Hawaii Department of Transportation
Form SRTS-1 (rev 01-13)

Hawaii Safe Routes to School Program
Contact Information

Please complete the information below and **include this form as the first page of your application.** The person identified as the contact for the applicant will be the main point of contact for Hawaii DOT staff.

PROJECT INFORMATION

Project Title: Kailua Bicycle Boulevard Keolu Drive to Kailua Road

Brief Description of the Project: Bicycle boulevard from Keolu Drive to Kailua Road

School(s) Affected by the Project: Kailua Elementary and Kailua Intermediate

Amount of SRTS Funding Requested: $500,000

Type of SRTS Funding Requested: (check one) ☑Infrastructure ☐Non-Infrastructure

APPLICANT INFORMATION

Contact Name: Randall Kurashige, P.E.

Contact Title: Civil Engineer V

Organization: City and County of Honolulu Department of Transportation Services
(check one) ☐ School ☐ School District ☑ Government Agency ☐ Non-Profit

Mailing Address: 650 S. King Street, 2nd Floor

City, State, Zip: Honolulu, Hawaii 96813

Best Phone # to Call: 768-8332

Contact E-mail: rkurashige@honolulu.gov

PARTNERING ORGANIZATION INFORMATION

Complete this section with contact information from each partnering organization if applicable. Reminder: non-profit organizations are required to partner with a government agency for infrastructure projects. For all other applicants, and non-profit organizations applying for non-infrastructure funds, partnering with other organizations is optional. Attach additional sheets if necessary.

PARTNERING ORGANIZATION 1

Contact Name: Dr. Lisa Delong

Contact Title: Principal

Organization: Kailua Intermediate School
(check one) ☑ School ☐ School District ☐ Government Agency ☐ Non-Profit ☐ Other

Mailing Address: 145 South Kainalu Drive

City, State, Zip: Kailua, Hawaii 96734

SafeRoutes
Hawaii Safe Routes to School

Best Phone # to Call: (808)263-1500

Contact E-mail: ldelong@kis.k12.hi.us

PARTNERING ORGANIZATION 2

Contact Name: James Rippard

Contact Title: T.A. Principal

Organization: Kailua Elementary School

(check one) ☑ School ☐ School District ☐ Government Agency ☐ Non-Profit ☐ Other

Mailing Address: 315 Kuulei Road

City, State, Zip: Kailua, Hawaii 96734

Best Phone # to Call: 266-7878

Contact E-mail: kailuaes@kailua.k12.hi.us

The award of Safe Routes to School funds; any subsequent funding or letting of contracts for design, construction, reconstruction, improvement or maintenance; and the furnishing of materials for this project shall not involve direct or indirect interest of any state, county or city official, elective or appointive. All of the above are prohibited by Hawaii Revised Statute §84-11, §84-11.5, §84-13, §84-14, §84-15. Any award of funding or any letting of a contract in violation of the foregoing provisions shall invalidate the award of Safe Routes to School funding and authorize a complete recovery of any funds previously disbursed.

Certification

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the applicant. I understand the following OFFICIAL ENDORSEMENT binds the applicant to assume responsibility for adequate maintenance of any new or improved facilities.

I understand that, although this information is sufficient to secure a commitment of funds, an executed contract between the applicant and the Department is required prior to authorization of funds.

Representing the City and County of Honolulu Department of Transportation Services

Randall Kurashige — Signature

December 3, 2015 — Date

Randall Kurashige, P.E. – Civil Engineer V — Name and Title

December 3, 2015 — Date

Project Summary

To increase safety, improve accessibility for students, and encourage more students to walk and bicycle to/from Kailua Intermediate School and Kailua Elementary School, the City and County of Honolulu Department of Transportation Services proposes the creation of a bicycle boulevard (also known as a greenway or keiki corridor) from Keolu Drive to Kailua Road along Pauku Street, Ka Awakea Road, Awakea Road, and Wanaao Road.

Existing Conditions

Kailua Elementary School and Kailua Intermediate School serves the students of Kailua from Enchanted Lakes to the Marine Corps Base and Kaneohe Bay. There are an estimated 350 students enrolled at Kailua Elementary School in grades K to 6th and 645 students enrolled at Kailua Intermediate School in the 7th and 8th grade. An estimated 73% of Kailua Elementary students live within 1 mile of the school and an estimated 49% of Kailua Intermediate students live within 2 miles of the school. See Appendix A for a 2-mile radius map around the affected schools.

The Kailua Intermediate Safe Routes to School (SRTS) Team has identified a segment of Wanaao Road, from Auwina Street to Kailua Road, as a major obstacle for children walking and biking from the Enchanted Lake neighborhood. Wanaao Road is a high volume thoroughfare connecting Keolu Drive to downtown Kailua. The narrow two lane road with restricted public right-of-way forces children to bike and walk on a narrow 3 to 4 foot uneven asphalt surface on the Mauka side of the road. The walkway has no curb and is adjacent to cars turning around a bend which poses additional sight limitations. The road is currently marked as a bicycle route but lacks bicycle markings and signage.

Picture 1: Segment of Wanaao Road with limited public right-of-way

Given the limited public right-of-way, improvements to properly accommodate walking and biking on Wanaao Road would be a major and long-term project. In consideration of this, an alternative route has been identified to bypass Wanaao Road without adding distance to a student's commute. The alternate route connects Keolu Drive to Wanaao Road using three residential streets: Pauku Street, Ka Awakea Road, and Awakea Road. These streets have posted speeds of 25 miles per hour and the majority of the route has concrete sidewalks. However, the wide roadway and intersections promote speeding around corners and along the straightaway. With unimproved shoulders, Awakea Road (from Auwinala Road to Wanaao Road) is the missing link in pedestrian facility since it is narrow and many cars park illegally on

both sides of the road, forcing children to walk into the road. A segment along Wanaao Road has an asphalt walkway in need of repair and widening. The proposed project is to improve the conditions of this alternate route to promote it as the preferred route for students to use.

Parent Survey and Student Tallies

Student tallies and parent surveys were conducted at both Kailua Elementary and Kailua Intermediate in September 2015. At Kailua Elementary, 172 parents completed the survey and 169 students participated in the tally. Results show approximately 25% of students currently walk/bike to school and 58% of students living within 1 mile of the school have asked for permission to walk/bike to school. At Kailua Intermediate, 247 parent surveys were conducted and 46 classrooms participated in the tally. Results show approximately 20% of students currently walk/bike to school and 75% of students who live within 2 miles of the school have asked for permission to walk/bike to school.

At both schools, the majority of parents who do not allow their child to walk/bike to school are concerned about the safety of intersections and crossings, the amount of traffic along the route, and the speed of traffic. Details of the results from the parent survey and student tallies are in the Kailua Intermediate SRTS Plan (Appendix B) and on the National SRTS Data Collection System (http://www.saferoutesdata.org/).

Note: Within the National SRTS Data Collection System, Kailua Elementary School parent survey and student tally results are listed under Kailua High School because the Kailua Elementary School group contact person did not respond to the SRTS Team's request for access.

Existing SRTS Efforts

Kailua Intermediate School is actively promoting children to safely walk and bike to school. The school worked with the Honolulu Police Department during the 2014 - 2015 school year and was successful in having all students who biked to school wear a helmet. Compliance was due to a helmet campaign which involved surveying students on the reasons they didn't wear a helmet, demonstrating the importance of wearing a helmet, implementing a coin point system which rewards students who wear a helmet, and issuing citations to students who did not wear a helmet. At the start of the 2015 – 2016 school year, the school modified the bicycle arrival and departure route to reduce the risk of bike/car collisions. Bicycle racks have been installed and accommodate 40 to 50 bicycles. In addition, students may park along select areas of the school's perimeter fence, which accommodates an excess of 100 bicycles. Once the roads that lead to Kailua Intermediate are safer, the school plans to organize and initiate "Walk and Bike to School Days" to get more students walking and biking. Kailua Intermediate has collaborated with the Hawaii Bicycling League to form a Kailua Intermediate SRTS Team and create a SRTS Plan (see Appendix B).

Project Scope

The City and County of Honolulu is applying for funds for the design and construction of a bicycle boulevard along Pauku Street, Ka Awakea Road, and Awakea Road, in addition to widening the walkway along a short segment of Wanaao Road – see Appendix C for a detailed map of the project area. To

create a bicycle boulevard, wayfinding signage, traffic calming measures, and new pavement markings are proposed. These infrastructure improvements would establish a bicycle boulevard which will allow students to comfortably bike and walk to school and encourage more students to commute using active transportation. Wayfinding signage is needed to direct students to and along the designated bicycle boulevard. Proposed traffic calming measures include 8 speed tables, 2 mini traffic circles, eradication of the center line, and sharrows as shown on the conceptual plans within the SRTS Plan (see Appendix B). The asphalt walkway along Wanaao Road, from Awakea Road to Kailua Road, is proposed to be widened to the full width of the shoulder to allow students to walk and bike more easily along the path. During the design phase, further analysis will be made to determine the exact location and feasibility of the proposed treatments.

The project is supported by the Kailua community at large. Numerous elected officials have shown support for the project – see Appendix D for letters of support. The Kailua Neighborhood Board Transportation Committee has unanimously supported a resolution to endorse the project and the resolution will be heard by the entire Neighborhood Board in December 2015. Canvasing of the residents along the proposed route has begun and results show that the majority (70%) of respondents are in support of the project.

