

Del Paso Heights Elementary School Walk Audit Report



April 27, 2015

WALKSacramento

Project Staff

WALKSacramento

Kirin Kumar	Project Manager
Emily Alice Gerhart	Project Manager
Miha Tomuta	Project Manager
Chris Holm	Project Manager

Project Partners

This project is funded through a grant provided by the Sacramento Area Council of Governments (SACOG) from Caltrans.

Acknowledgments

We would like to extend a special thank you to Principal Leo Alvarez and Council Member Allan Warren's office for helping to make this event possible. We would also like to thank each of the walk audit participants who helped develop these findings and recommendations.



Disclaimer:

This report is not a standard, specification, regulation, or official engineering study and should not be used for establishing civil liability. This report highlights needs and potential solutions within this community. The implementation of any strategy within this report should be made on the basis of an official engineering study at the location.

Table of Contents

BACKGROUND INFORMATION	4
Grant Overview	4
Safe Routes to School Walk Audit Workshop	4
Benefits of a Safe Routes to School program.....	4
School Information	5
Mode Split.....	6
Traffic Injury Mapping.....	7
Existing Conditions.....	8
Location and Neighborhood Conditions	8
Local Roadway Network	8
School and Parent Concerns	10
Identifying Barriers to Walking and Biking.....	11
WALK AUDIT RECOMMENDATIONS	12
Infrastructure Recommendations.....	12
General Recommendations	23
Non-Infrastructure Recommendations.....	25
Map of Identifications.....	27
APPENDIX A: NATIONAL CENTER FOR SAFE ROUTES TO SCHOOL STUDENT TRAVEL TALLY	28
APPENDIX B: WALK AUDIT PARTICIPANTS	29

BACKGROUND INFORMATION

Grant Overview

This project is meant to bring together Safe Routes to School partners to share experiences, best practices and resources to help build the Safe Routes network and improve programs throughout the Sacramento Region. At the 2015 regional summit, Safe Routes partners voted that a walk audit training workshop would be helpful for advancing their own Safe Routes to School Programs.

Safe Routes to School Walk Audit Workshop

The workshop brought together over 25 regional Safe Routes to School partners to share best practices and resources for planning, executing, and reporting on the findings of a walk audit. Walk audits are tremendously important to all Safe Routes programs because they provide the context and justification for program, policy, and infrastructure change to help get kids walking and biking to school safely.

The workshop involved a comprehensive walk audit assessment of Del Paso Heights Elementary School in Sacramento, California. The findings and recommendations made within this report were developed with our Safe Routes partners before, during and after the walk audit. This report will be shared with the relevant jurisdictions, agencies, community groups, and Safe Routes champions throughout the area.

Benefits of a Safe Routes to School program

The recommendations presented in this report will result in significant community benefit if implemented. Both the infrastructure and non-infrastructure recommendations can lead to fewer conflicts between pedestrians and motorists, fewer vehicle miles travelled, enhanced air quality, more physically active, alert, and healthy students, and safer, more inviting streets for all.



According to the 2014 United States Report Card on Physical Activity for Children and Youth, only one quarter of US children and youth between the ages of 6 and 15 meet the 2008 *Physical Activity Guidelines for Americans* recommendation of at least 60 minutes of moderate-to-vigorous physical activity per day.¹ By simply walking or biking to school, students can get closer to their recommended levels of physical activity, reducing their risk of diabetes and improving their overall health. Healthier Students miss fewer days of school.² Furthermore, students who exercise before school are more focused, attentive, and able to learn. Schools that implement and promote Safe Routes to School programs are helping to improve student health and readiness without eating into scheduled learning time or implementing additional costly programs.

Traditionally, streets that are designed as safe routes to school for students are safe and accommodating for all roadway users. Bike lanes, widened sidewalks, traffic calming measures, and other improvements can help encourage more people to choose to

¹ The 2014 United State Report Card on Physical Activity for Children and Youth http://www.physicalactivityplan.org/reportcard/NationalReportCard_longform_final%20for%20web.pdf

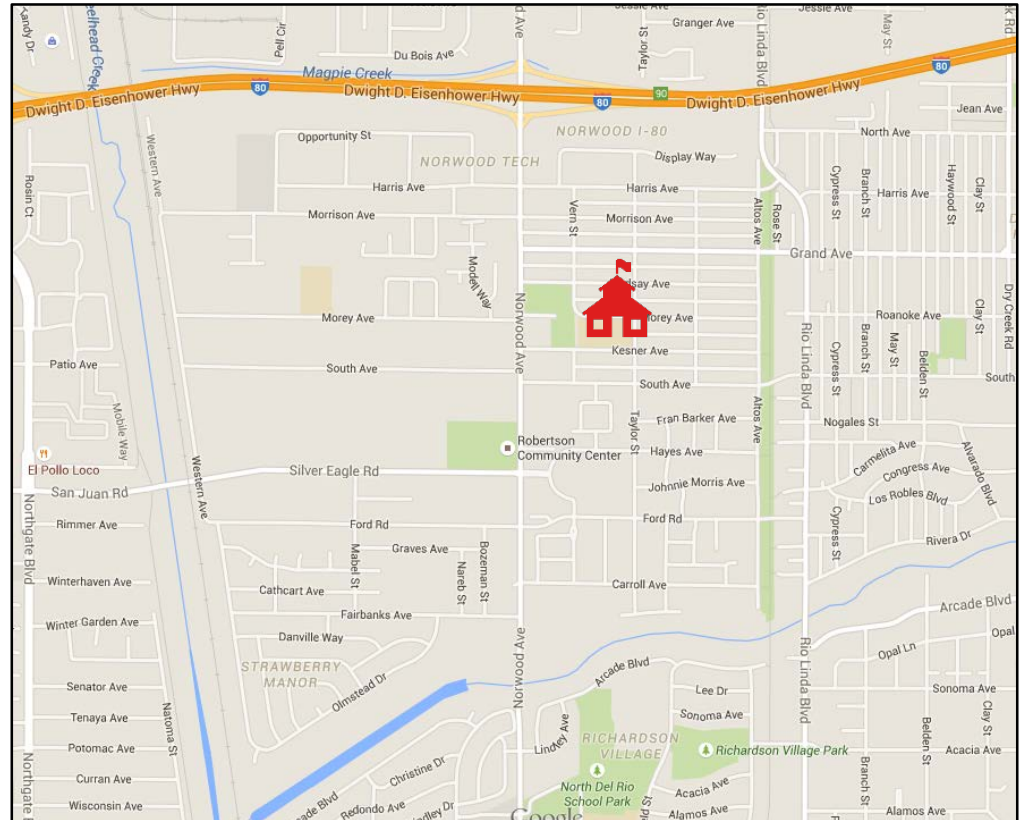
² Successful, Safe, and Healthy Students, U.S Department of Education, pg. 4 <https://www2.ed.gov/policy/elsec/leg/blueprint/successful-safe-healthy.pdf>

walk or bike rather than drive. When more people are outside walking and biking, a roadway is much safer and inviting for all users.³ This in turn can help build community cohesion and improve the overall livability of an area.

