# Walk Audit Report


SafeRoutes
Napa County

NEW TECHNOLOGY
HIGH SCHOOL

# NEW TECHNOLOGY HIGH SCHOOL

## 920 YOUNT STREET NAPA, CA

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# EXECUTIVE **SUMMARY**

## THE NAPA COUNTY SAFE ROUTES TO SCHOOL PROGRAM

The Napa County Safe Routes to School (SRTS) Program is a partnership between the Napa County Office of Education (NCOE), Napa County Bicycle Coalition (NCBC) and Napa Valley Transportation Authority (NVTA). Since 2008, the Program has provided high-quality bicycle and pedestrian safety education and encouragement programs and has worked closely with the public agency and school stakeholders to make walking and bicycling safer and more accessible for children throughout Napa County.

According to 2015 California Office of Traffic Safety (OTS) data, the data available when the SRTS program was applying for grant funding, Napa County ranked 1st in per capita number of collisions of bicyclists under the age 15, 2nd in total fatal and injury-causing collisions, and 3rd in overall pedestrian collisions. According to the most recent OTS data (2018), Napa County ranked 8th for bicyclist collisions statewide (58 counties), 7th for speed-related collisions, and 6th for total fatal and injury-causing collisions. A decades-long decline in the number of students walking and biking to school, as well as increased awareness of the significant traffic congestion, air pollution, and related issues associated with students being driven to school galvanized local agency partners to expand the existing program.

> The goal of the Walk Audit Report is to **identify, evaluate, prioritize, and offer solutions** to infrastructure and non-infrastructure barriers to students safely walking and biking to school in Napa County.

In 2017, the Napa County SRTS program secured funding through the Caltrans Active Transportation Program (ATP) and One Bay Area Grant (OBAG) Cycle II programs to expand education programs and initiate a series of evaluations at each public school countywide. NCOE has been leading education and engagement programs under the current program, while NCBC has led evaluations of active transportation barriers at all 36 school sites.

## WHY SAFE ROUTES TO SCHOOL?

Safe Routes to School is national initiative committed to increasing the number of students who walk or bike to school, and making it safe, convenient, and fun for kids to do so. In doing so, SRTS aims to improve kids' safety and increase health and physical activity. Concerned by the declining number of students walking and biking to school over recent decades and the related long-term health and traffic consequences, Congress made federal funding available for SRTS programs nationwide in 2005. Since then, SRTS programs have been implemented at more than 14,000 schools in all 50 states.

Studies have linked SRTS programs to increased walking and biking to school[ab] and reduced pedestrian-motorist collisions[cd]. This can lead to safer, healthier, and more focused students, while also benefitting local and school communities.

Regularly walking or biking increases children's daily levels of physical fitness and improves their cardiovascular health[e].

Student health has been linked to improved academic performance[fg]. When students walk or bike to school, the fresh air and exercise allow them to arrive refreshed, energized and ready to focus. Children have a greater sense of spatial awareness and knowledge when they are actively engaged in their transportation, allowing them to better recognize and navigate their neighborhoods independently[h]. Families are also provided with a low-cost transportation option that can significantly reduce their annual expenses[i].

When a greater share of students walk or bike to school, local and school communities benefit too. Fewer cars being driven to school can improve the air quality of surrounding neighborhoods by decreasing air pollutant emissions and increase street safety through reduced traffic congestion and noise pollution. This can also improve campus safety and reduce circulation hazards around the school site. Walking or biking is a reliable form of transportation, which can reduce student absence and tardiness. By reducing the number of short-distance school bus trips, increased student walking and biking can also help school districts save funds by decreasing costly bus service.



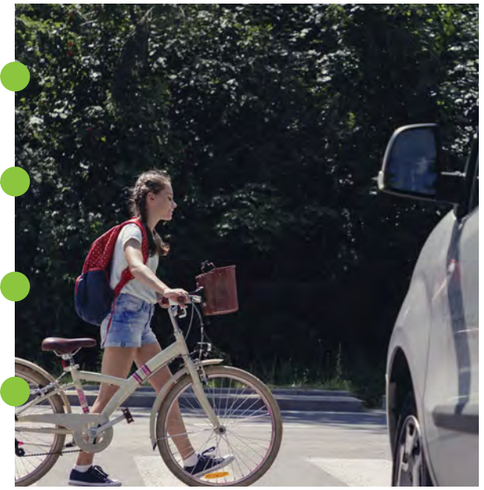
Schools and the community benefit immensely when students choose to walk or bike.

Student health has been linked to improved academic performance.

Walking or biking can provide a reliable form of transportation, leading to reduced student absence and tardiness.

Children arrive ready to learn and are less likely to experience discipline issues.

Fewer cars dropping off and picking up students improves campus safety and reduces circulation hazards.



## THE SIX E'S

Safe Routes to School programs originally followed a comprehensive approach that addressed the "Five E's" – education, encouragement, enforcement, evaluation, and engineering. In 2017, when the Napa County SRTS program obtained funding to perform Walk Audit evaluations, the "Five E's" had recently been altered to add a sixth "E" – equity. In June 2020, after a significant portion of the Walk Audit evaluation work had been completed, the "Six E's" framework was again altered, dropping enforcement and adding engagement. These changes were led by the Safe Routes to School National Partnership.

The current "Six E's" framework is described below. Although enforcement is no longer one of the "Six E's", a brief definition of enforcement is included, as it was part of the approach used by the Napa County SRTS program during the majority of the Walk Audit evaluation process. Enforcement statistics are not emphasized in this report, as this element needs more study and review.

### Engagement
Listen to community members and work with existing community organizations.

### Equity
Recognize the unique barriers that different people face in living healthy, fulfilled lives, and craft policies, programs, and overall approaches with those various challenges and needs in mind.

### Engineering
Design streets and schools for walkers and bikers to use safely and conveniently.

### Encouragement
Promote walking and biking in the school community through events, programs and incentives.

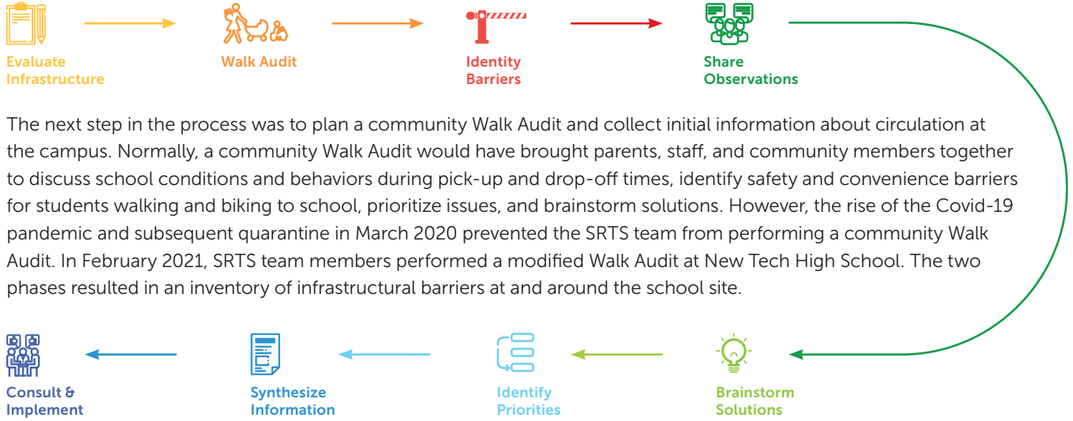
### Education
Ensure that everyone learns how to travel safely and why biking and walking are important.

### Evaluation
Track progress toward our shared safety goals, develop programs accordingly.

**Enforcement (no longer an "E'):**
Enforce traffic safety laws and school policies and target risky behaviors. No longer recommended as foundational to the start, maintenance, or growth of Safe Routes to School programs.

## REPORT PROCESS

The SRTS team conducted a comprehensive evaluation of the barriers to students walking and biking to and from New Tech High School, starting in the summer of 2018. Information on physical and behavioral challenges was collected in two phases. In August 2018, the SRTS team completed an initial infrastructure audit of the school site and the surrounding neighborhood within a half-mile of the school. SRTS team members walked and rode bicycles throughout the school neighborhood, taking photographs of barriers and logging them into Fulcrum, a GPS-enabled data collection smartphone app.




The next step in the process was to plan a community Walk Audit and collect initial information about circulation at the campus. Normally, a community Walk Audit would have brought parents, staff, and community members together to discuss school conditions and behaviors during pick-up and drop-off times, identify safety and convenience barriers for students walking and biking to school, prioritize issues, and brainstorm solutions. However, the rise of the Covid-19 pandemic and subsequent quarantine in March 2020 prevented the SRTS team from performing a community Walk Audit. In February 2021, SRTS team members performed a modified Walk Audit at New Tech High School. The two phases resulted in an inventory of infrastructural barriers at and around the school site.

A report draft was shared with the Napa Valley Transportation Authority, the Napa County Office of Education, public works and planning representatives from the City of Napa, the local school district, law enforcement, and school stakeholders, and their feedback was incorporated into the final version. As part of the larger countywide project, the SRTS team engaged EMC Research, a national public opinion research firm to conduct a comprehensive survey of parents' perceptions around walking and biking to school (see Appendix A). The Walk Audit report outlines the information gathered during this multi-year process and provides recommendations for improvements.



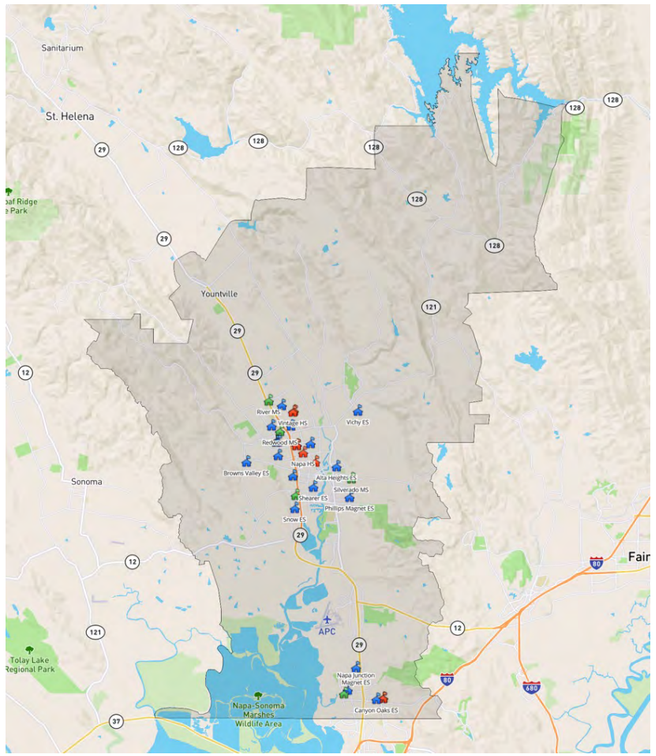
# NEW TECHNOLOGY HIGH SCHOOL
# SCHOOL SUMMARY

| | | | |
|---|---|---|---|
| Principal | Susan Miller | Grades | 9-12 |
| First Bell | 8:00 AM | Enrollment | 396 |
| Last Bell | 3:00 PM (1:50 PM on Wed.) | Street | 920 Yount Street |
| District | Napa Valley Unified | City | Napa, CA 94558 |

**Overall Facility Rating**[j]**: Good**

New Tech utilizes a lottery process for enrollment that is open to both in-district and out-of-district applicants with preference going to Napa Valley Unified School District residents, so its students live primarily, but not exclusively, throughout the Napa Valley Unified School District boundary. Students living farther away from school are often more likely to rely on driving for transportation, which can cause higher vehicular traffic volumes around the school during pick-up and drop-off.

According to the most recent data (2020-21 school year), 94% of New Tech students live in Napa Valley Unified School District boundaries, and 6% live in other districts.




*Map 1: The Napa Valley Unified School District boundaries.*

## DATA

No data is currently available regarding the number of students who walk and bike to the school at New Tech. Additional work is needed to establish a baseline of active transportation use for this school.

Data collected from the countywide EMC Research survey (Appendix A) conducted in Spring 2021 reflects parent perspectives on walking and biking to school for K-8 students only, and therefore cannot be directly applied to New Technology High School.

### Total Enrollment by Group (2019-20)

| ETHNICITY | NEW TECHNOLOGY HIGH SCHOOL | DISTRICT |
|---|---|---|
| Black or African American | 1.8% | 2.1% |
| American Indian or Alaska Native | 0.8% | 0.2% |
| Asian | 1.5% | 2.4% |
| Filipino | 1.0% | 6.9% |
| Hispanic or Latino | 52.8% | 55.6% |
| White | 37.1% | 28.4% |
| Native Hawaiian or Pacific Islander | 0.3% | 0.2% |
| Two or More Races | 4.3% | 4.0% |
| EXPERIENCE | | |
| Socioeconomically Disadvantaged | 42.2% | 51.2% |
| English Learners | 2.3% | 20.5% |
| Students with Disabilities | 7.1% | 12.5% |
| Homeless | 0.8% | 1.1% |

*Figure 1: Enrollment Data by Group*

### Student Enrollment by Grade Level (2019-2020)

| | NUMBER OF STUDENTS |
|---|---|
| Grade 9 | 94 |
| Grade 10 | 104 |
| Grade 11 | 103 |
| Grade 12 | 95 |
| **Total** | **396** |

*Figure 2: Enrollment Data by Grade*



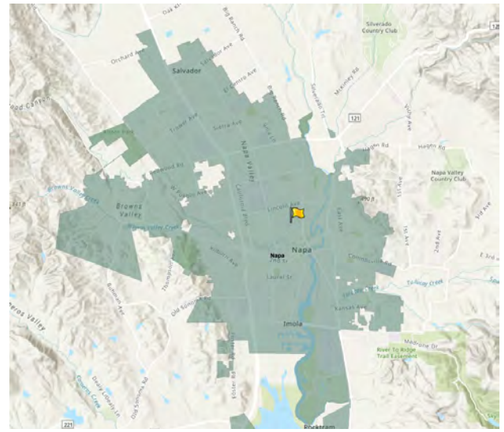
## NEIGHBORHOOD CONTEXT

New Tech High School is located on the north side of the city's Central Planning Area in central Napa, which includes the city's downtown and historic residential neighborhoods. The school is on Yount Street between Yajome Street and Main Street, two collectors. The Rotary of Napa Community Park is just southwest of the campus at the corner of Main Street and Yount Street. The school parking lot is located at the corner of Yount Street and Yajome Street and can be accessed from Yajome Street. There are commercial districts located along Yajome Street to the east of the school, including restaurants, a feed store and car repair shops. Residential neighborhoods surround the rest of the school.

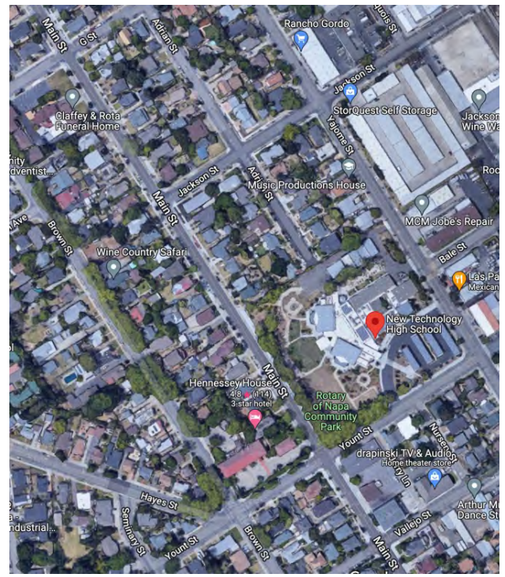
The neighborhoods surrounding the school are traditional residential neighborhoods developed prior to World War II with grid streets with some fragmented parallel streets. A few blocks south lies the downtown district of Napa with many commercial uses, hotels, and government buildings. To the east is a small, fragmented grid leading to the busy commercial district along Solano Avenue. To the west, there are some diagonal streets cutting through an otherwise primarily grid structure.

Yajome and Main Streets, which run north-south on either side of campus are collectors that run from the downtown area to Pueblo Avenue. A few blocks north of the school is Lincoln Avenue, a main east-west arterial that connects to Jefferson Street and Highway 29 to the west and Soscol Avenue and Silverado Trail to the east. Jefferson Street and Soscol Avenue are significant north-south arterials that are both a few blocks away from the school to the west and east, respectively. There are many commercial establishments along all these arterial corridors. One block south, Vallejo Street runs east-west and connects with Soscol Avenue, acting as a collector between Soscol and Yajome.

*Main Street in front of the school, looking south.*




*Map 2: New Tech High School (yellow flag) is located in central Napa (city boundaries shaded blue).*




*Aerial photo of New Tech High School and the surrounding neighborhood.*

# EXISTING **CONDITIONS**

The Safe Routes to School Team conducted an initial evaluation of the school site and surrounding area prior to conducting the Community Walk Audit. The Fulcrum App software was used to map and record significant point and segment issues within a half-mile range of the school. The team also collected information on local and school transportation policies and programs from conversations with the school's staff and administrators, as well as documents from the school and City websites.

## SITE CIRCULATION

New Tech High's main entrance is on the south side of the school and faces Yount Street. Motorists access the school's loading zone in front of the main entrance and the school parking lot from Yajome Street and drive through to exit onto Yount Street. A sidewalk runs along the north side of the parking lot/loading zone lane, allowing pedestrians and bicyclists arriving from the west and north to enter campus without navigating parking lot traffic. There is also a sidewalk and crosswalk connecting campus to the Yount Street sidewalk just east of the parking lot travel lane. Street parking is available on Main, Yount, and Yajome Streets.

*The sidewalk to the school's front entrance from Yount Street.*

The school is accessible by bicyclists and pedestrians on Yount Street and Yajome Street; there is no access point from Adrian Street on the north side of campus. Students may also access campus from Main Street by cutting across the Rotary Park field. There are two nearby entrance points to the Vine Trail: one on Jackson Street north of the school and one on Vallejo Street south of the school. Due to the relatively grid-like street network around the school area and the large enrollment boundary of the school, students may be arriving in the school area from all directions.

*The entrance to Rotary Park at the corner of Main Street and Yount Street.*

The school does not have a formal circulation policy, but the school's handbook lists the following in its "Behavioral Expectations":

- *Lock bikes in bike racks*
- *Riding bikes, skateboards or scooters on campus is prohibited*
- *Stay clear of parking lots*
- *Walk bikes on campus*

Bus service through NVUSD is not available for New Tech High students. However, students who live beyond 4.25 miles walking distance from school and attend their school of residence may apply for transportation through NVUSD. The Vine transit N line, operated by the Napa Valley Transportation Authority, provides service in north/central Napa, mostly along Trancas Street and Jefferson Street, and has a stop on B Street and F Street a few blocks from the school.

