KILAUEA AVENUE

Virtual Community Meeting

September 28, 2023

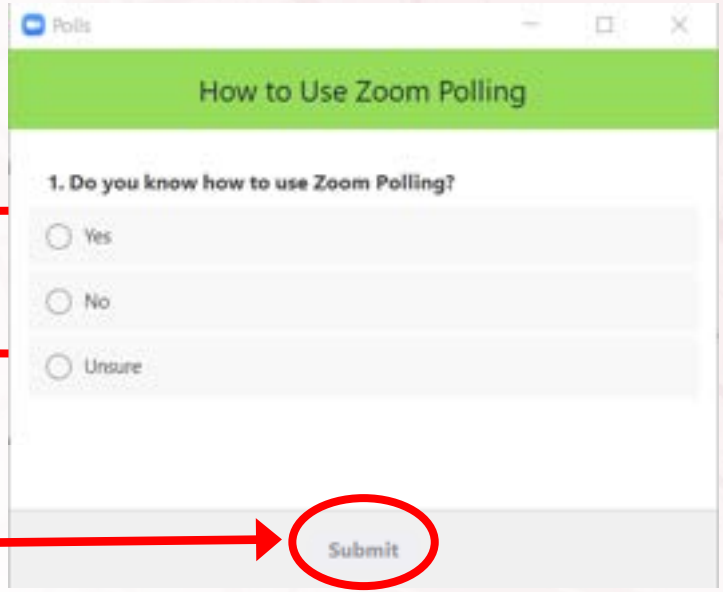
HOUSEKEEPING – "NETIQUETTE"

- This meeting will be recorded.
- You will be muted upon entry to today's meeting for sound quality. Please do not unmute yourself until you have been called on to speak.
- Your questions are welcome! Please feel free to use the Chat or the "Raise Hand" function to be recognized.
- Impersonating or mocking people or institutions is not allowed. Neither are blatantly false statements or foul language. Participants who engage in this behavior will be removed from the meeting.

Honolulu COMPLETESTREETS

HOW TO PARTICIPATE

POLLING QUESTIONS



1 Choose your response

2 Click submit

3 If you choose 'Other' or if you wish to clarify your answer, please submit your thoughts in the chat

BREAKOUT GROUPS

There will be a chance to breakout in groups to ask questions and further discuss your thoughts

Honolulu COMPLETESTREETS

WHAT ARE COMPLETE STREETS?

People on Foot and Universal Access

People on Cycles

People Using Collective Transport

People in Personal Motorized Vehicles

People Moving Goods and City Services

People Doing Business

Honolulu COMPLETESTREETS

HONOLULU'S COMPLETE STREETS LAW

R.O.H. 14-18

Complete streets are safe, convenient, and accessible for all, regardless of transportation mode, age, or ability.

Every transportation facility or project, whether new construction, reconstruction, or maintenance, provides the opportunity to implement complete streets policy and principles with the following goals.

- Improve **safety**
- Apply **context-sensitive** solution
- Protect and promote **accessibility** and mobility for all
- Balance the needs and **comfort** of all modes and users
- Encourage consistent use of national **best practices**
- Improve energy **efficiency** in travel and mitigate emissions
- Encourage opportunities for physical **activity**
- Recognize Complete Streets as a long-term **investment**
- Build **partnerships** with stakeholders + organizations
- Incorporate **trees** and landscaping

Honolulu COMPLETESTREETS

REHABILITATION OF STREETS PHASE 26A

- REPAVING
- RESTRIPING
- CURB RAMPS
- WALKWAY UPGRADES
- TRAFFIC SAFETY IMPROVEMENTS

Honolulu COMPLETESTREETS

!

On average, one person a week dies on O‘ahu roads.

LET’S DESIGN OUR STREETS FOR THE BEHAVIOR WE WANT

Honolulu COMPLETESTREETS

WHO IS MOST IMPACTED BY CRASHES?

PEOPLE WALKING

People walking make up 15% of all crashes island-wide; **people walking make up 36% of people killed** in crashes.

KUPUNA

Kupuna age 65 and older make up 41% of people killed while walking compared to 17% of Oahu's population

Honolulu COMPLETESTREETS

COMMON CRASH FACTORS

Common characteristics at Oahu's High Pedestrian Injury Corridors and Intersections/Crossings are summarized below. It's important to recognize these common characteristics as they provide insights into needed changes to address safety at these locations and streets around Oahu.

Corridor

Arterials with:

- 4 or more lanes
- Speed limits over 30 mph
- Lack of frequent well-designed crossings

Signalized Intersection

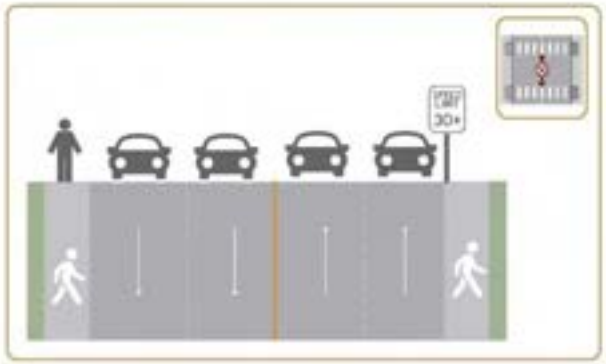
Arterials with:

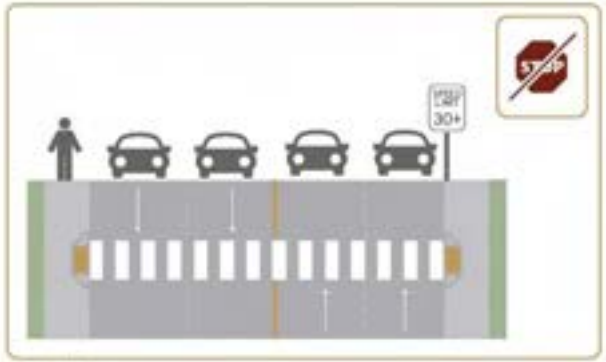
- Wide crossings
  (most 4 or more lanes and many 6 or more lanes)
- Speed limits over 30 mph
- Turning vehicle conflicts
- Missing pedestrian crossing leg or channelized right turns

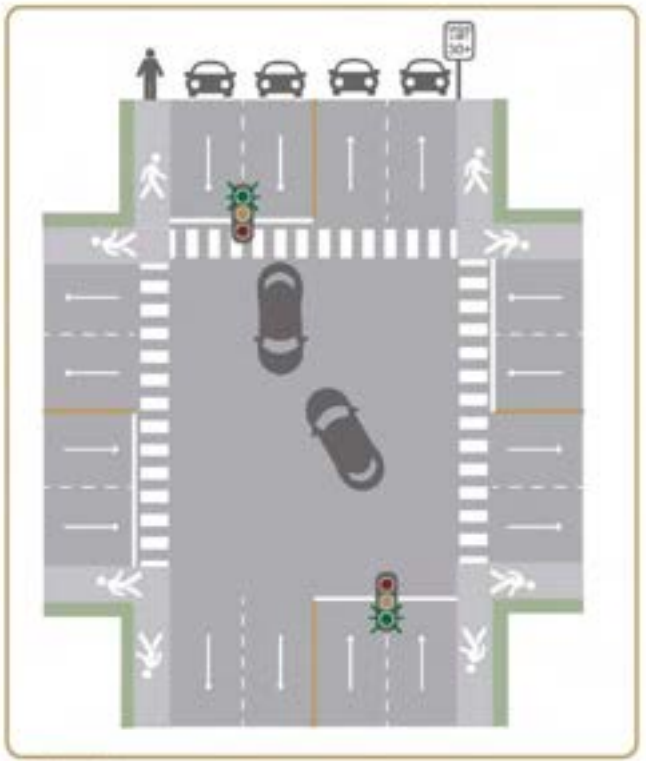
Uncontrolled Crossings

Wide crossings with:

- 4 or more lanes
- Marked crossings only
- Lack of medians, curb extensions, or other crossing enhancement



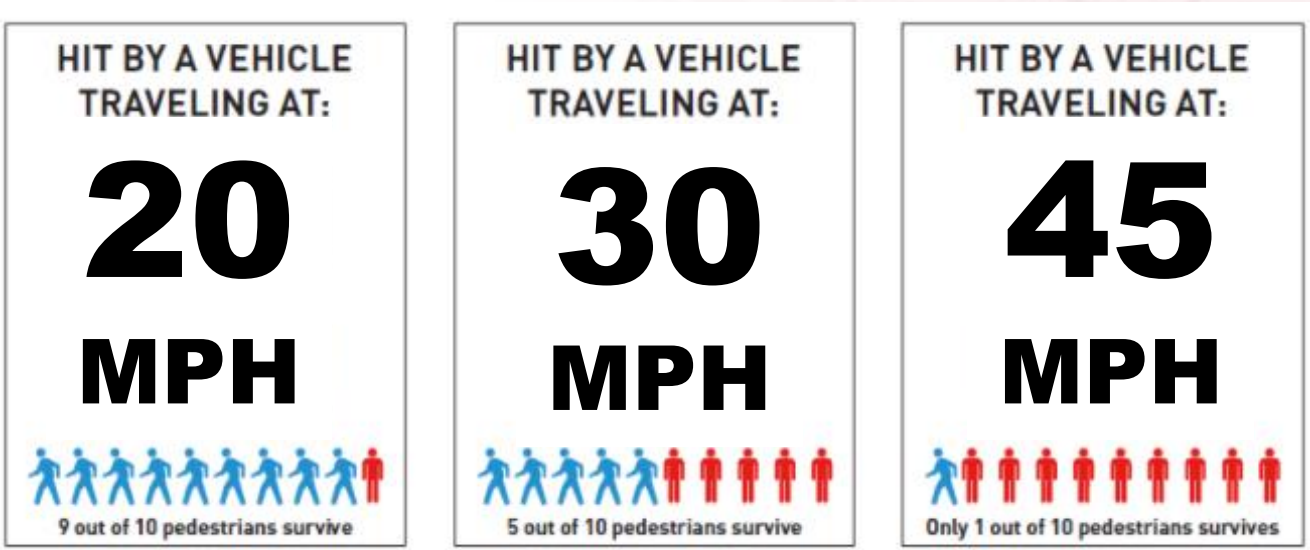




HOW DO WE CREATE SAFE STREETS FOR ALL USERS?

