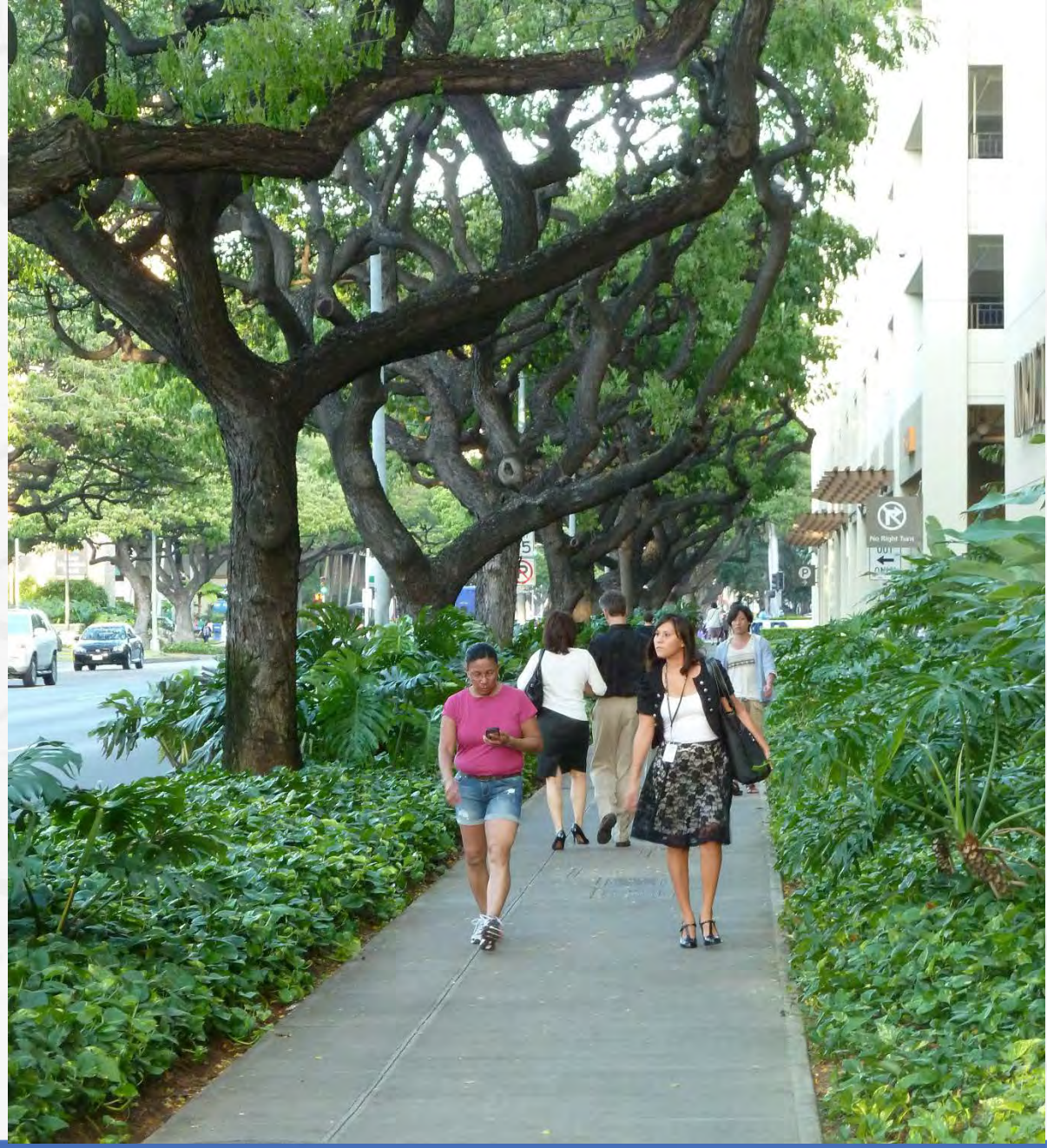
oahu Pedestrian Plan

Community Meeting

April 24, 2019

Welcome Pedestrians!

- Introductions
  - City Staff
  - Technical Advisory Committee
  - Fehr & Peers
  - PBR Hawaii
- Meeting Format
  - Presentation + Group Polling
  - Open House Activities



Presentation Outline

1. Complete Streets + the Planning Process

Pedestrian Focus Area Maps Review

Program Recommendations

Live Polling

Why Plan for Pedestrians?

People on Foot and Universal Access

Streets must be designed to accommodate safe, accessible, and comfortable use by everyone. Streets with active storefronts, foot traffic, and human scale contribute to an active and economically vibrant community. Public safety, adequate sidewalk width, visual variety, protection from rain, and shade from the sun make a successful street.

People on Cycles

Cyclists include users of bicycles, cycle-rickshaws, and cargo bikes. Facilities should be direct, safe, intuitive, clearly delineated, and part of a cohesive network to encourage use by people of all ages and confidence levels. Cycle tracks that create an effective division from traffic and are well coordinated with signal timing and intersection design form the basis of an accessible cycle network.

People Using Collective Transport

Dedicated space on the street for people using collective transit supports safe, convenient, reliable, and frequent service. Whether using rail, bus, or small collective vehicles, transit service dramatically increases the overall capacity of the street and should have safe and easily accessible boarding areas. The overall level of access and scope of a transit network should be aligned with demand, meeting service needs without sacrificing streetscape quality.

People in Personal Motorized Vehicles

Personal motorized vehicles provide on-demand, point-to-point transportation and include automobiles, for-hire vehicles and motorized two- and three-wheelers. Streets and intersections should be designed to facilitate safe movement and manage interactions between motorized vehicles and people walking and cycling.

People Moving Goods and City Services

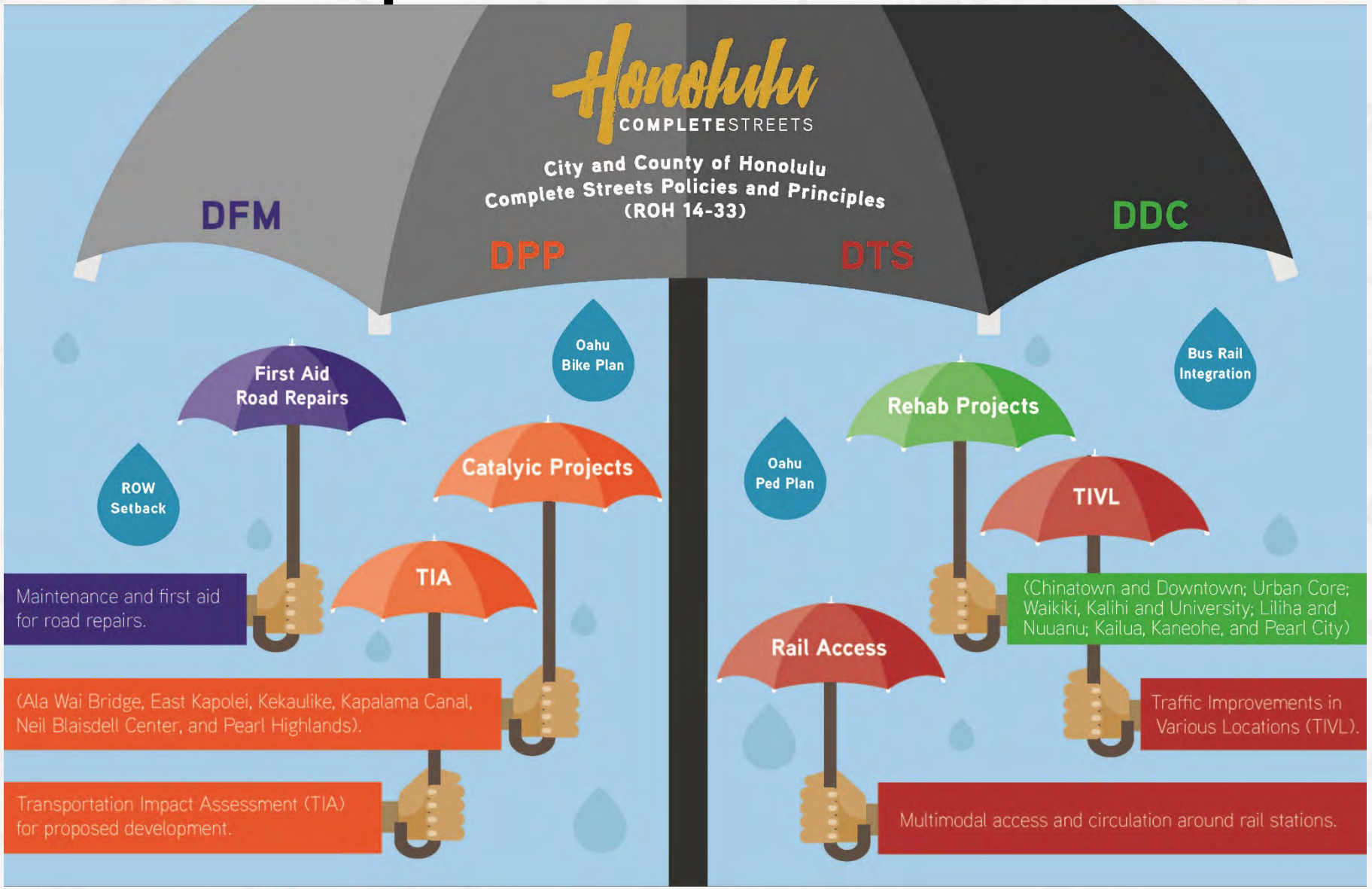
Freight operators benefit from dedicated curb access or docks for easy loading and unloading and rigorous management of space and movement throughout the traffic system. Emergency responders and cleaning vehicles need adequate space to operate, which can be accommodated while ensuring the safety of all other street users.

People Doing Business

Vendors, street stalls, and commercial activity connected to storefronts provide important services that support vibrant, active and engaging street environments. Adequate space in appropriate places on the street should be allocated to these uses. Providing regular cleaning, maintenance schedules, power, and water can support commercial activity and improve local quality of life.

Why Plan for Pedestrians?

Complete Streets Overview



ahu Pedestrian Plan

+

o'ahu bike plan
2018 Update

Regional Modal Plans

=

Complete Streets Program of Projects (PoP)

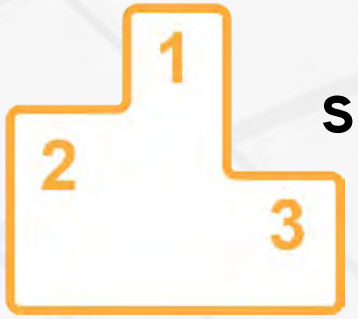
Catalytic Projects

ALA PONO
an Ala Wai crossing

Overview of the Pedestrian Plan Process

inventory **existing facilities**;

identify focus areas of the **greatest need**;



suggest **projects** and **prioritize** them;

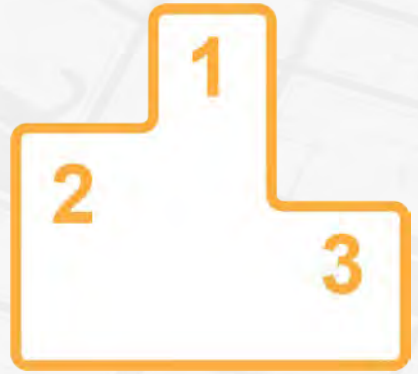
make **pedestrian program recommendations**

Identifying Needs and Prioritizing Projects

Step 1:
Data Collection

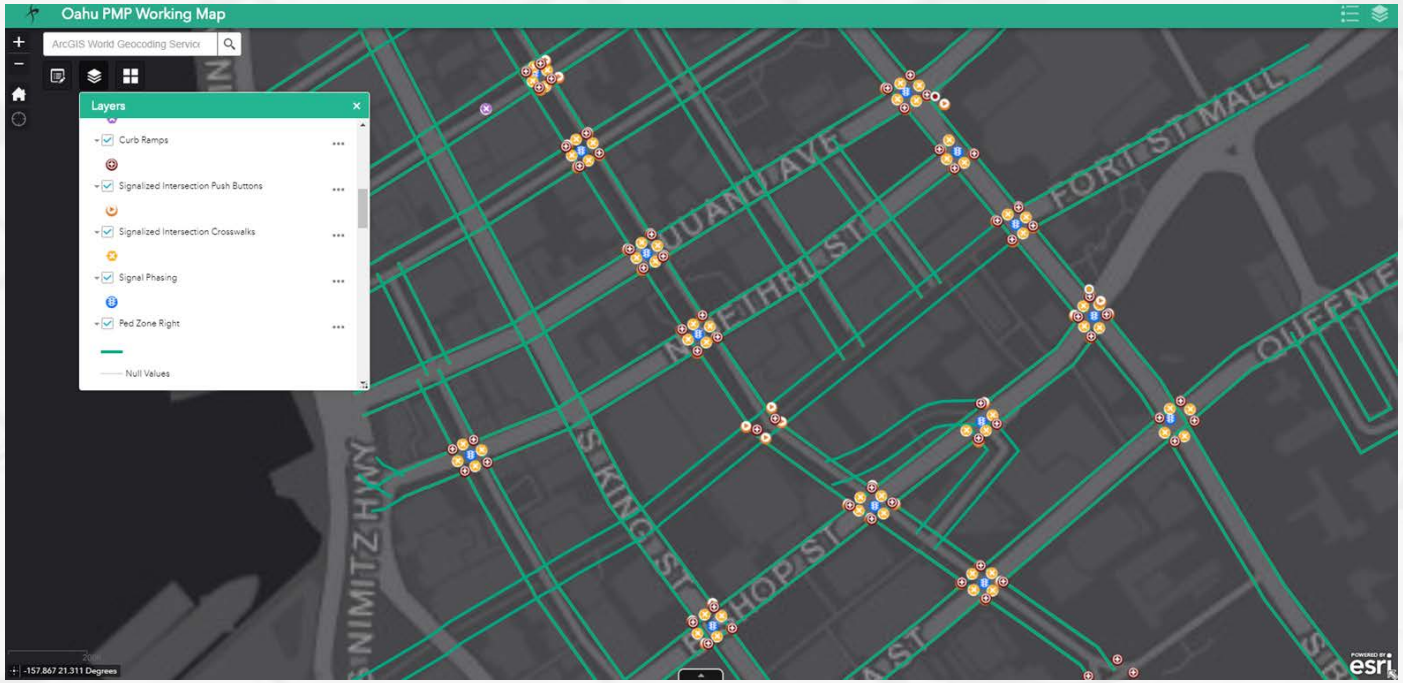
Step 2:
Focus Area Development

Step 3:
Project Development



Step 4:
Project Prioritization

Step 1: Data Collection



(Moanalua Rd. at Kaanohi St.)

Step 2: Focus Area Development

(finding areas of greatest need)

Where are the
Pedestrian Demands?