*Vine Transit, operated by NVTA.*

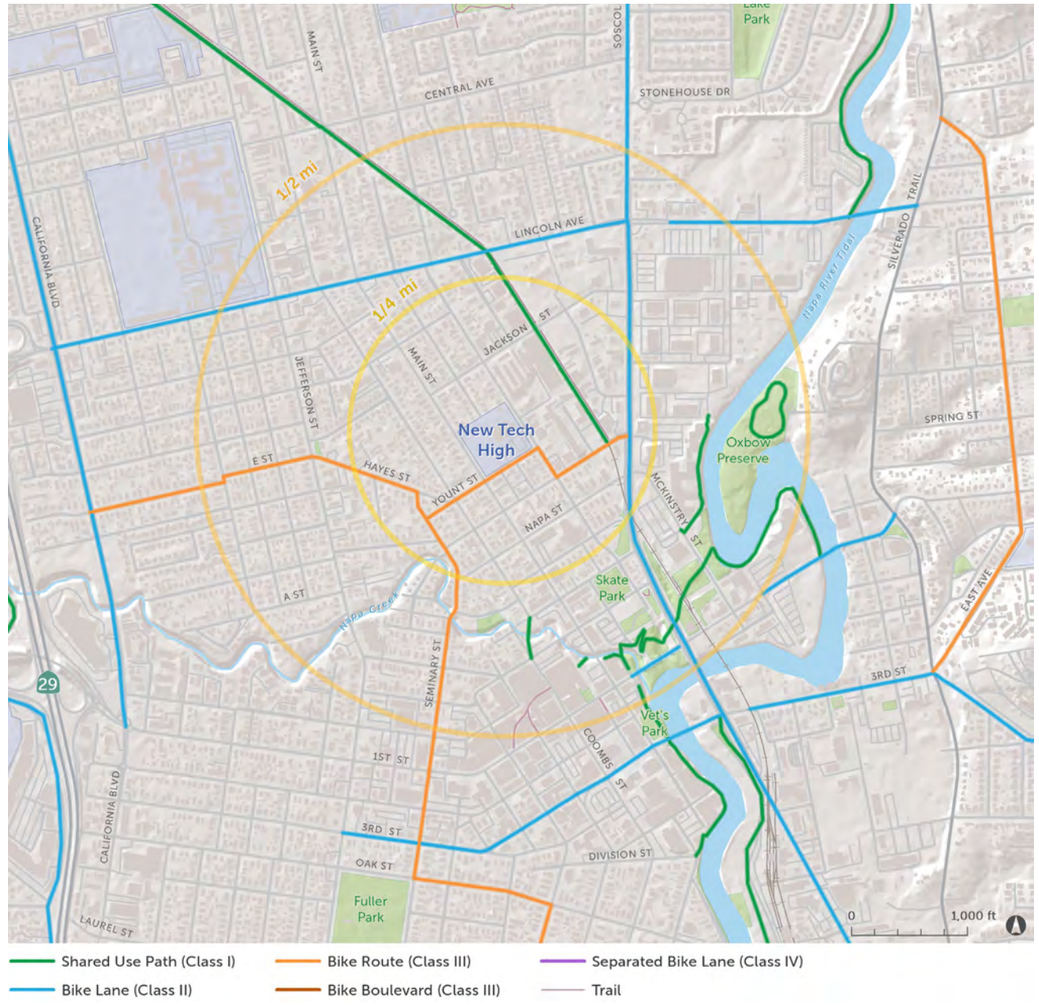
## BICYCLE AND PEDESTRIAN INFRASTRUCTURE

New Tech High provides three four-space spiral-style bike racks (12 parking spaces total) near the main entrance of the school, as well as several skateboard parking spaces against a wall nearby. There are also two grid-style bike racks providing roughly 30 additional bike parking spaces located on-campus near the Yajome Street driveway to the parking lot. These bike racks are on a dirt surface, and further away from the office and less visible than the spiral-style racks.

*Bike parking is available near the school's main office entrance (left) and near Yajome Street (middle). Skateboard parking is also available near the office entrance (right).*

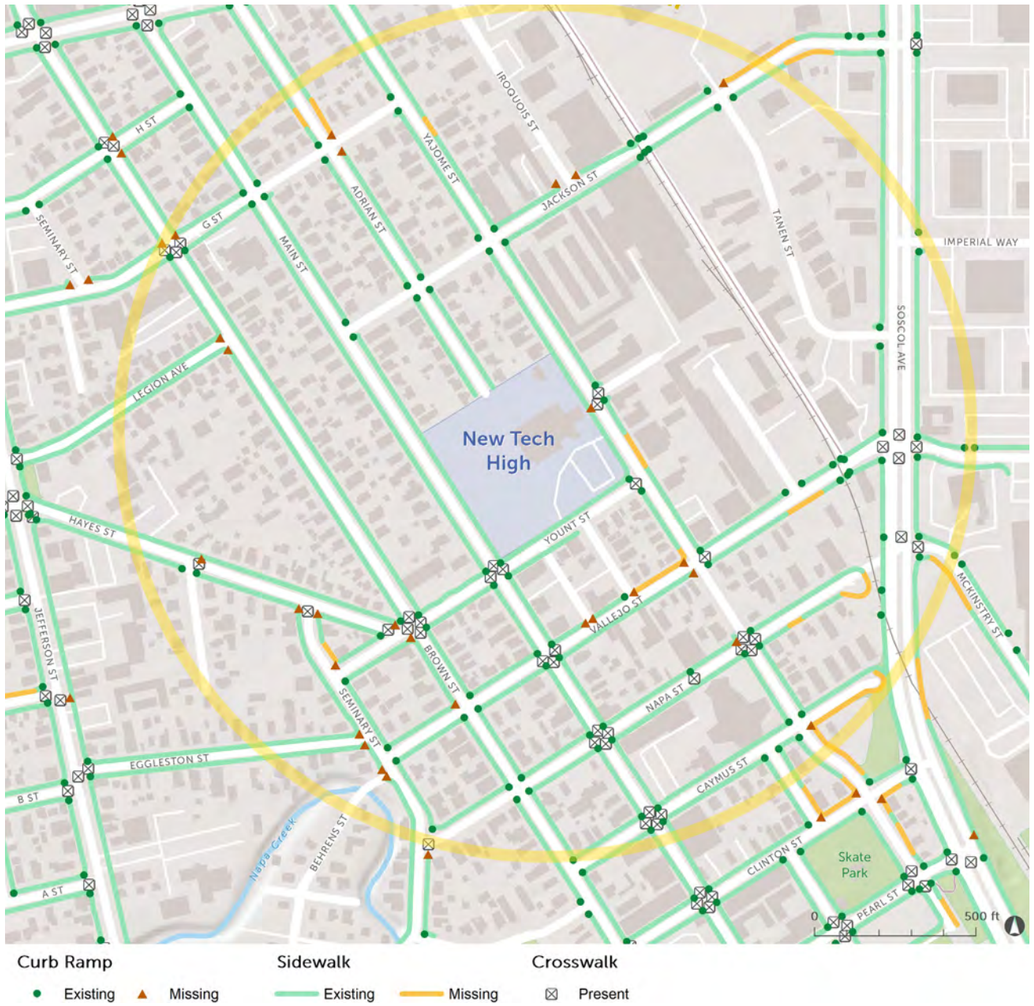


## MAP OF EXISTING BICYCLE FACILITIES




*Map 3: Existing Bicycle Facilities*
*(Map source: Napa Valley Transportation Authority Napa Countywide Bicycle Plan (2019))*

## MAP OF EXISTING PEDESTRIAN FACILITIES




*Map 4: Existing Pedestrian Facilities*
*( Map source: Napa Valley Transportation Authority Napa Countywide Pedestrian Plan (2016))*

## ENCOURAGEMENT AND EDUCATION PROGRAMS

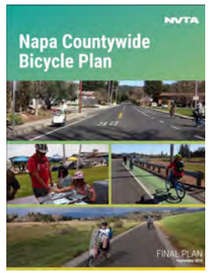
New Tech High has participated in annual countywide events, Bike to School Day and Walk and Roll to School Day, in the past. Bike to School Day and Walk and Roll to School Day are annual encouragement events facilitated by Napa County Safe Routes to School in the spring and fall, respectively, that celebrate students making the healthy choice to walk or bike to school. The school does not provide any bicycle education to students or conduct regular encouragement events to shift students from driving to walking or biking.

*New Tech students celebrated an informal Bike to School Day in 2021 with the countywide "Bike to Wherever Day" event, a modified event during the Covid-19 pandemic.*

| YEAR | EVENT | STUDENT PARTICIPANTS |
|---|---|---|
| 2015/16 | Bike to School Day | 31 |
| 2016/17 | Bike to School Day | 15 |
| 2018/19 | Walk & Roll to School Day | 27 |
| 2018/19 | Bike to School Day | 17 |

*Figure 4: Encouragement and Education Data*

## EXISTING PLANS



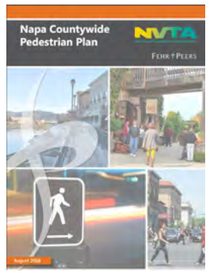

### NVTA Napa Countywide Bicycle Plan (2019):

The Napa Countywide Bicycle Plan recommends improving bicycle facilities around the school site. The Bicycle Plan suggests implementing a Class III urban bikeway along Brown Street, and the closure of the Vine Trail gap on Soscol Avenue south of the school from Vallejo Street to Third Street. The Vine Trail gap closure project was recently completed by the City of Napa.

### NVUSD Facilities Master Plan (2016):

NVUSD's Facilities Master Plan lists several projects for New Tech High. These projects include installation of fencing around the school perimeter and site ADA improvements. School perimeter fencing is planned to provide a single point of entry and wayfinding signage. These projects may impact future circulation around the school.

MEASURE H
BUILDING ON OUR VISION
NVUSD




### NVTA Napa Countywide Pedestrian Plan (2016):

The Napa Countywide Pedestrian Plan lists recommended improvements near the school site, the closest being the Oxbow Preserve Pedestrian Bridge.

### NVTA Napa Valley Countywide Transportation Plan: Advancing Mobility 2045 (2021):

The NVTA Countywide Transportation Plan is a long-range plan of countywide transportation priorities that provides a direction for the four- to five-year plan while considering a 25-year planning horizon. This plan is part of the regional planning process for the Regional Transportation Plan by the Metropolitan Transportation Commission. There are 28 projects by the City of Napa listed in the Plan, and several are located around the school area, the closest being the Soscol Avenue Widening and intersection modifications at Lincoln Avenue/Jefferson Street and Lincoln Avenue/ Soscol Avenue.


### City of Napa General Plan 2020 (1998) / 2040 (Not Yet Adopted):

The current General Plan for the City of Napa was adopted in 1998; a General Plan update began in 2018 and at the time of this report, is still ongoing. The General Plan update strives to build a more livable, sustainable, and inclusive future for the City of Napa by outlining the City's plan for land use, housing, transportation, climate change, and more. One of the draft guiding principles for the General Plan update is to "increase travel options through enhanced walking, bicycling, and public transportation systems, and promote mobility through increased connectivity and intelligent transportation management."



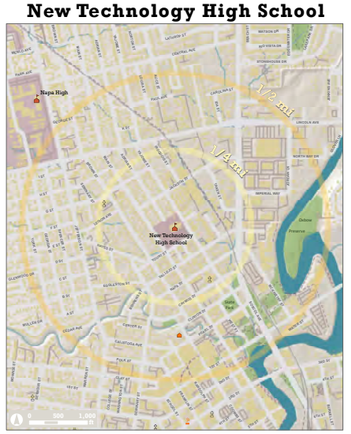
# WALK **AUDIT**

**Date:** 2/12/21
**Day of the Week:** Friday

**Meeting Time:** 3:00 PM
**Weather:** Partly cloudy

*A Safe Routes to School Walk Audit at nearby Napa High School.*

**New Technology High School**



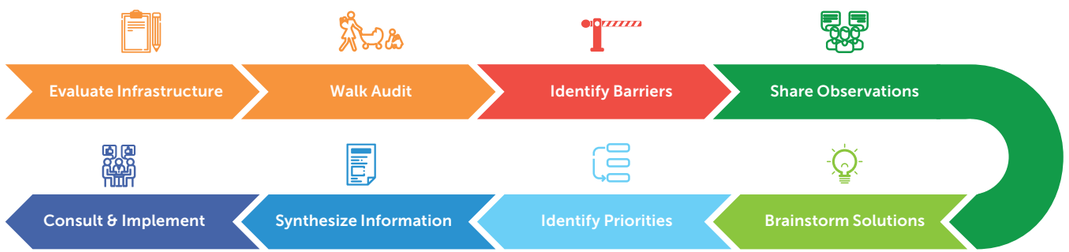

*SRTS team members used maps with quarter-and half-mile radii during the modified Walk Audit.*

## METHODOLOGY

Normally, the Community Walk Audit process would bring together school stakeholders, including parents, school staff, and students, with the SRTS team to observe existing conditions during pick-up or drop-off time, identify barriers to safe walking or biking, and brainstorm solutions. During the observation period, participants would discuss the physical infrastructure around the school as well as the behavior of motorists, pedestrians, and bicyclists in the area, while also sharing their own experiences traveling to and from school on foot, bike, and by car. Following observation, the team would discuss their observations, map issue areas, and record and prioritize the major barriers identified during the exercise.

Due to the spread of Covid-19 in early 2020 and subsequent Shelter-in-Place mandates and social distancing guidelines, the SRTS team was unable to hold a Community Walk Audit for New Tech High School. In February 2021, members of the SRTS team performed a modified Walk Audit that mirrored the initial infrastructure audit. SRTS team members rode bikes in the area immediately around the school and along significant route corridors while taking notes and photographs of infrastructure and behavioral barriers to student pedestrians and bicyclists.

Streets examined included Main Street from Jackson Street to Yount Street, Yount Street from Hayes Street to Yajome Street, Yajome Street from Vallejo Street to Lincoln Avenue, Hayes Street from Yount Street to Jefferson Street, and the Soscol Avenue and McKinstry Street intersection.

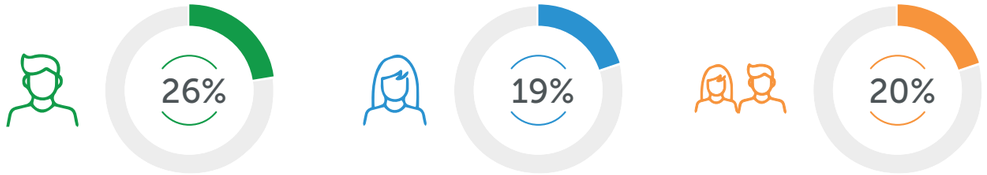


# CONTEXT FOR **RECOMMENDATIONS**

## IMPACT OF BARRIERS/HAZARDS ON COMMUNITY

Barriers to safe walking and bicycling, both infrastructure and non-infrastructure, can greatly discourage communities from engaging in active transportation. The quality, accessibility, and connectivity of bicyclist and pedestrian travel networks strongly influence the rates of walking and bicycling as a mode of daily transport[1]. Public policies and attitudes, such as traffic-calming measure enforcement and parking limitations, also contribute to the efficacy of pedestrian/bicycle networks. Thus, barriers to accessibility and connectivity must be addressed in order to encourage increased and safe walking and cycling.

Barriers that discourage walking and bicycling prevent communities from gaining the health benefits offered by active transportation. For children, physical activity can improve cognitive function, bone health, cardiorespiratory and muscular fitness, and mental wellness[2]. Adults benefit from lower risk of cardiovascular disease, hypertension, dementia, anxiety, and falls for older adults, as well as improved quality of life, physical function, bone health, and sleep.




However, only about **26% of men**, **19% of women**, and **20% of adolescents** are meeting the aerobic and muscle-strengthening guidelines developed by the Department of Health. Increased walking and biking to school can help boost that percentage by incorporating physical activity into one's daily routine and encouraging further active transportation choices.

Lack of safe bicycle/pedestrian facilities can also negatively impact the environment, as more people will choose to drive rather than bike or walk. Passenger cars and light-duty trucks produced **over half of the transportation sector emissions in 2017**[3].

**50%**

**29%**

The transportation sector produced the most greenhouse gas emission of any economic sector, releasing **up to 29% of total US greenhouse gas emissions** for the year.

Furthermore, **transportation emissions have increased around 400 million metric tons** since 1990 due to increased vehicle demand. Thus, decreasing vehicle use by creating bicycle/pedestrian networks that are safe from potential hazards and barriers can help mitigate these environmental effects.

**400 MILLION**

In addition to the consequences already discussed, barriers to safe walking and bicycling can lead to increased collisions and conflicts between motorists, pedestrians, and bicyclists. Safety barriers can lead to more people choosing to drive, even if the destination is within walking or biking distance, increasing traffic congestion. Children have fewer opportunities to develop their sense of independence through walking and biking to school, and the community is hindered from enjoying the social and economic benefits of bicycling and walking. Safety barriers and hazards that discourage increased walking and bicycling can considerably impact many different parts of a community, which is why it is so crucial to address and resolve them.

*[1] Kuzmyak, Richard J., Dill, Jennifer. "Walking and Bicycling in the United States: The Who, What, Where, and Why." TR News May-June 2012: 4-15. Web. [2] U.S. Department of Health and Human Services. Physical Activity Guidelines for Americans, 2nd edition. Washington, DC: U.S. Department of Health and Human Services; 2018. [3] Sources of Greenhouse Gas Emissions, United States Environmental Protection Agency. Web.*



# RECOMMENDATIONS

Recommendations were determined by Napa County Safe Routes to School staff, taking into account the feedback and results from the Walk Audit activity, Fulcrum data, existing plans, and local stakeholder input. Priority levels for recommendations were calculated through consideration of vehicle, pedestrian, and bicyclist traffic volumes; vehicular traffic speed; collision history; presence of existing bicycle/pedestrian facilities; proximity to major identified routes to school; high-level potential cost/complexity of recommendation; and Walk Audit participant input.

This section outlines and explains high and medium priority recommendations specific to the school site. School site-specific recommendations of all priority levels can be found in the "Table of Recommendations" section. Universal recommendations that apply to all school sites are described in Appendix B. Recommendations that are focused on infrastructure treatments are denoted by "NAI," and recommendations that suggest programmatic treatments are denoted by "NAP." Please note that implementing these recommendations will often require further evaluation and study, as well as design, right-of-way acquisition, compliance checks with existing laws, and coordination with utility, public safety, and other local government departments.

