



**AGENDA**  
**TRAFFIC AND PEDESTRIAN SAFETY COMMITTEE**  
**JULY 20, 2016**  
**7:00 P.M.**  
**2131 PEAR STREET, PINOLE, CA 94564**  
**COMMUNITY ROOM**

1.	<b>CALL TO ORDER – PLEDGE OF ALLEGIANCE</b>
2.	<b>ROLL CALL</b>
3.	<b>CITIZENS TO BE HEARD – FOR ITEMS NOT ON THE AGENDA</b>
4.	<p><b>A. Report to City Council</b></p> <p>a. Review and Comment</p> <p><b>B. Henry Avenue – Informal Park and Ride</b></p> <p>a. Discussion</p> <p><b>C. Pinon Avenue at San Pablo Avenue</b></p> <p>a. Dominant driving patterns</p> <p><b>D. Update to Speed Surveys</b></p> <p><b>E. Neighborhood Use of Door Hangers</b></p> <p>a) Education/Request for cooperation</p> <p>b) Process to be endorsed by City/TAPS</p> <p>c) See sample</p>
5.	<b>COMMITTEE MEMBER REPORTS</b>

POSTED: 07-14-16 @ 4:30p.m.City Hall

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Ana Morales, Secretary, City of Pinole



## **CITY COUNCIL REPORT**

**10B**

**DATE: JULY 19, 2016**

**TO: MAYOR AND COUNCIL MEMBERS**

**FROM: TAMARA MILLER, DEVELOPMENT SERVICES DIRECTOR / CITY  
ENGINEER**

**SUBJECT: TRAFFIC AND PEDESTRIAN SAFETY COMMITTEE REPORT**

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### **RECOMMENDATION**

Review the efforts and recommendations of the Traffic and Pedestrian Safety (TAPS) Committee and provide direction to staff regarding the recommendations of the Committee.

### **BACKGROUND**

The TAPS Committee meets routinely to discuss concerns regarding traffic safety. They last met on April 20, 2016. The Committee discussed several items during their last meeting that warrant reporting to the City Council. These items include:

1. Existing Crosswalk at Appian Way and Marlesta Road
2. Red Curbing on Ponderosa Way
3. Sharrows on Pinole Valley Road
4. Traffic Calming Measures for Old Pinole Valley Road near San Pablo Avenue

### **REVIEW AND ANALYSIS**

1. Existing Crosswalk at Appian Way and Marlesta Road

TAPS recommends to the City Council that it pursue a modified HAWK signal, resting in green, to aid pedestrians in crossing Appian Way. Further TAPS recommends the project be placed in the Capital Improvement Plan and that the City move forward with design to facilitate pursuit of grant funding. Estimated Project Cost: \$90,000

2. Red Curbing on Ponderosa Way

This item was a recurring item. Members of the neighborhood asked that this item be discussed again in hopes that some changes could be made to enhance some of the benefits achieved and also to combat some of the negative impacts of the red curb.

TAPS had an open discussion and finally agreed to make no changes to the red curb on Ponderosa Trail. Repainting of the curb will be required periodically as a maintenance function. Project Cost: minimal

3. Sharrows on Pinole Valley Road near High School and Kaiser

TAPS recommends to the City Council that it have sharrows installed on Pinole Valley Road to reinforce to users of Pinole Valley Road that the road should be shared by vehicles and bicycles. Estimated Project Cost: \$11,000

4. Traffic Calming Measures for Old Pinole Valley Road near San Pablo Avenue

TAPS reviewed possible traffic calming measures such as additional signage and channelization. However, after much deliberation, TAPS felt that existing facilities were suitable, but the area would benefit from the addition of sharrows. TAPS recommends to the City Council that it have sharrows installed on Old Pinole Valley Road to remind vehicle traffic on Old Pinole Valley Road that the road is shared with bicycles and their driving habits should adapted accordingly. Estimated Project Cost: \$8,000

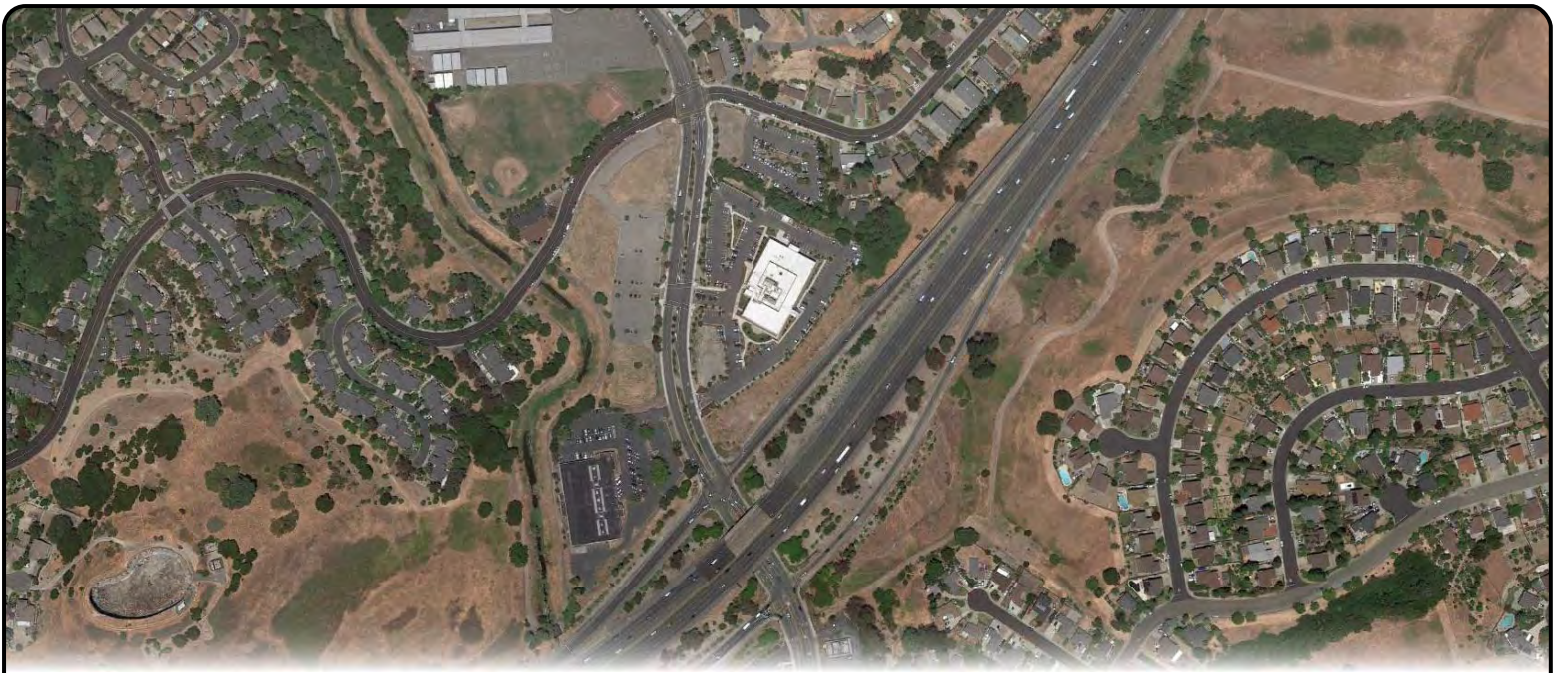
**FISCAL IMPACT**

Item	Estimated Fiscal Impact	Funding Source
Appian/Marlesta	\$90,000	Seek grant funding
Ponderosa Trail red curb	minimal	Current Maintenance Budget
Sharrows	\$11,000	Seek grant funding
Traffic Calming	\$8,000	Seek grant funding

**ATTACHMENTS**

Attachment A: Sharrow installation





*Trip Generation and Parking Analysis*

**GATEWAY MEDICAL CENTER**

City of Pinole

Prepared by:

Abrams Associates

1875 Olympic Boulevard, Suite 210

Walnut Creek, CA 94596



**Abrams Associates**  
TRAFFIC ENGINEERING, INC.

**JUNE 6, 2016**

# **Gateway Medical Center Project**

## ***City of Pinole***

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### **TRANSPORTATION AND PARKING**

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#### **1) EXECUTIVE SUMMARY**

This study provides information on the project's trip generation and parking demand and also to present the results of parking occupancy surveys conducted in the project area. This study also describes the regulatory setting; the criterion used for determining the significance of environmental impacts; and summarizes potential environmental impacts and appropriate mitigation measures. This study has been conducted in accordance with the requirements and methodologies set forth by the City of Pinole, the Contra Costa Transportation Authority (CCTA), Caltrans, and the applicable provisions of CEQA. A review of parking conditions in the area indicates the project wouldn't be expected cause any significant parking problems. Although there may be days when the project's parking demand exceeds the available off-street parking the surveys indicated there is sufficient on-street parking in the area to accommodate any additional parked vehicles generated by the proposed project.

#### **2) PROJECT DESCRIPTION**

As mentioned above, the proposed project is a commercial development proposed to include 9,182 square feet of medical office space. The project is located on the east side of Pinole Valley Road just south of Henry Avenue. All access to the site will be from one unsignalized driveway on Henry Avenue, which also serves as the entrance to an existing employee parking lot for Kaiser's Pinole Medical Offices.

### 3) REGULATORY CONTEXT

Existing policies, laws and regulations that apply to the proposed project are summarized below.

#### 3.1 State

The California Department of Transportation (Caltrans) has jurisdiction over State highways. Therefore, Caltrans controls all construction, modification, and maintenance of State highways, such as SR 4. Any improvements to these roadways would require Caltrans' approval. The Guide for the Preparation of Traffic Impact Studies provides consistent guidance for Caltrans staff who review local development and land use change proposals. The Guide also informs local agencies about the information needed for Caltrans to analyze the traffic impacts to state highway facilities which include freeway segments, on- or off-ramps, and signalized intersections.

#### 3.2 Local

**Contra Costa Countywide Comprehensive Transportation Plan Update (2009)** - The transportation policies that are currently applicable within Contra Costa County are based on the Contra Costa County Comprehensive Transportation Plan. This document identifies standards and procedures for analyzing transportation impacts in the county and includes action plans for routes of regional significance such as the West County Action Plan covering the project area.

**City of Pinole General Plan** - The Transportation and Circulation Element included in the City of Pinole General Plan was prepared pursuant to Section 65302(b) of the California Government Code. The Transportation and Circulation Element addresses the location and extent of existing and planned transportation routes, terminals, and other local public utilities and facilities. The General Plan identifies roadway and transit goals and policies that have been adopted to ensure that the transportation system of the City will have adequate capacity to serve planned growth. These goals and policies are intended to provide a plan and implementation measures for an integrated, multi-modal transportation system that will safely and efficiently meet the transportation needs of all economic and social segments of the City.

#### 3.3 Significance Criteria

It is important to note that parking impacts are no longer considered a significant impact under CEQA. SB 743 specified that parking impacts for qualifying infill projects are not considered significant impacts on the environment under CEQA. The fact that an urban development project does not "self-park" is not in itself a CEQA impact, but any environmental impacts foreseeably resulting from a project's "on-site" parking deficit should be analyzed and mitigated. In other words, if a project would result in additional vehicles parked on-street then the project should be evaluated to determine if this could result in other ancillary environmental impacts:

According to CEQA guidelines, a project would have a significant impact if it would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit.



- Conflict with an applicable congestion management program, including, but not limited to, level-of-service standards, and travel demand measures, or other standards established by a county congestion management agency for designated roadways.
- Result in inadequate emergency vehicle access.
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.
- Result in an internal circulation system that does not meet City standards.

Please note the City of Pinole has not adopted standards for on-street parking occupancy levels so having high parking occupancy levels is not necessarily a significant impact unless, for example, this condition results in a significant safety problem or impedes emergency vehicle access.

## 4) IMPACTS AND MITIGATION MEASURES

### 4.1 Project Trip Generation

The proposed project will consist of 9,182 square feet of medical office space. The trip generation calculations are shown in **Table 1**. They are based on rates for a Medical-Dental Office Building from the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 9<sup>th</sup> Edition.

The total trip generation reflects all vehicle trips that would be counted at the project driveways, both inbound and outbound. Although there is the potential for transit and bicycle use at this particular site, no reduction has been applied to the project trip generation to be conservative. It should be noted that based on information provided by ITE on trip reductions for developments located adjacent to bicycle lanes and/or bus transit corridors the project could potentially qualify for a 5% reduction to the project trip generation.<sup>1</sup> As shown in **Table 1**, the project is forecast to generate approximately 20 net new vehicle trips on the surrounding roadway system during the AM peak hour and 31 trips during the PM peak hour.

Based on the potential for transit and bicycle use a 5% reduction has been applied to the project trip generation. This is based on information provided by ITE on trip reductions for developments located adjacent to bicycle lanes and/or bus transit corridors. These reductions only apply when direct, safe connections will be made between the project and nearby transit stops.

For purposes of determining the reasonable worst-case impacts the trips generated by this proposed development are estimated for the peak commute hours of 7:30 a.m. and 8:30 a.m. and 4:30 p.m. and 5:30 p.m., which represent the peak of "*adjacent street traffic*". This is the period when the project traffic would generally contribute to the greatest amount of congestion.

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<sup>1</sup> *ITE Trip Generation Handbook, 2<sup>nd</sup> Edition*, Institute of Transportation Engineers, Washington D.C., June 2004.



**TABLE 1**  
**TRIP GENERATION CALCULATIONS**

Land Use	ITE Code	Size	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
ITE Medical-Dental Office Rates	220		36.13	1.89	0.50	2.39	1.00	2.57	3.57
Unadjusted Project Trip Generation		9,182 sq. ft.	315	17	5	22	9	24	33
Adjustment for Proximity To Transit (5% reduction)			-16	-1	0	-1	0	-2	-2
Project Trip Generation		9,182 sq. ft.	299	15	5	20	9	22	31

**SOURCE:** Institute of Transportation Engineers Trip Generation Manual (9<sup>th</sup> Edition) and the Trip Generation Handbook (2<sup>nd</sup> Edition)

## 4.2 Internal Circulation and Access

No internal site circulation or access issues have been identified that would cause a traffic safety problem or any unusual traffic congestion or delay. The site distance at the proposed entrance was reviewed for potential safety problems with vehicles and/or pedestrians and based on Caltrans sight distance standards it was also found to meet the minimum requirements for a private driveway. However, with respect to landscaping it should be noted that all ground cover adjacent to the project driveway should be trimmed to be no higher than 2 feet and any trees should be limbed up to at least 6 feet. Based on a review of the parking geometrics of the existing and proposed parking areas it appears that all parking aisles and parking spaces will meet City standards (subject to final City approval). It should be also noted there have been no significant safety problems reported with the operation of the existing parking lot on the site.

## 4.3 Parking Impacts

This section discusses the City of Pinole's zoning and estimated parking demand for the project. The project is proposing to provide six spaces less than off-street parking required according to the City's Municipal Code. As per the City's Municipal Code the minimum off-street parking requirement equates to one space per every 250 square feet of gross floor area. This equates to a requirement of 37 spaces.

**Residential Parking Demand Based on ITE Parking Generation Rates** - To provide additional information on the project's parking demand **Table 2** provides a summary of the parking demand results using the average ITE parking generation rates. According to the project description the project would operate differently on different days of the week. Exam days would be Monday through Friday with an estimated 20 to 50 patients per day. Two days a week would also be surgical days (Tuesday and Thursday) where there would be an estimated 12 patients per day for surgical procedures. According to the applicant this is the maximum schedule assuming there are two medical doctors practicing on the site. The parking demand estimates provided have been presented for the Medical-Dental Office Building Category (ITE Land Use Code 720).

As shown in **Table 2**, the maximum parking demand generated by the project would be forecast to be approximately 29 parking spaces on surgical days based on the ITE data. The number of

employees can also sometimes be a good indicator of the potential parking demand, although it should be noted this is usually not codified as part of the approvals.

**Table 2**  
**Off-Street Parking Calculations Using Parking Demand Data**  
**from the Institute of Transportation Engineers**

ITE Code	Project	Data Source	Land Use Category	Size		Parking Ratio	Required Spaces
720	Medical Office Building	ITE Parking Demand Rates	Medical Office	9,182	sq. ft.	3.20	29

**Additional Discussion on Acceptable Parking Occupancy Levels** – It is important to note that one “*rule of thumb*” for parking design is that parking in an area (or parking lot) is theoretically perceived by the general public to be full when more than 90% of the spaces are full.<sup>2</sup> As a result, it is typically desirable to have a parking supply at least 10 percent larger than the demand so that motorists are not discouraged from using off-street parking during peak periods. This is why the average parking supply ratio for medical office buildings (at the 77 sites surveyed for the ITE rates) is normally 4.0 spaces per 1,000 square feet of gross floor area. In other words, the average parking supply of the buildings surveyed by ITE was actually identical to the City’s zoning requirements (1 space per 250 square feet). Another parking demand guideline to keep in mind is the 80% parking occupancy threshold. Although there is no solid evidence to support it, observations indicate that the occurrence of illegal parking tends to increase as parking occupancy exceeds 80% over a large area.<sup>2</sup>

**On-Street Parking** - There are 123 on-street parking spaces within the project study area, i.e., on blocks that are within 500 feet of the project. On a typical weekday afternoon, there are approximately 50 on street spaces available within 500 feet of the project site.

**On-Street Parking Surveys** - In order to evaluate the local parking situation, on-street parking occupancy surveys were conducted while schools were in session based on direction provided by the City of Pinole. This survey includes a detailed inventory of all on-street and off-street parking within 500 feet of the project. The study involved a block-by-block survey of the number and types of spaces, and the parking occupancy on three different weekday mornings and afternoons (see Tables 1 through 4 for survey dates and times). The results of the study are attached to this report. Please note the new parking spaces being created for Kaiser on the eastern end of their property near the Gateway East Parcel were not yet available at the time of our surveys.

The number of parking spaces on each block-face are shown in **Table 1**. **Figure 1** shows the study area and the particular streets and off-street parking lots that have been studied. As seen in **Table 1**, there are 123 on-street parking spaces located on blocks within 500 feet of the project. The studies found that during the afternoon, there are about 70 spaces (57%) that are occupied, and about 50 spaces available. **Tables 2, 3, and 4** attached to this report present the detailed survey results for each block and for each area of the Kaiser parking lots. **Figures 2, 3, and 4** present the parking occupancy levels for each of the streets in the study area during the peak period recorded on each of the three days surveyed.

<sup>2</sup> ITE Parking Generation, 4<sup>th</sup> Edition, Institute of Transportation Engineers, Washington D.C., 2010

**Off-street Parking Lots** - There are no City of Pinole off-street public parking areas within 500 feet of the project. However, it should be noted that there are private parking lots for Kaiser's Pinole Medical Offices. The parking occupancy levels in the existing Kaiser parking lots were also recorded during each of the surveys. As seen in **Table 1**, there are 342 off-street parking spaces in the Kaiser parking lots adjacent to the proposed project. The studies found that during the peak demand in the early afternoon there are typically about 250 spaces (73%) that are occupied, and about 90 spaces available. However, it should be noted that parking area #1 (the lot adjacent to the proposed project site) was found to generally be about 90% occupied during the mid-afternoon peak period of each survey.

**Shared Parking Considerations With Kaiser** – It is important to note that the proposed project would displace 22 parking spaces in the northern parking lot currently used by Kaiser employees (identified as Lot #1 in Figure 1). Please note that 21 of these spaces would become designated parking spaces for the proposed project and one space would be removed to create a new trash enclosure for the project. Kaiser has previously been authorized to utilize 22 of the parking spaces in this lot that they do not own and, as a result, this project would take over 22 parking spaces currently being used by Kaiser Employees. Since Lot #1 is typically over 90% occupied it is assumed that approximately 22 employee vehicles will need to be relocated to the other Kaiser parking lots closer to the main Kaiser building. Based on the parking surveys this would be expected to increase the occupancy levels in the lots surrounding the main Kaiser building from the existing maximum recorded occupancy levels of 73% to about 80% if about 22 employee vehicles are shifted this lot. Please note this could be partially off-set with the removal of containers and other equipment that is currently blocking about five spaces in the main lot.

**Summary of Findings on Parking** - Based on the parking surveys of the surrounding neighborhood and the parking requirements for medical dental office space (1.0 per 250 sq. ft.) it is estimated that the parking demand could exceed the supply being proposed (31 spaces) by approximately 6 vehicles. However, given the City's policies supporting alternative transportation and the project's close proximity to bus transit the City could consider making the findings that the proposed 31 space parking supply for the project is reasonable and appropriate.

The justification could be as follows:

- 1) The project will also provide additional publicly accessible bicycle racks.
- 2) There are numerous shopping, employment, and education centers within walking distance of the site (such as the nearby planned Starbucks and the Sprouts Market being constructed directly across the street).
- 3) There is extensive public transportation available in the project area provided by WestCAT, which provides connections to the El Cerrito Del Norte BART Station. The WestCAT routes that runs closest to the proposed project are routes 16, 19, and JPX. These routes all have stops on Pinole Valley Road adjacent to the project site.

Based on Section 17.48.040 of the Pinole Municipal Code the Planning Commission will only grant a conditional use permit for reduced parking if it finds that the project meets all of the conditional use permit criteria in Section 17.12.140 (Conditional Use Permits) and that three (3) or more of the circumstances listed below are true.

- a) *The use will be adequately served by the proposed parking due to the nature of the proposed operation; proximity to frequent transit service; transportation characteristics of persons residing, working, or visiting the site; or because the applicant has undertaken a travel demand management program that will reduce parking demand at the site.*

The applicant has proposed the following travel demand management program for the project:

- 1) All employees will have available vouchers that pay 100% of their public transportation expenses.
- 2) The site is located next to a bus stop which services bus lines 16, 19 and JPX.
- 3) An employee ride share program will be instituted allowing employees subsidizing transportation costs, share commuter lanes and reduce by ½ the necessary parking needed on site.
- 4) The applicant bikes to work and other individuals would be encouraged to do so with bike racks prominently featured in the front of the building.

This circumstance appears to be met with the presence of the adjacent bus stops and the proposal to provide transit vouchers for all employees. With financial incentives to use transit ITE data indicates the project parking demand could be reduced by as much as 16 percent. This could potentially off set the requested reduction in parking by reducing the overall project parking demand by about 6 spaces.

- b) *Parking demand generated by the project will not exceed the capacity of or have a detrimental impact on the supply of on-street parking in the surrounding area.*

This circumstance appears to be met since there is sufficient capacity on the surrounding street system to absorb at least an additional 6 vehicles without causing the parking occupancy levels to exceed 80% in the area.

- c) *The site plan is consistent with the objectives of the zoning district and incorporates features such as unobtrusive off-street parking placed below the ground level of the project with commercial uses above or enclosed parking on the ground floor.*

This will be determined by City staff.