The project area is anticipated to be entirely within City and County of Honolulu right-of-way. The facility will be maintained by the City. No utility agreements are anticipated.

Picture 2: Segment of Wanaao Road with existing walkway in need of repair and widening

Picture 3: Example of a mini traffic circle in a residential neighborhood with a greenway

The project will go through a full NEPA process including section 106 and section 7. The project is expected to be a Cat Ex, List C(3) or C(8) project. A SMA permit is anticipated. A NPDES permit is not anticipated as the project is expected to be under 1 acre in size.

Project Schedule

Below is an approximate project development schedule assuming a written authorization to proceed date of July 1, 2016.

Phase	*Start Date*	*End Date*	*Duration*
Design	July 1, 2016	December 31, 2017	18 months
Right-of-way Verification	January 1, 2017	April 30, 2017	4 months
Construction	January 1, 2018	June 30, 2018	6 months
Evaluation	July 1, 2018	December 31, 2018	6 months

Project Team

The project team will be led by the applicant who is an employee of the City and County of Honolulu Department of Transportation Services Traffic Safety and Alternate Modes Branch (TSAM). TSAM manages numerous federally funded projects annually with decades of experience between four licensed engineers. The applicant is a licensed engineer with experience overseeing numerous federal-aid projects. Recent projects include: Waikamilo/Dillingham Intersection Improvements; Diamond Head, Monsarrat Ave, Makapuu Ave, 18th Ave Bikeway Improvements; Civic Center Bike Path Improvements; Kapolei Parkway Urban Core 4A. The applicant will be assisted by Brian Yoshida, P.E. and Shawn Butler who were also involved in overseeing the previously listed projects.

The applicant will use the awarded SRTS funds to hire a design consultant, a construction management consultant, and a construction company in compliance with the Brooks Act selection process and other state and local regulations including the Hawaii Public Procurement Code.

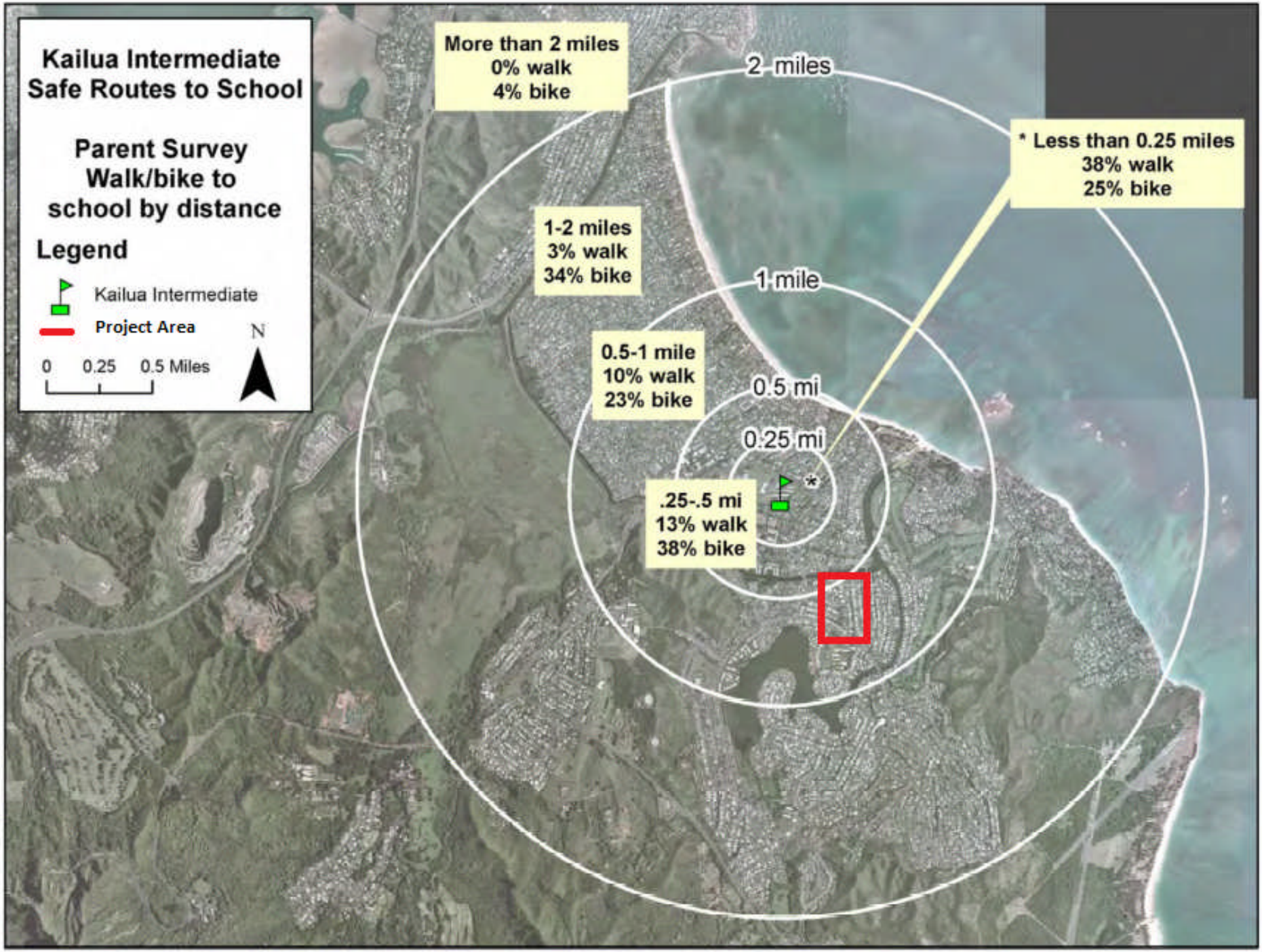
The City will partner with Kailua Intermediate School and Kailua Elementary School on this project – see Appendix E for partnership letters. The schools will be responsible for notifying parents about construction activities and administering the post-construction parent survey and student tally within 6 months of construction completion. Yamato Milner, the City's SRTS Coordinator, will lead and coordinate with community SRTS teams and affected schools to ensure the required parent surveys and student tallies are performed.

Cost Estimate

The design and construction of the proposed bicycle boulevard is estimated to cost $500,000 including inspection costs. An itemized breakdown of project costs was prepared by Shawn Butler and Brian Yoshida, P.E. and is included in Appendix F. The estimated project cost per student living 1 mile from Kailua Elementary and 2 miles from Kailua Intermediate is $874.

Appendix A:

Kailua Area 2-mile Map


Kailua Intermediate
Safe Routes to School
Parent Survey
Walk/bike to
school by distance
Legend
Kailua Intermediate
Project Area
0 0.25 0.5 Miles
N
More than 2 miles
0% walk
4% bike
2 miles
* Less than 0.25 miles
38% walk
25% bike
1-2 miles
3% walk
34% bike
1 mile
0.5-1 mile
10% walk
23% bike
0.5 mi
0.25 mi
*
.25-.5 mi
13% walk
38% bike

Appendix B:

Kailua Intermediate SRTS Plan

Safe Routes to School Plan

Kailua Intermediate School

Kailua, Hawaii

October 2015

Table of Contents

I. Introduction 1
a. Kailua Intermediate School 1
b. Safe Routes to School 1
II. SRTS Team and Planning Process 2
III. Existing Conditions 2
a. Prior SRTS work 2
b. Exiting Walking and Biking Infrastructure Audit 3
c. Bicycle and Pedestrian Traffic Injury Data 3
d. Parent Surveys 3
e. Travel Tallies 5
IV. Issue & Solution Identification 7
a. Issues 7
b. Solutions 10
V. Action Plan 12

I. Introduction

a. Kailua Intermediate School

Established in 1958, Kailua Intermediate School (referred to as "KIS" or "school" herein) serves students from the communities of Kailua, Enchanted Lakes, and Marine Corps Base Hawaii – Kaneohe Bay. The school includes 7th and 8th grades and had 645 students as of September 2015.

The mission of the school is "to provide a positive, safe learning environment which promotes diverse academic excellence, respect for self and others, and the development of responsible citizenship for all. As a community of learners, Kailua Intermediate School strives to develop the potential of every child to be successful in the 21st century."

b. Safe Routes to School

Safe Routes to School (SRTS) is a multi-faceted approach to make walking and bicycling to school safer and more accessible for children through addressing the ***5Es*** – *engineering (infrastructure), education, encouragement, enforcement, and evaluation/planning*. SRTS aims to turn around the decline in children walking and bicycling to and from school that has occurred since the 1960s. In 2005, the federal government established a program to fund SRTS as part of *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)*, which provided state departments of transportation funding dedicated for SRTS programs from 2005 to 2012.

Engineering, education, encouragement, enforcement, and evaluation/planning all play important roles in making it safe for children to walk and bicycle to school.

Engineering

Engineering (infrastructures) changes may include adding bike lanes, improving pedestrian crossings, installing traffic calming measures, and other physical improvements to make it safer to walk or bicycle to school.

Education

Educational programs can target students, parents, or the community with the objective of making it safer for children to walk or bicycle with existing infrastructure. Programs may include those directly targeted at children that walk and bike or those targeted at parents and community members that drive in and around the school area.

Encouragement

Encouragement programs work to convince children and parents that biking or walking to school is a safe, fun, and healthy activity. Encouragement activities may include walking and biking school buses, walk and bike to school days, and other initiatives designed to make it safer and more fun to walk and bike. Encouragement activities should be carefully coordinated with education, enforcement, and engineering.

