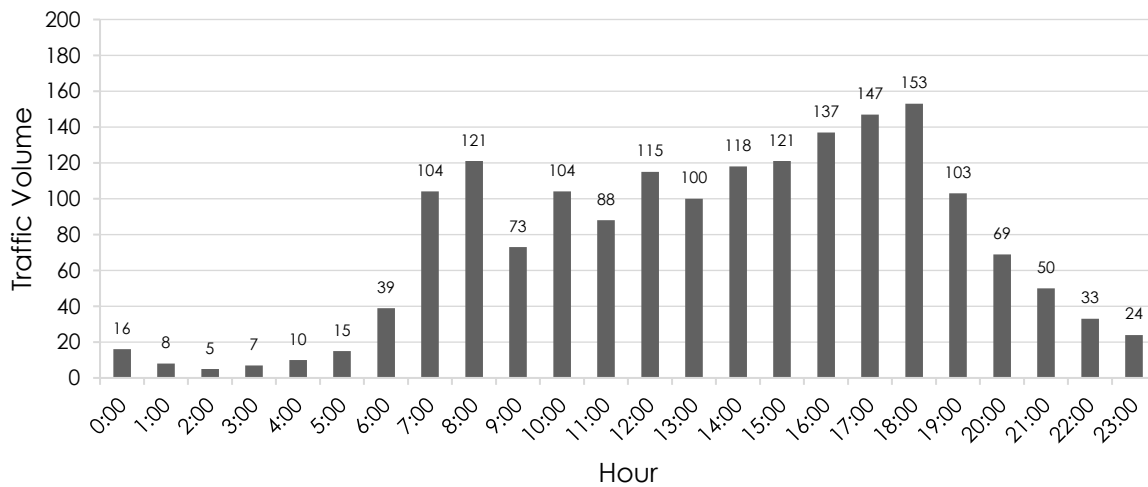


# **ATTACHMENT B - SUMMARY OF TRAFFIC VOLUMES COLLECTED IN 2017**

The following summarizes recent traffic volume data collected in Colma as well as Kittelson's observations from field reviews.

## F Street from El Camino Real to Hillside Boulevard

F Street is a east-west corridor, and the segment in between El Camino Real and Hillside Boulevard is the study corridor. The corridor has cemeteries on the south side, and residential development on the north side. The corridor branches off of El Camino Real with a steep up grade and then levels off. The entire segment has brick surface, on-street parking and sidewalk on both the sides. The visibility of the 'stop ahead' warning signs could be improved given the adjacent trees. There are 'stop ahead' warning signs on the pavement augmenting the street signs. There is a horizontal curve on F Street on the approach to Hillside Boulevard. The traffic volume information for this corridor is shown in Figure 1. This information helps in understanding the hourly vehicular traffic patterns on the corridor throughout the day.



**Figure 1: Traffic Volume Information for F Street**

Source: Tube Count Data Collected by Quality Counts, 2017.

### Existing Features

i. Pavement Markings

F Street has no pavement markings. Lane delineation could be helpful near the Hillside Boulevard intersection because of the presence of horizontal curve at the approach. The community input included comments on vehicle speeds. Adding pavement markings allocate and define roadway space. Adding right edge lines or parking "T"s visually narrow the travel lanes which could reduce vehicle drift and support lower travel speeds along the corridor.

ii. Street Signs

Some stop signs, warning signs, and streetname signs are obscured by vegetation. Others are placed at a relatively low height. Signing examples are shown in Figure 2.



Lack of intersection markings (i)

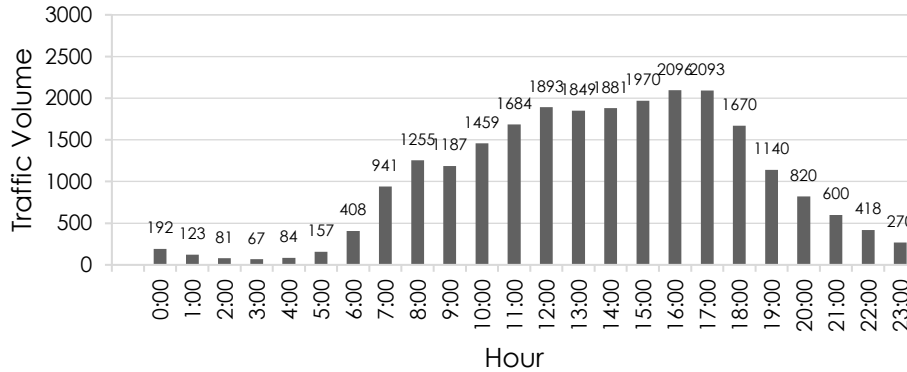


Obscured sign (ii)