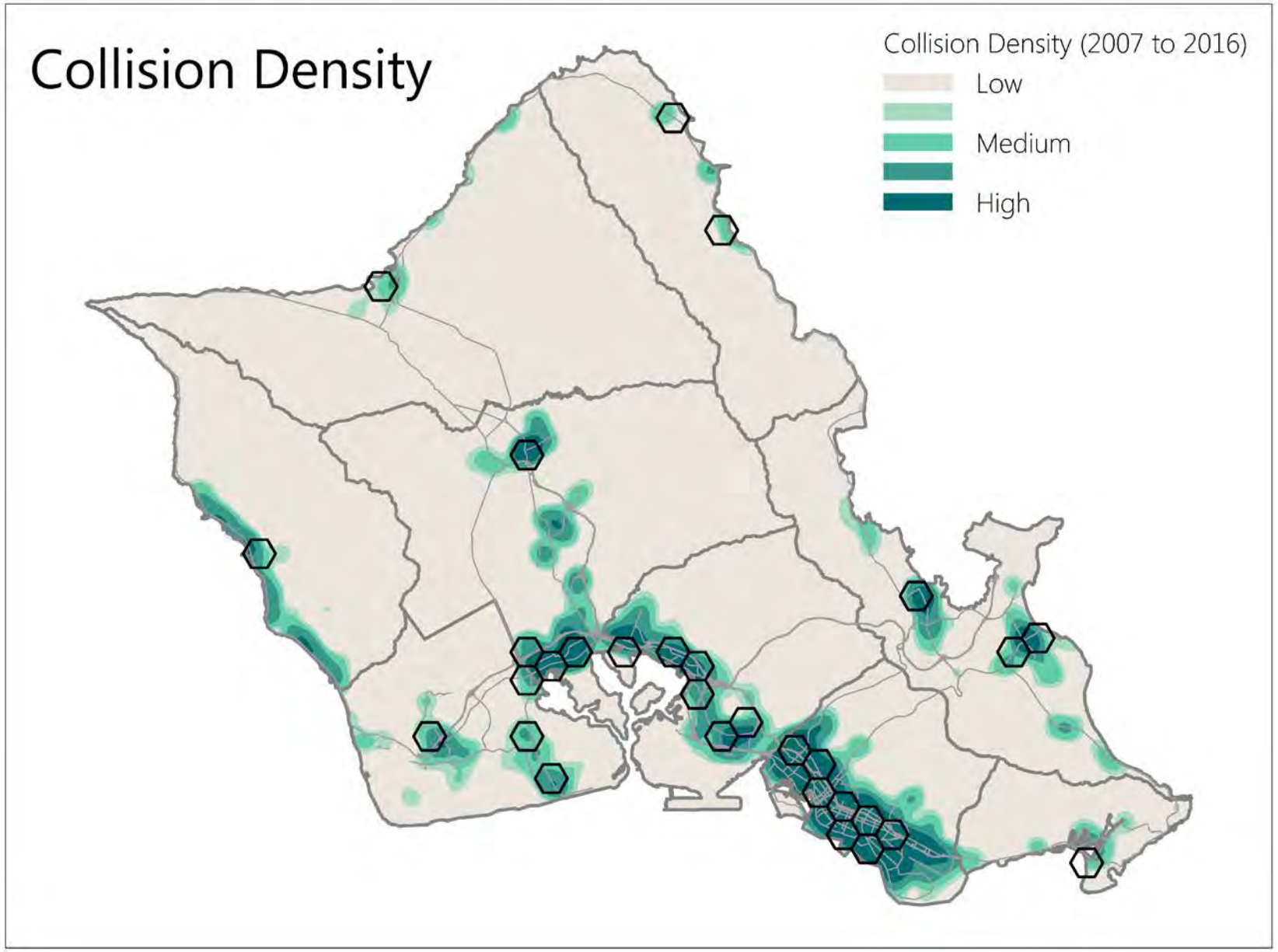
+

Where are the
Pedestrian Infrastructure Deficiencies?