## RECOMMENDATIONS #NAI-308 AND NAI-310: MAIN ST AND YAJOME ST BIKE BOULEVARDS

***Narrative –*** Main Street and Yajome Street are north-south collectors that border campus on the west and east sides, respectively. Both corridors extend far beyond the school zone area, providing routes to other key streets like Lincoln Avenue, the downtown area, and residential neighborhoods. Students who travel to school using the Vine Trail shared-use path must navigate Yajome Street for at least some portion of their trip, making it an important active transportation connection.

*There are no bicycle facilities on Main Street.*

### IDENTIFIED BARRIERS

- ***Motorist speeding –*** Motorist speeding on both Main Street and Yajome Street, which can be facilitated by wide, straight roads with little traffic-calming or traffic control, reduces motorists' range of vision and increases both risk of collisions and potential severity of collisions.

- ***No bike facilities –*** The lack of bicycle facilities on Main Street from Lincoln Avenue to 1st Street and Yajome Street from Lincoln Avenue to Pearl Street fails to provide a dedicated space for bicyclists and indicate to motorists where to expect bicyclists, making the corridor appear unwelcoming to bicyclists.

### RECOMMENDATIONS

- ***Class III bike boulevard –*** Install Class III bike boulevards on both Main Street and Yajome Street with sharrows, signage, and traffic-calming measures.

- ***Daylighting –*** Implement daylighting strategies at all intersections along both corridors, with priority for those that are 2-way stops, to improve visibility at intersections.

## RECOMMENDATIONS #NAI-299, NAI-319, AND NAI-321: VINE TRAIL CROSSINGS

***Narrative –*** The Vine Trail shared-use path runs north-south past the school about a block east of the campus. Two Vine Trail crossings, those on Jackson Street and Vallejo Street, are the closest entrance/exits to the trail relative to the school campus, depending on whether students are travelling north or south of the school. Another crossing important to the school zone is that on Yajome Street just north of Lincoln Avenue, which students must cross if travelling north of the school via the Vine Trail.

### IDENTIFIED BARRIERS

- ***No crosswalks –*** There are no crosswalks at the Vine Trail crossings across Yajome Street, Vallejo Street, and Jackson Street, greatly reducing motorist awareness of bicyclists and pedestrians crossing at these locations.
- ***Vallejo Street crossing***
  - ***Vehicles obstructing visibility –*** Minimal "no parking" red zones around the crossing allows motorists to park close to the crosswalk and obstruct pedestrian visibility.
  - ***Motorist speeding –*** Motorist speeding, which may occur on Vallejo when motorists enter from higher-speed Soscol Avenue, reduces motorists' range of vision and increases both risk of collisions and potential severity of collisions.
  - ***Stop lines –*** The westbound railroad stop lines are in the middle of crossing line, which may cause motorists to obstruct the crossing.
  - ***Poor sight lines –*** Northbound Vine Trail users approaching Vallejo from the south have poor visibility due to the positioning of the existing building and utility box.
- ***Jackson***
  - ***Low visibility –*** A grade/slope difference in the roadway at the crossing when approaching from the west further reduces visibility of crossing bicyclists and pedestrians.

*The Vine Trail crossing at Jackson Street.*

### RECOMMENDATIONS

- ***High-visibility crosswalk –*** Paint high-visibility crosswalks at all Vine Trail crossings to increase Vine Trail user visibility and motorist yielding behavior.
- ***Curb extensions –*** Install curb extensions for crosswalks at all three crossing locations (creative design solutions may be required due to vicinity to railroad tracks) to improve Vine Trail user visibility, prevent motorists from parking close to the crosswalk, and to slow motorists through the crossings.



## RECOMMENDATIONS #NAI-259, NAI-260, AND NAP-043: LINCOLN AVENUE MULTIMODAL ACCESS

***Narrative –*** Lincoln Avenue is located just a few blocks north of the school, and is a key high-volume east-west arterial corridor through central Napa, providing access to several residential neighborhoods including multi-family and mobile home neighborhoods, SR 29 and SR 121, other key north-south routes such as Jefferson Street and Soscol Avenue, and many commercial destinations. This corridor is long, straight, and wide, with several lanes of vehicle traffic, no traffic-calming, and only some traffic control, consequently facilitating frequent motorist speeding over the posted 30-mph speed limit. Lincoln Avenue currently has on-street Class II bike lanes and crosses the Vine Trail shared-use path just east of Iroquois Street.

### IDENTIFIED BARRIERS

- ***Auto-oriented corridor –*** Lincoln Avenue's current design, featuring wide lanes on a relatively straight corridor with no traffic-calming and little traffic control, prioritizes vehicle speed, volumes, and convenience and facilitates frequent motorist speeding.
- ***High-speeds and volumes of traffic –*** Lincoln Avenue carries extremely high volumes of high-speed traffic, which many bicyclists and pedestrians do not feel comfortable or safe navigating.
- ***High-stress bicycle facilities –*** The existing Class II bicycle facilities are stressful for riders due to the lack of separation between high speeds and volumes of vehicle traffic and high conflict-risk intersections. This stress is exacerbated in areas where road quality in the bike lane is poor, the bike lane narrows to substandard widths, or storm drains obstruct the bike lane and pose a fall hazard.
- ***Bike lane obstructions –*** The existing bike lanes on Lincoln Avenue are frequently obstructed with debris, gravel, broken glass, and garbage, and are often blocked by signage during periods of construction.

*The existing Class II bike lanes on Lincoln Avenue are high-stress, which is exacerbated in areas where the bike lane is narrowed and obstructed by storm drains.*

### RECOMMENDATIONS

- ***NAI-259 Road diet –*** Implement a road diet along Lincoln Avenue to create a street with one travel lane in each direction and a middle turn lane. Use reclaimed space for multimodal improvements, including widened bicycle facilities (recommended Class IV) and widened sidewalks. Due to high multimodal use potential and multiple stakeholders and land uses, this may require a Corridor Plan similar to Imola Avenue.
- ***NAI-260 Protected bike lane –*** Install a Class IV protected bike lane with conflict markings at major intersections and driveways. This protected bike lane may be parking protected in some locations where parking-protected bike lanes do not obstruct visibility of bicyclists to turning vehicles, but parking removal will be necessary around intersections and driveways. Buffered Class II bike lanes can also be used in areas where Class IV is not feasible.
- ***NAP-043 Bike lane maintenance -*** Ensure that existing bike lanes are being fully swept with regular street sweeping and increase frequency of sweeping if maintenance issues continue.

## RECOMMENDATION #NAP-044: STUDENT-LED EDUCATION/ENCOURAGEMENT

***Narrative –*** A vehicle-oriented transportation culture contributes to students choosing not to walk or bike to school. In addition to infrastructure barriers, much of which exists due to this transportation culture, many students drive or are driven to school because it is the „cool" or „normal" thing to do, or because they have recently earned their driver's license, a source of excitement and sense of independence. It is also likely that many students are unaware of the impacts their everyday transportation choices have on their health, environment, and community. An increase in encouragement programming can help raise awareness of and enthusiasm towards active transportation and complement infrastructure improvements.

### IDENTIFIED BARRIERS

- ***Vehicle-oriented transportation culture –*** Being surrounded by a vehicle-oriented transportation culture significantly contributes to students developing the habit of driving or being driven to school.


*The teen program of Marin County Safe Routes to School provides resources, messaging, and events tailored to students in middle and high school. Image credit: Marin County Safe Routes to School.*

- ***Congestion in school zone –*** Congestion in the school zone during school arrival and dismissal times can increase conflict risk and make the school zone feel unpredictable and unsafe to bicyclists and pedestrians, especially in conjunction with infrastructure barriers.

### RECOMMENDATIONS

- ***Student-led Programs –*** Empower student clubs, classes, and organizations like Student Council in developing and hosting regular active transportation encouragement events. Students should lead encouragement efforts, as peer-to-peer messaging is more effective and engaging.

  - Encouragement events, such as Walk and Roll Wednesdays, VMT reduction competitions, and Cycle for Cider, can introduce students to the joys of walking and biking to school and help bring about long-term mode shift. Marin County Safe Routes to School successfully runs similar programs through their Safe Routes to School Teen Program and may be a helpful resource.

  - Education outreach initiatives can help increase awareness amongst students of the various benefits of active transportation. For example, an Environmental Club can emphasize how walking and biking reduces greenhouse gases, and a Leadership Club can highlight the positive physical and mental health effects of active transportation.

## RECOMMENDATION #NAP-046: BIKE SAFETY AND MAINTENANCE EDUCATION

***Narrative –*** Bicycle safety education is a crucial component of increasing biking mode share and safety at a school site, as it teaches students rules of the road and safe biking behaviors, reminding students that bicyclists have the same rights and responsibilities as motorists. This understanding not only improves bicyclist safety, but also increases confidence and comfort for students. Common unsafe behaviors that are done unknowingly due to lack of education, such as riding against traffic or failing to stop at stop signs on a bike, are hazardous to students, as this behavior is unpredictable to motorists and can increase risk of collisions. While many of these behaviors can be addressed by improved infrastructure, such as clearly marked bicycle facilities, implementing annual education on bicyclist safety within the school system raises awareness of rules of the road and encourages safe behavior.

### IDENTIFIED BARRIERS

- ***No existing bike education –*** The lack of a bicycle safety education program can result in unintentional unsafe student bicyclist behavior and a sense of discomfort riding a bike.

### RECOMMENDATIONS

- ***Annual bicycle education –*** Provide annual bike safety and maintenance education to all students to ensure that all students are familiar with rules of the road and taking care of their bikes.

*Bicycle maintenance is an important part of bicycle safety education for middle and high school levels.*

## RECOMMENDATION #NAI-307: YOUNT STREET BIKE BOULEVARD

### IDENTIFIED BARRIERS

- ***No traffic-calming –*** The existing bicycle facilities on Yount Street only provide sharrows and signage and do not provide traffic-calming or mitigation in a highly-travelled school zone.

### RECOMMENDATIONS

- ***Traffic-calming –*** Complete the existing bike facilities to full Class III standards through the installation of traffic-calming elements.


*The large sharrows on Yount Street help increase awareness to road users to share the road; however, sharrows alone do not reduce the stress of high traffic volumes/speeds in the school zone, particularly during peak school hours.*

## RECOMMENDATION #NAI-309: MAIN ST AND YOUNT ST CURB EXTENSIONS

### IDENTIFIED BARRIERS

- ***Uncontrolled crosswalk –*** Traffic on Main Street is uncontrolled, allowing motorists to drive through the intersection without slowing down on a corridor that facilitates speeding, reducing motorist yielding behavior.
- ***Low-visibility crosswalks in school zone –*** The crosswalks are faded and painted with a standard, parallel line pattern, despite being located in a highly-travelled school zone.
- ***Vehicles obstructing visibility –*** The lack of "no parking" red zones allows motorists to park adjacent to the crosswalks and obstruct pedestrian visibility.

*Main Street traffic is uncontrolled through the intersection.*

### RECOMMENDATIONS

- ***High-visibility crosswalks –*** Upgrade crosswalks to be high-visibility school-zone patterns to increase pedestrian visibility and motorist yielding behavior.
- ***Curb extensions –*** Install curb extensions on all four corners to improve pedestrian visibility and motorist yielding behavior, slow traffic through the intersection, and prevent motorists from parking adjacent to crosswalks.



## RECOMMENDATION #NAI-315: YAJOME ST AND YOUNT ST INTERSECTION

### IDENTIFIED BARRIERS

- ***Low-visibility crosswalk in school zone –*** The existing crosswalk is painted with a standard, parallel line pattern, despite being located in a highly-travelled school zone.
- ***Vehicles obstructing visibility –*** The lack of "no parking" red zones around the intersection allows motorists to park adjacent to the crosswalks and obstruct pedestrian visibility. This is especially an issue with parked vehicles on southbound Yajome, as motorists exiting Yount Street block the crosswalk in order to see oncoming traffic.
- ***Long crossing distance –*** The long crossing distance across Yount Street pushes pedestrians further out of the range of vision of motorists and forces pedestrians to stay in the roadway for longer than necessary.

*The Yajome and Yount Street intersection, facing south.*

- ***Uncontrolled traffic –*** Uncontrolled traffic on Yajome Street, a corridor that facilitates motorist speeding, may induce risky driving behaviors such as fast turning movements from motorists trying to exit Yount Street.
- ***Wide curb radius –*** The wide curb radius on the northwest corner facilitates fast motorist turning motions through the intersection.

### RECOMMENDATIONS

- ***High-visibility crosswalk –*** Upgrade crosswalk to be high-visibility school-zone pattern to increase pedestrian visibility and motorist yielding behavior.
- ***Curb extensions –*** Install curb extensions on both corners of existing crosswalk to improve pedestrian visibility, calm Yajome traffic, and prevent motorists from parking adjacent to the crosswalk.
- ***New crosswalk –*** Evaluate potential for a crosswalk across Yajome on the north side of the intersection.

## RECOMMENDATIONS #NAI-316 AND NAI-317: YAJOME ST INTERSECTIONS AT VALLEJO ST AND JACKSON ST

### IDENTIFIED BARRIERS

- ***No crosswalks –*** Missing crosswalks at both intersections reduce motorist yielding behavior, especially for uncontrolled Yajome St traffic, and fail to provide a marked pedestrian crossing along routes to key Vine Trail access points on Vallejo and Jackson.
- ***Vehicles obstructing visibility –*** Missing "no parking" red zones around the intersections allows motorists to park adjacent to the intersections and obstruct pedestrian visibility.
- ***Uncontrolled traffic –*** Traffic on Yajome Street is uncontrolled at both intersections, allowing motorists to drive through the intersections without slowing down on a corridor that facilitates speeding, reducing motorist yielding behavior.

*The Yajome Street and Vallejo Street intersection.*

### RECOMMENDATIONS

- ***Curb extensions –*** Install curb extensions on all four corners of both intersections to improve pedestrian visibility and motorist yielding behavior, calm Yajome St traffic, and prevent motorists from parking adjacent to crosswalks.
- ***High-visibility crosswalks –*** Paint high-visibility crosswalks across Yajome Street at both intersections to provide a marked crosswalk to the Vine Trail shared-use path entrance points, and a high-visibility crosswalk across Jackson Street to meet northbound pedestrian needs.

## RECOMMENDATIONS #NAI-318 AND NAI-320: VALLEJO AND JACKSON VINE TRAIL ACCESS

### IDENTIFIED BARRIERS

- ***High vehicle volumes –*** Both Vallejo Street and Jackson Street experience high volumes of vehicles throughout the day due to the many auto shops and commercial uses on both streets, as well as their connection to Soscol Avenue.
- ***No traffic-calming –*** Bicycle facilities on Vallejo Street from Yajome Street to Soscol Avenue only provide sharrows and signage, despite the high vehicle volumes on the corridor and the key access Vallejo Street provides to the Vine Trail.
- ***No bicycle facilities –*** The lack of bicycle facilities on Jackson Street fails to provide a dedicated space for bicyclists and indicate to motorists where to expect bicyclists, making the corridor appear unwelcoming to bicyclists. This is especially problematic given the high vehicle volumes on the corridor and the key access Jackson Street provides to the Vine Trail.

*Vallejo Street facing east.*

### RECOMMENDATIONS

- ***NAI-318 Traffic-calming –*** Complete the existing bike facilities on Vallejo Street to full Class III standards through the installation of traffic-calming elements.
- ***NAI-320 Class III bike boulevard –*** Install Class III bike boulevard with sharrows, signage, and traffic-calming along the Jackson Street corridor.
- ***Red curbs –*** For both corridors, consider additional red curbs around intersections and major driveways to improve visibility of bicyclists and pedestrians, given the high volume of on-street parking and auto movement associated with auto repair businesses.

## RECOMMENDATIONS #NAI-292 – NAI-295: YAJOME AND LINCOLN INTERSECTION

### IDENTIFIED BARRIERS

*Poor sight lines cause motorists to block the crosswalk in order to see oncoming traffic.*

- ***Yajome widens –*** Yajome Street on the south side of the intersection widens leading up to the intersection, greatly increasing pedestrian crossing distance across Yajome Street and pushing pedestrians and bicyclists further out of the line of sight of motorists.

- ***Uncontrolled Lincoln traffic –*** Uncontrolled high-volume and high-speed traffic on Lincoln can make turning left from Yajome difficult for motorists, which can result in motorists making fast turning movements and not looking for pedestrians crossing. This may also result in motorists making fast turns off of Lincoln Avenue onto Yajome Street.

- ***Vehicles obstructing visibility –*** Missing "no parking" red zones around the intersection allows motorists to park adjacent to the intersection and existing crosswalk and obstruct pedestrian visibility.

- ***Bicycle/motorist conflict area –*** Leading up to the intersection, existing bicycle lanes become dashed in advance of the intersection to signal to motorists that they may merge with the bicycle lane to turn right. Given the high speeds on Lincoln Avenue and vehicle volumes on both corridors, this creates a potential bicycle/motorist conflict area when bicyclists are travelling straight on Lincoln and motorists are turning right onto Yajome.

- ***Missing crosswalks –*** There are no crosswalks across Yajome Street on the north side and across Lincoln Avenue, greatly reducing pedestrian visibility and requiring pedestrians to take a detour to cross Lincoln Avenue.

### RECOMMENDATIONS

- ***Curb extensions –*** Install curb extensions on all four corners of the intersection to reduce motorist speeds, improve pedestrian visibility, and reduce crossing distances, with significant extensions on the southwest and/or southeast corners to square up the south side of the intersection. The curb extensions on the south side should focus on the Yajome sides and should not obstruct Lincoln Ave bike lanes.

- ***Yajome crosswalk –*** Paint a crosswalk across the north side of Yajome Street to improve pedestrian visibility.

- ***Lincoln crosswalk –*** Paint a high-visibility crosswalk across Lincoln Avenue and install Rectangular Rapid Flashing Beacons and sharks' teeth on Lincoln Ave travel lanes to improve motorist yielding behavior and provide a direct crossing across Lincoln Avenue.

- ***Conflict markings –*** Paint green conflict markings in existing Lincoln Avenue bicycle facilities leading up to the intersection on both sides to improve bicyclist visibility.



