

Palau Walkability Institute - Update



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Agenda

1. Judy program update
2. Roundabout proposal
3. Main Road opportunity
4. Vertical delineators
5. Complete Streets policy



Program update

- Judy may provide slide(s) here

2. Roundabout essentials . . .



Benefits

- Fewer & less severe collisions.
- Calms traffic, less speeding.
- Low maintenance cost; works without power.

Design Keys

- Deflection & entry angles slow traffic.
- Mountable apron for rear truck tires.
- Entry splitter islands provide pedestrian refuges.
- Pedestrian crossings set back from yield lines.

Three proposed intersections for small roundabouts (mini-circles).

PVA



Airai



Koror

Asahi
field

**Small roundabouts will dramatically
improve flow and safety for turning,
especially at PVA & Asahi.
(Designs by Michael Moule, PE)**

Airai Shell



PVA

Asahi Field



PVA



**Each needs
improved
pedestrian
crossings.**

Airai



Asahi field



PVA



Splitter islands protect crossing pedestrians



Large vehicles can navigate small circles.

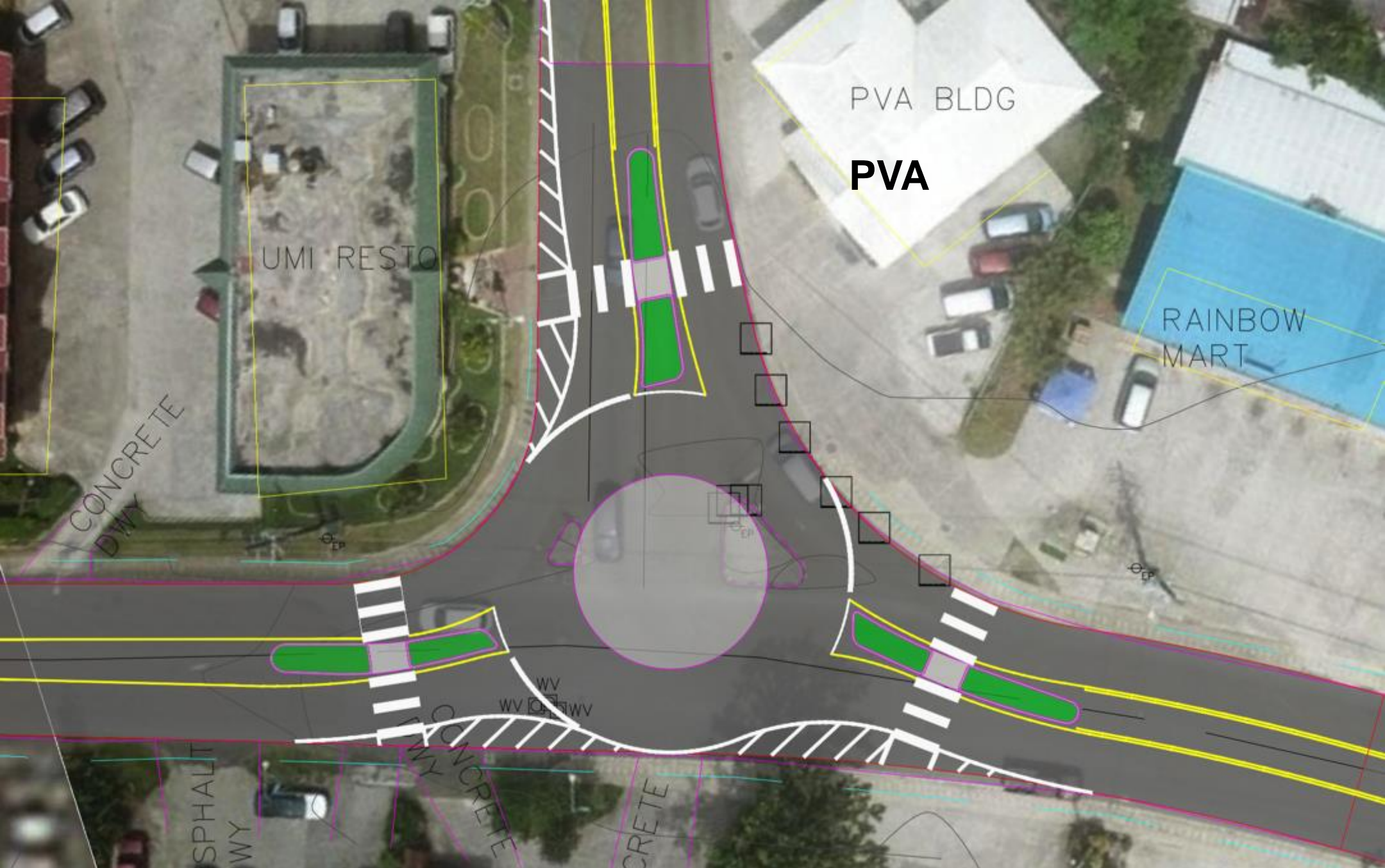


Mountable curb accommodates rear tires of larger vehicles.