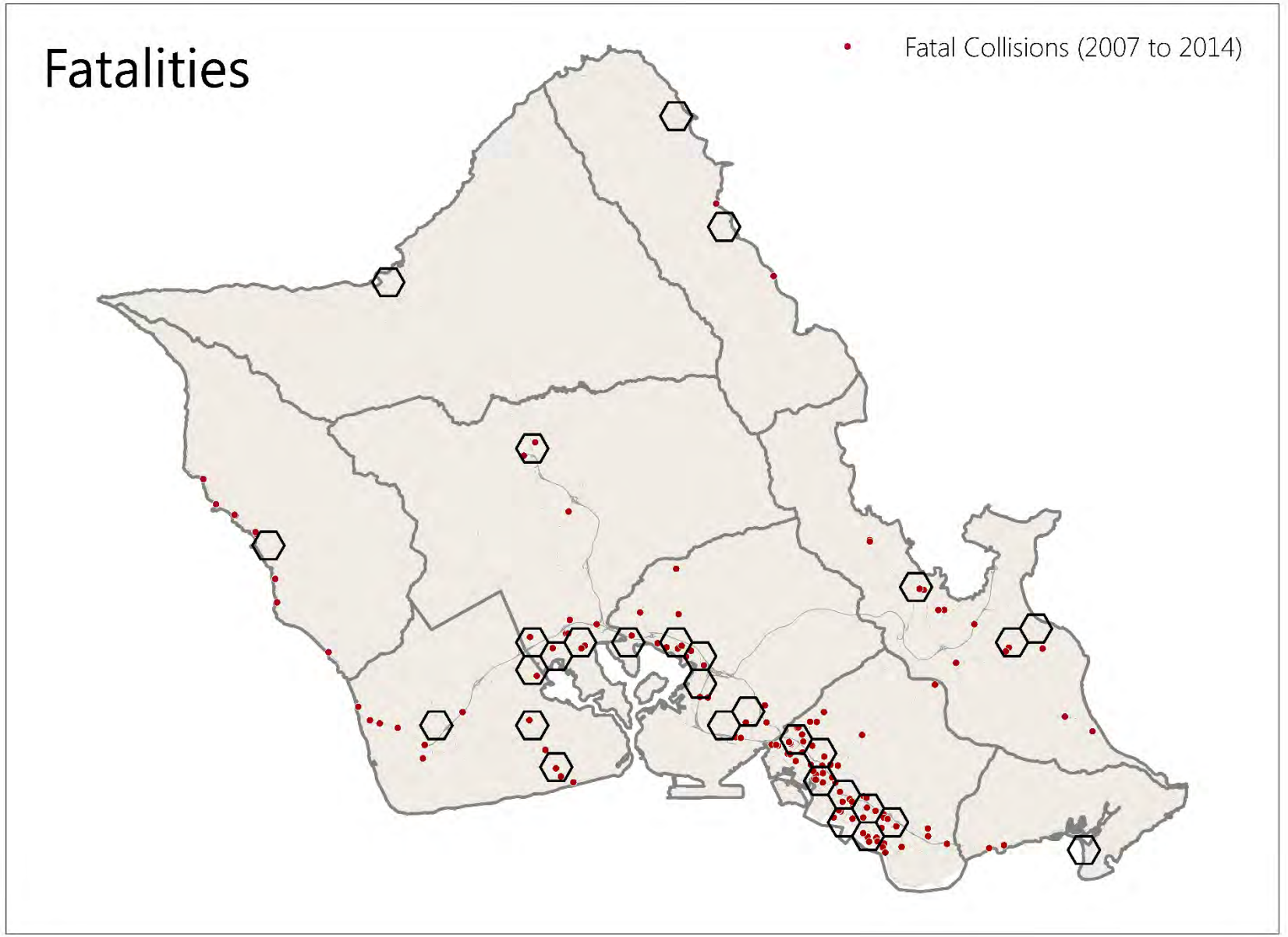
=

High Improvement Needs

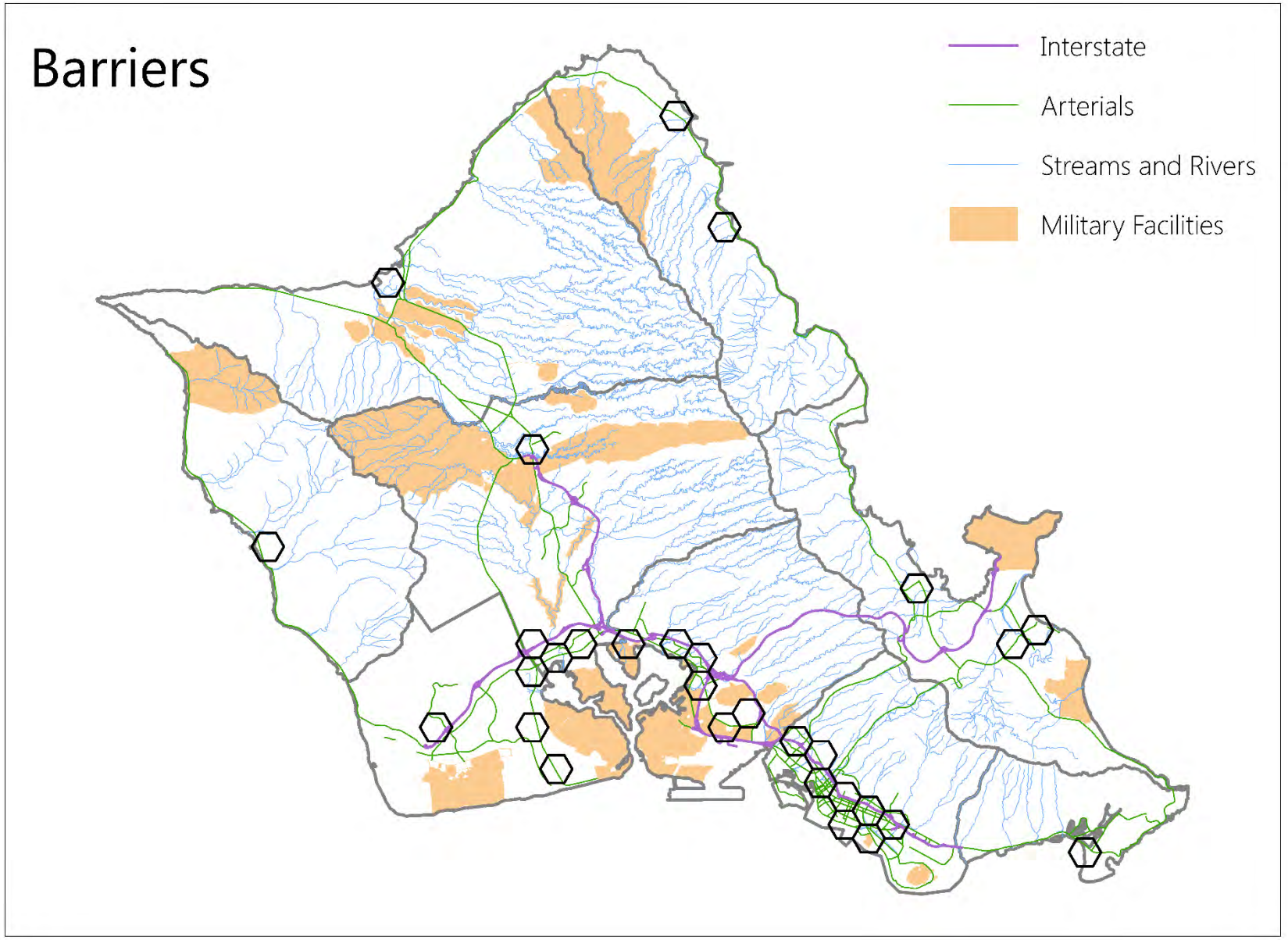
Collision Density



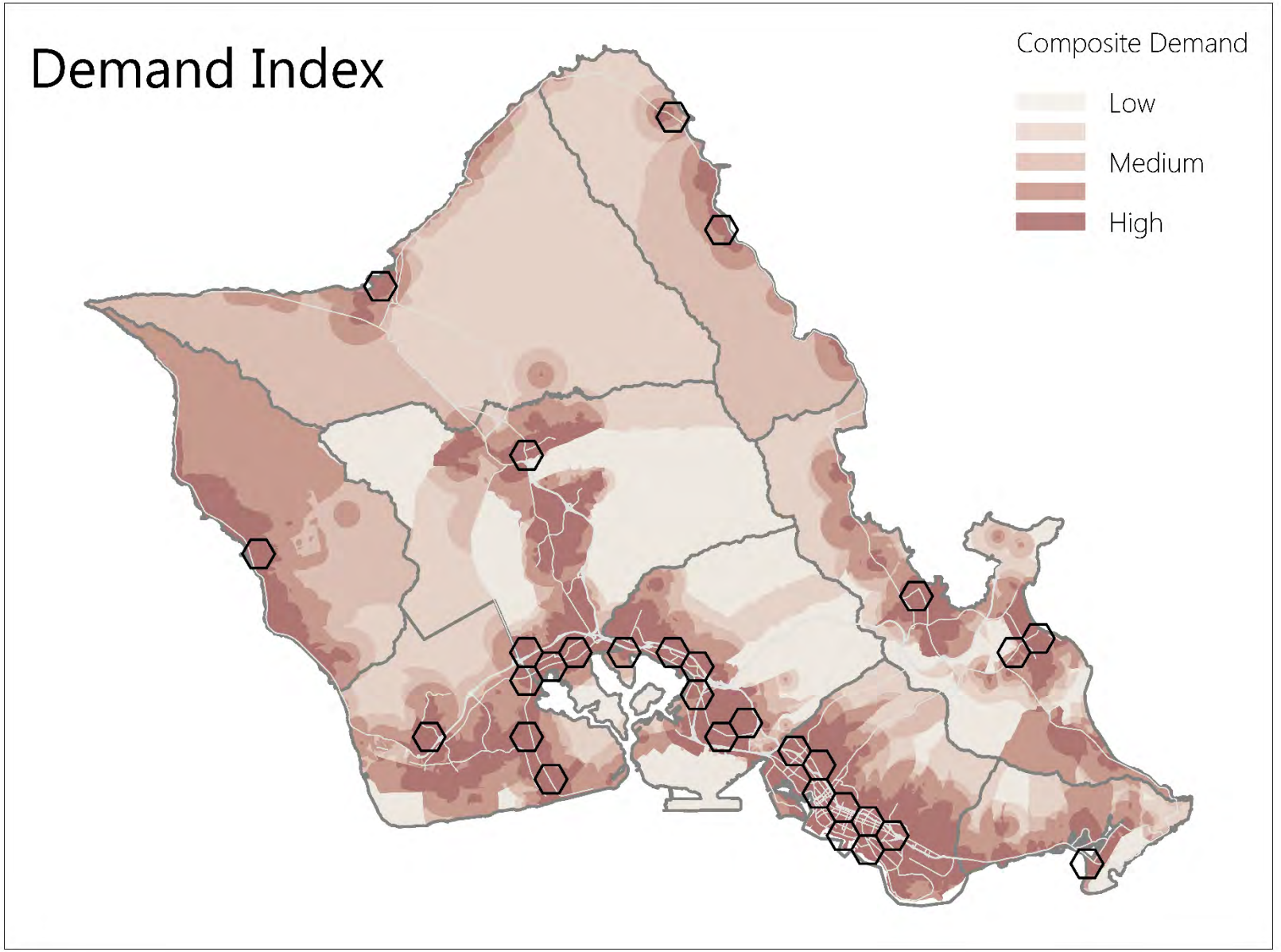
Fatalities



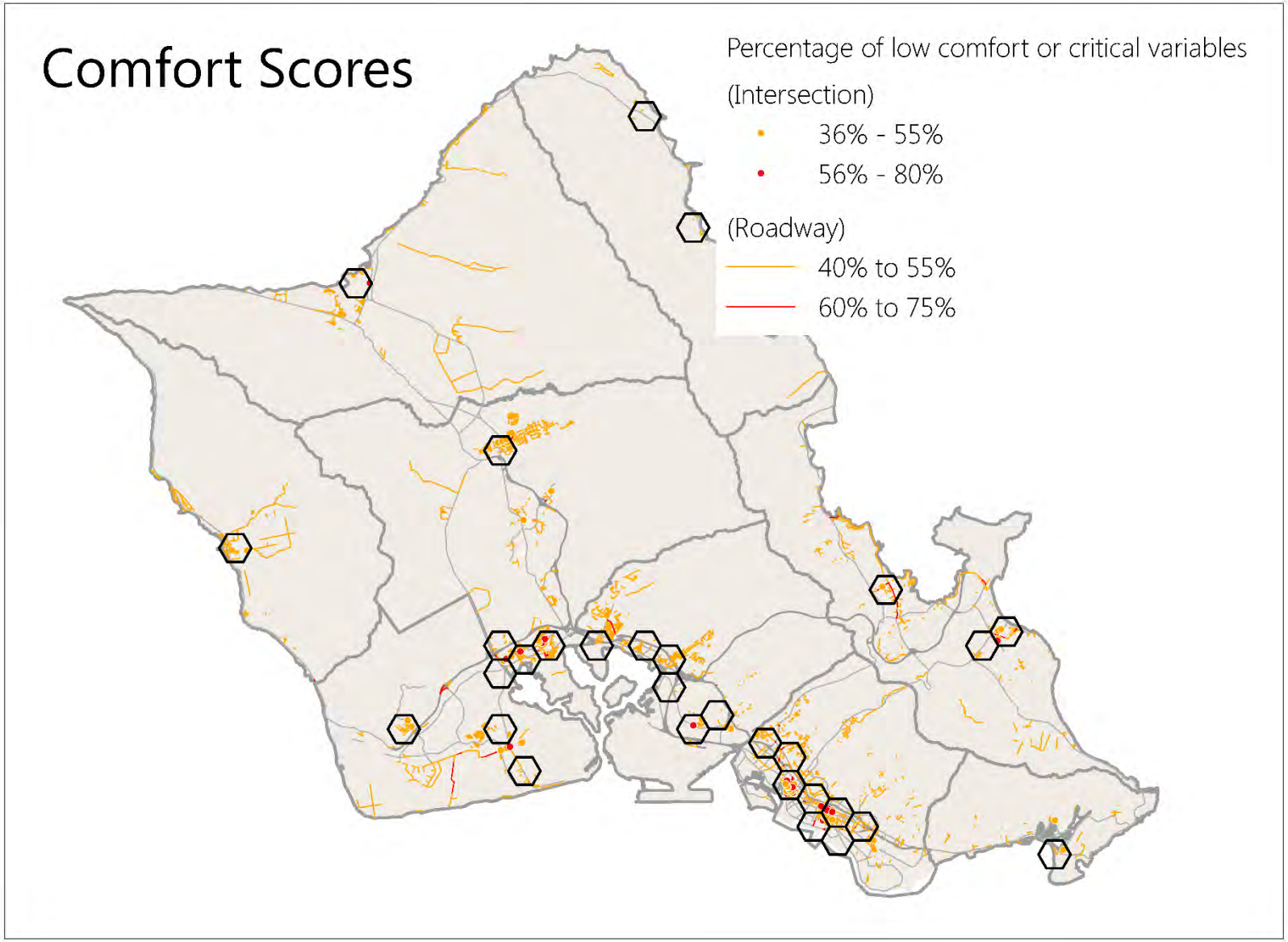
Barriers


Interstate
Arterials
Streams and Rivers
Military Facilities

Demand Index



Comfort Scores



Variables used in Comfort Scores:

Highly pedestrian friendly, easily navigable environment for people of **all ages and abilities**

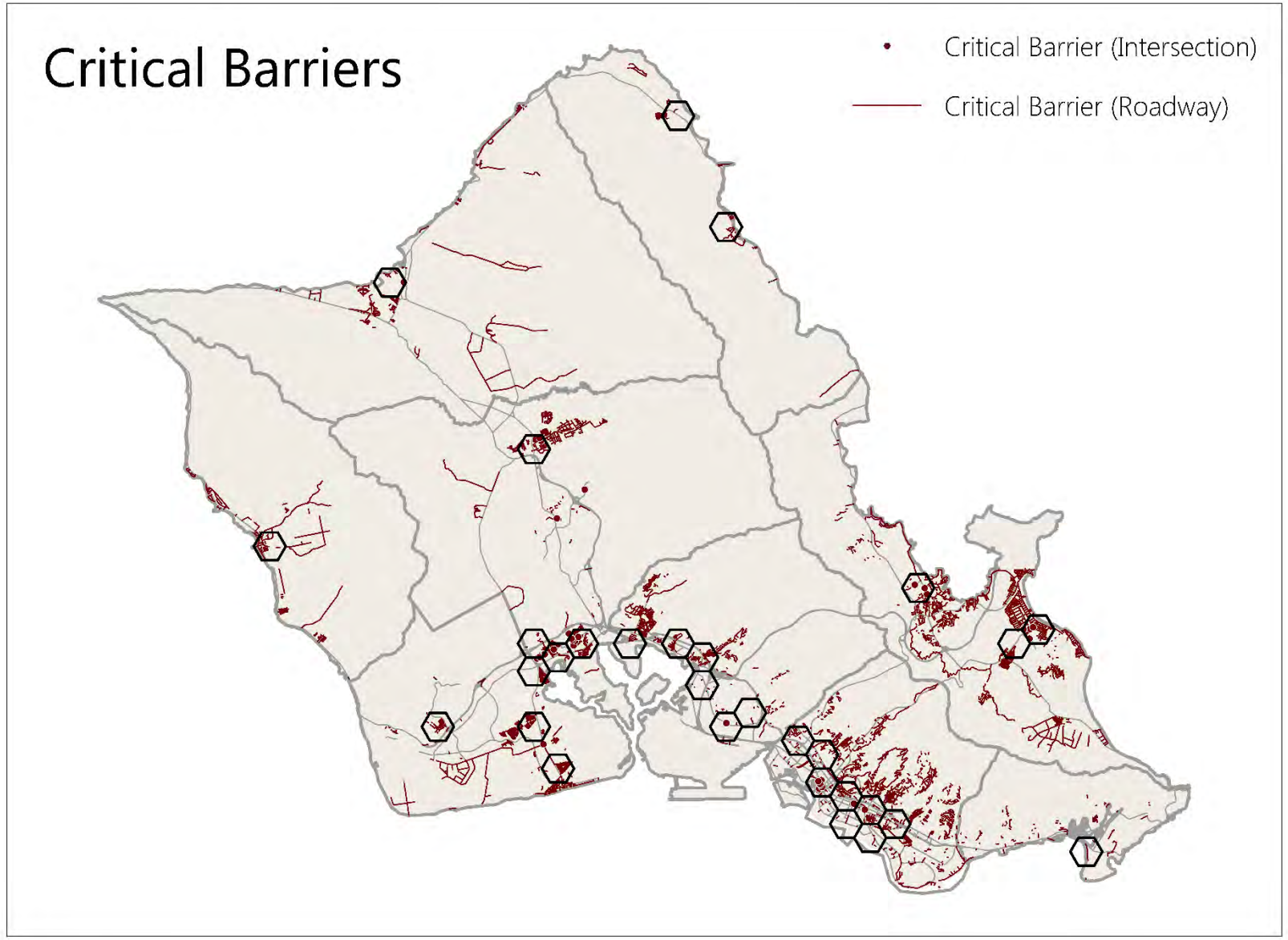
Walking is **generally comfortable**, but parents may not feel comfortable letting their children walk alone

Walking is **uncomfortable** but possible, with some barriers that make walking uninviting or uncomfortable

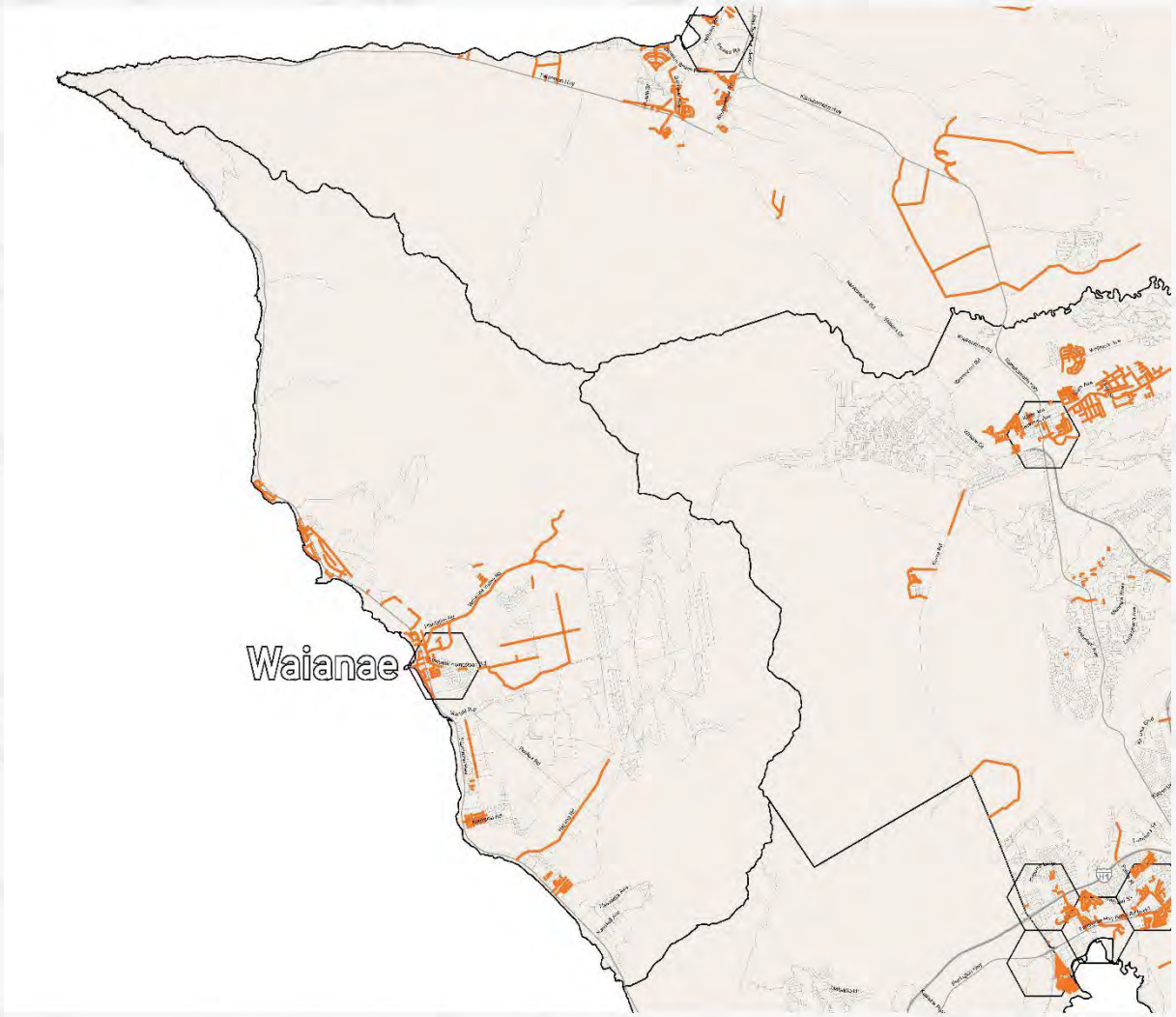
Walking is **very uncomfortable** or even **impossible**; streets have limited or no accommodation, **may be unsafe**