More walking, biking, and riding the bus to school can lead to improved local and regional air quality. 10 to 14% of rush-hour traffic is caused by parents driving their students to school.⁴ By creating safer routes, more transportation options become available for both students and parents, helping to divert some traditionally low occupancy vehicle trips to more sustainable options. This is especially impactful in lower income communities where the cost of owning and operating a vehicle can often impose a greater burden than in other communities. Furthermore, if children are exposed to alternative transportation options early on, they are more likely to choose them later in life.⁵

School Information

Del Paso Heights Elementary School is a neighborhood school located at 590 Morey Avenue, Sacramento, CA 95838 and is part of the Twin Rivers Unified School District. For the 2014-2015 school year, 504 students were enrolled, of which 93.3% were eligible for free or reduced price meals.⁶ The majority of students who attend Del Paso Heights Elementary live approximately within a $\frac{3}{4}$ mile radius of the school.



³ Dimaggio C and Li G. "Effectiveness of a Safe Routes to School Program in Preventing School-Aged Pedestrian Injury." *Pediatrics*, 131(2): 290-296, 2013.

⁴ McDonald N, Brown A, Marchetti L, et al. "U.S. School Travel, 2009: An Assessment of Trends." *American Journal of Preventive Medicine*, 41(2): 146-151, 2011. www.sciencedirect.com/science/article/pii/S0749379711002637;

⁵ The Influence of Past Travel Behavior, Attitudes and Habits on Present Choices: Rubin, James. <https://escholarship.org/uc/item/1vs4846h#page-2>

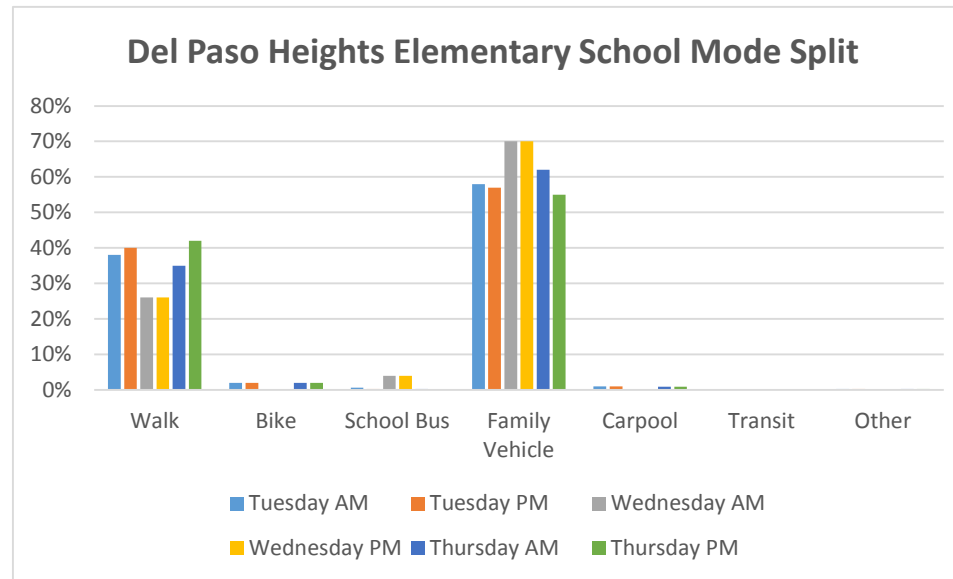
⁶ California Department of Education, Free/Reduced Meals Program and CalWORKS Data Files, 2013. Available from <http://www.cde.ca.gov/sd/sd/filespp.asp>.

Mode Split

Using the National Center for Safe Routes to School Student Travel Tally⁷, in-class assessments of student travel mode were conducted over a period of three days in April 2015. On average, 34.5% of students walked, 1.3% biked to school, and the majority of the remaining students traveled in a family car (~62%). The tally results are shown below.

	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Tuesday AM	360	38%	2%	0.6%	58%	1%	0%	0.3%
Tuesday PM	360	40%	2%	0.3%	57%	1%	0%	0.3%
Wednesday AM	27	26%	0%	4%	70%	0%	0%	0%
Wednesday PM	27	26%	0%	4%	70%	0%	0%	0%
Thursday AM	325	35%	2%	0.3%	62%	0.9%	0%	0.3%
Thursday PM	325	42%	2%	0%	55%	0.9%	0%	0.3%

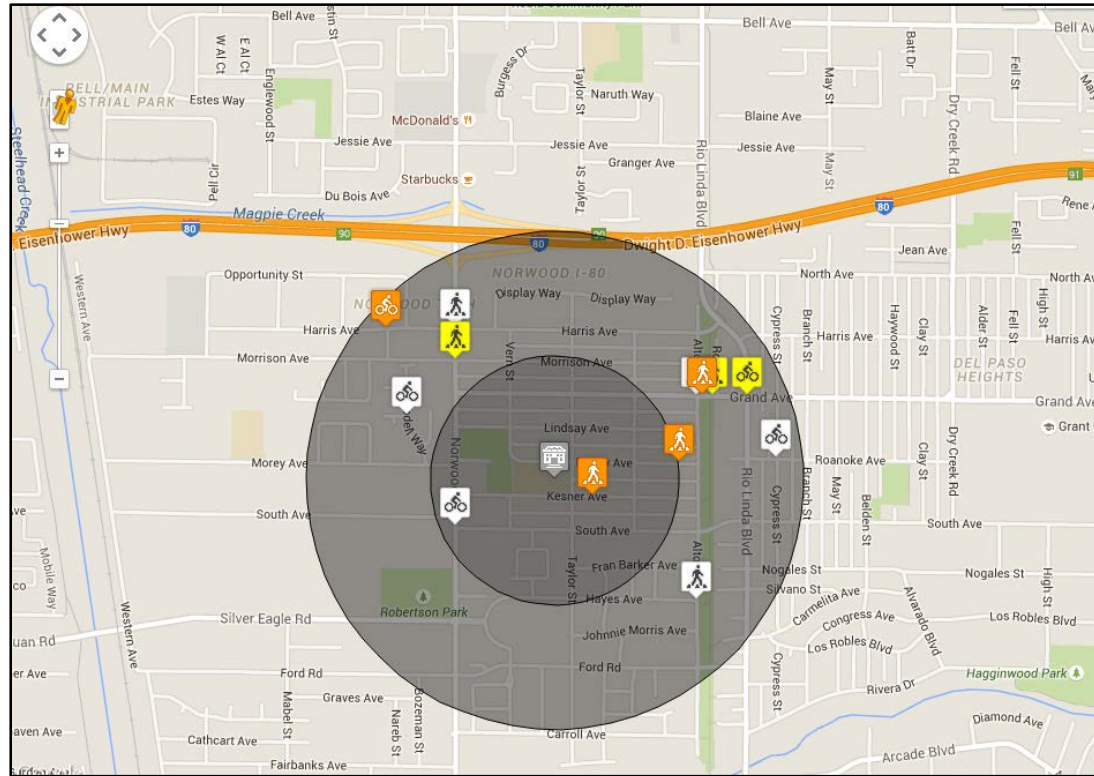
Percentages may not total 100% due to rounding.