- d) *The applicant has provided on-site parking for car share vehicles via a recorded written agreement between the landowner and the city that runs with the land. Agreement shall provide for proof of a perpetual agreement with a car share agency to provide at least one (1) car share vehicle on-site.*

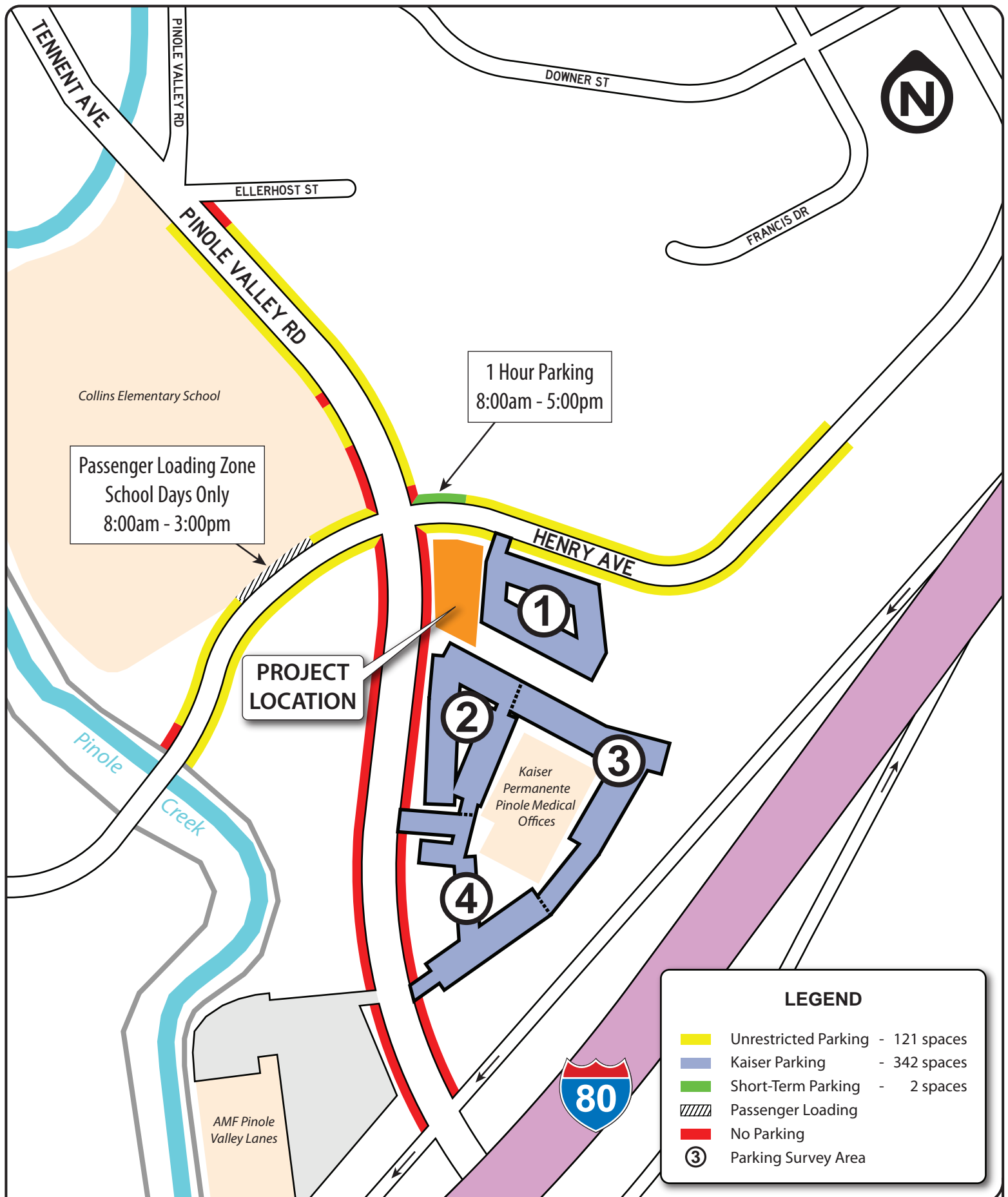
The applicant has proposed to provide a parking space for car sharing so it appears this circumstance would be met, subject to approval of the details of the car share agreement by City Staff.

It should again be noted the parking demand estimates presented in this report do not account for the applicants proposed Travel Demand Management Program. Although it is reasonable to assume that incentives to use transit could reduce the project parking demand, this is normally not included in the preliminary parking demand calculations. This would typically only be included in the calculations if the requirement to provide the transit incentives is officially codified as part of the project approvals so it would guarantee the incentives will continue in

perpetuity. However, as noted above, with financial incentives to use transit the ITE data does indicate the project parking demand could be reduced by as much as 16 percent, which could equate to a reduction to the overall project parking demand of about 6 spaces.

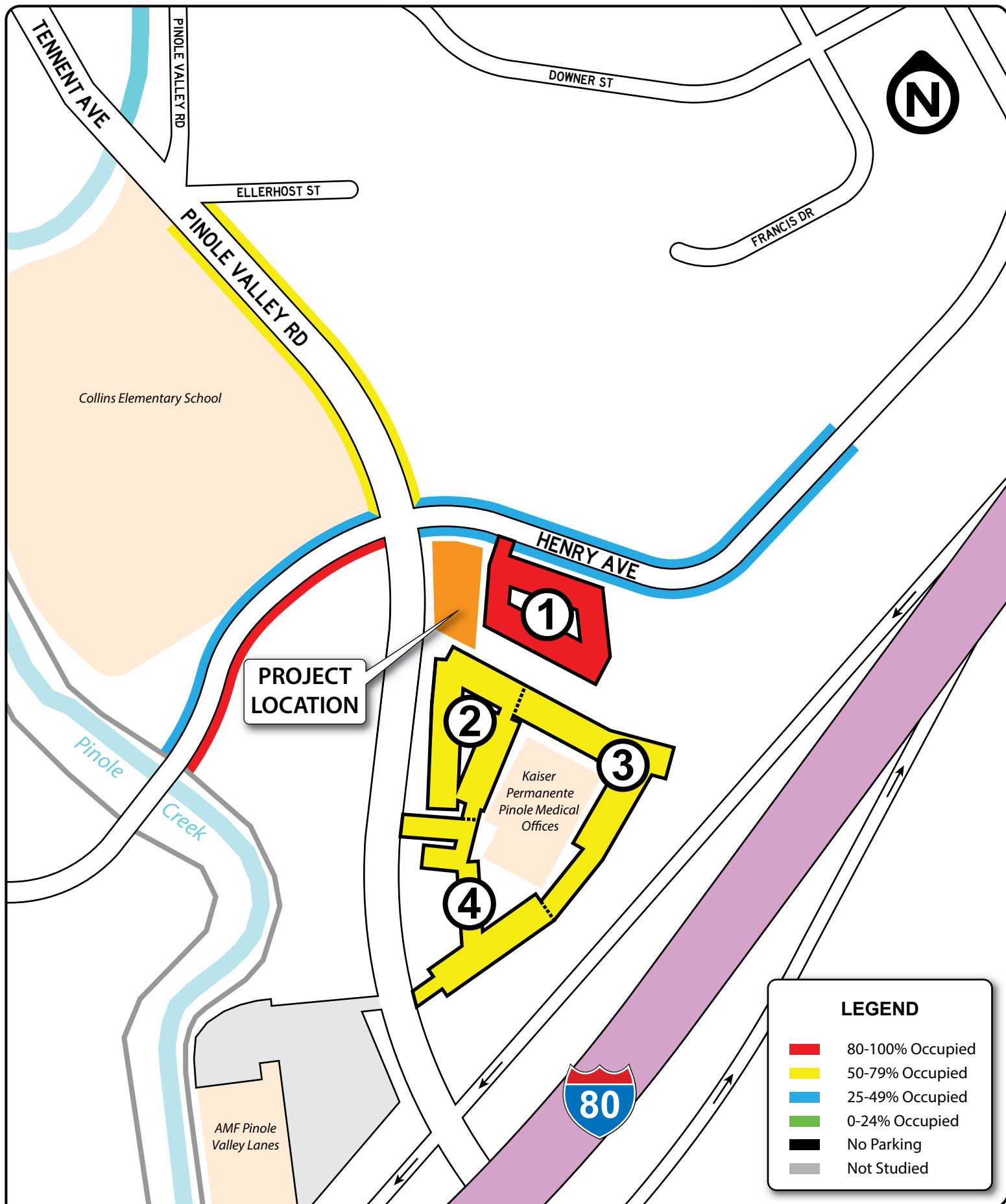
#### **4.4 Pedestrian and Bicycle Impacts**

The proposed project would generate additional pedestrian and bicycle traffic in the area, thereby potentially increasing conflicts between vehicles, bicycles, and pedestrians. However, the project would not conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks) or generate pedestrian, bicycle, or transit travel demand that would not be accommodated by existing transit, bicycle, or pedestrian facilities and plans. Along the perimeter of the project sidewalks are already provided. Therefore, based on the City's significance criteria the project's impacts on pedestrian and bicycle travel would be considered less than significant and no mitigations would be required.



**FIGURE 1 | PARKING INVENTORY**  
**PARKING ANALYSIS**  
 Gateway Medical Building  
 City of Pinole





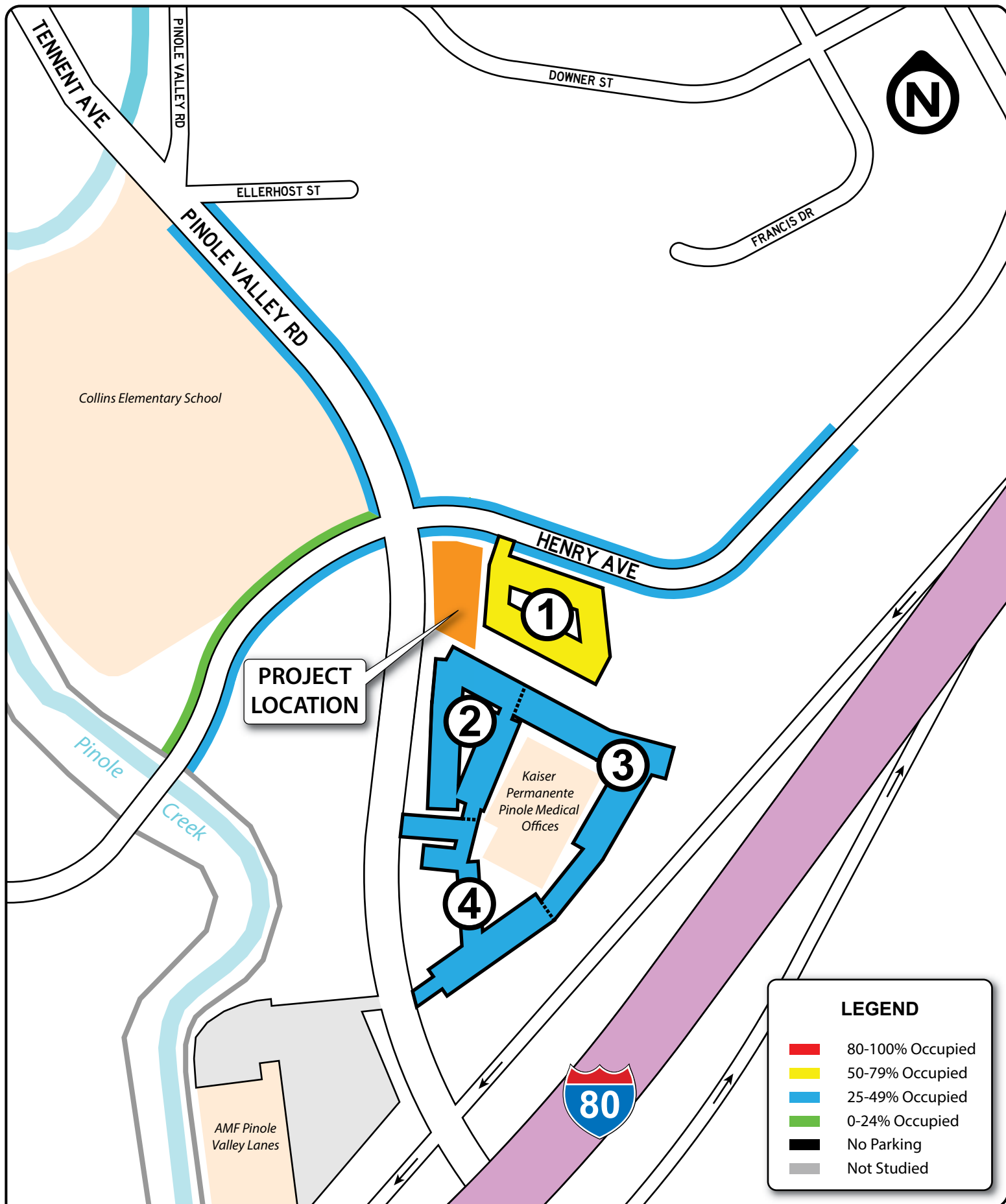
**FIGURE 2 | PARKING SURVEY RESULTS - TUESDAY APRIL 12, 2016**

**PARKING ANALYSIS**

**2:00 PM - 3:00 PM**

**Gateway Medical Building  
City of Pinole**





**FIGURE 3 | PARKING SURVEY RESULTS - WEDNESDAY APRIL 13, 2016**

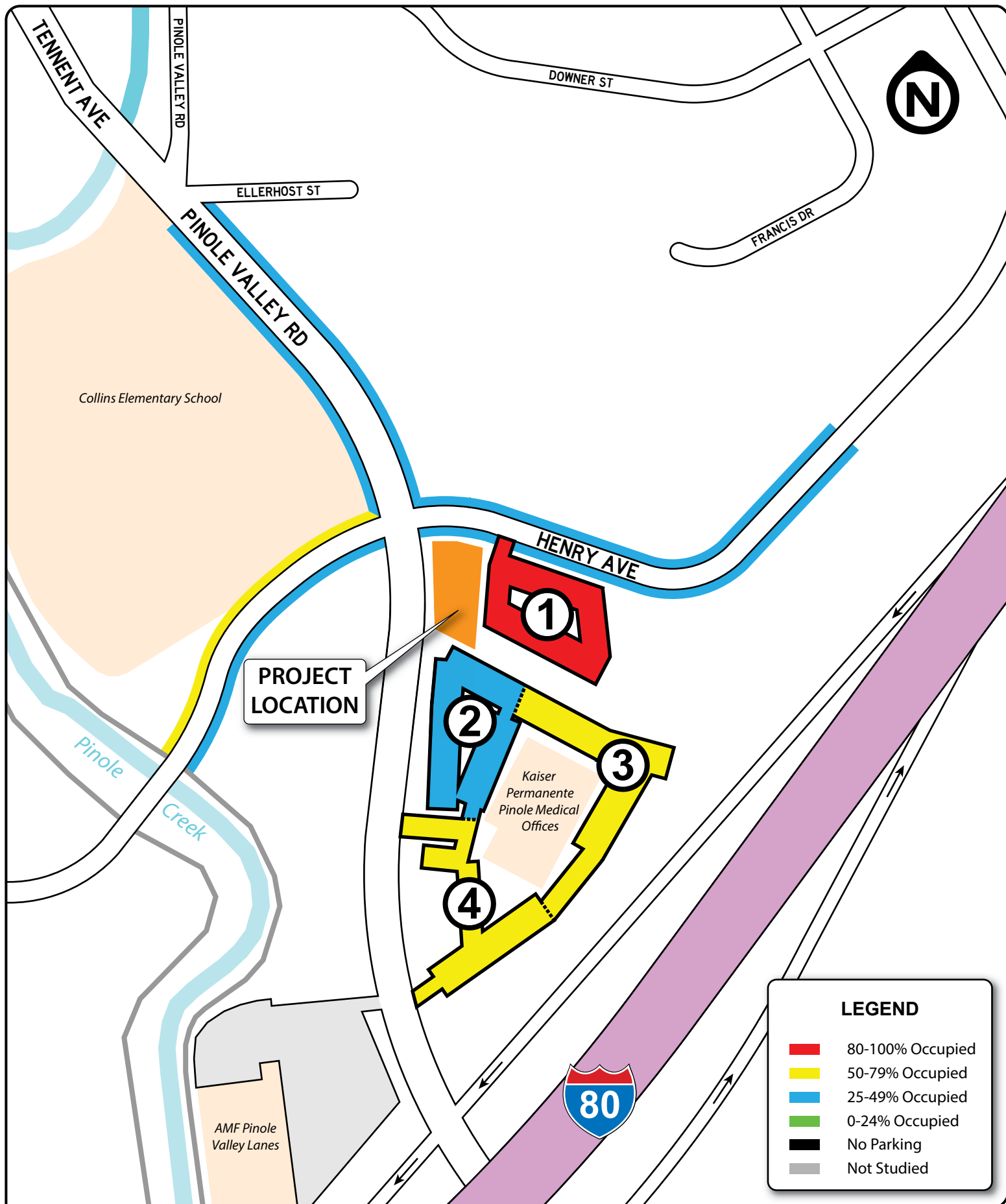
**PARKING ANALYSIS**

**11:00 AM - 12:00 PM**

**Gateway Medical Building  
City of Pinole**



**Abrams Associates**  
TRAFFIC ENGINEERING, INC.



**FIGURE 4 | PARKING SURVEY RESULTS - THURSDAY APRIL 14, 2016**

**PARKING ANALYSIS**

Gateway Medical Building  
 City of Pinole

2:00 PM - 3:00 PM



**Abrams Associates**  
 TRAFFIC ENGINEERING, INC.

Table 1 Summary of Parking Survey Results for the Peak Period										
Street	Side of Street	Number of Spaces	Survey Day 1 Tues 4/12			Survey Day 2 Wed 4/13			Survey Day 3 Thurs 4/14	
			2:00 PM - 3:00 pm	Parked Vehicles	Percent Occupied	11:00 AM - 12:00 PM	Parked Vehicles	Percent Occupied	2:00 PM - 3:00 PM	Parked Vehicles
Pinole Valley Rd	West	22		15	68.2%		8	36.4%		7
Pinole Valley Rd	East	14		7	50.0%		5	35.7%		8
Henry Ave (West of PVR)	North	21		10	47.6%		4	19.0%		18
Henry Ave (West of PVR)	South	16		16	100.0%		8	50.0%		9
Henry Ave (East of PVR)	North	25		12	48.0%		10	40.0%		12
Henry Ave (East of PVR)	South	25		10	40.0%		10	40.0%		13
Kaiser Parking Area	1	105		96	91.4%		92	87.6%		95
Kaiser Parking Area	2	100		53	53.0%		56	56.0%		53
Kaiser Parking Area	3	93		55	59.1%		43	46.2%		70
Kaiser Parking Area	4	44		24	54.5%		27	61.4%		33
<b>Total</b>	<b>N/A</b>	<b>465</b>		<b>298</b>	<b>64.1%</b>		<b>263</b>	<b>56.6%</b>		<b>318</b>
										<b>68.4%</b>

NOTE: PVR = Pinole Valley Rd

Table 2 Parking Survey Results for Tuesday 4/12/2016							
Street	Side of Street	Number of Spaces	1:00 PM - 2:00 PM		2:00 PM - 3:00 PM		Percent Occupied
			Parked Vehicles	Percent Occupied	Parked Vehicles	Percent Occupied	
Pinole Valley Rd	West	22	9	40.9%	15	68.2%	
Pinole Valley Rd	East	14	9	64.3%	7	50.0%	
Henry Ave (West of PVR)	North	21	11	52.4%	10	47.6%	
Henry Ave (West of PVR)	South	16	7	43.8%	16	100.0%	
Henry Ave (East of PVR)	North	25	10	40.0%	12	48.0%	
Henry Ave (East of PVR)	South	25	12	48.0%	10	40.0%	
Kaiser Parking Area	1	105	90	85.7%	96	91.4%	
Kaiser Parking Area	2	100	27	27.0%	53	53.0%	
Kaiser Parking Area	3	93	19	20.4%	55	59.1%	
Kaiser Parking Area	4	44	28	63.6%	24	54.5%	
<b>Total</b>	<b>N/A</b>	<b>465</b>	<b>222</b>	<b>47.7%</b>	<b>298</b>	<b>64.1%</b>	

NOTE: PVR = Pinole Valley Rd

Table 3 Parking Survey Results for Wednesday 4/13/2016														
Street	Side of Street	Number of Spaces	10:00 AM - 11:00 AM			11:00 AM - 12:00 PM			12:00 PM - 1:00 PM			1:00 PM - 2:00 PM		
			Parked Vehicles	Percent Occupied		Parked Vehicles	Percent Occupied		Parked Vehicles	Percent Occupied		Parked Vehicles	Percent Occupied	
Pinole Valley Rd	West	22	10	45.5%		8	36.4%		9	40.9%		8	36.4%	
Pinole Valley Rd	East	14	5	35.7%		5	35.7%		5	35.7%		5	35.7%	
Henry Ave (West of PVR)	North	21	6	28.6%		4	19.0%		4	19.0%		5	23.8%	
Henry Ave (West of PVR)	South	16	7	43.8%		8	50.0%		8	50.0%		6	37.5%	
Henry Ave (East of PVR)	North	25	9	36.0%		10	40.0%		9	36.0%		11	44.0%	
Henry Ave (East of PVR)	South	25	10	40.0%		10	40.0%		14	56.0%		12	48.0%	
Kaiser Parking Area	1	105	91	86.7%		92	87.6%		92	87.6%		79	75.2%	
Kaiser Parking Area	2	100	48	48.0%		56	56.0%		41	41.0%		21	21.0%	
Kaiser Parking Area	3	93	30	32.3%		43	46.2%		38	40.9%		14	15.1%	
Kaiser Parking Area	4	44	28	63.6%		27	61.4%		24	54.5%		14	31.8%	
Total	N/A	465	244	52.5%		263	56.6%		244	52.5%		175	37.6%	
Street	Side of Street	Number of Spaces	2:00 PM - 3:00 PM			3:00 PM - 4:00 PM			4:00 PM - 5:00 PM			5:00 PM - 6:00 PM		
			Parked Vehicles	Percent Occupied		Parked Vehicles	Percent Occupied		Parked Vehicles	Percent Occupied		Parked Vehicles	Percent Occupied	
Pinole Valley Rd	West	22	8	36.4%		6	27.3%		4	18.2%		2	9.1%	
Pinole Valley Rd	East	14	7	50.0%		5	35.7%		5	35.7%		5	35.7%	
Henry Ave (West of PVR)	North	21	5	23.8%		6	28.6%		6	28.6%		5	23.8%	
Henry Ave (West of PVR)	South	16	7	43.8%		10	62.5%		9	56.3%		4	25.0%	
Henry Ave (East of PVR)	North	25	9	36.0%		9	36.0%		10	40.0%		8	32.0%	
Henry Ave (East of PVR)	South	25	12	48.0%		11	44.0%		11	44.0%		9	36.0%	
Kaiser Parking Area	1	105	88	83.8%		89	84.8%		84	80.0%		81	77.1%	
Kaiser Parking Area	2	100	42	42.0%		37	37.0%		36	36.0%		40	40.0%	
Kaiser Parking Area	3	93	30	32.3%		38	40.9%		42	45.2%		36	38.7%	
Kaiser Parking Area	4	44	20	45.5%		22	50.0%		19	43.2%		17	38.6%	
Total	N/A	465	228	49.0%		233	50.1%		226	48.6%		207	44.5%	