Comfort Scores are Context-Sensitive

Critical Barriers



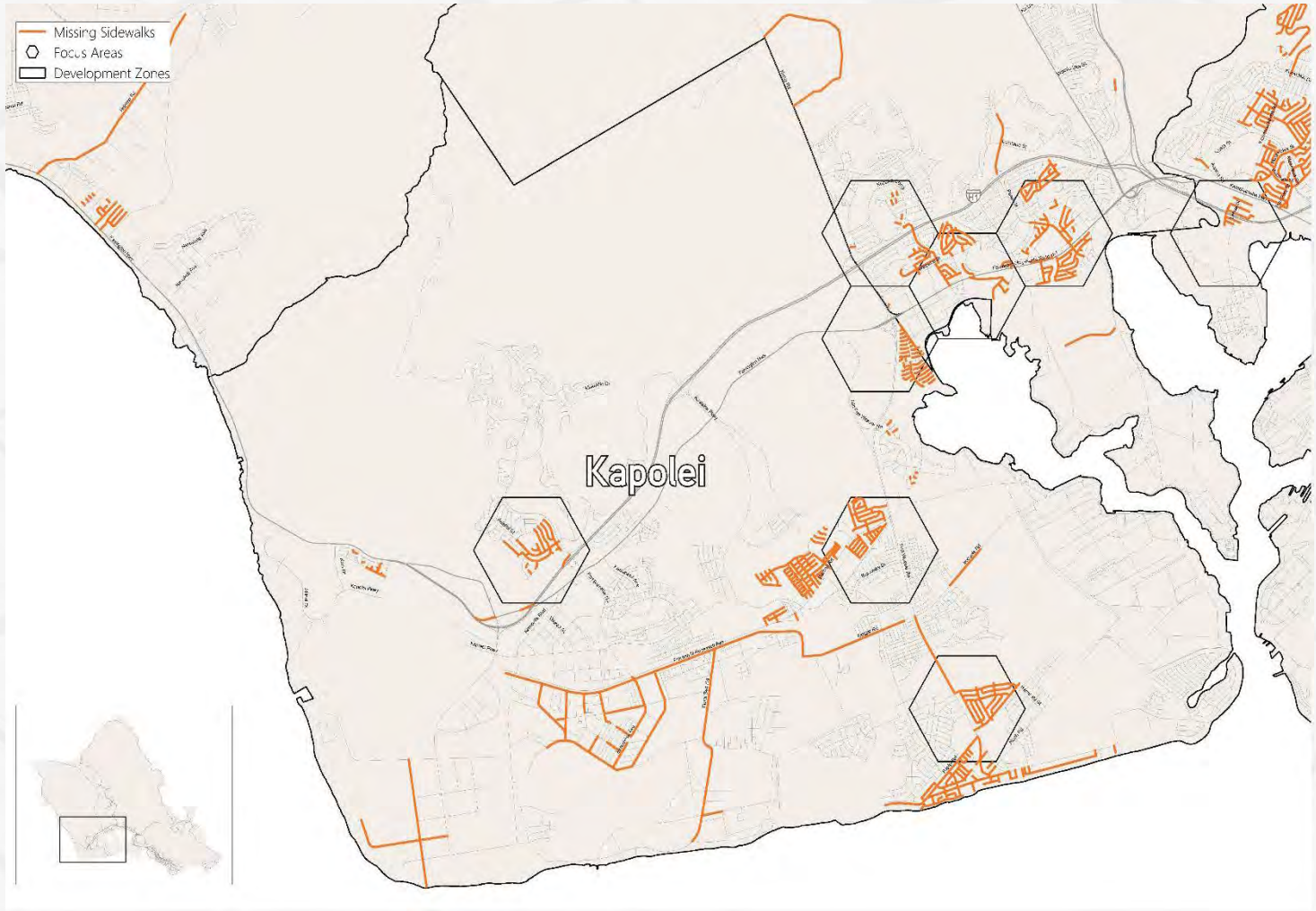
Missing Sidewalks: Waianae



Miles of missing Sidewalks: 52.53

Cost to build: $82,900,586

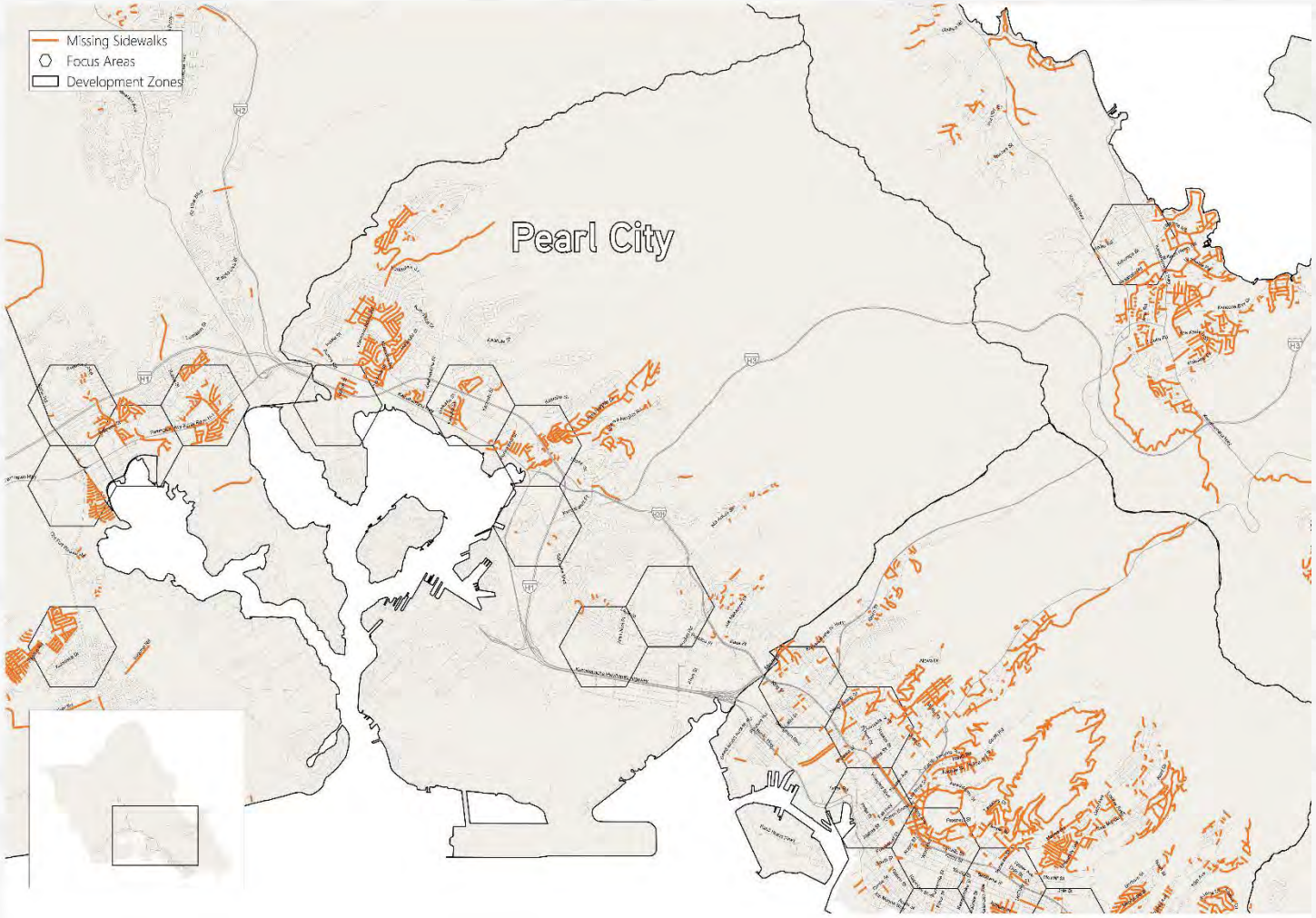
Missing Sidewalks: Ewa



Miles of missing Sidewalks: 81.93

Cost to build: $112,533,414

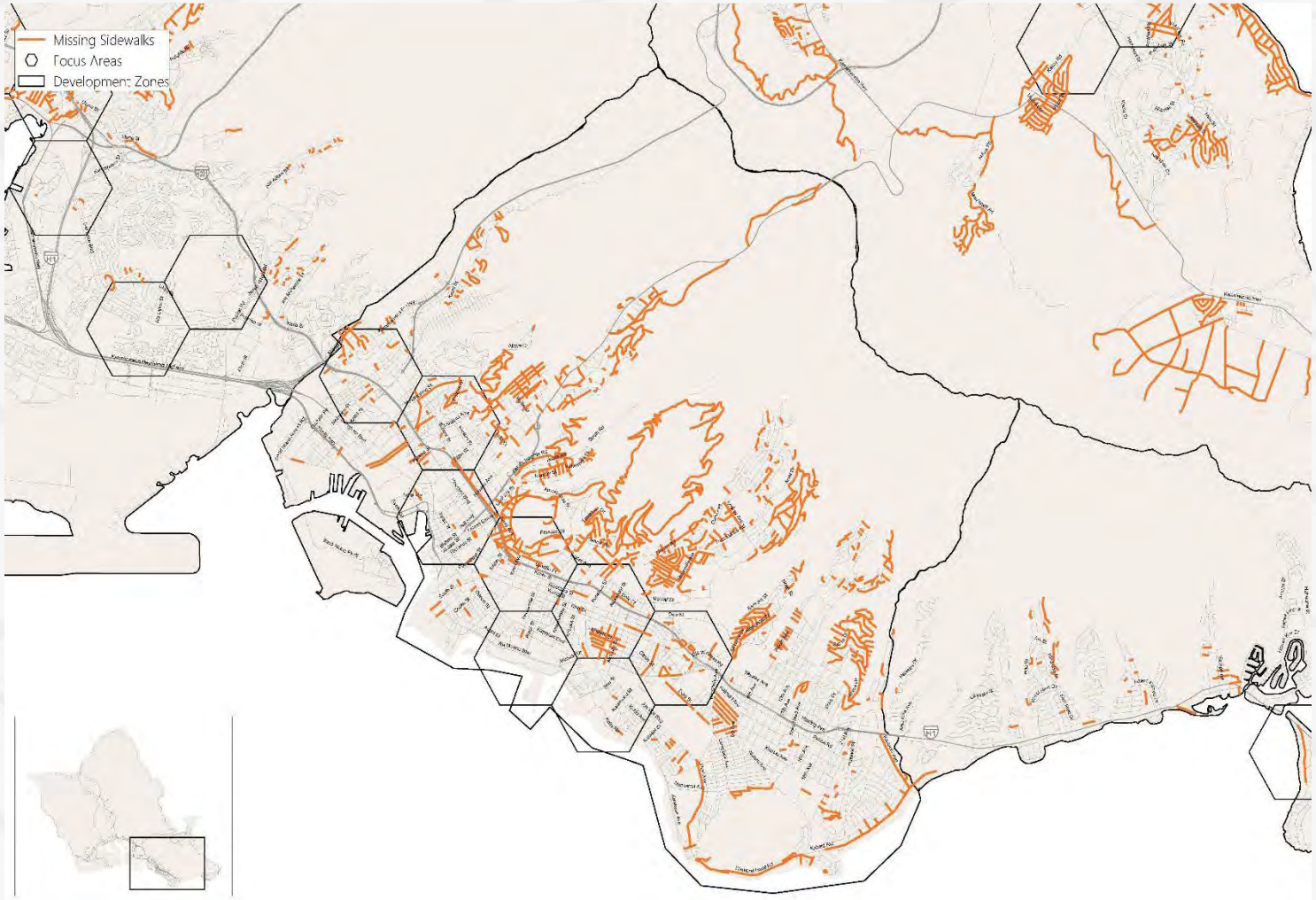
Missing Sidewalks: Honolulu Urban Core - West



Miles of missing Sidewalks: 69.89

Cost to build: $99,062,526

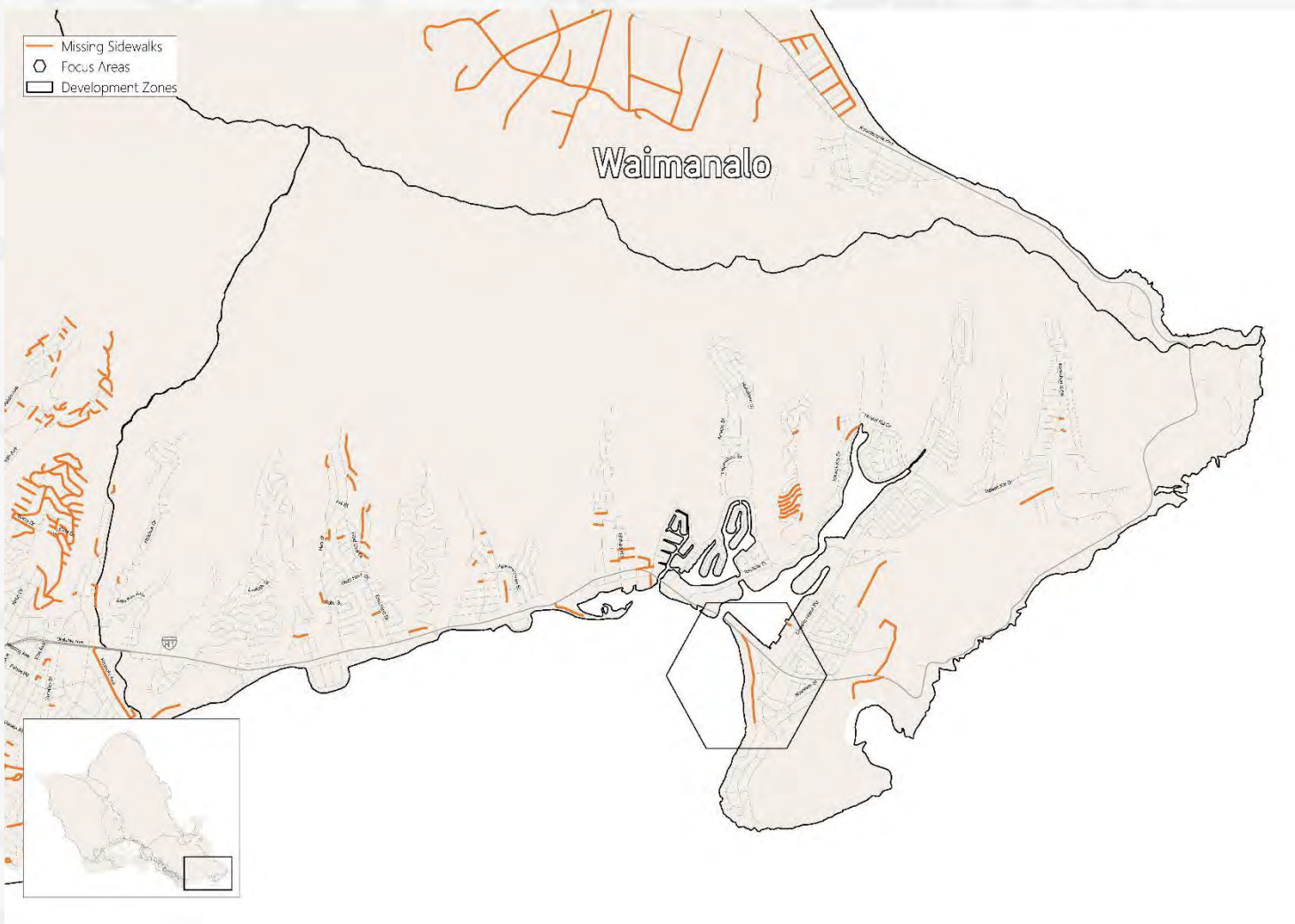
Missing Sidewalks: Primary Urban Core - Honolulu