⁷ National Center for Safe Routes to School, Evaluation: Student In-Class Travel Tally, 2013, available <http://saferoutesinfo.org/program-tools/evaluation-student-class-travel-tally>.

Traffic Injury Mapping

Between 2010 and 2012, there were 13 collisions involving motorists and non-motorists within a ½ mile radius of the school.⁸ Although there were no fatal collisions, seven collisions resulted in either severe or visible injuries to the cyclist or pedestrian. The two corridors where collisions occurred most frequently, Grand Avenue and Norwood Avenue, are both prominent routes to school for students. The recommendations in this report address several of the roadways where collisions have occurred.



Summary Statistics							
Radius	Fatal	Severe Injury	Visible Injury	Complaint of Pain	Pedestrian	Bicycle	Total
<¼ mi.	0	1	0	1	1	1	2
¼ - ½ mi.	0	3	3	5	7	4	11
Total	0	4	3	6	8	5	13

⁸ UC Berkley Transportation Injury Mapping System: Safe Routes to School Collision Map Viewer, available at www.tims.berkely.edu/tools/srts/main.php.

Existing Conditions

Location and Neighborhood Conditions

Del Paso Heights Elementary School is located within the Del Paso Heights Neighborhood in North Sacramento. According to walkscore.com, this area's Walk Score is 22 out of 100, indicating a high rate of car dependency with few walkable or bikeable destinations.⁹ The neighborhood offers a mix of housing stock including multi family, single family, and low income housing. According to AARP's livability index, the average speed limit is well above the median US neighborhood average of 28 miles per hour, at 37.3 miles per hour. This neighborhood averages 39.7 unhealthy air quality days per year compared to the national average of 8. Finally, according to the Centers for Disease Control and Prevention, an above average 26.6% of residents in this community are obese, yet 94.6% of people have access to recreational opportunities (living within half of a mile to parks and one mile to recreational facilities).¹⁰

High rates of crime and numerous vacant properties may deter parents from allowing their students to walk or bike to school. Additionally, higher than average roadway speeds along major arterials that surround the school (Grand Ave. and Norwood Ave.) may create significant barriers between a student's home and school. Although air quality is often measured regionally, a significant mode shift away from family vehicle trips to walking and biking may have a positive impact on local air quality, especially in a community where approximately 62% of students are driven to school. Finally, the prevalence of parks and recreational trails in this neighborhood may enable programmatic approaches such as walking school busses, bike trains, or even offsite carpooling programs.

Local Roadway Network

Del Paso Heights Elementary School is located adjacent to a community park within a two-way grid system of a mostly single family homes. The school is surrounded by the major arterial, Norwood Avenue, to the west, a minor arterial, Grand Avenue, to the north, the Sacramento Northern Bike trail to the East, and suburban collector streets to the South. Although quite flat, roadway conditions may make discourage walking and biking.

Neighborhood Streets

The neighborhood streets that immediately surround the school are two-lane two-way streets fronted predominantly by single family homes. Within a half mile radius of the school, excluding Norwood Avenue, all of the streets are characterized by rolled curbs, intermittent tree shading, often overgrown shrubbery, chain link and iron-wrought fences, a lack of school zone and speed limit signage, and sparse lighting. In terms of pedestrian and bike amenities, these streets are characterized by a lack of bike lanes, sharrows, or striped shoulders, intermittent ADA accessibility, attached sidewalks, utility poles within sidewalks, narrow corners with wide turning radii, and no traffic calming features other than on-street parking.



⁹ <https://www.walkscore.com/score/590-morey-ave-sacramento-ca-95838>

¹⁰ <https://livabilityindex.aarp.org/search#590+Morey+Avenue+Sacramento+CA+95838+USA>

Relatively unique to this neighborhood is the vast system of east-west alleys that connect the Northern Bike Trail to Norwood Avenue. Many of these alleys, although wide and well shaded, have come to be overgrown, littered and poorly lit.

Norwood Avenue

Norwood Avenue is major north-south arterial that spans the entirety of this community, connecting the neighborhood with I-80 to the north. Near Del Paso Heights Elementary School, Norwood carries 4 lanes of vehicular traffic with an extra left turning lane. The ADT or Average Daily Traffic count for Norwood along this stretch is between 17,500 vehicles and 15,000 vehicles per day.¹¹ Lanes along Norwood Avenue are wider than 12ft, yet there are no bike lanes, sharrows, or painted shoulders to facilitate bicycle travel. Sidewalks along Norwood Avenue are 5 ft. wide and often fronted by chain link fences or overgrown shrubbery. Utilities have not been



undergrounded, placing large poles within the pedestrian right of way on sidewalks. There are no midblock crossings across Norwood Avenue. Block lengths range from 150 ft. to over 450 ft. Between the Robertson Community Center and Morrison Avenue, there are six intersections but only two marked crosswalks. Lighting is poor and vehicle oriented where present.

The 19 and 86 Regional Transit bus routes travel along Norwood Avenue, although stops are often only made aware by small Regional Transit Signs. Frontage along Norwood Avenue includes vacant lots, single family homes, multifamily homes, commercial parking lots, and a park. Motorists have been observed speeding along Norwood Ave. Pedestrians who choose to cross mid-block are often seen running across the five lane roadway when there is a gap in the traffic flow. Students live on either side of Norwood Avenue.

Grand Avenue

Grand Avenue is a minor arterial that runs east-west through this community. Although meant to carry higher volumes of traffic, Grand Avenue is a two-lane roadway that accommodates pedestrian and bike travel with relatively wide sidewalks and bike lanes in both directions. Because Grand Avenue is unimpeded for several blocks, drivers have been observed traveling at excessive speeds and failing to yield for pedestrians waiting at crosswalks. Similar issues with utility poles in sidewalks, overgrown shrubbery, and fences that sometimes impede the pedestrian right of way can be found on Grand Avenue. Near the school there are school zone signs, painted warnings, and high visibility crosswalks leading toward Del Paso Heights Elementary.

¹¹ <http://portal.cityofsacramento.org/Public-Works/Transportation/Traffic-Data-Maps/Traffic-Counts>

Sacramento Northern Bike Trail

The Sacramento Northern Bike Trail is an extension of the American River Bike Trail into North Sacramento. The paved trail is poorly lit and has seen several muggings and other criminal activity in the past. There is intermittent tree shading, leaving much of the trail exposed to sunlight.

