



School Safety Assessment Technical Memorandum

Dublin High School

815 Village Parkway, Dublin, CA 94568

Dublin Unified School District

October 2022



The Alameda County Safe Routes to Schools Program is a program of the Alameda County Transportation Commission (alamedactc.org) and is funded with Alameda County's local sales tax Measure B, regional, state and federal funds.

Dublin High School


A school safety assessment was conducted at Dublin High School in the City of Dublin during the afternoon dismissal on Tuesday, October 4, 2022. The assessment was attended by representatives from the City of Dublin, Alameda County Safe Routes to Schools staff, and Dublin High School staff and Caregivers.

Participants included:

- Oliver Castillo, Engineer, City of Dublin Public Works
- Maureen Byrne, Principal, Dublin High School
- Jasmine Law, School Site Coordinator, Alameda SR2S team
- Valerie Haines, Alameda County SR2S team
- Ben Frazier, Planner, Alameda County SR2S team
- Jesús Contreras, Planner, Alameda County SR2S team
- One School parent
- One High School student

School Information

Location & Enrollment

	Address:	815 Village Parkway, Dublin, CA, 94568
	Morning Bell(s):	Period 0: 7:15 am 1 st Period: 8:30 am
	Afternoon Bell(s):	<p>Monday:</p> <ul style="list-style-type: none"> • 6th Period: 2:47 pm • 7th Period: 3:45 pm <p>Tuesday/Thursday</p> <ul style="list-style-type: none"> • 5th Period: 2:05 pm • 7th Period: 3:47 pm <p>Wednesday/Friday</p> <ul style="list-style-type: none"> • 6th Period: 2:50 pm <p>Modified Friday Schedule</p> <ul style="list-style-type: none"> • 6th Period: 3:21 pm <p>Minimum Day</p> <ul style="list-style-type: none"> • 6th Period: 12:10 pm • 7th Period: 12:46 pm


		Modified Day <ul style="list-style-type: none"> 6th Period: 1:35 pm 7th Period: 2:21 pm
	Grade Levels:	Grades 9-12
	Enrollment:	3,286
	School Type (neighborhood/magnet/charter):	Neighborhood






Student Travel Data


Students' Proximity to School (school estimate):	Less than ¼ mile (5-min. walk): 9% Between ¼ and ½ mile (5-10-min. walk): 6% Between ½ and 1 mile (10 to 20-min. walk): 14% Greater than 1 mile (more than 20-min. walk): 71%
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Student Travel Mode Info:	School Estimate:	Recent SR2S Hand Tally Data: Spring 2019
	Walking: 30%	Walking: 25%
	Biking: 10%	Biking: 4%
	School bus: 0%	School bus: 0%
	Transit: 15%	Transit: 7%
	Carpool: 15%	Carpool: 13 %
	Family Vehicle: 30%	Family Vehicle: 61%
	Other: 0%	Other: 2%

Bikes, Buses, and Drop-off/Pick-up

Does the school have bike racks? What is the capacity? Is it secure bike parking?		There is bicycle parking (schoolyard style racks) that can fit about 60 bikes near the Brighton Drive and Callan Street intersection. This area was full of bikes.
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<p>On a typical day, what percentage of racks are used?</p>		<p>There are 8 bicycle U-racks near the main office that can fit 16 bikes.</p> <p>This parking area was full.</p>
		<p>There are 24 bicycle U-racks behind the main office near the baseball field that can fit 48 bikes.</p>
<p>Do local transit agencies serve the school? Are there stops within ¼ mile?</p>		<p>Two bus stops in front of the school on Village Parkway are serviced by four different bus routes – 501, 502, 503 & 504.</p>
<p>Does the school have special pick-up/drop-off policies/ procedures?</p>		<p>The Village Parkway parking lot has four driveways. During release times, the driveway nearest the school building is closed. Cars can exit from three of the driveways but only enter through two of the driveways.</p>
		<p>Drivers entering the southeast parking lot on Brighton Dr circulate counter-clockwise. Drivers enter at the driveway closest to Langmuir Lane and exit at the driveway closest to the school building. Left turns are prohibited out of the exit driveway.</p>