**Figure 2: Photos Show Existing Features on F Street**

## El Camino Real from Northern Town Limits to Southern Town Limits

El Camino Real (ECR), State Highway 82, is a north-south through the Town of Colma. The corridor has cemeteries on the east and west sides until Colma Boulevard and industrial and/or commercial developments around Serramonte Boulevard/ECR intersection. ECR has a posted speed of 35 mph in South San Francisco area that changes to 40 mph in the Town of Colma. The hourly traffic volume information for this corridor is shown in Figure 3. This information helps in understanding the hourly vehicular traffic patterns on the corridor throughout the day.



**Figure 3: Traffic Volume Information for El Camino Real**

Source: Tube Count Data Collected by Quality Counts, 2017.

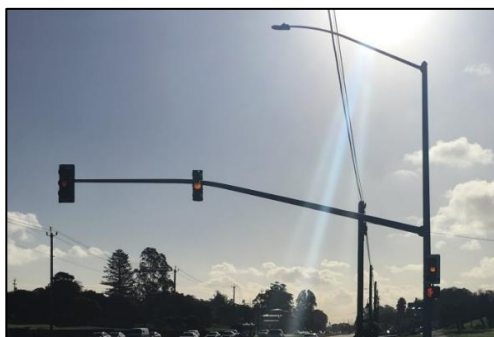
### Existing Features

i. Traffic Signals

The traffic signals at ECR intersections do not have reflective backplates on the signal heads. This limits the traffic signal visibility during the daytime.

ii. Pedestrian Crossing

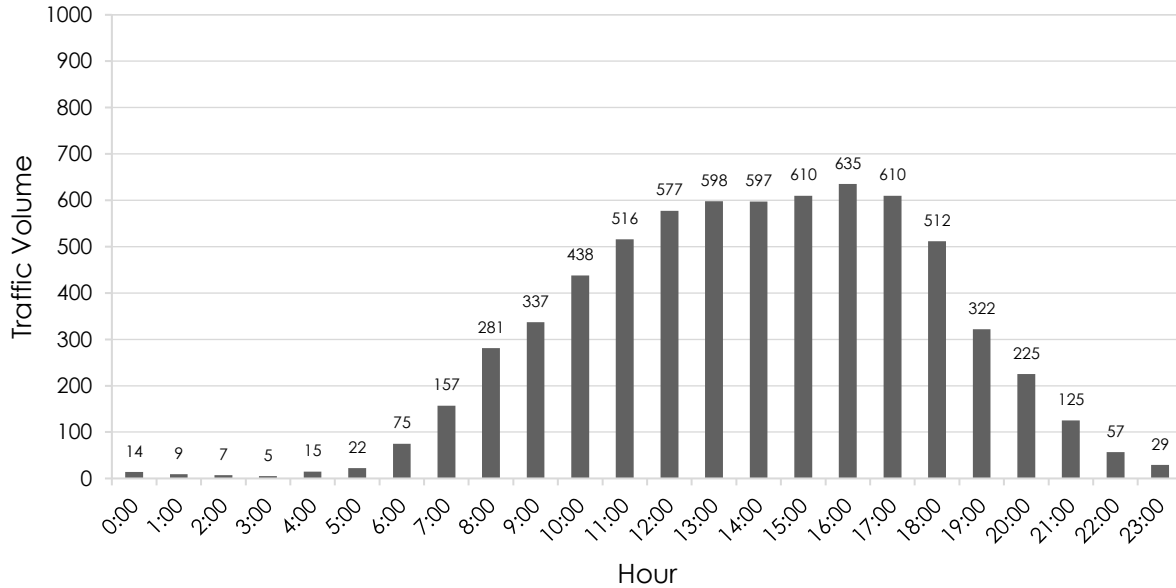
Community members provided comments about cars traveling on ECR not yielding to pedestrians. Examples of the limited signal visibility is shown in Figure 4.