Pick up and drop off

The majority of pick-up and drop-off occurs on Morey Avenue directly in front of the school. Morey Avenue is a two-way two-lane street. Because of the lack of faculty parking, teachers and administrators commonly park along both sides of Morey Avenue, considerably narrowing the street width. Sometimes, to prevent such dramatic narrowing, cars will park partially up on the sidewalk, in turn narrowing the pedestrian path of travel. During pick-up and drop-off periods, traffic backs up significantly. The school bus does not have a dedicated drop off location and thus has had to stop in the middle of Morey Avenue and drop students off in the street. Vehicles park on top of marked crosswalks, limiting a driver's view of students.



School and Parent Concerns

WALKSacramento staff met several times with Danielle Sturgeon, a START program coordinator for the City of Sacramento and Del Paso Heights Elementary School's liaison on this project, to discuss school, community and parent concerns about student travel. According to Danielle, students travel to Del Paso Heights Elementary from throughout the surrounding community. Students often walk along or across Norwood and Grand Avenues. Parents are often concerned about gang violence and crime within the neighborhood, citing safety as a major reason to disallow their student to walk or bike to school. Other concerns include excessive speeding throughout the neighborhood, a lack of accessible crossings across Norwood Avenue, students having to walk in the roadway because of debris, poles and other obstructions in sidewalks, aggressive dogs, and hectic traffic near the school's entrance.

Identifying Barriers to Walking and Biking

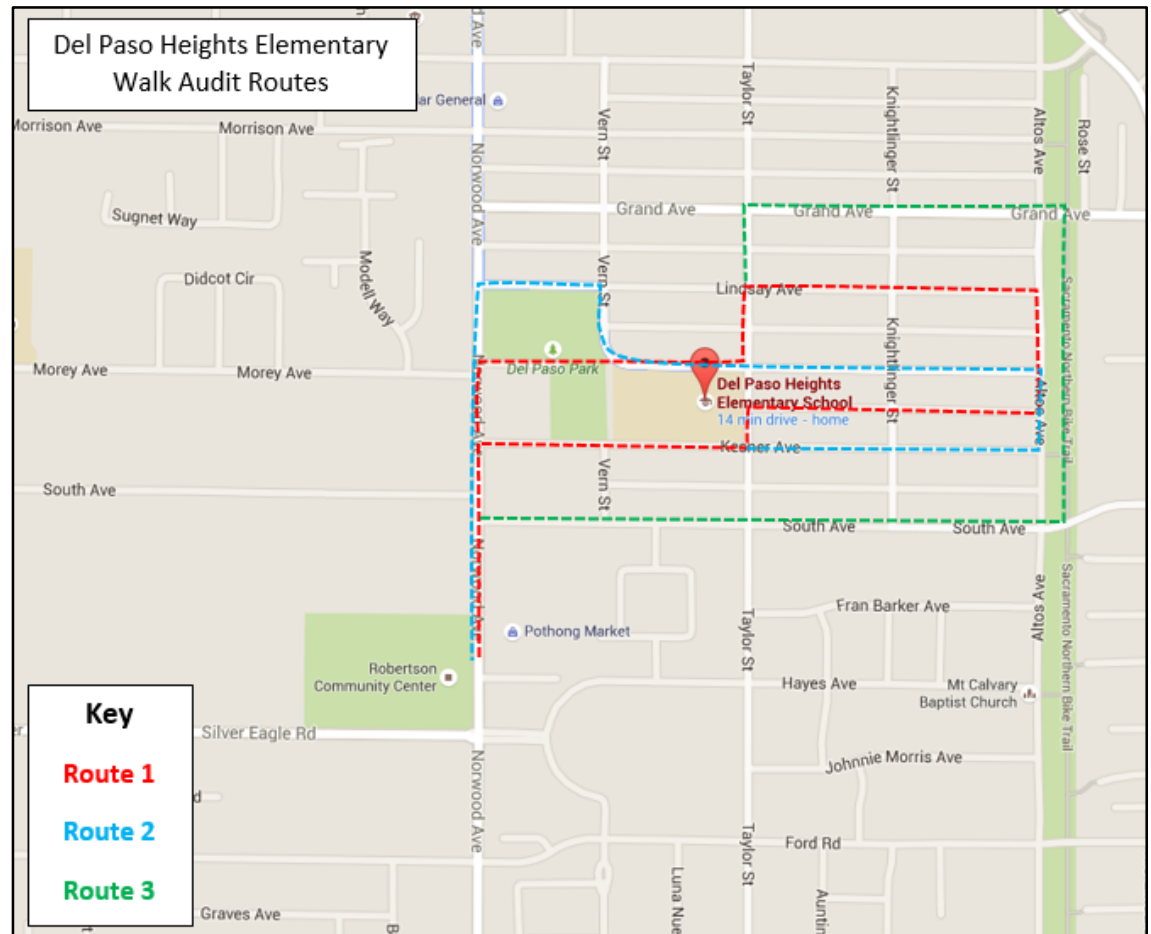
Infrastructure and non-infrastructure barriers to walking and biking were identified through a walk audit field observation and discussions with school staff, law enforcement, community members, Safe Routes to School partners, city planners, and other Safe Routes advocates. The walk audit was held on Monday April 17th, 2015.

Walk audit process

Before the walk audit, participants gathered around aerial maps of the school to identify potential barriers for students walking and biking to school. Participants discussed issues including the lack of bicycle lanes, narrow sidewalks, few crossing opportunities, and heavily trafficked roadways bordering the school. In addition to roadway conditions, participants considered locations of recent collisions, nearby land uses, traffic speeds, and student residential clusters to identify three routes to assess.

Walk Audit participants broke into three groups of approximately 15 walkers each. Participants used a checklist and a previously brainstormed list of conditions to identify barriers and solutions. The groups focused on the Sacramento Northern Bike Trail, the larger thoroughfares bordering the school, and the neighborhood streets and alleys surrounding the school.

After the walk audit, participants reconvened to discuss observations, common issues, and potential solutions. While many of the recommendations focused on long and short term infrastructure improvements, the group also identified several programs and policies that would help encourage and facilitate active student travel to and from school. The following section provides detail on those recommendations.



WALK AUDIT RECOMMENDATIONS

Infrastructure Recommendations

ID	Location	Recommendation	Justification
1	Norwood Avenue between Grand Avenue and Silver Eagle Road	<ul style="list-style-type: none"> Narrow lanes Install a landscaped median Widen and buffer sidewalks with landscaping Install bike lanes Install pedestrian scale lighting Provide seating and shelters at bus stops 	<p>Norwood Avenue is a major barrier to students walking and biking to school safely. The lack of midblock and marked crosswalks across the 5 vehicle lanes causes students cross in unyielding traffic, or for parents to simply disallow their student to walk or bike to school. Additionally, sidewalks are narrow and often encroached upon by overgrown shrubbery and fallen fences. Large utility poles in the center of already narrow sidewalks further minimize the available pedestrian zone. The lack of bike lanes makes bicycling difficult in both directions along Norwood. High traffic speeds further contribute to a poor pedestrian and bicycle environment. Vehicle oriented lighting and a lack of shade trees makes active transportation less safe and less appealing.</p> <p>A few roadway improvements along Norwood Avenue between Silver Eagle Road and Grand Avenue (a major bike and pedestrian corridor) would significantly improve the active transportation environment.</p>