## RECOMMENDATIONS #NAI-322 AND NAI-323: LINCOLN AVE AND SOSCOL AVE INTERSECTION

### IDENTIFIED BARRIERS


*Lincoln and Soscol intersection, facing north.*

- ***Large, busy intersection –*** This intersection of two arterials carries high volumes of high-speed traffic, which can increase risk of road user conflict with bicyclists and pedestrians and can make vulnerable road users feel unsafe and uncomfortable.
- ***Wide curb radii –*** Wide curb radii in the intersection facilitate fast motorist turning movements.
- ***Long crossing distances –*** Long crossing distances across several lanes of traffic on all legs of the intersection pushes bicyclists and pedestrians further out of the range of vision of motorists and requires them to be in the roadway for a longer time than necessary, increasing the risk of collisions.
- ***Low-visibility crosswalks –*** The crosswalks are painted with a standard, parallel line pattern, despite being located in a highly-travelled intersection of two arterials, where additional pedestrian visibility measures are likely needed.
- ***High conflict risk –*** There are several areas of high conflict risk for bicyclists in the existing Class II bike lanes, including motorists merging into right-turn only lanes, gas station driveways, and other commercial use driveways.
- ***Crosswalk obstructions –*** Motorists making right turns on red lights frequently obstruct the crosswalk in order to see oncoming traffic.

### RECOMMENDATIONS

- ***NAI-322 Short-term response***

  - ***High-visibility crosswalks –*** Repaint all crosswalks with a high-visibility pattern to increase pedestrian visibility and motorist yielding behavior.

  - ***Conflict markings –*** Paint green conflict markings at high bicycle/vehicle conflict risk locations approaching the intersection to increase visibility of bicyclists.

  - ***Curb extension –*** Install a curb extension on southeast corner to reduce the crossing distance and prevent motorists from using the bike lane and shoulder as an informal right-turn lane.

  - ***Widen bike lane –*** Narrow eastbound Lincoln Avenue travel lanes on west side of intersection and widen eastbound bike lane to 6 feet.

  - ***Limit lines –*** Install advanced limit lines on all travel lanes to indicate to motorists to stop with some distance from the crosswalk, improving pedestrian visibility, particularly for motorists planning to turn right on a red light.

- ***NAI-323 Long-term response***

  - ***Intersection redesign –*** Redesign intersection, especially in consideration of recommended road diets/ redesigns, to prioritize bicyclist and pedestrian safety and separation by addressing listed barriers. Evaluate potential for protected intersection given significant history of bike and pedestrian collisions within 500-750'

## RECOMMENDATIONS #NAI-324, NAI-325, AND NAP-047: SOSCOL AVE FROM LINCOLN AVE TO 1ST ST

### IDENTIFIED BARRIERS

- ***Auto-oriented corridor –*** Soscol Avenue's current design, featuring wide lanes on a relatively straight corridor with no traffic-calming and little traffic control, prioritizes vehicle speed, volumes, and convenience and facilitates frequent motorist speeding.
- ***High-speeds and volumes of traffic –*** Soscol Avenue carries extremely high volumes of high-speed traffic, which many bicyclists and pedestrians do not feel comfortable or safe navigating.

*Soscol Avenue facing north.*

- ***High-stress bicycle facilities –*** The existing Class II bicycle facilities are stressful for riders due to the lack of separation between high speeds and volumes of vehicle traffic and high conflict-risk intersections. This stress is exacerbated in areas where the bike lane runs between a vehicle travel lane and a vehicle parking lane, which adds the risk of riding in the door-zone.
- ***High-stress crosswalks –*** All crosswalks across Soscol Avenue require crossing several lanes of traffic, and many pose a risk of turning conflicts, making these crosswalks high-stress for pedestrians.
- ***Bike lane obstructions –*** The existing bike lanes on Soscol Avenue are frequently obstructed with debris, gravel, broken glass, and garbage.

### RECOMMENDATIONS

- ***NAI-324 Long term treatments***
  - ***Road diet –*** Implement a road diet and redesign of corridor to improve and prioritize safe, accessible, and comfortable multi-modal transportation through a Complete Streets framework. Integrate specific recommendations from SRTS reports into road redesign. Class IV protected bike lanes preferred for this corridor with reclaimed space from road diet
- ***NAI-325 Near-term treatments***
  - ***Conflict markings –*** Paint conflict markings for bike facilities at major side streets and driveways to improve bicyclist visibility.
  - ***Traffic-calming –*** Implement traffic-calming measures along the corridor to reduce motorist speeding.
  - ***Widen bike lanes –*** If repaving provides the opportunity to narrow travel lanes and widen bike lanes, widen the bike lanes to provide more space between road users.
- ***NAP-047 Bike lane maintenance –*** Ensure that existing bike lanes are being fully swept with regular street sweeping and increase frequency of sweeping if maintenance issues continue.



## RECOMMENDATIONS #NAI-267: JEFFERSON UNCONTROLLED CROSSWALKS

### IDENTIFIED BARRIERS

- ***Poor motorist yielding behavior –*** Motorist yielding behavior is significantly decreased at uncontrolled crosswalks across Jefferson (from Lincoln to Cedar) due to long crossing distances, low-visibility pattern crosswalks, no traffic-control/calming, high speeds of traffic, and vehicles parked next to crosswalks reducing visibility.

### RECOMMENDATIONS

- ***NAI-267 Traffic-calming and crosswalk improvements –*** Install curb extensions and high-visibility crosswalks at uncontrolled crosswalks across Jefferson Street between Lincoln and Cedar. Consider Rectangular Rapid Flashing Beacons at G Street. Implement additional traffic-calming along the corridor to slow motorist speeding.

*Jefferson Street and G Street intersection.*

## RECOMMENDATION #NAP-045: ANNUAL COUNTYWIDE ENCOURAGEMENT EVENTS

### IDENTIFIED BARRIERS

- ***Low participation in encouragement events –*** Infrequent participation or low student engagement in annual countywide encouragement events reduces the impact of these events on potential mode shift to active transportation.

### RECOMMENDATIONS

- ***Annual countywide events –*** Participate regularly in annual countywide encouragement events, Bike to School Day and Walk and Roll to School Day, with the goal of increasing participation. These annual events provide students who may be considering walking or biking with an opportunity to try it out in a positive schoolwide setting.

*Leadership students at American Canyon High School host a welcome table during Walk and Roll to School Day 2021.*

## ADDITIONAL CONSIDERATIONS

Improvements listed in this section are those within a half-mile radius that are either considered significant to the school area but are not located along routes to the school based on the school's enrollment boundary or were ranked as a higher priority during the Walk Audit for another nearby school. These barriers are listed as high or medium priority due to their impact on routes to nearby schools in the neighboring areas and will be analyzed in more depth in the reports for the affected schools.

### RECOMMENDATION #NAI-313: YAJOME STREET BICYCLE FACILITIES

#### IDENTIFIED BARRIERS

- ***No bicycle facilities (from Pueblo Ave to Lincoln Ave)***

#### RECOMMENDATIONS

- ***Class III bike boulevard with sharrows, signage, and traffic-calming***

*Relevant Reports:*

- *McPherson Elementary School Walk Audit Report*

### RECOMMENDATION #NAI-268: LINCOLN AVE AND JEFFERSON STREET INTERSECTION

#### IDENTIFIED BARRIERS

- ***Large, busy intersection***
- ***Long crossing distances***
- ***Low-visibility crosswalks***

#### RECOMMENDATIONS

- ***Leading Pedestrian Interval***
- ***High-visibility crosswalks***
- ***Limit lines***
- ***Green conflict markings***
- ***Curb extension***
- ***Intersection redesign***

*Relevant Reports:*

- *Napa High School Walk Audit Report*

### RECOMMENDATION #NAI-265 AND NAI-266: JEFFERSON STREET FROM LINCOLN AVE TO CEDAR AVE

#### IDENTIFIED BARRIERS

- ***Auto-oriented corridor***
- ***High speeds and volumes of traffic***
- ***No bicycle facilities***
- ***Minimal shade***

#### RECOMMENDATIONS

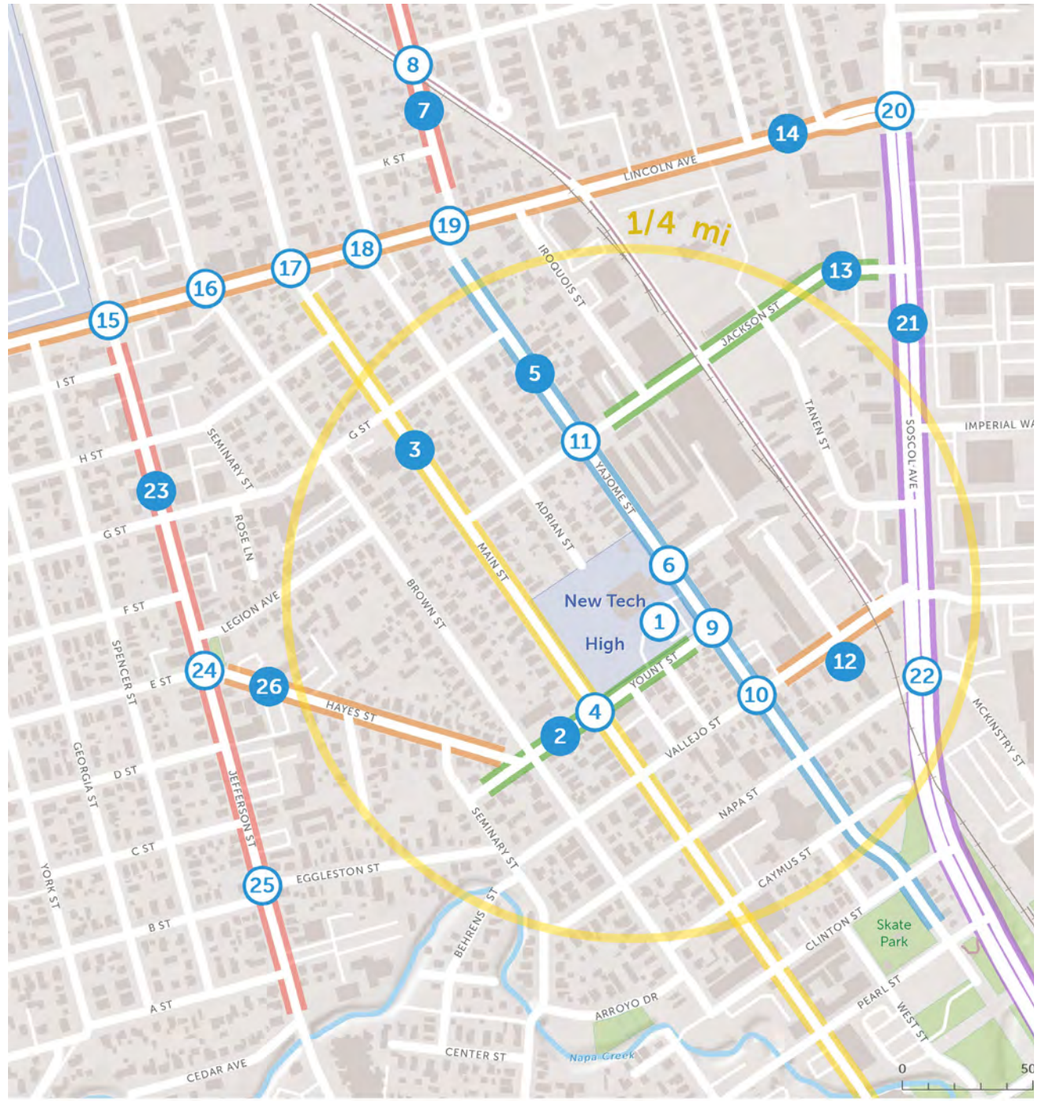
- ***Road diet and redesign***
- ***Implement short-term bicycle facilities in interim***

*Relevant Reports:*

- *Napa High School Walk Audit Report*



### MAP OF RECOMMENDATIONS




*Map 5: Recommendations*

## TABLE OF RECOMMENDATIONS

### Infrastructure:

| | LOCATION | ID # | BARRIER | RECOMMENDATION | COST | PRIORITY |
|---|---|---|---|---|---|---|
| 1 | School grounds | NAI-305 | Grid-style bike parking near Yajome appears vulnerable (rack is not secured, visible from street, out of vision of office or other school buildings). | Move grid-style bike racks to a location less visible from street or reduce visibility from the street with small fence or additional vegetation. Perform bike-rack counts to determine if additional bike parking is needed. | $ | Low |
| | | NAI-306 | Identified desire-line access point to campus from Main Street at northwest edge of campus. | Consider installation of gate and pathway following desire line or at existing pedestrian path between campus and Rotary Park. | $ | Low |
| 2 | Yount Street from Seminary Street to Yajome Street | NAI-307 | Existing bicycle facilities only provide sharrows and signage. | Upgrade bike facilities to full Class III standards with traffic-calming elements. | $ | Medium |
| 3 | Main Street from Lincoln Avenue to 1st Street | NAI-308 | Long, straight collector street with no traffic-calming and no traffic control (between Lincoln Ave and Napa St) facilitates motorist speeding; no bike facilities. | Install Class III bike boulevards with sharrows, signage, and traffic-calming. Implement daylighting strategies at all intersections, with priority for those that are 2-way stops. | $$ | High |
| 4 | Main Street and Yount Street intersection | NAI-309 | Main St traffic (high risk of speeding) uncontrolled. Faded low-visibility pattern crosswalks in school zone. Missing red curbs allow motorists to park adjacent to crosswalks and obstruct visibility. | Repaint crosswalks with high-visibility school zone pattern. Install curb extensions on all four corners to slow vehicle traffic and improve pedestrian visibility. | $$ | Medium |
| 5 | Yajome Street from Lincoln Avenue to Pearl Street | NAI-310 | Long, straight collector street with no traffic-calming and no traffic control (between Lincoln Ave and Clinton St) facilitates motorist speeding; no bicycle facilities. | Install Class III bike boulevards with sharrows, signage, and traffic-calming. Implement daylighting strategies at all intersections, with priority for those that are 2-way stops. | $$ | High |
| | | NAI-311 | Sidewalk gaps – northbound: in front of Wilson's Feed and Supply and from Clinton to Pearl; southbound: just north of Vallejo St intersection. | Fill sidewalk gaps* and/or realign parking at businesses to reduce conflicts and ensure ADA accessibility. | $ | Low |
| 6 | Yajome Street and Bale Street intersection | NAI-312 | Vehicles park adjacent to crosswalks and obstruct pedestrian visibility, especially hazardous with uncontrolled crosswalk across Yajome. | Install curb extensions and daylight intersection. | $$ | Low |
| 7 | Yajome Street from Pueblo Avenue to Lincoln Avenue | NAI-313 | No bicycle facilities. | Install Class III bike boulevard with sharrows, signage, and traffic-calming.* | $$ | High |
| | | NAI-314 | Southbound sidewalk gap from K St to Lincoln Ave. | Fill sidewalk gap.* | $ | Low |
| 8 | Yajome Street Vine Trail crossing (intersection) | NAI-299 | No crosswalk across Yajome at Vine Trail crossing. | Install curb extensions at Vine Trail curbs and paint high-visibility crosswalk across Yajome to mark Vine Trail crossing path. | $$ | High |
| 9 | Yajome Street and Yount Street intersection | NAI-315 | Low-visibility crosswalk in school zone. Vehicles park adjacent to intersection and obstruct visibility. Long crossing distance across Yount St. Parked vehicles on southbound Yajome block visibility for motorists turning onto northbound Yajome, who block the crosswalk to see. Uncontrolled high-speed Yajome traffic may induce risky driving behaviors for motorists trying to turn off Yount. Wide curb radius on northwest side. | Upgrade crosswalk to high-visibility school zone pattern. Install curb extensions on both sides of existing crosswalk across Yount St to reduce crossing distance, improve pedestrian visibility (would likely address vegetation in visibility triangle at southwest corner), calm Yajome traffic, and prevent vehicles from parking close to crosswalk. Evaluate potential for Yajome crosswalk on north side of intersection. | $$ | Medium |
| 10 | Yajome Street and Vallejo Street intersection | NAI-316 | No crosswalks across Yajome Street (high speeds and volumes) to access Vine Trail. Vehicles park adjacent to intersection and obstruct visibility. | Paint high-visibility crosswalk across Yajome Street. Install curb extensions on all four corners of intersection to improve pedestrian visibility and motorist yielding behavior, calm Yajome traffic, and reduce need for vehicles to creep into intersection, creating hazard for bikes/pedestrians. | $$ | Medium |
| 11 | Yajome Street and Jackson Street intersection | NAI-317 | No crosswalks, missing red curbs allow motorists to park close to intersection and obstruct visibility, no traffic control or calming for Yajome traffic makes it difficult and risky to cross and reach VT. | Paint high-visibility crosswalk across and parallel to Yajome Street. Install curb extensions on all four corners of intersection to improve pedestrian visibility, improve motorist yielding behavior, and calm Yajome traffic. | $$ | Medium |
| 12 | Vallejo Street from Yajome Street to Soscol Avenue | NAI-318 | High vehicle volumes due to several auto shops in area; bike facilities are just sharrows and signage. | Upgrade bike facilities to full Class III bike boulevard treatment with traffic-calming. Consider additional red curbs around intersections and major driveways given high volume of on-street parking and auto movement associated with auto repair businesses. | $ | Medium |
| | | NAI-319 | No crosswalk at Vine Trail crossing, cars parking close to crossing can reduce visibility, traffic may be high-speed coming off of Soscol. Westbound railroad stop lines are in the middle of crossing line. Poor sight lines for northbound Vine Trail users on south side due to building/ utility box. | Paint high-visibility crosswalk across Vallejo Street at Vine Trail crossing. Install curb extensions for crosswalk where railroad allows. | $-$$ | High |

| | LOCATION | ID # | BARRIER | RECOMMENDATION | COST | PRIORITY |
|---|---|---|---|---|---|---|
| 13 | Jackson Street from Yajome Street to Soscol Avenue | NAI-320 | No bicycle facilities, easy for westbound traffic to pick up speed past the bend in the road. | Install Class III bike boulevard with sharrows, signage, and traffic-calming. Consider additional red curbs around intersections and major driveways given high volume of on-street parking and auto movement associated with auto repair businesses . | $$ | **Medium** |
| | | NAI-321 | Vine Trail crossing hard to see because no crosswalk and grade/slope difference in road when approaching from the west . | Paint high-visibility crosswalk across Jackson Street at Vine Trail crossing and install curb extensions for crosswalk where railroad allows. | $-$$ | **High** |
| 14 | Lincoln Avenue from California Boulevard to Soscol Avenue | NAI-259 | High stress bicycle facilities – poor road quality, dips/fall hazards from storm drains, narrow and unprotected next to high speed and high-volume traffic. | Implement a road diet along Lincoln Avenue to create a street with one travel lane in each direction and a middle turn lane. Use reclaimed space for multimodal improvements (widen sidewalks, install low-stress bike facilities). Due to high multimodal use, may require a Corridor Plan similar to Imola Ave. | $$$-$$$$ | **High** |
| | | NAI-260 | | Install a Class IV bike lane – can be parking protected to preserve some parking in some locations but should remove parking around intersections and driveways. Install conflict markings at (major) intersections and driveways. Buffered Class II bike lanes can also be used in areas where Class IV is not feasible. | $$ | **High** |
| 15 | Lincoln Avenue and Jefferson Street intersection | NAI-268 | Large, busy intersection: long crossing distances across several lanes of traffic, high volumes of vehicles, faded low-visibility pattern crosswalks in a school zone and at an intersection of two arterials/collectors. | Install Leading Pedestrian Intervals for all crosswalks. Repaint crosswalks with a high-visibility pattern. Install stop lines for all vehicle travel lanes. Paint green conflict markings on Lincoln Ave bike lanes approaching the intersection. Curb extension on northeast corner to tighten curb radius and slow right turns and square up intersection.<br><br>Redesign intersection with recommended road diets and Jefferson Street corridor study* to prioritize bicyclist and pedestrian separation and safety and slow motorist speeds. Consider protected intersection during redesign. | $$ | **High** |