NOTE: PVR = Pinole Valley Rd

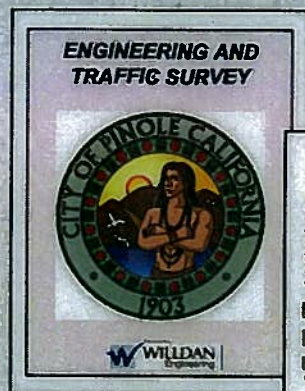
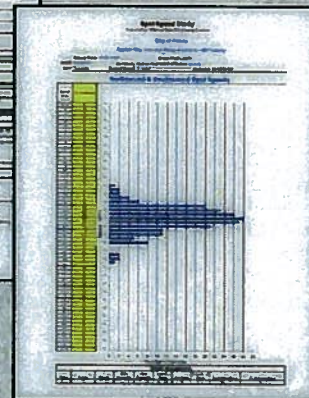
Table 4														
Parking Survey Results for Thursday 4/14/2016														
Side of Street	Number of Spaces	10:00 AM - 11:00 AM			11:00 AM - 12:00 PM			12:00 PM - 1:00 PM			1:00 PM - 2:00 PM			
		Parked Vehicles	Percent Occupied		Parked Vehicles	Percent Occupied		Parked Vehicles	Percent Occupied		Parked Vehicles	Percent Occupied		
Pinole Valley Rd	22	5	22.7%		6	27.3%		5	22.7%		6	27.3%		
Pinole Valley Rd	14	7	50.0%		7	50.0%		8	57.1%		8	57.1%		
Henry Ave (West of PVR)	21	5	23.8%		4	19.0%		5	23.8%		5	23.8%		
Henry Ave (West of PVR)	16	6	37.5%		10	62.5%		9	56.3%		7	43.8%		
Henry Ave (East of PVR)	25	12	48.0%		11	44.0%		14	56.0%		13	52.0%		
Henry Ave (East of PVR)	25	14	56.0%		15	60.0%		15	60.0%		15	60.0%		
Kaiser Parking Area	105	93	88.6%		94	89.5%		92	87.6%		69	65.7%		
Kaiser Parking Area	100	41	41.0%		41	41.0%		38	38.0%		18	18.0%		
Kaiser Parking Area	93	23	24.7%		23	24.7%		32	34.4%		16	17.2%		
Kaiser Parking Area	44	39	88.6%		39	88.6%		12	27.3%		11	25.0%		
Total	465	245	52.7%		250	53.8%		230	49.5%		168	36.1%		
Side of Street	Number of Spaces	2:00 PM - 3:00 PM			3:00 PM - 4:00 PM			4:00 PM - 5:00 PM			5:00 PM - 6:00 PM			
		Parked Vehicles	Percent Occupied		Parked Vehicles	Percent Occupied		Parked Vehicles	Percent Occupied		Parked Vehicles	Percent Occupied		
Pinole Valley Rd	22	7	31.8%		5	22.7%		3	13.6%		1	4.5%		
Pinole Valley Rd	14	8	57.1%		7	50.0%		7	50.0%		7	50.0%		
Henry Ave (West of PVR)	21	18	85.7%		7	33.3%		7	33.3%		6	28.6%		
Henry Ave (West of PVR)	16	9	56.3%		7	43.8%		5	31.3%		4	25.0%		
Henry Ave (East of PVR)	25	12	48.0%		14	56.0%		14	56.0%		13	52.0%		
Henry Ave (East of PVR)	25	13	52.0%		11	44.0%		11	44.0%		12	48.0%		
Kaiser Parking Area	105	95	90.5%		97	92.4%		90	85.7%		84	80.0%		
Kaiser Parking Area	100	53	53.0%		43	43.0%		57	57.0%		56	56.0%		
Kaiser Parking Area	93	60	64.5%		33	35.5%		56	60.2%		52	55.9%		
Kaiser Parking Area	44	32	72.7%		14	31.8%		24	54.5%		18	40.9%		
Total	465	307	66.0%		238	51.2%		274	58.9%		253	54.4%		

NOTE: PVR = Pinole Valley Rd

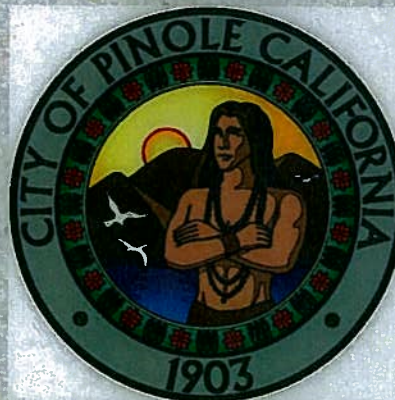


# **Engineering and Traffic Survey**

**November 2011**

This image shows a page from the survey report, likely a table of contents or a data table. It contains the City of Pinole logo and a table with multiple columns and rows of data, including a section for 'CITY OF PINOLE'.

**FOR THE CITY OF**



**PINOLE**

Prepared by:





November 14, 2011

Mr. Dean Allison  
Director of Development Services/City Engineer  
City of Pinole  
2131 Pear Street  
Pinole, CA 94564

Subject: 2011 Engineering and Traffic Survey

Dear Mr. Allison:

As requested, Willdan has completed an Engineering and Traffic Survey to justify and update the posted speed limits along 16 street segments in the City of Pinole. These segments were last surveyed in July 2006, and require an update to comply with the 7-year limitation set forth in the California Vehicle Code (CVC).

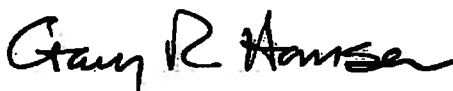
We are pleased to submit the enclosed Report that describes the E&T survey procedures and contains recommendations for posted speed limits on the City's arterial and collector street system. A summary of these recommendations is included in the Analysis. Supporting documentation for each speed zone recommendation is provided in the Appendices.

The Report was conducted in accordance with applicable provisions of the CVC, following procedures outlined in the California Manual on Uniform Traffic Control Devices (California MUTCD) dated January 2010, and as required by Section 627 of the California Vehicle Code. The Report is intended to satisfy the requirements of Section 40802 of the CVC to enable the continued use of radar for traffic speed enforcement.

We appreciate the opportunity to serve the City of Pinole and the assistance and cooperation afforded to us during the course of this study.

Very truly yours,

WILLDAN



Gary R. Hansen, T.E.  
Traffic Engineer

Enclosure

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## INTRODUCTION

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This Engineering and Traffic Survey is intended to be the basis for the establishment, revision, and enforcement of speed limits for selected streets within the City of Pinole. This Engineering and Traffic Survey presents recommended speed limits for 16 street segments in the City of Pinole. Engineering and Traffic Surveys are required by the State of California to establish intermediate speed limits on local streets and to enforce those limits using radar or other speed measuring devices. These surveys must be updated every 5 or 7 years to ensure the speeds reflect current conditions as dictated by the California Vehicle Code (CVC). The CVC also requires that the surveys be conducted based on the methodology required by The California Manual on Uniform Traffic Control Devices (California MUTCD) dated January 2010.

The survey was requested by the City for the proper posting of speed limits and to enable the Police Department to utilize radar or other electronic speed measuring devices for speed enforcement. CVC Sections 40801 and 40802 require Engineering and Traffic Surveys that verify the prima facie speed limit before enforcement by such a device is legal. The law further specifies that these surveys be conducted every 5 years. The surveys can be extended to 7 years provided the City's police officer(s) have completed a 24-hour radar operator course [CVC 40802(c)(2)(B)(i)(I)]. Additionally, some surveys may be extended to 10 years if a traffic engineer certifies that no changes in roadway or traffic conditions have occurred [CVC 40802 (c)(2)(B)(i)(II)]. These provisions assure that posted speed limits are kept reasonably current.

The Engineering and Traffic Surveys for the City were conducted in accordance with procedures outlined in the California Manual on Uniform Traffic Control Devices (California MUTCD) dated January 2010 and as required by Section 627 of the California Vehicle Code. The Code further describes three elements of an engineering and traffic survey:

1. Measurement of prevailing speed;
2. Accident history; and
3. Roadway characteristics not readily apparent to the motorist.

Posted speed limits are established primarily to protect the general public from the reckless and unpredictable behavior of dangerous drivers. They provide law enforcement with a clearly understood method to identify and apprehend violators of the basic speed law (CVC Section 22350). This law states that "No person shall drive a vehicle on a highway at a speed greater than is reasonable or prudent having due regard for weather, visibility, the traffic on, and the surface and width of the highway, and in no event at a speed which endangers the safety of persons or property." The posted speed limit gives motorists a clear warning of the maximum speed that is reasonable and prudent under typical driving conditions.

The basic fundamentals for establishing speed limits recognize that the majority of drivers behave in a safe and reasonable manner, and therefore, the normally careful and competent actions of a reasonable driver should be considered legal. Speed limits established on these fundamentals conform to the consensus that those who drive the highway determine what speed is reasonable and safe, not on the judgment of one or a few individuals. A radar speed study is usually used to record the prevailing speed of reasonable drivers.

Speed limits are also established to advise drivers of conditions which may not be readily apparent to a reasonable driver. For this reason, accident history, roadway conditions, traffic characteristics, and land use must also be analyzed before determining speed limits. Speed limit changes are usually made in coordination with physical changes in roadway conditions or roadside developments. Unusually short zones of less than one-half mile in length should be avoided to reduce driver confusion.

Additionally, it is generally accepted that speed limits cannot be successfully enforced without voluntary compliance by a majority of drivers. Consequently, only the driver whose behavior is clearly out of line with the normal flow of traffic is usually targeted for enforcement.

## **ELEMENTS OF THE ENGINEERING AND TRAFFIC SURVEY**

The California Manual on Uniform Traffic Control Devices (California MUTCD) dated January 2010 specifies the methodology to be used for completing Engineering and Traffic Surveys. This methodology includes an evaluation of current vehicle speeds, accident history and conditions not readily apparent to motorists. The basic elements of the Engineering and Traffic Survey are discussed in more detail as follows:

### **Speed Sampling**

Existing vehicle speeds are surveyed by a certified radar operator with a calibrated radar unit in an unmarked vehicle. Speed samples are taken for each segment representing a statistically significant sample of current traffic. This data is then evaluated to identify the distribution of speeds. A key element in the evaluation is the identification of the 85th percentile speed. The 85<sup>th</sup> percentile speed is the speed at or below which 85 percent of the traffic travels. This threshold represents what is historically found to be a safe and reasonable speed for most drivers based on common roadway conditions. Therefore, a "basic speed limit" is established at the nearest 5-mile per hour (mph) increment to the 85th percentile speed. For example, if the 85th percentile speed is 48 mph, the basic speed limit is 50 mph. If the 85th percentile speed is 47 mph, the basic speed limit is 45 mph.

## **Collision History**

Reported collisions are reviewed for each street segment to determine if there is a higher than average rate of collisions. A segment that has an above-average collision rate typically suggests conditions that are not readily apparent to motorists.

A summary of the collision rates for the 16 surveyed street segments is provided in Appendix B.

## **Conditions Not Readily Apparent To Motorists**

Each street segment is field inspected to identify roadway conditions that may not be readily apparent to motorists. A determination is made whether any conditions are significant and warrant the recommendation of the speed limit 5 mph or more below the basic speed limit. It is important to note that The California Manual on Uniform Traffic Control Devices (California MUTCD) dated January 2010 recommends exercising great care when establishing speed limits 5 mph or more below the basic speed limit.

## **SURVEY CONDITIONS**

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### **SURVEY LOCATIONS**

The procedures described below describe the criteria and methods used to survey selected streets within the City of Pinole. The specific location of the radar speed survey for each street segment was selected after considering the following:

1. Minimum stop sign and traffic signal influence.
2. Minimum visibility restrictions.
3. Non-congested traffic flow away from intersections and driveways.
4. Minimum influence from curves or other roadway conditions that would affect the normal operation of a vehicle.

### **DATA COLLECTION**

Data of existing conditions was obtained including prevailing speed of vehicles, traffic collisions, visibility restrictions, and roadway conditions within the community. Speed data and field reviews were conducted at 16 locations during the month of September 2011.

#### **Speed Data**

Radar speed measurements were conducted at 16 locations during September 2011. All surveys were conducted in good weather conditions, during off-peak hours on weekdays. The radar unit was operated from an unmarked vehicle to minimize any influence on driver behavior. Typically, a minimum sample size of 100 vehicles or the total samples during a maximum period of 2 hours were obtained for each segment. Traffic speeds in both directions were recorded for individual segments.

## Collision Data

Collision data was obtained from the City's accident records. For this study, collision data was used from the latest 3 years of reported accidents from September 1, 2008 to August 31, 2011. The collision rates for the 16 segments are expressed in accidents per million vehicle miles (A/MVM). To calculate these rates, 24-hour traffic volumes were collected for each street segment. This information was then entered into the following formula to determine the collision rate:

$$R = \frac{Ax1,000,000}{tx365 \frac{days}{year} xlv}$$

*A* = Number of midblock collisions over time period

*R* = Collision Rate (accidents/million vehicle miles)

*t* = Time Period Covered (in years)

*l* = Length of Segment (miles)

*v* = Traffic Volume (average daily traffic)

The segment collision rate was then compared to the average statewide collision rate. The average statewide collision rates were obtained from 2009 Collision Data on California State Highways published by Caltrans.

## Field Review Data

A field review was conducted for each of the selected street segments in the City with consideration for the following factors:

1. Street width and alignment (design speed);
2. Pedestrian activity and traffic flow characteristics;
3. Number of lanes and other channelization and striping patterns;
4. Frequency of intersections, driveways, and on-street parking;
5. Location of stop signs and other regulatory traffic control devices;
6. Visibility obstructions;
7. Land use and proximity to schools;
8. Pedestrian and bicycle usage;
9. Uniformity with existing speed zones and those in adjacent jurisdictions; and
10. Any other unusual condition not readily apparent to the driver.



## ANALYSIS

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### CRITERIA

Survey data was compiled and analyzed to determine the recommended speed limit in accordance with several criteria contained in The California Manual on Uniform Traffic Control Devices (California MUTCD) dated January 2010. Some of the criteria used are:

- A. The critical speed or 85th percentile speed is that speed at or below which 85 percent of the traffic is moving. This speed is the baseline value in determining what the majority of drivers believe is safe and reasonable. Speed limits set higher than the critical speed are not considered reasonable and safe. Speed limits set lower than the critical speed make a large number of reasonable drivers "unlawful," and do not facilitate the orderly flow of traffic. The "basic speed limit" is the nearest 5 mph increment to the 85<sup>th</sup> percentile speed.
- B. The 10 mile per hour (mph) pace speed is the 10 mph increment that contains the highest percentage of vehicles. It is a measure of the dispersion of speeds across the range of the samples surveyed. An accepted practice is to keep the speed limit within the 10 mph pace while considering the critical speed and other factors that might require a speed lower than the critical speed.
- C. The collision rate for each street segment is compared to average collision rates that can be reasonably expected to occur on streets and highways in other jurisdictions, in proportion to the volume of traffic per lane mile. These average collision rates have been developed by the State of California and are considered reasonable for use in the City of Pinole.

### RESULTS AND RECOMMENDATIONS

The Engineering and Traffic Survey Forms, presented in Appendix A, illustrate results of a thorough evaluation of the available data and recommend a speed limit for each street segment surveyed. A complete summary of all recommendations is shown in Table 2. In each case, the recommended speed limit was consistent with the prevailing behavior as demonstrated by the radar speed measurements. Typically, a speed limit in the upper range of the 10-mile pace was selected unless an collision rate significantly higher than expected was discovered or roadway conditions not readily apparent to the driver were identified. Any segments with recommended speed limits 5 mph or more below the basic speed limit are fully explained later in this report.

The Legislature, in adopting Section 22358.5 of the California Vehicle Code (CVC), has made it clear that physical conditions, such as width, curvature, grade and surface conditions, or any other condition readily apparent to a driver, in the absence of other factors, would not be the basis for special downward speed zoning. In these cases, the basic speed law (CVC Section 22350) is sufficient to regulate such conditions.

The recommendations contained in this Report are intended to establish prima facie speed limits. They are not intended to be absolute for all prevailing conditions. All prima facie

speed violations are actually violations of the basic speed law (Section 22350 of California Vehicle Code). This statute states that a person shall not drive a vehicle at a speed greater than is safe having regard for traffic, roadway, and weather conditions. A prima facie limit is intended to establish a maximum safe speed under normal conditions.

Table 1 identifies the street segments with recommended changes in posted speed limits and Table 2 summarizes the recommendations for all surveyed segments.

**TABLE 1**  
**STREET SEGMENTS WITH RECOMMENDED SPEED CHANGES**

No	STREET	FROM	TO	EXISTING	NEW	REASON FOR CHANGE
1	APPIAN WAY	SAN PABLO AVE	I-80 FREEWAY	35	35	NO CHANGE
2	APPIAN WAY	I-80 FREEWAY	SOUTH CITY LIMIT	35	35	NO CHANGE
3	FITZGERALD DR	RICHMOND PKWY	APPIAN WAY	30	30	NO CHANGE
4	PINOLE VALLEY RD	TENNENT AVE	I-80 FREEWAY	30	30	NO CHANGE
5	PINOLE VALLEY RD	I-80 FREEWAY	GRANADA CT	30	30	NO CHANGE
6	PINOLE VALLEY RD	GRANADA CT	SIMAS AVE	35	35	NO CHANGE
7	PINOLE VALLEY RD	SIMAS AVE	SOUTH CITY LIMIT	35	35	NO CHANGE
8	SAN PABLO AVE	EAST CITY LIMIT	PINOLE VALLEY RD	25	25	NO CHANGE
9	SAN PABLO AVE	PINOLE VALLEY RD	OAK RIDGE AVE	25	25	NO CHANGE
10	SAN PABLO AVE	OAK RIDGE AVE	APPIAN WAY	35	35	NO CHANGE
11	SAN PABLO AVE	APPIAN WAY	SUNNYVIEW DR	35	35	NO CHANGE
12	SAN PABLO AVE	SUNNYVIEW DR	WEST CITY LIMIT	40	40	NO CHANGE
13	SIMAS AVE	MENDOCINO DR	PINOLE VALLEY RD	25	25	NO CHANGE
14	SIMAS AVE	PINOLE VALLEY RD	MENDOCINO DR	25	25	NO CHANGE
15	TARA HILLS DR	APPIAN WAY	WEST CITY LIMIT	30	30	NO CHANGE
16	TENNENT AVE	RAILROAD AVE	SAN PABLO AVE	25	25	NO CHANGE

Table 2

## Summary of Recommendations

No. Street	From	To	Posted Speed Limit	Critical Speed	Recommended Speed Limit	Comments
1	APPIAN WAY	SAN PABLO AVE	35	41	35	*
2	APPIAN WAY	I-80 FREEWAY	35	35	35	85TH SPEED
3	FITZGERALD DR	RICHMOND PKWY	30	35	30	*
4	PINOLE VALLEY RD	TENNENT AVE	30	36	30	*
5	PINOLE VALLEY RD	I-80 FREEWAY	30	37	30	*
6	PINOLE VALLEY RD	GRANADA CT	35	38	35	*
7	PINOLE VALLEY RD	SIMAS AVE	35	38	35	*
8	SAN PABLO AVE	EAST CITY LIMIT	25	36	25	*
9	SAN PABLO AVE	PINOLE VALLEY RD	25	32	25	*
10	SAN PABLO AVE	OAK RIDGE AVE	35	36	35	85TH SPEED
11	SAN PABLO AVE	APPIAN WAY	35	38	35	*
12	SAN PABLO AVE	SUNNYVIEW DR	40	40	40	85TH SPEED
13	SIMAS AVE	MENDOCINO DR	25	31	25	*
14	SIMAS AVE	PINOLE VALLEY RD	25	31	25	*
15	TARA HILLS DR	APPIAN WAY	30	32	30	85TH SPEED
16	TENNENT AVE	RAILROAD AVE	25	31	25	*

\* See "Segments with Special Conditions" Section for Comments

\*\* = 25 mph when children are present

## **SEGMENTS WITH SPECIAL CONDITIONS**

The following segments surveyed had recommended speed limits that were 5 miles per hour (mph) or more below the critical speed due to conditions not readily apparent to the driver. Each segment is discussed below.

### **Segment #1 – Appian Way – San Pablo Avenue to I-80 Freeway**

This segment currently is currently posted at 35 mph and has 2 through lanes in each direction with an ADT of 14,628 vehicles per day. The adjacent land use is residential, commercial, and school. The critical speed is 41 mph and would normally justify a 40 mph posted speed limit. However, due to the limited sight distance resulting from the horizontal and vertical curves and an unprotected crosswalk, it is recommended that the existing 35 mph speed limit be retained.

### **Segment #3 – Fitzgerald Drive – Richmond Parkway to Appian Way**

This segment is currently posted at 30 mph and has 2 through lanes in each direction with an ADT of 17,218 vehicles per day. The adjacent land use is commercial. The critical speed is 35 mph and would normally justify a 35 mph posted speed limit. However, due to high volume of turning movements to/from the main driveways to the adjacent commercial land uses, it is recommended that the speed limit remain at 30 mph.

### **Segment #4 – Pinole Valley Road – Tennent Avenue to I-80 Freeway**

This segment is currently posted at 30 mph and has 2 through lanes in each direction with an ADT of 16,578 vehicles per day. The adjacent land use is residential and school. The critical speed is 36 mph and would normally justify a 35 mph posted speed limit. However, to be consistent with the existing 30 mph speed limit to the south and to provide a smooth transition to the existing 25 mph speed limit to the north, a 30 mph speed limit is recommended.

### **Segment #5 – Pinole Valley Road – I-80 Freeway to Granada Court**

This segment is currently posted at 30 mph and has 2 through lanes in each direction with an ADT of 18,347 vehicles per day. The adjacent land use is commercial and school. The critical speed is 37 mph and would normally justify a 35 mph posted speed limit. However, due to the high volume of turning movements to/from the many commercial driveways, and heavy pedestrian traffic, it is recommended that the existing 30 mph speed limit be retained.

### **Segment #6 – Pinole Valley Road – Granada Court to Simas Avenue**

This segment is currently posted at 35 mph and has 2 through lanes in each direction with an ADT of 12,110 vehicles per day. The adjacent land use is residential. The critical speed is 38 mph and would normally justify a 40 mph posted speed limit. However, due to the many residential driveways, the presence of on-street parking and the on street bike lane, it is recommended that the existing 35 mph speed limit be retained.

### **Segment #7 – Pinole Valley Road – Simas Avenue to Southeast City Limit**

This segment is currently posted at 35 mph and has 1 through lane in each direction with an ADT of 7,577 vehicles per day. The adjacent land use is residential and school. The critical speed is 38 mph and would normally justify a 40 mph posted speed limit. However, due to the residential driveways, on street parking and multiple unprotected crosswalks, it is recommended that the existing 35 mph speed limit be retained.

### **Segment #8 – San Pablo Avenue – East City Limit to Pinole Valley Road**

This segment is currently posted at 25 mph and has 2 through lanes in each direction with an ADT of 18,575 vehicles per day. The adjacent land use is commercial. The critical speed is 36 mph and would normally justify a 35 mph posted speed limit. However, since this segment qualifies as a business district under CVC section 235 and CVC section 22353 sets a 25 mph speed limit in business districts, the retention of the existing 25 mph speed limit is recommended.