Visual



ID	Location	Recommendation	Justification
1 Continued	Norwood Avenue between Grand Avenue and Silver Eagle Road	<ul style="list-style-type: none"> Narrow lanes Install a landscaped median Widen and buffer sidewalks with landscaping Install bike lanes Install pedestrian scale lighting Provide seating and shelters at bus stops 	<ul style="list-style-type: none"> The lanes on Norwood Avenue are approximately 12ft. wide. Narrowing lane width to 10 or 11ft. would provide the benefit of slowing traffic and creating room for bicycle and/or pedestrian facilities. The left turn lane spans this entire corridor, yet only provides access to a few turns. Installing a landscaped center median with turn pockets at intersections would further constrict motorists' line of sight, helping to further slow traffic. The medians would provide much needed shade, sun shielding, and potential refuge areas for midblock crossings. The sidewalks along Norwood are narrow, cracked, and directly adjacent to roadway traffic. Furthermore, pedestrians require a "shy distance" from fixed objects such as walls and fences. The lack of a shy distance means that the effective walking width is reduced. Landscaping the overgrown shrubbery and setting back fences and walls will enhance the walking environment. Also, detached sidewalks with landscaped buffers further separate pedestrians from vehicles and can provide the benefit of shade. Striped and signed bike lanes, in coordination with traffic calming and roadway narrowing efforts would significantly improve the bikeability along this corridor. Additionally, striping, bollards, or curbs that help to separate cyclists from roadway traffic would further improve bicycle safety. The lack of pedestrian scale lighting makes active transportation less secure, especially in winter months when sunlight is limited. Additional pedestrian lighting will improve safety and security. The majority of existing bus stops are simply signs on poles. Bus shelters that include seating and overhead shelter enhance the streetscape aesthetic, improve comfort at stops, and can encourage more ridership.

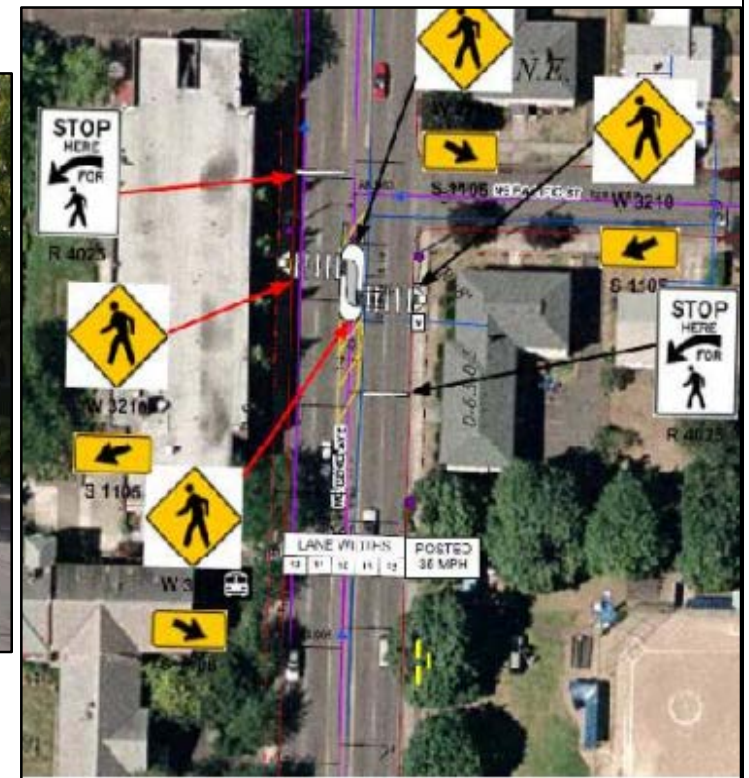
Visual



Using approximate measurements: A potential Complete Streets retrofit on Norwood could include buffered bike lanes, a transit shelter, wider sidewalks, and a center median

ID	Location	Recommendation	Justification
2	Norwood Avenue at Kesner Avenue	Install a two-stage, offset, high visibility pedestrian crossing with pedestrian actuation and visual alerts to drivers.	<p>A large number of students enter or exit the school site on Kesner Avenue, traveling to or from residences west of Norwood Avenue. In addition to residences, Regional Transit bus stops are located just north and south of Kesner Ave. on Norwood Ave. There are no marked pedestrian crossing opportunities across the 5 lanes of Norwood Ave. at Kesner Ave. The closest crossing opportunity for students and residents is nearly 350ft. north on Norwood. Students have been observed darting across Norwood to reach the homes directly across the street.</p> <p>A two-stage high visibility crosswalk with pedestrian actuation that visually alerts drivers to stop for pedestrians will help get students across Norwood safely. Because roadway speeds along Norwood Ave. tend to be so high, vehicles rarely yield for pedestrians attempting to cross outside of marked, signalized crossings. The two-staged crossing will minimally affect traffic flow along Norwood, because only one direction of traffic will be required to stop at a time.</p>

Visual



ID	Location	Recommendation	Justification
3	Taylor Street at Grand Avenue	<p>Install a Rapid Rectangular Flashing Beacon pedestrian crossing signal at this intersection</p> <p>Install additional school zone signage.</p>	<p>Taylor Street is a major pedestrian and bicycle route to school for students. Traffic along Grand Avenue tends to move rapidly, often failing to yield to pedestrians crossing at this marked crosswalk.</p> <p>A pedestrian actuated Rapid Rectangular Flashing Beacon would significantly increase traffic compliance at this crosswalk with minimal disruptions to traffic flow.</p> <p>Additionally, school zone signage along Grand Avenue before and after this intersection would alert drivers to the fact that they are approaching a school zone and should be extra observant.</p>