Enforcement

Enforcement of traffic laws can be very effective in increasing compliance with laws designed to ensure traffic safety and may address laws such as speed limits, stopping at crosswalks, stopping at traffic signals, and bicycle helmet use.

Evaluation/Planning

Evaluation and planning is crucial to forming any SRTS program and in monitoring its continued effectiveness and guiding changes.

II. SRTS Team and Planning Process

In July 2015, the Hawaii Bicycling League (HBL) reached out to Kailua Intermediate School about the possibility of creating a SRTS plan for the school. Principal Lisa DeLong was excited about the opportunity and agreed to support the formation of SRTS plan and team to oversee this process.

The SRTS team is comprised of the following members:

- Lisa DeLong, Principal of KIS
- Laurie Ahlgren, Parent Community Network Coordinator of KIS
- Bridget Tapper, Parent Community Network Coordinator of Kailua Elementary School (neighboring and feeder school)
- Daniel Alexander, Planning Director at HBL
- Travis Counsell, Education Project Manager at HBL

In addition to the SRTS team, Mike Packard (area resident and traffic engineer) completed a conceptual design for one of the engineering solution projects.

As part of the SRTS planning process, the September 2015 meeting of the KIS PTSA was dedicated to the SRTS plan. Twenty parents and four students were present at the meeting. Participants were asked 3 questions during the interactive planning meeting:

- *Where would you like to see the school in 5 years?*
- *What are your concerns?*
- *What solutions do you think are most important?*

Verbal comments were received from many parents and one student. Written comment forms were made available and 4 completed forms were received.

III. Existing Conditions

a. Prior SRTS work

While Kailua Intermediate School has not previously had a formal SRTS program, the school has implemented a number of activities that are essentially SRTS actions.

Helmet Campaign

The school worked with Honolulu Police Department (HPD) during the 2014-15 school year to conduct a helmet campaign. The campaign involved the following actions:

- Survey asking why students didn't use a helmet.
- A demonstration on the importance of wearing a helmet, which included dropping an egg in a helmet, was conducted at a school assembly with the involvement of a HPD officer.
- Passing out point coins to kids for using a helmet that can be turned in for snacks.

- HPD school arrival helmet enforcement starting with warnings and eventually issuing citations.

As a result of the efforts, helmet use went up to 100%.

Bicycle Arrival Route

After receiving parent and staff feedback, the school conducted observations of students arriving by bike and devised modifications to the bicycle arrival/departure routes that would reduce the risk of bike/car conflicts. At the start of the 2015-16 school year, the arrival and departure route for students on bicycles was modified to avoid entering and exiting motor vehicles.

Bicycle parking

The school has previously installed bicycle parking that accommodates 40-50 parked bicycles. In addition to the formal bike parking, students are allowed to park bicycles on the select areas of the school's perimeter fence, which accommodates in excess of 100 bicycles.

b. Exiting Walking and Biking Infrastructure Audit

An audit was conducted of existing walking and bicycling infrastructure within one-mile of Kailua Intermediate School. The audit looked for bike routes, bike lanes, bike paths, signalized crossings, and paved walkways (recording whether on both sides or not). Notable infrastructure for bicycling includes the bike lanes on Kainalu Drive extending from Kailua Road to Kainui Drive, the bike lanes on a short section of Kuulei Road, the bike lanes on a section of Keolu Drive, and the bike path through Kailua Beach Park extending towards Lanikai. See Figure 1 for a map of existing walking infrastructure and Figure 2 for a map of existing bicycling infrastructure.

c. Bicycle and Pedestrian Traffic Injury Data

The Hawaii Department of Health provides a map with the locations of traffic injuries requiring Emergency Medical Services response. Bicycle and pedestrian traffic injuries are available from 2007 to 2014. It should be noted that these injuries are relatively serious, as they warranted an ambulance response. These were analyzed as part of the SRTS planning process. Kuulei Road between Oneawa Street and Kainalu Drive stands out as having particularly high levels of bicycle traffic injuries relative to area roads. Figure 3 shows bicycle and pedestrian injuries for the years of 2013 and 2014.

d. Parent Surveys

Parent Surveys were sent home with all students in September 2015. A standardized parent survey form provided by the National Center for Safe Routes to School was used. Two hundred and thirty-five completed surveys were received and entered into the National Center for Safe Routes to School Data Collection System. The Parent Survey responses show the following. (continue on Page 5).