**Figure 4: Limited Signal Visibility**

## Colma Boulevard from Junipero Serra Boulevard to El Camino Real

Colma Boulevard is an east-west study corridor between ECR and Junipero Serra Boulevard (JSB) . The corridor has cemeteries near the ECR intersection and commercial development to the west approaching JSB. The corridor has four lanes at ECR that widens at the JSB intersection. The roadway is inclined going west from ECR and vehicle speeds are higher traveling east, down hill toward ECR. The corridor has sidewalk on the north side the entire length of the corridor and on both sides from the commercial development westward. The hourly traffic volume information this corridor is shown in Figure 5.



**Figure 5: Traffic Volume Information for Colma Boulevard**

Source: Tube Count Data Collected by Quality Counts, 2017.

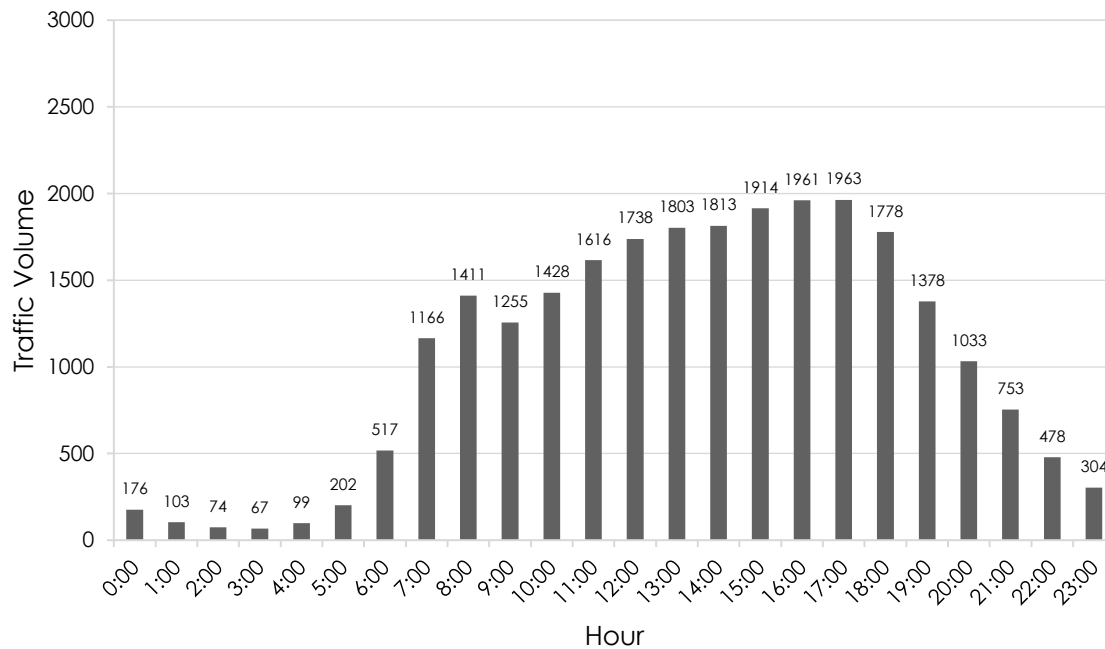
### Existing Features

i. Traffic Signals

The traffic signals at ECR/Colma Boulevard and JSB/Colma Boulevard do not have reflective backplates limiting visibility of the signal display when drivers are heading in the direction of sun.

## Junipero Serra Boulevard from Northern Town Limits to Southern Town Limits

JSB is a north-south study corridor running in parallel to ECR and I-280 running between the northern and southern town limits. The corridor has Sam Trans Bus stops and Colma BART Station on the north limit and commercial development at the Serramonte Center on the south corridor limit. Serramonte Boulevard interchanges with I-280 providing a freeway connection to the town. A northbound I-280 entrance ramp connects directly to JSB. The corridor segment has a rolling grade with up and downgrades. The corridor has sidewalk on the east side of the corridor until the Serramonte Boulevard/JSB intersection. The corridor has sidewalk on both sides from the Serramonte Boulevard/JSB intersection to the southern town limit. The hourly traffic volume information for this corridor is shown in Figure 6.