Visual



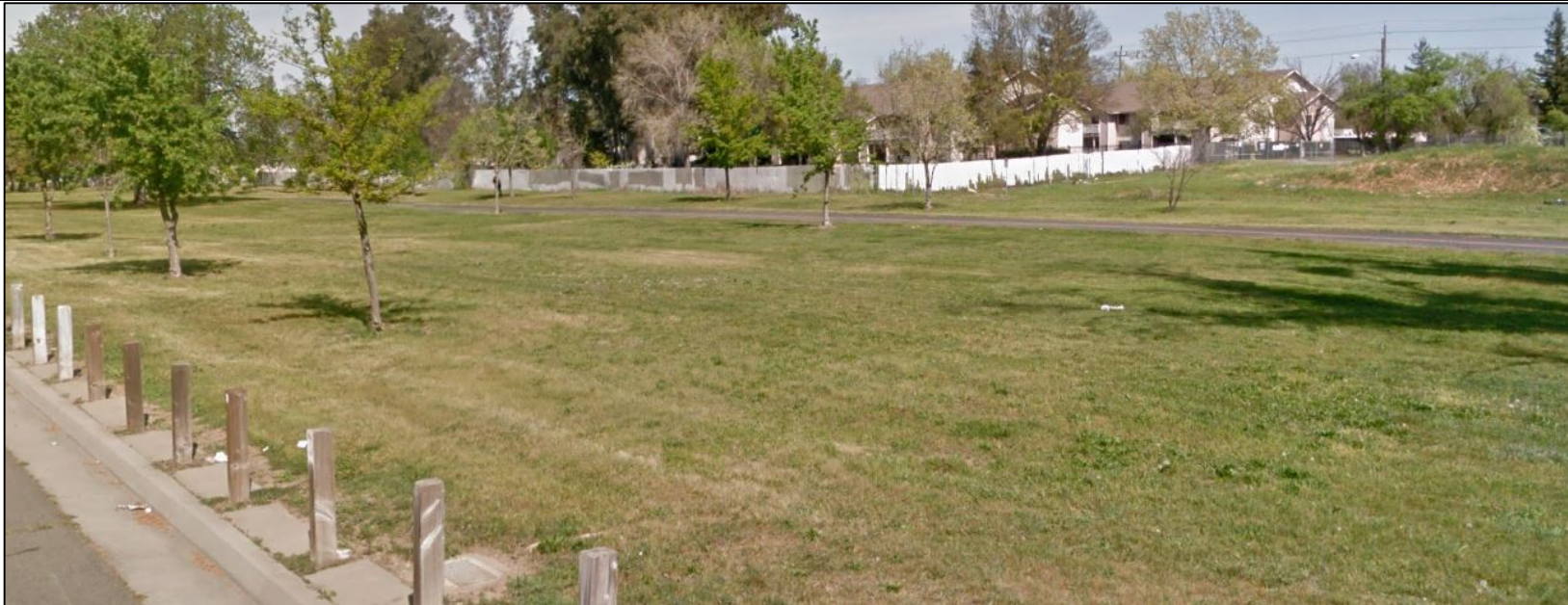
ID	Location	Recommendation	Justification
4	Lindsay Avenue at Vern Avenue.	<p>Make this intersection a 4-way stop to facilitate student travel to and from the school.</p> <p>Stripe the existing unmarked crosswalks with high visibility paint.</p>	<p>Vern Street is a major pedestrian and bicycle route to school for students. Currently, stop signs facilitate (unmarked) pedestrian crossings across Vern Street. However, the majority of pedestrian and bicycle traffic is north/south across Lindsay Avenue. Stop signs on Lindsay Ave. at this intersection would better facilitate active transportation to Del Paso Heights Elementary School by requiring east/west bound traffic to stop.</p> <p>Additionally, motorists tend to yield for pedestrians crossing in unmarked crosswalks far less than those in marked crosswalks. High visibility crosswalks at this location in addition to stop signs would likely enhance pedestrian safety.</p>

Visual



ID	Location	Recommendation	Justification
5	Sacramento Northern Bike Trail	Install pedestrian scale lighting and more shade trees along the Bicycle Trail	<p>Many students travel to Del Paso Heights Elementary School from residences east of the Sacramento Northern Bike Trail. The bike trail provides students with an off street, paved path to and from school. However, parents and residents have voiced concerns over the lack of lighting (especially in winter months), which makes the path seem unsafe. Without ample lighting the bike path may act more as a barrier than an asset for students walking and biking to school. Pedestrian scale lighting will increase security and safety along the bike path.</p> <p>Additionally, the walk audit revealed a lack of shading along the bike path. Shade trees are critical to making off-street paths comfortable for pedestrians and bicyclists, especially during the warmer months of the year.</p>

Visual



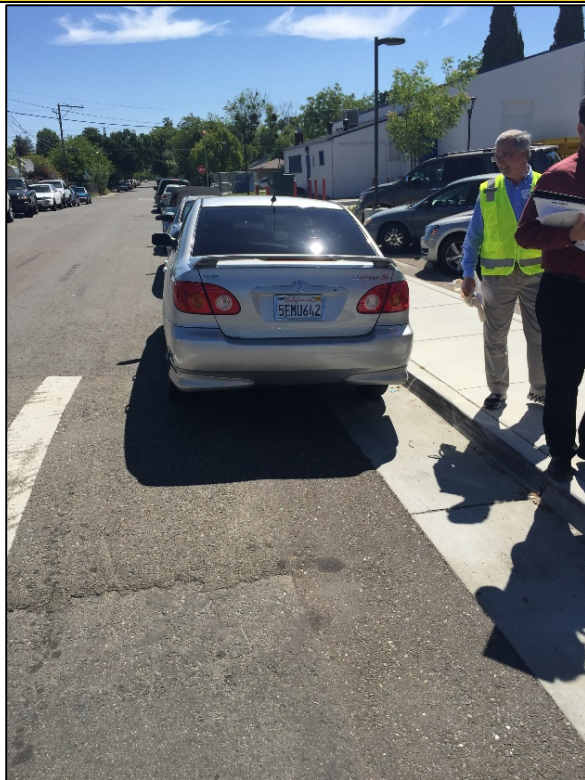
ID	Location	Recommendation	Justification
6	Morey Avenue at the school's main entrance	Restrict parking during pick up and drop off times at the school's entrance	<p>During pick up and drop off periods, Morey Avenue is highly congested. Significant congestion around schools can be harmful for a number of reasons including increased local air pollution from idling, frustrated motorists who may make rash decisions, and poor visibility of pedestrians. The congestion at Del Paso Heights Elementary School is in part due to teachers, administrators, and parents parking along Morey Avenue, significantly narrowing the roadway. Due to the lack of curb space, the school bus has been observed letting students out in the middle of the street. Furthermore, views of pedestrians are blocked by vehicles parked or idling at or just before crossing locations and driveways. Finally, because the majority of curbs at this location are rolled curbs, vehicles are often parked partially on the sidewalk, narrowing the available walking space.</p> <p>To ease traffic flow, improve bus drop off and pick up, improve visibility of pedestrians, and ensure ample walking room, parking should be restricted along Morey Avenue, especially during pick up and drop off periods. Doing so will of course require the designation of a nearby parking area for staff (see recommendation #8). The lack of on-street parking will allow parents and the school bus to quickly pick up or drop of their students at the curb, increase visibility at crossings and driveways, and increase the available walking area by removing over-parked vehicles.</p>

Visual



ID	Location	Recommendation	Justification
7	Morey Avenue at the School's main entrance	<p>Mark speed bumps as pedestrian crossing locations with signage and high visibility paint.</p> <p>Restrict parking on and within a certain distance of the speed bumps.</p>	<p>There are no marked cross walks across Morey Avenue at the school's entrance. Because of their crosswalk-like markings, students often cross Morey on the two speed bumps. However, the speed bumps are not signed as crossing locations with any parking restrictions, vehicles are often parked on or right next to them, limiting views of pedestrians.</p> <p>Installing signage and high visibility paint to highlight these locations as raised pedestrian's crossings will improve the walking environment near the school. Additionally, parking restrictions on and near the speed bumps will improve visibility of pedestrians.</p>