Miles of missing Sidewalks: 183.94

Cost to build: $241,702,138

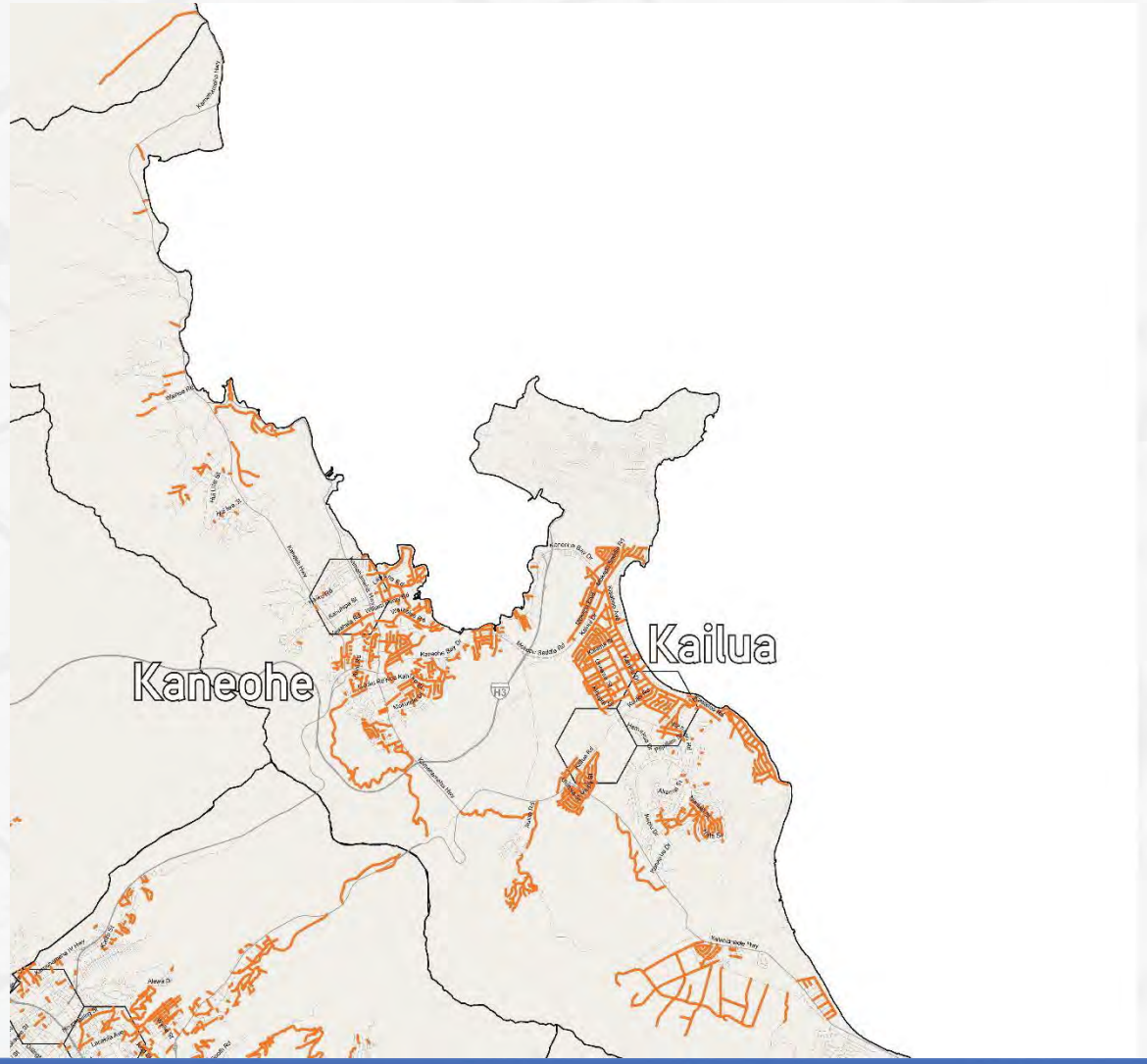
Missing Sidewalks: East Oahu



Miles of missing Sidewalks: 10.61

Cost to build: $13,204,379

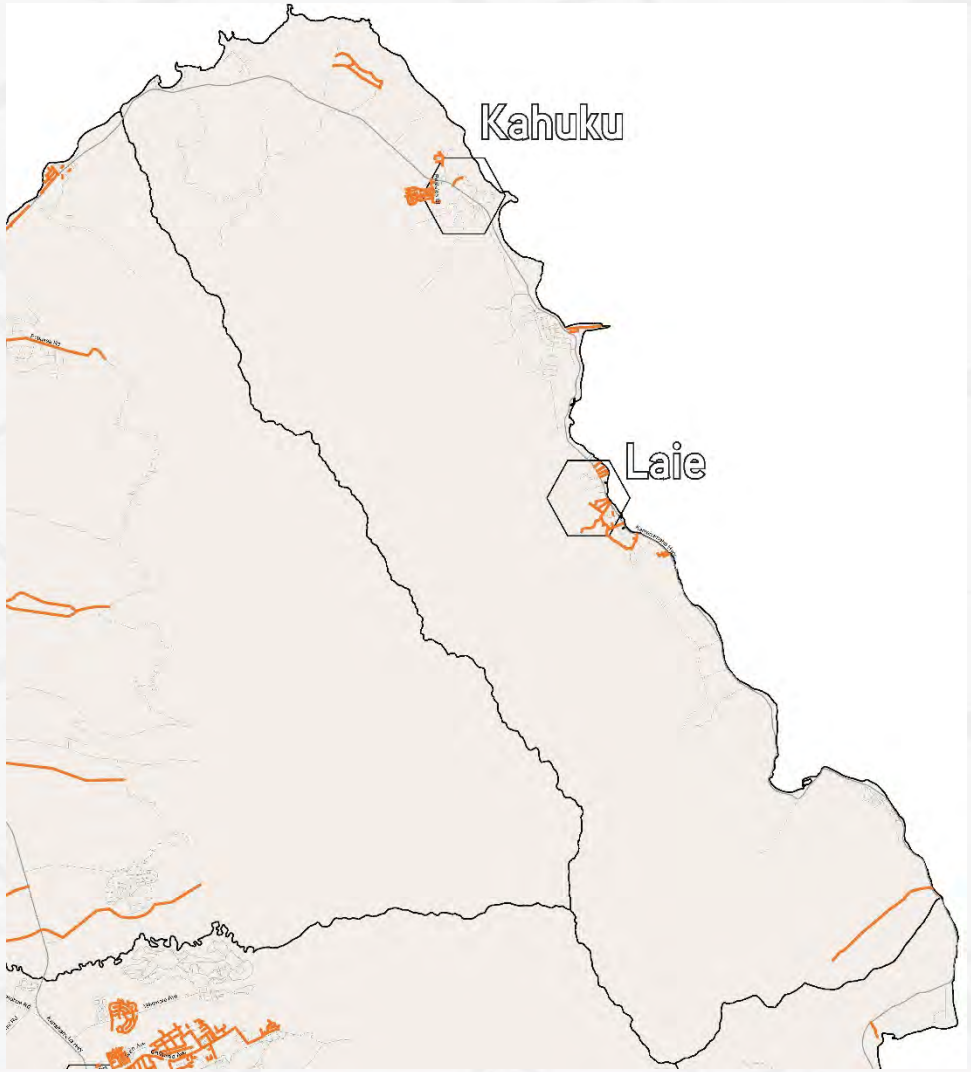
Missing Sidewalks: Koolau Poko



Miles of missing Sidewalks: 213.88

Cost to build: $319,160,888

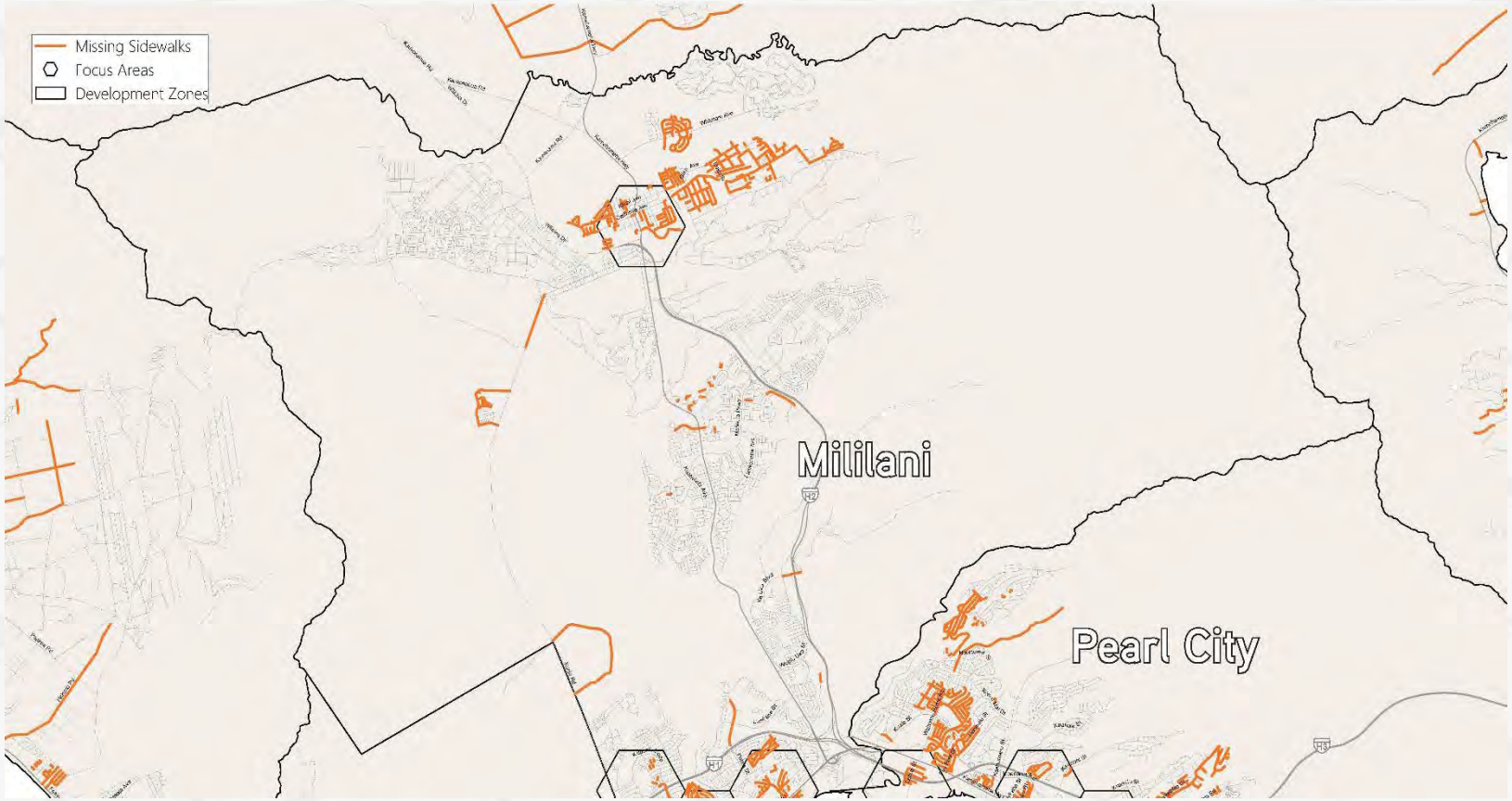
Missing Sidewalks: Koolau Loa



Miles of missing Sidewalks: 21.65

Cost to build: $35,285,346

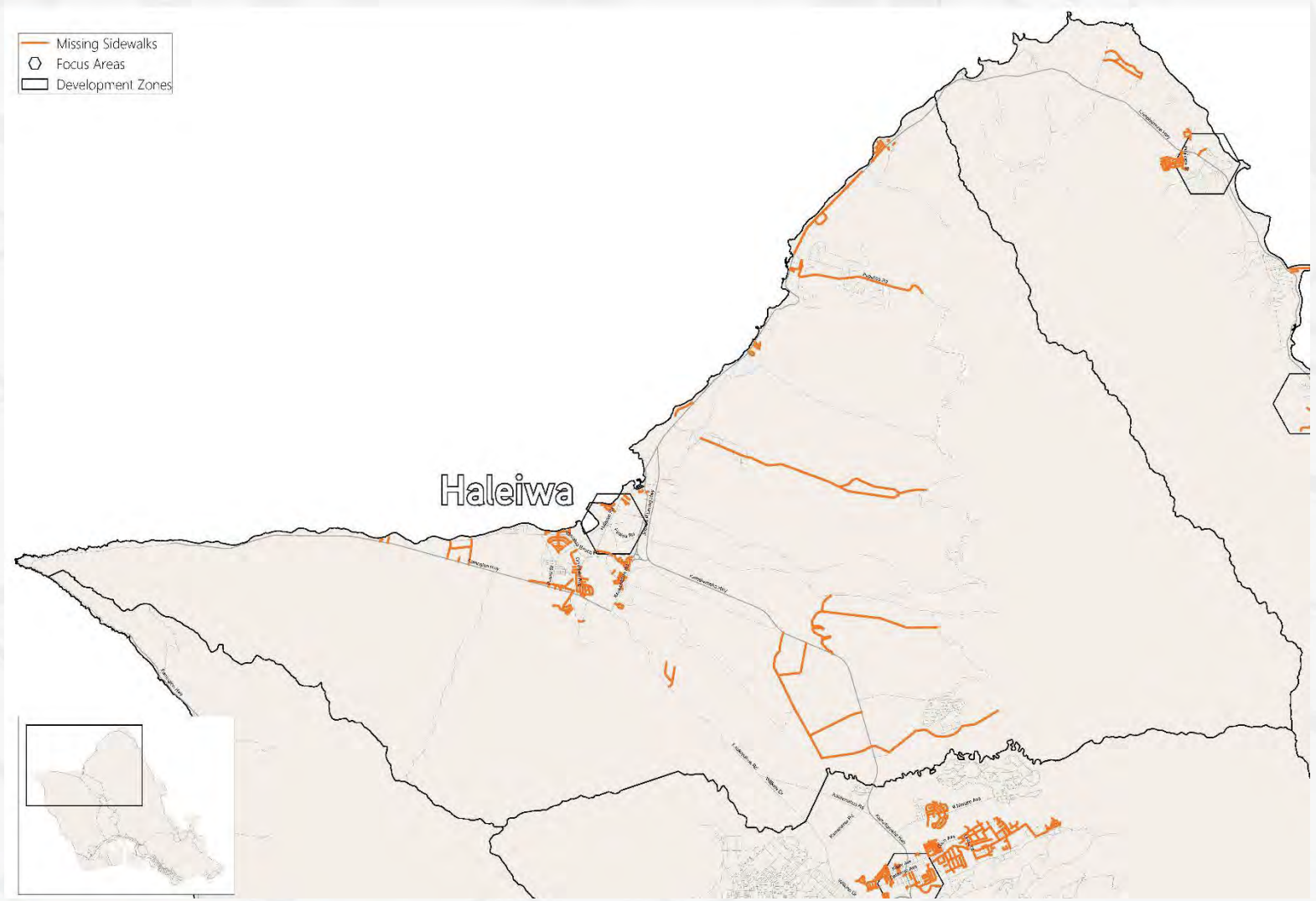
Missing Sidewalks: Central Oahu



Miles of missing Sidewalks: 82.14

Cost to build: $123,472,206

Missing Sidewalks: North Shore



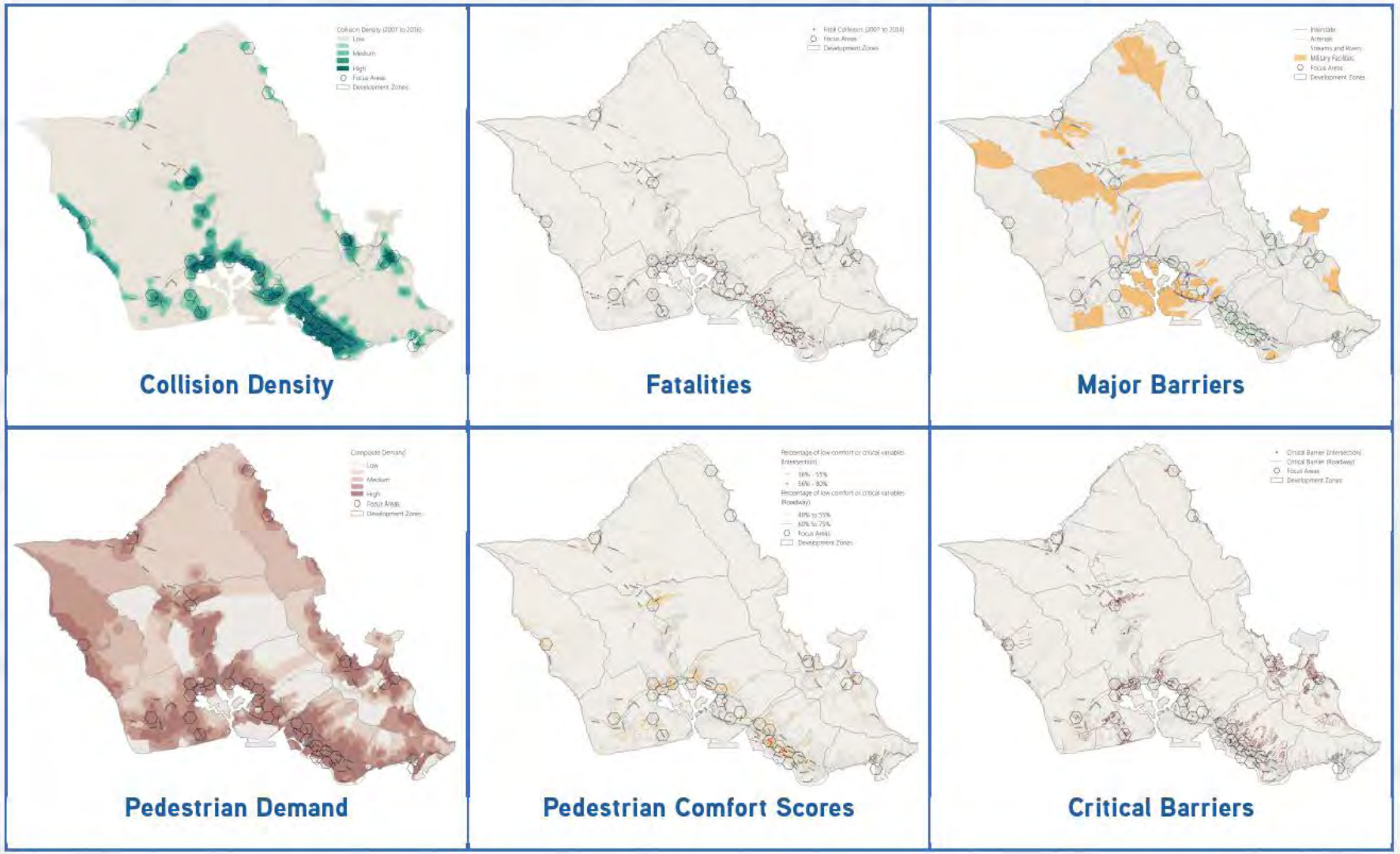
Miles of missing Sidewalks: 76.66

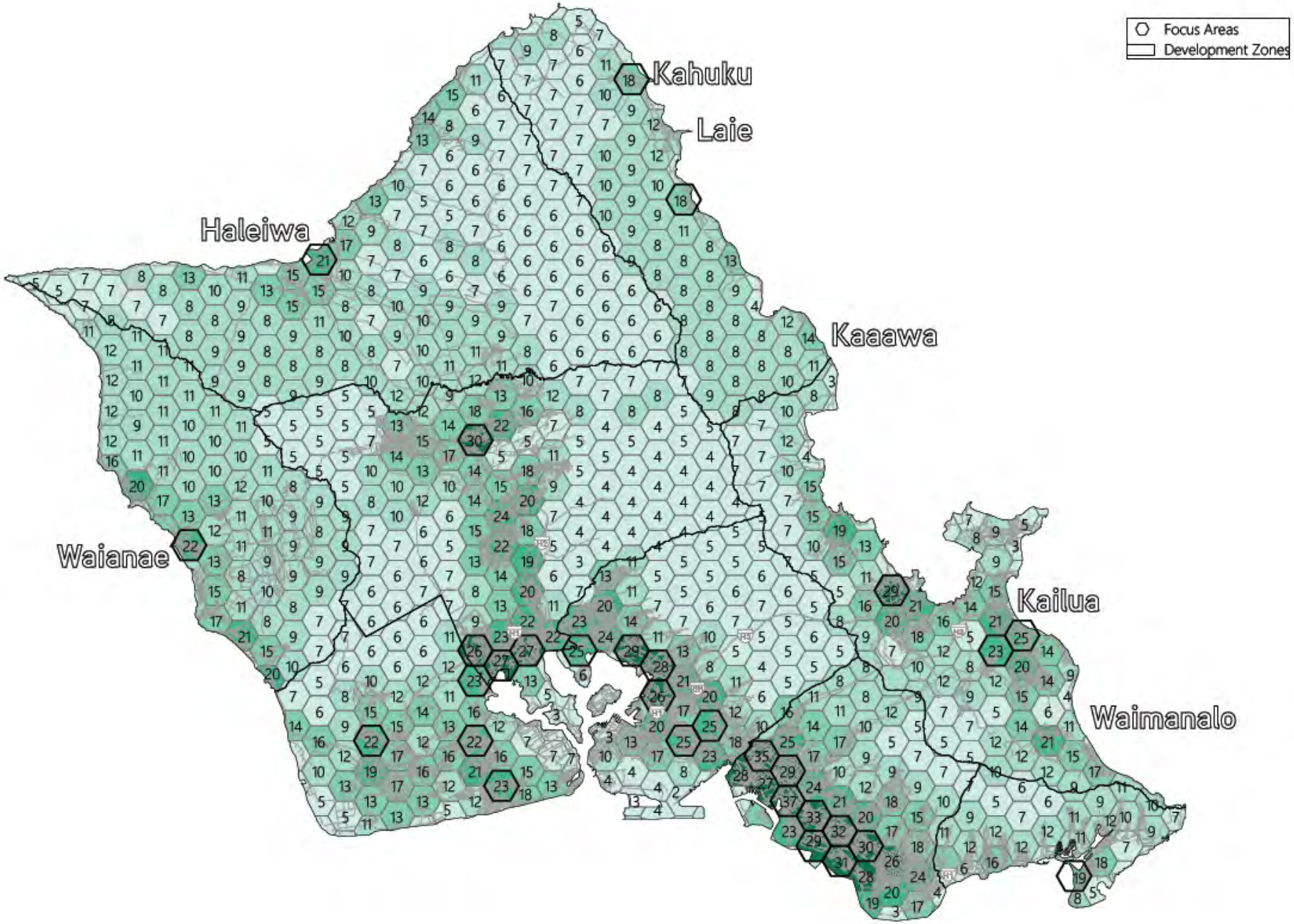
Cost to build: $124,533,814

Missing Sidewalks: Grand Total for Oahu =$1 billion+

Development Zone	In Focus Area		Not In Focus Areas		Grand Total	
	Missing Sidewalks Miles	**Total Cost**	**Missing Sidewalks Miles**	**Total Cost**	**Missing Sidewalks Miles**	**Total Cost**
Central Oahu	33.53	$49,300,065	48.62	$74,172,141	82.14	$123,472,206
East Honolulu	1.24	$1,321,424	9.37	$11,882,955	10.61	$13,204,379
Ewa	28.83	$33,434,048	53.10	$79,099,366	81.93	$112,533,414
Koolauloa	9.07	$14,839,466	12.58	$20,445,881	21.65	$35,285,346
Koolaupoko	24.95	$39,264,152	188.93	$279,896,736	213.88	$319,160,888
North Shore	2.35	$3,963,366	74.31	$120,570,448	76.66	$124,533,814
Puc - Pearl City	20.79	$31,872,863	49.10	$67,189,663	69.89	$99,062,526
Puc-Honolulu	33.00	$43,151,232	150.94	$198,550,906	183.94	$241,702,138
Waianae	8.26	$12,894,060	44.28	$70,006,526	52.53	$82,900,586
GRAND TOTAL	**162.03**	**$230,040,677**	**631.21**	**$921,814,621**	**793.24**	**$1,151,855,298**

Finding Areas of Greatest Pedestrian Need




Focus Areas
Development Zones
Kahuku
Laie
Haleiwa
Kaaawa
Waianae
Kailua
Waimanalo

Step 3: Project Development

Road Diet

Midblock Crossing Improvements

Side-Street Stop Crosswalk and Trail Improvements

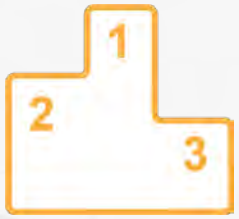
Interchange Improvements

All-way Stop Intersection Improvements

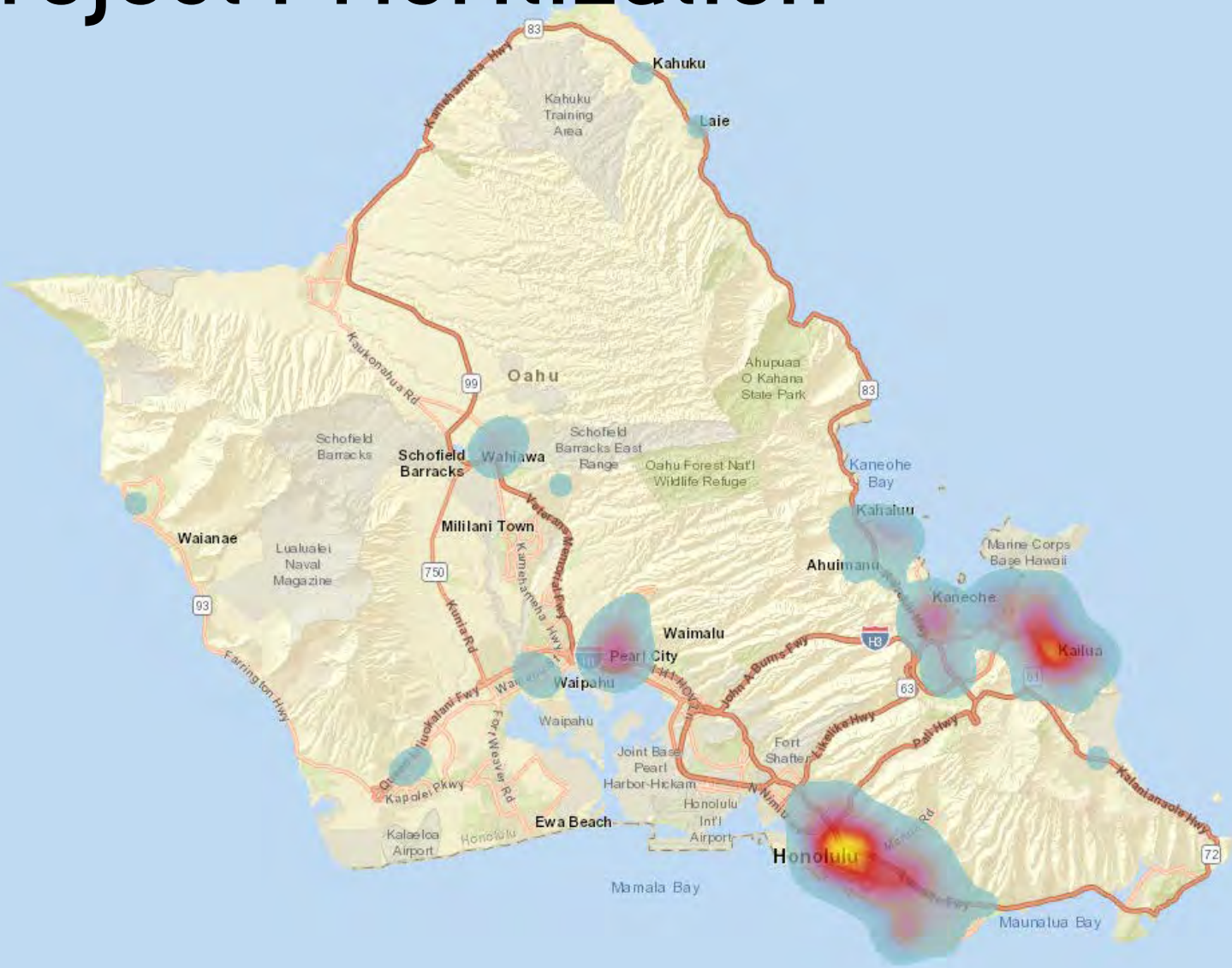
Signalized Intersection Improvements

Traffic Calming

Step 4: Project Prioritization



Project Prioritization -



685

pedestrian
on-line comments!

one-on-one conversations at Bluezones events in central Oahu and Honolulu, Bike UHM, and Malama Honua celebration