| | LOCATION | ID # | BARRIER | RECOMMENDATION | COST | PRIORITY |
|---|---|---|---|---|---|---|
| 16 | Lincoln Avenue and Brown Street intersection | NAI-285 | Difficult intersection, motorists fail to yield to pedestrians, long crossing distance, faded crosswalks, extremely faded low-visibility crosswalks, high volumes and speeds of Lincoln Ave traffic. | Install Rectangular Rapid Flashing Beacons across Lincoln Ave, repaint crosswalks, upgrade crosswalks across Lincoln Ave to be high-visibility pattern, install small curb extension on northwest corner, paint red curbs on Brown Street adjacent to crosswalks. | $$ | **Low** |
| 17 | Lincoln Avenue and Main Street intersection | NAI-290 | Faded crosswalks, wide corner radii, large intersection with high speeds/volumes of vehicle traffic on Lincoln Ave. | Repaint crosswalks with high-visibility pattern, install curb extension on southeast side. | $-$$ | **Low** |
| 18 | Lincoln Avenue and Adrian Street intersection | NAI-291 | Misaligned intersection, no crosswalks, cars park close to intersection on Adrian St and block pedestrian visibility, high volumes and speeds of vehicle traffic on Lincoln Ave. | Paint crosswalks across Adrian Street, install curb extensions on north corners and paint red curbs on Adrian St on south curbs. | $$ | **Low** |
| 19 | Lincoln Avenue and Yajome Street intersection | NAI-292 | Yajome St (south side) – widens at intersection, increasing ped crossing distance and facilitating fast right turns onto Lincoln Ave. No stop control for high speed/volume Lincoln Ave traffic may cause drivers on Yajome to make fast turns/ crossings without looking for bicyclists/peds. Bike facilities disappear through intersection. | Install significant curb extension on southwest corner and curb extension on southeast corner (Yajome sides only) to square up intersection, reduce crossing distance, and calm traffic. | $$ | **Medium** |
| | | NAI-293 | Yajome St (north side) – no crosswalk across Yajome St, wide curb radii on both north corners, bike facilities disappear through intersection, cars park close to intersection and obstruct visibility. | Paint crosswalk across Yajome. Install curb extensions on both north corners, removing one parking space on both Lincoln and Yajome per curb extension (improve pedestrian visibility and motorist visibility so motorists don't block crosswalk). | $$ | **Medium** |
| | | NAI-294 | Bicyclist/motorist conflict area leading up to intersection with motorist right turns onto Yajome. | Paint green conflict markings in existing Lincoln Avenue bicycle facilities leading up to intersection on both sides. | $ | **Medium** |
| | | NAI-295 | No crosswalk across Lincoln Avenue to connect Yajome Street. | Install high-visibility crosswalk across Lincoln Avenue with Rectangular Rapid Flashing Beacons at northeast corner of Lincoln/Yajome. Install sharks' teeth on Lincoln Ave travel lanes. | $ | **Low** |
| | | NAI-296 | Southbound Yajome sidewalk north of Lincoln Ave does not reach intersection. | Fill sidewalk gap.* | $ | **Low** |

| | LOCATION | ID # | BARRIER | RECOMMENDATION | COST | PRIORITY |
|---|---|---|---|---|---|---|
| 20 | Lincoln Avenue and Soscol Avenue intersection | NAI-322 | High speeds and volumes of vehicle traffic, wide curb radii facilitate fast turning movements, long crossing distances, low-visibility pattern crosswalks, several high conflict risk locations for bike facilities. Motorists taking right turns on red lights drive into crosswalk to see oncoming traffic. | Upgrade crosswalks to high-visibility pattern. Paint green conflict markings at high bicycle/vehicle conflict risk locations approaching the intersection. Install curb extension on southeast corner. Narrow eastbound Lincoln Avenue travel lanes on west side of intersection and widen eastbound bike lane to 6 feet. Paint stop lines on all travel lanes. | $$ | **Medium** |
| | | NAI-323 | | Redesign intersection (especially in consideration of recommended road diets) to prioritize bicyclist and pedestrian safety by addressing listed barriers. Evaluate potential for protected intersection given significant history of bike and ped collisions within 500-750'. | $-$$ | **Medium** |
| 21 | Soscol Avenue from Lincoln Avenue to 1st Street | NAI-324 | Significant central north/ south arterial – wide, straight, auto-oriented corridor designed to prioritize vehicle speed and convenience over safety/access of other modes. Road design facilitates frequent motorist speeding. Uncomfortable crosswalks across the corridor, high-stress unprotected on-street bicycle facilities with frequent debris obstructions and high conflict risk between moving traffic and door zone of parked vehicles. | Long term: Road diet and redesign of corridor to improve and prioritize safe, accessible, and comfortable multi-modal transportation through a Complete Streets framework. Integrate specific recommendations from SRTS reports into road redesign. Class IV protected bike lanes preferred for this corridor with reclaimed space from road diet. | $$$-$$$$ | **Medium** |
| | | NAI-325 | | Near-term solutions: Paint conflict markings for bike facilities at major side streets and driveways. Traffic-calming measures along corridor. If repaving provides opportunity to narrow travel lanes and widen bike lanes, do so. | $-$$ | **Medium** |
| 22 | Soscol Avenue and McKinstry Street intersection | NAI-326 | Long crossing distance across Soscol Avenue; lack of red curbs allow motorists to park adjacent to intersection and obstruct visibility. | Install curb extensions on both sides of Soscol Ave crosswalk. | $$ | **Low** |



| | LOCATION | ID # | BARRIER | RECOMMENDATION | COST | PRIORITY |
|---|---|---|---|---|---|---|
| 23 | Jefferson Street from Lincoln Avenue to Cedar Ave* | NAI-265 | Significant central north/ south arterial – wide, straight, auto-oriented corridor designed to prioritize vehicle speed and convenience over safety/access of other modes. Road design facilitates frequent motorist speeding. Infrequent and inadequate crosswalks across the corridor, minimal shade, high LTS, no bike facilities. | Long term: Road diet and redesign of corridor to improve and prioritize safe, accessible, and comfortable multi-modal transportation through a Complete Streets framework. Integrate specific recommendations from SRTS reports into road redesign. | $$$-$$$$ | **High** |
| | | NAI-266 | No bicycle facilities.* | Find a short-term solution pending the road diet/redesign that creates continuous bicycle facilities in both directions for this corridor – minimum separation level is Class II bike lanes. May require reallocating space from motor vehicles. | $-$$$ | **High** |
| | | NAI-267 | Uncontrolled crosswalks across Jefferson are extremely difficult to cross – low driver yielding behavior, low-visibility pattern crosswalks, no traffic-control/calming, high volumes and speeds of traffic, parked vehicles close to crosswalks, long crossing distance, low field of vision for motorists. | Install curb extensions (may require removing parking) and high-visibility crosswalks at uncontrolled crosswalks across Jefferson Street. | $$ | **Medium** |
| 24 | Jefferson Street and E Street/Hayes Street intersection | NAI-304 | Free right turn off of northbound Jefferson St facilitates fast motorist turning movement, reduces motorist yielding behavior. Long crossing distance across Jefferson. Low-visibility school zone crosswalk patterns. Wide curb radii facilitate fast motorist turning movement, especially off of Jefferson St | Close free right turn off of northbound Jefferson Street – can use bollards for quick response. Upgrade crosswalks to high-visibility pattern. Curb extensions on west corners. Install Leading Pedestrian Interval for Jefferson crosswalks. | $$ | **Low** |
| 25 | Jefferson Street and Eggleston Street intersection | NAI-327 | Long crossing distance across Jefferson Street, low-visibility crosswalk pattern (used to be high-visibility pattern but wasn't repainted as such), uncontrolled high-speed/ high-volume Jefferson traffic. | Repaint high-visibility crosswalk pattern across Jefferson Street, install curb extensions on both sides of Jefferson Street crosswalk. | $$ | **Low** |
| 26 | Hayes Street from Jefferson Street to Yount Street | NAI-328 | Faded bike boulevard stencils; wide, straight corridor with no traffic-calming for Class III bike boulevard. | Repaint bike boulevard stencils, install traffic-calming measures along corridor, with key opportunities at Coleman Street crosswalk and intersection with Yount/Brown/Hayes. | $-$$ | **Low** |

** = projects included in Napa Countywide Pedestrian Plan (2016) or Napa Countywide Bicycle Plan (2019)*

## Programmatic Improvements:

| | ISSUE | ID # | RECOMMENDATION | LOCATION | FREQUENCY | COST | PRIORITY |
|---|---|---|---|---|---|---|---|
| 1 | Vehicle-oriented transportation culture | NAP-044 | Peer/Student-led encouragement programs and education campaigns highlighting health, environmental, social, and academic benefits of walking/biking to school. | School grounds | Monthly | $ | **High** |
| 2 | Low participation in encouragement events | NAP-045 | Continue growing participation in annual countywide encouragement events. | School site | Annually | $ | **Medium** |
| 3 | No existing bike education program | NAP-046 | On-campus bike maintenance and safety workshop for students. | School site | Annually | $ | **High** |
| 4 | Existing Class II bike lanes frequently littered with debris, gravel, broken glass, etc. | NAP-047 | Improve maintenance of existing bike facilities by slowing street sweeping to ensure thorough sweeping of bike lanes, increase sweeping if necessary. | Soscol Avenue from Lincoln Avenue to 1st Street | Consistent with regular street sweeping schedule, increase if needed | $ | **Medium** |
| 5 | Debris / gravel / obstructions in existing Lincoln Ave bike lanes | NAP-043 | Improve existing maintenance – ensure that bike lanes are swept with regular street sweeping and increase frequency of maintenance if maintenance issues continue. | Lincoln Avenue from California Boulevard to Soscol Avenue | Regular street-sweeping schedule, increase if needed | $ | **High** |



## COLLISION MAP AND DATA


*Map 6: Collision Map (2016-2020) (Source: UC Berkeley Transportation Injury Mapping System: SRTS Collision Map Viewer)*

### Summary Statistics

| RADIUS | FATAL | SEVERE INJURY | VISIBLE INJURY | COMPLAINT OF PAIN | PEDESTRIAN | BICYCLE | TOTAL |
|---|---|---|---|---|---|---|---|
| < .25 mi. | 1 | 2 | 3 | 4 | 5 | 6 | 10 |
| .25-.5 mi. | 0 | 4 | 25 | 18 | 23 | 24 | 47 |
| Total | 1 | 5 | 28 | 22 | 28 | 30 | 57 |

### Collision List

Crash List

| Case ID | Date | Time | Primary | Secondary | Distance | Direction | Bike | Ped |
|---|---|---|---|---|---|---|---|---|
| 7197243 | 2016-02-07 | 12:58 | LEGION AV | LEGION AV 1115 | 0.00 | - | No | Yes |
| 8059595 | 2016-05-31 | 07:25 | RIVER TERRACE WY | SOSCOL AV | 0.00 | - | No | Yes |
| 8099755 | 2016-07-24 | 21:49 | LINCOLN AV | YAJOME ST | 0.00 | - | Yes | No |
| 8352132 | 2017-03-28 | 00:54 | JEFFERSON ST | LINCOLN AV | 0.00 | - | Yes | No |
| 8380330 | 2017-05-19 | 15:18 | 1ST ST | FRANKLIN ST | 0.00 | - | Yes | No |
| 8380362 | 2017-05-09 | 08:50 | 1ST ST | MAIN ST | 0.00 | - | Yes | No |
| 8422113 | 2017-07-21 | 13:04 | JEFFERSON ST | SENIOR CENTER DR | 0.00 | - | Yes | No |
| 8424947 | 2017-08-03 | 13:59 | PEARL ST | MAIN ST | 0.00 | - | Yes | No |
| 8440559 | 2017-08-22 | 08:02 | BROWN ST | LINCOLN AV | 0.00 | - | Yes | No |
| 8465610 | 2018-05-31 | 10:58 | SOSCOL AV | TANEN ST | 0.00 | - | No | Yes |
| 8489594 | 2017-10-26 | 09:48 | SOSCOL AV | JACKSON ST | 0.00 | - | No | Yes |
| 8507141 | 2017-09-13 | 16:45 | CALISTOGA AV | JEFFERSON ST | 0.00 | - | Yes | No |
| 8510884 | 2017-12-05 | 15:10 | 1ST ST | MAIN ST | 150.00 | W | No | Yes |
| 8535264 | 2018-01-08 | 07:31 | JEFFERSON ST | LINCOLN AV | 0.00 | - | Yes | No |
| 8614300 | 2018-04-12 | 11:42 | MAIN ST | PEARL ST | 0.00 | - | No | Yes |
| 8657175 | 2018-07-13 | 14:00 | 2ND ST | RANDOLPH ST | 0.00 | - | Yes | No |
| 8680095 | 2018-07-30 | 21:56 | BROWN ST | LINCOLN AV | 0.00 | - | No | Yes |
| 7183988 | 2016-01-28 | 14:30 | CLAY ST | JEFFERSON ST | 0.00 | - | No | Yes |

Collision List (continued)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8021520 | 2016-03-27 | 00:07 | SOSCOL AV | LINCOLN AV | 100.00 | S | No | Yes |
| 8022770 | 2016-04-01 | 16:00 | JEFFERSON ST | LINCOLN AV | 0.00 | - | Yes | No |
| 8041833 | 2016-04-24 | 23:59 | MAIN ST | NAPA ST | 10.00 | N | Yes | No |
| 8087563 | 2016-07-10 | 12:00 | PEARL ST | COOMBS ST | 100.00 | E | No | Yes |
| 8087566 | 2016-07-05 | 00:34 | HAYES ST | HAYES ST 1136 | 0.00 | S | Yes | No |
| 8172171 | 2016-11-03 | 17:55 | MAIN ST | 1ST ST | 20.00 | N | No | Yes |
| 8294005 | 2017-01-18 | 12:36 | 1ST ST | MAIN ST | 0.00 | - | No | Yes |
| 8323508 | 2017-02-24 | 18:16 | C ST | JEFFERSON ST | 0.00 | - | No | Yes |
| 8369827 | 2017-05-08 | 08:34 | CLAY ST | JEFFERSON ST | 0.00 | - | No | Yes |
| 8386067 | 2017-06-21 | 08:26 | 2ND ST | COOMBS ST | 0.00 | - | No | Yes |
| 8407391 | 2017-07-01 | 09:02 | JEFFERSON ST | C ST | 0.00 | - | No | Yes |
| 8428063 | 2017-07-31 | 15:05 | LINCOLN AV | SOSCOL AV | 90.00 | W | Yes | No |
| 8496275 | 2017-11-08 | 20:08 | 1ST ST | SOSCOL AV | 0.00 | - | No | Yes |
| 8519504 | 2017-12-16 | 01:21 | MAIN ST | 2ND ST | 50.00 | N | No | Yes |
| 8613023 | 2018-04-25 | 18:43 | POLK ST | SEMINARY ST | 0.00 | - | Yes | No |
| 8689574 | 2018-08-11 | 13:00 | LINCOLN AV | MAIN ST | 0.00 | - | Yes | No |
| 8691837 | 2018-08-28 | 20:03 | JEFFERSON ST | H ST | 0.00 | - | Yes | No |
| 8729239 | 2018-10-27 | 15:41 | VALLEJO ST | SOSCOL AV | 100.00 | W | Yes | No |
| 8737906 | 2018-11-02 | 18:41 | LINCOLN AV | LINCOLN AV 770 | 0.00 | - | No | Yes |
| 8816422 | 2019-02-23 | 09:53 | JEFFERSON ST | LINCOLN AV | 138.00 | S | Yes | No |
| 8858385 | 2019-01-15 | 18:42 | SOSCOL AV | LINCOLN AV | 226.00 | S | No | Yes |
| 8858770 | 2019-05-07 | 11:59 | JACKSON ST | SOSCOL AV | 0.00 | - | Yes | No |
| 8916228 | 2019-06-30 | 19:11 | JEFFERSON ST | LINCOLN AV | 0.00 | - | Yes | No |
| 8920788 | 2019-08-12 | 20:34 | VALLEJO ST | YAJOME ST | 0.00 | - | Yes | No |
| 9026943 | 2020-01-24 | 15:06 | PEARL ST | SOSCOL AV | 0.00 | - | Yes | No |
| 9072814 | 2020-03-04 | 15:03 | 1ST ST | FRANKLIN ST | 0.00 | - | Yes | No |
| 9083401 | 2020-03-19 | 10:32 | F ST | YORK ST | 0.00 | - | Yes | No |
| 9125470 | 2020-07-11 | 12:20 | VALLEJO ST | MAIN ST | 0.00 | - | Yes | Yes |
| 9130079 | 2020-08-02 | 05:36 | LINCOLN AV | SOSCOL AV | 0.00 | - | No | Yes |
| 9185796 | 2020-11-03 | 18:47 | 1ST ST | MAIN ST | 0.00 | - | No | Yes |
| 8702517 | 2018-09-14 | 10:54 | SOSCOL AV | 1ST ST | 0.00 | - | Yes | No |
| 8704696 | 2018-09-22 | 20:14 | 1ST ST | SOSCOL AV | 0.00 | - | No | Yes |
| 8761801 | 2019-01-02 | 18:31 | BROWN ST | YOUNT ST | 0.00 | - | No | Yes |
| 8764524 | 2018-11-05 | 11:05 | H ST | JEFFERSON ST | 0.00 | - | No | Yes |
| 8783691 | 2019-01-15 | 17:12 | MAIN ST | PEARL ST | 0.00 | - | No | Yes |
| 8806128 | 2019-02-09 | 10:16 | MAIN ST | CAYMUS ST | 80.00 | - | Yes | No |
| 8832843 | 2019-03-17 | 22:48 | MAIN ST | PEARL ST | 0.00 | - | Yes | No |
| 9210887 | 2020-10-02 | 20:47 | LINCOLN AV | IROQUOIS ST | 75.00 | E | No | Yes |
| 9211165 | 2020-12-29 | 12:02 | JEFFERSON ST | H ST | 0.00 | - | Yes | No |

*Figure 4: Collision Data (2016-2020) (Source: UC Berkeley Transportation Injury Mapping System: SRTS Collision Map Viewer)*

# APPENDICES



# FIGURES & MAPS

# FOOTNOTES

[a] Noreen McDonald, Ruth Steiner, Chanam Lee, Tori Rhoulac Smith, Xuemei Zhu and Yizhao Yang (2014). "Impact of the Safe Routes to School Program on Walking and Bicycling." Journal of the American Planning Association. Vol 80, Iss 2, p 153-167.

