



# Winchester Boulevard

## Complete Streets Plan



connect SKATE stay  
BIKE LOS GATOS  
JOG gather PLAY walk

Existing Conditions Report  
March 2020





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## Overview

### PROJECT PURPOSE

Parallel to State Route 17 and running north-south through the Town of Los Gatos and the neighboring City of Monte Sereno, Winchester Boulevard is an important arterial street connecting large employers and SR-85 on the northern limits of the town with the Los Gatos downtown. Between Knowles Drive and Blossom Hill Road (the extents of this plan) Winchester Boulevard is configured with two auto through lanes northbound and either one or two auto through lanes southbound<sup>1</sup>. While it does possess striped Class II bike lanes for much of the study area, the lanes offer no physical protection from fast-moving vehicles, discouraging use by less confident bicyclists. Additionally, many parts of the corridor lack sidewalks on one or both sides of the street, compelling pedestrians to walk on the shoulder.

The Winchester Boulevard Complete Streets Plan will evaluate options to improve the corridor for all users, including residents, commuters, school children, and workers. By making Winchester Boulevard more accommodating of users of all ages and abilities traveling by a variety of modes, the Town of Los Gatos hopes to protect vulnerable road users currently traveling along the corridor and to encourage more bicycling and walking trips. In addition, the Town is also interested in streetscape improvement to enhance the attractiveness of the street to provide a welcoming gateway to Los Gatos.

### DOCUMENT PURPOSE

This document, the Winchester Boulevard Existing Conditions Report, describes the corridor in its current condition. The Report details key points of interest nearby, the current configuration of the corridor, and how people use it today. It also catalogs areas of focus for improvement, both quantitative, such as the number and location and recent collisions, and qualitative, obtained from survey data and in-person observations.

The Report will serve as the informational foundation for the rest of the plan, during which conceptual designs and eventually final recommendations will be developed to accommodate the corridor's many uses and ameliorate the challenges cataloged here.

## Study Corridor

The study area for this plan is Winchester Boulevard/N. Santa Cruz Avenue between the Town limits (Knowles Drive) and Blossom Hill Road, a segment two miles in length. The right-of-way (ROW) varies between 95 feet in the northern, primarily-commercial segment, and 47 feet in the southern segment where Winchester Boulevard becomes N. Santa Cruz Avenue and enters the Los Gatos downtown. Between Lark Avenue and the northern terminus of the study area Winchester Boulevard

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<sup>1</sup> South of Bruce Avenue, one block north of the southern extent of project area, Winchester Boulevard becomes N. Santa Cruz Avenue. For the sake of simplicity, the entire corridor between Knowles Drive and Blossom Hill Road will be referred to as Winchester Boulevard.



has two lanes in each direction and a median with left-turn lanes. South of Lark Avenue it has two northbound lanes, a single southbound lane, and a two-way center turn lane.

Class II bike lanes are striped between the Union Pacific Railroad (UPRR) crossing and Daves Avenue. Sidewalks exist on either end of the corridor but are intermittent in the middle segment between Lark Avenue and Creekside Circle. **Figure 1** shows an aerial view of the study corridor. **Figure 2** provides a conceptual view of the corridor with auto, bicycle, pedestrian, and transit facilities listed. **Figure 3** shows the same conceptual view with cross sections for select segments.

## MAJOR POINTS OF INTEREST

### SR-85 Overcrossing

Near the northern terminus of the study area, between Knowles Drive and Albright Way, Winchester Boulevard crosses over SR-85 (the West Valley Freeway). The span is approximately 300 feet long and 98 feet in width. The overcrossing has two auto lanes in each direction with a raised median that becomes a left-turn pocket for the SR-85 NB on-ramps on the northern side of the overcrossing. While there are no marked bicycle lanes, each side of the roadway has a substantial shoulder that is used by confident bicyclists. There is a narrow sidewalk on the west side of the overcrossing but none on its east side. Paralleling the overcrossing to the east is a railroad overcrossing used by UPRR.

### Union Pacific Railroad Right-of-Way

Between Smith Ranch Court and Albright Way is an at-grade crossing of the UPRR. The crossing features a single set of tracks with crossing gates and signals. The railway is only lightly used, with at most one daily train crossing at low speeds. West of Winchester Boulevard the rail ROW runs roughly perpendicular to the street, but at the crossing with the road the tracks turn to run parallel. The railway intersects the roadway at a 40-degree angle on the western side of the street and a 15-degree angle on the eastern side of the street. The 2 to 3-inch gap between the embedded rail and the roadway surface material where the train wheels travel is known as the “flangeway gap”. Because this gap runs nearly parallel to the path of travel on the east side of the roadway, it may be easy for a bicycle tire of a northbound rider to slip into this gap.

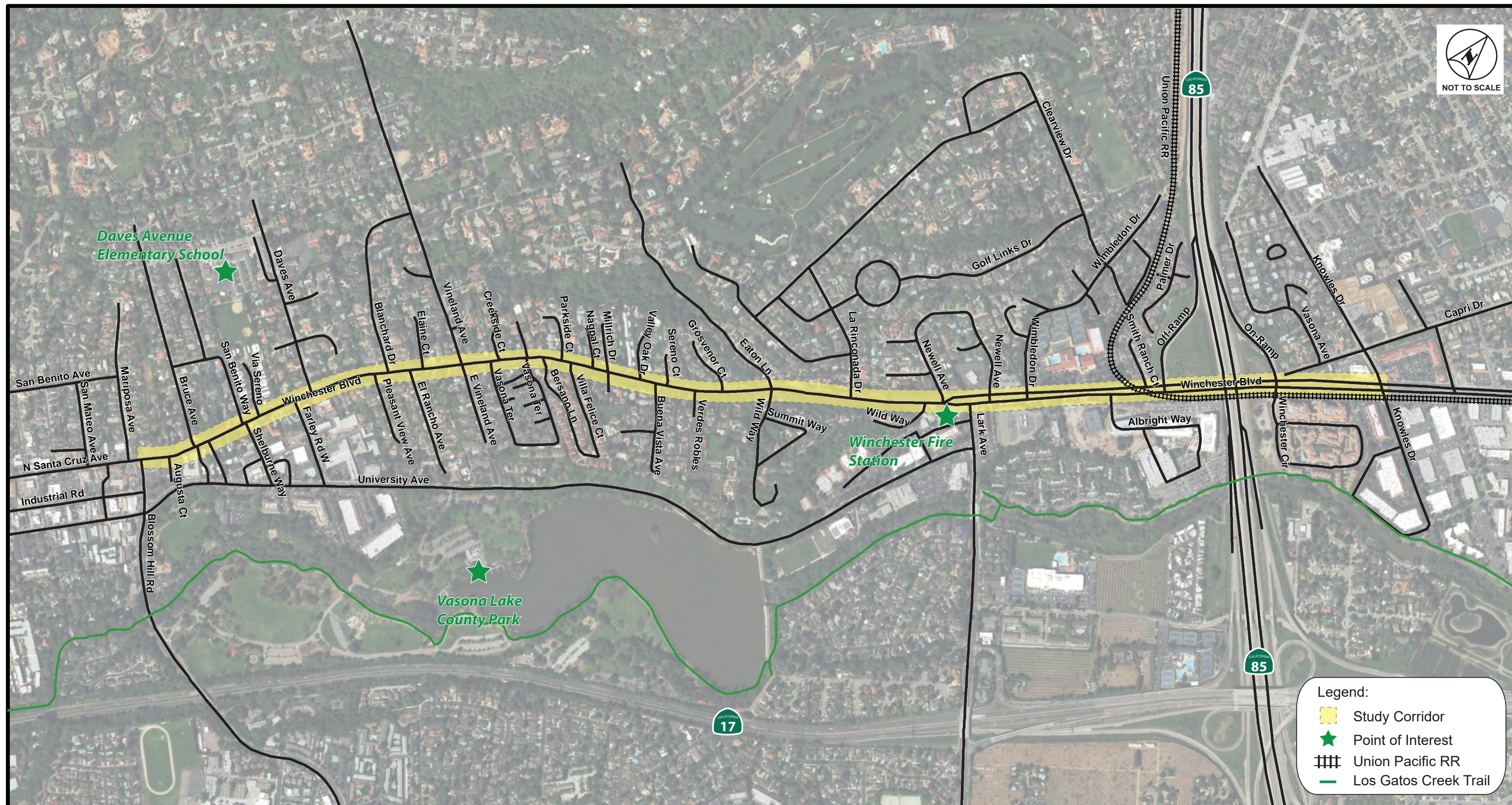
### Daves Avenue Elementary School

Located at Daves Avenue and Poppy Lane ¼ mile west of Winchester Boulevard, Daves Avenue Elementary School serves students from the Town of Los Gatos and the City of Monte Sereno. Enrollment for the 2017-18 school year was 538 students. School begins at 8:10 A.M. with dismissal at approximately 2:30 P.M. most weekdays (and at 11:30 A.M. – 12:15 P.M. on Wednesdays).

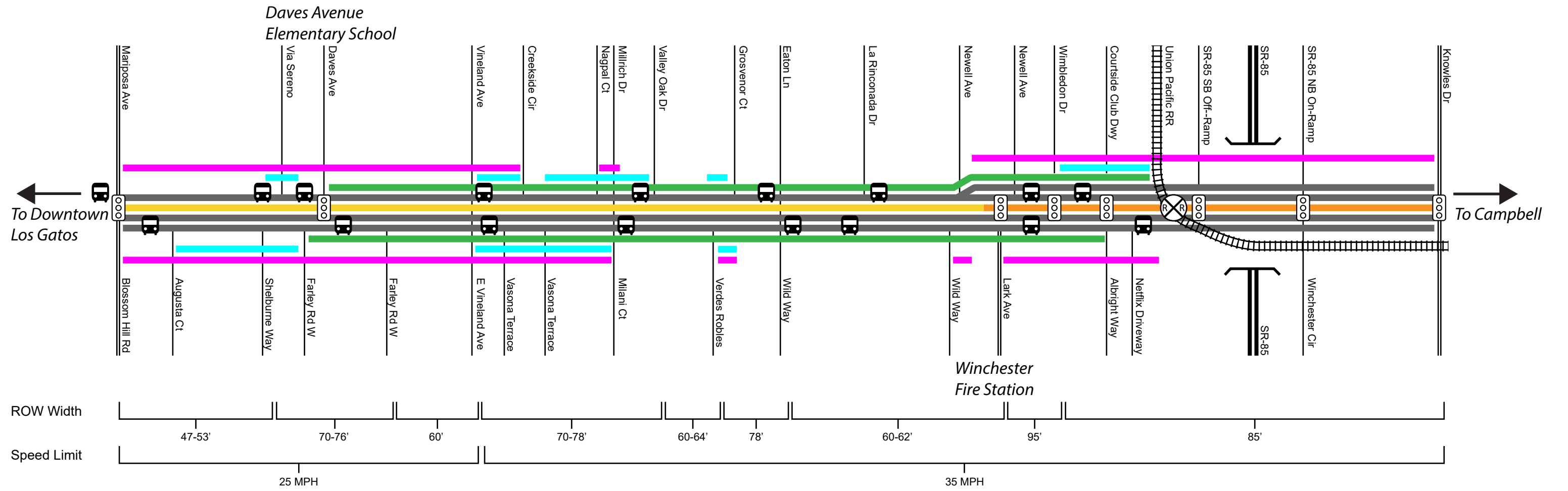
### Netflix/Roku

The online streaming and video service Netflix is headquartered in Los Gatos directly off Winchester Boulevard, on the east side of the street. Of their five buildings, one (Building A) is located north of SR-85 between Knowles Drive and the freeway overpass. The other four buildings (D, E, F, and G), as well as the company’s parking structure are all south of SR-85 between the overpass and Albright Way.









ROW width based on measurements from aerial photography. To be confirmed by topographical survey.

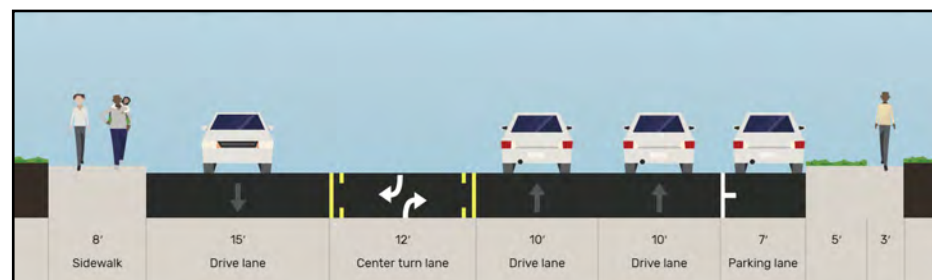
### Legend

	Auto Through Lane		Union Pacific Railroad ROW
	Center Turn Lane		Signalized Intersection
	Median/Left-Turn Lane		Railroad Crossing
	Class II Bike Lane		VTA Bus Stop
	On-Street Parking		
	Existing Sidewalk		

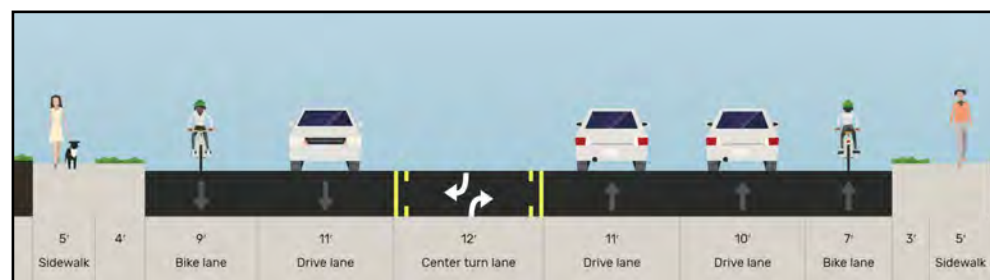
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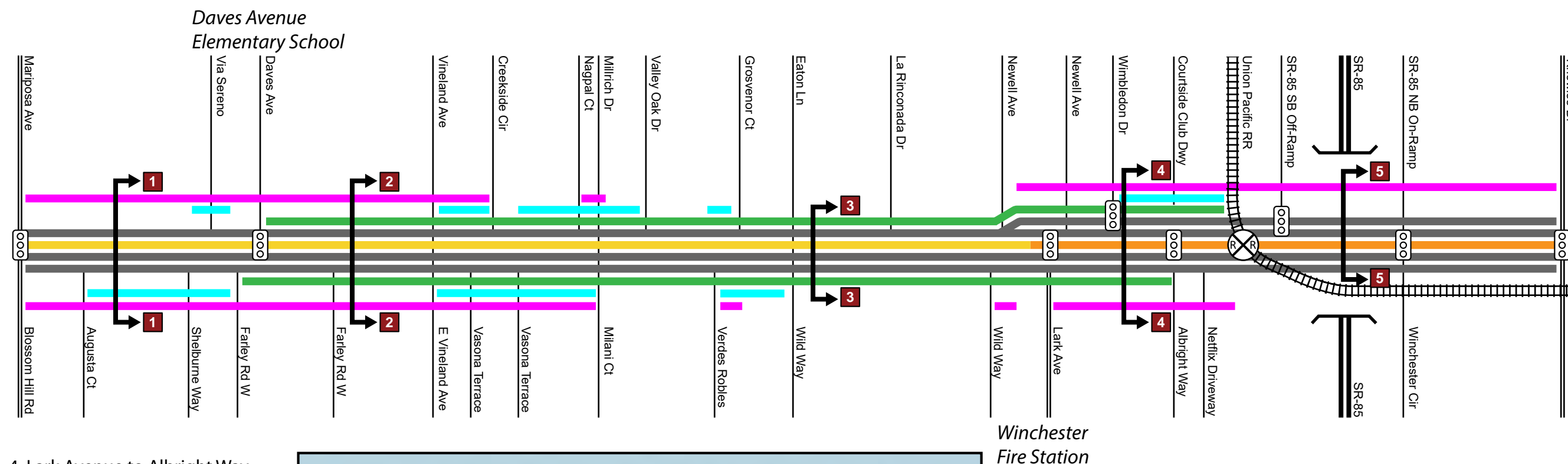
1. Blossom Hill Drive and Shelburne Way (looking north)



