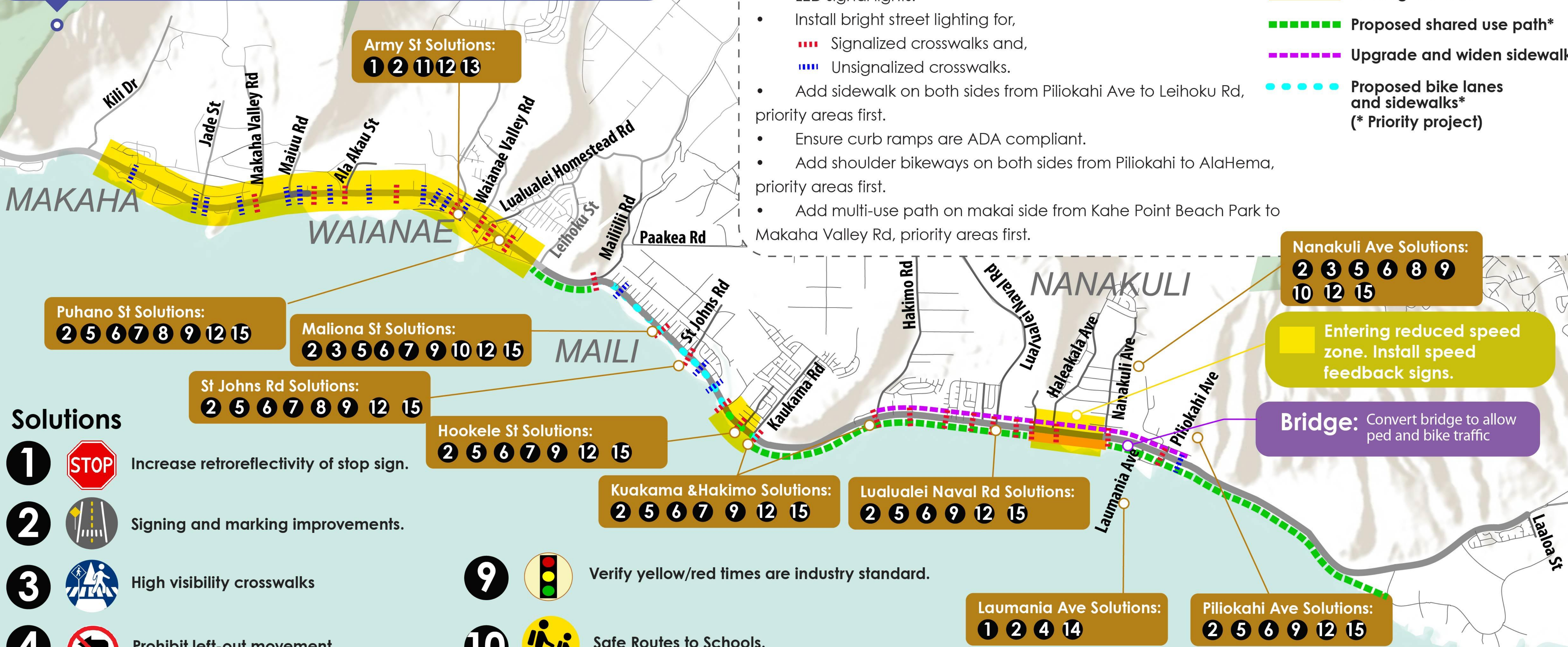


PRELIMINARY SOLUTIONS TO IMPROVE SAFETY

Overall solutions

- LED signal lights.
- Install bright street lighting for,
 - Signalized crosswalks and,
 - Unsignalized crosswalks.
- Add sidewalk on both sides from Piliokahi Ave to Leihoku Rd, priority areas first.
- Ensure curb ramps are ADA compliant.
- Add shoulder bikeways on both sides from Piliokahi to AlaHema, priority areas first.
- Add multi-use path on makai side from Kahe Point Beach Park to Makaha Valley Rd, priority areas first.

- Existing Sidewalk
- Proposed shared use path*
- Upgrade and widen sidewalk*
- Proposed bike lanes and sidewalks* (* Priority project)