[b] Orion Stewart, Anne Vernez Moudon, and Charlotte Claybrooke (2014) Multistate Evaluation of Safe Routes to School Programs. American Journal of Health Promotion: January/February 2014, Vol. 28, No. sp3, pp. S89-S96.

[c] Peter A Muennig et al., 'The Cost-Effectiveness Of New York City's Safe Routes To School Program', American Journal Of Public Health, iss 0 (2014): 1-6.

[d] David Ragland, S Pande, J Bigham and FJ Cooper. (2014, January). Ten years later: examining the long-term impact of the California Safe Routes to School program. Presented at the Transportation Research Board 93rd Annual Meeting, Washington DC. Available at http://docs.trb.org/prp/14-4226.pdf.

[e] Davison K, Werder J and Lawson, C. "Children's Active Commuting to School: Current Knowledge and Future Directions." Preventing Chronic Disease, 5(3): A100, July 2008.

[f] Hillman CH, Pontifex MB, Raine LB, Castelli DM, Hall EE, Kramer AF. The effect of acute treadmill walking on cognitive control and academic achievement in preadolescent children. Neuroscience. 2009;159(3):1044-1054. doi:10.1016/j.neuroscience.2009.01.057

[g] Castelli, D.M., Glowacki, E., Barcelona, J.M., Calvert, H.G., & Hwang, J. (2015). Active Education: Growing Evidence on Physical Activity and Academic Performance. [Research brief.] Active Living Research. http://activelivingresearch.org/sites/default/files/ALR_Brief_ActiveEduc....

[h] Appleyard, B. (2017). The meaning of livable streets to schoolchildren: An image mapping study of the effects of traffic on children's cognitive development of spatial knowledge. Journal of Transport & Health, 5.

[i] AAA. Cost of Owning and Operating Vehicle in U.S. Increased 1.9% According to AAA's 2012 Your Driving Costs Study. 2012. http://newsroom.aaa.com/2012/04/costof-owning-and-operating-vehicle-in-u....

[j] Overall Facility Rating determined from 2019-20 School Accountability Report Card

# APPENDIX A

# EMC Survey Toplines

## Safe Routes to School Walk Audit Report and Active Transportation Action Plan

# Evaluation: Research & Methodology

- **Purpose: Gain insight into parent practices, perceptions, and attitudes around children walking and riding bicycles to and from school; explore barriers to behavior change**
- **Quantitative survey of 459 parents of K-8 students in Napa County**
  - Conducted online and by telephone, offered in English and Spanish
  - Conducted March 11 – April 12, 2021
  - Participants recruited via communications from school districts and targeted online and telephone contacts
  - *Survey methods were designed to include as many participants as possible; not a random sample*
- **Qualitative follow-up research**
  - One online focus group with 7 participants in English; 4 in-depth telephone interviews in Spanish
  - Conducted May 20 – 28, 2021
  - Targeted parents who lived within two miles of their school site and would like their children to walk or bike to school

**Survey of Parents/Guardians of at least one child in K-8th Grade**
**Napa County, California**
**Hybrid Email-to-Web/Text-to-Web/Live Telephone Survey**
**Conducted March 11-April 12, 2021**
**n=459**
**EMC Research #21-6420**

***All numbers in this document represent percentage (%) values, unless otherwise noted.***
***Please note that due to rounding, percentages may not add up to exactly 100%.***

**INTRO:** Your opinions are important! Thank you for participating in this survey EMC Research is conducting on behalf of the Napa County Safe Routes to School program in partnership with local school districts. You may have been contacted previously to complete this survey via telephone and we ask each individual only complete the survey once.

Your responses will remain completely confidential. Please try to answer every question even if you're not sure. If you need to, you may skip a question.

1. Are you the parent or guardian of any children currently attending kindergarten through eighth grade in one or more of the school districts located in Napa County below? *Please select the District(s) that your K-8th grade student(s) is/are currently enrolled in, check all that apply.* **(MULTIPLE RESPONSES ACCEPTED)**

| | |
|---|---|
| Calistoga Joint Unified School District | 0 |
| Howell Mountain Elementary School District | - |
| Napa Valley Unified School District | 97 |
| Pope Valley Union Elementary School District | 0 |
| Saint Helena Unified School District | 2 |
| Another District or school in Napa County (please specify) | 1 |
| None of the above → **TERMINATE** | - |
| (No response) → **TERMINATE** | - |

2. Please indicate below what grade(s) your child/children are in. *Please select all that apply.* **(MULTIPLE RESPONSES ACCEPTED)**

| | |
|---|---|
| Kindergarten | 22 |
| 1st grade | 17 |
| 2nd grade | 15 |
| 3rd grade | 20 |
| 4th grade | 15 |
| 5th grade | 15 |
| 6th grade | 14 |
| 7th grade | 12 |
| 8th grade | 9 |
| 9th through 12th grade → **TERMINATE IF ONLY RESPONSE SELECTED** | 14 |
| (No response) → **TERMINATE** | - |

**(IF MORE THAN ONE K-8 STUDENT**: "Although you have multiple children in K-8, we ask that you please think about your **oldest K-8** child when answering the next questions."**)**

For these next few questions, please think back to when your **(**child was**/**children were**)** attending school **before** the COVID-19 pandemic.

3. On most days, what was the primary way your **(**K-8 child**/**oldest K-8 child**)** travelled **to** school?

| | |
|---|---|
| Family vehicle (only children in your family) | 73 |
| Carpool (children from other families) | 3 |
| School bus | 3 |
| Other public transportation | 0 |
| Bike | 4 |
| Walk | 16 |
| Other (scooter, skateboard, inline skates, etc.) | 0 |
| (No response) | 0 |

4. And on most days, what was the primary way your **(**K-8 child**/**oldest K-8 child**)** travelled **from** school?

| | |
|---|---|
| Family vehicle (only children in your family) | 73 |
| Carpool (children from other families) | 3 |
| School bus | 3 |
| Other public transportation | 1 |
| Bike | 4 |
| Walk | 15 |
| Other (scooter, skateboard, inline skates, etc.) | 0 |
| (No response) | 0 |

5. How long did it normally take your **(**K-8 child**/**oldest K-8 child**)** to get to/from school?

| | |
|---|---|
| Less than 5 minutes | 18 |
| 5-10 minutes | 42 |
| 11-15 minutes | 22 |
| 16-20 minutes | 8 |
| More than 20 minutes | 9 |
| (No response) | 0 |

6. Has your **(**K-8 child**/**oldest K-8 child**)** ever walked or biked to/from school?

| | |
|---|---|
| Yes | 43 |
| No | 56 |
| (No response) | 0 |

7. **(ONLY ASKED IF Q6=1, 'Yes, has walked/biked to/from school')** In what grade did your child begin to walk or bike to/from school? **(n=199)**

| | |
|---|---|
| Pre-school | 7 |
| Kindergarten | 30 |
| 1st grade | 9 |
| 2nd grade | 6 |
| 3rd grade | 10 |
| 4th grade | 8 |
| 5th grade | 9 |
| 6th grade | 13 |
| 7th grade | 6 |
| 8th grade | 1 |
| 9th through 12th grade | 1 |
| (No response) | 2 |

8. Thinking generally, what grade would you feel comfortable with a child walking or biking to/from school?

| | |
|---|---|
| Pre-school | 1 |
| Kindergarten | 5 |
| 1st grade | 2 |
| 2nd grade | 2 |
| 3rd grade | 5 |
| 4th grade | 14 |
| 5th grade | 12 |
| 6th grade | 16 |
| 7th grade | 10 |
| 8th grade | 7 |
| 9th through 12th grade | 13 |
| I would not feel comfortable at any grade | 14 |
| (No response) | 1 |

9INT. Continuing to think about times **before** the COVID-19 pandemic, please indicate how comfortable **you** were with your **(**K-8 child**/**oldest K-8 child**)** doing each of the following.

| SCALE: | Very Comfortable | Somewhat Comfortable | Not too Comfortable | Not at all Comfortable | (No Response) | Total Comfort. | Total Not Comfort. |
|---|---|---|---|---|---|---|---|
| **(RANDOMIZE)** | | | | | | | |
| 9. Taking a bus to school | 32 | 33 | 17 | 15 | 3 | **65** | **32** |
| 10. Walking to school without an adult | 8 | 18 | 19 | 54 | 1 | **26** | **73** |
| 11. Riding a bike to school without an adult | 7 | 17 | 22 | 53 | 2 | **23** | **75** |
| 12. Walking to school with an adult | 66 | 19 | 6 | 8 | 1 | **85** | **14** |
| 13. Riding a bike to school with an adult | 45 | 29 | 11 | 13 | 2 | **74** | **24** |
| **(END RANDOMIZE)** | | | | | | | |

14. **(ONLY ASKED IF Q10=3 OR 4, 'not comfortable')** What would you say is the **main** reason you were not comfortable with your **(**K-8 child**/**oldest K-8 child**)** **walking** to school without an adult?
**(VERBATIM RESPONSES CODED INTO BELOW CATEGORIES) (n=335)**

| | |
|---|---|
| Worry for child's safety/Crime | 28 |
| Not old enough | 19 |
| Live too far away | 17 |
| Traffic/Busy streets | 11 |
| Street crossing/Intersections | 6 |
| Not enough sidewalks | 5 |
| Crossing Highway 29 | 3 |
| Other | 8 |
| Don't know | 1 |

15. **(ONLY ASKED IF Q11=3 OR 4, 'not comfortable')** What would you say is the **main** reason you were not comfortable with your **(**K-8 child**/**oldest K-8 child**)** **riding a bike** to school without an adult?
**(VERBATIM RESPONSES CODED INTO BELOW CATEGORIES) (n=324)**

| | |
|---|---|
| Worry for child's safety/Crime | 29 |
| Not old enough | 18 |
| Traffic/Busy streets | 13 |
| Live too far away | 9 |
| Street crossing/Intersections | 5 |
| Crossing Highway 29 | 4 |
| Can't ride a bike | 4 |
| Not enough sidewalks | 3 |
| No bike lanes | 3 |
| Other | 10 |
| Don't know | 1 |

For these next few questions, please think back to when your **(**child was**/**children were**)** attending school **before** the COVID-19 pandemic.

16INT. Please indicate whether you agree or disagree with each of the following statements.

| SCALE: | Strongly Agree | Somewhat Agree | Somewhat Disagree | Strongly Disagree | (No Response) | Total Agree | Total Disagree |
|---|---|---|---|---|---|---|---|
| **(RANDOMIZE)** | | | | | | | |
| 16. I would generally like my K-8 **(**child**/**children**)** to be able to walk or bike to/from school. | 43 | 32 | 12 | 12 | 0 | **76** | **24** |
| 17. My K-8 **(**child enjoys**/**children enjoy**)** walking and/or biking places. | 57 | 31 | 8 | 4 | 0 | **88** | **12** |
| 18. I would never let my K-8 **(**child**/**children**)** walk or bike to/from school. | 20 | 24 | 27 | 28 | 0 | **44** | **55** |
| 19. It is safe for children to walk or bike in my area. | 13 | 45 | 22 | 20 | - | **58** | **42** |
| 20. There are enough bike paths and sidewalks for my K-8 **(**child**/**children**)** to walk or bike to/from school. | 13 | 27 | 20 | 39 | 1 | **40** | **60** |
| 21. I am concerned about speeding or distracted drivers if/when my **(**child**/**children**)** walk or bike to/from school. | 81 | 15 | 2 | 2 | 0 | **96** | **4** |
| 22. The school is too far away for my K-8 **(**child**/**children**)** to walk or bike there. | 37 | 19 | 15 | 29 | 0 | **55** | **45** |
| 23. My K-8 **(**child**/**children**)** cannot bike to and from school because of their before- or after-school commitments. | 13 | 26 | 25 | 35 | 1 | **39** | **60** |
| 24. Walking or biking to and from school is a good way for my K-8 **(**child**/**children**)** to get physical exercise. | 69 | 25 | 3 | 3 | 1 | **93** | **6** |
| 25. Walking or biking to and from school is a good way for me to spend quality time with my K-8 **(**child**/**children**)**. | 55 | 30 | 7 | 6 | 1 | **85** | **14** |
| 26. I would only allow my K-8 **(**child**/**children**)** to walk or bike to and from school if I, or another adult, can accompany them. | 54 | 25 | 12 | 8 | 0 | **79** | **21** |
| **(END RANDOMIZE)** | | | | | | | |

27INT. Next, you will see some things that local schools and other organizations could do that may affect how you feel about your **(**K-8 child**/**oldest K-8 child**)** biking to school once the COVID-19 pandemic has ended. For each, please indicate if the item would make you feel more comfortable about allowing your **(**K-8 child**/**oldest K-8 child**)** to walk or bike to school once the COVID-19 pandemic has ended.

| SCALE: | Much More Comfortable | Somewhat More Comfortable | A Little More Comfortable | (No Difference) | (Don't Know) |
|---|---|---|---|---|---|
| **(RANDOMIZE)** | | | | | |
| 27. Limit how much children have to carry in their backpacks | 36 | 25 | 14 | 24 | 1 |
| 28. Provide children and parents with information and maps on safe routes to and from school | 37 | 24 | 16 | 22 | 1 |
| 29. Offer free bicycle safety courses for children to learn how to ride safely on local streets | 43 | 21 | 21 | 15 | 0 |
| 30. Provide opportunities for children to practice biking in a car-free environment | 42 | 23 | 14 | 20 | - |
| 31. Offer free pedestrian safety classes for children | 39 | 20 | 21 | 19 | 1 |
| 32. Provide crossing guards at major intersections | 62 | 22 | 10 | 6 | - |
| 33. Organize groups of students to walk or bike to/from school together | 42 | 26 | 17 | 14 | 1 |
| 34. Provide a local parent or adult volunteer to walk or bike with children to/from school | 36 | 27 | 15 | 20 | 1 |
| 35. Add designated bike lanes to roads | 46 | 24 | 15 | 14 | - |
| 36. Improve the condition of existing bike lanes | 47 | 23 | 14 | 16 | 1 |
| 37. Add more bike paths that are separated from the road | 62 | 17 | 11 | 9 | 0 |
| 38. Add more sidewalks | 53 | 21 | 13 | 12 | 1 |
| 39. Fix missing or broken sidewalks | 56 | 19 | 15 | 10 | 1 |
| 40. Increase the visibility and safety of crosswalks | 61 | 20 | 11 | 8 | 0 |
| 41. Increase the police presence on routes that lead to schools | 52 | 23 | 13 | 12 | 1 |
| 42. Reduce the speed of traffic on streets that kids use to walk or bike to school | 53 | 21 | 15 | 11 | 1 |
| **(END RANDOMIZE)** | | | | | |

43. Is there something else that could be done that would make you feel more comfortable about allowing your **(**K-8 child**/**oldest K-8 child**)** to walk or bike to school once the COVID-19 pandemic has ended? **(VERBATIM RESPONSES CODED INTO BELOW CATEGORIES)**

| | |
|---|---|
| Nothing/No additional comments | 42 |
| Add or improve bike paths/Sidewalks/Crosswalks | 15 |
| Increase crossing guards/Supervision/Police presence | 11 |
| School is too far away/Can't use active modes | 9 |
| Speeding concerns/Increased road law enforcement | 5 |
| Increase safety related to Highway 29 | 2 |
| Already walks/bikes/etc. | 2 |
| Provide bikes/Equipment/Storage | 2 |
| Other | 10 |
| Don't know/Refused | 2 |

44. About how far does your **(**K-8 child**/**oldest K-8 child**)** live from school? If you're not sure, give your best guess.

| | |
|---|---|
| Less than ½ mile | 14 |
| ½ mile up to 1 mile | 19 |
| 1 mile up to 2 miles | 21 |
| 2 miles up to 3 miles | 14 |
| 3 miles up to 5 miles | 15 |
| 5 miles or more | 16 |
| (No response) | 1 |

45. Does your **(**K-8 child**/**oldest K-8 child**)** currently have their own working bicycle?

| | |
|---|---|
| Yes | 79 |
| No | 21 |
| (No response) | - |

46. Did you ride a bicycle when you were your K-8 **(**child's**/**children's**)** age?

| | |
|---|---|
| Yes | 78 |
| No | 21 |
| (No response) | 0 |

These last questions are for statistical purposes only. Your responses will remain completely confidential.

47. Do you identify as…

| | |
|---|---|
| Male | 14 |
| Female | 83 |
| Non-binary | - |
| Another gender identity | - |
| Prefer not to respond | 3 |

48. What year were you born? **(YEARS CODED INTO CATEGORIES)**

| | |
|---|---|
| 18-29 (2003-1992) | 5 |
| 30-39 (1982-1991) | 36 |
| 40-49 (1972-1981) | 45 |
| 50-64 (1957-1971) | 12 |
| 65 or older (1956 or earlier) | 1 |
| Prefer not to respond | 1 |

49. Do you consider yourself to be…

| | |
|---|---|
| Hispanic or Latino | 38 |
| White or Caucasian | 41 |
| African American or Black | 1 |
| Asian or Pacific Islander | 7 |
| Something else | 3 |
| Prefer not to respond | 10 |

50. Do you…

| | |
|---|---|
| Own or are buying the home or apartment where you live | 55 |
| Rent or lease | 35 |
| Prefer not to respond | 10 |

**THANK YOU!**

# APPENDIX B

# Universal Recommendations

## Safe Routes to School Walk Audit Report and Active Transportation Action Plan

# Appendix B
# Napa County SRTS Walk Audit Report
# Universal Recommendations

The Napa County Safe Routes to School (SRTS) Walk Audit Report Universal Recommendations apply to all public schools in Napa County, which reflects the schools served under the SRTS program. Universal recommendations are meant to supplement site-specific recommendations and address common barriers in the bicycle/pedestrian network around schools in a concise and consistent manner.

## Universal Recommendation 1: High-Visibility School Zone Crosswalks

Federal Highway Administration data[1] indicates that high-visibility crosswalk striping improves the visibility of crosswalks compared to standard parallel lines and can improve yielding behavior by drivers[2]. Additionally, crosswalk visibility enhancements, which include but are not limited to high-visibility crosswalks, can reduce crashes by 23-48%[1].