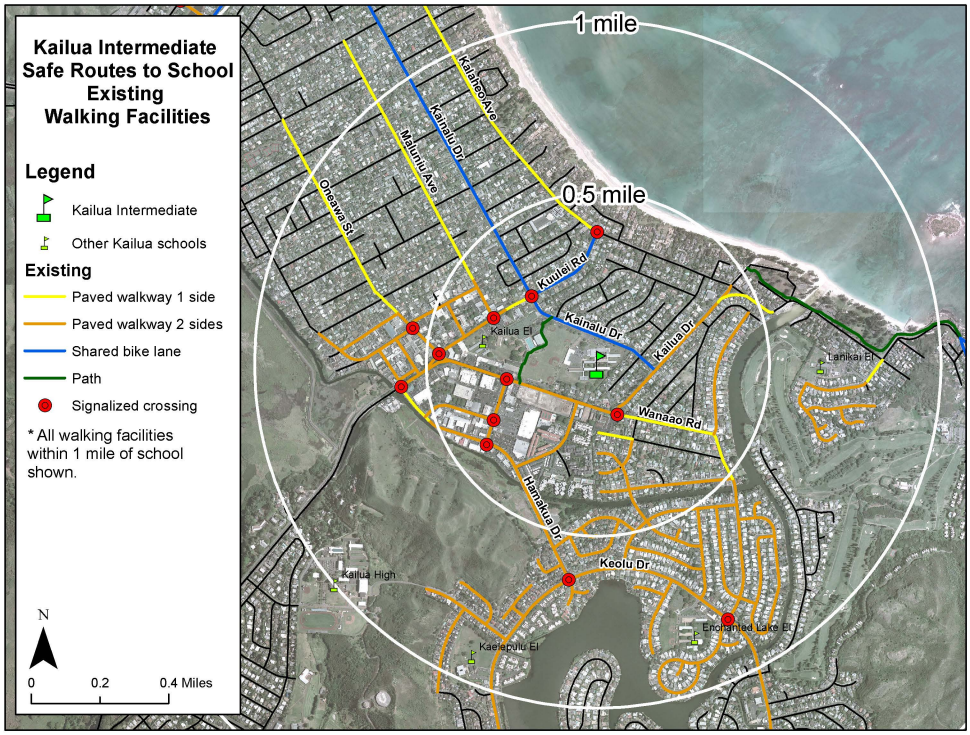


Figure 1 - Walking Infrastructure

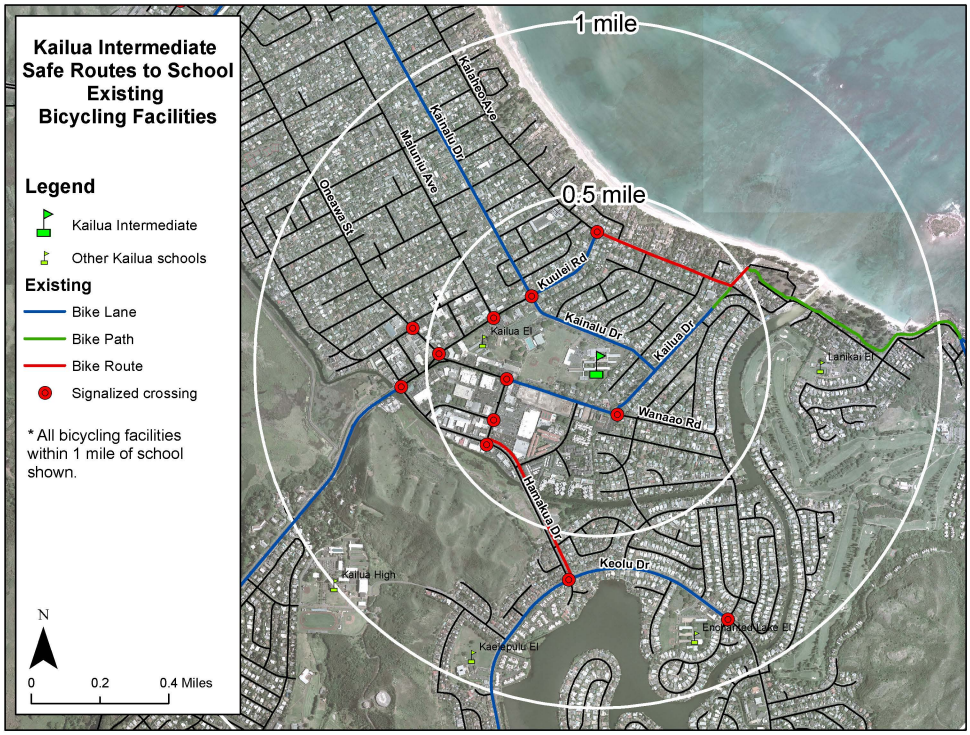


Figure 2 - Biking Infrastructure

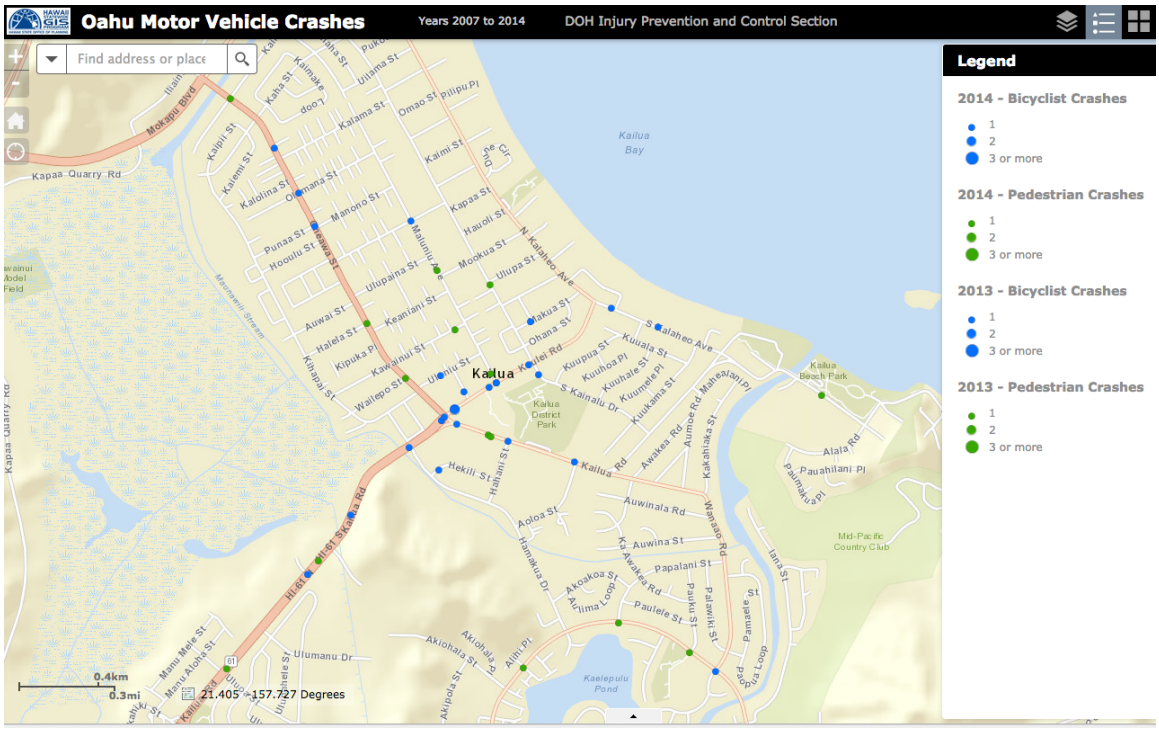


Figure 3 - Bicyclist & Pedestrian Injuries 2013-14

Getting to/from School

A little over half of students were getting to (59%) and from (56%) school by family vehicle. A significant amount of students were biking (17% to, 16% from) and walking (4% to, 6% from). When looking at students that live less than 2 miles from the school, walking and biking rates are considerably higher, with walking rates highest (38%) among student living within a quarter-mile and biking rates highest (38%) among student living between half and a quarter-mile from campus. See Figure 4 for more information.

Just over half (52%) of parents reported that their child had asked permission to walk or bike to/from school.

Parents Concerns

The Parent Survey form asks parents if 12 different factors affect their decision to allow their child to walk or bike to/from school. For parents whose child does not currently bike or walk to/from school the top three most noted factors were distance, safety of intersections and crossings, and amount of traffic along route. The list of all 12 factors with parents saying that if the factor changed it would impact their decision to let their child walk or bike to/from school is provided in Figure 5.

e. Travel Tallies

Travel tallies, using the standardized process and form provided by the National Center for Safe Routes to School, were taken by homeroom teachers in 46 classrooms. Each teacher asked for students to raise their hand based on how they got to school and how they intended to get home from school. The numbers shown in Figure 6 are largely consistent with those in the Parent Survey responses.

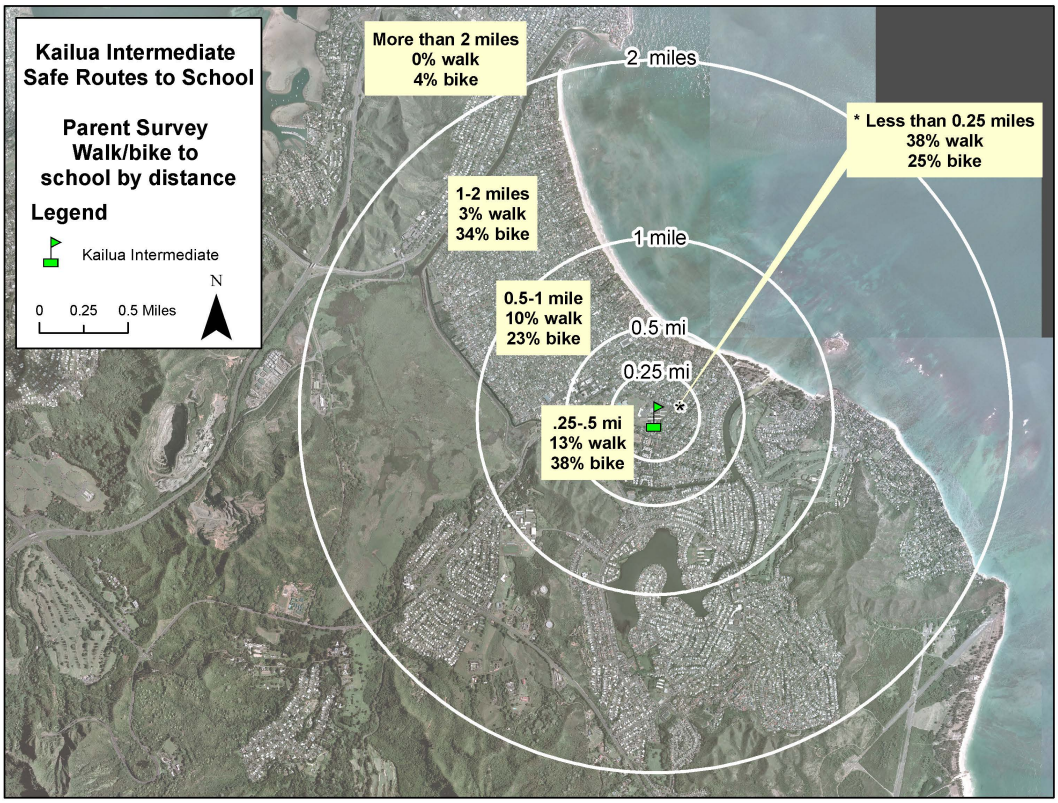


Figure 4 - Walking and Biking Rates by distance from school

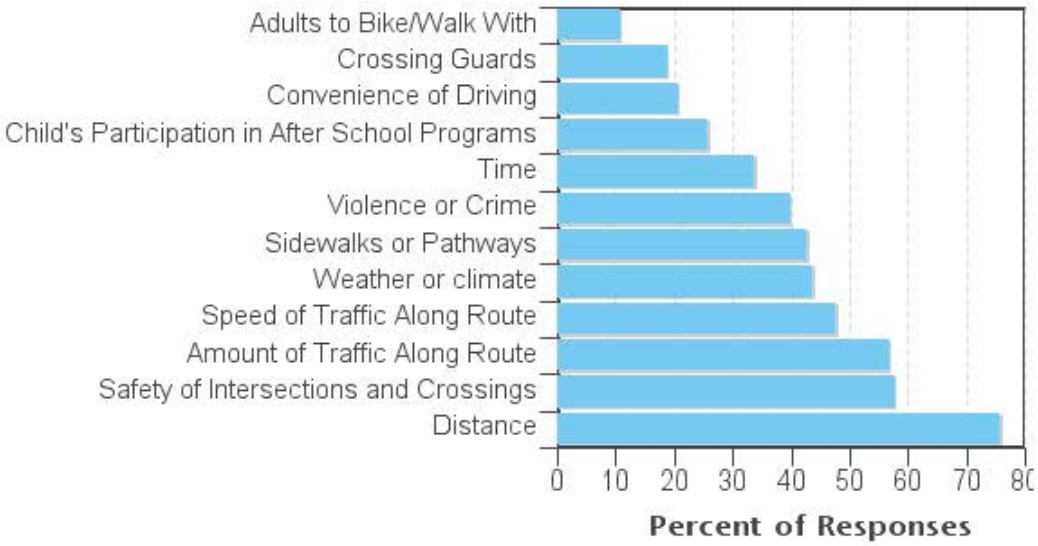


Figure 5 - Factors that if changed would impact the decision to allow their child to walk or bike

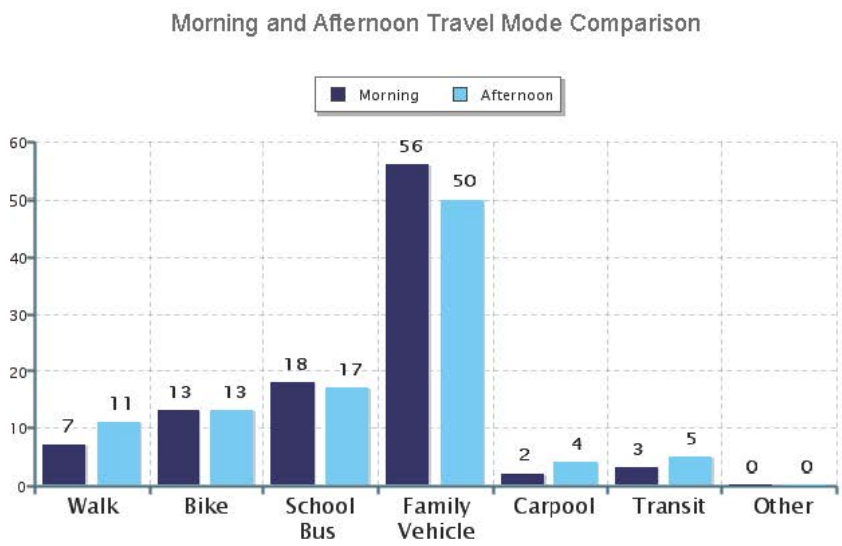


Figure 6 - Travel Tallies for Getting to/from School

IV. Issue & Solution Identification

Based on existing conditions, parent surveys, travel tallies, traffic injury data, and feedback during the SRTS planning meeting, the SRTS team identified key issues and some solutions. This list highlights those that were identified as most important.

a. Issues

Engineering

There are a number of engineering or infrastructure needs to make walking and bicycling to and from KIS safer and more attractive.