**Figure 6: Traffic Volume Information for Junipero Serra Boulevard**

Source: Tube Count Data Collected by Quality Counts, 2017.

### Existing Features

i. Warning Signs

The crash data shows that improper turning was reported for 39% of crashes along this corridor. The driveways at the Extra Space storage driveway are not conspicuous and can go unnoticed by northbound JSB driver. Southbound drivers turning into left-in only turn pocket have limited sight distance to northbound vehicles on JSB.

ii. Pedestrian Crossing

Pedestrian crossings are some times limited in visibility and drivers are inconsistent in yielding to the pedestrian crossings on the street because of the operating speeds. Community members provided input about the cars not yielding to pedestrians at some corridor locations.

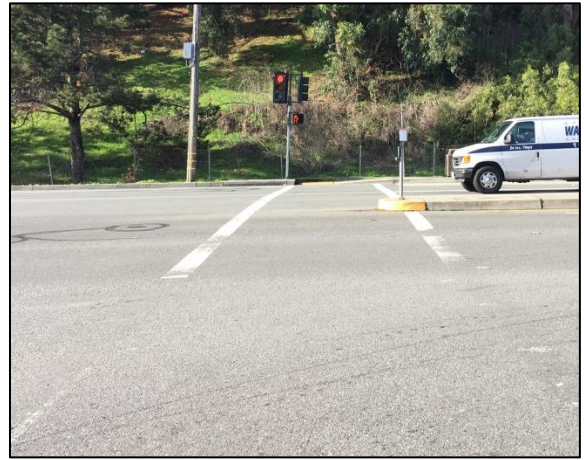
iii. Traffic Signals

The traffic signals do not have reflective backplates limiting visibility of the signal display when drivers are heading in the direction of sun.

Examples from the corridor are shown in Figure 7.



Left-in only driveway access (vi)



Limited visibility of crosswalk (vii)

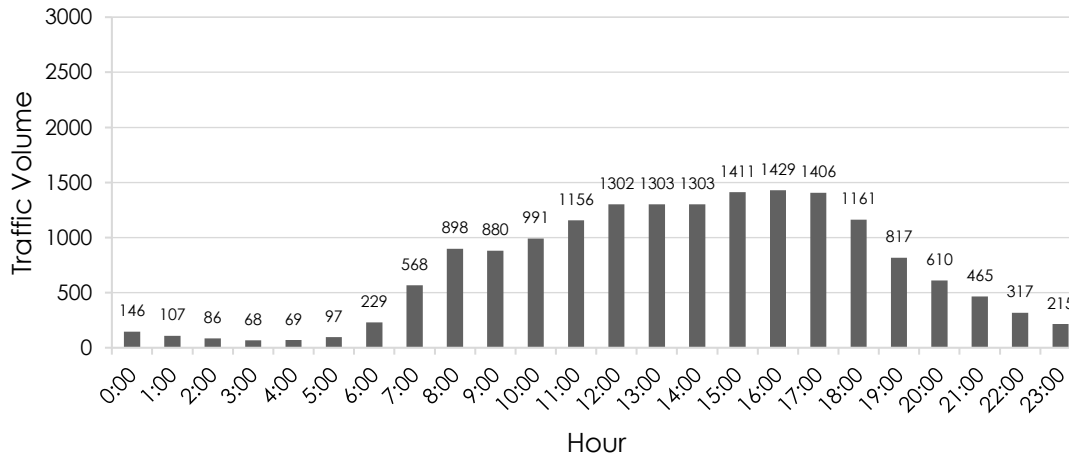


Limited signal visibility (viii)

**Figure 7: Photos show Existing Features on Junipero Serra Boulevard**

## Serramonte Boulevard from Hillside Boulevard to Northbound I-280

Serramonte Boulevard is a east-west corridor providing access to I-280 and commercial development on either side of I-280. The study corridor is between JSB and Hillside Boulevard. The corridor has commercial development, i.e. shopping center near the JSB/Serramonte Boulevard and Collins intersection. The corridor later transitions to auto dealerships near the eastern limit. There is a casino at the Serramonte Boulevard terminus with Hillside Boulevard. The hourly traffic volume information for this corridor is shown in Figure 8.