		<p>There is a crossing guard at Brighton Drive and Callan Street that facilitates the flow of traffic on Brighton Drive and the students crossing at Callan Street.</p>
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Note: Dublin High School is not served by a school bus

Street Profiles

Street Name	Width	Lanes	Posted Speed Limit	Traffic Volumes	Notes
Brighton Drive	50 feet	2 lanes	25 mph	ADT=3,700 (2019)	
Village Parkway	80 feet	4 lanes	35 mph	ADT=10,800 (2022)	Bus route, center median, and bike lane.

Pedestrian- and Bicycle-Involved Collision Summary 2016-2020

The collision summary table shows all bicycle- and pedestrian-involved collisions within one-half mile of the school. These collisions may or may not be school-related travel.

Radius from School	Total Collisions	Fatal Collisions	Severe Injury Collisions	Visible Injury Collisions	Complaint of Pain Collisions	Pedestrian Collisions	Bicycle Collisions
< ¼ mi	4	0	0	0	4	2	2
¼ mi – ½ mi	4	0	0	3	0	2	2
Total	7	0	0	3	4	4	4

Source: UC Berkeley – Transportation Injury Mapping System, Safe Transportation Research and Education Center, University of California, Berkeley, 2021

Community Health and Demographics (Data from the census tract of school site)

<u>Percent of Students Eligible for Free or Reduced Priced Meals ('20-'21 school year)</u>	<u>MTC Equity Priority Community Designation (2018)</u>	<u>Healthy Places Index Score (2021)</u>	<u>CalEnviroScreen 4.0 Percentile (2021)</u>
7.4%	Not Applicable	82.1 Percentile	17

Sources: California Department of Education, Metropolitan Transportation Commission, Public Health Alliance of Southern California, and California Office of Environmental Health Hazard Assessment

Existing Conditions

Overview

Dublin High School is located in a residential neighborhood east of I-680 and north of I-580. Village Parkway, a 4-lane arterial with a center median, a bicycle lane, and four transit lines, runs along the west side of the school. Brighton Drive, a two-lane collector street, runs on the south side of the school. The Iron Horse Regional Trail and the South San Ramon Creek runs behind the school, separating the campus from the adjacent residential neighborhood. School users can access the trails via the sports fields, but there is no formalized connection between the trail and the residential neighborhood to the east. However, the Iron Horse Nature Park and Open Space project will provide a connection from the Iron Horse Trail to Stagecoach Park. Murray Elementary, Dublin Elementary, Wells Middle Schools, and Kolb Park are all within a half mile of Dublin High School.

Two bus stops in front of the school on Village Parkway serve four bus routes – 501, 502, 503, and 504. During the observation, many students took transit buses during school release times. The buses along Village Parkway have dedicated school trips, and school staff helps to facilitate students' boarding.

A bike lane conflicts with the bus stop and the passenger loading zone just ahead of the bus stop. The busses stop in the bike lane to load passengers, and because they wait for the school release bell, they wait in the bike lane for an extended time period. Additionally, drivers pulling over in the loading zone ahead of the bus stop also obstruct the bike lane. Consequently, cyclists choose to ride on the sidewalk.

Dublin High School has two parking lots, one along Village Parkway and one along Brighton Drive. Both lots require a school permit to park during school hours. The Village Parkway parking lot has four driveways. One of the driveways is closed during the release time. Drivers can exit from three of the driveways and enter from two of the driveways. This strategy allows buses to exit the loading zone more easily because the driveway nearest the bus stop is closed.

Drivers accessing the southeast parking lot enter through the driveway closest to Langmuir Lane and exit through the driveway closest to the school building. Creating a counter-clockwise circulation. Exiting vehicles are prohibited from turning left onto Brighton Drive.

At the Brighton Drive and Callan Street intersection, a crossing guard helps facilitate the flow of vehicles and pedestrians.