#1: DEDICATED AND PROTECTED FACILITIES FOR NON-VEHICULAR TRAVEL

#2: LIMIT OPPORTUNITIES FOR SPEEDING



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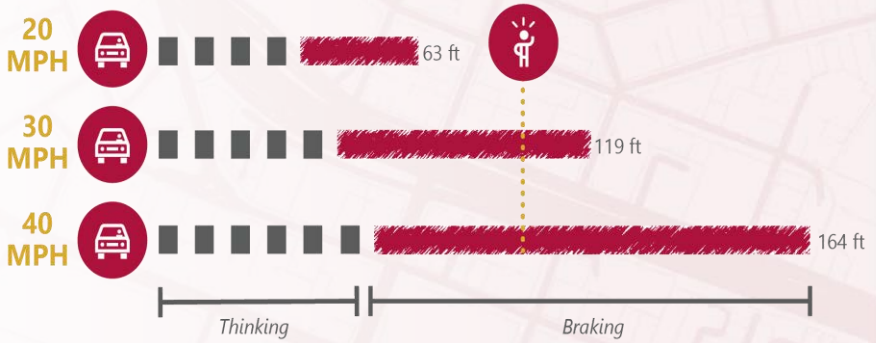
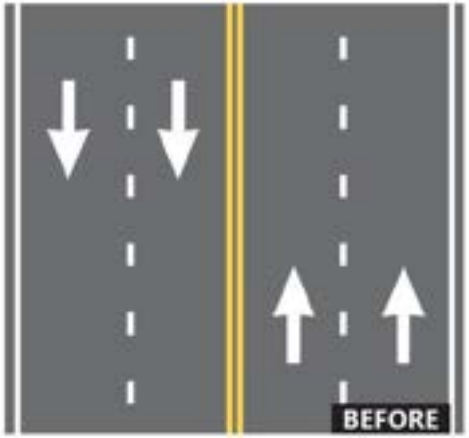
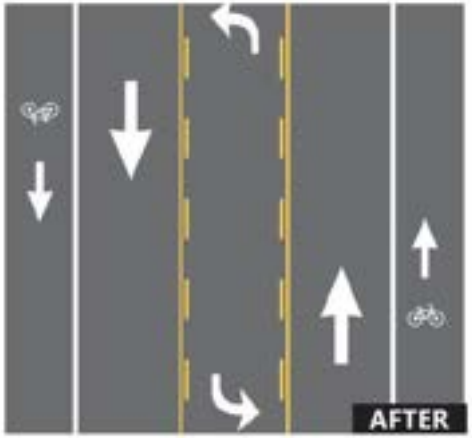
SPEED MATTERS



Honolulu COMPLETESTREETS

4 TO 3 LANE CONVERSION (AKA "ROAD DIET")





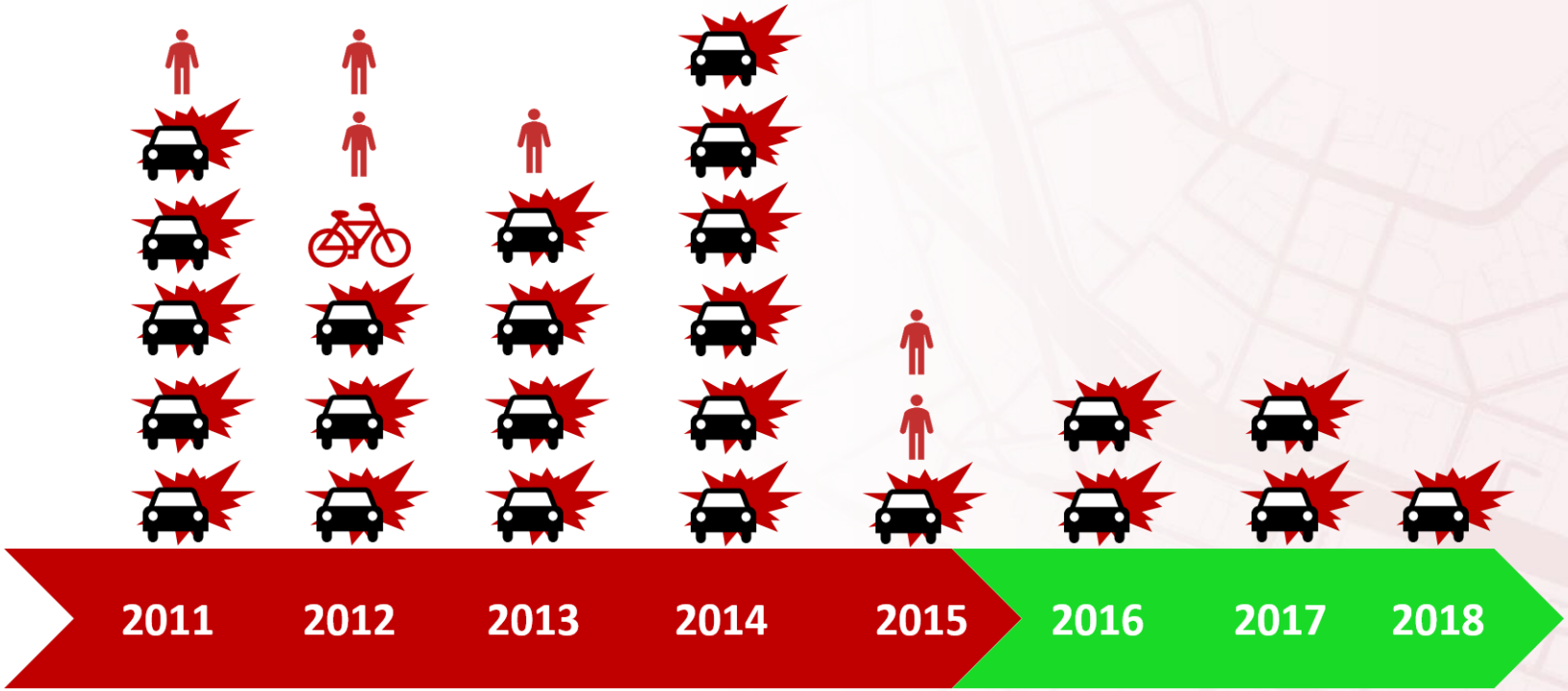
Benefits of these common projects may include:

- Reduction of rear-end and left-turn crashes due to the dedicated left-turn lane.
- Reduced right-angle crashes as side street motorists cross three versus four travel lanes.
- Fewer lanes for pedestrians to cross.
- Opportunity to install pedestrian refuge islands, bicycle lanes, on-street parking, or transit stops.
- Traffic calming and more consistent speeds.
- A more community-focused, Complete Streets environment that better accommodates the needs of all road users.

Honolulu COMPLETESTREETS

4 TO 3 LANE CONVERSION (AKA "ROAD DIET"): KAMEHAMEHA IV ROAD

Honolulu COMPLETESTREETS



Total Crashes on Kamehameha IV Road - EMS attended
Before and After Road Diet (2016)

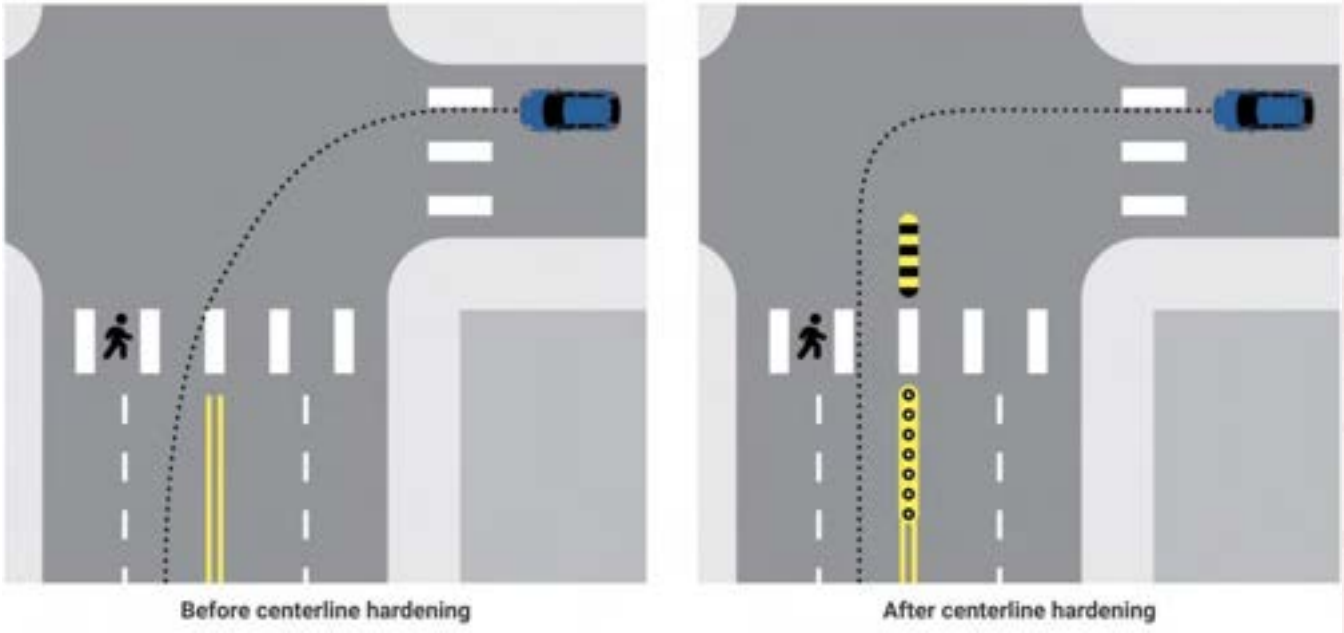
Honolulu COMPLETESTREETS

4 TO 3 LANE CONVERSION (AKA “ROAD DIET”): ALA NAPUNANI STREET

Honolulu COMPLETESTREETS

SLOW-TURN WEDGES

DESIGNED TO SLOW TURNING VEHICLES AND REDUCE PEDESTRIAN CRASHES

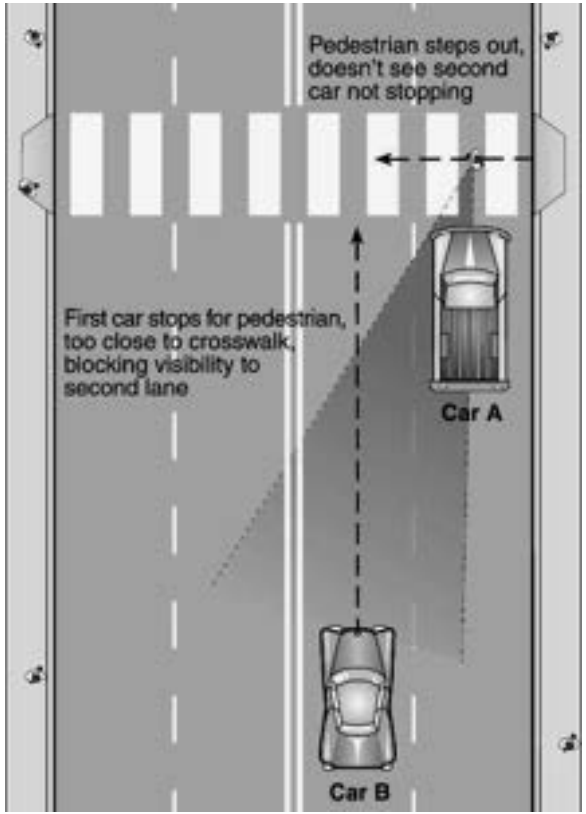


Before centerline hardening

After centerline hardening

Honolulu COMPLETESTREETS

MULTI-LANE PEDESTRIAN CROSSINGS (NO TRAFFIC SIGNAL OR STOP SIGN)