- Wanaao Road between Auwina Street to Kailua Road – This street is very narrow and has a 3-4ft rough paved walkway on one side, which is shared with bicyclists due to the high volumes and high speed nature of Wanaao Road. Wanaao Road serves as a link between the school and the Enchanted Lake community. While shown in City maps as a bike route, the road lacks any markings or signage. See Figure 7 for a photo of this section.
- Awakea Road between Wanaao Road and Auwinala Road – This street is very narrow and has no paved sidewalk on either side. Cars often park in the unimproved sidewalk forcing children into the road. As shown in Figure 1, this section is the missing link between pedestrian facilities in Enchanted Lake and those along Wanaao Road.
- Kuulei Road between Kailua Road and Kainalu Drive – This multi-lane road lacks any bicycle facility, yet serves as a crucial link for those students coming from the mauka areas of the Coconut Grove neighborhood.
- Kuulei Road/Aulike Street intersection crossing – The crosswalk at this intersection involves crossing four lanes of traffic and 2 parking lanes without a signal or a median refuge. In addition to serving KIS students, this crosswalk is an important access for students walking to/from Kailua Elementary School. See Figure 8 for photo of this crossing.

- Kailua Road between Wanaao Road and Kalaheo Avenue – Conditions are dangerous for walking and bicycling. The road is very narrow and has 3-5ft rough paved shoulder on mauka-bound side and 3-5ft rough paved walkway on the makai-bound side, both of which are shared by bicyclists, due to the high traffic nature of the road. While shown in City maps as a bike lane, the road lacks any markings or signage indicating the presence of a bike lane, nor does it appear to meet the minimum standards for a bike lane. The road serves as an important link to KIS for those living in both the Enchanted Lakes and Lanikai neighborhoods.
- Kalaheo Avenue between Kainui Drive and Mokapu Boulevard – This street is very narrow and has a 3-5ft rough paved walkway on one side, which is shared with bicyclists due to the high traffic and high speed nature of the road. This section serves as an unavoidable link between the school and the Marine Corps Base Hawaii Kaneohe Bay community.

Figure 7 - Wanaao Rd near Awakea Rd

Figure 8 - Kuulei Rd crosswalk at Aulike St

- Kainalu Drive crosswalk at Kuuhale Street – this unsignalized crosswalk is a major crossing for students walking to KIS. While only requiring a two lane crossing, due to heavy traffic the crossing can be dangerous.
- School zone reduced speed - There is no signage in the vicinity of the school indicating a reduced speed limit during school arrival and departure times. The speed limit is 25mph, which can be hazardous with the unsignalized crossings and unprotected bike lanes.
- Bike parking at KIS – There is a need for additional bike parking at the school. Desire has been expressed for covered bike parking that would protect student's bikes from the weather.
- Bicycle "fix-it" station – Students often have minor mechanical issues with their bicycles. With the provision of a "fix it" station and basic mechanic education many of the most common mechanical issues could be dealt at the school by students.

Education

- Students don't currently receive any formal bicycle safety education.
- Past helmet education has proven effective, but there is a need for ongoing action.
- The safest bike routes are largely unknown by students and parents; students generally ride on the roads where their parents drive. On-street signage or a safe bike routes map could help address this, where safer alternative routes exist.

Encouragement

- The school has previously implemented a coin point system providing rewards for students using helmets. There is a need for ongoing action to continue the effectiveness of this work.
- There is an opportunity for bike and walk to school days and other encouragement activities.
- It was noted that some students report not having access to a bicycle. A program to provide them bicycles could play an important role in allowing some students to bicycle.

Enforcement

- Based on Department of Education policy, intermediate schools such as KIS, are not provided funds for crossing guards.
- Speeding, running red lights, failure to stop for pedestrians, and other traffic violations play a role in making it more dangerous for children to walk and bike. Increased enforcement could reduce these illegal and dangerous activities. These issues are routinely communicated to the Honolulu Police Department at quarterly meeting by Principal DeLong.
- Helmet enforcement – Youth under the age of 16 are required to wear a helmet while bicycling. A 2014-15 school year helmet campaign involved citations as a final measure and was effective at achieving 100% helmet use.
- Bicycle theft was noted as an occasional issue. Stolen bikes are normally those not locked and left near the edge of the property. Factors that may contribute to this include difficulty locking to the perimeter fence (where many students must park due to insufficient formal bike parking), lack of awareness on the importance of locking or proper locking technique, and lack of access to a lock. KIS plans to install video surveillance in the next year, which may serve as enforcement deterrent.

Evaluation/Planning

By way of this SRTS plan, extensive evaluation and planning has taken place. There will be a need for evaluation and planning on an ongoing basis to determine if programs are effective and possible changes.

b. Solutions

Based on the identified issues and looking at SRTS best practices for the 5Es, the SRTS team identified a number of solutions. The below highlights two engineering solutions that warrant extensive explanation, a number of other important solutions are outlined in the Action Plan section.

Wanaao Road bicycle boulevard alternative

Wanaao Road was noted by many parents as a major obstacle to children walking and bicycling from the Enchanted Lake neighborhood to KIS. The section between Awakea Road and Auwina Street is a major issue it is a very narrow roadway with a 3-5 foot asphalt walkway in rough condition on one side without any curb or berm to provide additional protection. Given the constricted public right-of-way in the Awakea Road to Auwina Street section, improvements that properly accommodate both walking and bicycling would be a major and long-term project. In consideration of this, an alternative route was considered. Using a route that includes Awakea Rd. → Ke Awakea Rd. → Pauku St. does not increase the route distance compared to Wanaao Road when traveling between the corner of Kailua Road/Wanaao Road and Wanaao Road/Keolu Drive. A bicycle boulevard treatment would work to reduce traffic levels and traffic speeds along this route, thereby making the route safer and more inviting for bicycling. A bicycle boulevard treatment may involve the following elements:

- Speed humps
- Mini traffic circles
- Reduce speed limit to 15mph or 20mph
- Elimination of the center line
- Sharrows and bicycle route signage
- Wayfinding finding on route and directing to route

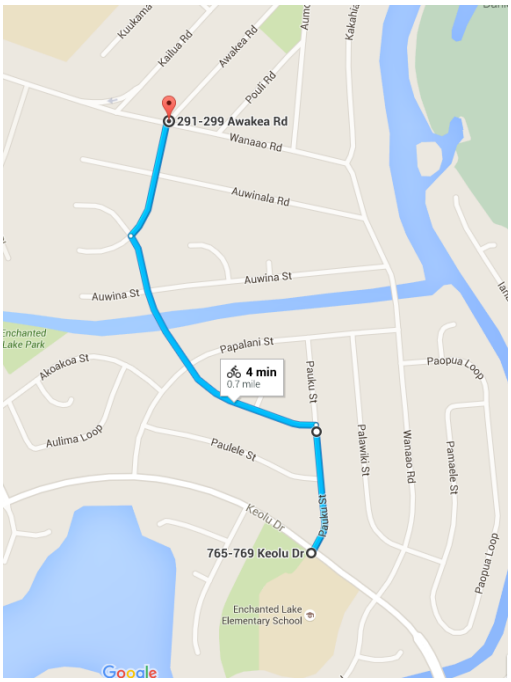


Figure 9 - Wanaao Road bicycle boulevard alternative route

Figure 10 - Bicycle boulevard example

As seen in Figure 10, the route between Kailua Road and the bicycle boulevard section would require traveling on a single block portion of

Wanaao Road. This section, shown in Figure 7 should have the mauka side walkway widened and protected with a curb or asphalt berm to provide a safer connection.

Appendix 1 provides a conceptual design for the above.

Kuulei Road "right sizing"

Kuulei Road between Kailua Road and Kainalu Drive was identified as important issue negatively impacting bicycling and walking to and from KIS. Kuulei Road serves as access for students bicycling from the mauka sections of the Coconut Grove neighborhood to KIS, with its current state serving as deterrent to bicycling from these areas. This multi-lane road lacks any bicycle facility and the crosswalk at Aulike Street involves crossing four lanes of traffic and 2 parking lanes without a signal or a median refuge. Traffic injury data shows alarming high number of bicycle injuries with 10 serious injuries in the last 5 years on this 0.3-mile stretch of road.