A fully mountable mini-roundabout allows very large trucks to pass over if needed.





PVA BLDG

PVA

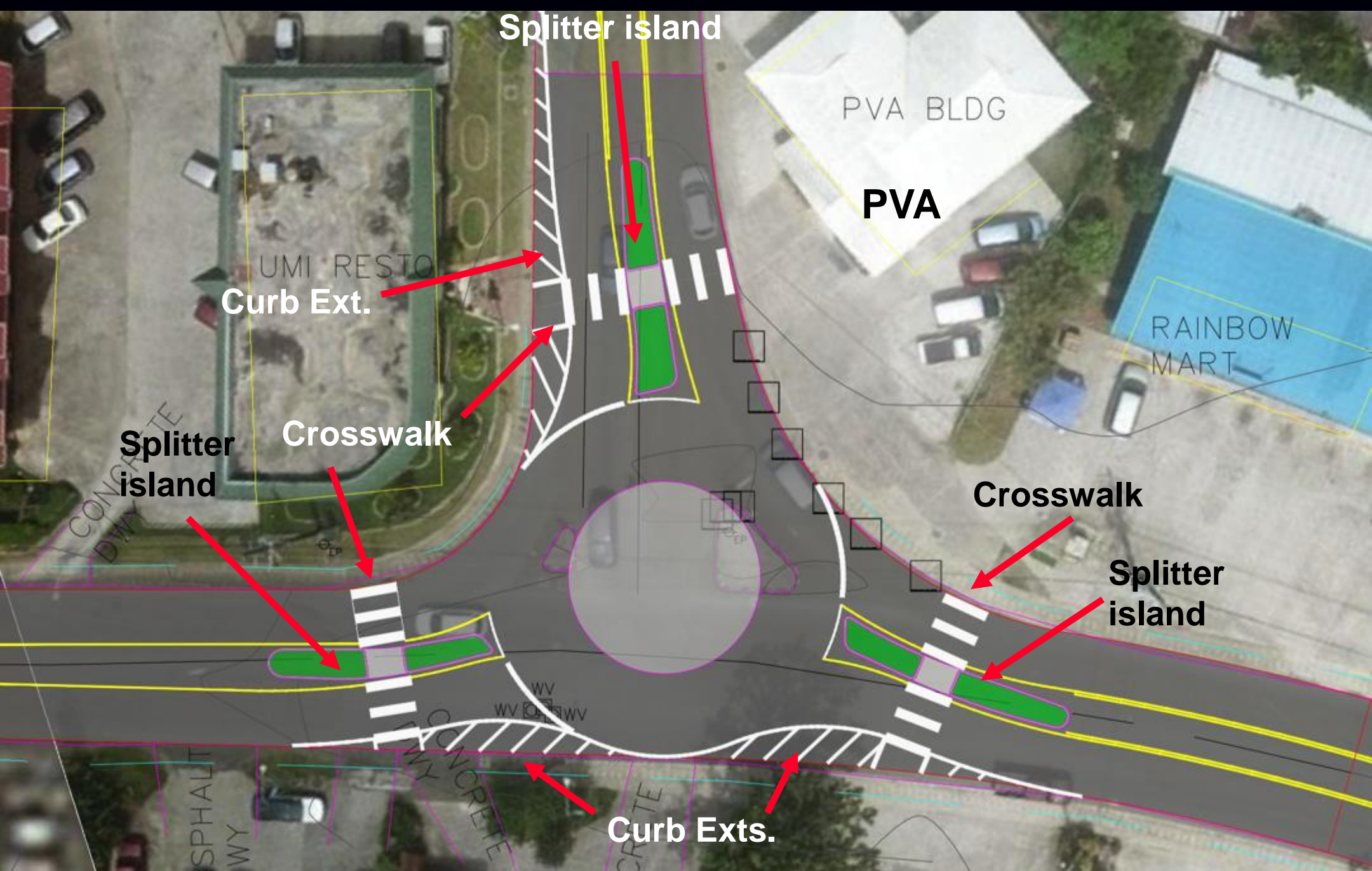
UMI RESTO

RAINBOW
MART

CONCRETE
DWY

SPHALT
WY

CONCRETE
DWY



Splitter island

PVA BLDG

PVA

UMI RESTO

Curb Ext.