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PEDESTRIAN REFUGE ISLANDS

PROTECTED AREAS FOR VULNERABLE USERS REDUCE PEDESTRIAN CRASHES BY 56%

Kailua Road

North King Street

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ENHANCED PEDESTRIAN CROSSINGS: CURB EXTENSIONS

Waialae Avenue

South King Street

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BIKEWAYS: BIKE LANES

Kupuna Loop

Kamehameha IV Road

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BIKEWAYS: BUFFERED BIKE LANES

Nuuanu Avenue

Waiakamilo Road

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BIKEWAYS: PROTECTED BIKE LANES

Ward Avenue

Honolulu COMPLETE STREETS

BIKEWAYS: PARKING-PROTECTED BIKE LANES

Hamakua Drive

South King Street

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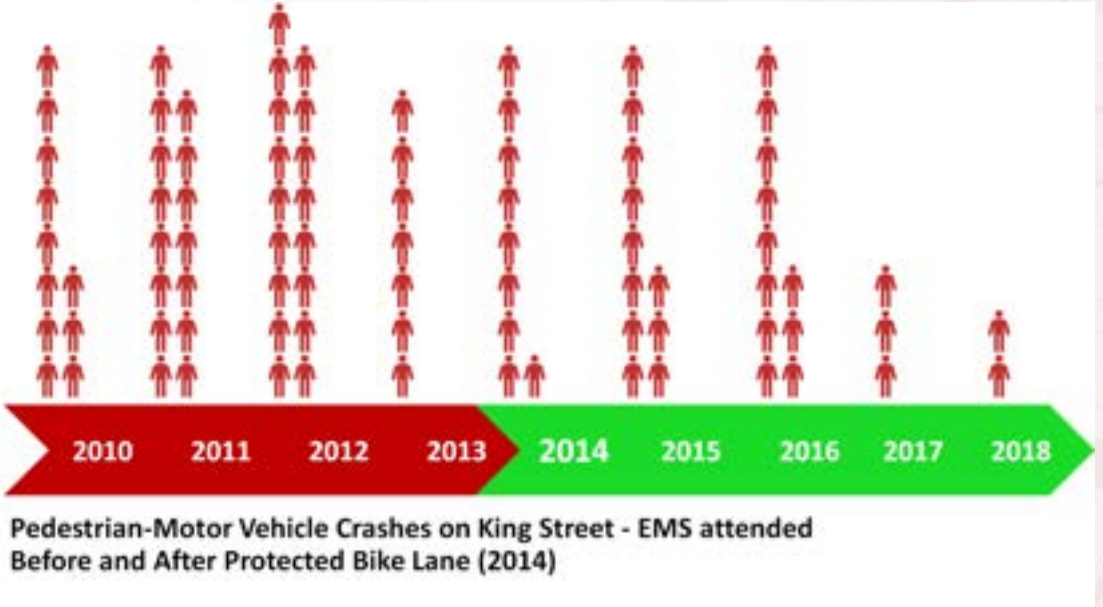
BIKEWAYS: FRONTAGE BIKE/PARKING LANES

- Slow moving lane that provides access to parking and driveways
- Bicyclist share the low-speed environment
- Traffic calming benefits

San Jose, CA

Honolulu COMPLETESTREETS

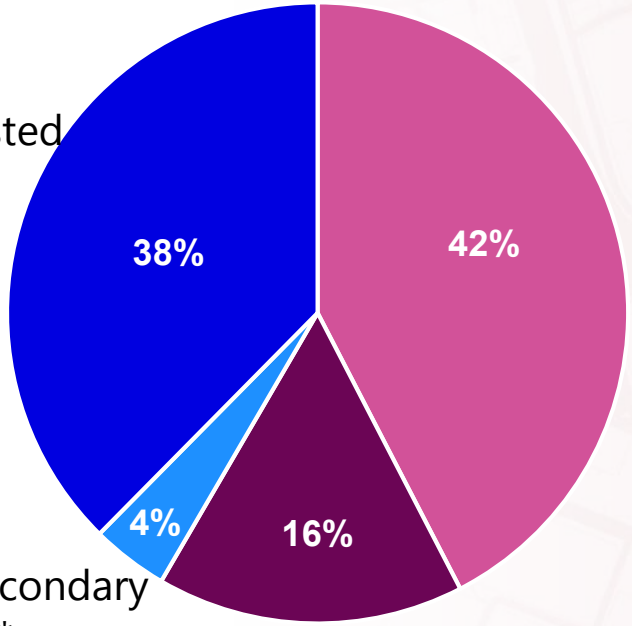
BIKE FACILITY BENEFITS BEYOND BICYCLISTS



Pedestrian-Motor Vehicle Crashes on King Street - EMS attended
Before and After Protected Bike Lane (2014)

Honolulu COMPLETESTREETS

BICYCLING ON OAHU



38% Not interested in bicycling

42% Would bicycle if there was network of protected and separated bikeways

4% Bicycles as primary or secondary transportation mode*

16% Bicycles some, not as primary or secondary transportation mode*

**47% of people that already bike would bike more if there was a network of protected and separated bikeways*

Source: Survey of Public Opinion on Complete Streets Policy and Multimodal Enhancements to Public Right of Way (2018)

Honolulu COMPLETESTREETS

SCHOOLS

- KAPIOLANI COMMUNITY COLLEGE
- KAIMUKI MIDDLE
- WAIALAE ELEMENTARY
- KAHALA ELEMENTARY
- WILSON ELEMENTARY
- KCAA PRESCHOOL
- WAIOKEOLA PRESCHOOL

Honolulu COMPLETE STREETS

PROJECT OUTREACH

RESIDENTS
- Door-to-Door along Kilauea Avenue
- Kahala Towers
- Tropic Gardens
- Waialae Gardens

BUSINESSES
- Aloha Petroleum
- Kahala Mall
- Kahala Professional Center
- Bank of Hawai‘i
- McDonald’s

SCHOOLS
- Kahala Elementary
- Kaimuki Middle
- Kapiolani Community College
- KCAA Wai-Kahala Preschool
- Waialae Elementary
- Wilson Elementary

COMMUNITY
- Kahala/Waialae YMCA
- Waialae/Kahala Neighborhood Board
- Kaimuki Neighborhood Board
- Diamond Head/Kapahulu/St. Louis Heights NB

BICYCLE ORGS
- Hawaii Bicycling League
- Biki

ELECTEDS
- State Senators & Representatives
- City Councilmember Waters

AGENCIES
- Hawai‘i Department of Education
- Hawai‘i Department of Health
- Honolulu Police Department
- Honolulu Departments of Transportation Services, Design & Construction, Facility Maintenance, Environmental Services, Planning & Permitting

Honolulu COMPLETESTREETS

OAHU PEDESTRIAN PLAN

Department of Transportation Services
City and County of Honolulu

FINAL
July 2022

Honolulu COMPLETE STREETS

HIGH PEDESTRIAN-INJURY LOCATIONS

Comprehensive analysis of City streets identified **38 corridors** (~1 mile segments) and **107 intersections/crossings** with a concentration of safety issues.

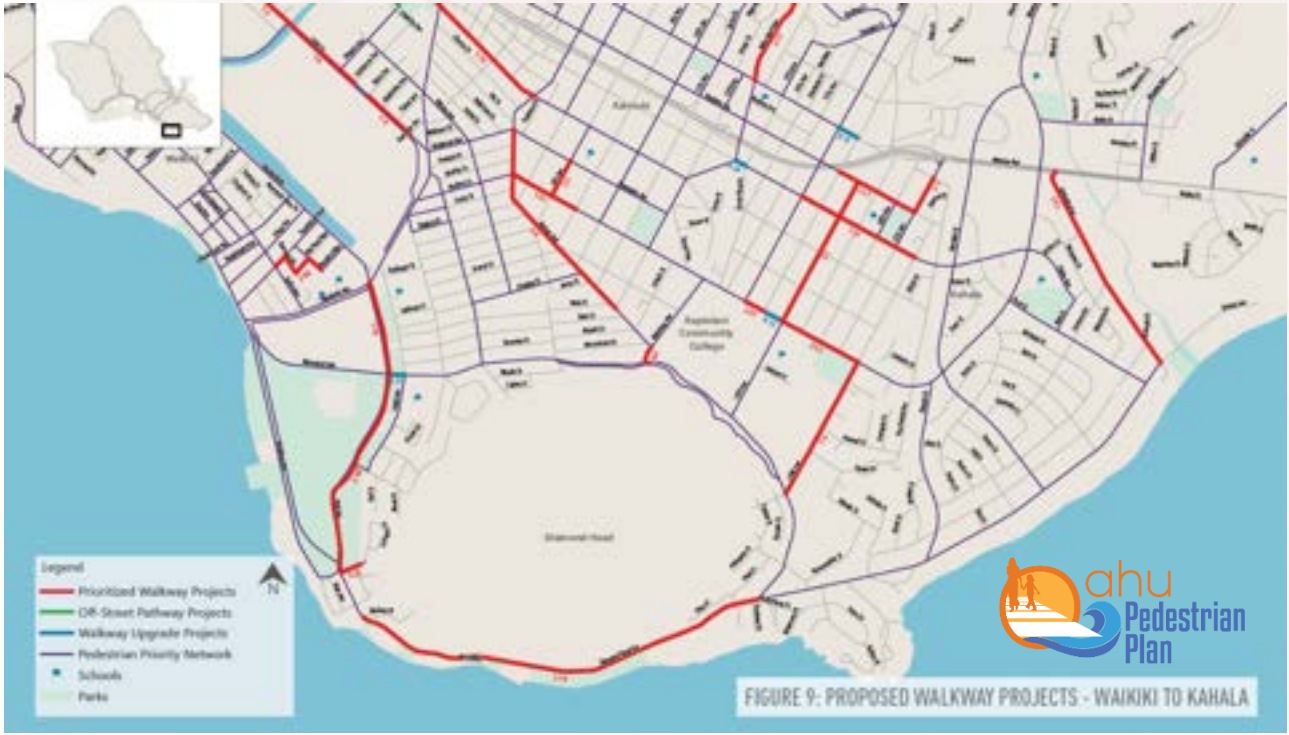
High Pedestrian-Injury Corridors are only 2% of City streets but account for:
- 60% of fatalities and
- 42% of injuries

Honolulu COMPLETESTREETS

PRIORITY WALKWAY PROJECTS & PEDESTRIAN-PRIORITY NETWORK

These are the streets most important for pedestrian travel because they serve schools, parks, community and commercial centers, transit, and other pedestrian traffic generators.

Priority walkway projects are near schools or on major roadways with heavy traffic volumes.