Visual



ID	Location	Recommendation	Justification
8	Empty lot behind the school on Morey Avenue.	Develop this parcel as a parking lot for teachers and staff to alleviate congestion on Morey Ave.	<p>Due to the lack of available parking at Del Paso Heights Elementary School, staff often park along Morey Avenue. This in turn contributes to congestion, poor pedestrian visibility, school bus, and sidewalk encroachment issues. To help move parked cars away from Morey Avenue, the school district should pursue developing a parking lot on the fenced off piece of land adjacent to the school on Morey Avenue.</p> <p>With less parking on Morey Avenue, congestion and subsequent idling may decrease, bus circulation and operation will improve, and the overall environment in front of the school will become much friendlier and safer for pedestrians.</p>

Visual



ID	Location	Recommendation	Justification
9	West side of Norwood Ave	Install new driveways and curbs or landscaped buffers to separate vehicles from pedestrians.	Back-out parking can put pedestrians at risk of collision due to a lack of visibility on the part of the motorist. By eliminating the option to back out onto Norwood Avenue, pedestrians are provided a more protected, continuous path of travel. Small planter boxes or even curbs at the back of sidewalks will prevent motorists from backing into the pedestrian right of way. New driveways will facilitate vehicle travel in and out of the parking lot.

Visual



ID	Location	Recommendation	Justification
10	Morey/Kesner Avenue Alley and Lindsay/Morey Avenue Alley	<p>Create safe paths to school. Install pedestrian scale lighting, clean up over grown shrubbery, and pick up trash.</p> <p>Install crosswalks and signage at intersections to indicate pedestrian presence.</p>	<p>The east-west residential alleys in this community create a unique opportunity to provide students with almost entirely off street routes to school. However, similar to the bike trail, if the paths are overgrown, under-lit, and perceived as unsafe, they may be underutilized.</p> <p>To create safe paths, the alleys should be cleared of overgrown shrubbery, trash, and graffiti. Pedestrian scale lighting along the alleys will help improve visibility and personal safety. Additionally, at intersections, crosswalks and/or signage indicating pedestrian presence should be installed.</p>

Visual



General Recommendations

These recommendations are not specific to a single location but rather, address issues common throughout the community.

Install additional traffic calming features throughout the neighborhood

Traffic calming features such as speed bumps and curb bulbouts help slow traffic and improve roadway safety for all modes of travel. Curb bulbouts are particularly effective because they shorten the pedestrian crossing distance and increase vehicle deflection to slow traffic at corners. Other traffic calming features such as high visibility crosswalks, narrower lanes, and signage are permanent measures that enhance safety for students and community members.



Paint advanced stop bars.

Advanced stop bars are roadway markings that require motorists to stop further back from a crosswalk or intersection. Advanced stop bars are beneficial to pedestrians and cyclists because they create a buffer zone for safe crossings. The advanced stop bars should also be accompanied by signs that remind drivers to stop at the markings. Advanced stop bars would be effective at all stop locations throughout the community, especially closest to the school and along major, higher speed thoroughfares.

Underground utility poles

Utility poles in the middle of or adjacent to sidewalks significantly reduce the available walking area. Often, if students are walking side by side, one student may have to step into the street to avoid the pole. A short term, less costly fix would be to extend the sidewalk slightly around poles to allow continuous use of the sidewalk. The long term solution of undergrounding poles, while costly, is critical to improving the walking environment.

Install Americans with Disability Act compliant infrastructure



Properly designed accessibility improvements such as curb ramps, railings, and accessible signal buttons are sound community investments. These improvements not only benefit students with disabilities, but other students, seniors, and community members. The walk audit revealed numerous locations where compliance with ADA standards was lacking.

Fix fences and encourage a residential fence set back

Large fences that encroach upon the sidewalk limit the available walking area for pedestrians. Encouraging fence and landscaping setbacks from the sidewalk will increase the pedestrian shy distance from fixed objects, increasing the effective sidewalk width. Contacting code enforcement regarding private properties is an effective way to temporarily address this issue.

Eliminate chain link and barbed wire fencing

Chain linked and barbed wire fencing is a common site in this neighborhood. These fences not only detract from the roadway aesthetic but often lean into the sidewalk and/or break, placing sharp hazards within the pedestrian path of travel. Replacing chain link fences with sturdy, upright fences will improve the walking environment and overall streetscape.

Install additional school signage

School zone signage and pavement markings convey important information to motorists to slow down and be more aware of students. Although there is some school zone signage around the school, additional signage throughout the community will further alert drivers. Potential signs and tools include traffic speed feedback signs, changeable message signs, school speed limit signs, and overhead school flasher speed limit signs.

Install additional Speed limit signage

The walk audit revealed a lack of speed limit signs, especially along major thoroughfares. Common, visible speed limit signs are important for providing drivers, especially those not familiar with the area, information about the correct speed limit.

Install pedestrian-scale lighting

There is a lack of pedestrian scale lighting throughout the neighborhood around the school. Pedestrian scale lighting helps improve actual security and safety concerns while also increasing the perception of safety, thus helping to encourage walking and biking. Pedestrian scale lighting is situated lower to the ground and spaced closely together to provide even lighting rather than alternating lit and unlit areas. Pedestrian scale lighting better alerts drivers to the presence of pedestrians and cyclists.

Create more opportunities for “eyes on the street”

When people are able to regularly observe public streets and parks, or even when it is perceived that there is constant surveillance, actual and perceived safety increases. On the other hand, an area with very few eyes on the street can feel isolated, unsecure, and alley-like. Opportunities for eyes on the street happen when buildings are minimally set back from streets, windows to active living spaces like kitchens and living rooms face a roadway, and the street encourages more usage with amenities like public seating and gathering places.



Eliminate overgrown shrubbery

In several locations, overgrown landscaping on city and private property encroach upon the pedestrian right of way. Overgrown shrubbery and trees not only take up much of the available walking space, forcing pedestrians into the roadway, but are often sharp and can cause physical harm. Private residents and business owners, the city, and the school should actively monitor and address overgrown landscaping. Contacting code enforcement regarding private properties is an effective way to address this issue.

Non-Infrastructure Recommendations

The following policy and program based recommendations can help address the barriers identified in the walk audit by creating, improving, and sustaining safe routes to school.

Develop a school based Safe Routes to School coalition

Establishing a multidisciplinary coalition is an important step in beginning any comprehensive Safe Routes to School effort. Coalitions are especially helpful in spearheading local education and encouragement efforts, coordinating with the school, community, and jurisdiction, identifying and securing ongoing funding, and developing the support of jurisdictions, law enforcement agencies, elected officials, and school districts for Safe Routes to School infrastructure and policy changes. Members might include: Community members, school administrators and teachers, parents, law enforcement representatives, jurisdiction planning and engineering staff, local business owners, and elected officials.