Dublin High School is less than half a mile away from Amador Valley Boulevard, which has been identified by Alameda County Transportation Commission as a Pedestrian and Bicycle High-Injury Network. Village Parkway has been identified as part of the Bicycle High-Injury Network.

Observations

Participants observed or reported the following conditions during the school safety assessment (SSA).

1. Davona Drive and Village Parkway Intersection (*Corresponds to #1 on improvement map*)

- ◆ The Davona Drive and Village Parkway intersection is signalized and has high-visibility crosswalks at all four crossings.
 - One of the approaches is a school parking lot driveway. The driveway is configured with a single-entry lane, and two exit lanes (left turn only and thru/right). This is the only driveway that provides for left turns from the parking lot.
- ◆ Davona Drive provides direct ingress and egress from the school parking lot.
 - During the dismissal observation, there was less vehicle backup at this exit compared to the driveways on Village Parkway due to the long double approach lanes that feed the driveway along the east side of the parking lot.
- ◆ During the observation, vehicles were seen speeding along Village Parkway to catch the green light and make it through the intersection.
- ◆ On Village Parkway, U-turns are allowed at both approaches to Davona Drive.
 - During the observation, drivers made U-turns from both directions.
 - Drivers making U-turns from the northern approach frequently pulled over in front of the church on the northeast corner of the intersection to pick up students. From multiple drivers doing this, the curb space filled up.
 - Parking is not permitted along this curb.
 - Drivers that pulled over here obstructed the bicycle lane.
- ◆ There is a bus stop south of the intersection served by the 501, 502, and 504 Wheels lines.
 - Many students walked across the parking lot and along the Village Parkway sidewalk to reach this bus stop.



Left: Southeast corner of Davona Drive and Village Parkway intersection facing north.



Right: Bus and vehicles blocking the bike lane on Village Parkway.



Left: Southeast corner of Davona Drive and Village Parkway intersection facing northwest.



Right: On Village Parkway, north of Davona Drive, this is the location where vehicles pull over in front of the church to pick up students in the bike lane (loading not pictured).

Recommendations:

The following infrastructure recommendations are proposed to improve the existing conditions described above:

- Construct new: Bulb-outs with bike channels at all corners to tighten the turn radii and reduce crossing distance without obstructing the bike lane.
- Construct new: Raised crosswalk across the parking lot driveway.
- Install new: Leading pedestrian intervals for all crossing phases.
- Install new: Protected bike lane along Village Parkway north of Davona Drive (consistent with the 2023 Active Transportation Plan).

2. Village Parkway Between Davona Drive and Brighton Drive *(Corresponds to #2 on improvement map)*

- ◆ Village Parkway is an 80-foot, four-lane arterial road with a center median and bike lanes in both directions of travel.
- ◆ During the observation, busses were seen arriving before the release bell and waiting for students to exit. There was a school staff on site who was helping students board the bus.
 - During the observation, four buses were waiting at the Village Parkway and Brighton stop at the same time. This stop is serviced by the following bus routes: 502, 503, and 504.
 - During the observation, buses parked along the curb obstructed the bike lane causing some people biking to ride on the sidewalk instead of the vehicle lane congested with drivers from the pick-up queue.
- ◆ There are three driveways along Village Parkway that provide access to the school parking lot.
 - The parking lot driveway on Village Parkway nearest the school is closed during the school release time.
 - Many students walk along Village Parkway and cross the closed driveway (high pedestrian-volume area).
 - During the observation, some vehicles were seen stopped in front of the closed driveway and picking up students.
- ◆ The sidewalk along the eastern side of Village Parkway was uneven due to the root growth of street trees.
- ◆ The middle driveway is used as an exit only.
 - During the observation, there was a long queue of drivers waiting to exit the lot at this driveway.
 - Instead of stopping before the driveway, drivers stopped on the sidewalk (to look for opposing traffic and wait for space) and blocked the walkway.
 - During the observation, students weaved through the idling vehicles as they walked through the parking lot.
- ◆ The driveway furthest from the school is open to drivers entering and exiting the parking lot.
 - During the observation, there was a queue of vehicles waiting to exit the parking lot.
 - Instead of stopping before the driveway, drivers stopped on the sidewalk (to look for opposing traffic and wait for space) and blocked the walkway.
- ◆ Along the east side of Village Parkway, just beyond the bus stop, there is a white curb area where drivers pull over to pick up students. There is a bike lane that runs along this curb.
 - Drivers stopped along the curb and obstructed the bicycle lane.
 - During the observation, drivers idled in the travel lane as they waited for a spot on the curb and obstructed the buses trying to pull away from the curb.