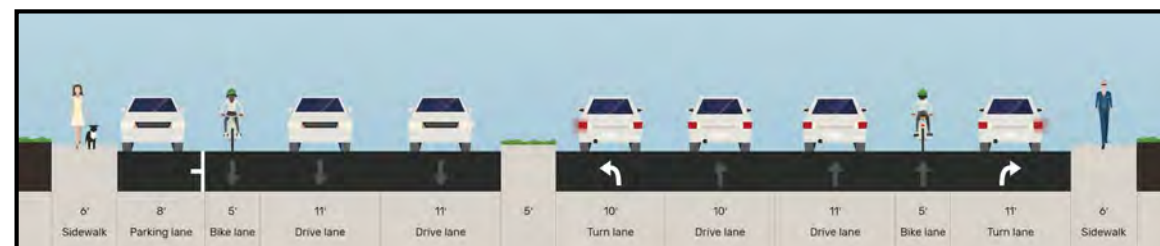
2. Daves Avenue to Vineland Avenue (looking north)



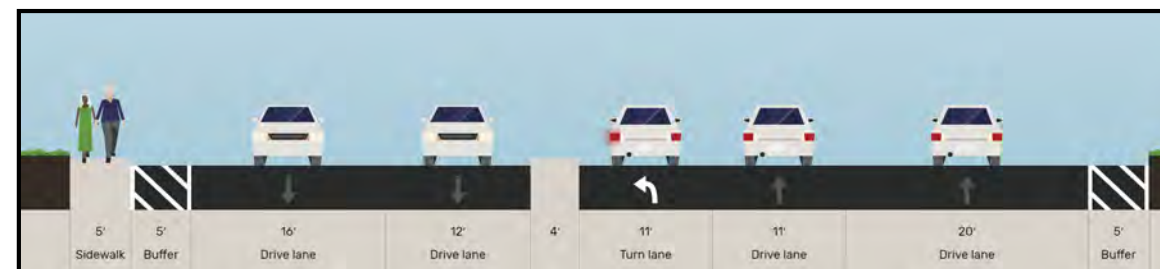
3. Eaton Lane to La Rinconada (looking north)



4. Lark Avenue to Albright Way (looking north)



5. SR 85 Overpass (looking north)



### Legend

	Auto Through Lane		Union Pacific Railroad ROW
	Center Turn Lane		Signalized Intersection
	Median/Left-Turn Lane		Railroad Crossing
	Class II Bike Lane		Cross Section Number
	On-Street Parking		Cross Section Location and Perspective
	Existing Sidewalk		

Map not to scale



### Bay Club Courtside

On the west side of Winchester Boulevard immediately opposite the Netflix campus is the Bay Club Courtside. The club has swimming, tennis, and exercise classes, attracting a large number of members. During peak usage the parking lot reaches capacity, requiring users to park in the club's satellite lot on the west side of Winchester Boulevard on the other side of Wimbledon Drive. There is on-street parking in front of the club which was observed to be used primarily by club staff, who are not permitted to park in the main lot.

### Winchester Fire Station

Santa Clara County Fire Department operates a fire station on the east side of Winchester Boulevard immediately south of Lark Avenue. The station has an on-duty staff of four firefighters and operates Truck 85. The fire station is co-located with the Winchester Mechanic Shop where maintenance on other vehicles is performed. Emergency vehicles are able to exit the station onto Winchester Boulevard to the north or the south. The street in front of the station has "Keep Clear" markings to remind drivers not to block access to the station's driveway, but the station does not have emergency vehicle traffic control signals or hybrid beacons.

## Data Collection

Data was provided by the Town of Los Gatos for bicycle, pedestrian, and auto volumes at specific intersections along the corridor. Additionally, in-person observations were conducted by Kimley-Horn staff on two separate days, one during the A.M. commute and school start period (7:30 A.M. to 11:00 A.M.) and the other in the P.M. school release period (2:00 P.M. to 5:00 P.M.), to obtain qualitative information about the corridor and document potential conflict points between users of the various travel modes.

## Existing Bicycle/Pedestrian Network

### PEDESTRIAN NETWORK

#### Sidewalks

On both the northern and southern ends of the corridor, pedestrian infrastructure is provided. Between Albright Way and Lark Avenue in the north and between Creekside Court and Blossom Hill Road in the south, the street has a sidewalk on both sides. Sidewalk widths vary between four and six feet and pavement is generally in good condition. Some curb ramps are not ADA-compliant. In several segments there are numerous driveways crossing the sidewalk.

Though the segments described have sidewalks on both sides, many side streets were developed without sidewalks on one or both sides. North of Albright Way, the sidewalk on the east side of Winchester Boulevard extends only as far as the VTA bus stop but does not continue across the SR-85 overcrossing. Between Newell Avenue and Creekside Court, Winchester Boulevard lacks sidewalks on both sides of the street, limiting the accessibility of the street for many users. Field observations showed that, despite the lack of sidewalks, some pedestrians walk along the wide shoulder.





### Crossings

The 1-mile segment of the corridor between Lark Avenue and Daves Avenue lacks any signalized or painted crosswalks. This limits people from traveling by foot between houses on opposite sides of the street and can present a significant barrier to transit users. If someone commutes via VTA Route 27 and boards at the northbound stop at Winchester Boulevard & Milani Court, upon their return they will be dropped off at the southbound stop across the street. To walk to the nearest signalized crosswalk and back would require a trip of one mile, likely leading them to cross the street at the stop. Per the California Vehicle Code, all street intersections are crosswalks, obliging drivers to yield to a pedestrian attempting to cross, but yield rates at unmarked crosswalks are typically low.

### Intersection Design

There are several free right-turns on the corridor, located for movements from eastbound and westbound Knowles Drive, westbound Lark Avenue and northbound Winchester Boulevard, and westbound Blossom Hill Road. In addition, many of the two-way stop-controlled intersections on the corridor have large curb radii, permitting automobile turning movements through pedestrian conflict areas at higher speeds.

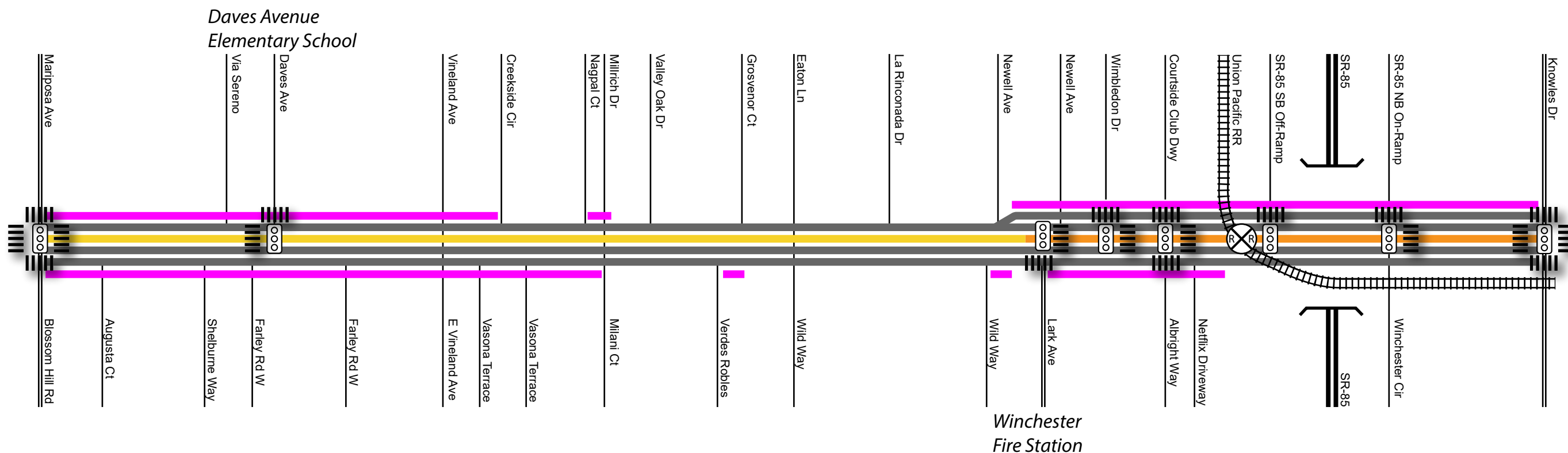
**Figure 4** shows a conceptual view of existing pedestrian facilities on the corridor.

## BICYCLE NETWORK

### Facilities on Winchester Boulevard/Santa Cruz Avenue

There is an existing Class II striped bike lane on 1.3 miles of the two-mile corridor, between the UPRR crossing and Daves Avenue. North of the railway crossing there is a wide shoulder that is used by bicyclists, though it is not officially designated as a bicycle route. The wide shoulder transitions into a northbound right-turn lane to Winchester Circle along the SR-85 overcrossing, with no delineated space for cyclists. South of Daves Avenue, there are no bicycle facilities on Winchester Boulevard. Per the 2017 Los Gatos Bicycle and Pedestrian Master Plan (BPMP) bicyclists are encouraged to access the downtown via Farley Road West and University Avenue, which has a Class II bike lane.

The Class II bike lane on Winchester Boulevard varies between a minimum five feet in the segment north of Lark Avenue and greater than 10 feet at points south of Lark Avenue. The bicycle facility is not clearly marked where vehicles are expected to weave across it, such as at approaches to signalized intersections. Examples of this are at the intersections of Winchester Boulevard with Lark Avenue and Albright Way where northbound right-turning vehicles must cross the northbound bike lane to access the right-turn lane. A similar conflict occurs between northbound bicyclists and drivers using the free right-turn lane from westbound Lark Avenue onto northbound Winchester Boulevard, requiring a weave where automobiles are accelerating to the segment's 35 mph speed limit. Additionally, many of the corridor's unsignalized intersections have large curb radii and no marked bicycle facilities, allowing drivers to navigate them at higher speeds, which can decrease yield rates to bicyclists and pedestrians.



### Legend

	Auto Through Lane		Union Pacific Railroad ROW
	Center Turn Lane		Signalized Intersection
	Median/Left-Turn Lane		Railroad Crossing
	Existing Sidewalk		Marked Crosswalk

Map not to scale



The multilane configuration of much of Winchester Boulevard creates difficulty for bicyclists attempting to make left-turns. Riders must either cross multiple auto lanes to reach a left turn lane or proceed through the intersection to execute a two-stage left turn. However, this latter option is not possible at all places due to the configuration of some intersections, such as the left-turn from southbound Winchester Boulevard onto eastbound Lark Avenue. **Figure 5** shows the conceptual view of existing bicycle facilities.

### Connections to Bicycle Network

Two streets intersecting with the corridor have existing bicycle facilities. Lark Avenue has a Class II striped bike lane (buffered in the eastbound direction and unbuffered in the westbound direction). Blossom Hill Road has a green-backed Class II bike lane (buffered in the eastbound direction and unbuffered in the westbound direction). A new bike box has recently been added to facilitate left turns from Blossom Hill Road onto southbound Santa Cruz Avenue. There is currently a gap in the bicycle network between the Class II bike lanes on Blossom Hill Road and the existing Class II bike lanes on Winchester Boulevard, which only extend as far south as Daves Avenue.

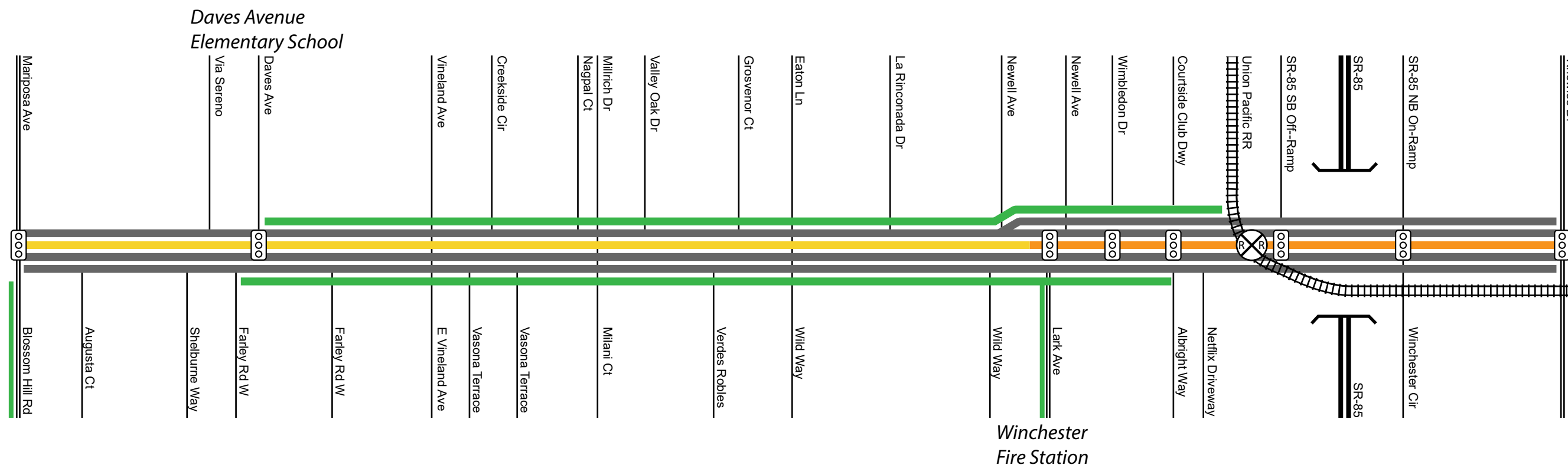
### TRAIL ACCESS

Winchester Boulevard roughly parallels the Los Gatos Creek Trail, which runs along Los Gatos Creek. The trail stretches from the Town's northern border with City of Campbell at Los Gatos Creek Park to its southern edge with St. Joseph's Hill Open Space in unincorporated Santa Clara County. The trail provides a low-stress, car-free connection under SR-85 and connects many local and regional destinations. The trail is part of Los Gatos Creek County Park and has hours of operation between 8:00 A.M. and sunset, though many users travel on the trail outside of these hours.