Develop a law enforcement presence plan

The walk audit identified several issues that may be solved through collaboration and planning with local law enforcement agencies. Increased enforcement, especially during key student commute periods, could help address aggressive driving, vehicles parked on sidewalks, gang activity, homelessness, and a lack of compliance with traffic controls around the school. Additionally, with the aid of law enforcement and code enforcement, issues involving abandoned vehicles, aggressive dogs, bike trail crime, and gang related graffiti can be addressed.

Implement crossing guard programs

Crossing guards are critical to facilitating safe student travel to and from school by ensuring that motorists stop for pedestrians. Crossing guards are currently located at Morey Avenue to facilitate student crossings across Norwood Avenue. Additional crossing guards would be beneficial at Grand Avenue at Taylor Street, at Lindsay Avenue at Vern Street, along Morey Avenue, and at Kesner Avenue and Taylor Street. Crossing guards could be administrators, teachers, parent volunteers, or students with adult supervision. AAA offers funding to start a student crossing guard program.



Start walking school busses and bicycle trains

Walking school busses and bicycle trains are groups of students that walk or bike to school together, often led by a teacher or parent volunteer. Pedestrians and cyclists that travel in larger groups tend to be more visible, increasing the likelihood that motorists will yield for them at crossings and slow down. To facilitate the walking school bus or bicycle train, the school or parent volunteers need to designate a common meeting location and consistent meeting times. This can be accomplished by the school through a student handbook or other beginning of the year material.



Hold regular community trash cleanups

A common issue identified by the walk audit was trash and debris littered throughout the community, especially within pedestrian and bicycle routes of travel. Not only does trash and large debris impede the pedestrian and bicycle right of way, but can be dangerous if a student were to trip on or pick up the trash. Regular community cleanups, especially along the east-west alleys and directly around the school, will ensure that common routes to school are clean and trash free throughout the year.

Facilitate a school carpooling program

Carpooling programs can help alleviate traffic around schools. Because congestion was identified as a major issue during pick-up and drop-off periods, developing or encouraging a carpooling program may be a relatively simple way to improve the walking and biking environment, decrease the number of aggressive drivers, and improve air quality around the school. Similar to the walking school busses and bike trains, a common location and time must be established.

Develop an offsite pick-up and drop-off location

Additionally, offsite pick-up and drop-off locations will help improve student safety around the front and rear of the school by directing many of the pick-ups and drop-offs to a further removed, less congested area. By decreasing vehicle traffic directly by the school, the pedestrian and bicycle environment is significantly improved. A potential offsite location is at the Morey Avenue cul-de-sac within Del Paso Park. This location is easily accessible by students through an off-street path and is accessible to parents directly off of a major thoroughfare. Additionally, the potential queuing distance along Morey Avenue is quite long. To best facilitate the offsite pick-up and drop-offs, a parent volunteer or teacher should be stationed at this location.

Map of Identifications



APPENDIX A: NATIONAL CENTER FOR SAFE ROUTES TO SCHOOL STUDENT TRAVEL TALLY

Safe Routes to School Students Arrival and Departure Tally Sheet											
+ CAPITAL LETTERS ONLY – BLUE OR BLACK INK ONLY +											
School Name:				Teacher's First Name:				Teacher's Last Name:			
<div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div>				<div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div>				<div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 100px; height: 1.2em; margin: 2px;"></div>			
Grade: (PK,K,1,2,3,...)		Monday's Date (Week count was conducted)				Number of Students Enrolled in Class:					
<div style="border: 1px solid black; width: 20px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 1.2em; margin: 2px;"></div> <div style="display: flex; justify-content: space-around; font-size: 0.8em;">0 2</div>		<div style="border: 1px solid black; width: 20px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 1.2em; margin: 2px;"></div> <div style="display: flex; justify-content: space-around; font-size: 0.8em;">M M D D Y Y Y Y</div>				<div style="border: 1px solid black; width: 20px; height: 1.2em; margin: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 1.2em; margin: 2px;"></div> <div style="display: flex; justify-content: space-around; font-size: 0.8em;">1 5</div>					
<p>• Please conduct these counts on two of the following three days Tuesday, Wednesday, or Thursday. (Three days would provide better data if counted)</p> <p>• Please do not conduct these counts on Mondays or Fridays.</p> <p>• Before asking your students to raise their hands, please read through all possible answer choices so they will know their choices. Each Student may only answer once.</p> <p>• Ask your students as a group the question "How did you arrive at school today?"</p> <p>• Then, reread each answer choice and record the number of students that raised their hands for each. Place just one character or number in each box.</p> <p>• Follow the same procedure for the question "How do you plan to leave for home after school?"</p> <p>• You can conduct the counts once per day but during the count please ask students both the school arrival and departure questions.</p> <p>• Please conduct this count regardless of weather conditions (i.e., ask these questions on rainy days, too).</p>											
Step 1. Fill in the weather conditions and number of students in each class				Step 2. AM – "How did you arrive at school today?" Record the number of hands for each answer. PM – "How do you plan to leave for home after school?" Record the number of hands for each answer.							
Key	Weather	Student Tally	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other		
	S= sunny R= rainy O= overcast SN= snow	Number in class when count made	-	-	-	Only with Children from your family	Riding with children from other families	City bus, subway, etc.	Skate-board, scooter, etc.		
Sample AM	S N	2 0	2	3	8	3		3	1		
Sample PM	R	1 9	3	3	8	1	2	2			
Tues. AM											
Tues. PM											
Wed. AM											
Wed. PM											
Thurs. AM											
Thurs. PM											
Please list any disruptions to these counts or any unusual travel conditions to/from the school on the days of the tally.											
+ +											

APPENDIX B: WALK AUDIT PARTICIPANTS

Andrew Manthe – California Department of Public Health

Arlete Hodel – League Certified Instructor

Chris Pair – Sacramento Regional Transit

Daniel Savala – City of Sacramento

Danielle Sturgeon – Del Paso Heights Elementary School

Diane Waters – California Department of Education

Erica Lee – Health Education Council

Eric Hansen – Health Education Council

Fred Yeager – California Department of Public Health

Jeannine Barbato – California Department of Public Health

Jennifer Rubin – Mercy San Juan

Jenny Wong – Sacramento Chinese Community Service Center

John Gordon – California Department of Education

Kathy Storelli – Sacramento Chinese Community Service Center

Lianne Dillon – California Department of Public Health

Lisa Constancio – California Department of Education

Helen O'Mara – Tahoe Park Resident

Mandy Molteni – SNAP – Ed

Melba Hinojosa – California Department of Public Health

Megan Gilles – Sacramento Court Appointed Special Advocates

Michael O'Neill – California Department of Education

Molly Wright – Sacramento Air District

Monty Stowers – Tahoe Park Resident

Rosie Ramos – Sacramento Area Council of Governments

Shannon Whent – Sacramento Police Department

Tamara Engel – T Engel Consulting

Tim Berry – California Department of Education

Tom Harrington – Tahoe Park Resident

Traci Canfield – Sacramento Regional Transit

Travis Evans – City of Rancho Cordova

Victoria Custodio – California Department of Public Health