Outcomes: Countywide & Program Policies Working Together (the "5 E's")

Engineering

Education

Enforcement

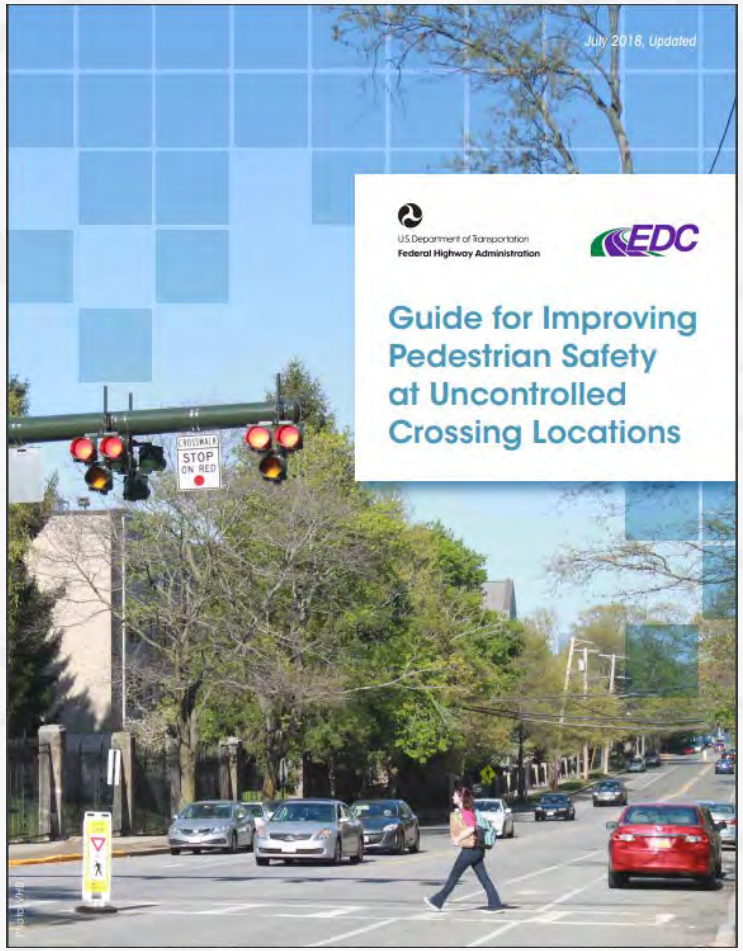
Encouragement

Evaluation

Legislative Advocacy

National and Other Cities' Best Practices and Policies

NACTO



Seattle

CITY OF PORTLAND, OREGON 1851

CITY OF LOS ANGELES FOUNDED 1781

Outcomes: Crosswalk Countermeasures

Table 3-1
SAFETY COUNTERMEASURES FOR UNCONTROLLED CROSSING LOCATIONS

High Visibility Crosswalk Markings

Standard treatment at all uncontrolled in crosswalks. Crosswalks should be marked as close to 90 degrees and as short as possible.

Parking Restriction on Crosswalk Approach

Standard treatment at all uncontrolled crosswalks. A minimum of 10 feet of red curb should be marked ahead of the crosswalk.

Photo Source: MyParkingSign

Adequate Nighttime Lighting Levels

Standard treatment at all uncontrolled crosswalks. All marked crosswalks should be provided with lighting, and the average illumination level in the crosswalk area should be at least equal to that provided at the intersection of two major streets, around 34 lux. The uniformity ratio should be no more than 3:1.

Photo Source: FHWA

Raised Crosswalk

Candidate treatment where the roadway speed is 30 mph or less and has three travel lanes or fewer.

Advance Stop Here For Pedestrians Sign and Stop Line

Candidate treatment at all uncontrolled crosswalks. Should be strongly considered on all roadways with 35+ mph speeds or 4+ lanes.

Photo Source: Bike Walk Lincoln Park

In-Street Pedestrian Crossing Sign

Candidate treatments on roadways with three travel lanes or fewer and with speeds that are 30 mph or less.

Photo Source: Impact Recovery Systems

Curb Extension

Candidate treatment at any location where space is available, such as on streets with parking.

Pedestrian Refuge Island

Candidate treatment at any location. Should be strongly considered on all 3+ lane roadways that do not currently have raised medians. Median refuges should be a minimum of six feet in width with truncated domes.

Rectangular Rapid Flashing Beacon (RRFB) Overhead and Roadside

Candidate treatment at many locations with higher speeds, ADT, and number of traffic lanes.

Pedestrian Hybrid Beacon (PHB)

Candidate treatment for many roadways with the highest speeds, ADT, and number of travel lanes. Include advanced stop bar.