Left: Backup of vehicles exiting the parking lot as they turn right onto Village Parkway.

Right: Vehicles waiting in the loading zone on the eastern side of Village Parkway obstructing the bike lane.



Left: Sign closing the entrance at the middle driveway.

Right: Students ride their bikes on the sidewalk because the bike lane is obstructed by buses and vehicles.



Left: Uneven sidewalk due to root growth from the street tree.



Right: Wheels bus obstructing the bike lane as it loads passengers.

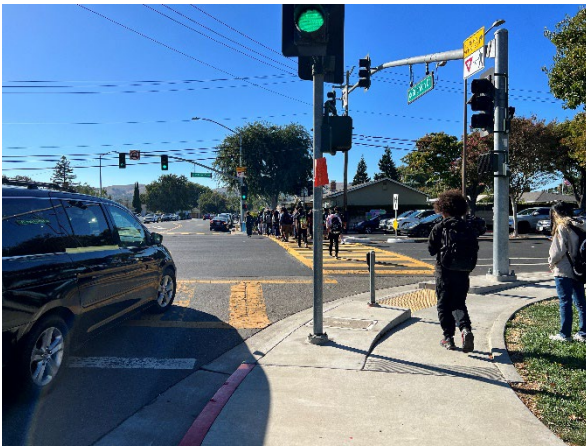
Recommendations:

The following infrastructure recommendations are proposed to improve the existing conditions described above:

- Refresh existing: Repave uneven sidewalks on the eastern side of Village Pkwy between the Davona Dr. bus stop and the southern parking lot driveway.
- Install new: Red curb along the eastern side of Village Parkway.
- Consistent with the 2023 Active Transportation Plan, conduct a complete streets study for a separated bikeway. Incorporate bus boarding islands in the separated bikeway design as appropriate.

3. Village Parkway and Brighton Drive intersection (*Corresponds to #3 on improvement map*)

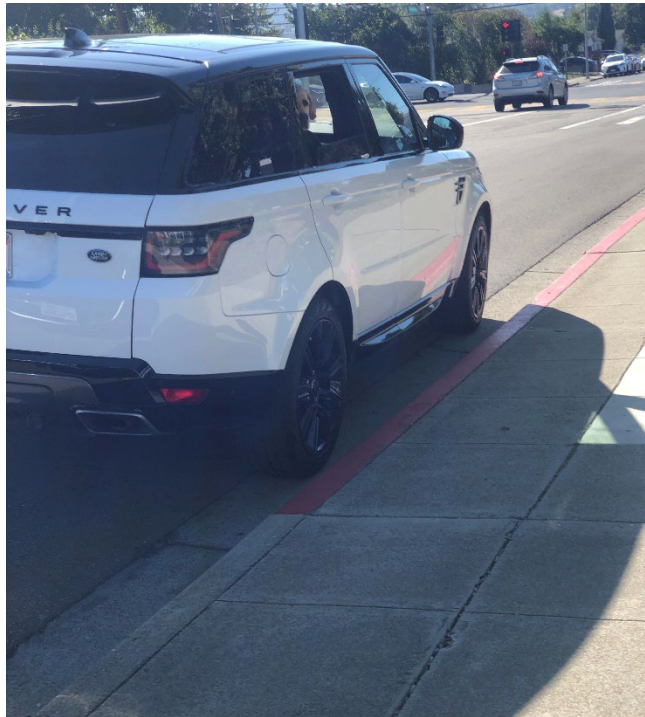
- ◆ This is a signalized intersection with high-visibility crosswalks at all crossings.
- ◆ Both approaches of Brighton Drive have right-turn lanes.
 - U-turns are not allowed from Brighton Drive approaches.
- ◆ U-turns are allowed at both ends of Village Parkway.
- ◆ During the observation, drivers idled along the red curb area on the northeast side of Brighton Drive.
- ◆ Large groups of students cross at this intersection heading west across Village Parkway.
 - Students were seen running into the crosswalk as the countdown timer ticked down to cross during that signal phase.