RAINFLOW
MART

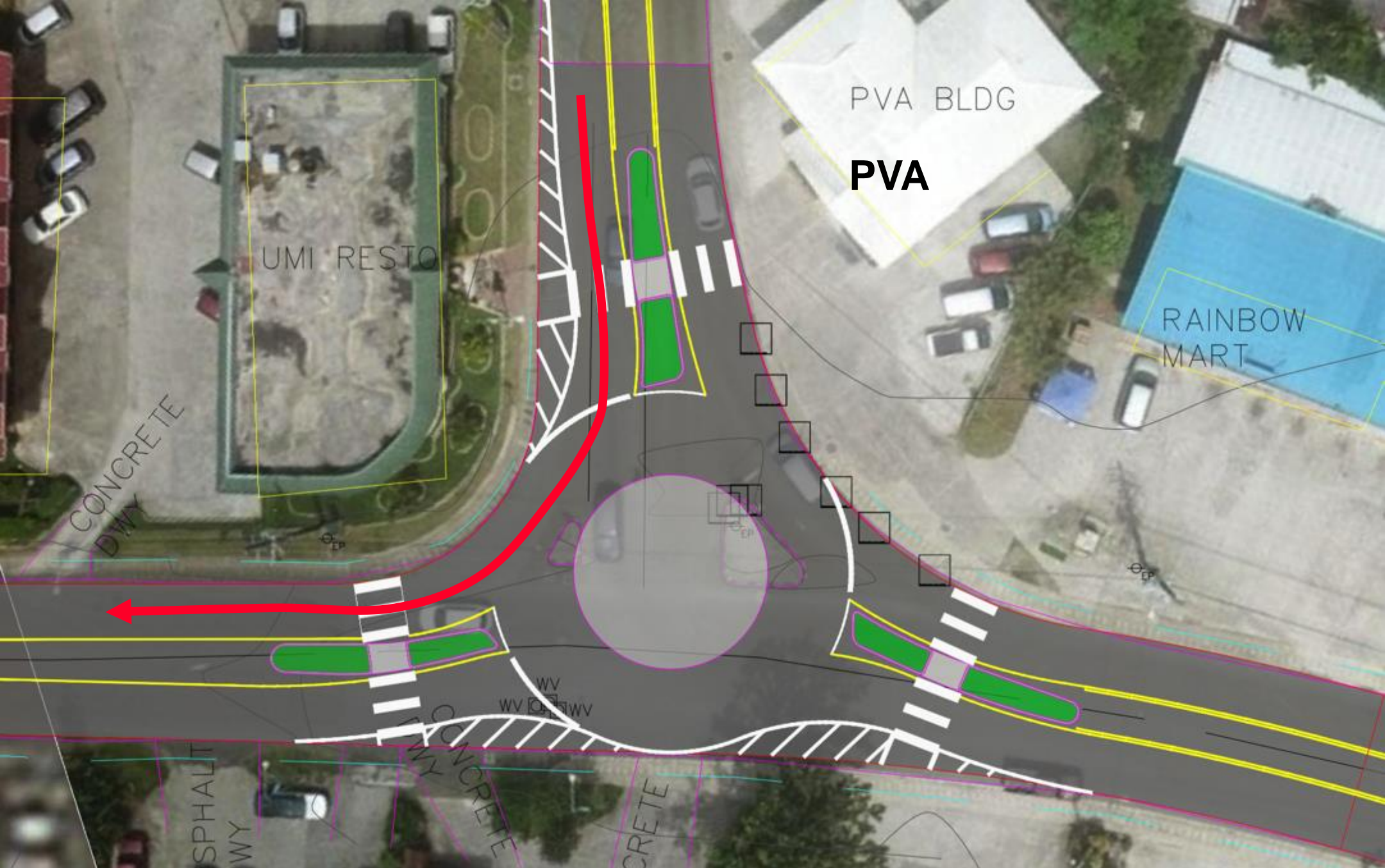
Splitter
island