- Recommendation: High-visibility (continental or ladder pattern) crosswalks should be implemented at the following locations:
    - Utilizing the California Vehicle Code (CVC) §21368 requirements for designating crosswalks as "school zone" crosswalks (painted yellow), all school zone crosswalks;
    - And, all marked crosswalks at an intersection with a designated collector or arterial roadway within 1320 feet (0.25 miles) of a school (following the same measuring method as CVC §21368)

This recommendation applies to existing and future crosswalks. It does not provide guidance for new crosswalk warrants; it is primarily focused on the improvement of crosswalks within the roughly ¼ mile radius examined through the Walk Audit process.

## Universal Recommendation 2: Intersection Daylighting

Daylighting is the practice of removing visual barriers, including parked vehicles, within a certain distance of a crosswalk or intersection to greatly improve visibility for pedestrians, bicyclists, and motorists. The National Association of City Transportation Officials recommends removing parking within 20-25 feet of an intersection. Daylighting can be accomplished through permanent infrastructure, such as concrete curb extensions, or more cost-effective materials, such as paint and bollards.

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[1] https://safety.fhwa.dot.gov/ped_bike/step/docs/TechSheet_VizEnhancemt_508compliant.pdf

2 Pulugartha, S. S., V. Vasudevan, S. S. Nambisan, and M. R. Dangeti. Evaluating the Effectiveness on Infrastructure-Based Countermeasures on Pedestrian Safety. Presented at the 91st Annual Meeting of the Transportation Research Board, Washington, D.C., 2012.

- Recommendation: Daylighting strategies should be implemented at the following intersections:
    - Those that are in the school zone as defined by CVC §21368;
    - Those that are intersections with a designated collector or arterial roadway within 2640 feet (0.5 miles) of a school (following the same measuring method as CVC §21368).

**Universal Recommendation 3: Sidewalk Width Adjacent to School Campus**

A barrier frequently identified during Walk Audits throughout the county was that sidewalks immediately adjacent to the school were too narrow for the high volumes of pedestrians generated during school arrival and dismissal times. Most of these sidewalks were roughly 4 feet wide, including space for utility and signage poles. While these sidewalks may meet specific municipal standards, they do not accommodate high volumes of school-related pedestrians and can deter or prevent students from walking to school if they travel with their families, in groups, or use a mobility assistance device. This is especially so when sidewalks are obstructed by utility poles, signal boxes, and other objects.

- Recommendation: All sidewalks that lead to a school campus entrance should be a minimum of 6 feet wide within at least 250 feet of the school entrance; if a school has only one entrance, the sidewalk leading to that entrance should be a minimum of 8 feet wide within 250 feet of that entrance.

**Universal Recommendation 4: Class III Bike Boulevard Traffic-Calming**

Class III bicycle boulevards are on-street bicycle facilities that have traditionally been marked by signage and share-the-road stencils ("sharrows") painted in the vehicle travel lane. Class III facilities do not provide any separation between bicyclists and motorists and instead indicate to road users that bicyclists and motorists must share the road. Such facilities are intended to be installed on low-speed (25 mph or less*) and low-volume (<3,000 vehicles/day*) roadways; however, the current practice of implementing only signage and sharrows for Class III routes frequently does not meet the comfort and safety perception needs of the "Interested but Concerned" user profile of bicyclists, which includes an estimate of 51%-56% of the population and is typically the profile assumed for most school-age children. To create a lower stress bicycle network, the Federal Highway Administration describes improving bicycle boulevards by "slowing motor vehicle speeds and implementing other speed management measures."

- Recommendation: All Class III bicycle boulevards should be marked with sharrows and signage and must be treated with traffic-calming strategies to enforce the desired speed limit and prevent motorist speeding. Class III bicycle boulevards adjacent to school campuses or along roadways that facilitate

motorist speeding (long, straight, and/or minimal traffic control) should be prioritized for traffic-calming treatments.

* Metrics established by the Federal Highway Association in their 2019 Bikeway Selection Guide.

**Universal Recommendation 5: Curb Ramps (Americans with Disabilities Act)**

Some of the early Walk Audit reports specifically call out intersections or other pedestrian access points where curb ramps compliant with the Americans with Disabilities Act were missing, which creates a significant connectivity barrier for pedestrians who use mobility assistance devices. However, following these reports, the Napa County Safe Routes to School team recognized that many intersections and pedestrian access points were missing these curb ramps and that individually identifying each missing curb ramp would be redundant, particularly given data from the Napa Countywide Pedestrian Plan (2016). Consequently, though some early reports do mention lack of accessible curb ramps, a universal recommendation was created to address this important pedestrian barrier while avoiding redundancy in reports.

- Recommendation: In alignment with the Americans with Disabilities Act, when implementing recommendations made in Napa County Safe Routes to School reports that impact the curb at intersections, pedestrian crossings, or other pedestrian access points, curb ramps that are compliant with the Americans with Disabilities Act should be installed.

# APPENDIX C

# Quick Build Brochure

## Safe Routes to School Walk Audit Report and Active Transportation Action Plan

# QUICK-BUILD BIKEWAY NETWORKS FOR SAFER STREETS

## Delivering Safer Streets in Weeks or Months, Instead of Years

*How to Meet Public Demand for Safe Bikeway Networks—Affordably, Quickly, and Inclusively*

*Photo credit: Alta Planning + Design*

**CASE STUDY**

Adeline Street in Berkeley got protected bike lanes 20 years ahead of schedule, when Bike East Bay worked closely with the city to incorporate planned lanes into the repaving schedule, saving time and money by simply adding bike infrastructure to an existing project, one funded through a local infrastructure bond measure. The City of Berkeley garnered extensive public input on the Adeline Corridor, making this a great example of quick-build speeding up existing bike infrastructure planning, bringing bike lanes to Berkeley in 2019 instead of 2039.

**WHY QUICK-BUILD? WHY NOW?**

Biking is up in many communities in California, including those that started with low rates of bicycling, as people seek out healthy and safe transportation and recreation. Californians are discovering they can be healthier and happier simply by getting out on two wheels.

Meanwhile, agency budgets are down. Plans to spend millions on infrastructure may no longer be realistic. More than ever, the public demands that transportation projects are equitable and responsive to the needs of neglected communities.

Quick-build is a method of building bike and pedestrian safety improvements—protected bike lanes, pedestrian crossings, slow streets, parklets, and more—now, within your budget. In challenging times, quick-build projects are crucial to building trust in the government's ability to deliver public benefit. And quick-build infrastructure can engage the public better than ever, and be more inclusive and equitable than traditional infrastructure.

> *"We as transportation experts need to be thinking strategically about whether or not we need to spend three years talking about doing something important, or three weeks to just try something."*
>
> — Warren Logan
>
> *Transportation Policy Director of Mobility and Interagency Relations at Oakland Mayor's Office*

# WHAT IS QUICK-BUILD?

## The Basics

- Quick-build projects use materials that can be installed quickly and at low cost. Build projects from posts, planters, and stripes of paint, not new pavement or curb alignments.
- **Quick-build projects are installed on a trial basis.** Temporary installations allow for adjusting or removing elements in response to public feedback. Successful projects may become permanent, exactly as installed, or upgraded with more durable materials.
- **Quick-build should incorporate rigorous community engagement.** A project on the ground can serve much more effectively than a PowerPoint or rendering for trying something out and allowing community residents to respond. Gather feedback and input, and change designs accordingly.

## Materials

From paint, traffic cones, and A-boards to concrete curb barriers, planters, and temporary raised crosswalks, a wide variety of materials work well for creating quick-build projects. The full Quick-Build Toolkit provides thorough, detailed descriptions of materials that can make for an effective and inexpensive project to meet your community's needs.

*Photo credits, top to bottom: Alta Planning + Design; Real Hartford; Alta Planning + Design; Street Plans Collaborative*

### CASE STUDY

In August of 2020, the City of San Luis Obispo converted one of the three motor vehicle lanes of downtown Higuera Street into a buffered bike lane, as part of Open SLO, the city's pilot program to expand the use of public spaces (with parklets and bike/ped spaces) during the COVID-19 pandemic. The project was installed with paint, took less than a week to install, and cost a mere $15K instead of the more than $150K it would have taken to put in a traditional bike lane by sealing and restriping the whole street as the city would normally do.

*Photo credit: Bike SLO County*

# WHO?

## Your Quick-Build Project Team

**Team leader.** Quick-build projects need a "chief" (usually city staff) tasked with project facilitation, keeping the momentum going, establishing lines of communication, and accepting and evaluating feedback.

**Community leaders.** Because evaluation and adjustment are essential for successful quick builds, make sure community leaders are on board from the beginning. Look to businesses, residential associations, places of worship, and nearby schools. Bring in bike/ped advocacy organizations and other CBOs, including those based in disadvantaged communities and led by people of color.

**Department liaisons.** Your project may impact transit, street sweeping, parking enforcement, maintenance, waste management and recycling, and emergency response. Involve other agencies as necessary to ensure you don't forget a critical aspect.

**Elected Officials.** They have the power to marshal funding for quick-build projects. They will hear from constituents, so communication channels between the project team and electeds must be open for effective project evaluation.

**Communications.** Ideally, include a dedicated communications person on your team. Because this is a new method, and people are used to years of discussion, publicize quick-build's temporary nature. Talk about the project's intended benefits, and listen to feedback about the actual impacts.

## Community Engagement

Community engagement is essential and also very effective, because it's easy to engage people in providing feedback on real-world solutions that they can see and use. Here are the keys:

- Start engaging with the community before you install the project so that residents' opinions are included from the get-go.
- Be inclusive in your outreach, including perspectives from disadvantaged communities and people of color.
- Emphasize the project's temporary nature, and the ability to change the project after it's installed.
- Implement effective feedback mechanisms during the project, making sure to plan and budget for project adjustments in response to input.

### CASE STUDY

The El Cajon Boulevard Business Improvement Association ("The Boulevard") got city councilmembers and the mayor on board to fund a pilot bus and bike lane along a 3-mile stretch of San Diego's El Cajon Boulevard. The Boulevard staff brought in diverse stakeholders and built on longstanding relationships to push the city to dedicate a lane for El Cajon Boulevard's new bus rapid transit line, and got bikes included on this Vision Zero corridor. The entire three-mile project, which launched in January 2020, cost $100K, funded by San Diego's general fund.

*Photo credit: Holly Raines*

# WHERE?

## Which Projects are Best for Quick-Build?

Some projects are better than others for the quick-build method.

- **Look to existing plans.** Your community's current active transportation plan already identifies key improvements and priorities. Most such plans will take decades to complete with traditional methods and funding. Quick-build can take those plans to reality much sooner.
- **Fill gaps in the bikeway network, especially now when more people are bicycling.** Look to improve intersections that are dangerous to navigate, short sections of crosstown routes that use busy streets, or long sections of streets that could become "slow streets" to connect neighborhoods.
- **Put disadvantaged communities first.** If your plan doesn't already incorporate an equity analysis to set priorities, this is your chance. Look at a model plan like Oakland's "Let's Bike Oakland" bicycle plan which incorporates a framework of equity and a focus on improving well-being for the city's most vulnerable groups.

If a project is funded and on schedule to be built within a year or two, turn your attention to projects that will take years without quick build. Projects that require expensive modifications—new traffic signals, bridges, reconfigured curbs—are not good quick-build candidates.

*Photo credit: Alta Planning + Design*

## Funding for Quick-Build

### POTENTIAL FUNDING SOURCES IN CALIFORNIA

Available funding for quick-build projects varies a lot from one municipality to the next. But here are a few ideas.

- Public works departments' essential repaving and repair projects are great opportunities to put in quick-build projects at low cost.
- Local and regional funds such as general fund, sales tax revenue, and Air Quality Management District funds can be used for quick-build projects.
- Tack on costs to another publicly-funded transportation project, or even a private project. For example, a development project that is required to repave and stripe new bike lanes might install a protected bike lane using quick-build materials instead.
- In 2020, the **Active Transportation Program** piloted a special quick-turnaround funding pot for quick-build projects, with an earlier (summer) deadline. Keep an eye on the ATP to see if they continue to offer this funding in future years. CalBike will be pushing them to do so.
- PeopleForBikes has a **small grant program** for infrastructure projects.
- AARP's **Community Challenge grant** could fund a quick-build project.

This resource was prepared in partnership with Alta Planning + Design. For more information see our complete **Quick-Build Guide**.

CALIFORNIA BICYCLE COALITION

# APPENDIX D

# Bike Parking Guidance

## Safe Routes to School Walk Audit Report and Active Transportation Action Plan

## ESSENTIALS OF

# BIKE PARKING

Selecting and installing bicycle parking that works


apbp

Association of Pedestrian and Bicycle Professionals

*Expertise for Active Transportation*

**Essentials of Bike Parking**
*Revision 1.0, September 2015*



**Acknowledgments**

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***Cover image:*** *Sign D4-3 from Standard Highway Signs, 2004 Edition, http://mutcd.fhwa.dot.gov/ser-shs_millennium_eng.htm*



*APBP is an association of professionals who plan, implement and advocate for walkable and bicycle-friendly places.*

**Association of Pedestrian and Bicycle Professionals**

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www.apbp.org

## TABLE OF CONTENTS

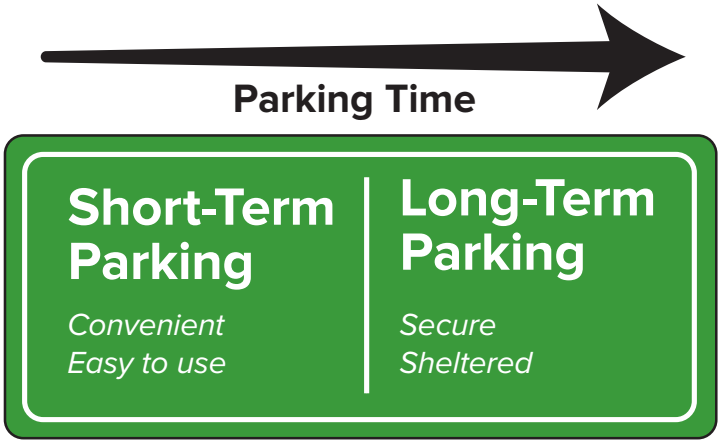


## INTRODUCTION

Among the necessary supports for bicycle transportation, bike parking stands out for being both vital and easy. Still, it requires some attention to get it right. Bike parking may go unused if it's not more appealing to users than the nearest sign post. A minor mistake in installation can make a quality rack unusable. The variety of bicycle sizes, shapes, and attachments continues to increase, and good bike parking should accommodate all types.

The Association of Pedestrian and Bicycle Professionals (APBP) prepared this guide for people planning to purchase or install bike parking fixtures on a limited scale. It is a brief overview of APBP's comprehensive *Bicycle Parking Guidelines* handbook, available at www.apbp.org.

This guide divides bike parking into short-term and long-term installations. These two kinds of parking serve different needs, and the starting point for most bike parking projects is recognizing whether the installation should serve short-term users, long-term users, or both. If users will typically be parking for two hours or longer, they are likely to value security and shelter above the convenience and ease that should characterize short-term parking.



# SHORT-TERM PARKING

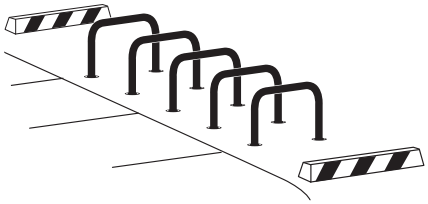
*Effective bike parking for short-term users depends on two main factors: 1) proximity to the destination and 2) ease of use.*

*Short-term parking is designed to meet the needs of people visiting businesses and institutions, and others with similar needs—typically lasting up to two hours. Short-term users may be infrequent visitors to a location, so the parking installation needs to be readily visible and self-explanatory.*

**INVERTED U**

**POST & RING**

**CORRAL**



## SITE PLANNING

### Location

Short-term bike parking should be visible from and close to the entrance it serves—50' or less is a good benchmark. Weather-protected parking makes bicycle transportation more viable for daily and year-round use, and it can reduce the motivation for users to bring wet bicycles into buildings. Area lighting is important for any location likely to see use outside of daylight hours.

### Security

All racks must be sturdy and well-anchored, but location determines the security of short-term parking as much as any other factor. Users seek out parking that is visible to the public, and they particularly value racks that can be seen from within the destination. Areas with high incidence of bicycle theft may justify specific security features such as specialty racks, tamper-proof mounting techniques, or active surveillance.

### Quantity

Many jurisdictions have ordinances governing bike parking quantity. APBP's full *Bicycle Parking Guidelines* offers complete recommendations for the amount and type of parking required in various contexts. In the absence of requirements, it's okay to start small—but bear in mind that perceived demand may be lower than the demand that develops once quality parking appears.

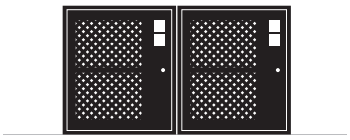
## BIKE CORRALS

Some cities with limited sidewalk space and strong bicycle activity place bike parking in on-street "bike corrals" located in the street area adjacent to the curb. Bike corrals can sometimes make use of on-street areas that are unsuitable for auto parking. When replacing a single auto parking space, a corral can generally fit 8 to 12 bicycles. APBP's full *Bicycle Parking Guidelines* provides details about designing and siting bike corrals. **apbp.org**

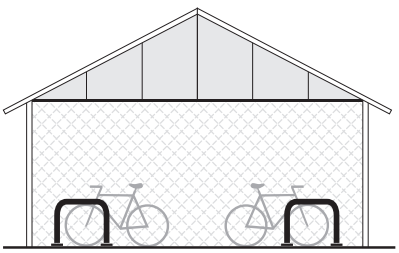
# LONG-TERM PARKING

*Users of long-term parking generally place high value on security and weather protection. Long-term parking is designed to meet the needs of employees, residents, public transit users, and others with similar needs. These users typically park either at home or at a routine destination such as a workplace. They often leave their bicycles unmonitored for a period of several hours or longer, so they require security and weather protection that let them park without unreasonable concern for loss or damage.*

*Long-term parking can take a variety of forms, including a room within a residential building or workplace, a secure enclosure within a parking garage, or a cluster of bike lockers at a transit center. Some long-term parking is open to the public—such as a staffed secure enclosure at a transit hub—and some of it is on private property with access limited to employees, residents, or other defined user groups.*



**BIKE LOCKERS**



**SHELTERED SECURE ENCLOSURE**

## SITE PLANNING

### Location

Appropriate locations for long-term parking vary with context. Long-term parking users are typically willing to trade a degree of convenience for weather protection and increased security. Long-term installations emphasize physical security above public visibility. Signage may be needed for first-time users.