Left: Vehicle turning right onto Village Parkway and stopped in the crosswalk while students were crossing.



Right: High-visibility crosswalk across the eastern end of Brighton Drive



Above: A driver stopped along the red curb near the northeast corner of Brighton Drive and Village Parkway to wait for their students.

Recommendations:

The following infrastructure recommendations are proposed to improve the existing conditions described above:

- Install new: Leading pedestrian intervals for all crossing phases.
- Install new: Bulb-outs with bike channels at all corners to provide more waiting space for pedestrians.

4. Brighton Drive and Callan Street intersection (*Corresponds to #4 on improvement map*)

- ◆ Callan Street and Brighton Street is a three-way stop-controlled T-intersection.
- ◆ On the school property along the intersection, there is a bike parking area with 20 bike racks that can fit 40 bikes.
 - During the observation, the bike parking was filled.
 - School staff reported there was insufficient bike parking on campus.
- ◆ There are high-visibility crosswalks at all three crossings with red curbs on each side of them.
- ◆ West of the crosswalks on the northern side of Brighton Drive, there is an emergency vehicle driveway with a red curb.
 - In between this driveway and the red curb next to the crosswalk, there is a parking spot.
- ◆ East of the crosswalk on the northern side of Brighton Drive, there are two disconnected white curb segments with lengths of 40 and 45 feet, respectively.
 - There is no signage for the white curbs.
- ◆ A crossing guard helps facilitate the flow of drivers and students through this intersection.
 - During the observation, there were large numbers of students crossing at this intersection.
 - The crossing guard helped meter the flow of students and drivers through the intersection.
 - For the most part, students followed the crossing guards' instructions. Only a few students were seen crossing without the crossing guard's permission (They did legally cross as vehicles stopped at the stop sign, but the crossing guard wanted to group students together).



Left: Students crossing Brighton Drive at Callan Street heading south.



Right: White car parked on the red curb near the crosswalk obstructing the visibility of crossing pedestrians.



Above: Disconnected white curb areas on the northern side of Brighton Drive east of Callan Street.

Recommendations:

The following infrastructure recommendations are proposed to improve the existing conditions described above:

- Install new: Advanced stop bars on Brighton Drive at both approaches to Callan Street.
- Install new: School Zone signs along Brighton Drive.
- Install new: Loading zone with adequate signage extending 180 feet from the crosswalk at Callan Street to connect the two disconnected white curbs.
- Install new: Red curb on the western side of Brighton Drive between the Callan Street crosswalk and the emergency vehicle driveway; removing the existing parking spot.
- Install new: Additional bike racks at the existing bike cage.
- Construct new: Curb extensions at street crossings

5. Southeast Parking Lot *(Corresponds to #5 on improvement map)*

- ◆ Drivers circulate counter-clockwise inside the parking lot.
 - There are two driveways for the parking lot.
 - Drivers enter through the second furthest driveway from the school building and exit from the driveway closest to the school. Exiting vehicles are expected to make a right turn onto Brighton Drive.
- ◆ School staff reported there is usually a school staff member at the exiting driveway, ensuring vehicles turn right. This avoids conflicts with on-coming vehicles entering the lot through the eastern driveway.
 - Only a few drivers made a left turn.
- ◆ Some students were seen riding bikes through the parking lot.
- ◆ There is a red curb area along the northern edge bordering the school.
 - Drivers stopped along the red curb waiting to pick up students.
- ◆ There is a loading zone on the western edge of the parking lot along the red curb.
- ◆ During the observation, drivers stopped on the sidewalk as they exited the parking lot (to watch for oncoming traffic) and blocked the walkway.
- ◆ There is a large tree along the western side of the exiting driveway obstructing the stop sign.