There are no direct connections between Winchester Boulevard and the Los Gatos Creek Trail, but there are several points where they are relatively close to one another. There is a connection between Lark Avenue and the Los Gatos Creek Trail between Charter Oaks Drive and Mill Road, approximately 1000 feet southeast of the intersection of Lark Avenue and Winchester Boulevard. The trail may also be accessed through the parking lot of Netflix north of Albright Way. That access is entirely within private right-of-way. North of SR-85, the Los Gatos Creek Trail has connections to Winchester Circle and Knowles Drive via the parking lot south of the intersection of Winchester Boulevard and Knowles Drive. While both of these access points are within private right-of-way, the Knowles Drive parking lot is open to free passage and the Winchester Circle access is gated.

The Winchester Boulevard overcrossing over SR-85 lacks bicycle facilities and, as mentioned above, the overcrossing also lacks a sidewalk on its east side. As such, the Los Gatos Creek Trail serves as a low-stress bicycle and pedestrian route between the two sides of SR-85 and is used by many commuters as well as recreational users.





### Legend

	Auto Through Lane		Union Pacific Railroad ROW
	Center Turn Lane		Signalized Intersection
	Median/Left-Turn Lane		Railroad Crossing
	Class II Bike Lane		

Map not to scale



## Existing Transit Service

### MTA SERVICE

Public transit service in Los Gatos is provided by the Santa Clara County Valley Transportation Authority (MTA) which, in December 2019, completed a systemwide update to its bus network and schedules known as the New Transit Service Plan (NTSP). The corridor was formerly served by Route 48 from Winchester LRT Station to Los Gatos via Winchester and is now served by the Route 27 from Winchester Station to Kaiser San José via Downtown Los Gatos. Service begins at 6:30 A.M. and concludes at 9:30 P.M. With the NTSP, buses now arrive more frequently. The former Route 48 weekday service was limited to every 40-45 minutes with hourly weekend service. The current Route 27 bus arrives every 30 minutes on weekdays and every 45 minutes on the weekend.

### Bus Stops and Amenities

There is a large number of bus stops on the corridor: eight in the northbound direction and nine in the southbound direction, some of which are spaced as closely as 1/12<sup>th</sup> of a mile. Despite the abundance of bus stops, access to transit on the corridor may be difficult for some potential users. Five stops between Millrich Court and Lark Avenue lack sidewalk access in either direction, and three stops lack a concrete ADA boarding zone. **Table 1** below shows the number of bus stops on the corridor that possess amenities or features that make waiting for a bus easier or more pleasant. Of the 17 stops, less than half have a bench and only two have a trash can. None of the stops has pedestrian-scale lighting, relying on street lamps to provide illumination. None of the stops has a shelter, though 11 are adjacent to trees or buildings that could provide ambient shade depending on the time of day.

*Table 1 - Bus Stop Amenities*

Amenity or Feature	Number of Stops
Concrete Boarding Pad	14
ADA Accessible	12
Bus Bench	8
Shelter	0
Ambient Tree or Building Shade	11
Trash Can	2
Bicycle Parking	1
Pedestrian-Scale Lighting	0
Street Light on same side as Stop	11
MTA System Map	0
Sidewalk of at least 5 feet	8
<b>Total</b>	<b>17</b>



### Access to Stops

The lack of either signalized or marked crossings between Daves Avenue and Lark Avenue means that, if someone were to commute via transit, they would have to make an unprotected crossing of several lanes of traffic on foot either on their journey between home and the bus or upon their return.

**Figure 6** shows the conceptual view of existing transit services.

### SCHOOL BUSES

While there are two school bus routes that operate in the Town of Los Gatos, neither of them directly serves the Daves Avenue Elementary School, the only academic facility located along the corridor.

The Los Gatos Route A school bus does have a single stop at the intersection of Winchester Boulevard and Wimbledon Drive on its trip serving Fisher Middle School.

### TECH SHUTTLES

As an amenity to their workers who live outside of easy commuting distance, many of the tech companies offer private bus service to their employees. Inbound “tech shuttles” drop off at Netflix campus locations both north and south of SR-85. Shuttle routes operate on the segment of Winchester Boulevard between Lark Avenue and Knowles Drive. Outbound shuttles originating in Los Gatos have stops on Winchester Boulevard, but their routes and specific stops are not available to the public.

## Activity Levels and Performance

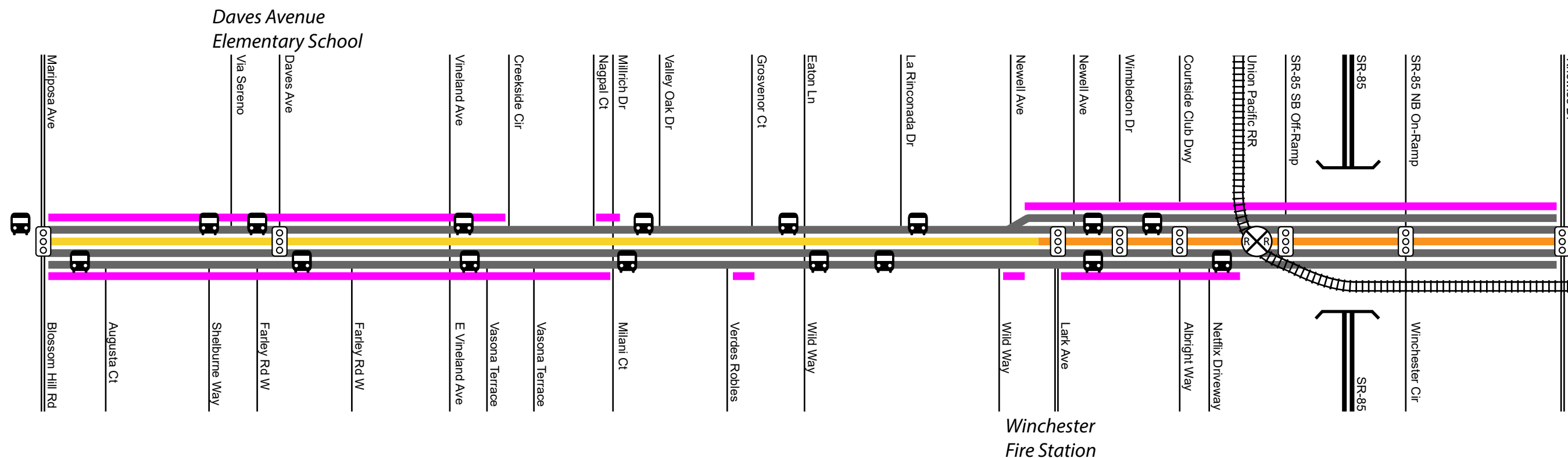
### VEHICLE VOLUMES AND SPEED

**Figure 7** provides vehicle turning movement volumes at three intersections on the corridor: Winchester Boulevard and Lark Avenue, Wimbledon Drive, and Albright Way.

Traffic flow is generally higher in the northbound direction during the A.M. peak and higher in the southbound direction in the P.M. peak. The right-turn movement from Lark Avenue onto northbound Winchester Boulevard is one of the heaviest. This is likely due to the freeway connection between Lark Avenue and SR-17 (which also includes a connection from SR-85).

The segment of Winchester Boulevard south of Lark Avenue has two northbound lanes and one southbound lane. Despite having more capacity, A.M. northbound volumes are lower than P.M. southbound volumes, suggesting that there may be excess capacity in the northbound direction.

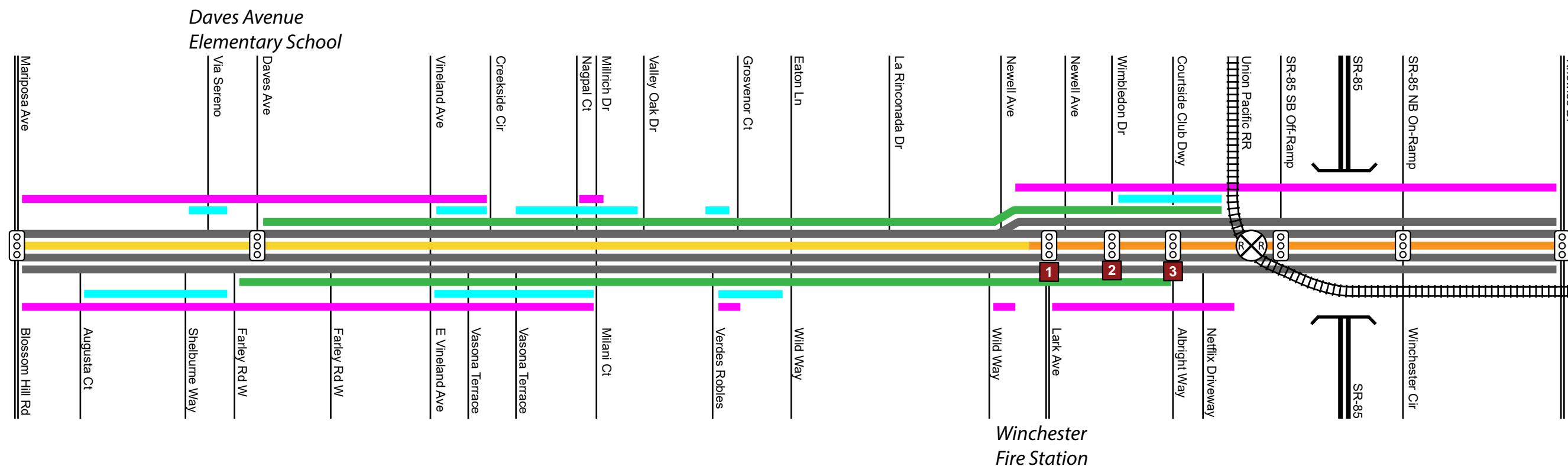




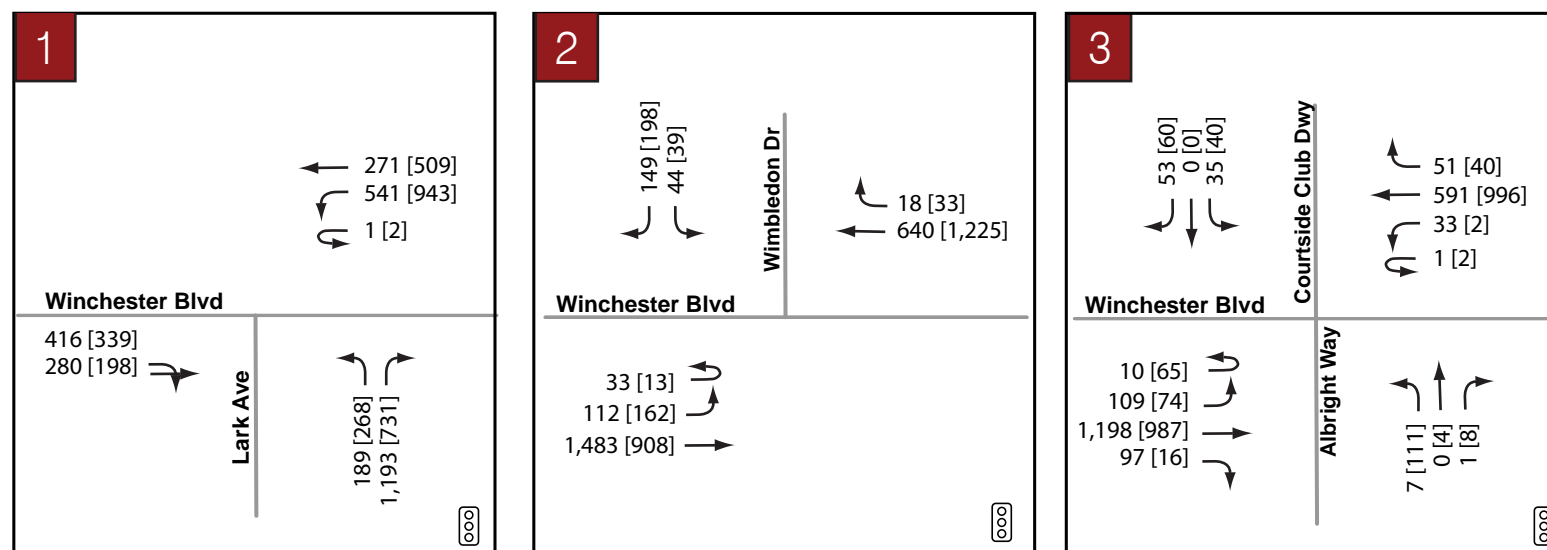
### Legend

	Auto Through Lane		Union Pacific Railroad ROW
	Center Turn Lane		Signalized Intersection
	Median/Left-Turn Lane		Railroad Crossing
	Existing Sidewalk		VTA Bus Stop

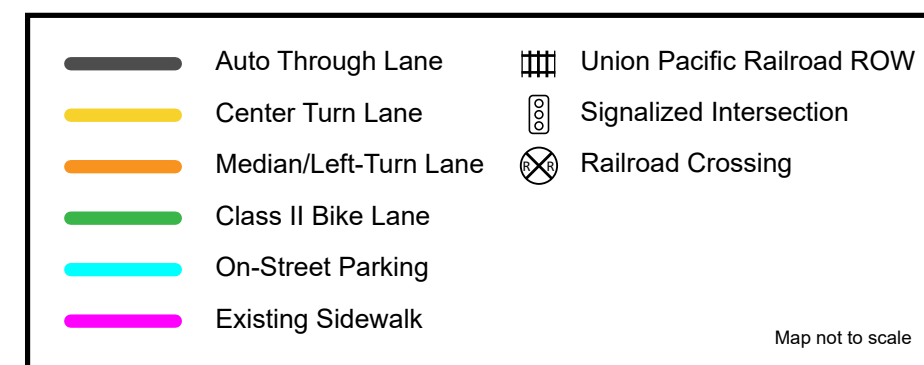
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XX[YY] AM[PM] Peak Hour Volumes  
 AM Peak Hour: 8:00 a.m. - 9:00 a.m.  
 PM Peak Hour: 4:45 p.m. - 5:45 p.m.