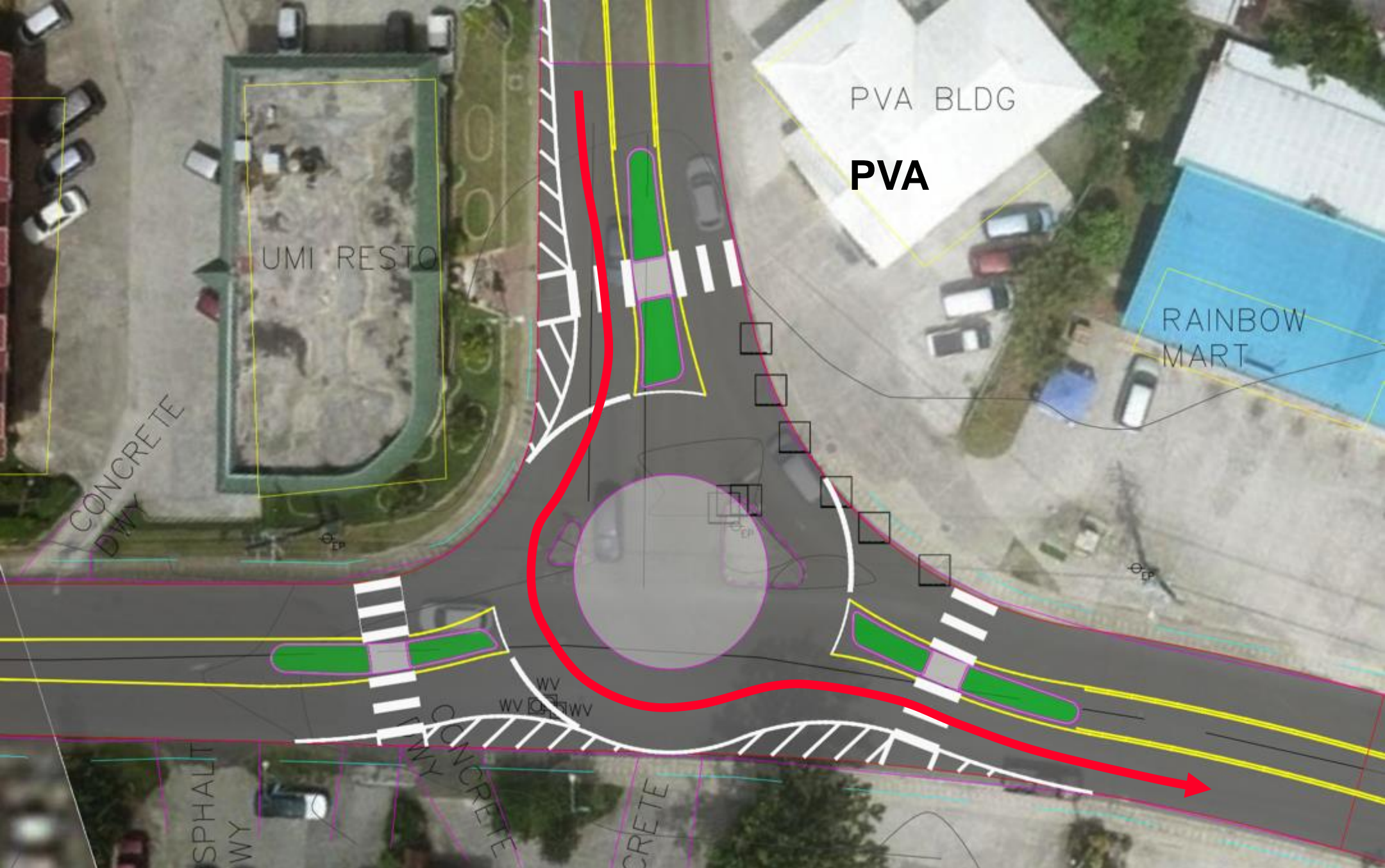
Crosswalk

Crosswalk

Splitter
island

Curb Exts.