Solutions

- 1

Increase retroreflectivity of stop sign.
- 2

Signing and marking improvements.
- 3

High visibility crosswalks
- 4

Prohibit left-out movement.
- 5

Include leading ped interval at signal.
- 6

Pedestrian countdown timer.
- 7

Add green left arrows.
- 8

Add right turn lane.
- 9

Verify yellow/red times are industry standard.
- 10

Safe Routes to Schools.
- 11

Pedestrian hybrid beacon.
- 12

Raised median.
- 13

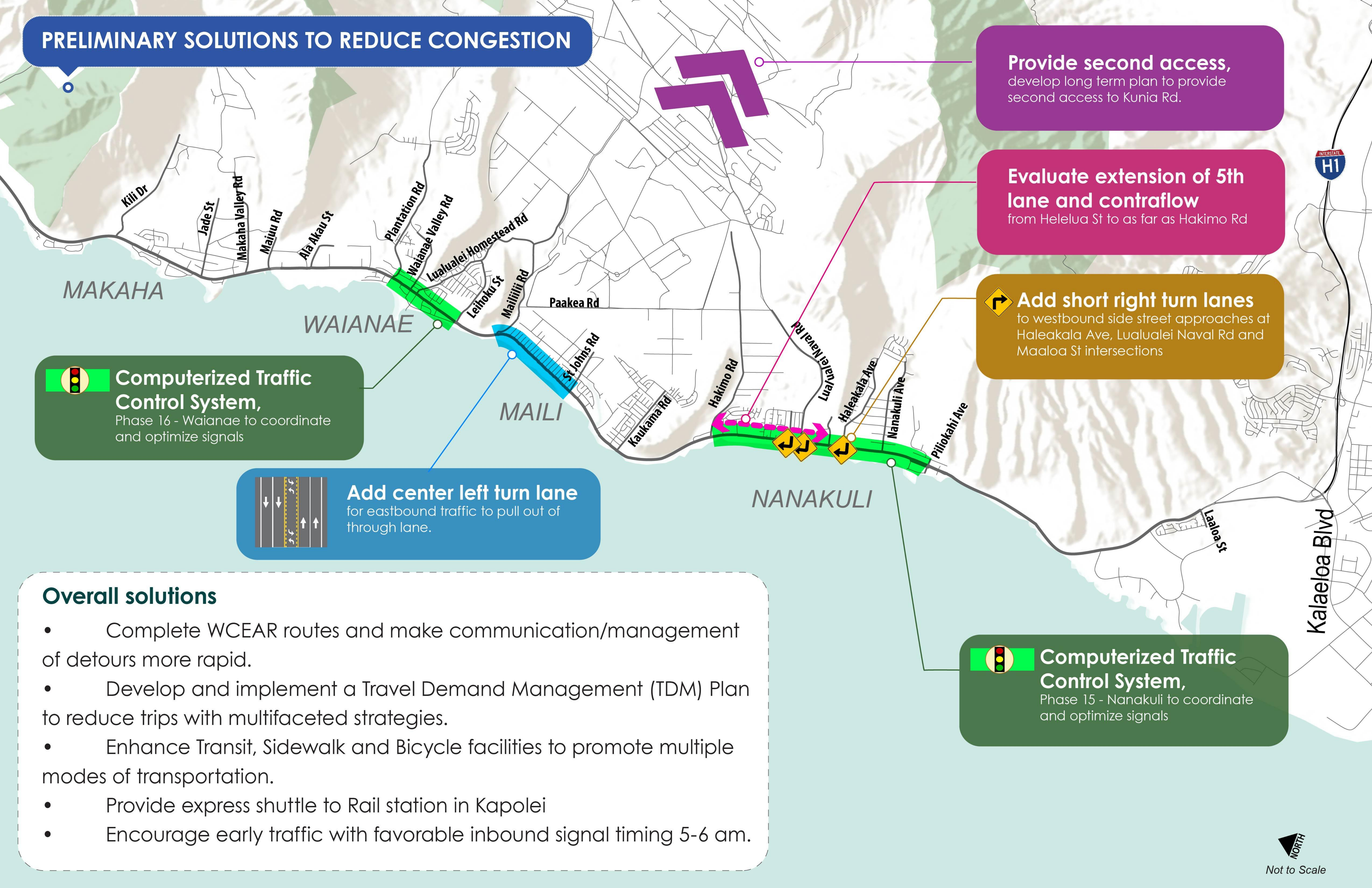
Advanced stop markings.

- 14

Convert open median to left-in only movement.
- 15

Left turn lane offset.

PRELIMINARY SOLUTIONS TO REDUCE CONGESTION

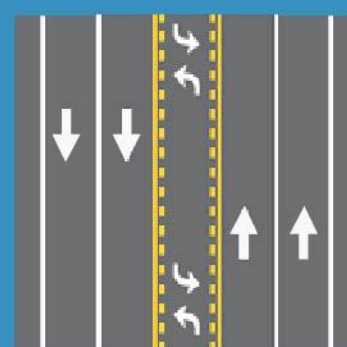


Provide second access,
develop long term plan to provide
second access to Kunia Rd.

**Evaluate extension of 5th
lane and contraflow**
from Helelua St to as far as Hakimo Rd

 **Add short right turn lanes**
to westbound side street approaches at
Haleakala Ave, Lualualei Naval Rd and
Maaloa St intersections

 **Computerized Traffic
Control System,**
Phase 16 - Waianae to coordinate
and optimize signals



Add center left turn lane
for eastbound traffic to pull out of
through lane.