### Legend





The most recent speed survey on the corridor was conducted in 2013, shown in **Table 2**.

*Table 2 - Winchester Boulevard Speed Survey*

Segment Limits	Dir.	Mean Speed	85 <sup>th</sup> Percentile Speed	Posted Speed Limit
Vineland Ave. to Lark Ave.	NB	37	40	35
	SB	37	40	
Lark Ave. to Knowles Dr.	NB	36	40	35
	SB	36	39	

Vineland Ave. to Lark Ave observations conducted 7/8/2013, Lark Ave. to Knowles Dr. conducted 7/9/2019

## BICYCLE AND PEDESTRIAN COUNTS

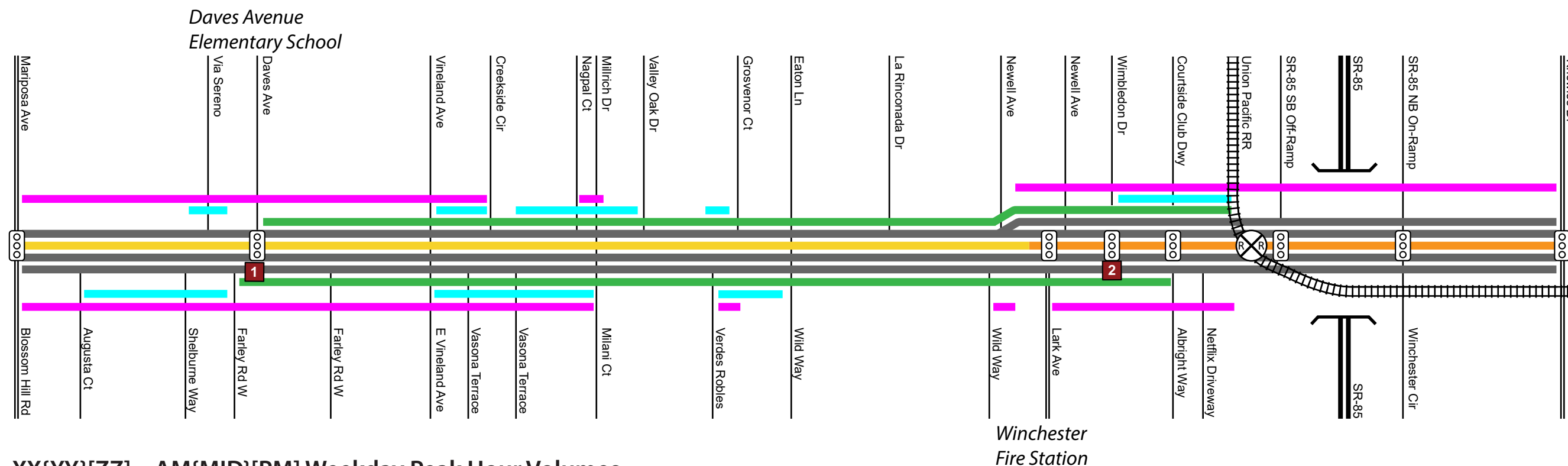
Weekday bicycle and pedestrian counts were available for two intersections: Winchester Boulevard and Daves Avenue; and Winchester Boulevard and Wimbledon Drive. These are shown in **Figure 8**. At both intersections, much of the bicycle and pedestrian traffic is characterized by people traveling between Winchester Boulevard and the secondary streets. Comparatively little bicycle and pedestrian traffic is made up by people through-traveling on Winchester Boulevard. This is especially the case for observed youth bicyclists.

Winchester Boulevard and Daves Avenue sees the most pedestrian traffic in the A.M. period and the midday period (2:00 P.M. to 4:00 P.M.), corresponding with school start and dismissal. Winchester Boulevard and Wimbledon Drive have their highest pedestrian volumes during the A.M. and P.M. period.

## TRANSIT RIDERSHIP

The corridor is not currently a generator of significant transit demand. There are 17 stops on the corridor, eight northbound and nine southbound. The Newell Avenue Southbound and Daves Avenue Northbound have the highest ridership with nine and eight weekday boardings respectively. No other stops on the corridor have more than four weekday boardings on average.

**Table 3** shows the average daily boardings on the corridor by stop. Note that these data are the most recent available from VTA's bus stop database, which was last updated before NTSP was launched. The stops on Winchester Boulevard were previously served by Route 48, which operated at lower frequencies than the current Route 27.



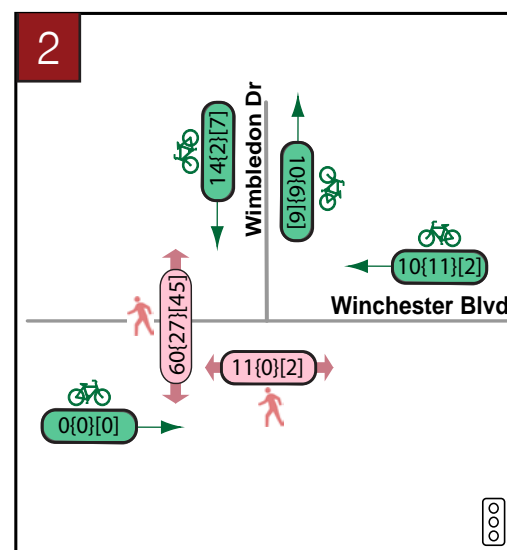
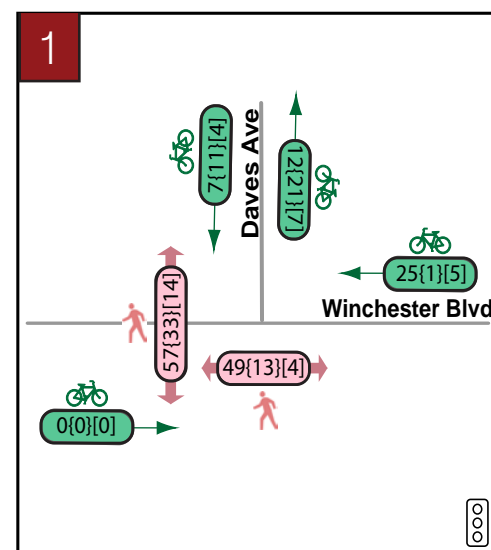
### XX{YY}[ZZ] AM{MID}[PM] Weekday Peak Hour Volumes

AM period: 7:00 a.m. to 9:00 a.m.

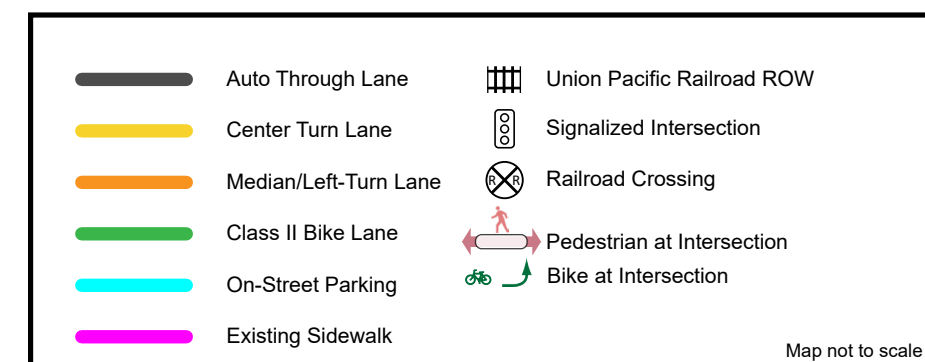
Middy period: 2:00 p.m. to 4:00 p.m.

PM period: 4:00 p.m. to 6:00 p.m.

Pedestrian at Intersection  
 Bike at Intersection



### Legend



Map not to scale





Table 3 - Average Daily Boardings by Stop

Northbound Stops		Southbound Stops	
Stop Name	Avg. Weekday Boardings	Stop Name	Avg. Weekday Boardings
Winchester & Blossom Hill	2	Winchester & Albright	1
Winchester & Daves	8	Winchester & Newell	9
Winchester & Vineland	1	Winchester & La Rinconada	0
Winchester & Milani	1	Winchester & Eaton	0
Winchester & Wild	0	Winchester & Valley Oak	4
Winchester & La Rinconada	0	Winchester & Vineland	2
Winchester & Lark	4	Winchester & Daves	2
Winchester & Albright	2	Winchester & Via Sereno	0
		N. Santa Cruz & Mariposa	1

Ridership data from VTA Bus Stop Inventory, last updated 7/16/2019

## TRANSIT SERVICE PERFORMANCE

### Transit Speeds

**Figure 9** shows the average travel speed of Route 27 on weekdays between 1/27/2020 and 2/9/2020. Average travel speed in the outbound direction (south on Winchester Boulevard) is high, with buses experiencing very little slow-down on the study corridor. Inbound (northbound) buses experience slower travel speeds between Albright Avenue and Knowles Drive, where buses must turn left. Field observations found that the signal at Winchester Boulevard and Knowles Drive is particularly long, at 130 seconds. Note that average speeds shown here include trips made during off-peak times, which may increase speeds by offsetting slower peak-hour trips.

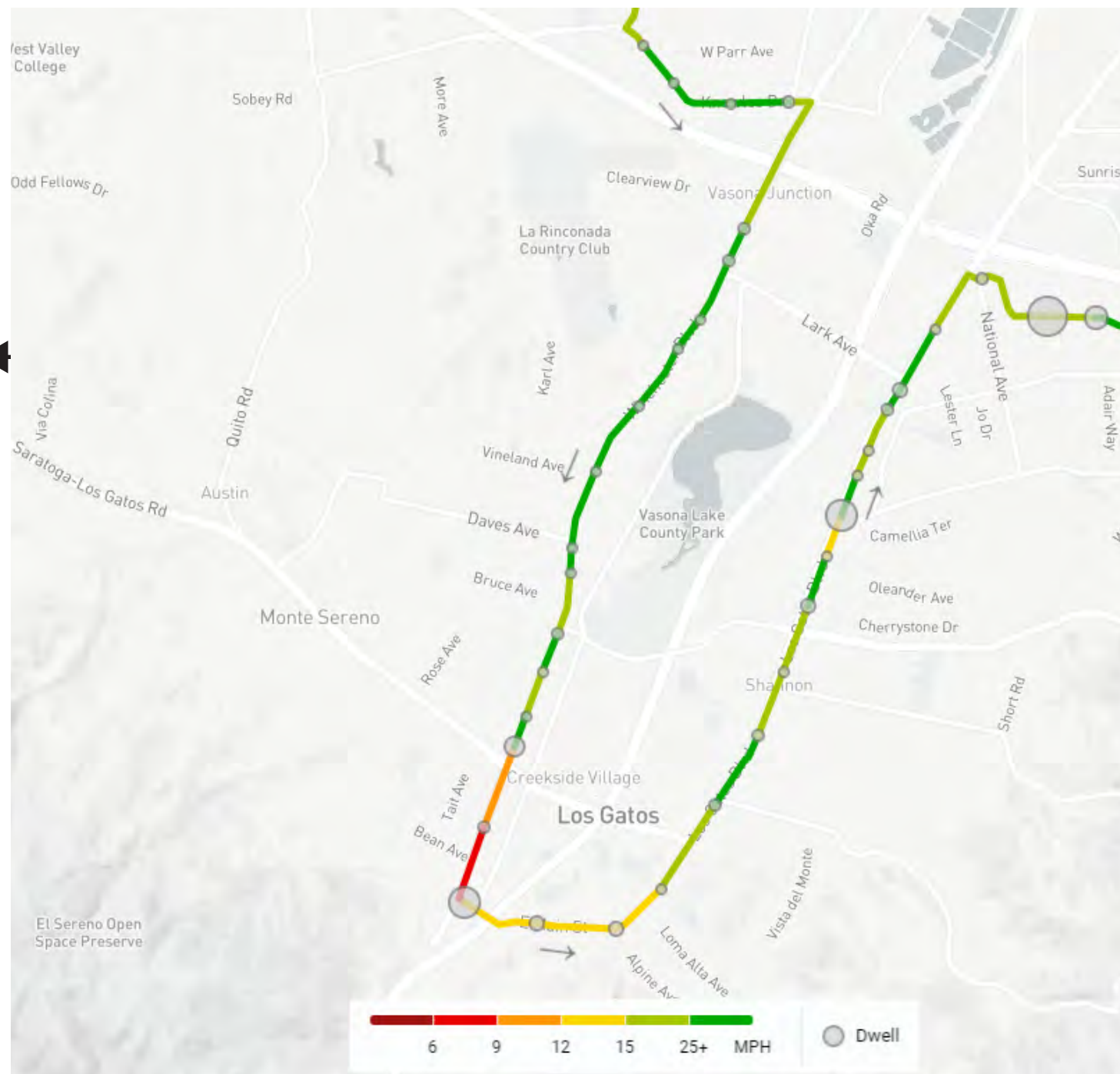
### On-Time Performance

Route 27 does not have any timepoints within the study area, the closest being Santa Cruz Avenue & Los Gatos-Saratoga (0.5 miles south of the study area's southern limit) and Burrows Road and & W Hacienda Avenue (one mile on the route's alignment past the study area's northern limit).