The 4 to 3 "right sizing" (also known as "road diet") reconfigures a road creating new space for non-motorized users and making the road safer for all users without adversely impacting capacity. The Kuulei Road right-sizing would reconfigure the road to 1 through lane in each direction, a center left turn, and bike lanes on each side. This configuration would provide room for pedestrian safety medians and curb extensions. The right sizing would have major safety benefits for all roadway users, while continuing to accommodate the 15,000-16,000 average daily vehicle trips. The City has implemented a right sizing on a section of Keolu Drive in the Enchanted Lakes neighborhood with great success and will do so on section of Kamehameha IV Road in Kalihi in the coming year.

Figure 11 shows Kuulei Road as it currently is and Keolu Drive, which would serve as a model for the right sizing reconfiguration.

Figure 11 - Kuulei Road currently and Keolu Drive "right sizing" model

V. Action Plan

The action plan is where the SRTS plan comes to life; it is with the implementation of these actions that it will become safer to walk and bike to and from school and more students will do so. Many of these actions must be taken by parties besides KIS and will therefore require further coordination to see what action is possible and a schedule for implementation. This action plan specifies actions to be pursued for a Hawaii Department of Transportation-administered SRTS grant application in the application period open until December 2015; see those with mention of "*SRTS grant application*". Table 1 outlines specific actions within each of the *5Es* SRTS strategies, action descriptions, involved parties, and specific actions.

Table 1 - Action Plan Matrix

Strategies	Description	Involved Parties	Action
Engineering	Reconfigure Kuulei Road between Oneawa Street and Kainalu Drive to have 1 through lane in each direction, a center left turn lane and bike lanes.	DTS	Request DTS SRTS grant application
	As part of the reconfiguration of Kuulei, install a pedestrian safety crossing island at the intersection with Aulike Street	DTS	Request DTS SRTS grant application
	Install infrastructure, signage, and markings for a "bicycle boulevard" on Awakea Rd. → Ke Awakea Rd. → Pauku St. to serve as an alternative to Wanaao Road	DTS	Request DTS SRTS grant application
	Improve the sidewalk on the south (mauka) side of Wanaao Road between Awakea Road and Kailua Road	DTS	Request DTS SRTS grant application
	Pave a path within the unimproved sidewalk along Awakea Road between Wanaao Road and Auwinala Road	DTS	Request DTS SRTS grant application
	Install school zone flashing beacons with school zone speed limit signs	DTS	Request DTS consideration
	Install a "State Law Must Yield to Pedestrians" flapper sign at Kainalu Drive crosswalk at Kuuhale Street	DTS	Request DTS consideration
	Improve the Kailua Road and Wanaao Road intersection for bicycle and pedestrian crossings	DTS	Request DTS consideration
	Improve the sidepaths on Kailua Road between Wanaao Road and Kalaheo Avenue to serve as multi-use paths	DTS	Request DTS consideration
	Create walking and biking paths on Kalaheo Drive between Kainui Drive and Mokapu Blvd	DTS	Request DTS consideration
	Reconfigure Keolu Drive between Wanaao Road and Nanialii Street to have 1 through lane in each direction and a center left	DTS	Request DTS consideration

Strategies	Description	Involved Parties	Action
	turn lane and bike lanes.		
	Improve the walkways on Wanaao Road between Awakea Road and Auwina Street	DTS	Request DTS consideration
	Create bikeways on Kailua Road between Oneawa Street and Hamakua Drive	DTS	Request DTS consideration
	Improve walkways on Maluniu Avenue between Uluniu Street and Kalama Street	DTS	Request DTS consideration
	Install bike lanes on Mokapu Blvd between Kalaheo Drive and MCBH Kaneohe Bay entrance	HDOT	Request HDOT consideration
	Add additional bicycle parking	KIS	Consider SRTS application
	Install covered bicycle parking	KIS	Consider SRTS application
	Install a "fix-it" bicycle station	KIS	Consider SRTS application
Education	Helmet education	KIS, HPD	KIS & HPD action
	Bicycle Safety Workshops	KIS, HBL	KIS & HBL action
	Safe Routes bike map	KIS, HBL	Consider SRTS application
	Bicycle Mechanic Education	KIS, HBL	KIS & HBL action
Encouragement	Bike/Walk to School Day	KIS, HBL	Consider SRTS application
	Bike Together program	KIS, HBL	Consider SRTS application
	Bike Team t-shirts or patches	KIS, HBL	Consider SRTS application
Enforcement	HPD coordination on helmet campaign	HPD	Request HPD consideration
	Increased traffic enforcement around campus	HPD	Request HPD consideration
Evaluation/ Planning	Annually evaluate SRTS programs	KIS, HBL	KIS & HBL action

DTS – City and County of Honolulu Department of Transportation Services
HBL – Hawaii Bicycling League
HDOT – Hawaii Department of Transportation
HPD – Honolulu Police Department
KIS – Kailua Intermediate School

Appendix 1

Wanaao Alternative Bicycle Boulevard & Related Improvements

SAFE ROUTES TO SCHOOL

Bicycle Boulevard
Wanaao Road to Keolu Drive, Kailua, HI
SSFM International, Inc.
October. 5, 2015

N

0' 50' 100'

1

Install Speed Hump
(~260' from Ka Awakea Road)

Matchline A

Awakea Road

Install Mini-Circle with
Mountable Domed Center
and Raised A/C Berm

Install Speed Hump
(~300' from Awakea Road)

Install New Crosswalks

BIKE BOULEVARD

Ka Awakea Road

Matchline B

18' Travelway with No
Center Line and 10' Parking
Lane on Both Sides

Legend:

Roadway (Gray) with Side of Travelway Striping (White)
and Sharrow Markings (White)

Roadway (Gray) with Crosswalk (Parallel White)

Sidewalk (Orange=proposed; Brown=Existing)
with Driveway (Red) and Edge of Pavement (White)

SAFE ROUTES TO SCHOOL

Bicycle Boulevard
Wanaao Road to Keolu Drive, Kailua, HI
SSFM International, Inc.
October. 5, 2015

0' 50' 100'

SAFE ROUTES TO SCHOOL

Bicycle Boulevard
Wanaao Road to Keolu Drive, Kailua, HI
SSFM International, Inc.
October. 5, 2015

N

0' 50' 100'

Appendix 1

3

SAFE ROUTES TO SCHOOL

Bicycle Boulevard
Wanaao Road to Keolu Drive, Kailua, HI
SSFM International, Inc.
October. 5, 2015

0′ 50′ 100′

Pauku St

Pauku Street

BIKE BOULEVARD

BIKE BOULEVARD

Install New Crosswalks

Install Speed Hump
(~260' from Ka Awakea Street)

12' Yield Street with No
Center Line and 8' Parking
Lane on Both Sides

Install Speed Hump
(~315' from Pauku Street)

Ka Awakea Road

Matchline B

Matchline D

Legend:

Roadway (Gray) with Side of Travelway Striping (White) and Sharrow Markings (White)

Roadway (Gray) with Crosswalk (Parallel White)

Sidewalk (Orange=proposed; Brown=Existing) with Driveway (Red) and Edge of Pavement (White)