### **Segment #9 – San Pablo Avenue – Pinole Valley Road to Oak Ridge Avenue**

This segment is currently posted at 25 mph and has 2 through lanes in each direction with an ADT of 16,963 vehicles per day. The adjacent land use is commercial. The critical speed is 32 mph and would normally justify a 30 mph posted speed limit. However, since this segment qualifies as a business district under CVC section 235 and CVC section 22353 sets a 25 mph speed limit in business districts, it is recommended that the existing 25 mph speed limit be retained.

### **Segment #11 – San Pablo Avenue – Appian Way to Sunnyview Drive**

This segment is currently posted at 35 mph and has 2 through lanes in each direction with an ADT of 17,452 vehicles per day. The adjacent land use is commercial. The critical speed is 38 mph and would normally justify a 40 mph posted speed limit. However, for this relatively short segment to be compatible with segments to the east and west, it is recommended that the existing 35 mph speed limit be retained.

### **Segment #13 – Simas Avenue – Mendocino Drive to Pinole Valley Road**

This segment is currently posted at 25 mph and has 1 through lane in each direction with an ADT of 762 vehicles per day. The adjacent land use is residential. The critical speed is 31 mph and would normally justify a 30 mph posted speed limit. However, since this segment qualifies as a residential street under CVC section 515 and section 22353 of the CVC sets a 25 mph speed limit on residential streets, it is recommended that the existing 25 mph speed limit be retained.

### **Segment #14 – Simas Avenue – Pinole Valley Road to Mendocino Drive**

This segment is currently posted at 25 mph and has 1 through lane in each direction with an ADT of 3,775 vehicles per day. The adjacent land use is residential. The critical speed is 31 mph and would normally justify a 30 mph posted speed limit. However, since this segment qualifies as a residential street under CVC section 515 and section 22353 of the CVC sets a 25 mph speed limit on residential streets, it is recommended that the existing 25 mph speed limit be retained.

### **Segment #16 – Tennent Avenue – Railroad Avenue to San Pablo Avenue**

This segment is currently posted at 25 mph and has 1 through lane in each direction with an ADT of 2,846 vehicles per day. The adjacent land use is residential. The critical speed is 31 mph and would normally justify a 30 mph posted speed limit. However, since this segment qualifies as a residential street under CVC section 515 and section 22353 of the CVC sets a 25 mph speed limit on residential streets, it is recommended that the existing 25 mph speed limit be retained.

## **LEGISLATIVE REFERENCES**

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### **APPLICABLE SECTIONS OF CALIFORNIA VEHICLE CODE**

#### **SECTION 1. Section 627 of the Vehicle Code:**

##### **Section 627.**

- (a) *"Engineering and traffic survey,"* as used in this code, means a survey of highway and traffic conditions in accordance with methods determined by the Department of Transportation for use by state and local authorities.
- (b) An engineering and traffic survey shall include, among other requirements deemed necessary by the department, consideration of all of the following:
  - (1) Prevailing speeds as determined by traffic engineering measurements.
  - (2) Accident records.
  - (3) Highway, traffic, and roadside conditions not readily apparent to the driver.
- (c) When conducting an engineering and traffic survey, local authorities, in addition to the factors set forth in paragraphs (1) to (3), inclusive, of subdivision (b) may consider all of the following:
  - (1) Residential density, if any of the following conditions exist on the particular portion of highway and the property contiguous thereto, other than a business district:
    - a. Upon one side of the highway, within a distance of a quarter of a mile, the contiguous property fronting thereon is occupied by 13 or more separate dwelling houses or business structures.
    - b. Upon both sides of the highway, collectively, within a distance of a quarter of a mile, the contiguous property fronting thereon is occupied by 16 or more separate dwelling houses or business structures.
    - c. The portion of highway is longer than one-quarter of a mile but has the ratio of separate dwelling houses or business structures to the length of the highway described in either subparagraph (A) or (B).
  - (2) Pedestrian and bicyclist safety.

#### **Basic Speed Law**

22350. No person shall drive a vehicle upon a highway at a speed greater than is reasonable or prudent having due regard for weather, visibility, the traffic on, and the surface and width of, the highway, and in no event at a speed which endangers the safety of persons or property.

#### **Speed Law Violations**

##### **Section 22351.**

- (a) The speed of any vehicle upon a highway not in excess of the limits specified in Section 22352 or established as authorized in this code is lawful unless clearly proved to be in violation of the basic speed law.
- (b) The speed of any vehicle upon a highway in excess of the prima facie speed limits in Section 22352 or established as authorized in this code is prima facie unlawful unless the defendant



establishes by competent evidence that the speed in excess of said limits did not constitute a violation of the basic speed law at the time, place and under the conditions then existing.

## **Prima Facie Speed Limits**

### **Section 22352.**

- (a) The prima facie limits are as follows and shall be applicable unless changed as authorized in this code and, if so changed, only when signs have been erected giving notice thereof:

- (1) Fifteen miles per hour:

A) When traversing a railway grade crossing, if during the last 100 feet of the approach to the crossing the driver does not have a clear and unobstructed view of the crossing and of any traffic on the railway for a distance of 400 feet in both directions along such railway. This subdivision does not apply in the case of any railway grade crossing where a human flagman is on duty or a clearly visible electrical or mechanical railway crossing signal device is installed but does not then indicate the immediate approach of a railway train or car.

B) When traversing any intersection of highways, if during the last 100 feet of the driver's approach to the intersection, the driver does not have a clear and unobstructed view of the intersection and of any traffic upon all of the highways entering the intersection for a distance of 100 feet along all those highways, except at an intersection protected by stop signs or yield right-of-way signs or controlled by official traffic control signals.

- C) On any alley.

- (2) Twenty-five miles per hour:

A) On any highway other than a state highway, in any business or residence district unless a different speed is determined by local authority under procedures set forth in this code.

(B) When approaching or passing a school building or the grounds thereof, contiguous to a highway and posted with a standard "SCHOOL" warning sign, while children are going to or leaving the school either during school hours or during the noon recess period. The prima facie limit shall also apply when approaching or passing any school grounds which are not separated from the highway by a fence, gate or other physical barrier while the grounds are in use by children and the highway is posted with a standard "SCHOOL" warning sign. For purposes of this subparagraph, standard "SCHOOL" warning signs may be placed at any distance up to 500 feet away from school grounds.

(C) When passing a senior center or other facility primarily used by senior citizens, contiguous to a street other than a state highway and posted with a standard "SENIOR" warning sign. A local authority is not required to erect any sign pursuant to this paragraph until donations from private sources covering those costs are received and the local agency makes a determination that the proposed signing should be implemented. A local authority may, however, utilize any other funds available to it to pay for the erection of those signs.

- (b) This section shall become operative on March 1, 2001.

## **Increase of Local Speed Limits to 65 Miles Per Hour**

### **Section 22357.**

- (a) Whenever a local authority determines upon the basis of an engineering and traffic survey that a speed greater than 25 miles per hour would facilitate the orderly movement of vehicular traffic and would be reasonable and safe upon any street other than a state highway otherwise subject to a prima facie limit of 25 miles per hour, the local authority may by ordinance determine and declare a prima facie speed limit of 30, 35, 40, 45, 50, 55 or 60 miles per hour or a maximum speed limit of 65 miles per hour, whichever is found most appropriate to facilitate the orderly movement of traffic and is reasonable and safe. The declared prima facie or maximum speed limit shall be effective when appropriate signs giving notice thereof are erected upon the street and shall not thereafter be revised except upon the basis of an engineering and traffic survey. This section does not apply to any 25 mile per hour prima facie limit, which is applicable when passing a school building or the grounds thereof or when passing a senior center or other facility primarily used by senior citizens.
- (b) This section shall become operative on the date specified in subdivision (c) of Section 22366.

## **Downward Speed Zoning**

### **Section 22358.5.**

It is the intent of the Legislature that physical conditions such as width, curvature, grade and surface conditions, or any other condition readily apparent to a driver, in the absence of other factors, would not require special downward speed zoning, as the basic rule of Section 22350 is sufficient regulation as to such conditions.

## **Boundary Line Streets**

### **Section 22359.**

With respect to boundary line streets and highways where portions thereof are within different jurisdictions, no ordinance adopted under Sections 22357 and 22358 shall be effective as to any such portion until all authorities having jurisdiction of the portions of the street concerned have approved the same. This section shall not apply in the case of boundary line streets consisting of separate roadways within different jurisdictions.

## **Speed Trap Prohibition**

### **Section 40801.**

No peace officer or other person shall use a speedtrap in arresting, or participating or assisting in the arrest of, any person for any alleged violation of this code nor shall any speed trap be used in securing evidence as to the speed of any vehicle for the purpose of an arrest or prosecution under this code.

## **Speed Trap**

### **Section 40802.**

- (a) A "speed trap" is either of the following:
  - (1) A particular section of a highway measured as to distance and with boundaries marked, designated, or otherwise determined in order that the speed of a vehicle may be calculated by securing the time it takes the vehicle to travel the known distance.
  - (2) A particular section of a highway with a prima facie speed limit that is provided by this code or by local ordinance under subparagraph (A) of paragraph (2) of subdivision (a) of Section 22352, or established under Section 22354, 22357, 22358, or 22358.3, if that prima facie speed limit is not justified by an engineering and traffic survey conducted within five years prior to the date of the alleged violation, and enforcement of the speed limit involves the use of radar or any other electronic device that measures the speed of moving object. This paragraph does not apply to a local street, road, or school zone.
- (b)(1) For purposes of this section, a local street or road is defined by the latest functional usage and federal-aid system maps submitted to the federal Highway Administration, except that when these maps have not been submitted, or when the street or road is not shown on the maps, a "local street or road" means a street or road that primarily provides access to abutting residential property and meets the following three conditions:
  - (A) Roadway width of not more than 40 feet.
  - (B) Not more than one-half mile of a uninterrupted length. Interruptions shall include official traffic control devices as defined in Section 445.
  - (C) Not more than one traffic lane in each direction.
- (2) For purposes of this section "school zone" means that area approaching or passing a school building or the grounds thereof that is contiguous to a highway and on which is posted a standard "SCHOOL" warning sign, while children are going to or leaving the school either during school hours or during the noon recess period. "School zone" also includes the area approaching or passing any school grounds that are not separated from the highway by a fence, gate, or other physical barrier while the grounds are in use by children if that highway is posted with a standard "SCHOOL" warning sign.
- (c)(1) When all the following criteria are met, paragraph (2) of this subdivision shall be applicable and subdivision (a) shall not be applicable:
  - (A) When radar is used, the arresting officer has successfully completed a radar operator course of not less than 24 hours on the use of police traffic radar, and the course was approved and certified by the Commission on Peace Officer Standards and Training.
  - (B) When laser or any other electronic device is used to measure the speed of moving objects, the arresting officer has successfully completed the training required in subparagraph (A) and an additional training course of not less than two hours approved and certified by the Commission on Peace Officer Standards and Training.

- (C)(i) The prosecution proved that the arresting officer complied with subparagraphs (A) and (B) and that an engineering and traffic survey has been conducted in accordance with subparagraph (B) of paragraph (2). The prosecution proved that, prior to the officer issuing the notice to appear, the arresting officer established that the radar, laser, or other electronic device conformed to the requirements of subparagraph (D).
  - (ii) The prosecution proved the speed of the accused was unsafe for the conditions present at the time of alleged violation unless the citation was for a violation of Section 22349, 22356, or 22406.
  - (D) The radar, laser, or other electronic device used to measure the speed of the accused meets or exceeds the minimal operational standards of the National Traffic Highway Safety Administration, and has been calibrated within the three years prior to the date of the alleged violation by an independent certified laser or radar repair and testing or calibration facility.
- (2) A "speed trap" is either of the following:
- (A) A particular section of a highway measured as to distance and with boundaries marked, designated, or otherwise determined in order that the speed of a vehicle may be calculated by securing the time it takes the vehicle to travel the known distance.
  - (B)(i) A particular section of a highway or state highway with a prima facie speed limit that is provided by this code or by local ordinance under subparagraph (A) of paragraph (2) of subdivision (a) of Section 22352, or established under Section 22354, 22357, 22358, or 22358.3, if that prima facie speed limit is not justified by an engineering and traffic survey conducted within one of the following time periods, prior to the date of the alleged violation, and enforcement of speed limit involves the use of radar or any other electronic device that measures the speed of moving objects:
    - (I) Except as specified in subclause (II), seven years.
    - (II) If an engineering and traffic survey was conducted more than seven years prior to the date of the alleged violation, and a registered engineer evaluates the section of the highway and determines that no significant changes in roadway or traffic conditions have occurred including, but not limited to, changes in adjoining property or land use, roadway width, or traffic volume, 10 years.
  - (ii) This subparagraph does not apply to a local street, road, or school zone.

### **Speed Trap Evidence**

#### **Section 40803.**

- (a) No evidence as to the speed of a vehicle upon a highway shall be admitted in any court upon the trial of any person in any prosecution under this code upon a charge involving the speed of a vehicle when the evidence is based upon or obtained from or by the maintenance or use of a speedtrap.

- (b) In any prosecution under this code of a charge involving the speed of a vehicle, where enforcement involves the use of radar or other electronic devices which measure the speed of moving objects, the prosecution shall establish, as part of its prima facie case, that the evidence or testimony presented is not based upon a speed trap as defined in paragraph (2) of subdivision (a) of Section 40802.
- (c) When a traffic and engineering survey is required pursuant to paragraph (2) of subdivision (a) of Section 40802, evidence that a traffic and engineering survey has been conducted within five years of the date of the alleged violation or evidence that the offense was committed on a local street or road as defined in paragraph (2) of subdivision (a) of Section 40802 shall constitute a prima facie case that the evidence or testimony is not based upon a speed trap as defined in paragraph (2) subdivision (a) of Section 40802.

# **APPENDIX A**

## **Street Segment Data**

# CITY OF PINOLE

## ENGINEERING & TRAFFIC SURVEY

Street Name: Appian Way (#1) Survey Date: 9/13/2011  
From/To: San Pablo Ave to I-80 Street Width: 64 feet  
Direction: NB/SB # of Vehicle Lanes: 4  
Street Classification: Collector On-Street Parking: On some sections  
Adjacent Street Segment Speed Limits: 35 mph (south of I-80) Bicycle Lanes: No  
Adjacent Land Use: Residential/Commercial/School Sidewalks: Yes

Other Special Considerations: Horizontal curves, vertical curves, and an unprotected crosswalk at Marlesta Rd.

Posted Speed Limit (MPH)	10MPH Pace Speed	85th Percentile Speed (MPH)
35	35 to 44	41
Average Daily Traffic	Length (Miles)	# of Accidents
14,628	0.95	5
		(9/1/2008 to 8/31/2011)
Collision Rate (a/mvm)	Expected Midblock Accident Rate (a/mvm)	
0.33	2.00	

### Speed Limit Justification:

Based on the 85th percentile speed of 41 mph, this segment would typically be set at 40 mph. However, due to the limited sight distance resulting from the horizontal and vertical curves and an unprotected crosswalk, it is recommended that the existing 35 mph speed limit be retained.

### RECOMMENDED SPEED LIMIT:

**35 mph**

TRAFFIC ENGINEER:

*Gary R. Hansen*

Gary R. Hansen T.E. No. 0328

DATE: 11/14/2011

This survey expires five (5) years from the date it was performed. This Engineering and Traffic Survey (E&T) has been prepared per Section 627 of the California Vehicle Code (CVC) and the State of California Department of Transportation Traffic Manual. Section 627 of the CVC defines that a E&T shall include consideration of all of the following elements: (1) Prevailing Speed, (2) Accident records, (3) Conditions not readily apparent to the driver, (4) Residential density, and (5) Pedestrian and bicycle safety.

# CITY OF PINOLE

## ENGINEERING & TRAFFIC SURVEY

Street Name: Appian Way (#2) Survey Date: 9/13/2011  
From/To: I-80 to South City Limit Street Width: 60 ft to 80 ft  
Direction: NB/SB # of Vehicle Lanes: 2-4  
Street Classification: Collector On-Street Parking: On some sections  
Adjacent Street Segment Speed Limits: 35 mph (north of I-80) Bicycle Lanes: No  
Adjacent Land Use: Commercial/Residential Sidewalks: Yes

Other Special Considerations:

--

Posted Speed Limit (MPH)	10MPH Pace Speed	85th Percentile Speed (MPH)
35	27 to 36	35

Average Daily Traffic	Length (Miles)	# of Accidents
24,633	0.65	5
		(9/1/2008 to 8/31/2011)

Collision Rate (a/mvm)	Expected Midblock Accident Rate (a/mvm)
0.29	2.00

Speed Limit Justification:

Based on the 85th percentile speed of 35 mph, the posted speed of 35 mph is justified.

RECOMMENDED SPEED LIMIT:

**35 mph**

TRAFFIC ENGINEER:

*Gary R. Hansen*

Gary R. Hansen T.E. No. 0328

DATE: 11/14/2011

This survey expires five (5) years from the date it was performed. This Engineering and Traffic Survey (E&T) has been prepared per Section 627 of the California Vehicle Code (CVC) and the State of California Department of Transportation Traffic Manual. Section 627 of the CVC defines that a E&T shall include consideration of all of the following elements: (1) Prevailing Speed, (2) Accident records, (3) Conditions not readily apparent to the driver, (4) Residential density, and (5) Pedestrian and bicycle safety.



# CITY OF PINOLE

## ENGINEERING & TRAFFIC SURVEY

Street Name: Fitzgerald Dr (#3) Survey Date: 9/13/2011  
From/To: Richmond Pkwy to Appian Way Street Width: 60 ft  
Direction: EB/WB # of Vehicle Lanes: 4  
Street Classification: Collector On-Street Parking: No  
Adjacent Street Segment Speed Limits: N/A Bicycle Lanes: No  
Adjacent Land Use: Commercial Sidewalks: Yes

Other Special Considerations: Horizontal curve and many commercial driveways.

Posted Speed Limit (MPH)	10MPH Pace Speed	85th Percentile Speed (MPH)
30	26 to 35	35
Average Daily Traffic	Length (Miles)	# of Accidents
17,218	1.00	17
		(9/1/2008 to 8/31/2011)
Collision Rate (a/mvm)	Expected Midblock Accident Rate (a/mvm)	
0.90	2.00	

Speed Limit Justification:

Based on the 85th percentile speed of 35 mph, this segment would typically be set at 35 mph. However due to high volume of turning movements to/from the many driveways to the adjacent commercial land uses, it is recommended that the speed limit remain at 30 mph.

RECOMMENDED SPEED LIMIT:

30 mph

TRAFFIC ENGINEER:

*Gary R. Hansen*

Gary R. Hansen T.E. No. 0328

DATE: 11/14/2011

This survey expires five (5) years from the date it was performed. This Engineering and Traffic Survey (E&T) has been prepared per Section 627 of the California Vehicle Code (CVC) and the State of California Department of Transportation Traffic Manual. Section 627 of the CVC defines that a E&T shall include consideration of all of the following elements: (1) Prevailing Speed, (2) Accident records, (3) Conditions not readily apparent to the driver, (4) Residential density, and (5) Pedestrian and bicycle safety.

# CITY OF PINOLE

## ENGINEERING & TRAFFIC SURVEY

Street Name: Pinole Valley Rd (#4) Survey Date: 9/13/2011  
From/To: Tennent Ave to I-80 Street Width: 40-64 ft  
Direction: NB/SB # of Vehicle Lanes: 2-4  
Street Classification: Collector On-Street Parking: Yes  
Adjacent Street Segment Speed Limits: 30 mph/25 mph Bicycle Lanes: No  
Adjacent Land Use: Residential/School Sidewalks: Yes

Other Special Considerations:

Horizontal curve.

Posted Speed Limit (MPH)

30

10MPH Pace Speed

28 to 37

85th Percentile Speed (MPH)

36

Average Daily Traffic

16,578

Length (Miles)

0.35

# of Accidents

2

(9/1/2008 to 8/31/2011)

Collision Rate (a/mvm)

0.31

Expected Midblock Accident Rate (a/mvm)

2.00

Speed Limit Justification:

Based on the 85th percentile speed of 36 mph, this segment would typically be set at 35 mph. However, to be consistent with the existing 30 mph speed limit to the south and to provide a smooth transition to the existing 25 mph speed limit to the north, a 30 mph speed limit is recommended.

RECOMMENDED SPEED LIMIT:

30 mph

TRAFFIC ENGINEER:

*Gary R. Hansen*

Gary R. Hansen T.E. No. 0328

DATE: 11/14/2011

This survey expires five (5) years from the date it was performed. This Engineering and Traffic Survey (E&T) has been prepared per Section 627 of the California Vehicle Code (CVC) and the State of California Department of Transportation Traffic Manual. Section 627 of the CVC defines that a E&T shall include consideration of all of the following elements: (1) Prevailing Speed, (2) Accident records, (3) Conditions not readily apparent to the driver, (4) Residential density, and (5) Pedestrian and bicycle safety.

# CITY OF PINOLE

## ENGINEERING & TRAFFIC SURVEY

**Street Name:** Pinole Valley Rd (#5) **Survey Date:** 9/13/2011

**From/To:** I-80 to Granada Ct **Street Width:** 64 ft

**Direction:** NB/SB **# of Vehicle Lanes:** 4

**Street Classification:** Collector **On-Street Parking:** Yes, Adjacent to High School

**Adjacent Street Segment Speed Limits:** 30 mph/35 mph **Bicycle Lanes:** No

**Adjacent Land Use:** Commercial/School **Sidewalks:** Yes

**Other Special Considerations:** Horizontal curve, many commercial driveways, heavy pedestrian traffic, and adjacent to Pinole Valley High School and County library.

Posted Speed Limit (MPH)
30

10MPH Pace Speed
30 to 39

85th Percentile Speed (MPH)
37

Average Daily Traffic
18,347

Length (Miles)
0.70

# of Accidents
10
(9/1/2008 to 8/31/2011)

Collision Rate (a/mvm)
0.71

Expected Midblock Accident Rate (a/mvm)
2.00

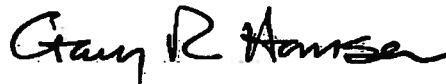
**Speed Limit Justification:**

Based on the 85th percentile speed of 37 mph, this segment would typically be set at 35 mph. However, due to the high volume of turning movements to/from the many commercial driveways, and heavy pedestrian traffic, it is recommended that the existing 30 mph speed limit be retained.

**RECOMMENDED SPEED LIMIT:**

**30 mph**

**TRAFFIC ENGINEER:**



Gary R. Hansen T.E. No. 0328

**DATE:** 11/14/2011

This survey expires five (5) years from the date it was performed. This Engineering and Traffic Survey (E&T) has been prepared per Section 627 of the California Vehicle Code (CVC) and the State of California Department of Transportation Traffic Manual. Section 627 of the CVC defines that a E&T shall include consideration of all of the following elements: (1) Prevailing Speed, (2) Accident records, (3) Conditions not readily apparent to the driver, (4) Residential density, and (5) Pedestrian and bicycle safety.