In-roadway Warning Lights (IRWL)

Candidate treatment at many locations with lower speeds and ADT.

Photo Source: Silicon Constellations

Fully Signalized Intersection

Candidate treatment at locations with more than 5 lanes. Should only be installed if the location meets traffic signal warrants.

Table 4-1
UNIVERSAL CONSIDERATION FOR SIGNAL-CONTROLLED CROSSING LOCATIONS

Accessible Pedestrian Signals

Audible and vibrotactical information, such as "Walk" indications and direction of crossing, in nonvisual formats to improve accessibility for blind pedestrians.
Applicable to ALL PROJECTS.

Pedestrian Countdown Signal

Device displays a countdown of the seconds remaining for a pedestrian crossing interval during the flash/don't walk stage.
Applicable to MAJOR SIGNAL MODIFICATIONS.

Adequate Crossing Times

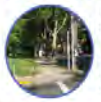
Adequate flashing Don't Walk time based on a speed of 3.5 feet per second.
Applicable to SIGNAL RETIMING.

Rest in Walk Along Major Streets

For coordinated corridors, rest in walk for pedestrians walking along the major street.
Applicable to SIGNAL RETIMING.

Photo Source: Washington County

Pedestrian Phase Actuation Extension



Extend actuation window of pedestrian phase to the beginning of the green phase when timing allows.
Applicable to SIGNAL MODIFICATIONS CONSIDERING NEARBY INTERSECTIONS AND PROGRESSION.

Pedestrian Recall

Develop coordinated signal timing plans with pedestrian signal intervals every cycle.
Applicable to SIGNAL RETIMING.

Reduce Cycle Lengths

Minimize signal cycle lengths to reduce pedestrian delay.
Applicable to SIGNAL RETIMING.

Photo Source: ITE

Table 4-2
SIGNAL ENHANCEMENTS

No Right Turn on Red (RTOR)

Can help prevent crashes between vehicles turning right on red from one street and through vehicles on the cross street, and crashes involving pedestrians. Should be considered at skewed intersections, or where exclusive pedestrian "WALK" phases, LPIs, sight distance issues, or high pedestrian volumes are present.

All-Pedestrian Phase

Signal enhancement to be provided at high pedestrian volume intersections without diagonal pedestrian desire lines.

Protected Right Turns

Applicable at intersections with a fairly high pedestrian volume and a high conflicting turning vehicle volume.

Pedestrian Scramble

Signal enhancement to be provided at high pedestrian volume intersections with diagonal pedestrian desire lines.

Hybrid Flashing Yellow

Applicable at intersections with a medium to high pedestrian volume.

Leading Pedestrian Interval (LPI)

Signal enhancement appropriate at intersections with high pedestrian volumes, near sensitive land uses, permitted left turns, atypical intersection geometry, or high volumes of turning vehicles.

Turning Vehicle Yield to Pedestrian Signs

Applicable at intersection with a low pedestrian volumes where conflicts between turning vehicles and pedestrians are present.

Time of Day Pedestrian Recall

Applicable at intersections with a medium pedestrian volume across any pair of crosswalks in order to provide a "Walk" phase during the time of day with the heaviest pedestrian volumes.

Curb Extension

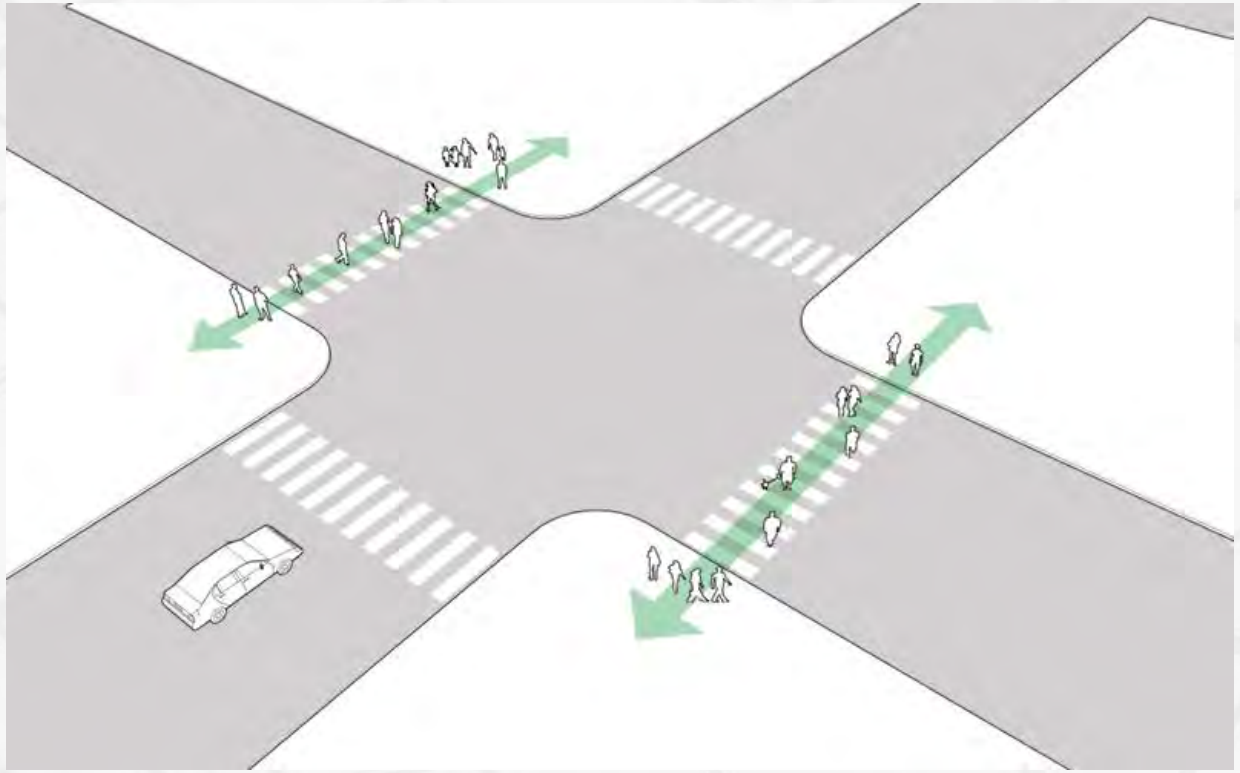
Applicable at intersections with a high pedestrian volume and a low turning vehicle volume that does not qualify as a candidate for a pedestrian scramble or all-pedestrian signal phase.

Split Signal Phasing

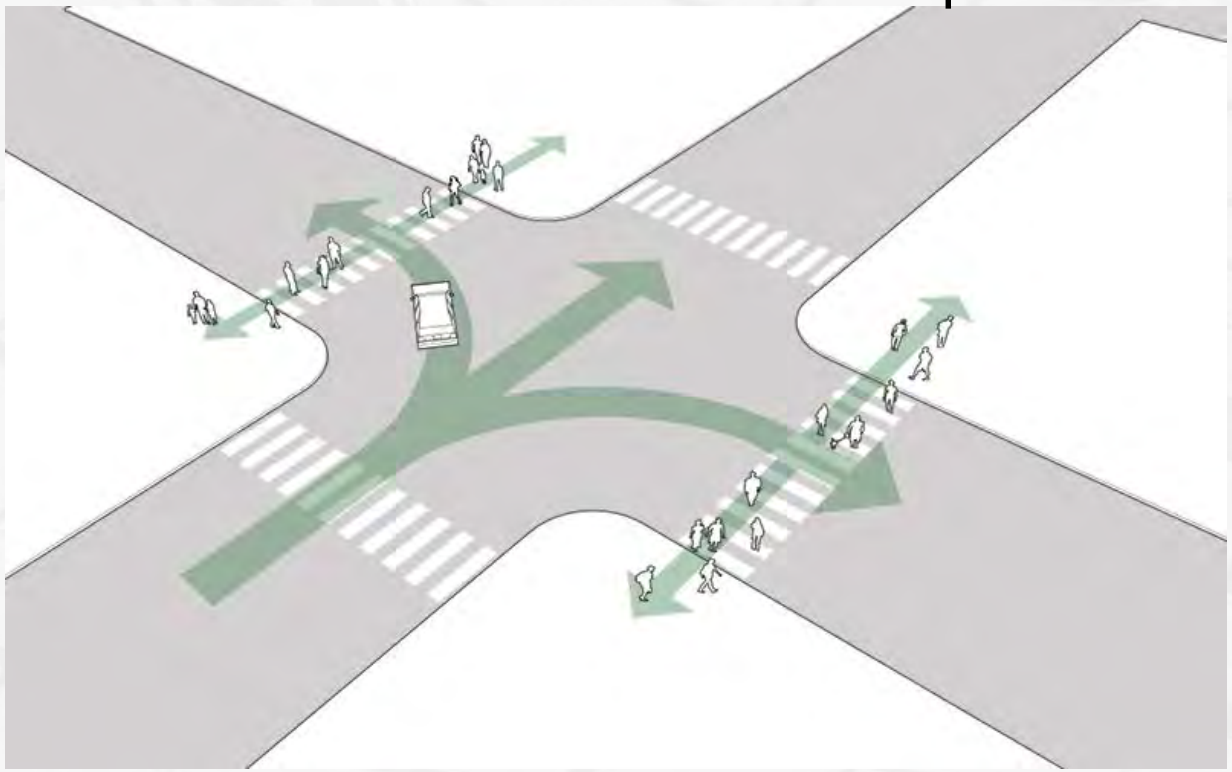
Applicable at intersection with high pedestrian volumes and high turning vehicle volumes that do not qualify for a pedestrian scramble or an all-pedestrian signal phase.

Crosswalk Countermeasures Example: Leading Pedestrian Interval (LPI)

Signalized Intersection Improvements



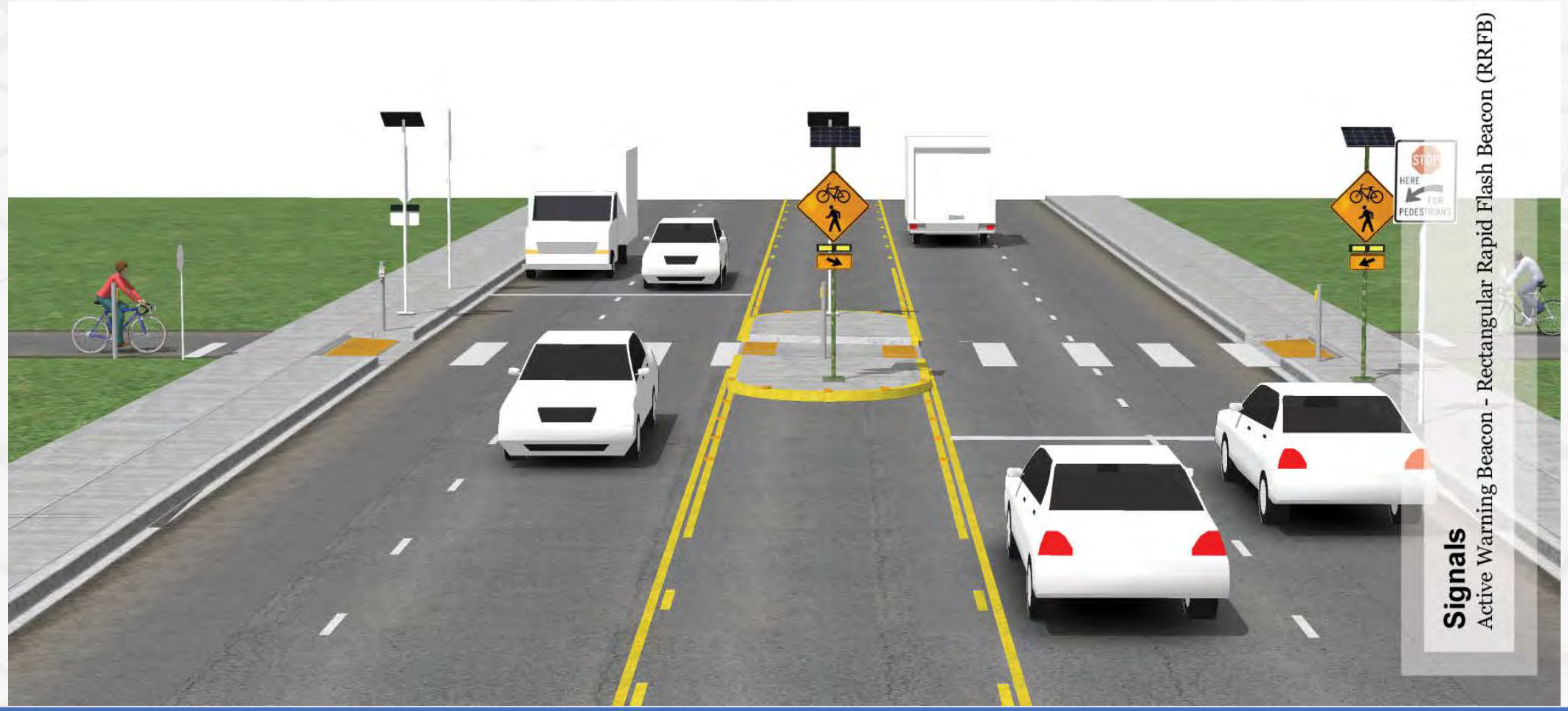
Phase 1: Pedestrians only
Pedestrians are given a minimum 3–7 second head start entering the signalized intersection.



Phase 2: Pedestrians and cars
Through and turning traffic are given the green light. Turning traffic yields to pedestrians already in the crosswalk.