Left: Loading zone on the western edge of the parking lot.

Right: Western parking lot driveway where vehicles exit and turn right onto Brighton Drive.



Left: Red curb along the northern edge of the parking lot where vehicles stopped to pick up students.

Right: Aerial view of the parking lot with directional arrows showing where and how vehicles enter and exit.

Recommendations:

The following infrastructure recommendations are proposed to improve the existing conditions described above:

- Refresh existing: Trim trees along the exit driveway to improve the visibility of the street signage.
- Install new: Yield Here To Pedestrian signs at the parking lot exit.

6. Connection to Iron Horse Trail Behind the School *(Corresponds to #6 on improvement map)*

- ◆ Behind the school, between the baseball field and the football field, there is a connection to the Iron Horse Trail via a pedestrian bridge across Coyote Creek.
 - During the observation, there were 10 students walking and 15 students biking through to the trail.
- ◆ Access to the school is controlled by a gate that is locked during school hours.
- ◆ Between the bridge and the gate, there is a gravel path and a parallel gutter.



Left: Unpaved trail running on the left side of Coyote Creek



Right: School bike racks closest to the Iron Horse Trail, located east of the baseball field

Recommendations:

The following infrastructure recommendations are proposed to improve the existing conditions described above:

- Programmatic: Clean up trash in the storm gutter
- Install new: Add more bike racks

Participant Comments

School staff and parents who attended the assessment were primarily concerned with students crossing Brighton Drive at Callan Street and the buses and vehicles stopping on Village Parkway. Participants highlighted the large number of students who depend on the Wheels buses to get to and from school. Participants also noted the heavy congestion along Village Parkway that occurs as students are released and when the Wheels buses and drivers pull over on the curb. As a result, the northbound bike lane gets obstructed, causing some students to ride on the sidewalk. Although this event only lasted for 20 minutes after the school release, the bike lane in front of the school was unusable during this time. The City's Bike Plan calls for a complete street study along the segment of Village Parkway Between Amador Valley Blvd. and Davona Dr. to identify possibilities for a separate or protected bike facility. Proposals for an improved bike facility should minimize service impacts to Wheels buses.

On Callan Street, the crossing guard facilitated the flow of drivers and students through the intersection. Here, participants were concerned with the large number of students crossing the street and drivers rolling through the stop. During the observation, the crossing guard did a good job of ensuring students crossed safely while also moving vehicular traffic. At times, the crossing guard would let multiple cars go at once and stop students until a large crowd formed. At times, some students would cross without the crossing guards' permission, when vehicles had come to a stop.

School staff also reported an insufficient supply of bicycle parking on campus. During the observation, all the bike parking facilities were at or close to capacity. The recommendations include adding bike parking to the rear side of campus near the baseball field. The school should also identify an additional site for more bike parking.

City staff highlighted the need to trim the trees in the southeast parking lot and place more pedestrian signage near driveways.

Recommendations

Engineering Recommendations

Recommendations to improve infrastructure or operations surrounding Dublin High School can be seen on the conceptual improvement plan found following this memo.

Policy & Program Recommendations

In addition to engineering improvements, the Alameda County Safe Routes to Schools Program has many encouragement and educational activities that can benefit students and the campus community at Dublin High School.

The School Site Coordinator for Dublin High School is Cairo Moore. The Site Coordinator can help schedule, organize, and promote many of the program offerings of Alameda County SR2S. The contact information for the Site Coordinator is below:

Cairo Moore, cmoore@alamedacountysr2s.org

Please do not hesitate to reach out to the Site Coordinator if you have any questions or concerns or if you wish to move forward with additional programming activities.

Programs

The following improvements are recommendations for policy and program implementation at Dublin High School to increase safety and active commutes to school.