# CITY OF PINOLE

## ENGINEERING & TRAFFIC SURVEY

**Street Name:** Pinole Valley Rd (#6) **Survey Date:** 9/13/2011

**From/To:** Granada Ct to Simas Ave (north) **Street Width:** 64 ft

**Direction:** NB/SB **# of Vehicle Lanes:** 4

**Street Classification:** Collector **On-Street Parking:** Yes

**Adjacent Street Segment Speed Limits:** 30 mph/35 mph **Bicycle Lanes:** Yes, Southbound Only

**Adjacent Land Use:** Residential **Sidewalks:** Yes

**Other Special Considerations:** Horizontal curve, residential driveways, on-street parking and a striped southbound bike lane.

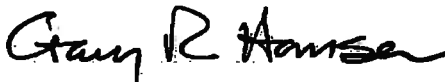
Posted Speed Limit (MPH)	10MPH Pace Speed	85th Percentile Speed (MPH)
35	30 to 39	38

Average Daily Traffic	Length (Miles)	# of Accidents
12,110	0.45	4
(9/1/2008 to 8/31/2011)		

Collision Rate (a/mvm)	Expected Midblock Accident Rate (a/mvm)
0.67	2.00

**Speed Limit Justification:** Based on the 85th percentile speed of 38 mph, this segment would typically be set at 40 mph. However, due to the many residential driveways, the presence of on-street parking and the on street bike lane, it is recommended that the existing 35 mph speed limit be retained.

**RECOMMENDED SPEED LIMIT:** 35 mph

**TRAFFIC ENGINEER:**   
Gary R. Hansen T.E. No. 0328 **DATE:** 11/14/2011

This survey expires five (5) years from the date it was performed. This Engineering and Traffic Survey (E&T) has been prepared per Section 627 of the California Vehicle Code (CVC) and the State of California Department of Transportation Traffic Manual. Section 627 of the CVC defines that a E&T shall include consideration of all of the following elements: (1) Prevailing Speed, (2) Accident records, (3) Conditions not readily apparent to the driver, (4) Residential density, and (5) Pedestrian and bicycle safety.

# CITY OF PINOLE

## ENGINEERING & TRAFFIC SURVEY

**Street Name:** Pinole Valley Rd (#7) **Survey Date:** 9/13/2011

**From/To:** Simas Ave (north) to S. City Limit **Street Width:** 24-36 ft

**Direction:** NB/SB **# of Vehicle Lanes:** 2

**Street Classification:** Collector **On-Street Parking:** Yes

**Adjacent Street Segment Speed Limits:** 35 mph **Bicycle Lanes:** No

**Adjacent Land Use:** Residential/School **Sidewalks:** Yes

**Other Special Considerations:** Horizontal curves, residential driveways, Ellerhorst Elementary School, and unprotected crosswalks at Savage Rd, Monte Verde Dr, and Simas Ave (South).

Posted Speed Limit (MPH)
35

10MPH Pace Speed
30 to 39

85th Percentile Speed (MPH)
38

Average Daily Traffic
7,577

Length (Miles)
1.90

# of Accidents
0

(9/1/2008 to 8/31/2011)

Collision Rate (a/mvm)
0.00

Expected Midblock Accident Rate (a/mvm)
2.55

**Speed Limit Justification:**

Based on the 85th percentile speed of 38 mph, this segment would typically be set at 40 mph. However, due to the residential driveways, on street parking and multiple unprotected crosswalks, it is recommended that the existing 35 mph speed limit be retained.

**RECOMMENDED SPEED LIMIT:**

**35 mph**

**TRAFFIC ENGINEER:**

  
Gary R. Hansen T.E. No. 0328

**DATE:** 11/14/2011

This survey expires five (5) years from the date it was performed. This Engineering and Traffic Survey (E&T) has been prepared per Section 627 of the California Vehicle Code (CVC) and the State of California Department of Transportation Traffic Manual. Section 627 of the CVC defines that a E&T shall include consideration of all of the following elements: (1) Prevailing Speed, (2) Accident records, (3) Conditions not readily apparent to the driver, (4) Residential density, and (5) Pedestrian and bicycle safety.

# CITY OF PINOLE

## ENGINEERING & TRAFFIC SURVEY

Street Name: San Pablo Ave (#8) Survey Date: 9/13/2011

From/To: East City Limit to Pinole Valley Rd Street Width: 64 ft

Direction: EB/WB # of Vehicle Lanes: 4

Street Classification: Arterial On-Street Parking: Yes

Adjacent Street Segment Speed Limits: 25 mph/40 mph Bicycle Lanes: No

Adjacent Land Use: Commercial - Business District Sidewalks: Yes

Other Special Considerations:

--

Posted Speed Limit (MPH)
25

10MPH Pace Speed
26 to 35

85th Percentile Speed (MPH)
36

Average Daily Traffic
18,575

Length (Miles)
0.40

# of Accidents
1
(9/1/2008 to 8/31/2011)

Collision Rate (a/mvm)
0.12

Expected Midblock Accident Rate (a/mvm)
2.00

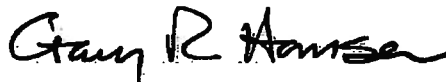
Speed Limit Justification:

Based on the 85th percentile speed of 36 mph, this segment would typically be set at 35 mph. However, since this segment qualifies as a business district under CVC section 235 and CVC section 22353 sets a 25 mph speed limit in business districts, the retention of the existing 25 mph speed limit is recommended.

RECOMMENDED SPEED LIMIT:

**25 mph**

TRAFFIC ENGINEER:



Gary R. Hansen T.E. No. 0328

DATE: 11/14/2011

This survey expires five (5) years from the date it was performed. This Engineering and Traffic Survey (E&T) has been prepared per Section 627 of the California Vehicle Code (CVC) and the State of California Department of Transportation Traffic Manual. Section 627 of the CVC defines that a E&T shall include consideration of all of the following elements: (1) Prevailing Speed, (2) Accident records, (3) Conditions not readily apparent to the driver, (4) Residential density, and (5) Pedestrian and bicycle safety.

# CITY OF PINOLE

## ENGINEERING & TRAFFIC SURVEY

**Street Name:** San Pablo Ave (#9) **Survey Date:** 9/13/2011

**From/To:** Pinole Valley Rd to Oak Ridge Ave **Street Width:** 64 ft

**Direction:** EB/WB **# of Vehicle Lanes:** 4

**Street Classification:** Arterial **On-Street Parking:** Yes

**Adjacent Street Segment Speed Limits:** 35 mph/25 mph **Bicycle Lanes:** No

**Adjacent Land Use:** Commercial **Sidewalks:** Yes

**Other Special Considerations:**

Posted Speed Limit (MPH)
25

10MPH Pace Speed
24 to 33

85th Percentile Speed (MPH)
32

Average Daily Traffic
16,963

Length (Miles)
0.25

# of Accidents
1
(9/1/2008 to 8/31/2011)

Collision Rate (a/mvm)
0.22

Expected Midblock Accident Rate (a/mvm)
2.00

**Speed Limit Justification:**

Based on the 85th percentile speed of 32 mph, this segment would typically be set at 30 mph. However, since this segment qualifies as a business district under CVC section 235 and CVC section 22353 sets a 25 mph speed limit in business districts, it is recommended that the existing 25 mph speed limit be retained.

**RECOMMENDED SPEED LIMIT:**

**25 mph**

**TRAFFIC ENGINEER:**

*Gary R Hansen*

Gary R. Hansen T.E. No. 0328

**DATE:** 11/14/2011

This survey expires five (5) years from the date it was performed. This Engineering and Traffic Survey (E&T) has been prepared per Section 627 of the California Vehicle Code (CVC) and the State of California Department of Transportation Traffic Manual. Section 627 of the CVC defines that a E&T shall include consideration of all of the following elements: (1) Prevailing Speed, (2) Accident records, (3) Conditions not readily apparent to the driver, (4) Residential density, and (5) Pedestrian and bicycle safety.

# CITY OF PINOLE

## ENGINEERING & TRAFFIC SURVEY

Street Name: San Pablo Ave (#10) Survey Date: 9/13/2011

From/To: Oak Ridge Ave to Appian Way Street Width: 64 ft

Direction: EB/WB # of Vehicle Lanes: 4

Street Classification: Arterial On-Street Parking: Yes

Adjacent Street Segment Speed Limits: 25 mph/35 mph Bicycle Lanes: No

Adjacent Land Use: Commercial Sidewalks: Yes

Other Special Considerations:

--

Posted Speed Limit (MPH)
35

10MPH Pace Speed
27 to 36

85th Percentile Speed (MPH)
36

Average Daily Traffic
18,645

Length (Miles)
0.50

# of Accidents
1
(9/1/2008 to 8/31/2011)

Collision Rate (a/mvm)
0.10

Expected Midblock Accident Rate (a/mvm)
2.00

Speed Limit Justification:

Based on the 85th percentile speed of 36 mph, the posted speed limit of 35 mph is justified.

RECOMMENDED SPEED LIMIT:

**35 mph**

TRAFFIC ENGINEER:

*Gary R. Hansen*

Gary R. Hansen T.E. No. 0328

DATE: 11/14/2011

This survey expires five (5) years from the date it was performed. This Engineering and Traffic Survey (E&T) has been prepared per Section 627 of the California Vehicle Code (CVC) and the State of California Department of Transportation Traffic Manual. Section 627 of the CVC defines that a E&T shall include consideration of all of the following elements: (1) Prevailing Speed, (2) Accident records, (3) Conditions not readily apparent to the driver, (4) Residential density, and (5) Pedestrian and bicycle safety.



# CITY OF PINOLE

## ENGINEERING & TRAFFIC SURVEY

Street Name: San Pablo Ave (#11) Survey Date: 9/13/2011

From/To: Appian Way to Sunnyview Dr Street Width: 64-76 ft

Direction: EB/WB # of Vehicle Lanes: 4

Street Classification: Arterial On-Street Parking: Yes

Adjacent Street Segment Speed Limits: 35 mph/35 mph Bicycle Lanes: No

Adjacent Land Use: Commercial Sidewalks: Yes

Other Special Considerations:

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Posted Speed Limit (MPH)	10MPH Pace Speed	85th Percentile Speed (MPH)
35	30 to 39	38

Average Daily Traffic	Length (Miles)	# of Accidents
17,452	0.40	1
(9/1/2008 to 8/31/2011)		

Collision Rate (a/mvm)	Expected Midblock Accident Rate (a/mvm)
0.13	2.00

Speed Limit Justification:

Based on the 85th percentile speed of 38 mph, this segment would typically be set at 40 mph. However, for this relatively short segment to be compatible with segments to the east and west, it is recommended that the existing 35 mph speed limit be retained.

RECOMMENDED SPEED LIMIT:

**35 mph**

TRAFFIC ENGINEER:

*Gary R. Hansen*

Gary R. Hansen T.E. No. 0328

DATE: 11/14/2011

This survey expires five (5) years from the date it was performed. This Engineering and Traffic Survey (E&T) has been prepared per Section 627 of the California Vehicle Code (CVC) and the State of California Department of Transportation Traffic Manual. Section 627 of the CVC defines that a E&T shall include consideration of all of the following elements: (1) Prevailing Speed, (2) Accident records, (3) Conditions not readily apparent to the driver, (4) Residential density, and (5) Pedestrian and bicycle safety.

# CITY OF PINOLE

## ENGINEERING & TRAFFIC SURVEY

Street Name: San Pablo Ave (#12) Survey Date: 9/14/2011

From/To: Sunnyview Dr to W. City Limit Street Width: 64-76 ft

Direction: EB/WB # of Vehicle Lanes: 4

Street Classification: Arterial On-Street Parking: Yes

Adjacent Street Segment Speed Limits: 35 mph/45 mph Bicycle Lanes: No

Adjacent Land Use: Commercial Sidewalks: Yes

Other Special Considerations:

--

Posted Speed Limit (MPH)
40

10MPH Pace Speed		
32	to	41

85th Percentile Speed (MPH)
40

Average Daily Traffic
16,773

Length (Miles)
1.00

# of Accidents
4
(9/1/2008 to 8/31/2011)

Collision Rate (a/mvm)
0.22

Expected Midblock Accident Rate (a/mvm)
2.00

Speed Limit Justification:

Based on the 85th percentile speed of 40 mph, the posted 40 mph speed limit is justified.

RECOMMENDED SPEED LIMIT:

**40 mph**

TRAFFIC ENGINEER:

*Gary R. Hansen*

Gary R. Hansen T.E. No. 0328

DATE: 11/14/2011

This survey expires five (5) years from the date it was performed. This Engineering and Traffic Survey (E&T) has been prepared per Section 627 of the California Vehicle Code (CVC) and the State of California Department of Transportation Traffic Manual. Section 627 of the CVC defines that a E&T shall include consideration of all of the following elements: (1) Prevailing Speed, (2) Accident records, (3) Conditions not readily apparent to the driver, (4) Residential density, and (5) Pedestrian and bicycle safety.

# CITY OF PINOLE

## ENGINEERING & TRAFFIC SURVEY

Street Name: Simas Ave (#13) Survey Date: 9/14/2011

From/To: Mendocino Dr to Pinole Valley Rd (south) Street Width: 40 ft

Direction: NB/SB # of Vehicle Lanes: 2

Street Classification: Residential Collector On-Street Parking: Yes

Adjacent Street Segment Speed Limits: 25 mph Bicycle Lanes: No

Adjacent Land Use: Residential Sidewalks: Yes

**Other Special Considerations:**

Horizontal and vertical curves. Driveways to adjacent residential units.

Posted Speed Limit (MPH)
25

10MPH Pace Speed
23 to 32

85th Percentile Speed (MPH)
31

Average Daily Traffic
762

Length (Miles)
0.60

# of Accidents
1
(9/1/2008 to 8/31/2011)

Collision Rate (a/mvm)
2.00

Expected Midblock Accident Rate (a/mvm)
2.55

**Speed Limit Justification:**

Based on the 85th percentile speed of 31 mph, this segment would typically be set at 30 mph. However, since this segment qualifies as a residential street under CVC section 515 and section 22353 of the CVC sets a 25 mph speed limit on residential streets, it is recommended that the existing 25 mph speed limit be retained.

**RECOMMENDED SPEED LIMIT:**

**25 mph**

TRAFFIC ENGINEER:

*Gary R. Hansen*

Gary R. Hansen T.E. No. 0328

DATE: 11/14/2011

This survey expires five (5) years from the date it was performed. This Engineering and Traffic Survey (E&T) has been prepared per Section 627 of the California Vehicle Code (CVC) and the State of California Department of Transportation Traffic Manual. Section 627 of the CVC defines that a E&T shall include consideration of all of the following elements: (1) Prevailing Speed, (2) Accident records, (3) Conditions not readily apparent to the driver, (4) Residential density, and (5) Pedestrian and bicycle safety.

# CITY OF PINOLE

## ENGINEERING & TRAFFIC SURVEY

**Street Name:** Simas Ave (#14) **Survey Date:** 9/14/2011

**From/To:** Pinole Valley Rd to Mendocino Dr **Street Width:** 40 ft

**Direction:** EB/WB **# of Vehicle Lanes:** 2

**Street Classification:** Residential Collector **On-Street Parking:** Yes

**Adjacent Street Segment Speed Limits:** 25 mph **Bicycle Lanes:** No

**Adjacent Land Use:** Residential **Sidewalks:** Yes

**Other Special Considerations:** Horizontal curve and residential driveways.

Posted Speed Limit (MPH)
25

10MPH Pace Speed
22 to 31

85th Percentile Speed (MPH)
31

Average Daily Traffic
3,775

Length (Miles)
0.75

# of Accidents
4
(9/1/2008 to 8/31/2011)

Collision Rate (a/mvm)
1.29

Expected Midblock Accident Rate (a/mvm)
2.55

**Speed Limit Justification:**

Based on the 85th percentile speed of 31 mph, this segment would typically be set at 30 mph. However, since this segment qualifies as a residential street under CVC section 515 and section 22353 of the CVC sets a 25 mph speed limit on residential streets, it is recommended that the existing 25 mph speed limit be retained.

**RECOMMENDED SPEED LIMIT:**

**25 mph**

**TRAFFIC ENGINEER:**

*Gary R. Hansen*

Gary R. Hansen T.E. No. 0328

**DATE:** 11/14/2011

This survey expires five (5) years from the date it was performed. This Engineering and Traffic Survey (E&T) has been prepared per Section 627 of the California Vehicle Code (CVC) and the State of California Department of Transportation Traffic Manual. Section 627 of the CVC defines that a E&T shall include consideration of all of the following elements: (1) Prevailing Speed, (2) Accident records, (3) Conditions not readily apparent to the driver, (4) Residential density, and (5) Pedestrian and bicycle safety.

# CITY OF PINOLE

## ENGINEERING & TRAFFIC SURVEY

Street Name: Tara Hills Dr (#15) Survey Date: 9/13/2011

From/To: Appian Way to W. City Limit Street Width: 64 ft

Direction: EB/WB # of Vehicle Lanes: 4

Street Classification: Collector On-Street Parking: On some sections

Adjacent Street Segment Speed Limits: N/A Bicycle Lanes: No

Adjacent Land Use: Commercial/Residential Sidewalks: Yes

Other Special Considerations:

--

Posted Speed Limit (MPH)
30

10MPH Pace Speed
24 to 33

85th Percentile Speed (MPH)
32

Average Daily Traffic
12,446

Length (Miles)
0.70

# of Accidents
5
(9/1/2008 to 8/31/2011)

Collision Rate (a/mvm)
0.52

Expected Midblock Accident Rate (a/mvm)
2.00

Speed Limit Justification:

Based on the 85th percentile speed of 32 mph, the posted speed limit of 30 mph is justified.

RECOMMENDED SPEED LIMIT:

**30 mph**

TRAFFIC ENGINEER:

*Gary R. Hansen*

Gary R. Hansen T.E. No. 0328

DATE: 11/14/2011

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# CITY OF PINOLE

## ENGINEERING & TRAFFIC SURVEY

Street Name: Tennent Ave (#16) Survey Date: 9/14/2011

From/To: Railroad Ave to San Pablo Ave Street Width: 34 ft

Direction: NB/SB # of Vehicle Lanes: 2

Street Classification: Collector On-Street Parking: Yes

Adjacent Street Segment Speed Limits: N/A Bicycle Lanes: No

Adjacent Land Use: Residential Sidewalks: Yes

Other Special Considerations:

--

Posted Speed Limit (MPH)
25

10MPH Pace Speed
23 to 32

85th Percentile Speed (MPH)
31

Average Daily Traffic
2,846

Length (Miles)
0.60

# of Accidents
1
(9/1/2008 to 8/31/2011)

Collision Rate (a/mvm)
0.53

Expected Midblock Accident Rate (a/mvm)
2.55

Speed Limit Justification:

Based on the 85th percentile speed of 31 mph, this segment would typically be set at 30 mph. However, since this segment qualifies as a residential street under CVC section 515 and section 22353 of the CVC sets a 25 mph speed limit on residential streets, it is recommended that the existing 25 mph speed limit be retained.

RECOMMENDED SPEED LIMIT:

**25 mph**

*Gary R. Hansen*

TRAFFIC ENGINEER:

Gary R. Hansen T.E. No. 0328

DATE: 11/14/2011

This survey expires five (5) years from the date it was performed. This Engineering and Traffic Survey (E&T) has been prepared per Section 627 of the California Vehicle Code (CVC) and the State of California Department of Transportation Traffic Manual. Section 627 of the CVC defines that a E&T shall include consideration of all of the following elements: (1) Prevailing Speed, (2) Accident records, (3) Conditions not readily apparent to the driver, (4) Residential density, and (5) Pedestrian and bicycle safety.

# ***Radar Speed Distribution Forms***



# Spot Speed Study

Prepared by: National Data & Surveying Services

## City of Pinole

### Appian Way from San Pablo Avenue to I-80 Freeway

Survey Time: 15:04-15:27

Street Width: 46 Ft

DATE: 9/13/2011

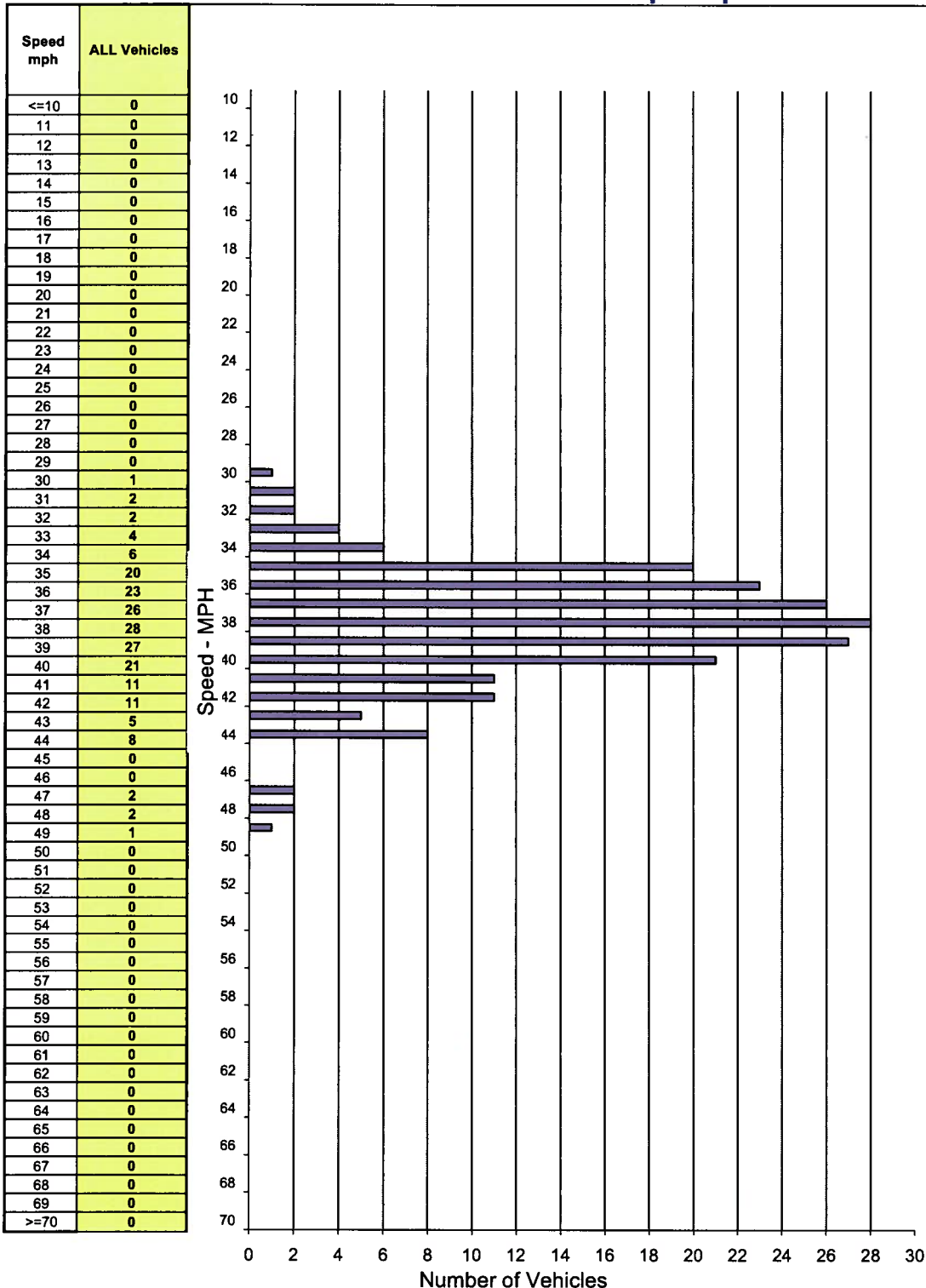
Location: Appian Way south of Belden Street.