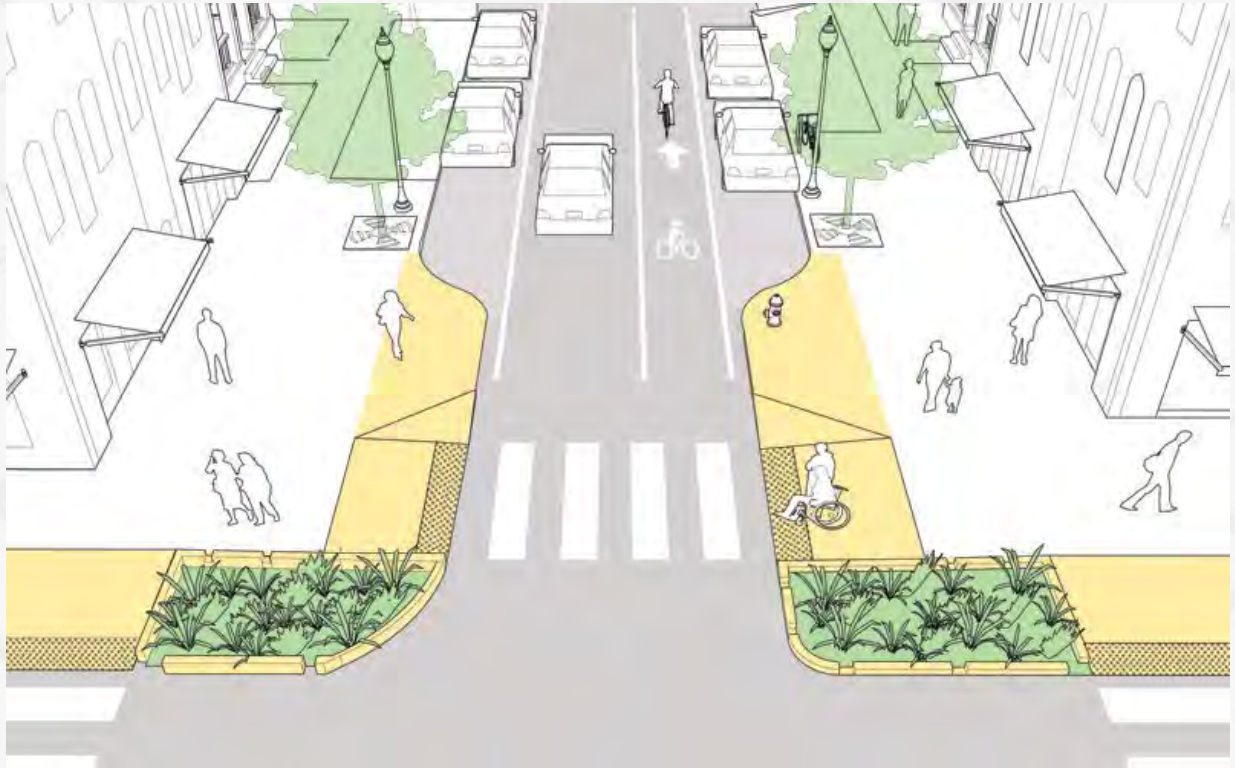
Crosswalk Countermeasures Example: Rectangular Rapid Flash Beacons

Midblock Crossing Improvements



Crosswalk Countermeasures Example: Curb Extensions

Traffic Calming



Outcomes: Ped Program Recommendations

ONGOING EDUCATION CAMPAIGN

- Expand upon the Pedestrian Safety Program and Walk Wise Hawaii
- Provide information on transportation opportunities and the rules of the road through advertisements, online media, and other items

WALK TO WORK EVENTS

- Walk to Work Day or Month to potentially include:
  - Nature walks, scavenger hunts, historical walking tours, and neighborhood parties
- Employers could incentivize employees to walk to work through competitions and giveaways

TRANSPORTATION DEMAND MANAGEMENT (TDM)

- TDM program managed by City and County of Honolulu could include:
  - Best practices, legislative recommendations and enabling policies
  - Island-wide mode share targets
  - Residential Commute Trip Reduction Strategies and Investments
  - Employer Commute Trip Reduction Strategies and Investments
  - Community Outreach and engagement
  - Program website
  - Program Administration, Marketing, and Educational Materials
  - Online reporting and webmap monitoring mechanism

FAÇADE IMPROVEMENTS PROGRAM

- Pay or subsidize the cost of upgrading storefronts to:
  - Create a more aesthetically pleasant environment in which people are more likely to walk
  - Lure people out of their cars and reduce parking demand

PEDESTRIAN FOCUS AREA

- Encourage the development of pedestrian routes and enhanced intersections within pedestrian focus areas
- Creation of pedestrian routes and intersections could include:
  - Wider sidewalks
  - Shorter street crossings
  - Consolidated driveway cuts
  - Enhanced street furniture
  - Widespread wayfinding

FAST (FIXING AND STREAMLINING TRANSIT) POLICY (FOR HONOLULU'S URBAN CORE)

- Provides public transportation priority in transportation planning and operations considerations
- Prioritizing transit would increase walking as all transit riders are pedestrians at the beginning and end of their journey

TRANSIT EXPANSION

- Encourage active transit options by expanding 24/7 bus routes, express bus routes, and additional Limited stop bus options to serve rural/ outlying communities

POLICE DEPARTMENT INVOLVEMENT

- In-person education and police warnings
- Tickets and fines for violations
- Effective for all streets, especially:
  - New roadway configurations
  - Traffic signal changes
  - Areas with new developments
- Focus on enforcing the top 3 most harmful driving behaviors to pedestrians such as distracted driving, speeding and impaired driving in areas with high pedestrian activity

CURBSIDE MANAGEMENT PROGRAM

- Open up the curb to pedestrians, bicycles, and transit by dedicating space for:
  - Parklets and outdoor restaurant seating
  - Bike share stations or bicycle parking
  - Transit-only lanes
  - Time-limited passenger loading

WORK ZONE ACCOMMODATION

- Provide pedestrian accommodation during road work and construction by:
  - Separating pedestrians from other road users in construction areas

NEW MOBILITY PLAN

- Provide guidance and requirements for accommodating new mobility – segways and scooters – on Oahu's streets and focus on preserving sidewalk space for pedestrians

HONOLULU QUICK BUILD

- Short-term, low-cost transportation projects that make an immediate impact for a neighborhood
- Design-testing and prototyping aligned with Vision Zero

FOCUS ON DE-CRIMINALIZING WALKING

- Encourage the City and County of Honolulu to repeal the Distracted Walking Law and fund efforts such as Vision Zero instead
- Eliminate jaywalking offences and to transfer liability to drivers operating vehicle in areas with heavy pedestrian activity or walking environments that are considered low stress or low speed
- Equity consideration, i.e. criminalizing walking may disproportionally affect lower income communities

VISION ZERO

- A comprehensive strategy to eliminate all traffic deaths and severe injuries
- Online High Crash Network (HCN) for both streets and intersections, including equity analysis
- Vision Zero project prioritization list
- Guide, pledge, educational, and campaign materials
- Legislative recommendations
- Design recommendations and guidelines
- Community Outreach and engagement; website development
- Design testing and data evaluation

ADVOCATE FOR LEGALIZING CROSSING DURING COUNTDOWN SIGNALS

- Encourage the City and County of Honolulu to repeal the law that makes it illegal to cross the street when the "Don't Walk" or "Upraised Palm" is illuminated

PRESERVE PEDESTRIAN RIGHTS IN TRAFFIC CODE

- Revise the traffic code to provide for pedestrian rights and responsibilities
  - Preserve pedestrian equity, safety, and accessibility

PRESERVE PEDESTRIAN RIGHTS IN CROSSWALK

- Provide clarity on failure to yield or failure to stop for a pedestrian in a marked or unmarked crosswalk as a traffic offense

Program highlight: Vision Zero

VISION ZERO IS A STRATEGY TO ELIMINATE ALL TRAFFIC FATALITIES BY A TARGET DATE

by 2030

Honolulu COMPLETE STREETS

VISION ZERO

CAMPAIGN: DRIVER EDUCATION


DON'T MAKE A QUICK TRIP
LAST A LIFETIME.
IT'S TIME TO SLOW DOWN, PORTLAND.
VISION ZERO
VISION ZERO
PBOT
PORTLAND BUREAU OF TRANSPORTATION

Program highlight: Honolulu Quick Build

Examples of Quick Build Improvement Types

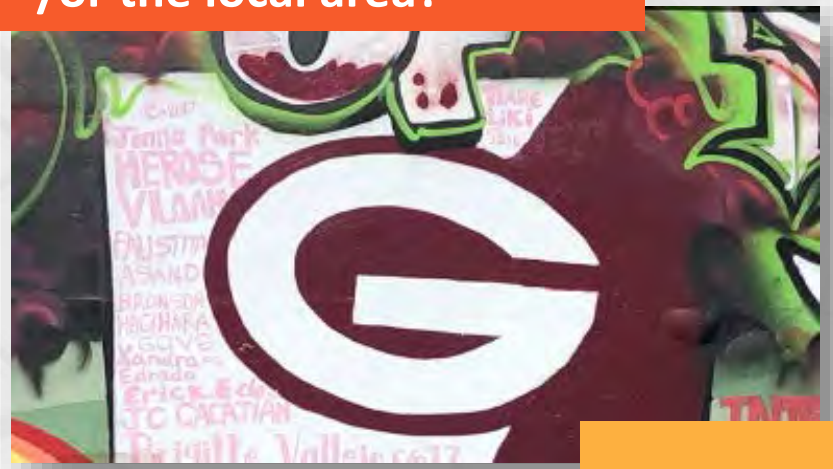
Painted Utility Boxes

Decorative Curb Extensions

Decorative Crosswalks

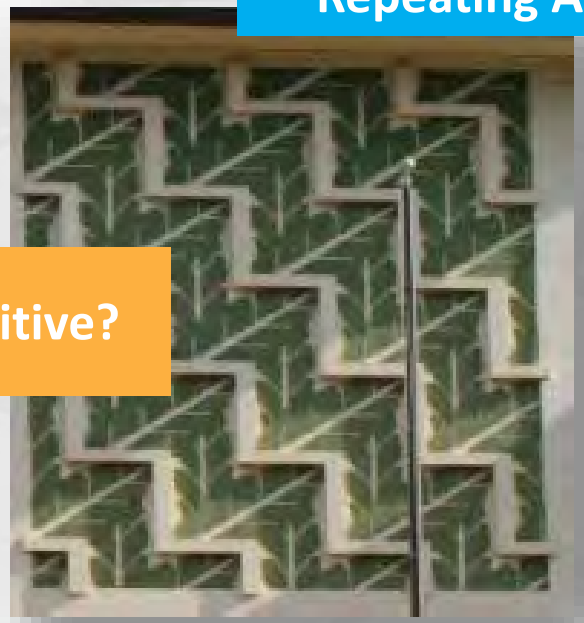
Inspiration

Does it represent Farrington and /or the local area?



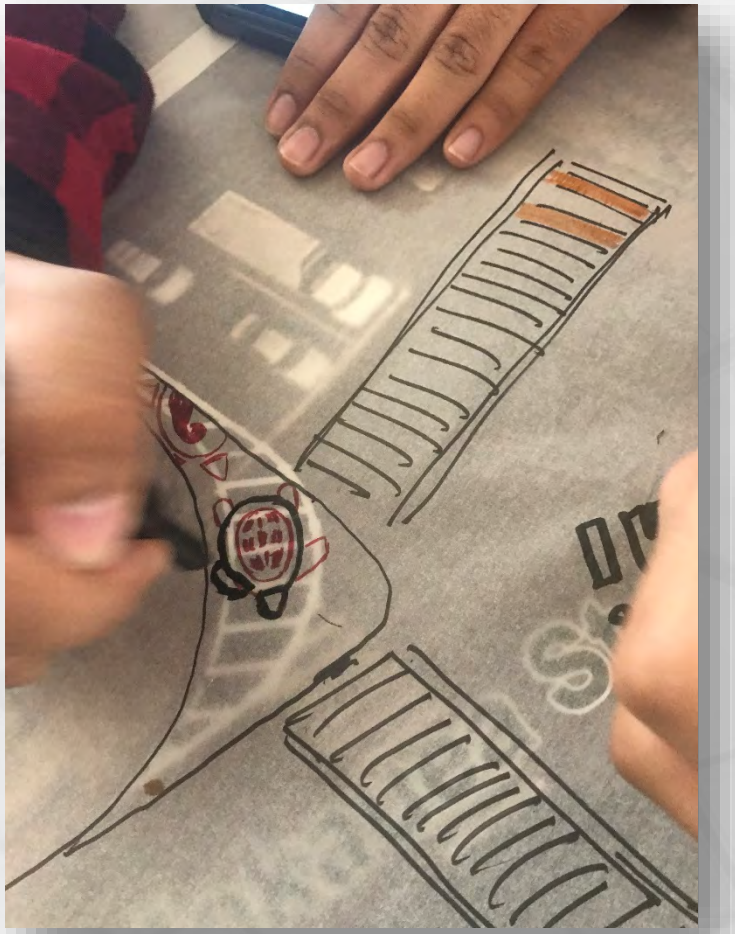
Repeating Abstract or Pattern

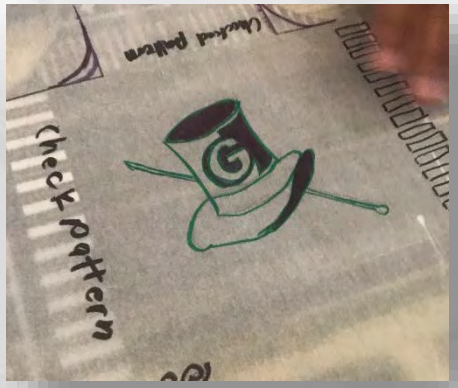
Is the pattern context-sensitive?

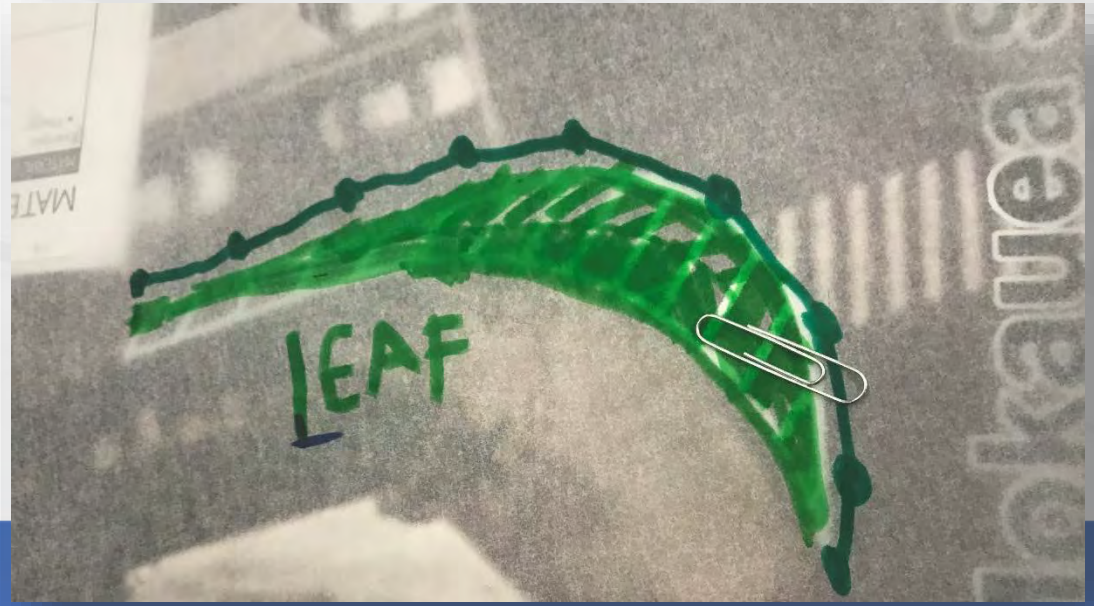


April Design Workshop

April Design Workshop







Live Polling Instructions

- Go to www.menti.com and use the code 92 33 60 (spaces are optional)

Practice Question

Most often, I am a pedestrian:

On the streets around my home

On the streets around my work

On the streets near my school

On a trail in a park, on the beach, or hiking

Other- somewhere else

Of the 5 E's + A (Advocacy); please rank them by your priorities

Education

Encouragement

Enforcement

Evaluation

Engineering (Complete Streets and Countermeasures)

Legislative Advocacy

Do you choose your walking route based on whether a crosswalk is present?

Yes

No

Now that you know more about Vision Zero (VZ), do you support the City's VZ efforts in general?

Yes

No

I don't know

Now that you know more about Quick Build, do you support the City's Quick Build efforts in general?

Yes

No

I don't know

Considering new mobility modes (e.g. scooters, segways), is preserving pedestrian-only facilities (sidewalks, pedestrian-only malls, etc) important to you?

Very important to me

I feel neutral about this

Not that important to me

I don't know

Mahalo!

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