impact Fee (outside RBD)
Detached Accessory DU	Dwelling Unit	$1,936	$1,120
Single-family Dwelling	Dwelling Unit	$4,840	$2,800
All other residential/non-residential land uses (including but not limited to expansion of a single-family home, or expansion or new construction of townhouses, multi-family, office/R&D, industrial, and retail uses)	Impervious Acre	$121,000	$70,000

b. Subject to City Council approval, a reduction **i**n the storm drainage impact fee can be considered when a project will include improvements to reduce stormwater impacts and discharge rates that exceed City requirements in effect at the time a complete planning application is filed. Qualifying improvements can include but are not limited to: on-site stormwater capture and reuse above the existing C-3 low impact development requirements; expanded green infrastructure in the public right-of way with a long-term operations and maintenance agreement; and full trash capture for off-site stormwater treatment of the public right-of-way through private facilities.

c. Staff may develop guidelines that incorporate drainage factors for partial-impervious surfaces to calculate the storm drainage impact fee.

d. No fee adjustment or credit shall be available for existing impervious acres on a project site unless an entitled development had previously paid storm drainage impact fees pursuant to Section 13.28 of the Municipal Code.

e. Additional fees for stormwater management program and enforcement may also apply pursuant to Chapter 13.12, Section 13.12.220 of the Municipal Code.

TRANSPORTATION INFRASTRUCTURE IMPACT FEE

a. FEE SCHEDULE:

Land Use Category	Unit	Impact Fee
Detached Accessory Dwelling Unit	Dwelling Unit	$943
Single-family/Townhouse	Dwelling Unit	$2,358
Multi-family Housing	Dwelling Unit	$1,775
Office/Research & Development	Square Foot	$7.33
Industrial	Square Foot	$4.77
Retail	Square Foot	$7.33

b. For other non-residential projects that are not included in the above land use categories, the impact fee shall be calculated by a City-approved traffic engineer as follows:

PM Peak-hour Vehicle Trips x Internal Trips (%)* x $6,898 = Transportation Infrastructure Impact Fee

* Internal trips pertain to percentage of PM peak-hour trips that begin or end within the City of East Palo Alto and also include non-motorized trips and public transit trips.

c. The following fee adjustments can be allowed:

i. Credit for land uses that are/were on the project site during the two-year period prior to filing a complete planning or building permit application, whichever date is earlier; credit shall be calculated based on (a) or (b) above, whichever is applicable.

ii. Subject to City Council approval, a reduction in the transportation infrastructure impact fee can be considered by the City Council when a project will further reduce PM peak-hour vehicle trips beyond the projected trips for the development based on Institute of Transportation Engineers (ITE) trip generation rates, such as through a Transportation Demand Management (TDM) program, a Transportation Management Association (TMA), or alternative transportation facility or improvements. An adjustment to the impact fee can also be considered for affordable housing and senior housing developments based on projected PM peak-hour trips.

TRANSPORTATION INFRASTRUCTURE IMPACT FEE (cont'd.)

CACULATING POTENTIAL TDM FEE ADJUSTMENT:

The Nexus Study assumed the following PM peak-hour trips to calculate the transportation infrastructure impact fee (Nexus Study, Tables 4-9 and E-2). These trip rates include adjustments based on the City/County Association of Governments of San Mateo (C/CAG) travel demand model and reductions for internal trips, non-motorized trips, and transit use.

Land Use Category	PM Peak-hour Trip Rate
Office/R&D	1.06/1,000 sq. ft.
Industrial	0.69/1,000 sq. ft.
Retail	1.93/1,000 sq. ft.
Townhouse	0.34/dwelling unit
Multi-family	0.26/dwelling unit

STEP A: Calculate the PM peak-hour trips for the project based on the traffic impact analysis for the development project and apply a TDM trip reduction factor.

PM Peak-hour Vehicle Trips x TDM Reduction (%)* = Adjusted PM Peak-hour Trips

** Includes total reduction in PM peak-hour trips from: 1) internal trips; and 2) trip reduction measures from TDM program.*

STEP B: Calculate the PM peak-hour trips for the project using the assumed trip rate from the Nexus Study.

Nexus Study Trip Rate* x (Building Sq. Ft./1,000 or Dwelling Units) =
Nexus Study PM Peak-hour Trips

** From above table*

IF the amount in Step A is equal or greater than the amount in Step B, project is not eligible for a TDM credit.

IF the amount in Step A is less than the amount in Step B, project is eligible for TDM credit based on percentage reduction from Nexus Study PM Peak-hour Trips.

INTENSIFICATION OF EXISTING USE

When an existing building is proposed for conversion to a more intensive use (e.g. from an industrial warehouse to an office use), and/or an existing structure is proposed for expansion, the development impact fees for each impact fee shall be calculated based on the current fee schedules as described above. The total amount of impact fees would be as follow:

Fees for Proposed Use – Fees for Existing Use = Total Development Fees

CREDIT FOR IMPROVEMENTS CONSTRUCTED BY DEVELOPERS

A fee credit may be available where the developer agrees or offers to construct a portion of a capital improvement project that is partially funded with development impact fees. The potential credit shall only apply to the related impact fee (i.e., a street improvement can only provide credit to the transportation infrastructure impact fee.) Property frontage improvements are not eligible for a credit, unless the improvements exceed standard City requirements as determined by the City. A credit shall also be available for environmental mitigation measures or other City requirements where a fair share contribution is provided by a developer for a capital improvement project that is funded with development impact fees. Fee credits shall be based on the estimated cost of improvements. The developer may be required to fund the cost of a licensed engineer to estimate the value of the improvement.

ADDITIONAL FEE ADJUSTMENTS AND REDUCTIONS

In addition to the potential fee adjustments discussed above, the City Council may authorize other fee adjustments or reductions for affordable housing projects and other development projects when substantial community benefits will be provided to the City to address infrastructure, facility or other community needs.