DAY: Tuesday

Posted Speed: 35 MPH

Project #: 11-7376-001

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# In Pace	Percent In Pace	% / # Below Pace	% / # Above Pace
ALL	200	11 - 69	38 mph	41 mph	35 - 44	180	90%	7% / 15	3% / 5

# Spot Speed Study

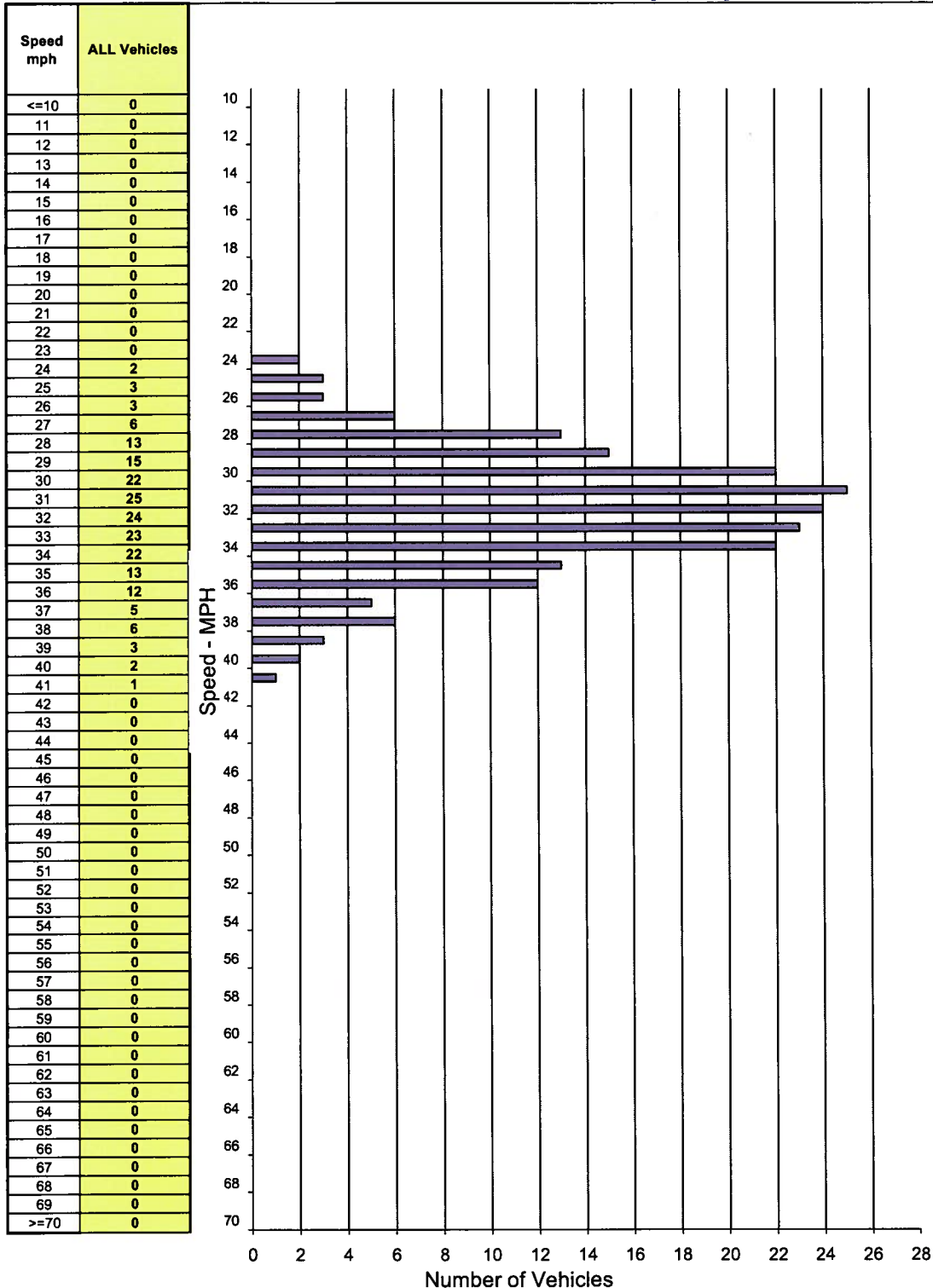
Prepared by: National Data & Surveying Services

## City of Pinole

### Appian Way from I-80 Freeway to South City Limit

Survey Time: 11:50-12:20 Street Width: 52 Ft  
 DATE: 9/13/2011 Location: 2655 Appian Way  
 DAY: Tuesday Posted Speed: 35 MPH Project #: 11-7376-002

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	200	11 - 69	32 mph	35 mph	27 - 36	175	88%	4% / 8	9% / 17

# Spot Speed Study

Prepared by: National Data & Surveying Services

## City of Pinole

### Fitzgerald Drive from Richmond Parkway to Appian Way

Survey Time: 11:00-11:36

Street Width: 68 Ft

DATE: 9/13/2011

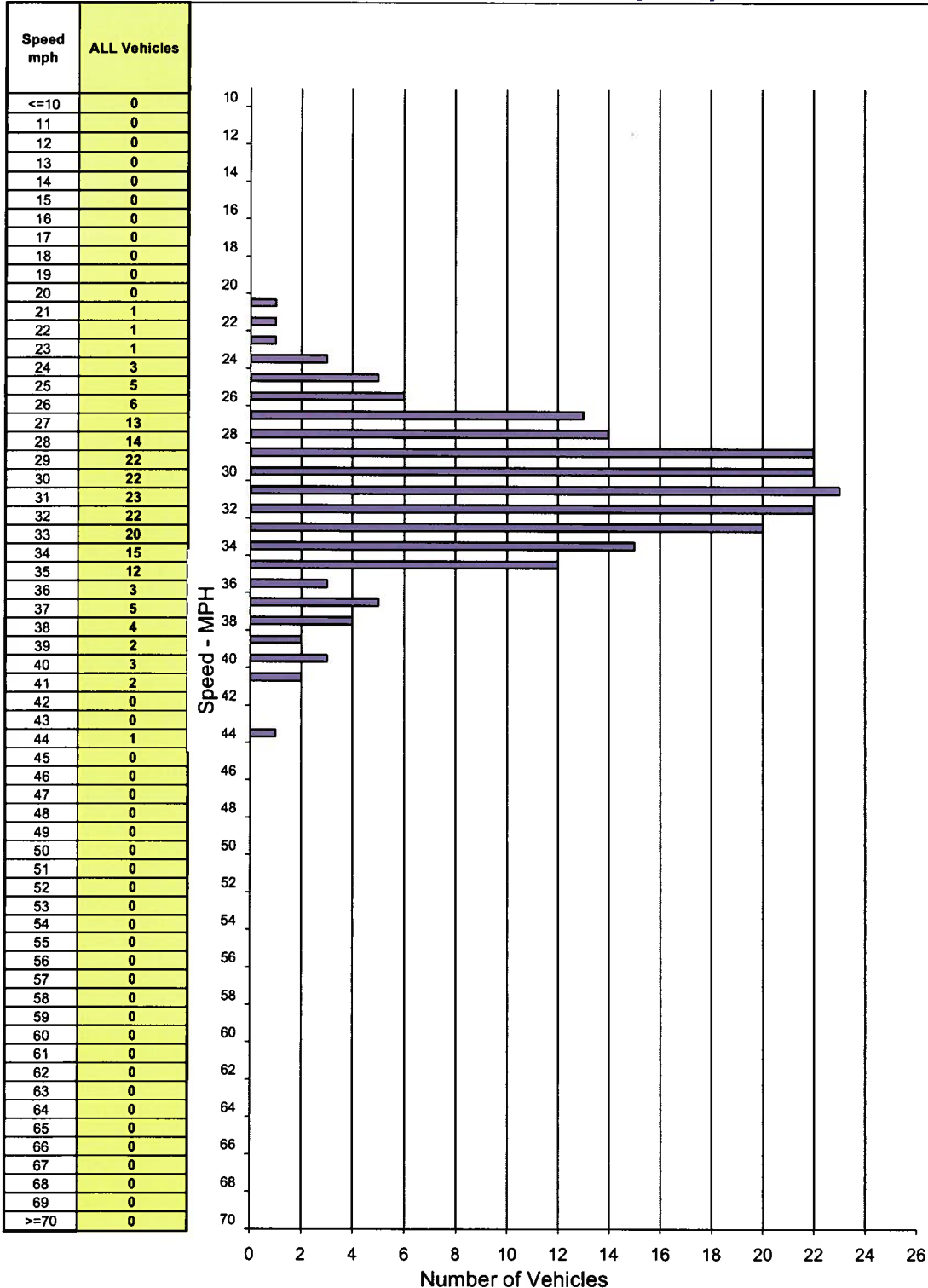
Location: 1475 Fitzgerald Drive

DAY: Tuesday

Posted Speed: 30 MPH

Project #: 11-7376-003

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent In Pace	% / # Below Pace	% / # Above Pace
ALL	200	11 - 69	31 mph	35 mph	26 - 35	169	85%	5% / 11	10% / 20

# Spot Speed Study

Prepared by: National Data & Surveying Services

## City of Pinole

### Pinole Valley Road from Tennent Avenue to I-80 Freeway

Survey Time: 10:30-11:26

Street Width: 40 Ft

DATE: 9/13/2011

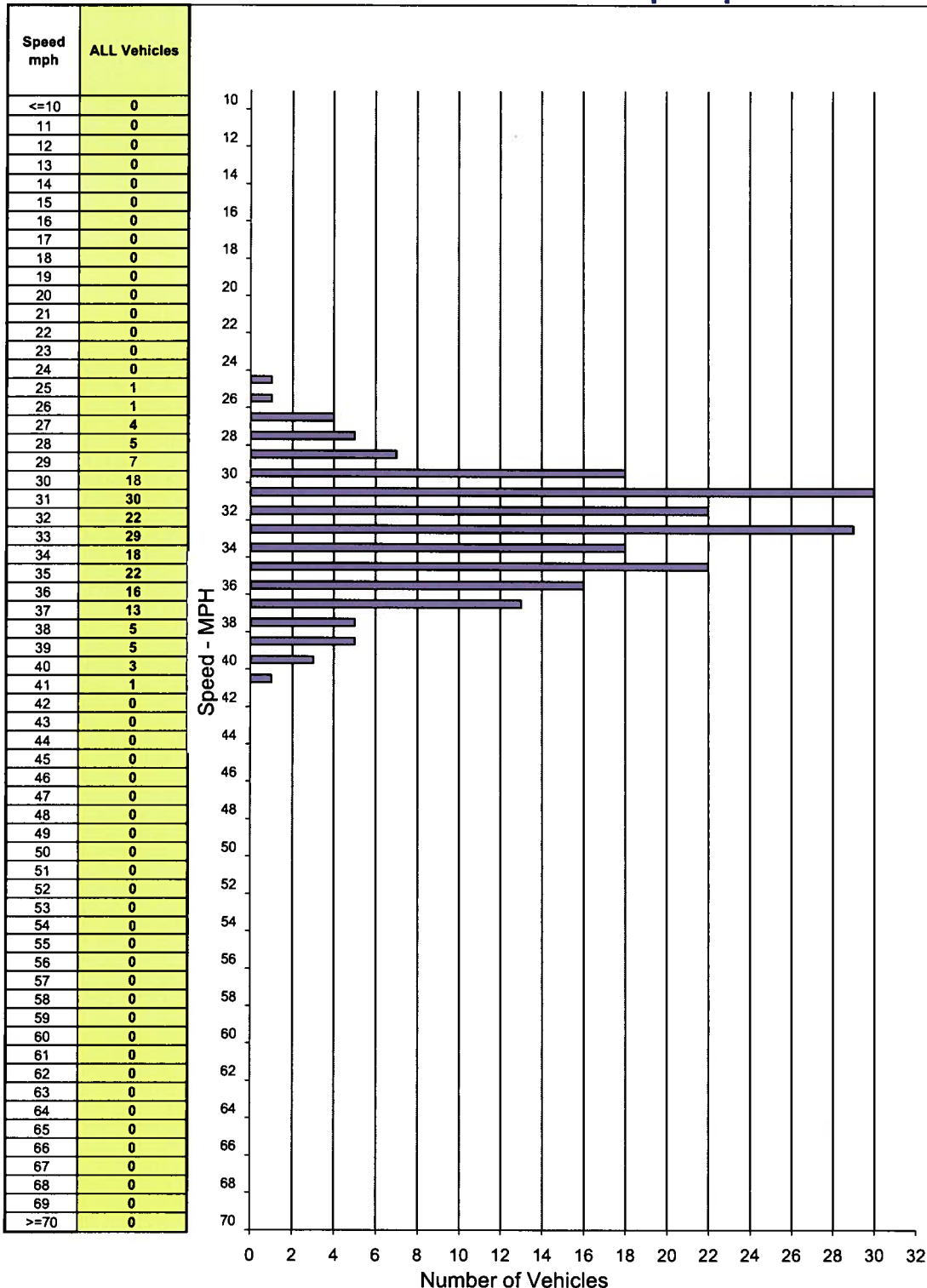
Location: 1237 Pinole Valley Road

DAY: Tuesday

Posted Speed: 30 MPH

Project #: 11-7376-004

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	200	11 - 69	33 mph	36 mph	28 - 37	180	90%	3% / 6	7% / 14

# Spot Speed Study

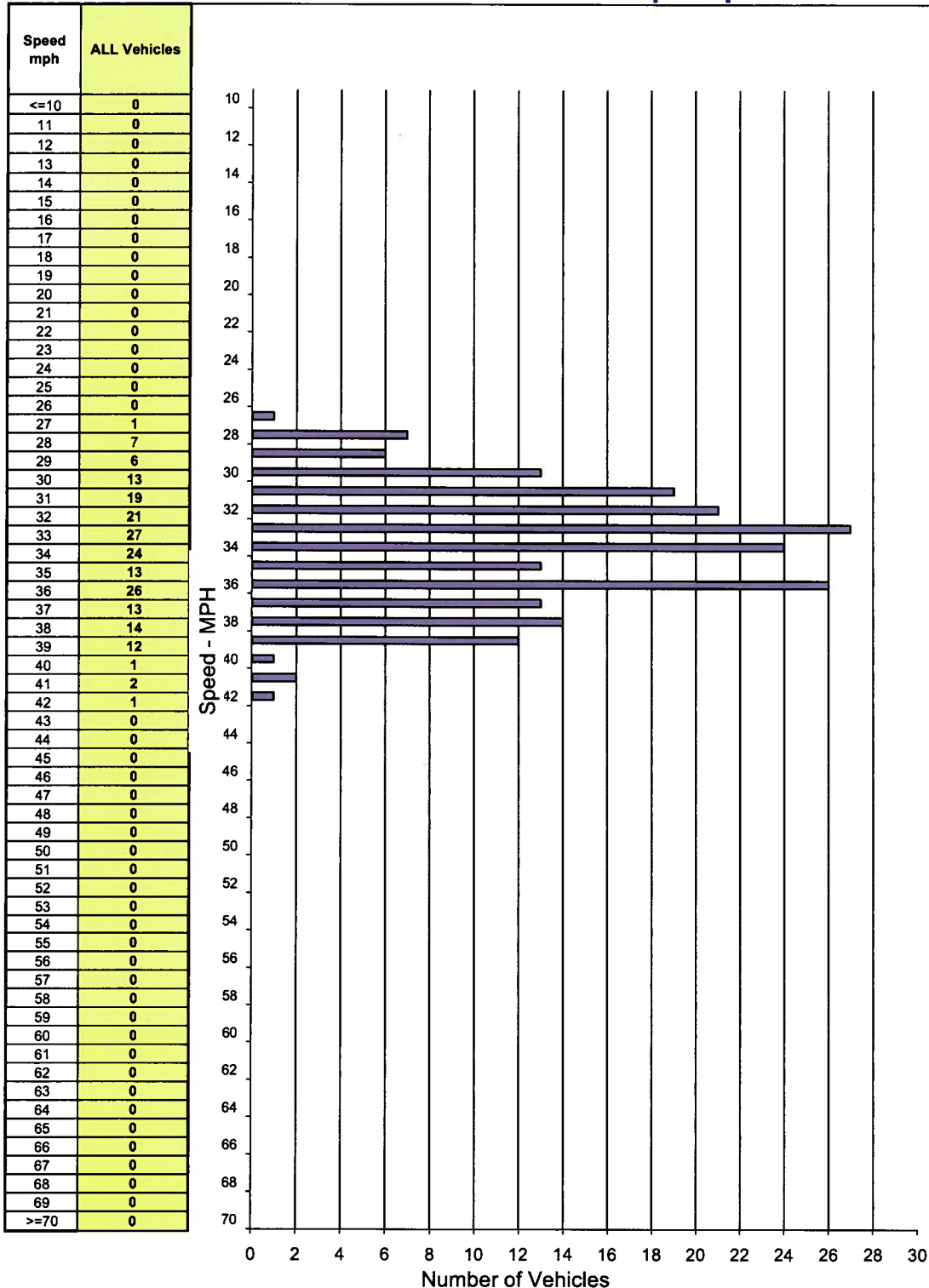
Prepared by: National Data & Surveying Services

## City of Pinole

### Pinole Valley Road from I-80 Freeway to Granada Court

Survey Time: 9:30-10:10 Street Width: 58 Ft  
 DATE: 9/13/2011 Location: 2900 Pinole Valley Road  
 DAY: Tuesday Posted Speed: 30 MPH Project #: 11-7376-005

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# In Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	200	11 - 69	34 mph	37 mph	30 - 39	182	91%	7% / 14	2% / 4

# Spot Speed Study

Prepared by: National Data & Surveying Services

## City of Pinole

### Pinole Valley Road from Granada Court to Simas Avenue

Survey Time: 12:35-13:00

Street Width: 60 Ft

DATE: 9/13/2011

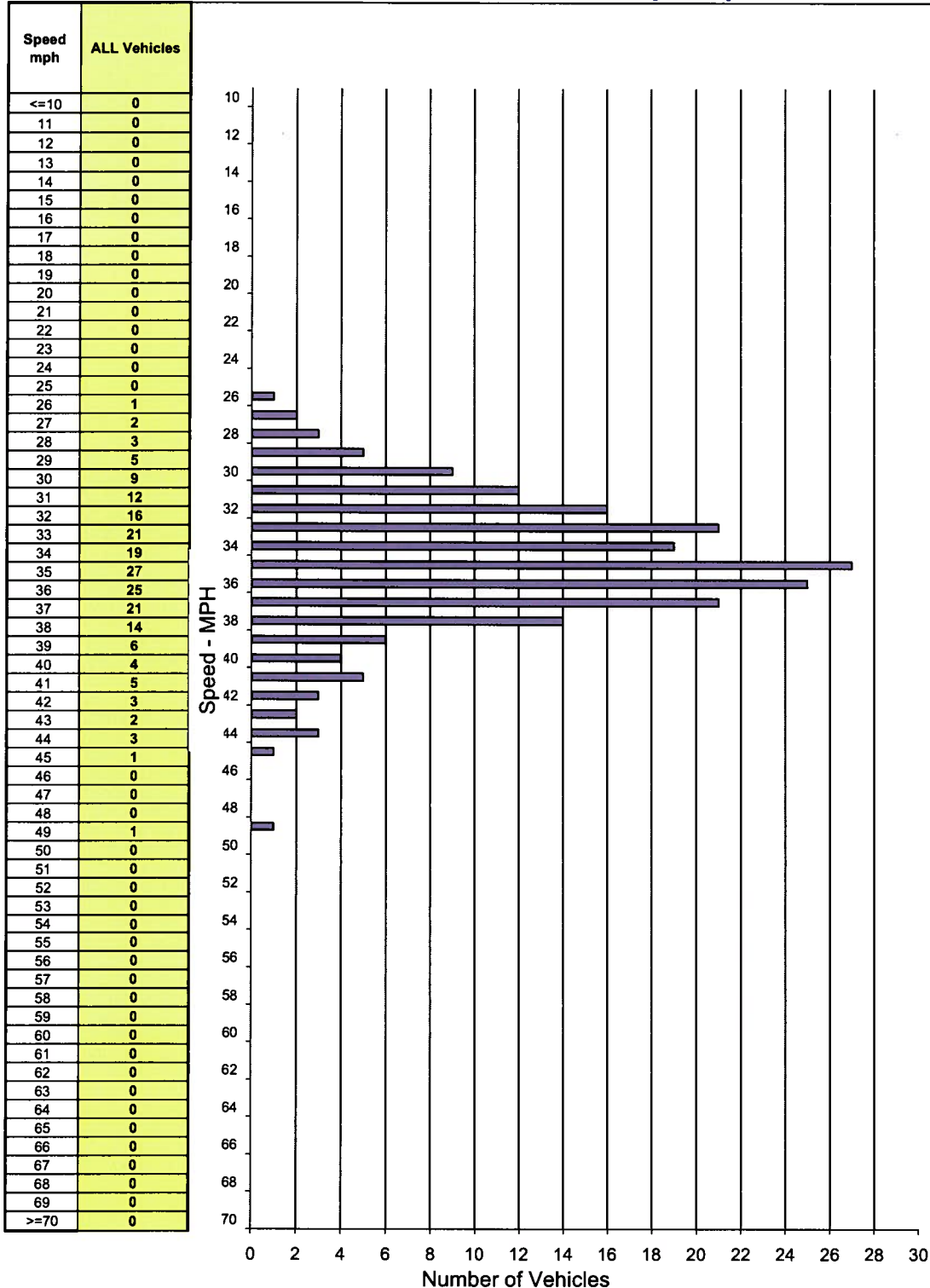
Location: 3188 Pinole Valley Road

DAY: Tuesday

Posted Speed: 35 MPH

Project #: 11-7376-006

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	200	11 - 69	35 mph	38 mph	30 - 39	170	85%	5% / 11	10% / 19