 **Computerized Traffic
Control System,**
Phase 15 - Nanakuli to coordinate
and optimize signals

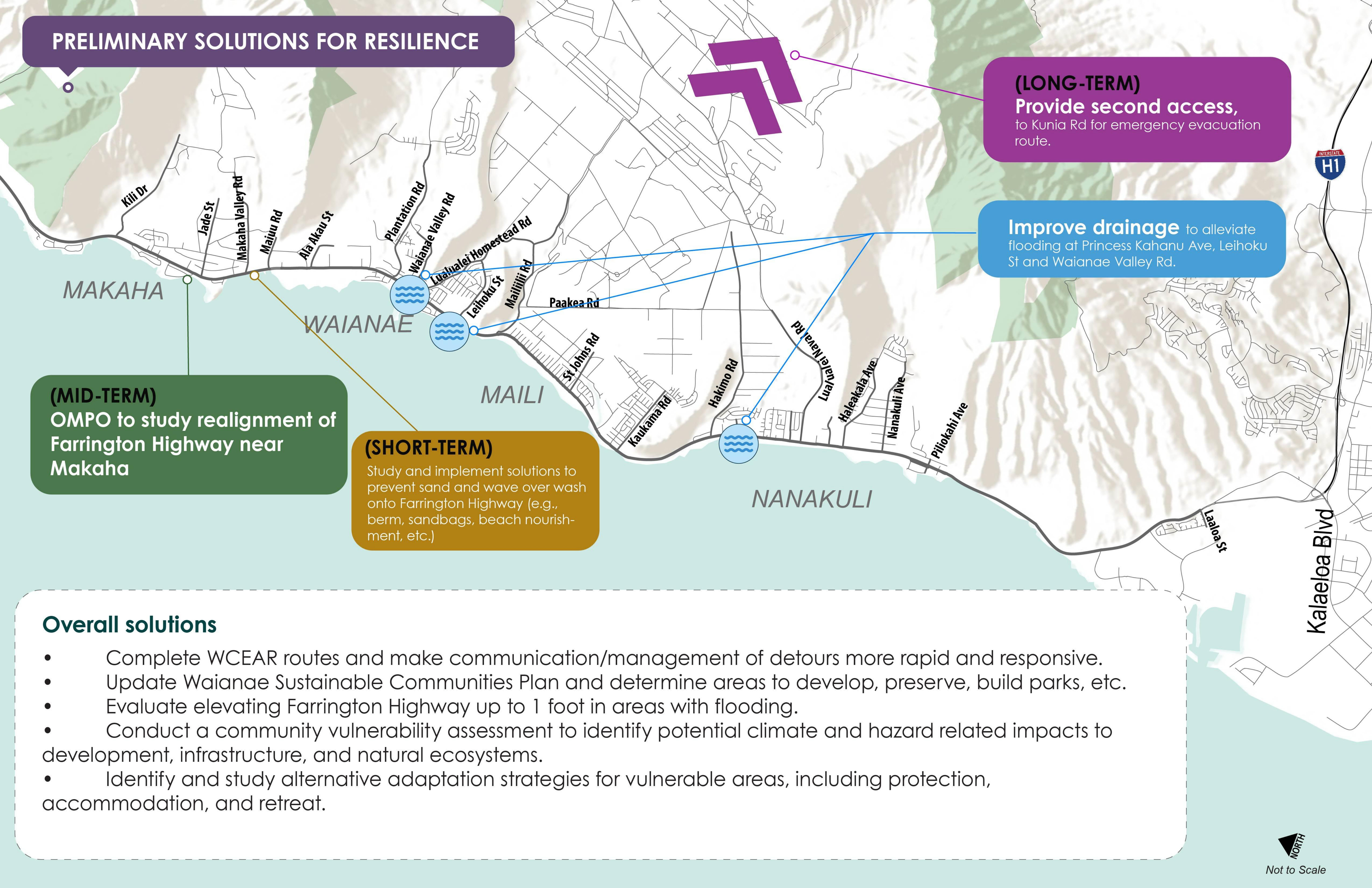
Overall solutions

- Complete WCEAR routes and make communication/management of detours more rapid.
- Develop and implement a Travel Demand Management (TDM) Plan to reduce trips with multifaceted strategies.
- Enhance Transit, Sidewalk and Bicycle facilities to promote multiple modes of transportation.
- Provide express shuttle to Rail station in Kapolei
- Encourage early traffic with favorable inbound signal timing 5-6 am.



Not to Scale

PRELIMINARY SOLUTIONS FOR RESILIENCE



(MID-TERM)
OMPO to study realignment of Farrington Highway near Makaha

(SHORT-TERM)
Study and implement solutions to prevent sand and wave over wash onto Farrington Highway (e.g., berm, sandbags, beach nourishment, etc.)

(LONG-TERM)
Provide second access, to Kunia Rd for emergency evacuation route.

Improve drainage to alleviate flooding at Princess Kahanu Ave, Leihoku St and Waianae Valley Rd.

Overall solutions

- Complete WCEAR routes and make communication/management of detours more rapid and responsive.
- Update Waianae Sustainable Communities Plan and determine areas to develop, preserve, build parks, etc.
- Evaluate elevating Farrington Highway up to 1 foot in areas with flooding.
- Conduct a community vulnerability assessment to identify potential climate and hazard related impacts to development, infrastructure, and natural ecosystems.
- Identify and study alternative adaptation strategies for vulnerable areas, including protection, accommodation, and retreat.