- ◆ Develop Walk and Bicycle Route Maps
 - The SR2S Program can create recommended Walk and Bicycle Route Maps. These maps illustrate preferred routes to school for walking and biking and provide safety tips to encourage better travel behavior.
 - These maps can also be used as a part of Walking School Buses (WSBs), Bicycle Trains (BTs), or other Walk and Roll to School activities. Park and Walk, WSB, and BT meeting locations are also shown on these maps where appropriate.
- ◆ Encourage and Help Facilitate Carpooling
 - The SR2S Program can assist schools in working with parents to connect them with other families who live nearby to increase the number of students carpooling. This can reduce congestion by reducing the number of vehicles coming to campus.
- ◆ Encourage Parents to Park and Walk from Designated Locations
 - Potential park and walk locations have been identified on the Improvement Plan Map.
 - Kolb Park
 - Davona Drive west of Village Parkway
 - The school should encourage parents to utilize these locations to reduce congestion in and near existing drop-off/pick-up locations.
- ◆ Participate in International Walk and Roll to School Day (IRW2SD), and Bike to School Day (B2SD)
 - These are the three main countywide encouragement events that occur throughout the academic year. All schools can participate in International Walk and Roll to School Day, held in October every year. All schools can also participate in Bike to School Day, held in tandem with Bike to Work Day, which encourages schools to sponsor Energizer Stations and students and families to bike to school.

Safe Routes to Schools Improvement Plan
Dublin High School
Dublin

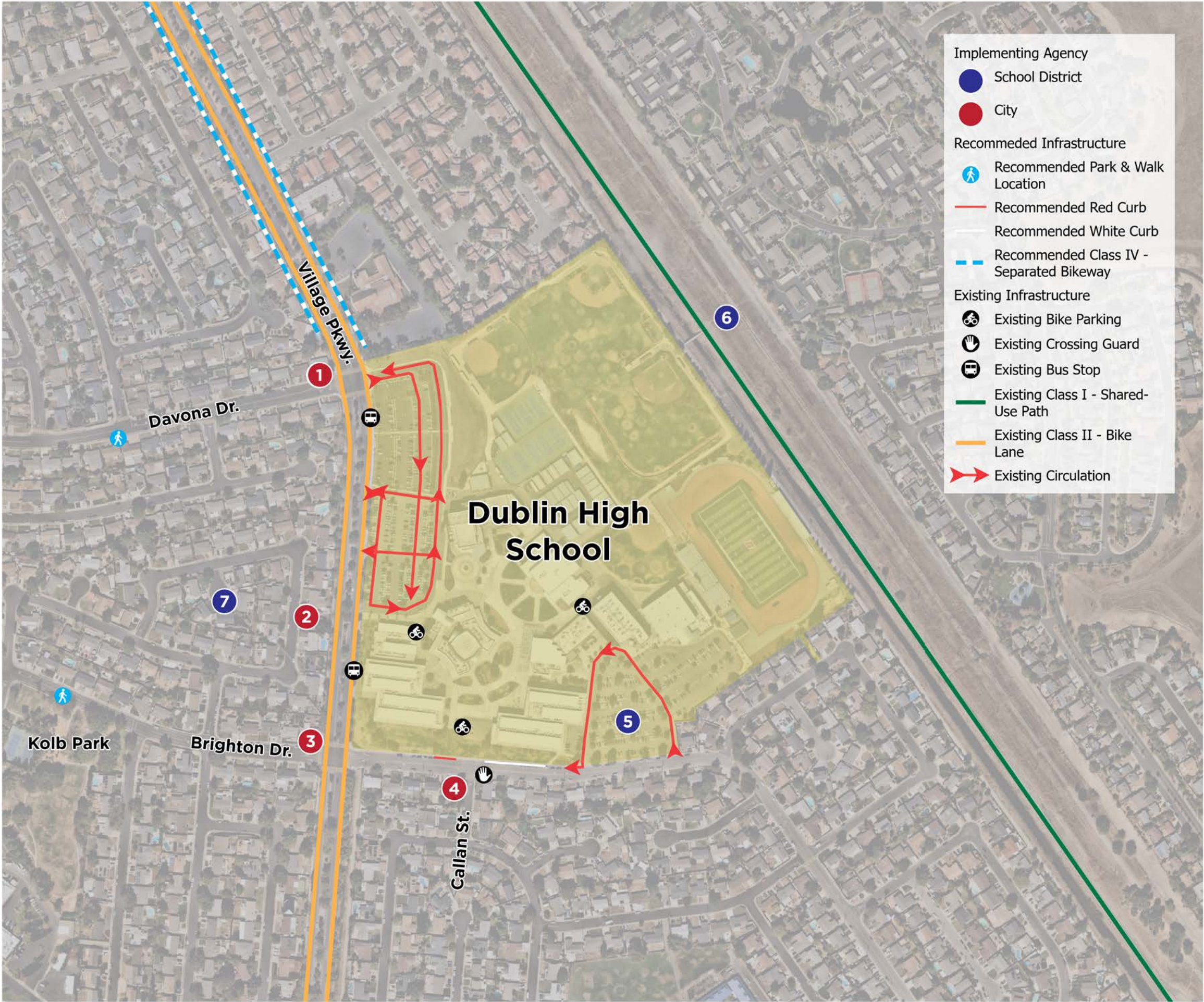
School Safety Assessment held October, 2022