# Spot Speed Study

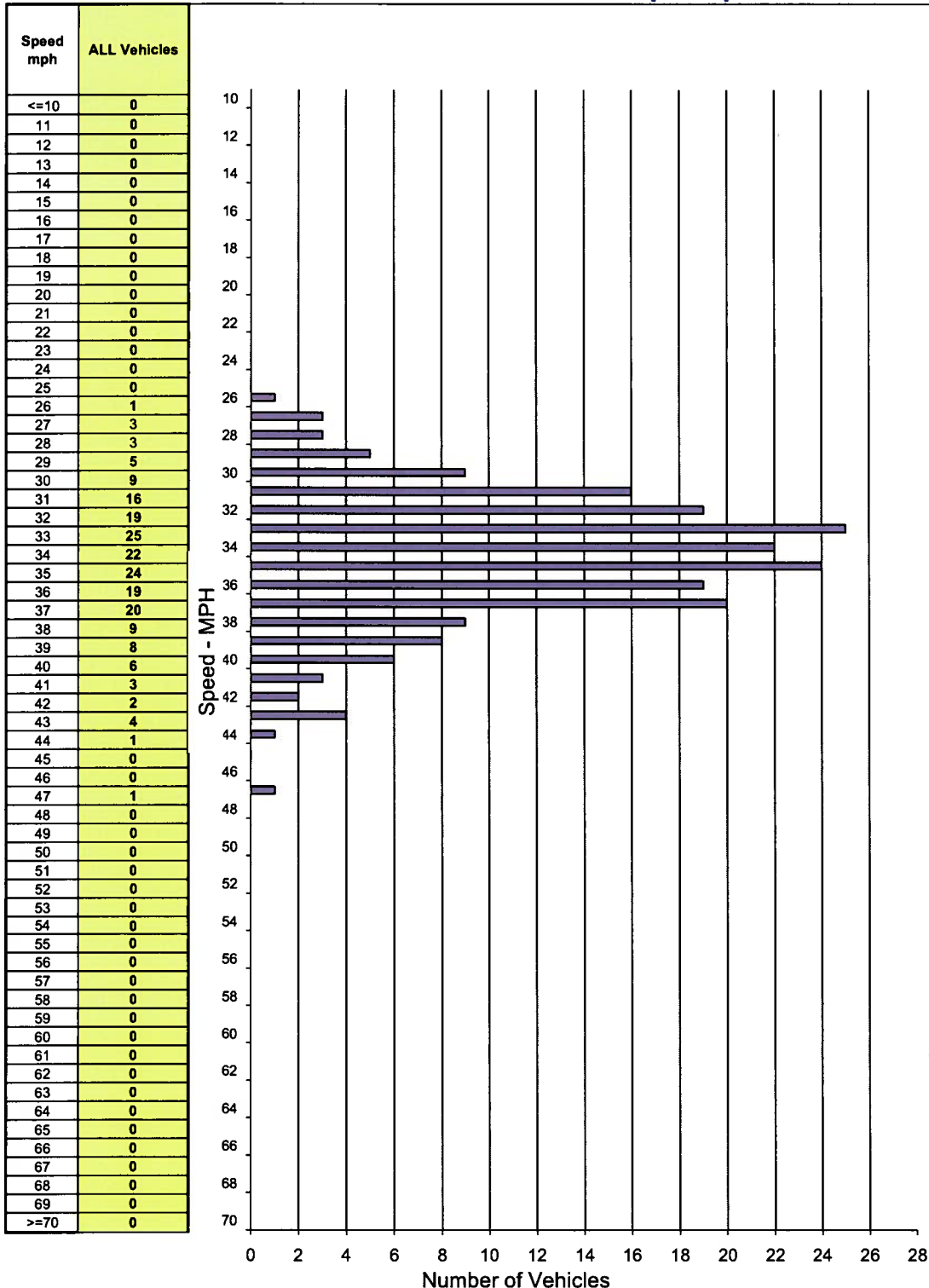
Prepared by: National Data & Surveying Services

## City of Pinole

### Pinole Valley Road from Simas Avenue to Southeast City Limit

Survey Time: 13:05-13:41 Street Width: 30 Ft  
 DATE: 9/13/2011 Location: 3326 Pinole Valley Road  
 DAY: Tuesday Posted Speed: 35 MPH Project #: 11-7376-007

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent In Pace	% / # Below Pace	% / # Above Pace
ALL	200	11 - 69	34 mph	38 mph	30 - 39	171	86%	6% / 12	9% / 17



# Spot Speed Study

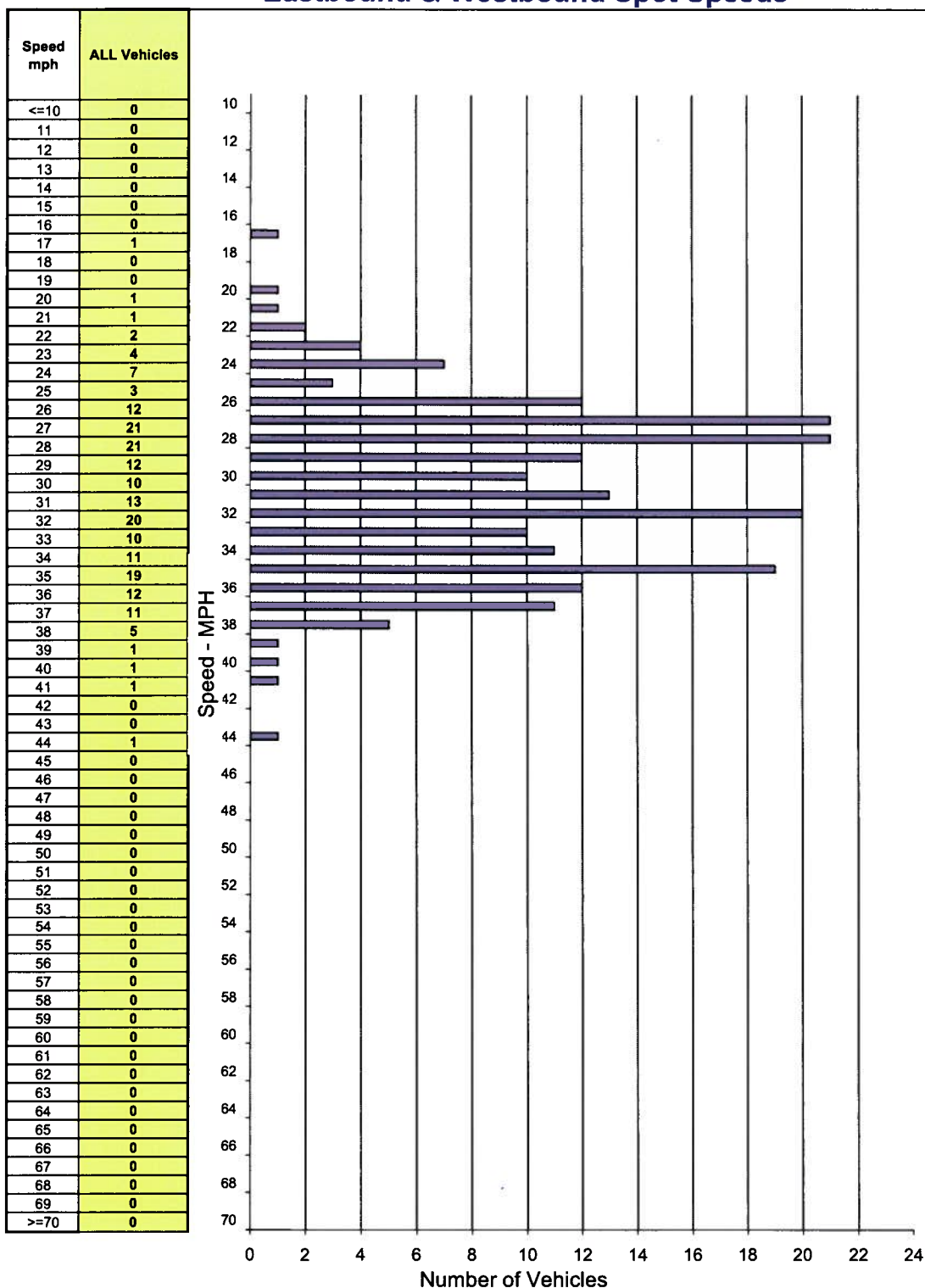
Prepared by: National Data & Surveying Services

## City of Pinole

### San Pablo Avenue from East City Limit to Pinole Valley Road

Survey Time: 11:30-12:07 Street Width: 47 Ft  
 DATE: 9/13/2011 Location: San Pablo Avenue east of John Street.  
 DAY: Tuesday Posted Speed: 25 MPH Project #: 11-7376-008

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	200	11 - 69	31 mph	36 mph	26 - 35	149	75%	9% / 19	16% / 32

# Spot Speed Study

Prepared by: National Data & Surveying Services

## City of Pinole

San Pablo Avenue from Pinole Valley Road to Oak Ridge Avenue

Survey Time: 12:40-13:13

Street Width: 47 Ft

DATE: 9/13/2011

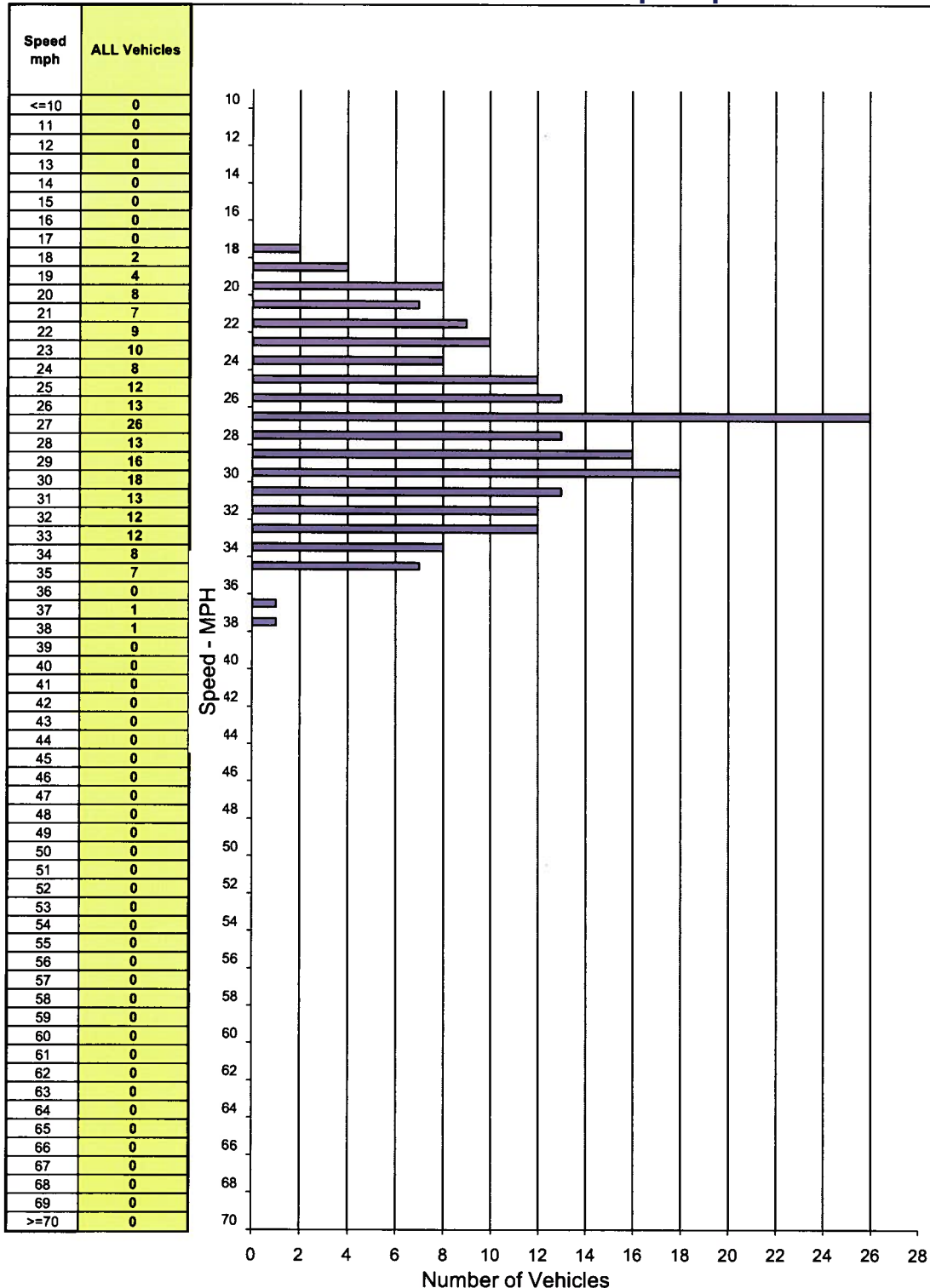
Location: 2401 San Pablo Avenue

DAY: Tuesday

Posted Speed: 25 MPH

Project #: 11-7376-009

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	200	11 - 69	28 mph	32 mph	24 - 33	143	72%	20% / 40	9% / 17

# Spot Speed Study

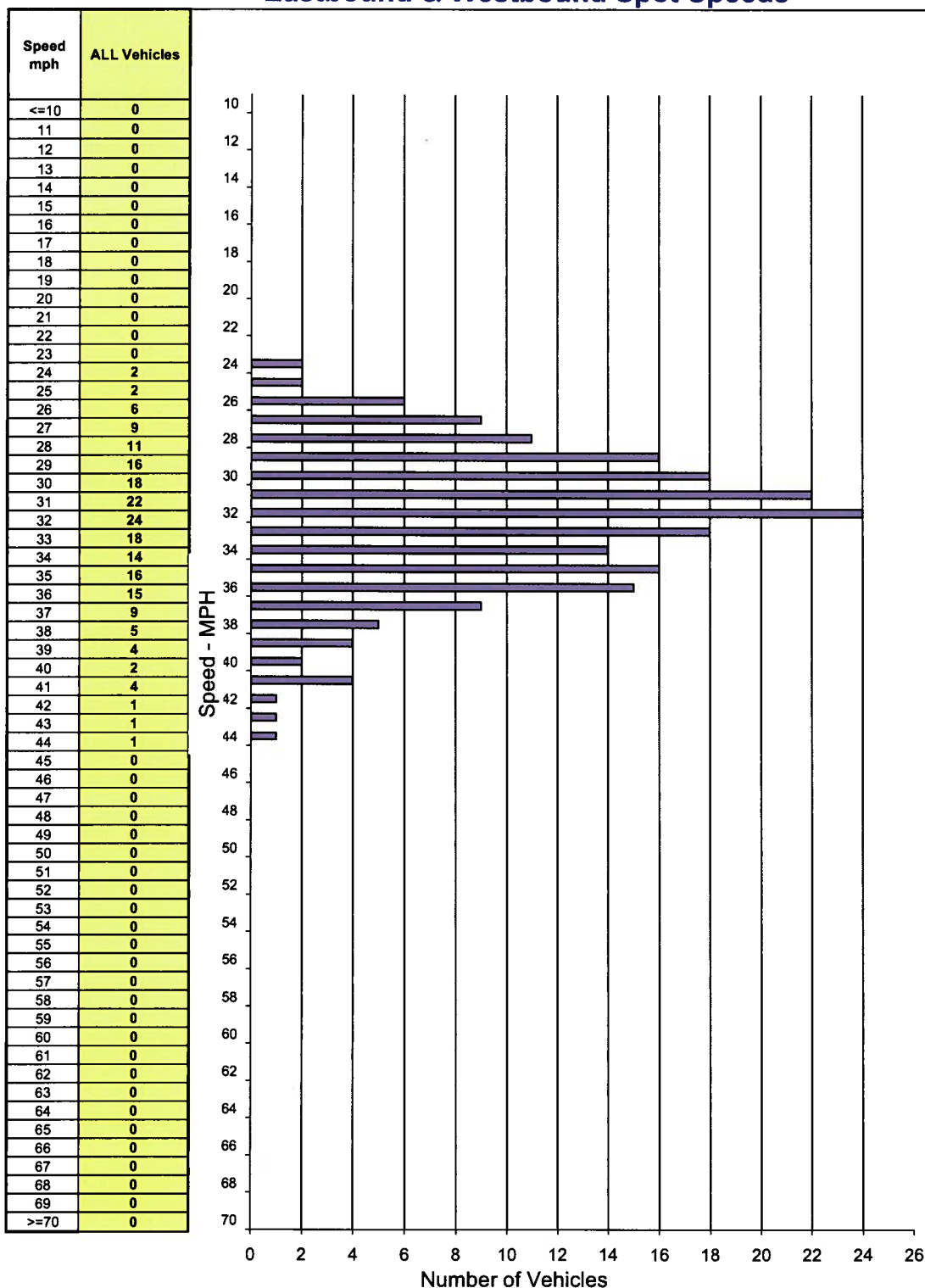
Prepared by: National Data & Surveying Services

## City of Pinole

### San Pablo Avenue from Oak Ridge Avenue to Appian Way

Survey Time: 13:17-14:14 Street Width: 59 Ft  
 DATE: 9/13/2011 Location: 1971 San Pablo Avenue  
 DAY: Tuesday Posted Speed: 35 MPH Project #: 11-7376-010

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# In Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	200	11 - 69	32 mph	36 mph	27 - 36	163	82%	5% / 10	14% / 27

# Spot Speed Study

Prepared by: National Data & Surveying Services

## City of Pinole

### San Pablo Avenue from Appian Way to Sunnyview Drive

Survey Time: 14:20-14:45

Street Width: 53 Ft

DATE: 9/13/2011

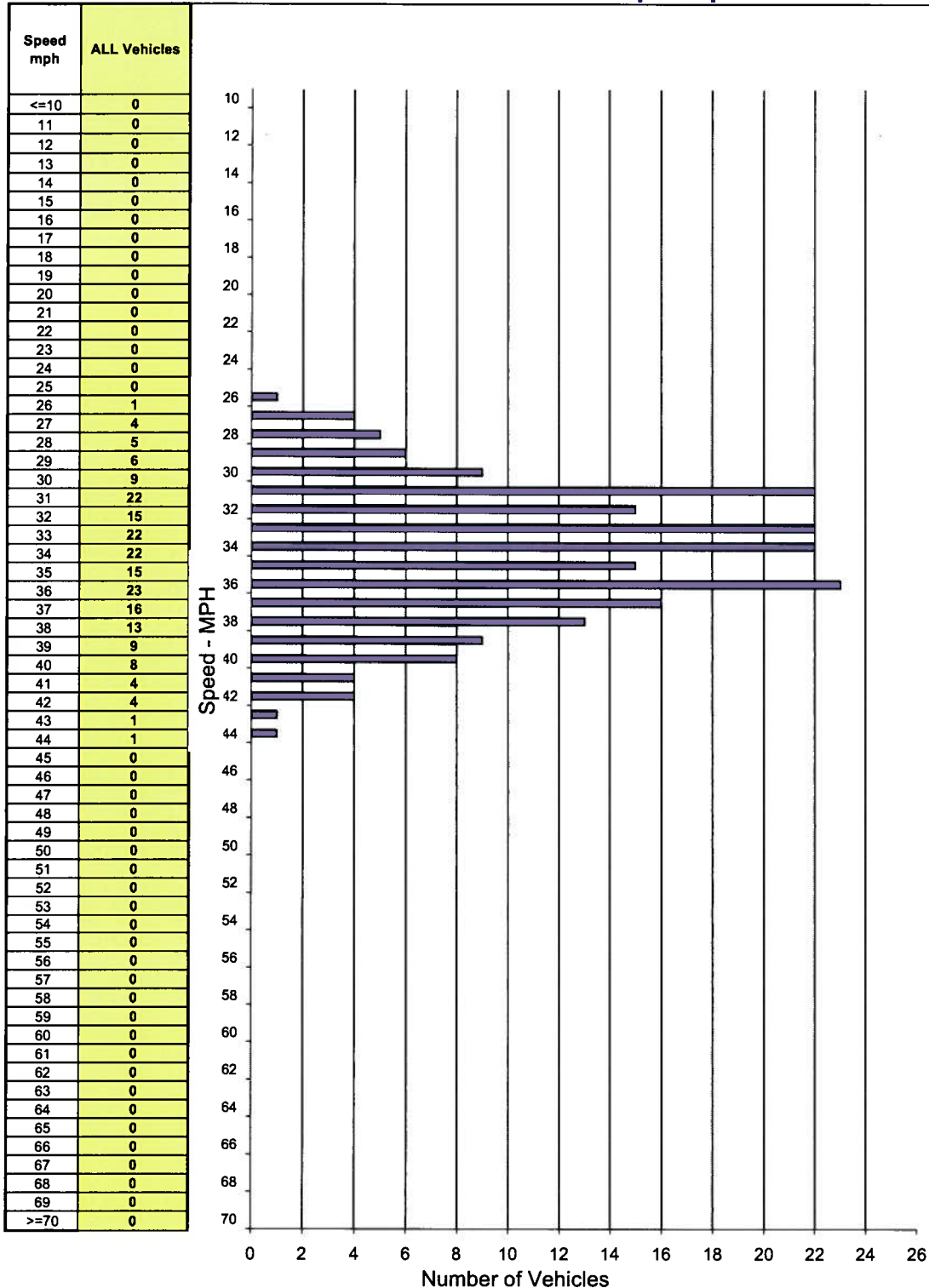
Location: 1149 San Pablo Avenue

DAY: Tuesday

Posted Speed: 35 MPH

Project #: 11-7376-011

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	200	11 - 69	34 mph	38 mph	30 - 39	166	83%	8% / 16	9% / 18

# Spot Speed Study

Prepared by: National Data & Surveying Services

## City of Pinole

### San Pablo Avenue from Sunnyview Drive to West City Limit

Survey Time: 14:17-15:00

Street Width: 66 Ft

DATE: 9/14/2011

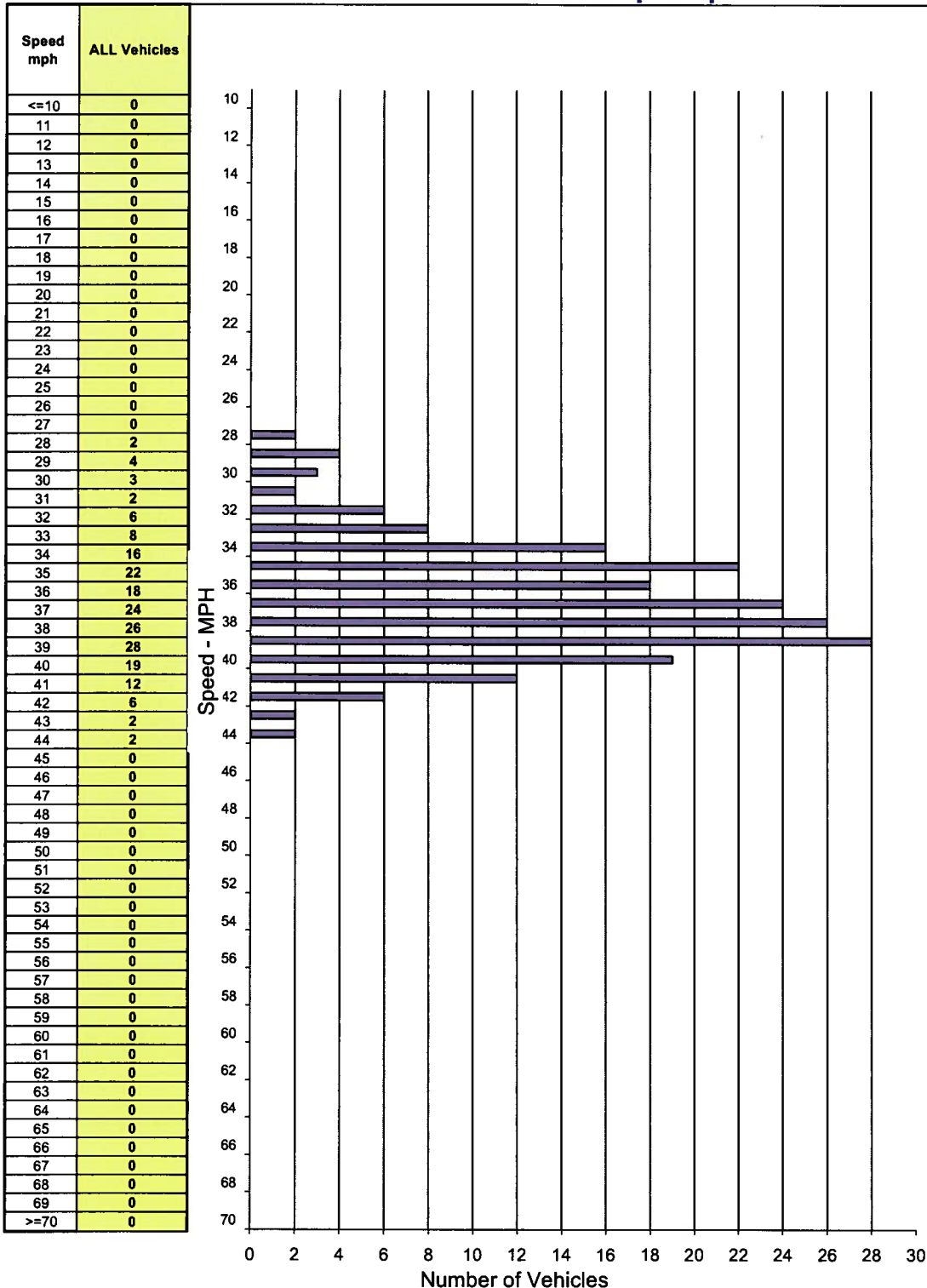
Location: 799 San Pablo Avenue

DAY: Wednesday

Posted Speed: 40 MPH

Project #: 11-7376-012

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	200	11 - 69	37 mph	40 mph	32 - 41	179	90%	5% / 11	5% / 10