PVA BLDG

PVA

UMI RESTO

RAINBOW
MART

CONCRETE
DRY

SPHALT
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CONCRETE

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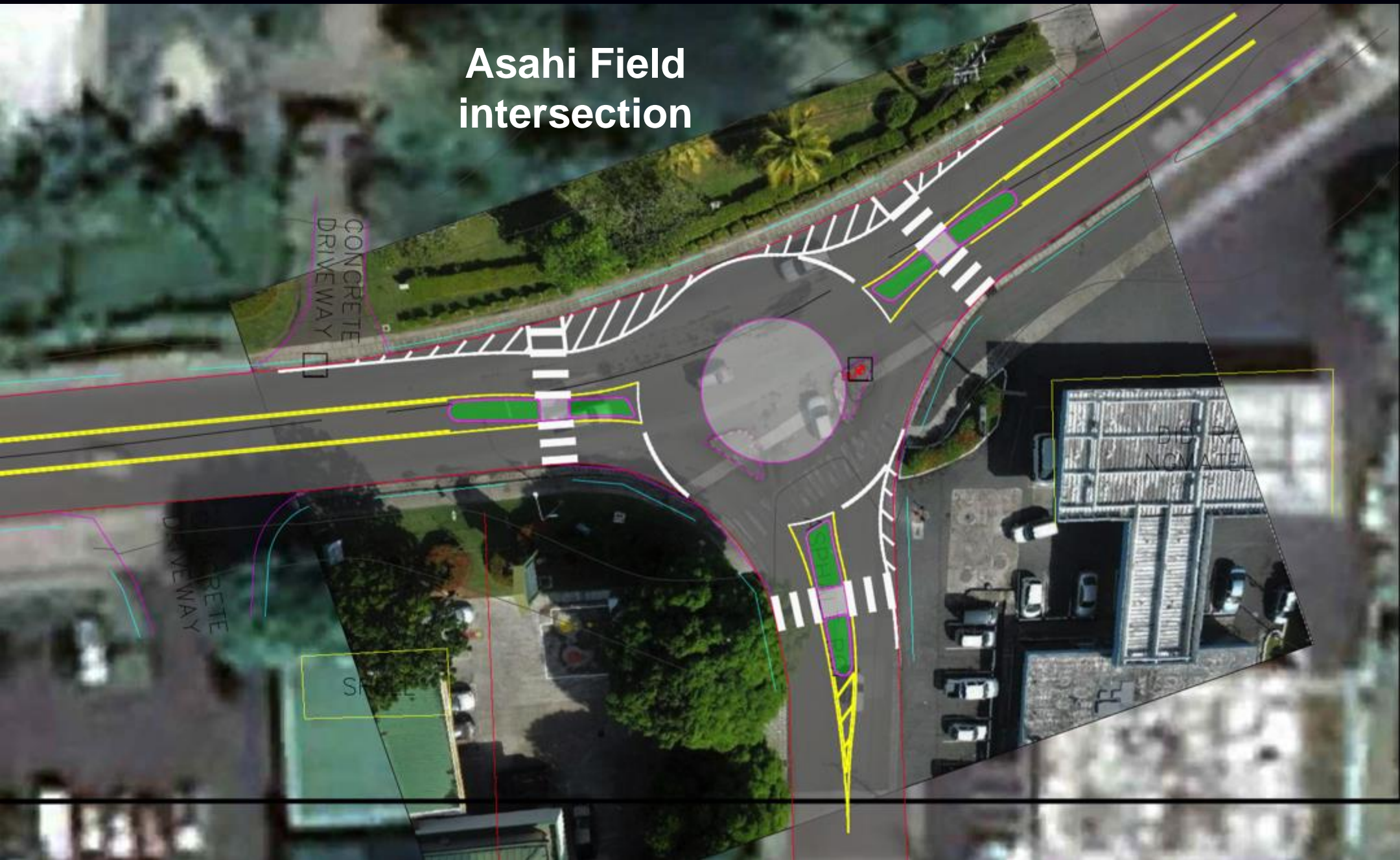
Construction notes (1)