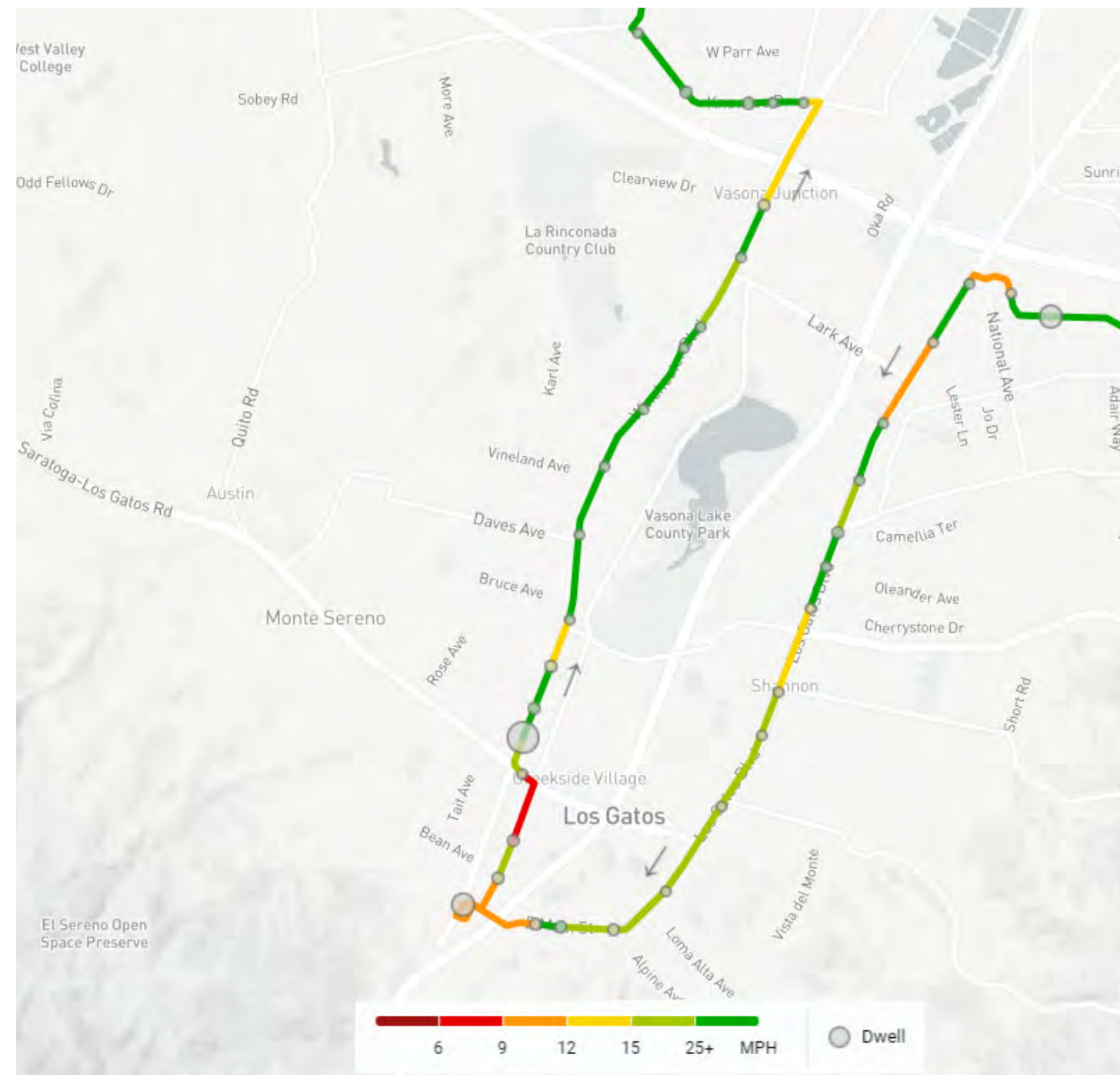
**Table 4** shows the weekday on-time performance at the closest timepoints, defined as between three minutes early and five minutes late. AM Peak is defined as 7:00-9:00 A.M. and PM Peak is 4:00-6:00 P.M. Inbound trips are those toward Winchester Station (northbound on Winchester Boulevard); outbound trips are those toward Kaiser San José (southbound on Winchester Boulevard).



### Route 27 Average Weekday Travel Speed (all trips)



Outbound Trips (south on Winchester Boulevard toward Kaiser San Jose)



Inbound Trips (north on Winchester Boulevard toward Winchester Station)

Data from Swiftly, all weekday trips from 1/27/2020 - 2/9/2020



Table 4 - Percentage of Buses Arriving Late

Timepoints	Inbound Routes (northbound)		Outbound Routes (southbound)	
	Santa Cruz & Los Gatos-Saratoga	Burrows & Hacienda	Burrows & Hacienda	Santa Cruz & Los Gatos-Saratoga
AM Peak	22.6%	9.5%	0%	2.6%
PM Peak	17.5%	11.1%	5.4%	5.4%

Data was obtained via Swiftly and represents weekday observations from 1/27/2020 through 2/9/2020.

While weekday travel times are indeed greater in the AM and PM peak, the segment of Winchester Boulevard that falls within the study area does not appear to cause on-time performance issues for Route 27. In fact, the route's on-time performance on the corridor suggests that buses "catch up" on their schedule while traveling through the study area.

## Collision History

Data was collected from the Statewide Integrated Traffic Records System (SWITRS) for the five-year period from 2014 through 2018. These collisions are shown in **Figure 10** and detailed in **Table 5**. During this period, there were 25 reported injury collisions on the corridor involving a total of 44 people and resulting in 30 injuries<sup>2</sup>. None of those collisions resulted in a fatality, though three of the auto-only collisions resulted in at least one severe injury.

Table 5 - Type and Severity of Injury Collisions

Collision Type	Total Collisions	Resulting in			
		Fatality	Severe injury	Other visible injury	Complaint of pain
Auto-only	14	0	3	4	7
Bicycle-involved	8	0	0	5	3
Pedestrian-involved	2	0	0	1	1
Motorcycle	1	0	1	0	0
<b>Total</b>	<b>25</b>	<b>0</b>	<b>4</b>	<b>10</b>	<b>11</b>

<sup>2</sup> A note on collision data: academic research has found that data on collision involving pedestrians and bicyclists collected by police is often under-reported, meaning that not all injury collisions that occur find their ways into a database, due to people not calling the police after a collision takes place. This is particularly the case with respect to solo bicycle collisions. Thus, it is possible that the number of collisions listed here is less than those that actually occurred. For a summary of the existing literature on this topic, see Doggett, S., Ragland, D. R., & Felschundneff, G. (2018). *Evaluating Research on Data Linkage to Assess Underreporting of Pedestrian and Bicyclist Injury in Police Crash Data*. UC Berkeley: Safe Transportation Research & Education Center. Retrieved from <https://escholarship.org/uc/item/0jq5h6f5>





Source: Statewide Integrated Traffic Records System (SWITRS) - 2014-2018 Data



Of the two pedestrian collisions, neither resulted in a severe injury.

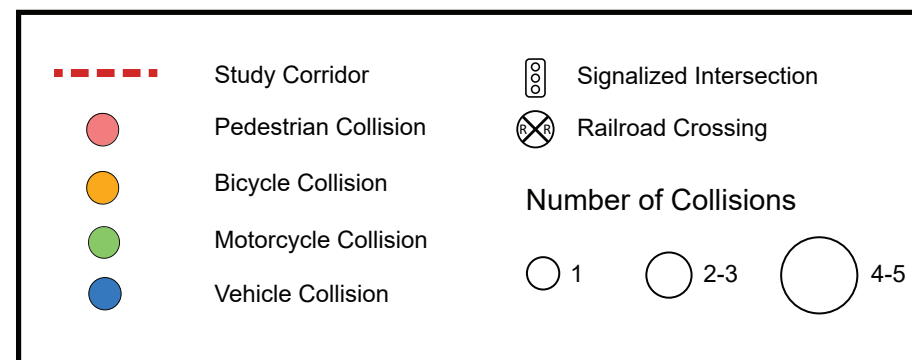


5 of 8 recorded bicycle crashes occurred at the intersection of Smith Ranch Court and Union Pacific Railroad crossing. Each of these was a solo-bicyclist crash.



28% of auto-only collisions were head-on and 21% resulted in severe injuries.

### Legend







### PEDESTRIAN-INVOLVED COLLISIONS

Only two reported injury collisions on the corridor involved pedestrians during the study period, one at Newell Avenue (the southern leg south of Lark Avenue) and the other at Blossom Hill Road. Neither of the collisions resulted in a severe injury.

### BICYCLIST-INVOLVED COLLISIONS

During the study period there were eight reported bicycle injury collisions on the corridor. Notably, five of them occurred with northbound riders on Winchester Boulevard at the UPRR crossing. All these incidents were solo crashes and were classified as either occurring with a “fixed object” or as “non-collisions.”

Without further research it cannot be stated with certainty how these crashes occurred, but the quantity and location suggest that a non-trivial number of bicyclists are crashing when crossing the rail tracks in the northbound direction, likely due to the high degree of skew between the tracks and roadway (~15 degrees off parallel).

Of the remaining bicyclist-involved crashes, two took occurred at the intersection of Winchester Boulevard and Wimbledon Drive and one on Bruce Avenue west of Winchester Boulevard.

### AUTO-ONLY OR MOTORCYCLE-INVOLVED COLLISIONS

There were 14 reported auto-only collisions on the corridor during the study period. The most frequent type of collision was a rear-end collision, which is most typically associated with locations with vehicle queuing. Three of the collisions, including two of the three severe auto-only crashes, involved drivers who were under the influence of alcohol. No other significant patterns were apparent in the data during the study period.

The only collision on the corridor involving a motorcycle occurred at the intersection of Winchester Boulevard and Lark Avenue, where a person operating a motorcycle traveling south was struck head-on by a driver traveling north, resulting in a severe injury.

The collision category of all auto-only collisions or motorcycle collisions is shown in **Table 6**.

*Table 6 - Type and Number of Auto-Only and Motorcycle Collisions*

Collision Type	Number of Injury Collisions
Head-On	4
Sideswipe	1
Rear-End	5
Broadside	1
Hit Object	2
Other	1
Not specified	1
<b>Total</b>	<b>15</b>



## Field Observations

Corridor issues are summarized below and shown on **Figure 11**.

### VEHICLE SPEEDS

One of the stated purposes for the project is to reduce vehicles speeds on Winchester Boulevard to improve multimodal safety. High vehicle speeds were observed during fieldwork in both A.M. and P.M. periods, particularly in the segment between Lark Avenue and Daves Avenue. LED driver feedback signs are installed in both the northbound and southbound directions on the approaches to Daves Avenue, a segment where the speed limit is 25 miles per hour. Many vehicles were traveling greater than 35 miles per hour (at which point the signs display a “Slow Down” message to drivers), exceeding the speed limit by more than 10 mph. During informal interviews with pedestrians walking on the corridor, some of whom were parents walking children home from Daves Avenue Elementary School, several people mentioned concerns of vehicles traveling at high speeds. The 2013 speed survey referenced in **Table 2** did not capture speeds on Winchester Boulevard south of Vineland Avenue. North of Vineland Avenue mean vehicles speeds were within 2 mph of posted speed limits, though 15 percent of vehicles were observed traveling greater than 5 mph over the posted limit.

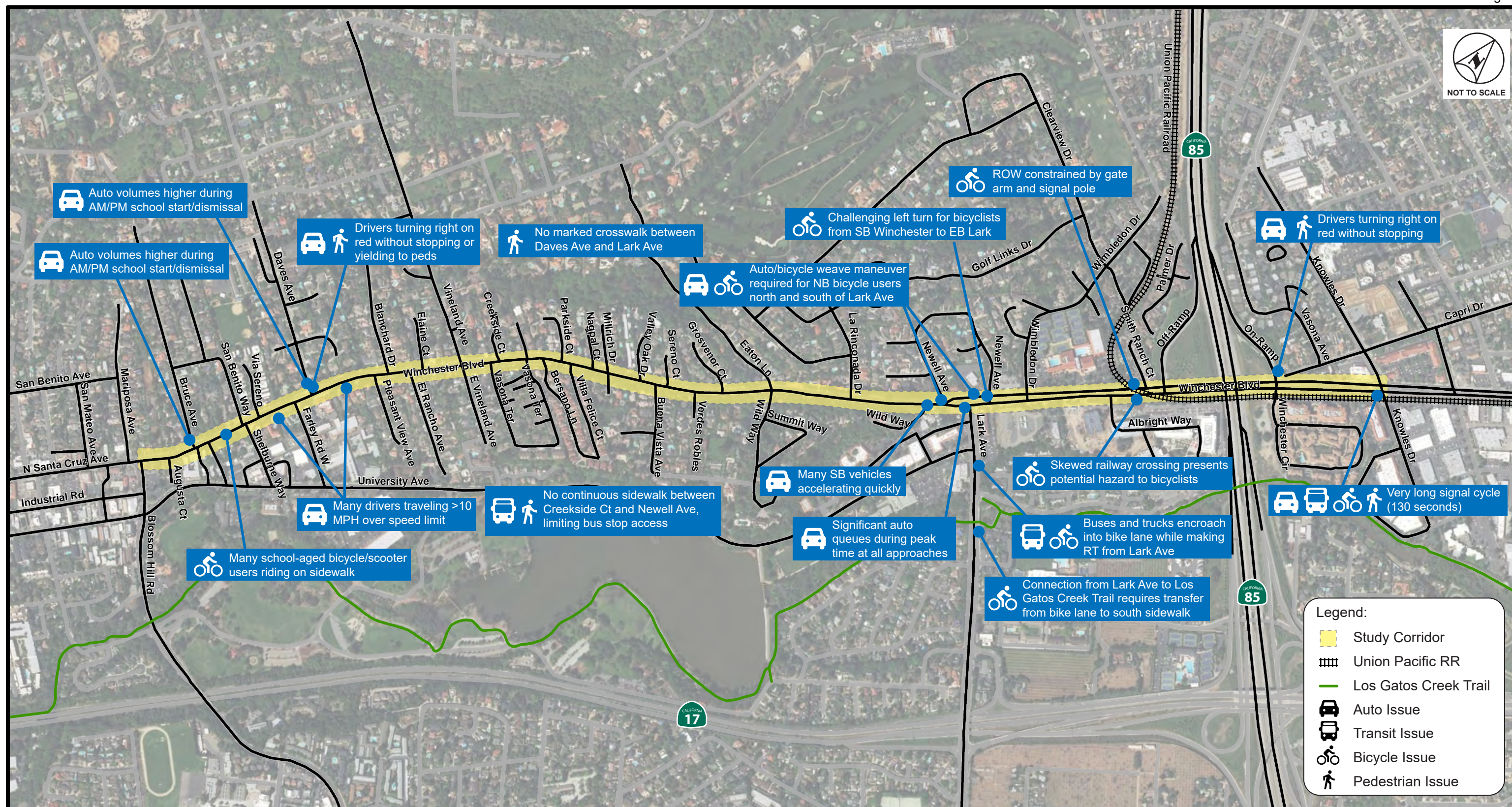
### LACK OF PEDESTRIAN FACILITIES

During both observation periods, pedestrians were seen using the corridor segment between Lark Avenue and Creekside Court, despite the fact that it does not have sidewalks. Observed users were students returning from school, joggers, and parents walking with a stroller.

### INSUFFICIENT BICYCLE FACILITIES

Winchester Boulevard has a Class II bike lane for much the extent of the study area. However, the lack of physical separation from automotive traffic leads many riders to feel comfortable riding only on the sidewalk rather than in the roadway. During field observations, nearly all school-aged users of bicycles and kick-scooters rode on the sidewalk. During A.M. period, several high school-aged children were observed riding bikes southbound on Winchester Boulevard in the roadway, who then switched to the sidewalk at Daves Avenue where the bike lane ends. Adult bicyclists observed were split between those riding on the sidewalk and those riding in the existing bike lanes or unsigned shoulder north of Albright Way. The fact that a large proportion of riders observed during fieldwork used the sidewalk (where it exists) rather than the striped bike lane suggests that the existing facilities are not comfortable for riders of all ages and abilities.