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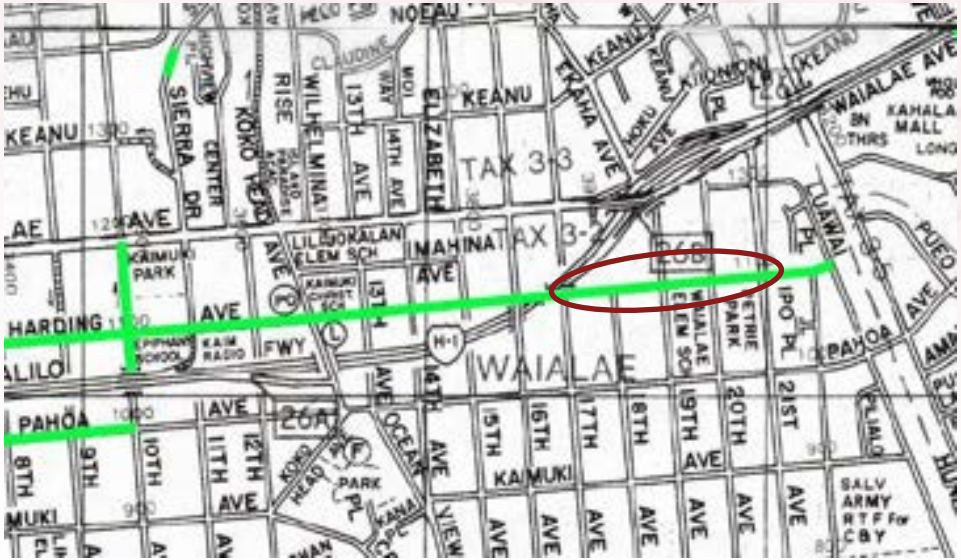
HARDING AVENUE

COMPLETING MISSING SIDEWALKS

Connecting schools and parks

Makai side only from 17th to 21st Avenues



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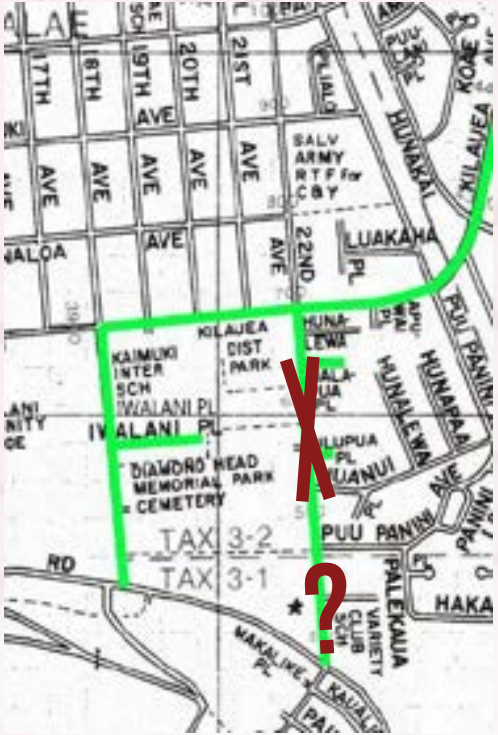
22ND AVENUE

ACCESSIBILITY IMPROVEMENTS

The City does not own 22nd Avenue from Kilauea – Puu Panini, so we are not able to make walkway improvements along this segment.

We are studying the feasibility of improving the walkway from Puu Panini Ave – Diamond Head Road.



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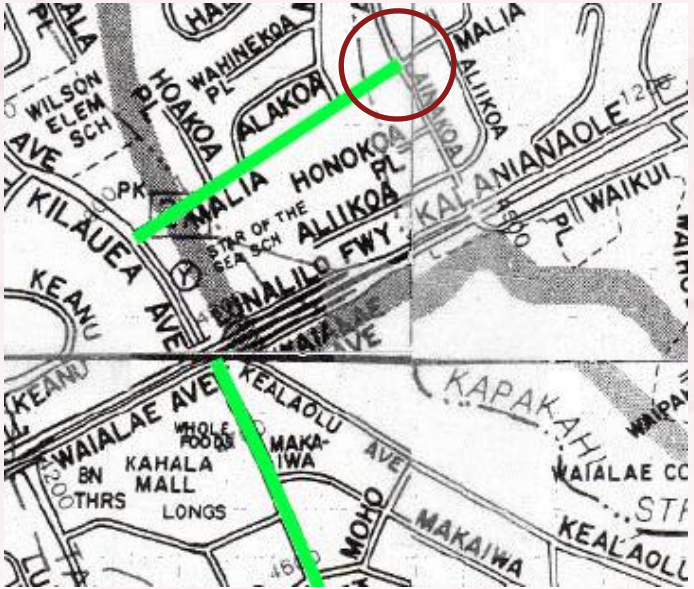
MALIA STREET & AINAKOA AVENUE

CROSSWALK UPGRADE & TRAFFIC CALMING



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MALIA STREET & AINAKOA AVENUE (CONTINUED)

CROSSWALK UPGRADE & TRAFFIC CALMING

Design Options:
- Pedestrian refuge islands
- Raised crosswalks
- Roundabout (previously rejected by NB)

Kailua Road

Honolulu COMPLETE STREETS

o'ahu bike plan

2019 update

Keanu St

Hunakai St

H1

Kahala Mall

Macy's

19th Ave

Waialae

16th Ave

17th Ave

18th Ave

20th Ave

Diamond Head Ave

Ocean View Ave

Kapiolani Community College

Kilauea Ave

21st Ave

22nd Ave

Luawai St

Koae St

Kahala Community Park

Farmers Rd

Koloa

Noho St

Makaiwa

0.3mi

Legend

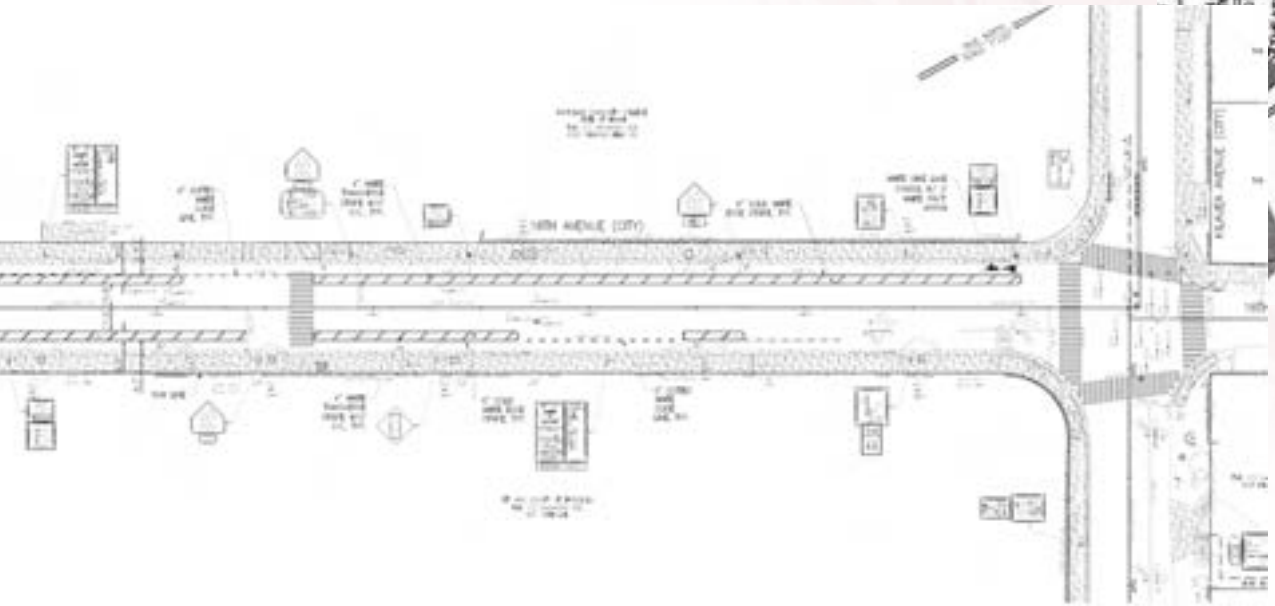
Proposed_Bikeways

- Shared Use Path
- Protected Bike Lane
- Buffered Bike Lane
- Bike Lane
- Climbing Lane
- Shoulder Bikeway
- Shared Roadway

Honolulu COMPLETE STREETS

18TH AVENUE
BIKE LANE UPGRADE

Wide street allows for bike lane buffer



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KILAUEA AVENUE

BIKE LANES, PEDESTRIAN CROSSING IMPROVEMENTS & TRAFFIC CALMING

Lane reconfiguration proposed from 18th to Waialae Avenues

65-70 MPH

Max Speeds

10,000-20,000

Cars per Day

7,720

School Enrollment on Corridor

1

Traffic Fatalities in Last 5 Years

78 feet

Street Width

Honolulu COMPLETESTREETS

SAFETY ANALYSIS (PROJECT AREA CRASHES)

Kilauea Avenue Project Vicinity Crashes 2015-2020

	Total	Motor Vehicle	Motorcycle/ Moped	Pedestrian	Bicyclist
Injury	51	29	12	7	3
Serious injury	5	0	2	2	1
Fatality	1	0	0	1	0

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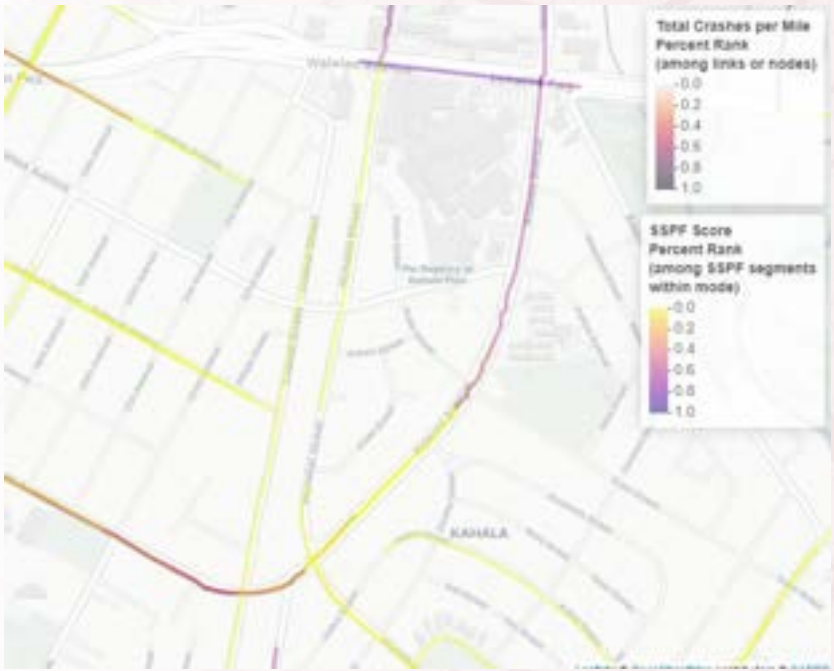
SAFETY ANALYSIS (INJURIES)