**Figure 8: Traffic Volume Information for Serramonte Boulevard**

Source: Tube Count Data Collected by Quality Counts, 2017.

### Existing Features

i. Pedestrian Crossing/Enhanced Pedestrian Crossing

The crash data shows that 30% of reported crashes on Serramonte Boulevard are associated with speeding. Community input indicates motorists do not yield consistently to pedestrians.

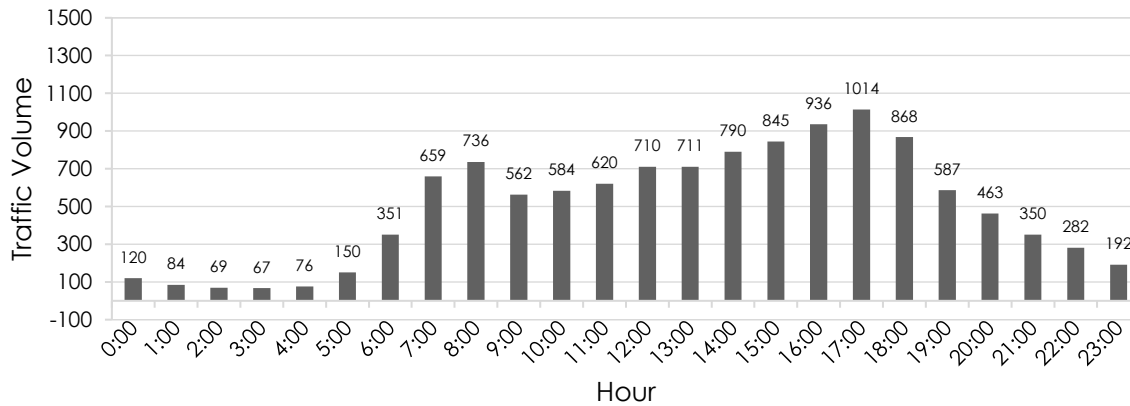
ii. Street Signs

Some streetname signs, and warning signs are less visible due to vegetation. Others are placed at a relative low height.



## Hillside Boulevard from Northern Town Limits to Southern Town Limits

Hillside Boulevard is a north-south study corridor between the northern and southern town limits. The corridor has residential development and school zone at the north limit just beyond the Colma limit. Heading south into Colma, the land uses consist of cemeteries on either side of the corridor near F Street. The 'Lucky Chances' casino is near the Serramonte Boulevard intersection which is followed by cemeteries on either sides of the corridor until Lawndale Boulevard. The hourly traffic volume information for this corridor is shown in Figure 9.



**Figure 9: Traffic Volume Information for Hillside Boulevard**

Source: Tube Count Data Collected by Quality Counts, 2017.

### Existing Features

i. Pedestrians

Pedestrian activity seems common along Hillside Boulevard particularly near the cemeteries with people needing to park on-street and walk to the cemeteries or other nearby businesses.

ii. Street Signs

Some speed limit signs, and warning signs are obscured by vegetation. Others are placed at a relative low height relative to on-street parked cars and other roadside conditions. Examples of these conditions are shown in Figure 10.



Undefined crossing (xi)