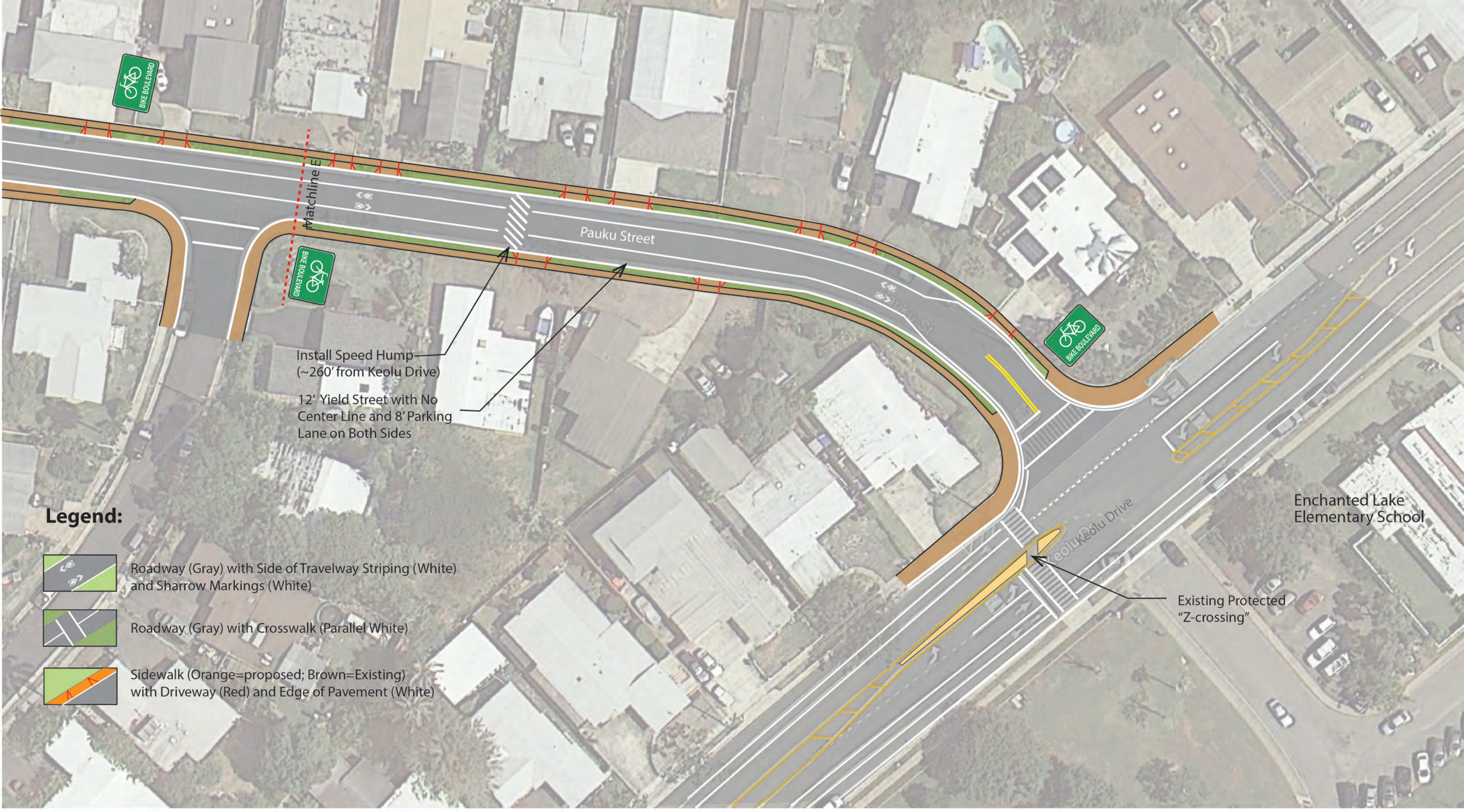
SAFE ROUTES TO SCHOOL

Bicycle Boulevard
Wanaao Road to Keolu Drive, Kailua, HI
SSFM International, Inc.
October. 5, 2015

N

0' 50' 100'

Appendix 1



SAFE ROUTES TO SCHOOL

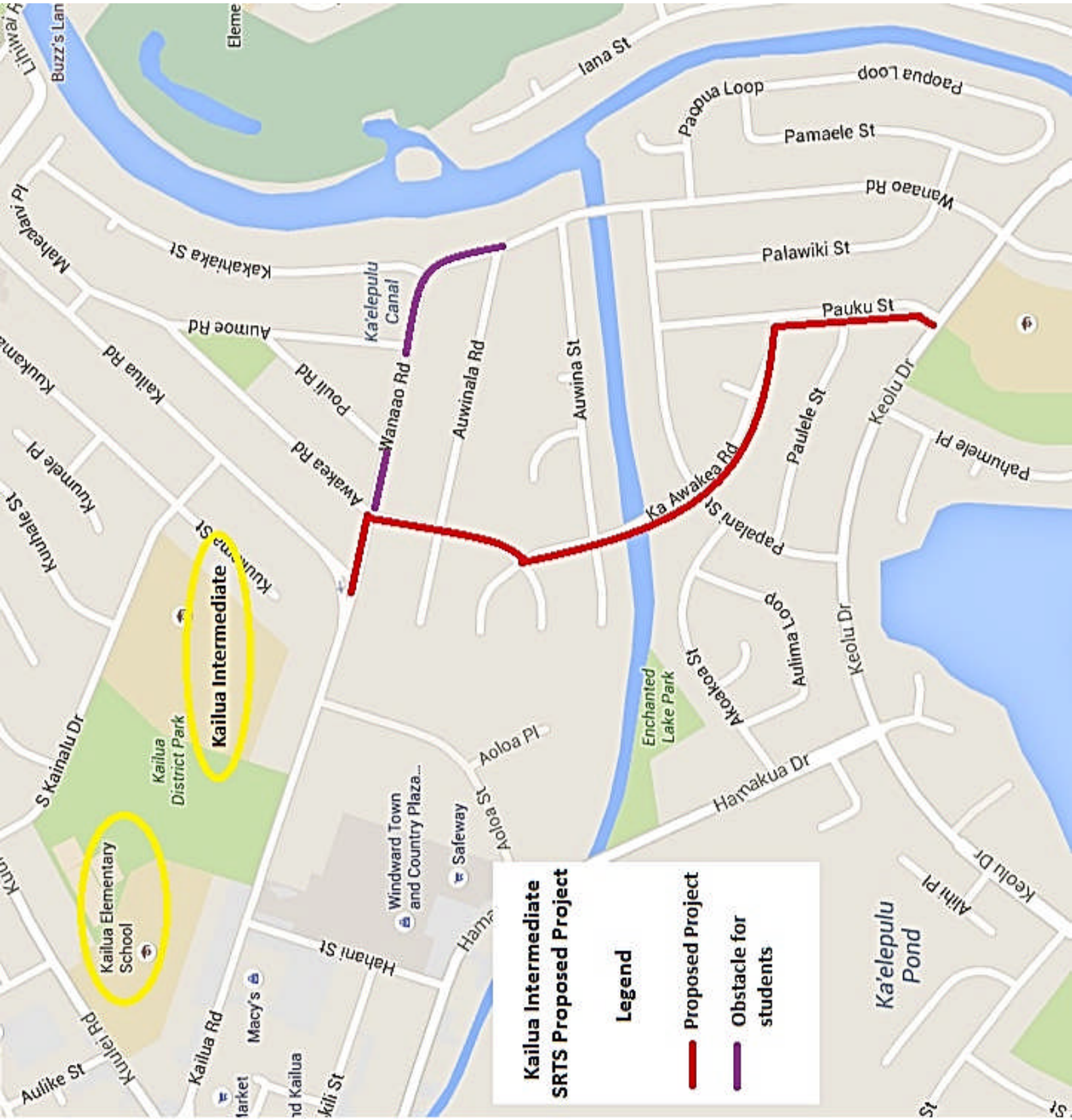
Bicycle Boulevard
Wanaao Road to Keolu Drive, Kailua, HI
SSFM International, Inc.
October. 5, 2015

N

0' 50' 100'

Appendix 1

Appendix C:
Detailed Project Map


Kailua Intermediate
SRTS Proposed Project
Legend
Proposed Project
Obstacle for students
Kailua Intermediate
Kailua Elementary School
Kailua District Park
Ka'elepulu Canal
Ka'elepulu Pond
Enchanted Lake Park
Windward Town and Country Plaza...
Safeway
Macy's
Iana St
Paopua Loop
Pamaele St
Wanaao Rd
Palawiki St
Pauku St
Kakahiaka St
Aumoe Rd
Kailua Rd
Pouli Rd
Awakea Rd
Wanaao Rd
Auwinala Rd
Auwina St
Ka Awakea Rd
Paulele St
Keolu Dr
Pahumele Pl
Papalani St
Aulima Loop
Akoakoa St
Hamakua Dr
Aoloa Pl
Aoloa St
Hahani St
Kuulei Rd
Aulike St
Kuumele Pl
Kuuhale St
S Kainalu Dr
Buzz's Lan
Maheelani Pl
Alihi Pl

Appendix D:

Letters of Support

HOUSE OF REPRESENTATIVES
STATE OF HAWAII
STATE CAPITOL
HONOLULU, HAWAII 96813

December 1, 2015

Director Michael D. Formby
Department of Transportation Services
City and County of Honolulu

Re: Kailua Intermediate School Safe Routes to School "Keiki Corridor" project

Dear Mr. Formby,

I am writing to express my **strong support** for the Kailua Intermediate School Safe Routes to School "Keiki Corridor" project. This project would create a safer biking and walking route for kids traveling between the Enchanted Lake area and the school.

Kailua has made major strides towards making the community bicycle-friendly. The success of past efforts is evidenced by the fact that according to Kailua Intermediate School surveys nearly one-fifth of students bicycle to and from the school. Despite this progress, more work needs to be done to make bicycling and walking safe and accessible to all students.

Kailua Intermediate School, with the support of Hawaii Bicycling League, surveyed and met with parents to create a Safe Routes to School Plan. Through this plan, a safer biking and walking connection between Enchanted Lake area and the school was identified as a top priority need. The Keiki Corridor would provide this connection in a way that benefits the neighborhood through creating safer, traffic-calmed streets. The project would make it safer for children bicycling and walking to and from the school and enable more students to do so.

The Keiki Corridor project, as the result of a safe routes to school effort, seems perfectly suited for Safe Routes to School funding. I understand your Department is planning to submit this project for federal Safe Routes to School funds in the current funding window due December 4, 2015. I extend a big mahalo to you and your staff for your work on this important project.

If you have any questions about my support of this work, please do not hesitate to contact me.

Sincerely,

CHRIS LEE
State Representative

Representative Chris Lee
51st House District
Hawaii State Capitol, Room 436 / Honolulu, Hawaii 96813
Phone: (808) 586-9450 / Fax: (808) 586-9456 / E-mail: replee@capitol.hawaii.gov

The Senate

STATE CAPITOL
HONOLULU, HAWAII 96813

November 24, 2015

Michael D Formby, Director
Department of Transportation Services
City and County of Honolulu
650 South King Street, 3rd Floor
Honolulu, Hawaii 96813

Re: Kailua Intermediate School Safe Routes to School "Keiki Corridor" project

Dear Director Formby,

I am writing in **strong support** for the Kailua Intermediate School Safe Routes to School "Keiki Corridor" project. This project would create a safer biking and walking route for kids traveling between the Enchanted Lake area and the school.

Kailua has made major strides towards making the community bicycle-friendly. The success of past efforts is evidenced by the fact that according to Kailua Intermediate School surveys, nearly one-fifth of students bicycle to and from the school. Yet more work still needs to be done to make bicycling and walking safe and accessible to all students.