Pedestrian Injuries

Bicyclist Injuries



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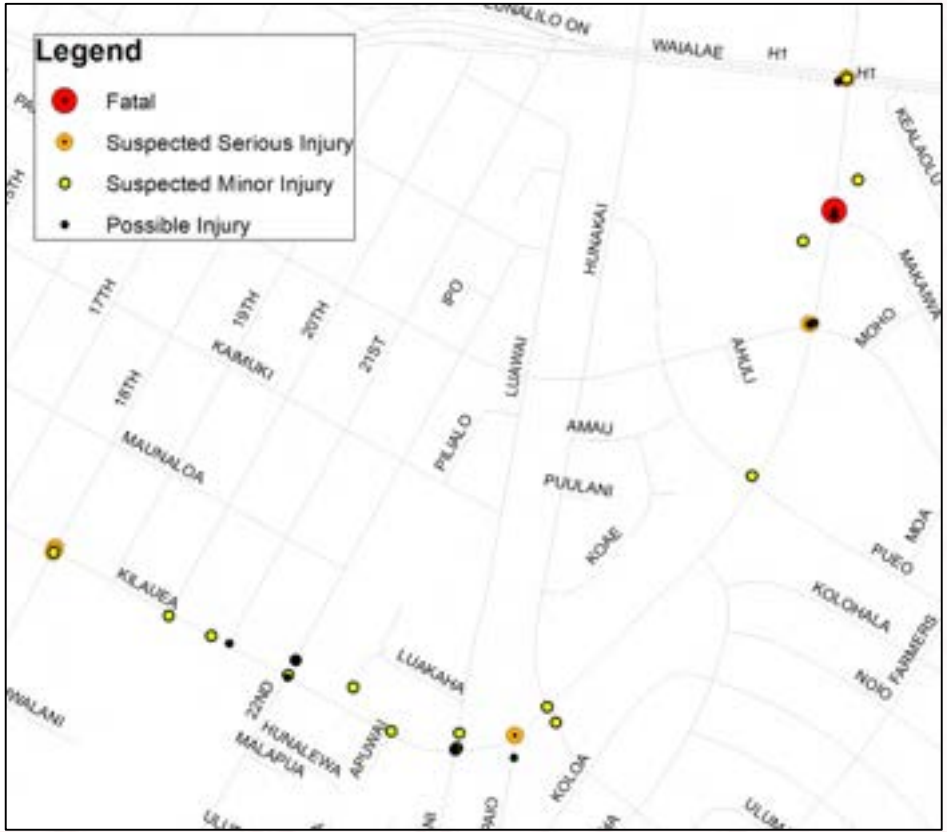
SAFETY ANALYSIS (CRASHES)

Kilauea Avenue Project Vicinity Crashes 2015-2020



Fatality

Kilauea Avenue and Makaiwa Street

Serious Injuries

Kilauea Avenue and 18th Avenue

Kilauea Avenue and Elepaio Street

Waialae Avenue and Kilauea Avenue

Pahoa Avenue and Kilauea Avenue

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SAFETY ANALYSIS (FATAL AND SERIOUS INJURY CRASHES)

Kilauea Avenue Project Area Fatal and Serious Injury Crashes 2015-2020

Location	Mode	Severity	Lighting	Details
Kilauea Avenue and 18th Avenue	Pedestrian	Suspected serious injury	Dark	Pedestrian crossing 18th Avenue at Kilauea Avenue slightly south of the marked crosswalk, motorist turned left from Kilauea westbound onto 18th and hit pedestrian.
Kilauea Avenue and 18th Avenue	Pedestrian	Suspected serious injury	Daylight	Pedestrian crossing 18th Avenue at Kilauea Avenue in crosswalk, motorist turned left from Kilauea Avenue onto 18th Avenue and hit pedestrian.
Kilauea Avenue and Elepaio Street	Moped	Suspected serious injury	Dark	Moped traveling eastbound on Kilauea Avenue, motorist attempted to turn left from Kilauea Avenue westbound onto Elepiao Street and hit moped.
Kilauea Avenue and Makaiwa Street	Pedestrian	Fatal	Dark	Pedestrian crossing Kilauea Avenue in crosswalk with green signal, motorist turning left from Makaiwa Street eastbound (exiting mall) onto to Kilauea Avenue and hit pedestrian.

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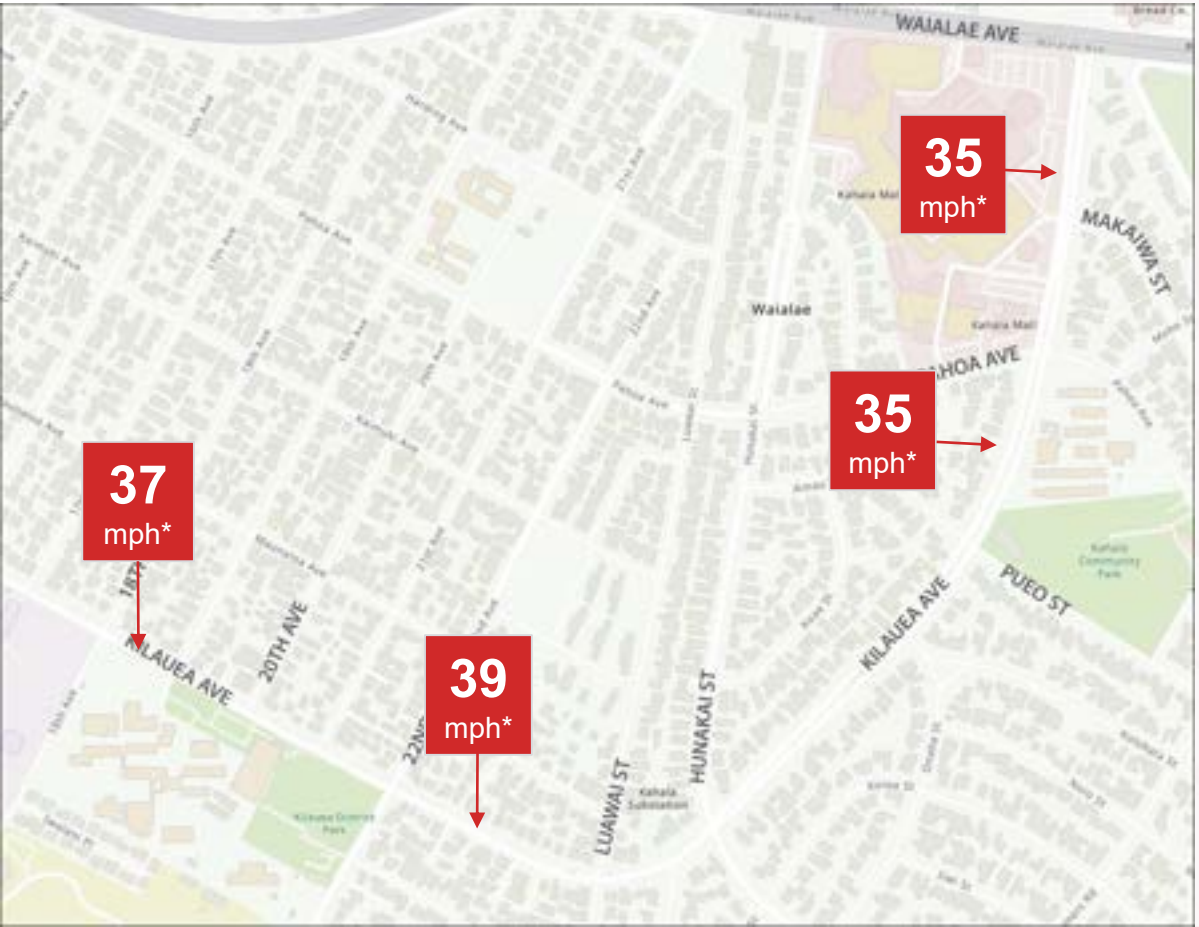
SPEED DATA



HIT BY A VEHICLE TRAVELING AT:

30

MPH

5 out of 10 pedestrians survive

** 95th percentile speeds (5% of traffic going at or above) Collected by direction, highest direction shown*

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SPEED LIMIT REDUCTION PROPOSAL

- Speed limit is currently 30 MPH along most of the corridor
- 25 MPH in School Zones

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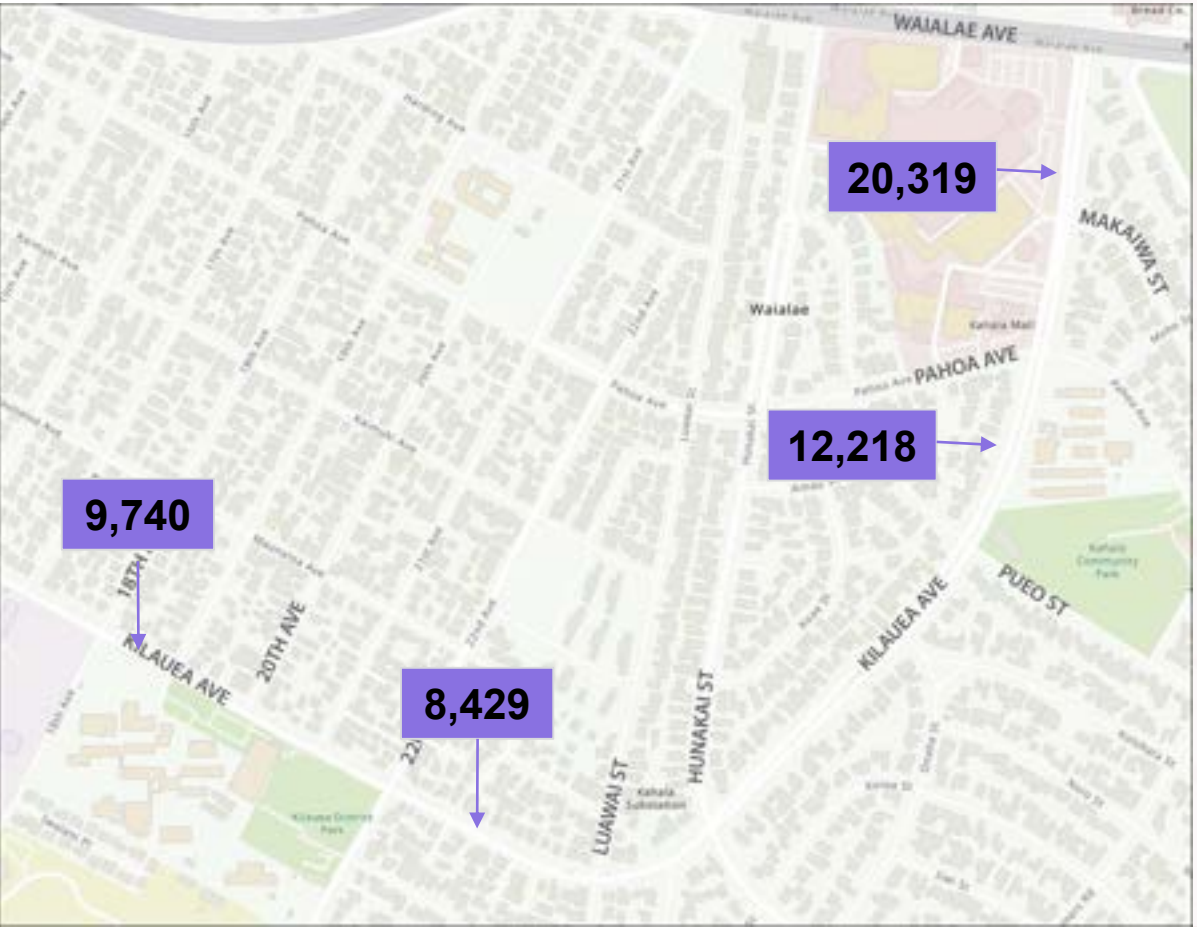
TRAFFIC COUNT DATA



Data collected in 2016, 2017, 2018, 2019, and 2023 show relatively consistent traffic volumes.