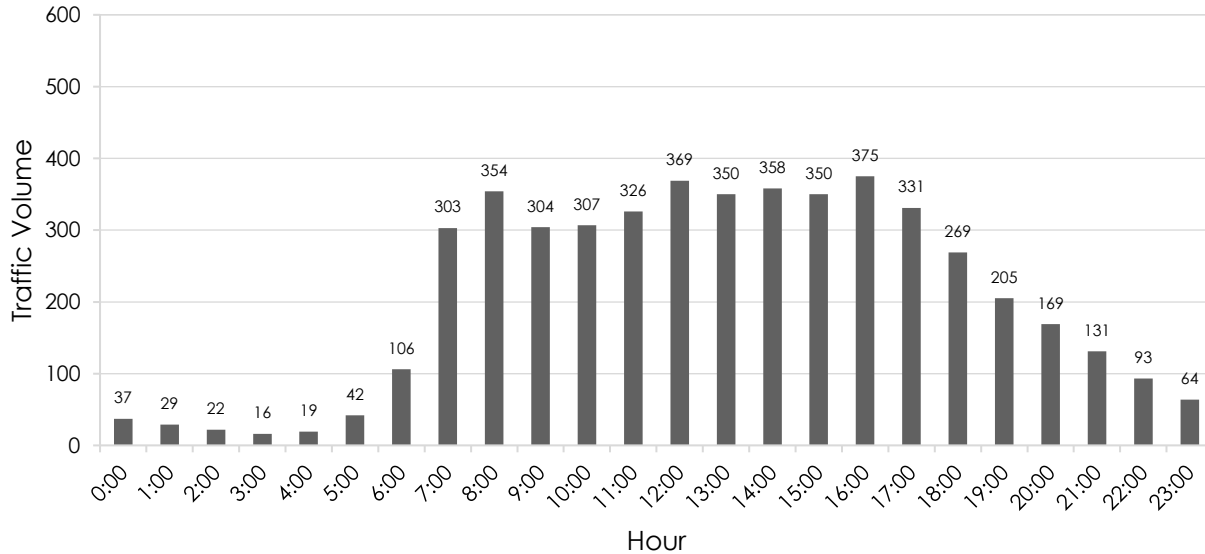


Obscured sign (xii)

**Figure 10: Photos show Existing Features on Hillside Boulevard**

## Collins Avenue from Junipero Serra Boulevard to El Camino Real

Collins Avenue is an east-west study corridor between Serramonte Boulevard and ECR. The corridor has industrial development with car dealerships near Serramonte Boulevard on the south side, and some car dealerships and a shopping center (i.e. Kohl's) near the ECR/Collins Avenue intersection on the north side of the corridor. There is on-street parking on one side of the corridor on the west side, and on both sides near the Serramonte Ford Body Shop along the Collins Avenue corridor. The hourly traffic volume information for this corridor is shown in Figure 11.



**Figure 11: Traffic Volume Information for Collins Avenue**

Source: Tube Count Data Collected by Quality Counts, 2017.