# Spot Speed Study

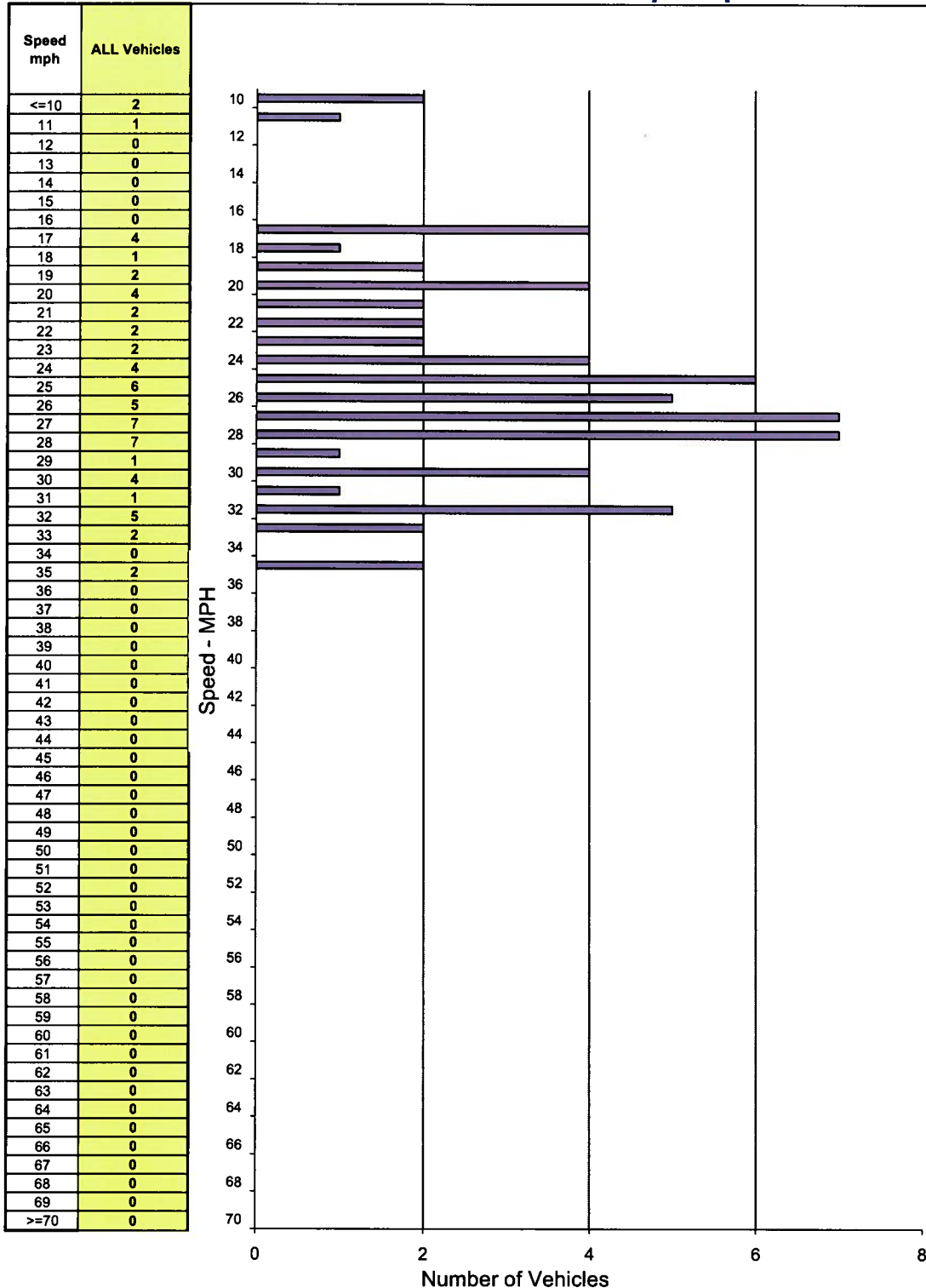
Prepared by: National Data & Surveying Services

## City of Pinole

Simas Avenue from Mendocino Drive to Pinole Valley Road

Survey Time: 10:35-12:35 Street Width: 46 Ft  
 DATE: 9/14/2011 Location: 3007 Simas Avenue  
 DAY: Wednesday Posted Speed: 25 MPH Project #: 11-7376-013

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# In Pace	Percent Pace	% / # Below Pace	% / # Above Pace
ALL	64	11 - 69	26 mph	31 mph	23 - 32	42	66%	28% / 18	7% / 4

# Spot Speed Study

Prepared by: National Data & Surveying Services

## City of Pinole

Simas Avenue from Pinole Valley Road to Mendocino Drive

Survey Time: 9:30-10:30

Street Width: 37 Ft

DATE: 9/14/2011

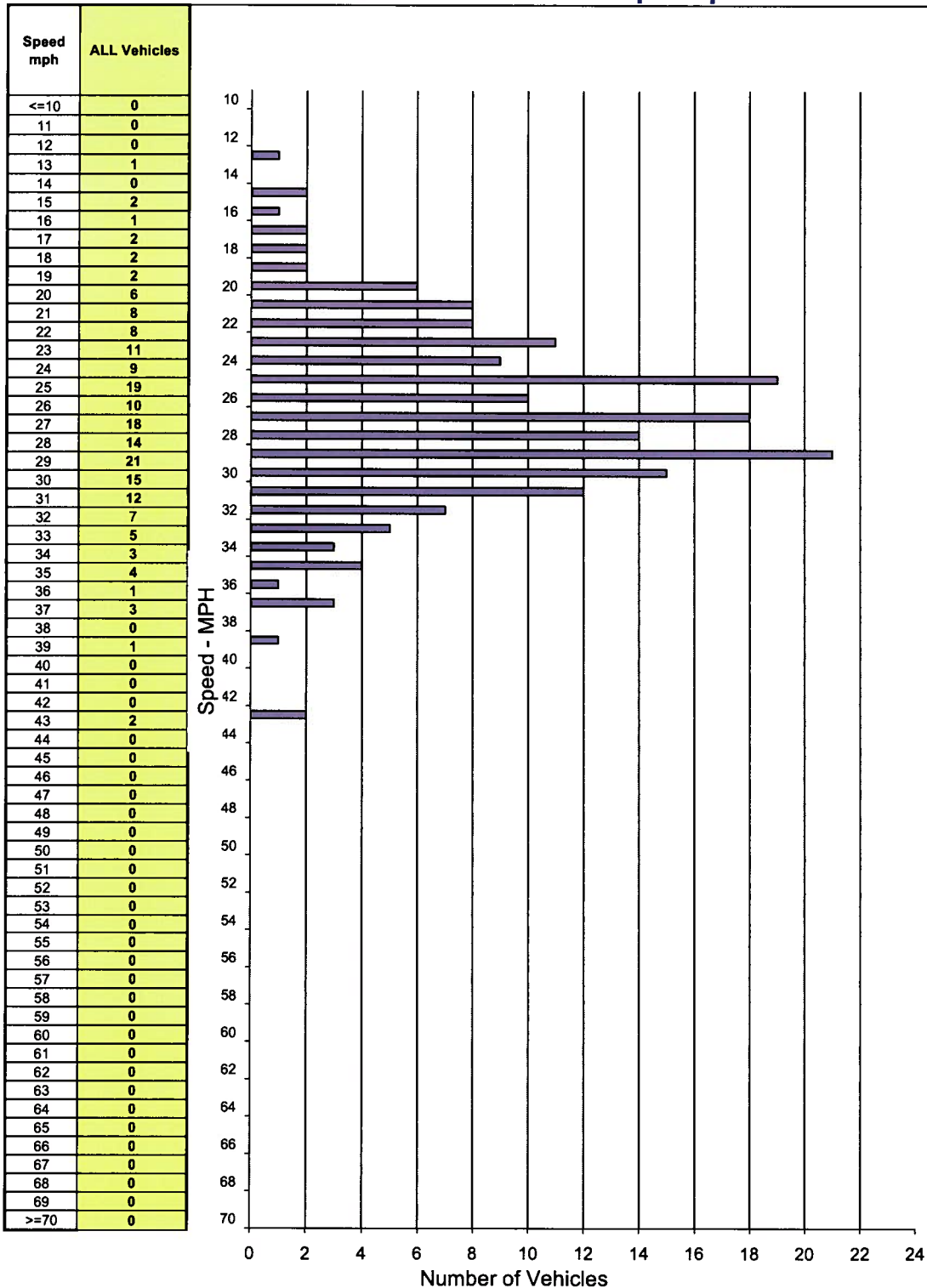
Location: 2459 Simas Avenue

DAY: Wednesday

Posted Speed: 25 MPH

Project #: 11-7376-014

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	187	11 - 69	27 mph	31 mph	22 - 31	137	73%	12% / 24	14% / 26



# Spot Speed Study

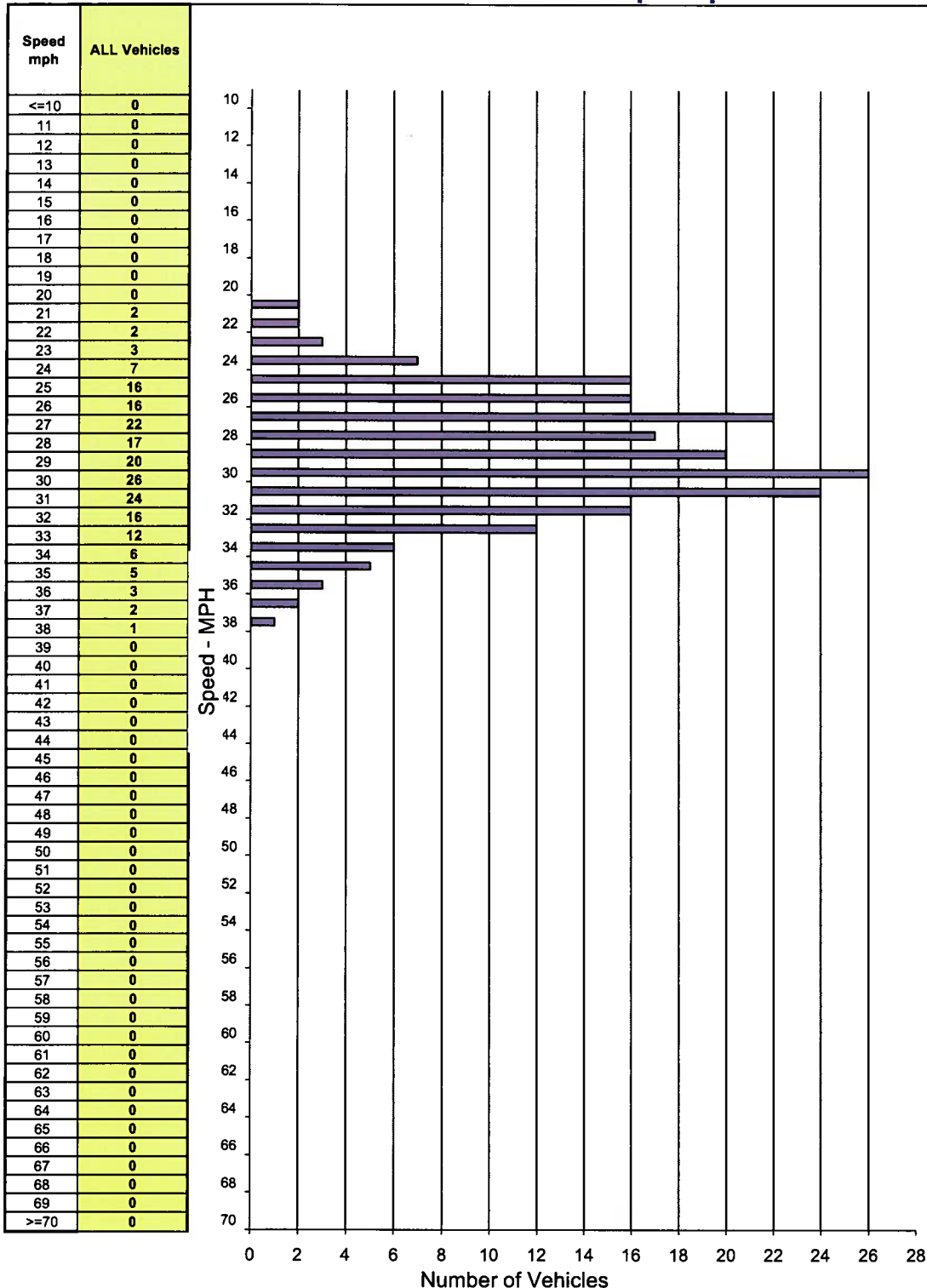
Prepared by: National Data & Surveying Services

## City of Pinole

### Tara Hills Drive from Appian Way to West City Limit

Survey Time: 14:00-14:42 Street Width: 58 Ft  
 DATE: 9/13/2011 Location: 1311 Tara Hills Drive  
 DAY: Tuesday Posted Speed: 30 MPH Project #: 11-7376-015

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# In Pace	Percent In Pace	% / # Below Pace	% / # Above Pace
ALL	200	11 - 69	29 mph	32 mph	24 - 33	176	88%	3% / 7	9% / 17

# Spot Speed Study

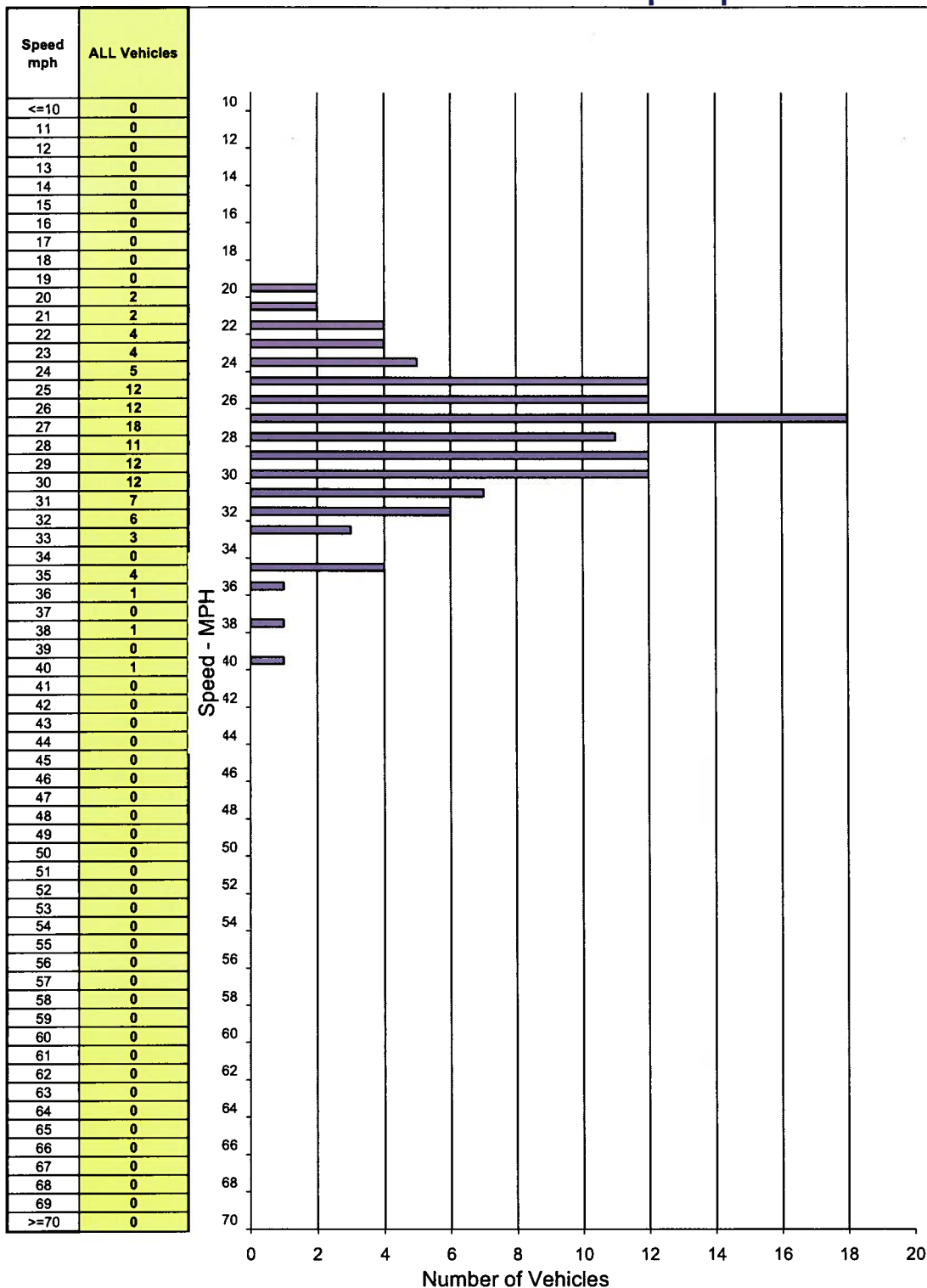
Prepared by: National Data & Surveying Services

## City of Pinole

Tennent Avenue from Railroad Avenue to San Pablo Avenue

Survey Time: 12:40-13:40 Street Width: 30 Ft  
 DATE: 9/14/2011 Location: 635 Tennent Avenue  
 DAY: Wednesday Posted Speed: 25 MPH Project #: 11-7376-016

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	117	11 - 69	27 mph	31 mph	23 - 32	99	85%	6% / 8	9% / 10

# **APPENDIX B**

## **Collision Rates**

Table 3									
Collision Rates									
No. Street	From	To	Midblock Collisions (3 Years)	ADT*	Approx. Length of Segment (mi)	Calculated Accident Rate (Acc/MVM**)	Statewide Accident Rate*** (Acc/MVM)		
1	APPIAN WAY	SAN PABLO AVE	5	14,628	0.95	0.33	2.00		
2	APPIAN WAY	I-80 FREEWAY	5	24,633	0.65	0.29	2.00		
3	FITZGERALD DR	RICHMOND PKWY	17	17,218	1.00	0.90	2.00		
4	PINOLE VALLEY RD	TENNENT AVE	2	16,578	0.35	0.31	2.00		
5	PINOLE VALLEY RD	I-80 FREEWAY	10	18,347	0.70	0.71	2.00		
6	PINOLE VALLEY RD	GRANADA CT	4	12,110	0.45	0.67	2.00		
7	PINOLE VALLEY RD	SIMAS AVE	0	7,577	1.90	0.00	2.55		
8	SAN PABLO AVE	EAST CITY LIMIT	1	18,575	0.40	0.12	2.00		
9	SAN PABLO AVE	PINOLE VALLEY RD	1	16,963	0.25	0.22	2.00		
10	SAN PABLO AVE	OAK RIDGE AVE	1	18,645	0.50	0.10	2.00		
11	SAN PABLO AVE	APPIAN WAY	1	17,452	0.40	0.13	2.00		
12	SAN PABLO AVE	SUNNYVIEW DR	4	16,773	1.00	0.22	2.00		
13	SIMAS AVE	MENDOCINO DR	1	762	0.60	2.00	2.55		
14	SIMAS AVE	PINOLE VALLEY RD	4	3,775	0.75	1.29	2.55		
15	TARA HILLS DR	APPIAN WAY	5	12,446	0.70	0.52	2.00		
16	TENNENT AVE	RAILROAD AVE	1	2,846	0.60	0.53	2.55		

# **APPENDIX C**

## **Survey Equipment**

## **SURVEY EQUIPMENT USED**

The radar equipment used to collect speed measurements for this survey was a Genesis GHD Handheld Directional Traffic Radar manufactured by Decatur Electronics, of Decatur, Illinois. The calibration of the unit was checked before each series of measurements were taken. Tests of the unit were conducted in accordance with the manufacturer's specifications. The Genesis GHD Handheld Directional Traffic Radar was last calibrated on December 9, 2008 by Decatur Electronics, Inc.



Cut out area  
for door knob



## **Terra Linda Homeowners' Association**

Post Office Box 6405 • San Rafael, CA 94903-0405

[www.terralindahoa.com](http://www.terralindahoa.com)

Dear Resident(s):

As you know Terra Linda is a wonderful place to live and as part of the grass routes effort by the Terra Linda Homeowners' Association. We would like to remind our community to drive at or below the speed limit within our neighborhood.

The main issue facing the Association continues to be speeding and traffic on neighborhood streets. The Association has developed partnerships with the Dixie School District, Terra Linda High School, Saint Marks School, Kaiser Permanente and the San Rafael Police Department to communicate traffic and speeding problems within our community. However, speed surveys indicate that a large portion of the speeding is occurring outside the commute periods.

To reduce speeding we need a change in habits and priorities. We know coming from the freeway and boulevard it is difficult without conscious effort to drive 25 mph on a road you are very familiar with, but our hope is that with this reminder you will help ensure Terra Linda continues to be a wonderful and safe place to live.

When driving in Terra Linda please be cautious, vigilant, and safe. We also ask that if your home has a young driver that you remind them to exercise caution when driving. In addition it would be much appreciated if you are having guests that you ask them also to drive considerately through Terra Linda. Finally, let's continue to work hard together to make Terra Linda a safe and courteous place to live.

***TLHOA – Working for a safe and strong community***

Cut out area  
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