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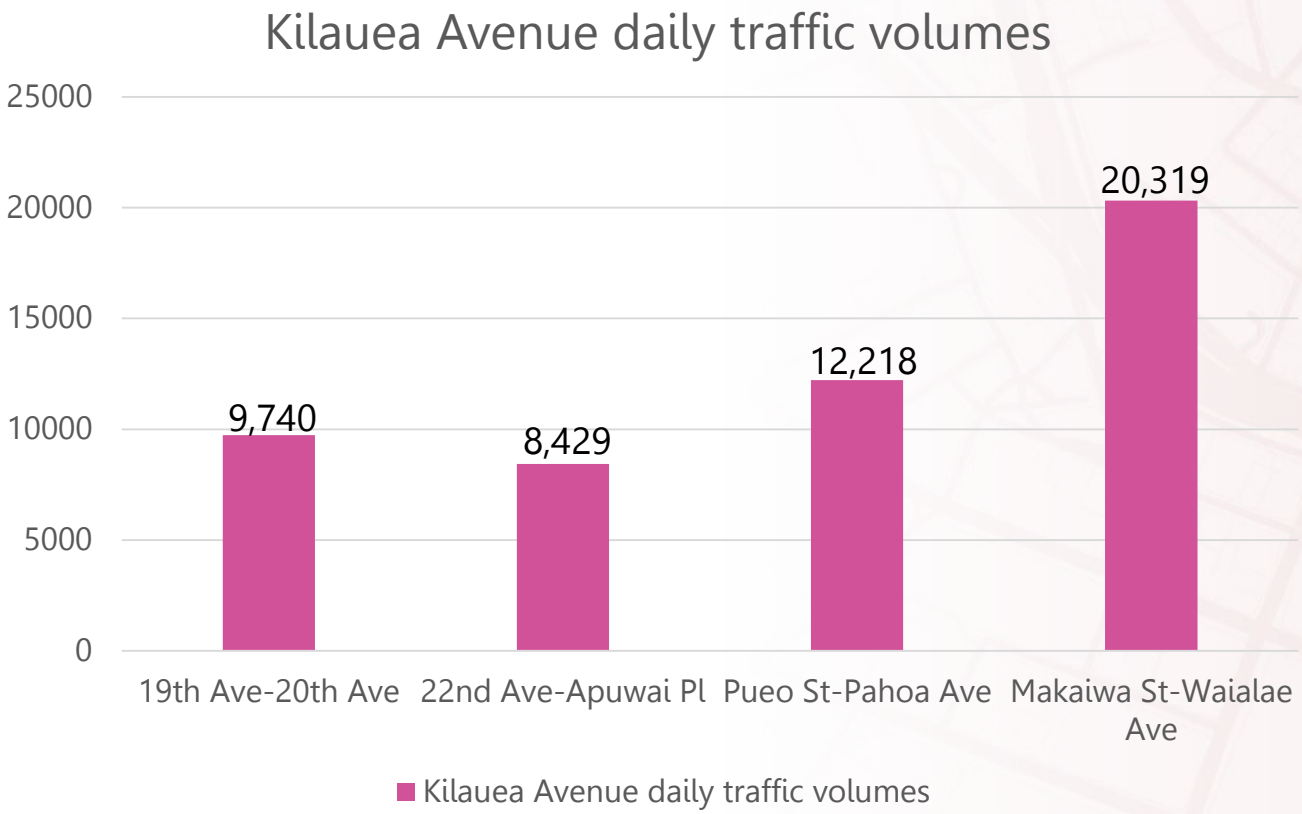
TRAFFIC ANALYSIS



Traffic volume reduces by nearly half south of Pahoa Avenue

**Data collected in 2016, 2017, 2018, 2019, and 2023 show relatively consistent traffic volumes.*

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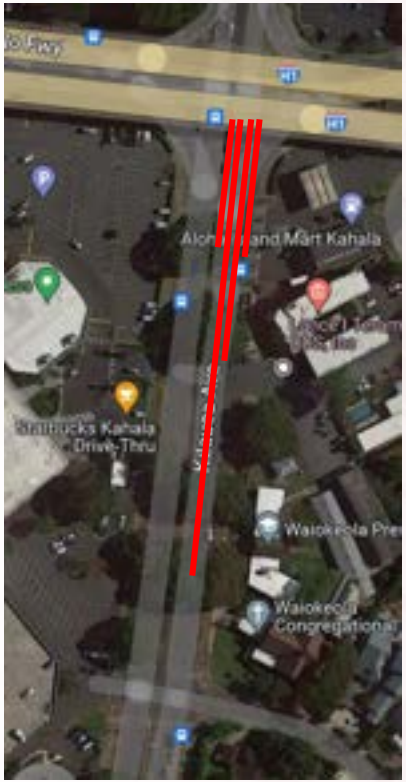
Kilauea Avenue Traffic & Queue Study

Northbound @ Waialae Ave: PM Peak

95th percentile queue by lane



Average queue by lane

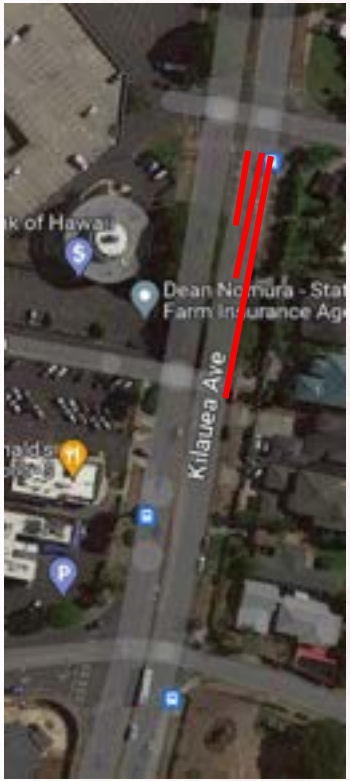
**PM peak is 2:30-3:30pm*
PM peak is highest of day

Honolulu COMPLETESTREETS

Kilauea Avenue Traffic & Queue Study

Northbound @ Makaiwa St: PM Peak

95th percentile queue by lane



Average queue by lane

**PM peak is 2:30-3:30pm*
PM peak is highest of day

Honolulu COMPLETESTREETS

Kilauea Avenue Traffic & Queue Study

Northbound @ Pahoa Ave: PM Peak

95th percentile queue by lane

Average queue by lane

**PM peak is 2:30-3:30pm*
PM peak is highest of day

Honolulu COMPLETESTREETS

Kilauea Avenue Traffic & Queue Study

Southbound @ Pueo St AM Peak

95th percentile queue by lane

Average queue by lane

**AM peak is 7:15-8:15am*
AM peak is highest of day

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KILAUEA AVE LANE CONFIGURATION

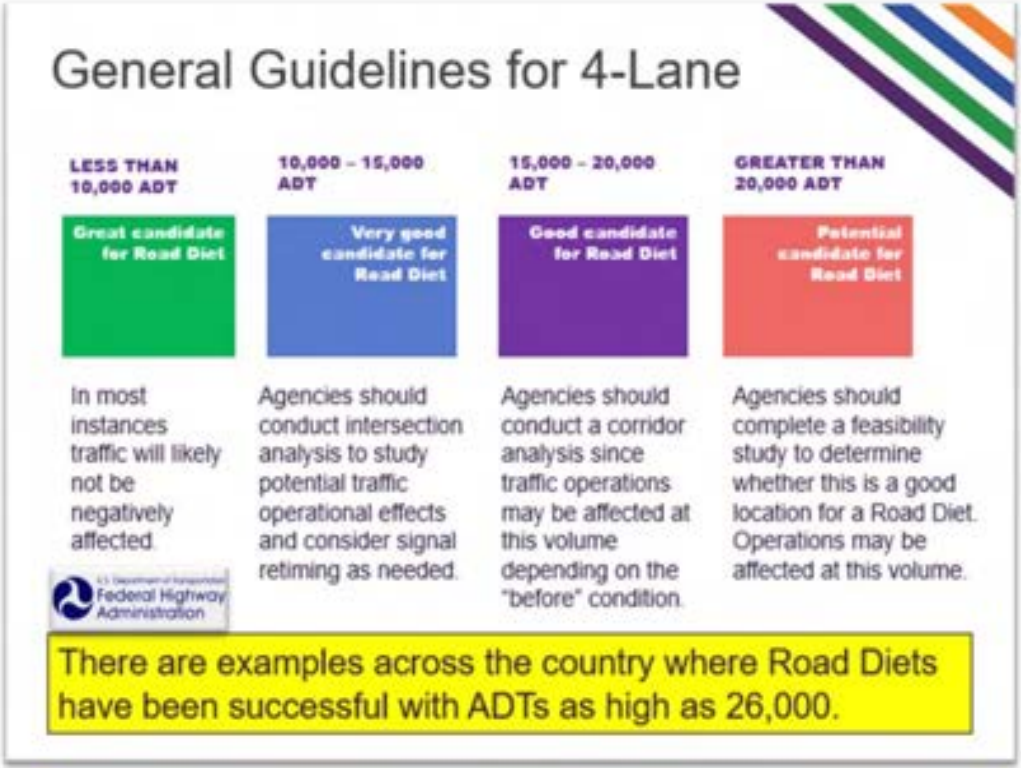
Honolulu COMPLETESTREETS

KILAUEA AVE LANE RECONFIGURATION

Honolulu COMPLETESTREETS

FHWA GUIDANCE ON 4-TO-3 LANE RECONFIGURATIONS

Four-lane undivided roadways with AADT ≤ 20,000 are typically good candidates for a lane repurposing (e.g., converting to a two-lane, two-way road with a center-left-turn lane). However, projects are evaluated for lane repurposing feasibility on a case-by-case basis.