Improvement Detail

- 1a. Install curb bulb-outs (focus on tightening corner radii) with bike channels at all corners at Village Pkwy. and Davona Dr.
- 1b. Provide a leading pedestrian interval for all crossing phases at Village Pkwy. and Davona Dr.
- 1c. Install a protected bike lane along Village Pkwy north of Davona Dr.
- 2a. Repave uneven sidewalk on the eastern side of Village Pkwy. between the Davona Dr. bus stop and the southern parking lot driveway
- 2b. Install a red curb along the eastern side of Village Pkwy.
- 2c. In compliance with the 2023 Active Transportation Plan, conduct a complete streets study for a separated bike facility along Village Pkwy from Amador Valley Blvd. to Davona Dr. Incorporate bus boarding islands into the separated bikeway design as appropriate.
- 3a. Provide a leading pedestrian interval for all crossing phases at Village Pkwy. and Brighton Dr.
- 3b. Install bulb-outs (focus on providing additional waiting space for pedestrians) with bike channels at all corners at Village Pkwy. and Brighton Dr.
- 4a. Install advanced stop bars at the Brighton Dr. approaches to the Brighton Dr./Callan St. intersection (Callan St. approach already has a stop bar)
- 4b. Install "School Zone" sign prior to the Callan St. approach
- 4c. Install a loading zone with adequate signage on the northern side of Brighton Dr. extending 180 ft. east from the crosswalk at Callan St. (connecting the two existing white curb areas)
- 4d. Install curb extensions at all crosswalk landings on Callan St. and Brighton Dr.
- 4d. Install a red curb on the northern side of Brighton Dr. extending 60 ft. west of the crosswalk at Callan St.
- 5a. Trim trees in the southeast parking lot near the exit driveway
- 5b. Install a "Yield Here to Pedestrians" sign at the driveway exit
- 6a. Clean up trash in the storm gutter.
- 7a. Consider designating Kolb Park as a park and walk location
- 7b. Consider designating Davona Dr. west of Village Pkwy. as a park and walk location

Universal Recommendations

- U1 Install additional bike parking at all existing bike parking facilities where feasible.



The above items are recommendations only and based on Safe Routes to Schools site assessment best practices. Feasibility determination, final design, accessibility, funding, and implementation of any recommended improvements is the responsibility of the appropriate governing agency.
**Red curb and/or parking restriction signage should be provided between advance stop/yield markings and the crosswalk. Exact red curb distance should be determined in accordance with the CA-MUTCD and City policies/standards. Red curb not symbolized on map.
This figure is intended only for reference, conceptual planning, and informational purposes. This figure should not be used to establish boundaries, property lines, location of objects, or to provide any other information typically needed for final design, construction or any other purpose when engineered plans are required.