### AUTO-PEDESTRIAN CONFLICTS

Several of the signalized intersections on the corridor (Knowles Drive, Lark Avenue, Blossom Hill Road) allow free right turns for vehicle. This configuration can reduce yield rates for pedestrians, something that was observed during field observations. Additional conflicts were observed at the intersection of Winchester Boulevard and Daves Avenue where several right-turning vehicles leaving Daves Avenue failed to yield to school-aged pedestrians despite the presence of a crossing guard and an LED-lit “no turn on red” sign. Similar driver behavior was documented at the intersection of Winchester Boulevard and the SR-85 NB on-ramp, where right-turning drivers failed to come to a stop when presented with a red light.

Southbound drivers traveling on Winchester Boulevard making left turns onto side streets must cross two lanes of northbound traffic, limiting their ability to watch for northbound bicyclists or pedestrians crossing the side street.

### SCHOOL ACCESS

There are two intersections on the corridor that see a substantial amount of school-based access: Winchester Boulevard’s intersections with Daves Avenue and Bruce Avenue. Students traveled to and from the school on foot, and by scooter, bike, and car. The majority of travel flow during the school start/dismissal periods at Winchester Boulevard and Daves Avenue consists of people accessing the intersection from the north. The majority of travel flow at Winchester Boulevard and Bruce Avenue is made up by people accessing the intersection from the south.

## Summary of Findings

### PEDESTRIAN EXPERIENCE AND INFRASTRUCTURE

Much of the corridor between Lark Avenue and Creekside Court, a distance of  $\frac{3}{4}$  of a mile on the 2-mile corridor, lacks sidewalks on one or both side of the road, compelling pedestrians to walk in the roadway shoulder. While there is a sidewalk on the west side of the SR-85 overcrossing, no sidewalk exists on the east side of Winchester Boulevard from just north of Albright Way to the town border at Knowles Drive. In some portions of the corridor where sidewalks are provided, they are narrow and not well buffered from the roadway, leading to an uncomfortable pedestrian environment.

There are no designated pedestrian crossings for a one-mile segment of Winchester Boulevard between Daves Avenue and Lark Avenue, requiring pedestrians to either cross several lanes of uncontrolled traffic or make a significant deviation to a signalized crossing.

Auto-pedestrian conflicts were observed at several intersections with drivers failing to yield to pedestrians in the crosswalk. This was observed at Daves Avenue, where drivers turn right on red in violation of clear signage, and at the SR-85 on-ramp, where drivers made right turns on red without coming to a stop, even when pedestrians were present. The lower-than-desired yielding rate may be a product of drivers traveling faster than posted speed limits, lack of pedestrian visibility in conflict areas, and the overall feel and context of the roadway that currently prioritizes roadway width for auto uses over other modes.





### TRANSIT EXPERIENCE AND INFRASTRUCTURE

The corridor is served by the VTA Route 27 from Winchester Station to Kaiser San José via Los Gatos. The bus arrives every 30 minutes on weekdays and every 45 minutes on weekends. The corridor has traditionally not been a significant generator of transit demand, although transit frequency was enhanced with VTA's 2019 New Transit Service Plan that became effective in December 2019.

Existing bus stops are not accessible for users of all abilities and many do not provide a comfortable place for riders to wait for the bus. Five stops lack sidewalk access and three lack an ADA concrete boarding platform. Due to the lack of pedestrian crossings referenced above, riders accessing the bus between Lark Avenue and Daves Avenue do not have an easy way to cross the street between northbound and southbound bus stops, making at least one leg of their transit journey potentially challenging.

### BICYCLE EXPERIENCE AND INFRASTRUCTURE

The corridor lacks bicycle facilities that accommodate users of all ages and abilities. Of the two-mile corridor, Class II bicycle lanes are present on approximately 1.3 miles. The rest of the corridor does not have any designated bicycle lanes (though the segment north of the UPRR crossing has a wide shoulder used by some bicyclists). Most bicycle users, especially those of school age, were observed riding on the sidewalks, suggesting that the striped bicycle lanes do not provide a sufficient sense of safety.

The existing bicycle markings are discontinuous approaching and through signalized intersections, and the approaches to Lark Avenue requires drivers and bicycle users to execute a difficult weaving maneuver, which may be uncomfortable for inexperienced riders. The multilane configuration of the corridor makes the execution of left turns difficult for bicyclists, both at signalized intersections and to/from the stop-controlled side streets on the corridor.

The Winchester Boulevard corridor is in close proximity to other bicycle facilities in the Town of Los Gatos. However, there are several gaps in the network, which inhibit a seamless connection. There is a gap between the existing Class II bicycle lanes on Winchester Boulevard/N. Santa Cruz Avenue and the Class II bicycle lanes on Blossom Hill Road. The other nearby bicycle facility is the Los Gatos Creek Trail, an off-street path that runs parallel to Winchester Boulevard approximately 1,000 feet to the east. There are two additional places where riders can travel between Winchester Boulevard and the Los Gatos Creek Trail: Lark Avenue and behind the parking structure on the Netflix campus. Lark Avenue has Class II buffered bicycle lanes but sees high auto traffic volumes, preventing it from being a low-stress facility. Making a left turn from Lark Avenue to Winchester Boulevard, and vice versa, requires bicyclists to cross multiple lanes of traffic. The Netflix development is used by some through an ingress-egress easement, although that easement is not obvious to all users.

Winchester Boulevard is crossed by UPRR tracks between Albright Way and the SR-85 southbound off-ramp. These tracks are skewed with respect to the angle of the roadway, at approximately 15 degrees on the eastern, northbound side of Winchester Boulevard. The tracks are laid level with the roadway but have two gaps several inches wide where the train wheel flanges travel. This can



present a hazard to bicycle users if a tire slips into the gap. As noted in the corridor collision history section, this location has experienced a number of bicycle-related incidents.

## AUTO INFRASTRUCTURE AND EXPERIENCE

Between Knowles Drive and Lark Avenue, Winchester Boulevard has two northbound and two southbound through lanes separated by a median. South of Lark Avenue, there are two northbound lanes and a single southbound lane separated by a two-way left-turn lane. High traffic volumes were observed at the intersections of Lark Avenue and Knowles Drive during peak periods. During peak hour observations, no congestion was observed on the segment south of Lark Avenue.

Wide auto lanes on the corridor facilitate rates of speed in excess of the speed limit. Speed surveys in the 35-mph segment found a mean speed 1 or 2 mph over the speed limit with 15 percent of drivers traveling at least 40 mph. No speed survey data was available for the segment south of Vineland Avenue, but in-person observations found a large share of drivers traveling more than 10 mph over the posted speed limit of 25 mph (as shown by the existing driver feedback signs installed on the approaches to Daves Avenue). Large curb radii at most stop-controlled side streets and free right turns at signalized intersections facilitate high-speed turning maneuvers.

## CORRIDOR COLLISION HISTORY

Between 2014 and 2018 a total of 25 reported injury collisions occurred on the corridor involving 44 people and resulting in 30 injuries. None of these collisions resulted in a fatality, although three resulted in at least one severe injury. Of the eight bicycle-involved collisions, five of them were solo-bicycle crashes and occurred at the northbound crossing of the UPRR tracks, suggesting that riders crashed while attempting to navigate the skewed tracks. There were 14 auto-only injury collisions on the corridor. The most frequent type was a rear-end collision, typically associated with locations with vehicle queueing. Three of the collisions, including two of the three severe auto-only collisions, involved drivers under the influence of alcohol. No other significant patterns were observed in the data from this period.

## CONCLUSIONS AND NEXT STEPS

Winchester Boulevard is an important corridor connecting Downtown Los Gatos with communities further north, including Monte Sereno, Campbell, and San Jose. With a high number of school-age children using the roadway corridor, there present significant benefits to providing enhanced multi-modal accommodations. To enhance the mobility and safety for local residents, improvement measures such as a lower-stress and better-connected bicycle facility, wider and more comfortable sidewalks, additional well-demarcated pedestrian crossings, improved access to transit, and traffic calming through perceived roadway narrowing and reduced curb radii are encouraged. The feasibility of implementing improvements of this nature will be further explored and identified as part of subsequent study and design efforts.



## Appendices

Traffic, Bicycle, and Pedestrian Data

Corridor Base Maps





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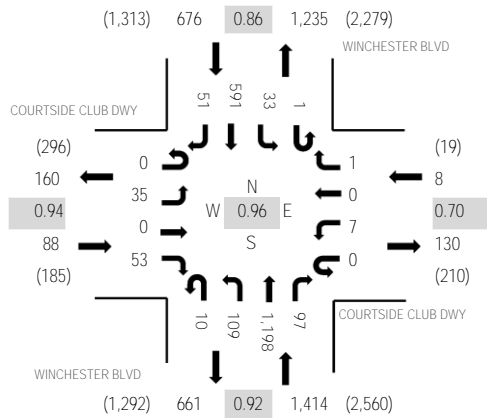
**Location:** 1 WINCHESTER BLVD & COURTSIDE CLUB DWY AM

**Date and Start Time:** Tuesday, March 27, 2018

**Peak Hour:** 08:00 AM - 09:00 AM

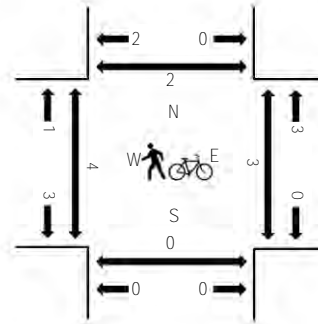
**Peak 15-Minutes:** 08:15 AM - 08:30 AM

### Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

### Peak Hour - Pedestrians/Bicycles in Crosswalk



### Traffic Counts

Interval Start Time	COURTSIDE CLUB DWY				COURTSIDE CLUB DWY				WINCHESTER BLVD				WINCHESTER BLVD				Total	Rolling Hour	Pedestrian Crossings			
	Eastbound				Westbound				Northbound				Southbound						West	East	South	North
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right						
7:30 AM	0	11	0	12	0	0	0	0	3	18	251	6	0	1	99	10	411	2,008	0	0	0	0
7:45 AM	0	7	0	13	0	2	0	0	2	18	285	6	0	3	146	19	501	2,121	0	1	0	0
8:00 AM	0	6	0	13	0	0	0	0	2	46	296	11	0	1	136	17	528	2,186	0	0	0	1
8:15 AM	0	7	0	11	0	2	0	1	4	22	330	28	0	12	136	15	568	2,139	2	0	0	1
8:30 AM	0	11	0	17	0	3	0	0	1	22	289	31	1	7	130	12	524	2,069	1	0	0	0
8:45 AM	0	11	0	12	0	2	0	0	3	19	283	27	0	13	189	7	566		0	3	0	0
9:00 AM	0	11	1	14	0	2	0	2	3	24	222	16	0	14	156	16	481		1	3	0	3
9:15 AM	0	7	0	21	0	5	0	0	2	22	248	20	0	13	151	9	498		0	0	0	1

### Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Lights	0	35	0	53	0	7	0	1	10	108	1,186	94	1	33	580	51	2,159
Mediums	0	0	0	0	0	0	0	0	0	1	11	3	0	0	11	0	26
Total	0	35	0	53	0	7	0	1	10	109	1,198	97	1	33	591	51	2,186



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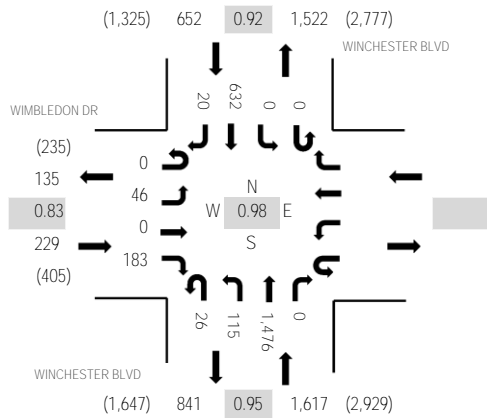
**Location:** 2 WINCHESTER BLVD & WIMBLEDON DR AM

**Date and Start Time:** Tuesday, March 27, 2018

**Peak Hour:** 07:45 AM - 08:45 AM

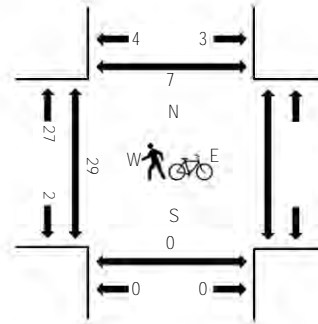
**Peak 15-Minutes:** 08:30 AM - 08:45 AM

### Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

### Peak Hour - Pedestrians/Bicycles in Crosswalk



### Traffic Counts

Interval Start Time	WIMBLEDON DR Eastbound				Westbound				WINCHESTER BLVD Northbound				WINCHESTER BLVD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:30 AM	0	9	0	37					1	20	255	0	0	0	114	6	442	2,302	2		0	2
7:45 AM	0	12	0	57					9	22	333	0	0	0	183	5	621	2,498	5		0	1
8:00 AM	0	11	0	45					7	26	390	0	0	0	144	7	630	2,479	7		0	2
8:15 AM	0	9	0	49					5	37	360	0	0	0	148	1	609	2,427	8		0	2
8:30 AM	0	14	0	32					5	30	393	0	0	0	157	7	638	2,357	9		0	1
8:45 AM	0	10	0	23					16	19	340	0	0	0	191	3	602		12		0	2
9:00 AM	0	14	0	33					10	24	316	0	0	0	173	8	578		21		0	0
9:15 AM	0	15	0	35					1	14	296	0	0	0	172	6	539		18		0	0

### Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	1					0	0	1	0	0	0	0	0	2
Lights	0	46	0	181					26	113	1,462	0	0	0	627	20	2,475
Mediums	0	0	0	1					0	2	13	0	0	0	5	0	21
Total	0	46	0	183					26	115	1,476	0	0	0	632	20	2,498



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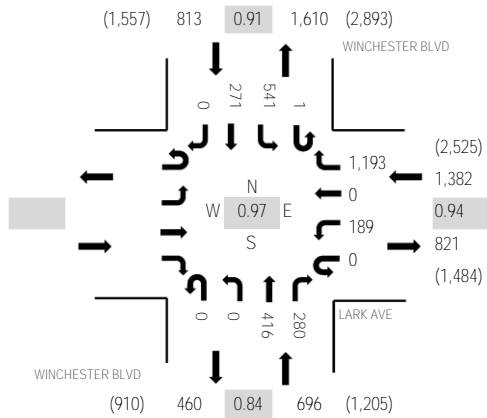
**Location:** 3 WINCHESTER BLVD & LARK AVE AM