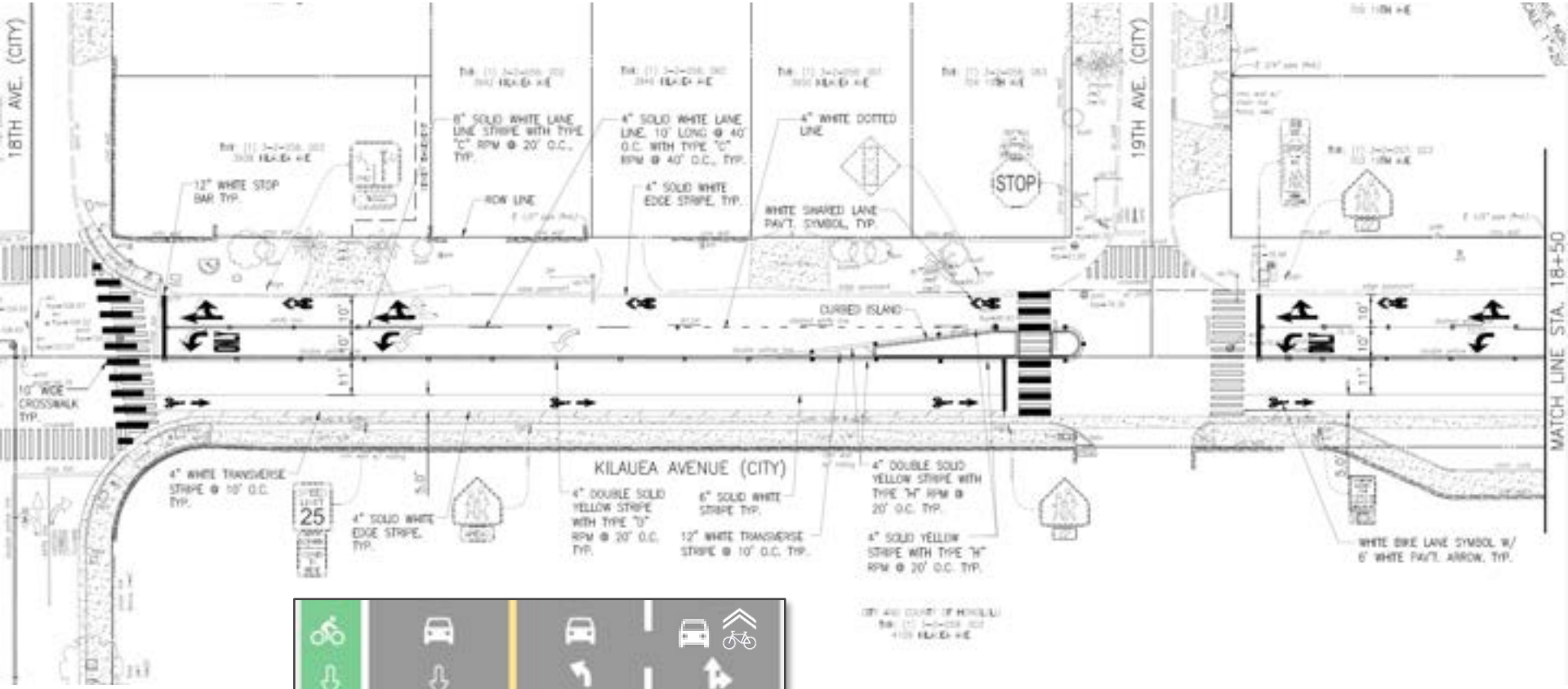


KILAUEA AVENUE

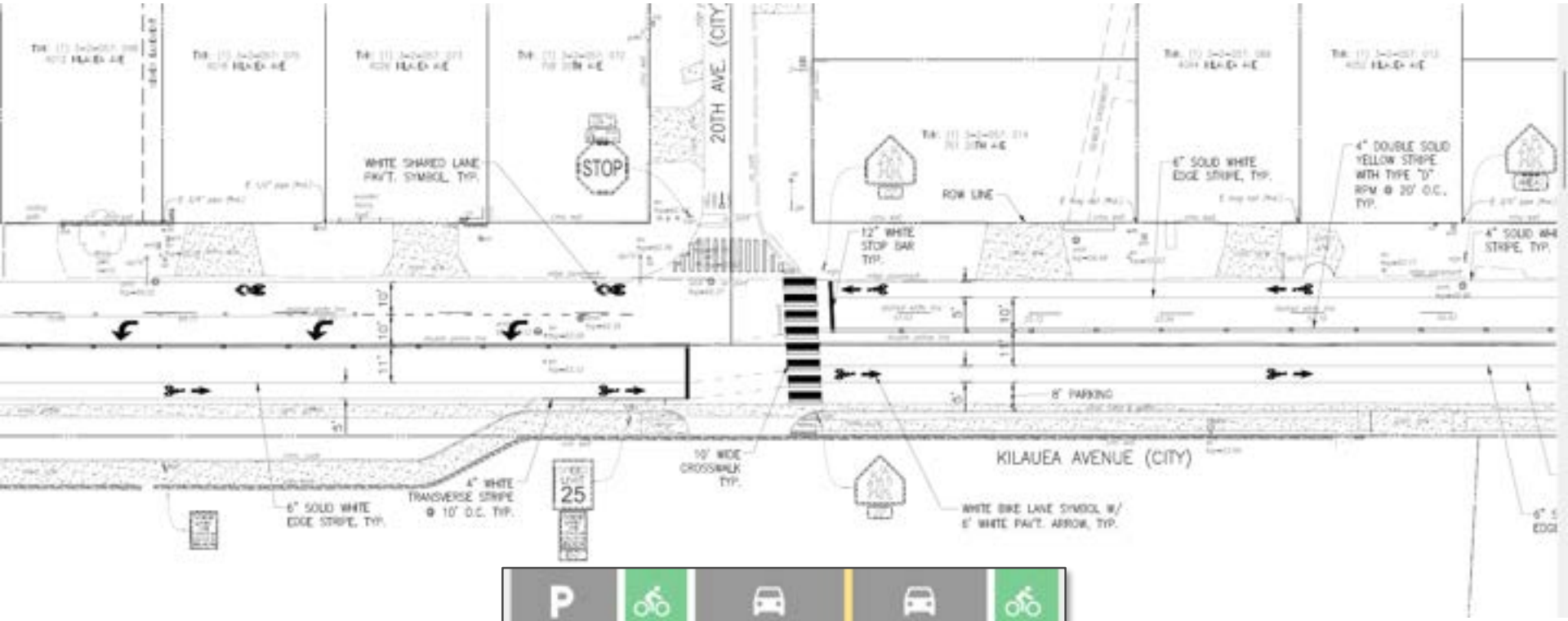
18TH AVENUE - 22ND AVENUE

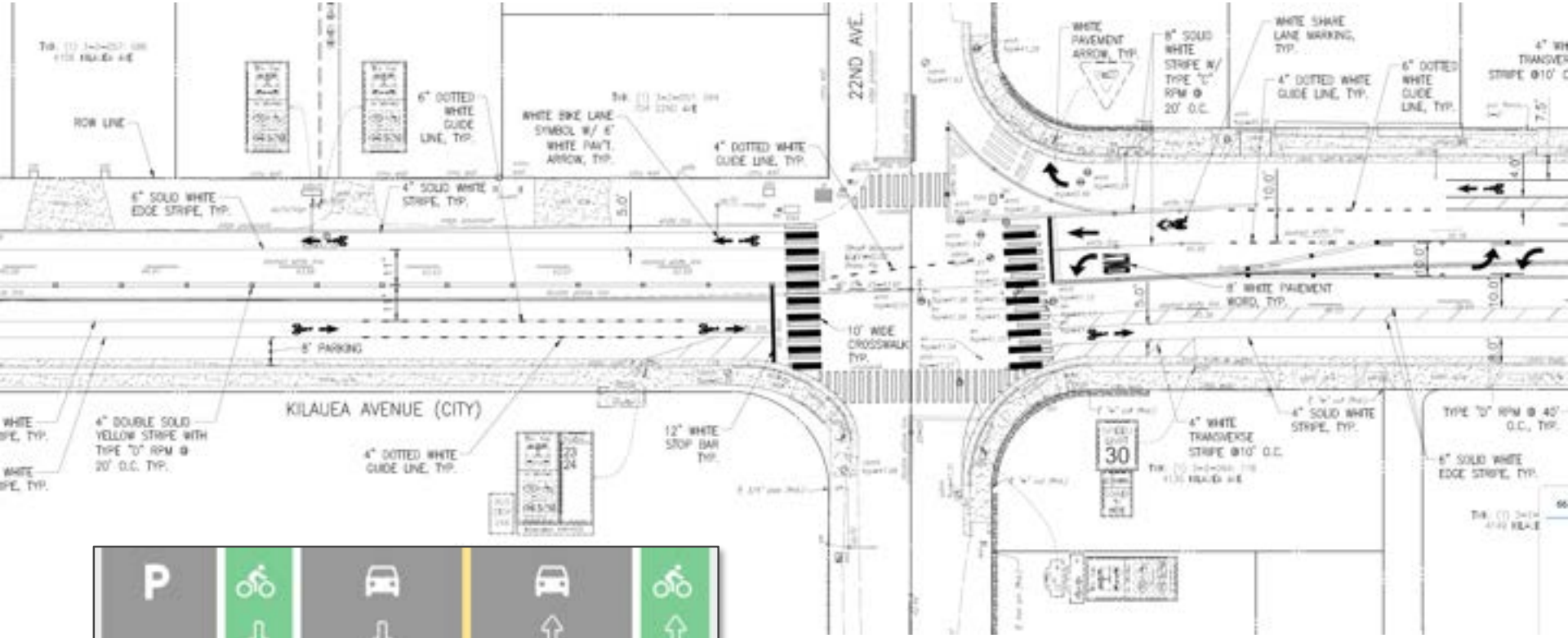
Missing mauka sidewalk
No bicycle facilities
High injury location at 18th Avenue
Two Ewa-bound travel lanes
Kapiolani Community College
Kaimuki Middle School
Kilauea Community District Park
Residential homes park in front yard

Honolulu COMPLETESTREETS



Honolulu COMPLETESTREETS


20TH AVE. (CITY)
STOP
WHITE SHARED LANE PAV'T. SYMBOL, TYP.
ROW LINE
12" WHITE STOP BAR TYP.
6" SOLID WHITE EDGE STRIPE, TYP.
4" DOUBLE SOLID YELLOW STRIPE WITH TYPE "D" RPM @ 20' O.C., TYP.
4" SOLID WHI STRIPE, TYP.
8' PARKING
KILAUEA AVENUE (CITY)
10' WIDE CROSSWALK TYP.
WHITE BIKE LANE SYMBOL W/ 6' WHITE PAV'T. ARROW, TYP.
6" SOLID WHITE EDGE STRIPE, TYP.
4" WHITE TRANSVERSE STRIPE @ 10' O.C. TYP.
25
P
8 ft
5 ft
11 ft
10 ft
5 ft


ROW LINE
6" DOTTED WHITE GUIDE LINE, TYP.
WHITE BIKE LANE SYMBOL W/ 6" WHITE PAV'T. ARROW, TYP.
4" DOTTED WHITE GUIDE LINE, TYP.
22ND AVE.
WHITE PAVEMENT ARROW, TYP.
8" SOLID WHITE STRIPE W/ TYPE "D" RPM @ 20' O.C.
WHITE SHARE LANE MARKING, TYP.
4" DOTTED WHITE GUIDE LINE, TYP.
6" DOTTED WHITE GUIDE LINE, TYP.
6" SOLID WHITE EDGE STRIPE, TYP.
4" SOLID WHITE STRIPE, TYP.
5.0'
10.0'
8' PARKING
10' WIDE CROSSWALK TYP.
8' WHITE PAVEMENT WORD, TYP.
KILAUEA AVENUE (CITY)
4" DOUBLE SOLID YELLOW STRIPE WITH TYPE "D" RPM @ 20' O.C. TYP.
4" DOTTED WHITE GUIDE LINE, TYP.
12" WHITE STOP BAR TYP.
30
4" WHITE TRANSVERSE STRIPE @10' O.C.
4" SOLID WHITE STRIPE, TYP.
TYPE "D" RPM @ 40' O.C., TYP.
6" SOLID WHITE EDGE STRIPE, TYP.
P
8 ft
5 ft
11 ft
11 ft
5 ft