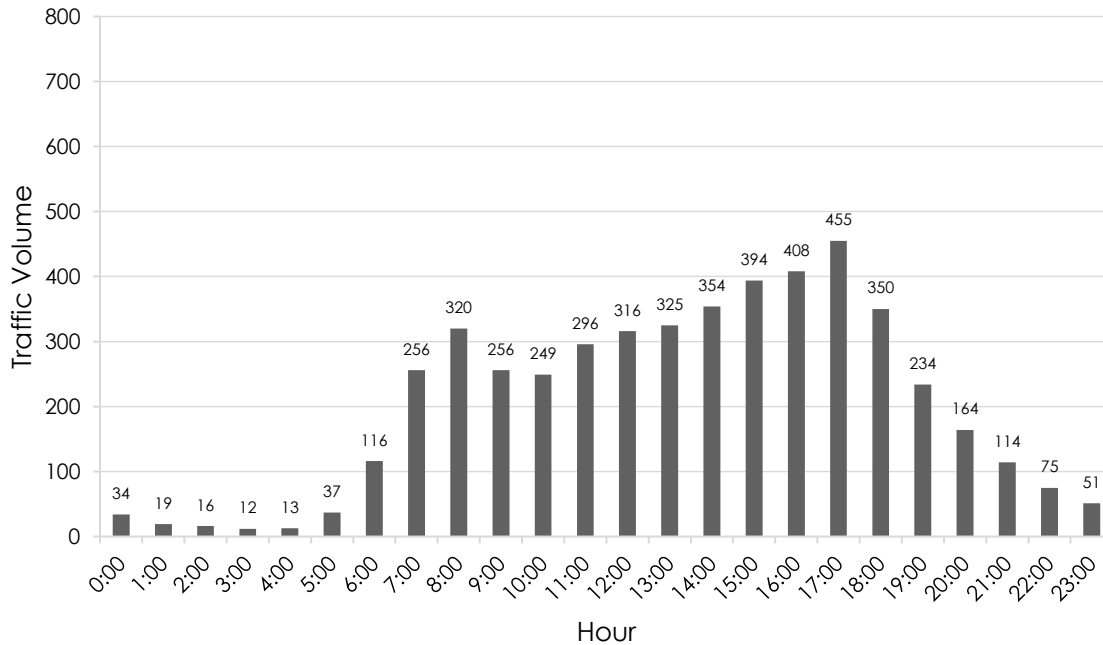
### Existing Features

- i. Warning, speed limit Signs

During the field visit, Kittelson noticed the need for larger street signs near Collins Avenue and ECR intersection. Kittelson also noticed that the warning signs, and speed limit signs need to be upgraded along the corridor. Some where obscured by vegetation, and placed at a relative low height when relative to on-street parking and roadside conditions.

## Lawndale Boulevard from Hillside Boulevard to Mission Road

Lawndale Boulevard is an east-west study corridor in between Hillside Boulevard and Mission Road. The corridor has residential development for about quarter length of the corridor and school for the other part of the corridor. ECR High School is on the south side near Mission Road. The roadway segment has a downgrade from Hillside Boulevard to Mission Road. The hourly traffic volume is shown in Figure 12.



**Figure 12: Traffic Volume Information for Lawndale Boulevard**

Source: Tube Count Data Collected by Quality Counts, 2017.

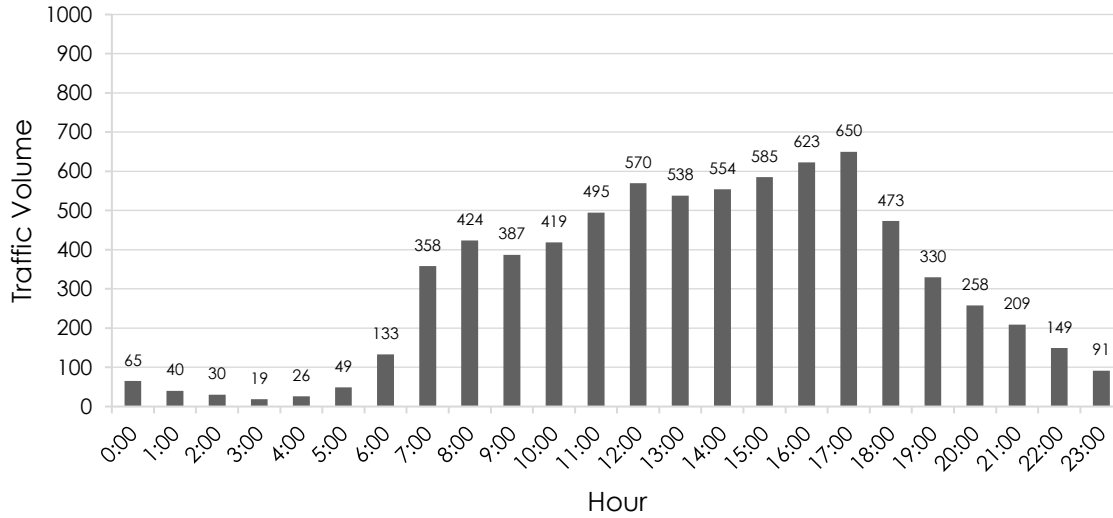
### Existing Features

i. Cross-section

Kittelton observed there were two receiving lanes westbound on Lawndale Boulevard from Hillside Boulevard. However, there is only a single left and right turn lane from Hillside Boulevard serving these two lanes. Therefore, a single receiving lane westbound would be sufficient to serve the traffic volume coming onto Lawndale Boulevard.

## Mission Road from El Camino Real to Lawndale Boulevard

Mission Road is a north-south corridor that terminates at ECR on the north and Lawndale Boulevard on the south. Mission Road has residential development on the west side and cemeteries on the east side of the corridor. The crash data for this corridor showed speeding related crashes. This finding was also validated by the community input received. The hourly traffic volume information for this corridor is shown in Figure 13.



**Figure 13: Traffic Volume Information for Mission Road**

Source: Tube Count Data Collected by Quality Counts, 2017.