### Security

Security is paramount for quality long-term parking. Access to parked bicycles can be limited individually (as with lockers) or in groups (as with locked bike rooms or other secure enclosures). Options for access control include user-supplied locks, keys, smart cards, and other technologies.

### Quantity

Refer to local ordinances or the comprehensive APBP *Bicycle Parking Guidelines* to determine the amount and type of parking required for various contexts.

## SPECIAL CONSIDERATIONS FOR LONG-TERM PARKING

In many ways, short-term and long-term parking function similarly and are served by the same guidelines. Some exceptions are noted below.

### Density

The competition of uses for high-security and sheltered locations creates particular pressure on long-term parking to fit more bicycles in less space. When parking needs cannot be met with standard racks and spacing recommended in this guide, consider rack systems designed to increase parking density. See the high-density racks table on page 7. Note that increasing density without careful attention to user needs can create parking that excludes people because of age, ability, or bicycle type. This may result in people parking bicycles in other less desirable places or choosing not to bike at all.

### Bicycle design variety

Long-term parking facilities should anticipate the presence of a variety of bicycles and accessories, including—depending on context—recumbents, trailers, children's bikes, long-tails, and others. To accommodate trailers and long bikes, a portion of the racks should be on the ground and should have an additional 36" of in-line clearance.

### Performance criteria

The bike rack criteria in the next section apply to racks used in any installation, regardless of its purpose. Long-term installations often use lockers and group enclosures not discussed in this guide. Such equipment raises additional considerations that are discussed in detail in APBP's full *Bicycle Parking Guidelines*. **apbp.org**

# INSTALLATION

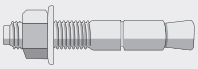
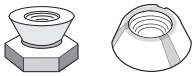
*Selecting an appropriate installation surface and technique is key to creating bicycle parking that remains secure and attractive over time.*

## INSTALLATION SURFACE

A sturdy concrete pad is an ideal surface for installing bicycle parking. Other surfaces often encountered include asphalt, pavers, and soft surfaces such as earth or mulch. These surfaces can accommodate in-ground mounting or freestanding bike racks such as inverted-U racks mounted to rails. See APBP's *Bicycle Parking Guidelines* for details. **apbp.org**

## INSTALLATION FASTENERS

When installing racks on existing concrete, consider the location and select appropriate fasteners. Drill any holes at least three inches from concrete edges or joints. Some locations benefit from security fasteners such as concrete spikes or tamper-resistant nuts on wedge anchors. Asphalt is too soft to hold wedge and spike anchors designed for use in concrete. Installing bike parking on asphalt typically requires freestanding racks and anchor techniques specific to asphalt.

| FASTENERS | | |
|---|---|---|
| **CONCRETE SPIKE** |  | Installs quickly in concrete with a hammer. Tamper-resistant. Removal may damage concrete and/or rack. |
| **CONCRETE WEDGE ANCHOR** |  | Allows for rack removal as needed. Not tamper-resistant, but can accommodate security nuts (below). |
| **SECURITY NUTS** |  | Use with concrete wedge anchors. Security nuts prevent removal with common hand tools. |

## INSTALLATION TECHNIQUES

When installing racks on existing concrete, choose those with a surface-mount flange and install with a hammer drill according to the specifications of the mounting hardware selected. When pouring a new concrete pad, consider bike parking fixtures designed to be embedded in the concrete. Because replacing or modifying an embedded rack is complicated and costly, this installation technique requires particular attention to location, spacing, rack quantity, and material.

# BICYCLE RACK SELECTION

## PERFORMANCE CRITERIA FOR BIKE PARKING RACKS

*These criteria apply to any rack for short- or long-term use.*

| CRITERIA | DETAILS |
|---|---|
| **Supports bike upright without putting stress on wheels** | The rack should provide two points of contact with the frame—at least 6" apart horizontally. Or, if a rack cradles a bicycle's wheel, it must also support the frame securely at one point or more. The rack's high point should be at least 32". |
| **Accommodates a variety of bicycles and attachments** | The racks recommended on page 6 ("racks for all applications") serve nearly all common bike styles and attachments—if installed with proper clearances (see placement section). Avoid designs and spacing that restrict the length, height, or width of bicycles, attachments, or wheels. |
| **Allows locking of frame and at least one wheel with a U-lock** | A closed loop of the rack should allow a single U-lock to capture one wheel and a closed section of the bike frame. Rack tubes with a cross section larger than 2" can complicate the use of smaller U-locks. |
| **Provides security and longevity features appropriate for the intended location** | Steel and stainless steel are common and appropriate materials for most general-use racks. Use tamper-resistant mounting hardware in vulnerable locations. Rack finish must be appropriate to the location (see materials and coatings section). |
| **Rack use is intuitive** | First-time users should recognize the rack as bicycle parking and should be able to use it as intended without the need for written instructions. |

# RACK STYLES

*The majority of manufactured bike racks fall into one of the categories on pages 6-8. Within a given style, there is wide variation among specific racks, resulting in inconsistent usability and durability. APBP recommends testing a rack before committing broadly to it.*

## RACKS FOR ALL APPLICATIONS

When properly designed and installed, these rack styles typically meet all performance criteria and are appropriate for use in nearly any application.

**INVERTED U**
also called staple, loop

Common style appropriate for many uses; two points of ground contact. Can be installed in series on rails to create a free-standing parking area in variable quantities. Available in many variations.

**POST & RING**

Common style appropriate for many uses; one point of ground contact. Compared to inverted-U racks, these are less prone to unintended perpendicular parking. Products exist for converting unused parking meter posts.

**WHEELWELL-SECURE**

Includes an element that cradles one wheel. Design and performance vary by manufacturer; typically contains bikes well, which is desirable for long-term parking and in large-scale installations (e.g. campus); accommodates fewer bicycle types and attachments than the two styles above.

*This guide analyzes the most common styles of bike racks, but it is not exhaustive. Use the performance criteria on page 5 to evaluate rack styles not mentioned. Custom and artistic racks can contribute to site identity and appearance, but take care that such racks don't emphasize appearance over function or durability.*

## HIGH-DENSITY RACKS

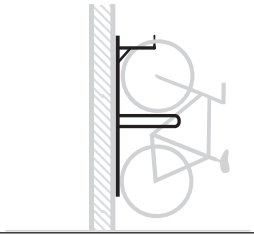
These rack styles do not meet all performance criteria but may be appropriate in certain constrained situations.

*High-density rack systems can maximize the use of limited parking space, but they don't work for all users or bicycles. If installing these racks, reserve additional parking that accommodates bicycles with both wheels on the ground for users who are not able to lift a bicycle or operate a two-tier rack, or for bikes that are not compatible with two-tier or vertical racks.*

### STAGGERED WHEELWELL-SECURE

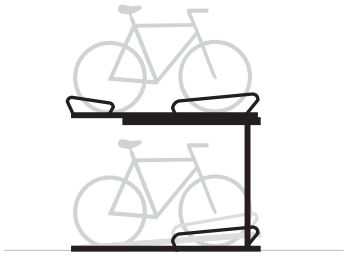
Variation of the wheelwell-secure rack designed to stagger handlebars vertically or horizontally to increase parking density. Reduces usability and limits kinds of bikes accommodated, but contains bikes well and aids in fitting more parking in constrained spaces.

### VERTICAL



Typically used for high-density indoor parking. Not accessible to all users or all bikes, but can be used in combination with on-ground parking to increase overall parking density. Creates safety concerns not inherent to on-ground parking.

### TWO-TIER



Typically used for high-density indoor parking. Performance varies widely. Models for public use include lift assist for upper-tier parking. Recommend testing before purchasing. Creates safety concerns not inherent to on-ground parking, and requires maintenance for moving parts.

## RACKS TO AVOID

Because of performance concerns, APBP recommends selecting other racks instead of these.

**WAVE**
also called undulating or serpentine

Not intuitive or user-friendly; real-world use of this style often falls short of expectations; supports bike frame at only one location when used as intended.

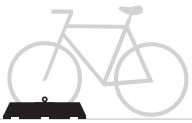
**SCHOOLYARD**
also called comb, grid

Does not allow locking of frame and can lead to wheel damage. Inappropriate for most public uses, but useful for temporary attended bike storage at events and in locations with no theft concerns. Sometimes preferred by recreational riders, who may travel without locks and tend to monitor their bikes while parked.

**COATHANGER**

This style has a top bar that limits the types of bikes it can accommodate.

**WHEELWELL**



Racks that cradle bicycles with only a wheelwell do not provide suitable security, pose a tripping hazard, and can lead to wheel damage.

**BOLLARD**

This style typically does not appropriately support a bike's frame at two separate locations.

**SPIRAL**

Despite possible aesthetic appeal, spiral racks have functional downsides related to access, real-world use, and the need to lift a wheel to park.

**SWING ARM SECURED**

These racks are intended to capture a bike's frame and both wheels with a pivoting arm. In practice, they accommodate only limited bike types and have moving parts that create unneeded complications.

# RACK MATERIALS & COATINGS

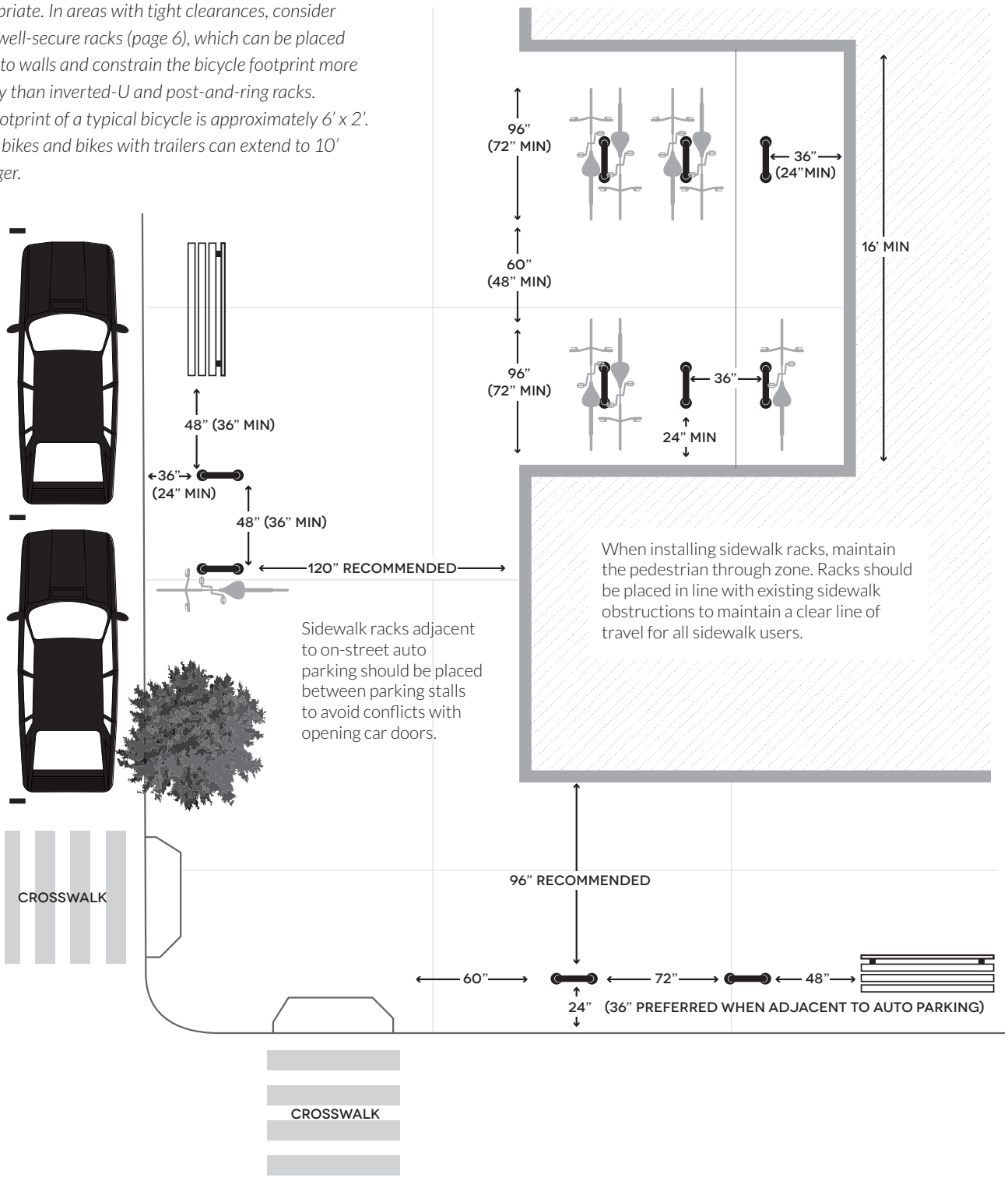
*Most bicycle parking racks are made of carbon steel or stainless steel. Carbon steel requires a surface coating to resist rust while appropriate grades of stainless steel need no coating. Not all materials and coatings with the same name perform equally. Square tubing provides a security advantage as round tubing can be cut quietly with a hand-held pipe cutter. Before purchasing racks, talk to suppliers about your particular conditions and choose a material and coating that suit your needs. The following are common choices, depending on local considerations and preferences.*

| RACK MATERIAL – COATING | RELATIVE PURCHASE COST | DURABILITY | CAUTIONS |
|---|---|---|---|
| **Carbon steel - galvanized** | Usually lowest | Highly durable and low-maintenance; touch-up, if required, is easy and blends seamlessly | Utilitarian appearance; can be slightly rough to the touch |
| **Carbon steel - powder coat* (TGIC or similar)** | Generally marginally higher than galvanized | Poor durability | Requires ongoing maintenance; generally not durable enough for long service exposed to weather; not durable enough for large-scale public installations |
| **Carbon steel - thermoplastic** | Intermediate | Good durability | Appearance degrades over time with scratches and wear; not as durable as galvanized or stainless |
| **Stainless steel - no coating needed, but may be machined for appearance** | Highest | Low-maintenance and highest durability; most resistant to cutting | Can be a target for theft because of salvage value; maintaining appearance can be difficult in some locations |

** When applied to carbon steel, TGIC powder coat should be applied over a zinc-rich primer or galvanization to prevent the spread of rust beneath the surface or at nicks in the finish.*

# PLACEMENT

*The following minimum spacing requirements apply to some common installations of fixtures like inverted-U or post-and-ring racks that park one bicycle roughly centered on each side of the rack. Recommended clearances are given first, with minimums in parentheses where appropriate. In areas with tight clearances, consider wheelwell-secure racks (page 6), which can be placed closer to walls and constrain the bicycle footprint more reliably than inverted-U and post-and-ring racks. The footprint of a typical bicycle is approximately 6' x 2'. Cargo bikes and bikes with trailers can extend to 10' or longer.*



# APPENDIX E

# Recommendation
# Cost Range Estimates

## Safe Routes to School Walk Audit Report and Active Transportation Action Plan

## Appendix E: Recommendation Cost Range Estimates

Cost estimate was one of many factors considered when prioritizing recommendations for Napa County Safe Routes to School Walk Audit reports. Recommendations in which a high cost estimate would considerably delay implementation of the recommendation may have been given a lower priority level in order to prioritize recommendations that are lower cost and therefore more likely to be installed more quickly. Cost was considered on a high-level scale; real cost ranges of recommendations may differ from cost range estimates included in Walk Audit reports.

Cost range estimates for Safe Routes to School Walk Audit recommendations are as follows:

| | |
|---|---|
| $ | < $25,000 |
| $$ | Between $25,000 and $250,000 |
| $$$ | $250,000 to $1 million |
| $$$$ | > $1 million |

# APPENDIX F

# Next Steps

## Safe Routes to School Walk Audit Report and Active Transportation Action Plan

**From Recommendations to Action: Next Steps**

Napa County Bicycle Coalition (NCBC) has concluded the final task under the Napa County Safe Routes to School Program in coordination with the Napa County Office of Education, funded under the One Bay Area Grant and the Active Transportation Program.

Evaluation of active transportation barriers at school sites are complete and final reports of recommendations for each school in Napa County will be published in the spring of 2022. The NCBC team is already planning the next phase of Safe Routes to School that will help bring these recommendations into reality. Supported by a "Quick Strike" grant through the Metropolitan Transportation Commission (MTC), NCBC will continue its SRTS work over the course of this next year.

**NCBC SRTS Quick Strike Program Elements (2022-2023):**

- Engage parents in advocating for implementing the recommendations. Hold safety summits at various school sites that raise awareness of the recommendations and provide a forum for parents to discuss strategies and to plan next steps. Work with schools and other stakeholders to implement recommendations. Build a Safe Routes to School (SRTS) Advisory Committee, including "parent champions" from key school sites, to help guide the SRTS program into the next phase of growth and engagement and to help ensure the long-term viability of the program, providing a structure both for stakeholder feedback and input, as well as for increased local investment in future program activities.
    - Action Steps:
        - Hold up to seven safety summits at various school sites
        - Form SRTS advisory committee
- Provide education and encouragement programming at elementary and middle schools that includes bike rodeos throughout the year, Bike Month (and Bike to School Day) in the spring, and Walk and Roll to School Day in the fall. This programming aims to increase the number of students who walk or bike to school and to ensure that, as barriers are removed and facilities are improved, youth have the skills and confidence to take advantage of improvements.
    - Action Steps:
        - Hold up to 14 Bike Rodeos at elementary and middle schools
        - Provide outreach and support for Walk and Roll to School Day and Bike Month activities at up to seven school sites
        - Support local Agricultural & Hospitality Industry workers with bicycle safety education
- Conduct community-based safety education programming that reaches identified populations of concern. Through bilingual Family Biking Workshops, community rides in partnership with other local organizations, and safety education outreach to agricultural

and hospitality workers, NCBC will tailor our programming to help engage the full spectrum of our community.

    - Action Steps:
        - Conduct up to nine bilingual Family Biking Workshops
        - Conduct up to six community events and rides

- Secure future funding for the Safe Routes to School Partnership (SRTS). We believe that every student should be able to safely walk or ride a bike to school. The SRTS program provides vital safety education, encouragement, and community engagement programs to thousands of students annually while advocating for facilities that make active transportation safe and accessible. SRTS will be a key force in helping to make the Walk Audit recommendations a reality. Napa County is one of the only counties in the region that lacks dedicated, long-term funding for these programs and efforts, and without that support implementing the recommendations will face more barriers.
    - Action Steps:
        - Apply for competitive and discretionary grant funding
        - Seek funding support from jurisdictions
        - Seek funding support from community health
        - Provide annual program reports to stakeholders