STREET PARKING

18TH AVENUE - 22ND AVENUE

	Existing Street Parking Spaces (estimate)	Existing Utilization*	Proposed Parking Spaces (estimate)
Mauka	0	0	0
Makai	47	7	37
Total	47	7	37

**Parking utilization was recorded on a weekday morning and mid-day with the highest number shown*

Honolulu COMPLETESTREETS

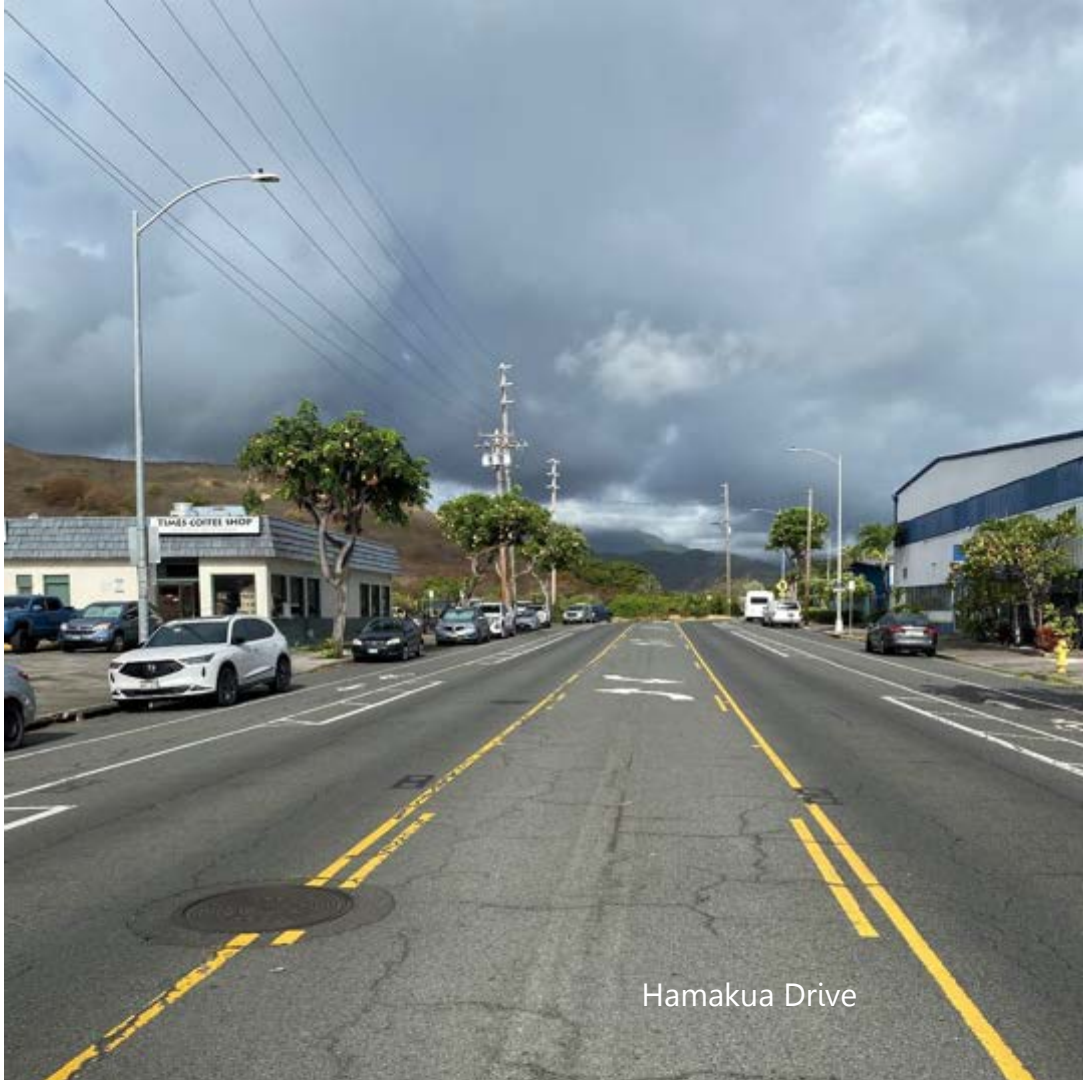
KILAUEA AVENUE

22ND AVENUE – HUNAKAI STREET

Roadway widens significantly
Residential properties park at curb
Built center median begins
Diamond Head Memorial Park


EXISTING
P
8 ft
12 ft
12 ft
12 ft
12 ft
P
8 ft
22nd Ave
Kilauea Ave
Luawai St
Elepaio St
Hunakai St


P
8 ft
5 ft
4 ft
10 ft
10 ft
10 ft
4 ft
5 ft
P
8 ft
ALTERNATIVE 1 - BUFFERED BIKE LANES



Hamakua Drive

ALTERNATIVE 2 - PARKING PROTECTED BIKE LANES

Honolulu COMPLETE STREETS


Hamakua Drive

STREET PARKING

22ND AVENUE TO HUNAKAI STREET

	Existing Street Parking Spaces (estimate)	Existing Utilization*	Alt 1: Buffered Bike Lanes	Alt 2: Parking Protected Bike Lanes
Mauka	34	12	34	16
Makai	27	7	27	14
Total	61	19	61	30

**Parking utilization was recorded on a weekday morning and mid-day with the highest number shown*

Honolulu COMPLETESTREETS

KILAUEA AVENUE

HUNAKAI STREET – PAHOA AVENUE

Kahala Elementary School
KCAA Wai-Kahala Preschool
Kahala Community Park
Residential properties
Built center median

Honolulu COMPLETESTREETS


EXISTING
Hunakai St
Kilauea Ave
Onaha St


ALTERNATIVE 1 -
BUFFERED BIKE LANES
Kilauea Ave
Kilauea Ave
Kilauea Ave
Onaha St

EXISTING

ALTERNATIVE 1 - BUFFERED BIKE LANES

COMPLETESTREETS

EXISTING

BUFFERED BIKE LANE

Honolulu COMPLETE STREETS

ALTERNATIVE 2 - PARKING PROTECTED BIKE LANE

Hamakua Drive

Honolulu COMPLETESTREETS

EXISTING

PARKING PROTECTED BIKE LANE

Honolulu COMPLETE STREETS

ALTERNATIVE 3 - FRONTAGE LANES

Alternative 3 – Frontage Lanes

- Slow moving area that provides access to parking and driveways
- Bicyclist share the low-speed environment
- Traffic calming benefits

San Jose, CA

Honolulu COMPLETESTREETS

STREET PARKING
HUNAKAI STREET – PAHOA AVENUE

	Existing Street Parking Spaces (estimate)	Existing Utilization*	Alt 1: Buffered Bike Lanes	Alt 2: Parking Protected Bike Lanes	Alt 3: Frontage Lanes
Mauka	59	4	59	38	55
Makai	81	9	81	66	77
Total	140	13	140	104	132

**Parking utilization was recorded on a weekday morning and mid-day with the highest number shown*

**School loading observed separately*

Honolulu COMPLETESTREETS

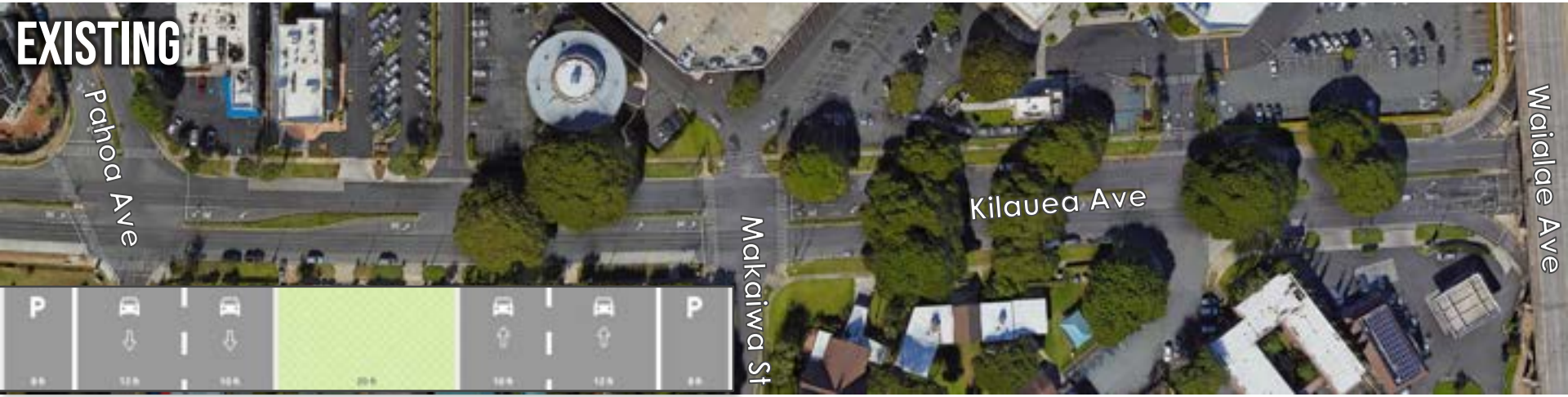
KILAUEA AVENUE

PAHOA AVENUE – WAIALAE AVENUE

Kahala Mall
Kahala Professional Center
Waiokeola Congregational Church
Waiokeola Preschool
Residential properties
Connection to H-1 Freeway

Honolulu COMPLETESTREETS


DROP OFF



Honolulu COMPLETESTREETS


Kilauea Ave
Pahoa Ave
NEW BIKE ROUTE
Makaiwa St
Moho St
EXISTING BIKE LANE
Kealaolu Ave
ALTERNATIVE 2 - PROTECTED BIKE LANE + PAHOA AVE DETOUR

ALTERNATIVE 3 - PROTECTED BIKE LANE + LOADING IN TRAVEL LANE

STREET PARKING
PAHOA AVENUE – WAIALAE AVENUE

	Existing Street Parking Spaces (estimate)	Existing Utilization*	Alt 1: Widened Sidewalk protected bike lane	Alt 2: Bike Detour	Alt 3: Loading in Travel Lane
Mauka/Ewa	12	6	0	0	0
Makai/Koko Head	22	11	14	14	0
Total	34	17	14	14	0

**Parking utilization was recorded on a weekday morning and mid-day with the highest number shown*

Honolulu COMPLETESTREETS

NEXT STEPS

- Post presentation materials online
- Review of community feedback
- Mail notification to property owners with frontage sidewalk improvements (not Kilauea Avenue)
- Project design through 2025
- Mailing list updates
- Neighborhood board updates

Honolulu COMPLETESTREETS

Honolulu
COMPLETESTREETS

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www.instagram.com/hnl.completestreets

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- Learn about Complete Streets projects
- Provide feedback and get involved!