Kailua Intermediate School, with the support of Hawaii Bicycling League, surveyed and met with parents to create a Safe Routes to School Plan. Through this plan, a safer biking and walking connection between the Enchanted Lake area and the school was identified as a top priority need. The Keiki Corridor would provide this connection in a way that benefits the neighborhood through creating safer, traffic-calmed streets. The project would make it safer for children bicycling and walking to and from the school and enable more students to do so.

The Keiki Corridor project, as the result of a safe routes to school effort, seems perfectly suited for Safe Routes to School funding. I understand your Department is planning to submit this project for federal Safe Routes to School funds in the current funding window due December 4, 2015. Thank you for your work and support on this important project.

Sincerely,

Senator Laura Thielen
25th District – Kailua, Waimanalo, Hawaii Kai

State Capitol, Room 231 - 415 S. Beretania Street, Honolulu, Hawaii 96813
Phone: 808.587.8388 - FAX: 808.587.7240 - senthielen@capitol.hawaii.gov

HOUSE OF REPRESENTATIVES

STATE OF HAWAII
STATE CAPITOL
HONOLULU, HAWAII 96813

December 1, 2015

Director Michael Formby
Department of Transportation
869 Punchbowl Street
Honolulu, HI 9813

Dear Mr. Formby,

I am writing to express my **strong support** for the Kailua Intermediate School Safe Routes to School "Keiki Corridor" project. This project would create a safer biking and walking route for kids traveling between the Enchanted Lake area and the school.

Kailua has made major strides towards making the community bicycle-friendly. The success of past efforts is evidenced by the fact that according to Kailua Intermediate School surveys nearly one-fifth of students bicycle to and from the school. Yet still more work needs to be done to make bicycling and walking safe and accessible to all students.

Kailua Intermediate School, with the support of Hawaii Bicycling League, surveyed and met with parents to create a Safe Routes to School Plan. Through this plan, a safer biking and walking connection between Enchanted Lake area and the school was identified as a top priority need. The Keiki Corridor would provide this connection in a way that benefits the neighborhood through creating safer, traffic-calmed streets. The project would make it safer for children bicycling and walking to and from the school and enable more students to do so.

The Keiki Corridor project, as the result of a safe routes to school effort, seems perfectly suited for Safe Routes to School funding. I understand your Department is planning to submit this project for federal Safe Routes to School funds in the current funding window due December 4, 2015. I extend a big mahalo to you and your staff for your work on this important project.

With aloha,

Cynthia Thielen

Representative Cynthia Thielen
50th District (Kailua, Kaneohe Bay)

Representative Cynthia Thielen, 50th District (Kailua, Kaneohe Bay)
Hawai'i State Capitol, 415 S. Beretania St., Room 443, Honolulu, HI 96813
Ph: (808) 586-6480 Fax: (808) 586-6481 repthielen@capitol.hawaii.gov www.cynthiathielen.com
Energy & Environmental Protection (Vice Chair), Judiciary (Ranking Member),
Water & Land (Ranking Member), Consumer Protection & Commerce (Ranking Member)

CITY COUNCIL

CITY AND COUNTY OF HONOLULU
530 SOUTH KING STREET, ROOM 202
HONOLULU, HAWAII 96813-3065
TELEPHONE: (808) 768-5010 • FAX: (808) 768-5011

IKAIKA ANDERSON
Council Vice Chair
Councilmember, District 3
Email: ***ianderson@honolulu.gov***
Phone: ***808-768-5003***
Fax: ***808-768-1235***

November 24, 2015

Michael D. Formby, Director
Department of Transportation Services
650 So. King Street, 3rd Floor
Honolulu, HI 96813

Dear Director Formby:

I wish to express my support for the Safe Routes to School "Keiki Corridor - A Safer Alternative to Wanaao Road" project. This alternate route would utilize Pauku Street, Ka Awakea Road and Awakea Road in Kailua. As a resident of District 3, I can see firsthand the benefits of providing a preferred route for bike and pedestrian travel from Enchanted Lake to Kailua town and return. Wanaao Road is a heavily used route with a sharp curve and which leaves, in some areas, a narrow margin for bicycle and pedestrian safety. Of particular interest is that this project will not limit vehicle access to, nor remove any established parking from, the subject roadways.

I view this proposed project as a much-needed improvement to the safety of our community and especially of our keiki.

Mahalo nui loa,

Ikaika Anderson
Council Vice Chair
Council District 3

cc: Daniel Alexander
Hawaii Bicycling League

Appendix E:

Partnership Letters

DAVID Y. IGE
GOVERNOR

KATHRYN S. MATAYOSHI
SUPERINTENDENT

MATTHEW C.W. HO
COMPLEX AREA SUPERINTENDENT

LANELLE D. HIBBS
COMPLEX AREA SUPERINTENDENT

STATE OF HAWAII
DEPARTMENT OF EDUCATION
KAILUA INTERMEDIATE SCHOOL
145 SOUTH KAINALU DRIVE
KAILUA, HAWAII 96734

November 25, 2015

Ms. Tara Lucas
Safe Routes to School Coordinator
State of Hawaii Department of Transportation, Highways Division
Traffic Branch
601 Kamokila Boulevard, Rm. 602
Kapolei, Hawaii 96707

Dear Ms. Lucas:

Kailua Intermediate School is excited partner with the County of Honolulu to initiate and sustain the Safe Routes to School Program. This program supports our health and Peers Educating Peers programs, both of which promote bicycle and pedestrian safety. We have also partnered with the Honolulu Police Department to increase helmet use and raise the awareness level of our students about bicycle safety.

We have taken the initial steps to survey our parents/students about having their child(ren) walk to and from school. Parents cited safety as a primary reason they are hesitant to let their children ride bikes and walk to school. Based on these parent responses, we worked with the Safe Routes to Schools program to identify roadways that are narrow and considered unsafe for pedestrians and bikes.

We developed the Keiki Corridor, a project that addresses the need to create safer walking and biking connections between the Enchanted Lake and Keolu areas and the school. Once the roads that lead to our school are safer, we plan to organize and initiate "Walk and Bike to School Days" to get more students walking and biking.

We at Kailua Intermediate look forward to continuing our partnership with the County of Honolulu and hope you are able to support our efforts by approving our project proposals.

Sincerely,

Lisa DeLong,
Principal

DAVID Y. IGE
GOVERNOR

KATHRYN S. MATAYOSHI
SUPERINTENDENT

STATE OF HAWAII
DEPARTMENT OF EDUCATION
KAILUA ELEMENTARY SCHOOL
315 KUULEI ROAD
KAILUA, HAWAII 96734

Ms. Tara Lucas
Safe Routes to School Coordinator
State of Hawaii Department of Transportation, Highways Division
Traffic Branch
601 Kamokila Boulevard, Room 602
Kapolei, Hawaii 96707

Dear Ms. Lucas,

Kailua Elementary is happy to partner with the City and County of Honolulu on a Safe Routes to School project to make it safer for our students to walk and bicycle to and from the school. While we are still in the process of finalizing a Safe Routes to School Plan, the need for safer walking and biking infrastructure has been identified as the greatest need by parent surveys and a Parent-Teacher-Student Association meeting focused on the topic.

The "Keiki Corridor" project, initiated by our neighboring school Kailua Intermediate, would create a safer walking and biking route on Ka Awakea Road, Awakea Road, and Paauku Road. The Keiki Corridor involves a route that is within one-mile of Kailua Elementary and would make walking and biking to school safer for many of our students. Parent Surveys conducted in September 2015 indicate that over one-third of students living within one-mile of campus normally walk (28%) or bike (6%) to and from school. The Parent Surveys also showed that parents three greatest concerns are safety of intersections and crossings, amount of traffic along route, and speed of traffic along route. The Keiki Corridor project through installing traffic calming measures and traffic circles at two intersections will directly address these concerns along one route accessing campus.

If this project is implemented, we will educate parents and students on the new route and encourage its use. In order to gauge the impact of the project, the school will conduct new Parent Surveys and Travel Tallies, both of which were completed in September of this year.

We hope you are able to support our Safe Routes to School efforts by approving this project.

Thank you,

Mr. Rippard – T.A. Principal
Kailua Elementary School
315 Kuulei Road
Kailua, HI 96734
808-266-7878

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

Appendix F:

Cost Estimate

DTS Cost Estimate				
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Cost**
Base Bid:				
Remove existing striping	LS	LS	LS	$ 7,500
New striping	L Ft	7200	$ 5	$ 36,000
Sharrows	Each	26	$ 250	$ 6,500
Signage (Bike Route)	Each	14	$ 800	$ 11,200
Traffic Control	LS	LS	LS	$ 14,400
Subtotal (Base Bid)				**$ 75,600**
Additive Alternate:				
Mini Single Lane Roundabout	Each	2	$ 25,000	$ 50,000
Speed humps	Each	8	$ 5,000	$ 40,000
New AC sidewalk	LS	LS	LS	$ 62,000
Upgraded AC sidewalk	LS	LS	LS	$ 34,000
Traffic Control	LS	LS	LS	$ 38,400
Subtotal (Additive Alternate)				**$ 224,400**
Subtotal (Base Bid + Additive Alternate)				**$ 300,000**
Construction				$ 300,000
CM				$ 70,000
Design				$ 100,000
Mobilization				$ 30,000
Total (Base Bid + Additive Alternate)				**$ 500,000**