**Date and Start Time:** Tuesday, March 27, 2018

**Peak Hour:** 08:00 AM - 09:00 AM

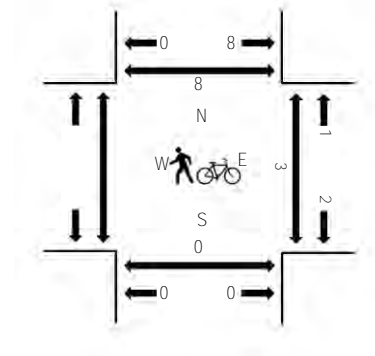
**Peak 15-Minutes:** 08:15 AM - 08:30 AM

### Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

### Peak Hour - Pedestrians/Bicycles in Crosswalk



### Traffic Counts

Interval Start Time	Eastbound				LARK AVE Westbound				WINCHESTER BLVD Northbound				WINCHESTER BLVD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:30 AM					0	35	0	222	0	0	66	55	0	100	52	0	530	2,626		0	0	5
7:45 AM					0	55	0	246	0	0	85	56	2	107	85	0	636	2,799		1	0	1
8:00 AM					0	53	0	275	0	0	102	72	0	138	77	0	717	2,891		0	0	5
8:15 AM					0	50	0	296	0	0	122	84	1	129	61	0	743	2,764		1	0	2
8:30 AM					0	51	0	316	0	0	99	54	0	122	61	0	703	2,661		1	0	1
8:45 AM					0	35	0	306	0	0	93	70	0	152	72	0	728			1	0	0
9:00 AM					0	48	0	234	0	0	88	50	1	107	62	0	590			2	0	0
9:15 AM					0	37	0	266	0	0	71	38	2	150	76	0	640			1	0	0

### Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks					0	0	0	0	0	0	0	1	0	1	0	0	2
Lights					0	183	0	1,181	0	0	407	277	1	535	264	0	2,848
Mediums					0	6	0	12	0	0	9	2	0	5	7	0	41
Total					0	189	0	1,193	0	0	416	280	1	541	271	0	2,891

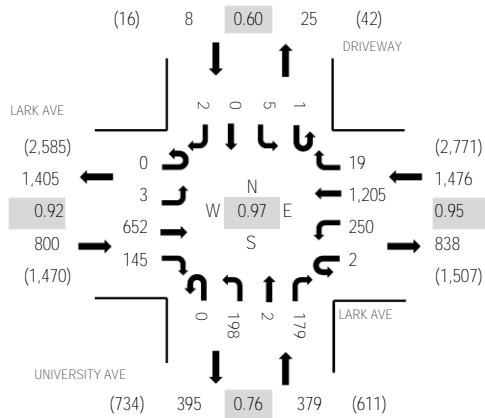




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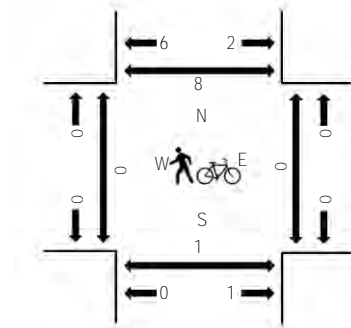
**Location:** 4 UNIVERSITY AVE & LARK AVE AM  
**Date and Start Time:** Tuesday, March 27, 2018  
**Peak Hour:** 08:00 AM - 09:00 AM  
**Peak 15-Minutes:** 08:15 AM - 08:30 AM

### Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

### Peak Hour - Pedestrians/Bicycles in Crosswalk



### Traffic Counts

Interval Start Time	LARK AVE Eastbound				LARK AVE Westbound				UNIVERSITY AVE Northbound				DRIVEWAY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:30 AM	0	1	137	18	0	42	236	5	0	37	1	21	0	1	0	0	499	2,424	0	0	0	4
7:45 AM	0	1	143	24	0	67	287	2	0	33	1	23	0	1	0	0	582	2,568	0	0	0	3
8:00 AM	0	1	175	31	0	62	291	4	0	49	1	42	0	1	0	0	657	2,663	0	0	0	1
8:15 AM	0	1	178	25	1	49	304	3	0	59	1	64	0	1	0	0	686	2,537	0	0	0	2
8:30 AM	0	1	139	32	0	58	304	10	0	57	0	40	0	1	0	1	643	2,444	0	0	0	4
8:45 AM	0	0	160	57	1	81	306	2	0	33	0	33	1	2	0	1	677		0	0	1	0
9:00 AM	0	0	136	28	0	62	258	2	0	26	0	18	0	0	1	0	531		0	0	2	4
9:15 AM	0	0	156	26	0	69	261	4	0	41	0	31	0	2	2	1	593		0	2	0	2

### Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3
Lights	0	3	644	145	2	249	1,189	19	0	198	2	178	1	5	0	2	2,637
Mediums	0	0	6	0	0	1	15	0	0	0	0	1	0	0	0	0	23
Total	0	3	652	145	2	250	1,205	19	0	198	2	179	1	5	0	2	2,663



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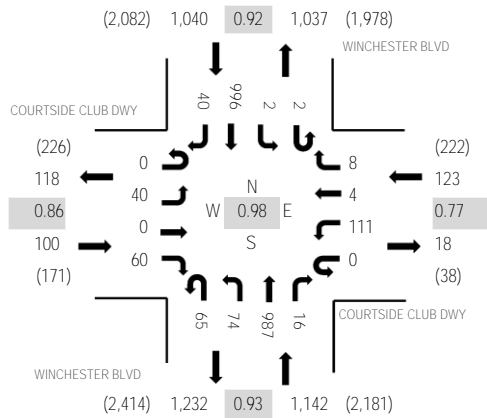
**Location:** 1 WINCHESTER BLVD & COURTSIDE CLUB DWY PM

**Date and Start Time:** Tuesday, March 27, 2018

**Peak Hour:** 04:45 PM - 05:45 PM

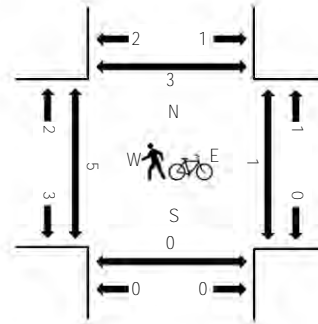
**Peak 15-Minutes:** 05:15 PM - 05:30 PM

### Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

### Peak Hour - Pedestrians/Bicycles in Crosswalk



### Traffic Counts

Interval Start Time	COURTSIDE CLUB DWY				COURTSIDE CLUB DWY				WINCHESTER BLVD				WINCHESTER BLVD				Total	Rolling Hour	Pedestrian Crossings			
	Eastbound				Westbound				Northbound				Southbound						West	East	South	North
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right						
4:00 PM	0	8	0	12	0	22	0	0	17	24	277	5	1	0	263	9	638	2,288	0	1	0	0
4:15 PM	0	5	0	13	0	19	0	1	7	12	224	2	0	3	252	10	548	2,260	0	0	0	0
4:30 PM	0	4	0	6	0	31	0	1	14	13	184	5	0	3	233	16	510	2,325	0	2	0	1
4:45 PM	0	7	0	18	0	19	1	2	14	25	206	7	0	1	285	7	592	2,405	0	0	0	0
5:00 PM	0	17	0	12	0	27	0	1	13	18	253	3	0	1	254	11	610	2,368	2	1	0	3
5:15 PM	0	7	0	13	0	35	2	4	18	18	268	3	2	0	235	8	613		2	0	0	0
5:30 PM	0	9	0	17	0	30	1	1	20	13	260	3	0	0	222	14	590		1	0	0	0
5:45 PM	0	6	0	17	0	19	1	5	19	10	225	1	0	1	238	13	555		0	1	0	1

### Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	40	0	60	0	111	4	8	65	74	979	15	2	1	985	40	2,384
Mediums	0	0	0	0	0	0	0	0	0	0	8	1	0	1	11	0	21
Total	0	40	0	60	0	111	4	8	65	74	987	16	2	2	996	40	2,405



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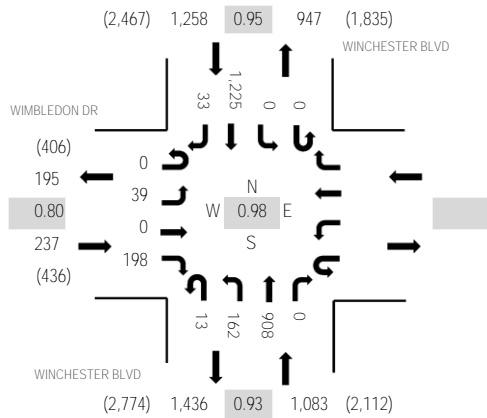
**Location:** 2 WINCHESTER BLVD & WIMBLEDON DR PM

**Date and Start Time:** Tuesday, March 27, 2018

**Peak Hour:** 04:45 PM - 05:45 PM

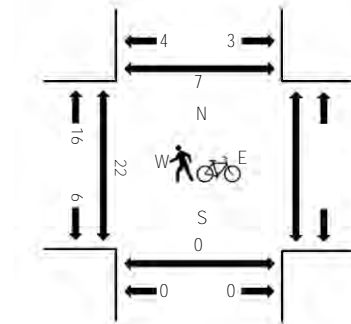
**Peak 15-Minutes:** 05:30 PM - 05:45 PM

### Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

### Peak Hour - Pedestrians/Bicycles in Crosswalk



### Traffic Counts

Interval Start Time	WIMBLEDON DR Eastbound				WINCHESTER BLVD Westbound				WINCHESTER BLVD Northbound				WINCHESTER BLVD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	8	0	36					1	48	285	0	1	0	289	8	676	2,494	0		0	2
4:15 PM	0	10	0	40					2	42	197	0	0	0	280	9	580	2,461	2		1	1
4:30 PM	0	8	0	48					2	34	174	0	0	0	321	9	596	2,517	4		0	0
4:45 PM	0	6	0	68					6	31	221	0	0	0	303	7	642	2,578	14		0	1
5:00 PM	0	9	0	35					4	39	220	0	0	0	329	7	643	2,521	3		0	0
5:15 PM	0	10	0	54					1	44	225	0	0	0	293	9	636		1		0	3
5:30 PM	0	14	0	41					2	48	242	0	0	0	300	10	657		3		0	0
5:45 PM	0	10	0	39					1	48	195	0	0	0	279	13	585		2		0	0

### Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0					0	0	0	0	0	0	1	0	1
Lights	0	39	0	197					13	162	896	0	0	0	1,216	33	2,556
Mediums	0	0	0	1					0	0	12	0	0	0	8	0	21
Total	0	39	0	198					13	162	908	0	0	0	1,225	33	2,578





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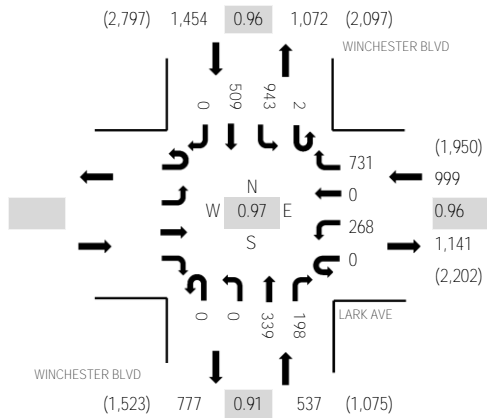
**Location:** 3 WINCHESTER BLVD & LARK AVE PM

**Date and Start Time:** Tuesday, March 27, 2018

**Peak Hour:** 04:45 PM - 05:45 PM

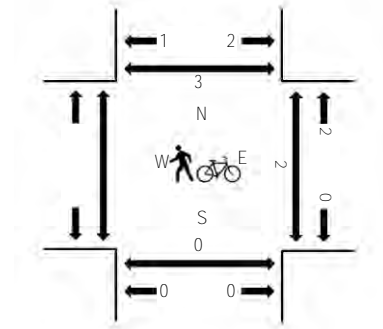
**Peak 15-Minutes:** 05:00 PM - 05:15 PM

### Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

### Peak Hour - Pedestrians/Bicycles in Crosswalk



### Traffic Counts

Interval Start Time	Eastbound				LARK AVE Westbound				WINCHESTER BLVD Northbound				WINCHESTER BLVD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM					0	76	0	208	0	0	101	51	0	221	116	0	773	2,880		1	0	0
4:15 PM					0	70	0	167	0	0	90	52	2	196	112	0	689	2,875		0	0	0
4:30 PM					0	68	0	136	0	0	71	54	1	226	117	0	673	2,930		0	0	0
4:45 PM					0	74	0	158	0	0	85	50	1	241	136	0	745	2,990		0	0	0
5:00 PM					0	68	0	179	0	0	90	51	1	253	126	0	768	2,942		0	0	1
5:15 PM					0	64	0	197	0	0	78	54	0	227	124	0	744			0	0	1
5:30 PM					0	62	0	197	0	0	86	43	0	222	123	0	733			2	0	1
5:45 PM					0	57	0	169	0	0	80	39	0	222	130	0	697			1	0	2

### Peak Rolling Hour Flow Rates

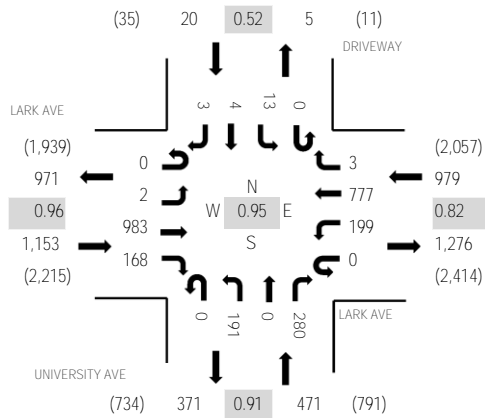
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks					0	1	0	0	0	0	0	0	0	0	0	0	1
Lights					0	265	0	727	0	0	332	197	2	936	502	0	2,961
Mediums					0	2	0	4	0	0	7	1	0	7	7	0	28
Total					0	268	0	731	0	0	339	198	2	943	509	0	2,990



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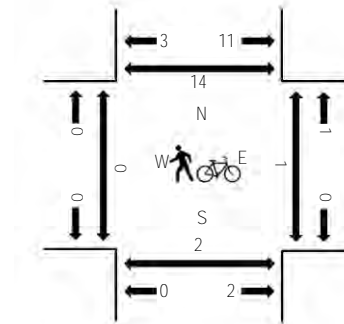
**Location:** 4 UNIVERSITY AVE & LARK AVE PM  
**Date and Start Time:** Tuesday, March 27, 2018  
**Peak Hour:** 04:45 PM - 05:45 PM  
**Peak 15-Minutes:** 05:00 PM - 05:15 PM

### Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

### Peak Hour - Pedestrians/Bicycles in Crosswalk



### Traffic Counts

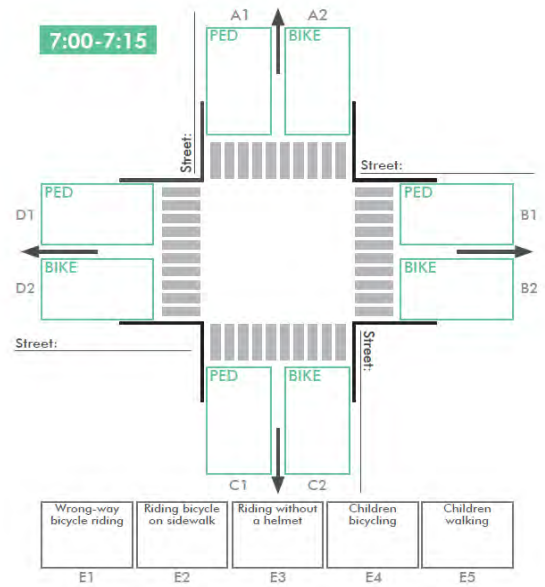
Interval Start Time	LARK AVE Eastbound				LARK AVE Westbound				UNIVERSITY AVE Northbound				DRIVEWAY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	2	246	34	0	75	244	0	0	39	1	50	0	2	2	0	695	2,500	0	0	1	0
4:15 PM	0	0	219	30	0	49	213	0	0	26	0	52	0	2	0	0	591	2,493	0	0	2	0
4:30 PM	0	1	240	34	0	62	180	1	0	25	0	50	0	7	1	0	601	2,574	0	0	1	5
4:45 PM	0	0	243	40	0	46	177	2	0	41	0	62	0	1	0	1	613	2,623	0	1	2	2
5:00 PM	0	1	251	48	0	52	202	1	0	39	0	83	0	6	4	1	688	2,598	0	0	0	7
5:15 PM	0	1	236	41	0	59	203	0	0	58	0	72	0	2	0	0	672		0	0	0	1
5:30 PM	0	0	253	39	0	42	195	0	0	53	0	63	0	4	0	1	650		0	0	0	4
5:45 PM	0	1	225	30	0	46	208	0	0	33	0	44	0	1	0	0	588		0	0	0	1

### Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Lights	0	2	979	164	0	199	771	3	0	191	0	278	0	13	4	3	2,607
Mediums	0	0	4	4	0	0	5	0	0	0	0	2	0	0	0	0	15
Total	0	2	983	168	0	199	777	3	0	191	0	280	0	13	4	3	2,623

Winchester and Wimbledon - Pedestrians and Cyclists

Time slot	Leaving Win		Leaving Win		Leaving Win		Leaving Win		Total					
	A1 Ped	A2 Bike	B1 Ped	B2 Bike	C1 Ped	C2 Bike	D1 Ped	D2 Bike	count legs	Wron g way riding	Sidew alk riding	No helme t	Childr en biking	childr en walkin
<b>8/28/19 7am-9am</b>														
7:00-7:15am	1	1			2	1	2	2	9					
7:15-7:30am					4		2		6					1
7:30-7:45am	4	4			1	2	2	3	16				1	
7:45-8:00am	3	1				3		2	9	1	3		1	
8:00-8:15am	1	2			1	2	2		8		2	1	1	
8:15-8:30am	5				1	1	1		8		1			
8:30-8:45am	18	1			2	1		1	23		1			
8:45-9:00am	16	1			1	4	2	2	26		1			
Total 2 hr, 7:00-9:00am	48	10	0	0	12	14	11	10	105	1	8	1	3	1
<b>8/28/19 2-4pm</b>														
2:00-2:15pm									0					
2:15-2:30pm	4	1							5	1		1		
2:30-2:45pm	5				1				6					
2:45-3:00pm	3				1				4					
3:00-3:15pm	3				3			6	12			1		
3:15-3:30pm		3			2			2	7	1				
3:30-3:45pm	2	1				1		1	5		1	1		
3:45-4:00pm		1			3	1		2	7	1	3			
Total 2 hr, 2:00-4:00pm	17	6	0	0	10	2	0	11	46	3	4	3	0	0
<b>8/28/19 4-6pm</b>														
4:00-4:15pm	1				1		1		3					
4:15-4:30pm		1			1	1			3		1	1		
4:30-4:45pm	1				2	1		1	5					
4:45-5:00pm	11					1	1		13	1	1			4
5:00-5:15pm	4				3	1			8					1
5:15-5:30pm	2	3			3	1		1	10		2	2		
5:30-5:45pm	2				7				9					3
5:45-6:00pm	1	2			6	2			11		1			
Total 2 hr, 4:00-6:00pm	22	6	0	0	23	7	2	2	62	1	5	3	0	8
Grand total all count	87	22	0	0	45	23	13	23	213	5	17	7	3	9





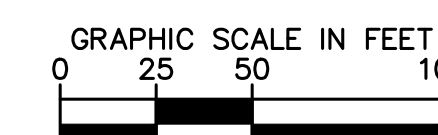
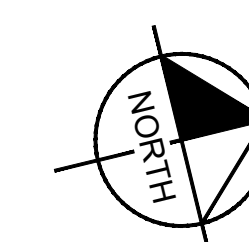
Winchester and Daves Ave. - Pedestrians and Cyclists

Time slot	Leaving Win		Leaving Dav		Leaving Win		Leaving Dav		Total					
	A1 Ped	A2 Bike	B1 Ped	B2 Bike	C1 Ped	C2 Bike	D1 Ped	D2 Bike	count legs	Wron g way riding	Sidew alk riding	No helme t	Childr en biking	childr en walki
<b>8/27/19 7am-9am</b>														
7:00-7:15am	2				4		2		8					
7:15-7:30am		1			1		1	2	5		1		1	
7:30-7:45am	4	4			2		2	2	14			1	3	2
7:45-8:00am	4	1				4	19	13	41	11	9	1	9	11
8:00-8:15am	8	3			11	3	21	7	53	1	8		10	14
8:15-8:30am	2				12		3		17					
8:30-8:45am		2			3		1	1	7					
8:45-9:00am	2	1			2				5					
Total 2 hr, 7:00-9:00am	22	12	0	0	35	7	49	25	150	12	18	2	23	27
<b>8/27/19 2-4pm</b>														
2:00-2:15pm						1	1		2			1	1	
2:15-2:30pm	4	2				1	2		9		1			3
2:30-2:45pm	5	2			8		7	1	23					5
2:45-3:00pm	2	5			8	7			22	1	6		6	2
3:00-3:15pm	2	4							6		4		3	
3:15-3:30pm	1	4					1		6		4		4	
3:30-3:45pm	1	2			2				5		2		2	
3:45-4:00pm		2				2	2		6		1		1	1
Total 2 hr. 2:00-4:00pm	15	21	0	0	18	11	13	1	79	1	18	1	17	11
<b>8/27/19 4-6pm</b>														
4:00-4:15pm	3	3			2		1		9		3		1	
4:15-4:30pm	1						1		2					
4:30-4:45pm	2				1			1	4		1		1	
4:45-5:00pm	1				2			3	6					
5:00-5:15pm		1			1	1			3					
5:15-5:30pm		1	1						2		1			
5:30-5:45pm		2				1		1	4					
5:45-6:00pm	1		1			2			4					
Total 2 hr, 4:00-6:00pm	8	7	2	0	6	4	2	5	34	0	5	0	2	0
Grand total all count	45	40	2	0	59	22	64	31	263	13	41	3	42	38





MATCHLINE  
SEE SHEET 2

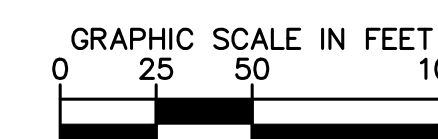
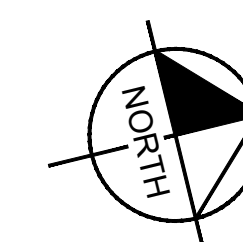




MATCHLINE  
SEE SHEET 1



MATCHLINE  
SEE SHEET 3

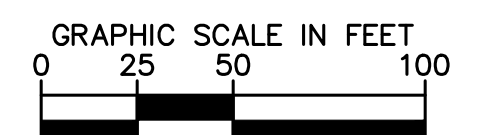
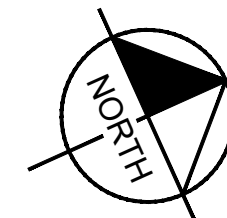




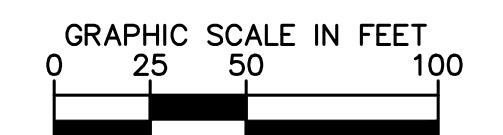
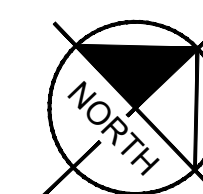


MATCHLINE  
SEE SHEET 2

MATCHLINE  
SEE SHEET 4









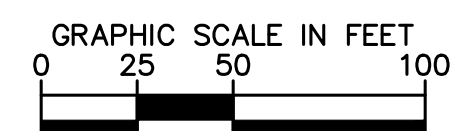
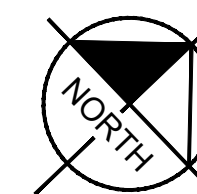
MATCHLINE  
SEE SHEET 4



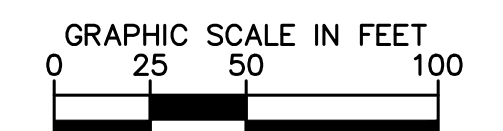
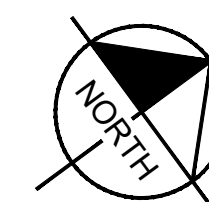
MATCHLINE  
SEE SHEET 6

WINCHESTER BOULEVARD COMPLETE STREETS IMPROVEMENTS  
BLOSSOM HILL ROAD TO KNOWLES DRIVE  
CONCEPT PLAN  
SHEET 5 OF 9  
FEBRUARY 2020

Existing Conditions Base Map











MATCHLINE  
SEE SHEET 6

WILD WAY

NEWELL AVE

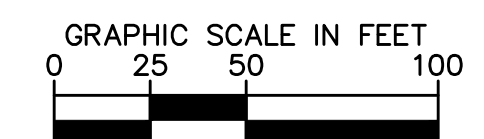
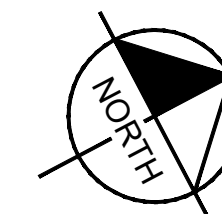
LARK AVE

WINCHESTER BLVD

NEWELL AVE

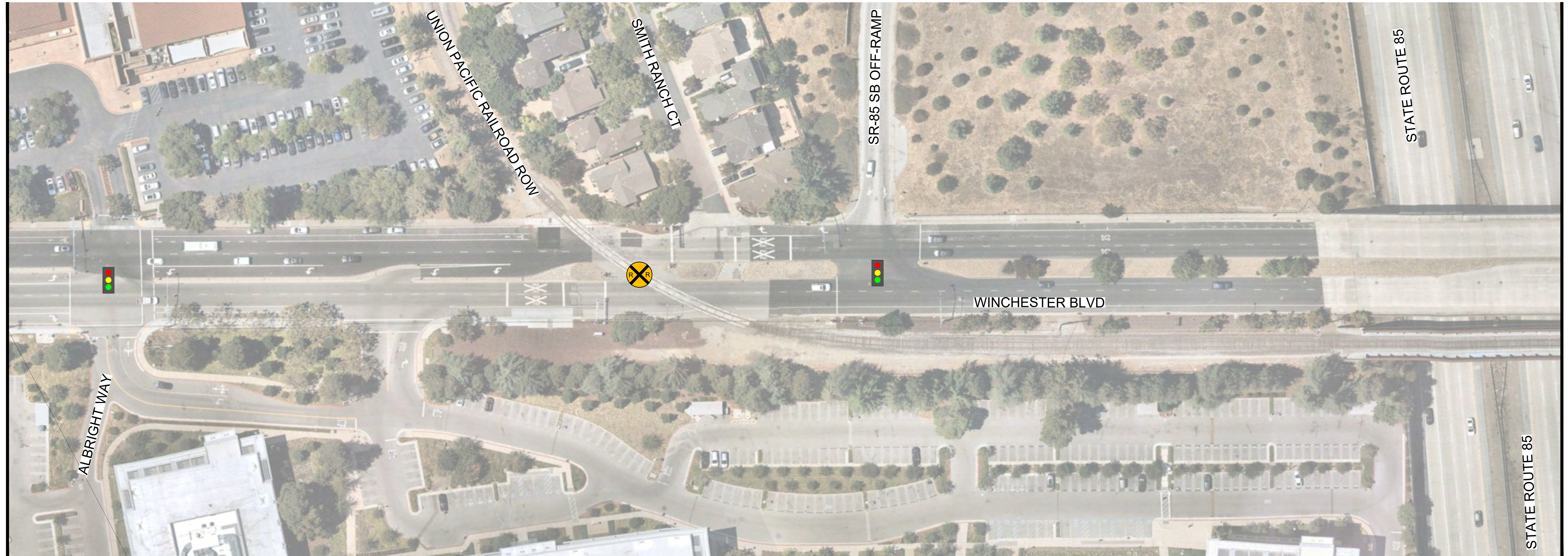
WIMBLEDON DR

MATCHLINE  
SEE SHEET 8





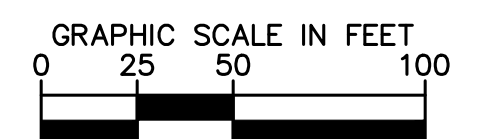
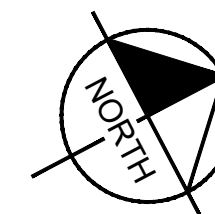
MATCHLINE  
SEE SHEET 7



MATCHLINE  
SEE SHEET 9

WINCHESTER BOULEVARD COMPLETE STREETS IMPROVEMENTS  
BLOSSOM HILL ROAD TO KNOWLES DRIVE  
CONCEPT PLAN  
SHEET 8 OF 9  
FEBRUARY 2020

Existing Conditions Base Map







WINCHESTER BOULEVARD COMPLETE STREETS IMPROVEMENTS  
 BLOSSOM HILL ROAD TO KNOWLES DRIVE  
 CONCEPT PLAN  
 SHEET 9 OF 9  
 FEBRUARY 2020

Existing Conditions Base Map