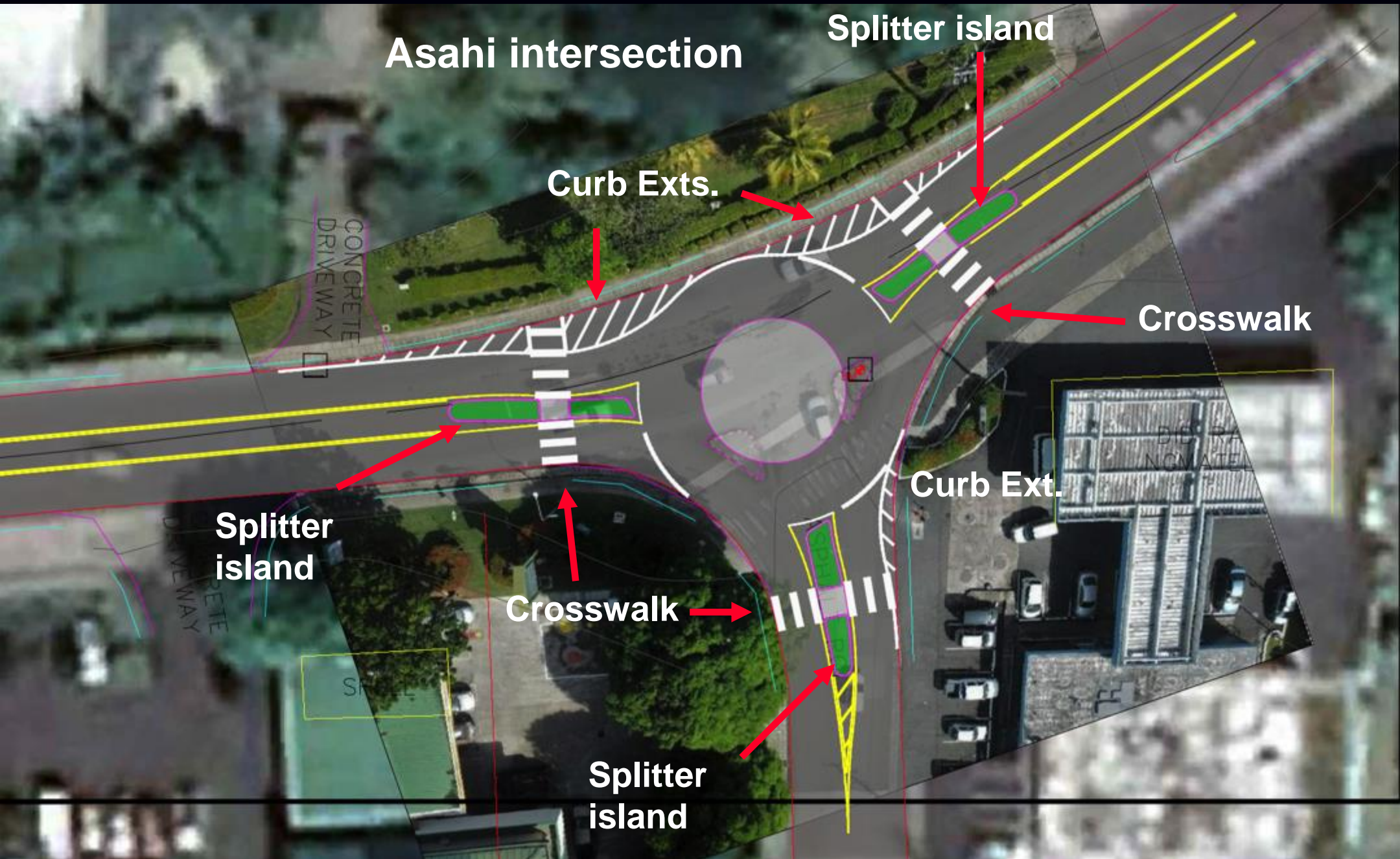
- These circles are designed to fit in the existing pavement space.
- The existing raised triangular islands at the PVA and Asahi intersections must be removed, with full pavement structure placed below them.
- Each circle includes splitter islands on each leg – small islands separating the entering and exiting travel lanes.
- The designs include curb extensions (painted with white hash marks) to create deflection for vehicles entering the circle, which assures that they slow to the appropriate speed.
- The curb extensions (white paint) could be just paint, but will be much more effective if constructed of slightly raised or textured concrete to deflect all but the very largest trucks.

Construction notes (2)

- The central gray circle in each roundabout is designed to be fully mountable. For these roundabouts (a 23.4 meter diameter for PVA and 23.2 meters for Asahi), large trucks will need to track over a portion of the central island when circulating.
- These mountable central islands are best if constructed using raised concrete, about 2 to 3 inches above the pavement, perhaps raised to 4 or 5 inches at the center, so it is mountable, but raised enough to deter all but the very largest vehicles from traveling over the edge.
- The splitter islands can also also be created of textured and similarly raised concrete to allow the largest vehicles to travel over them when needed.

Asahi Field intersection





Asahi intersection

Splitter island

Curb Exts.

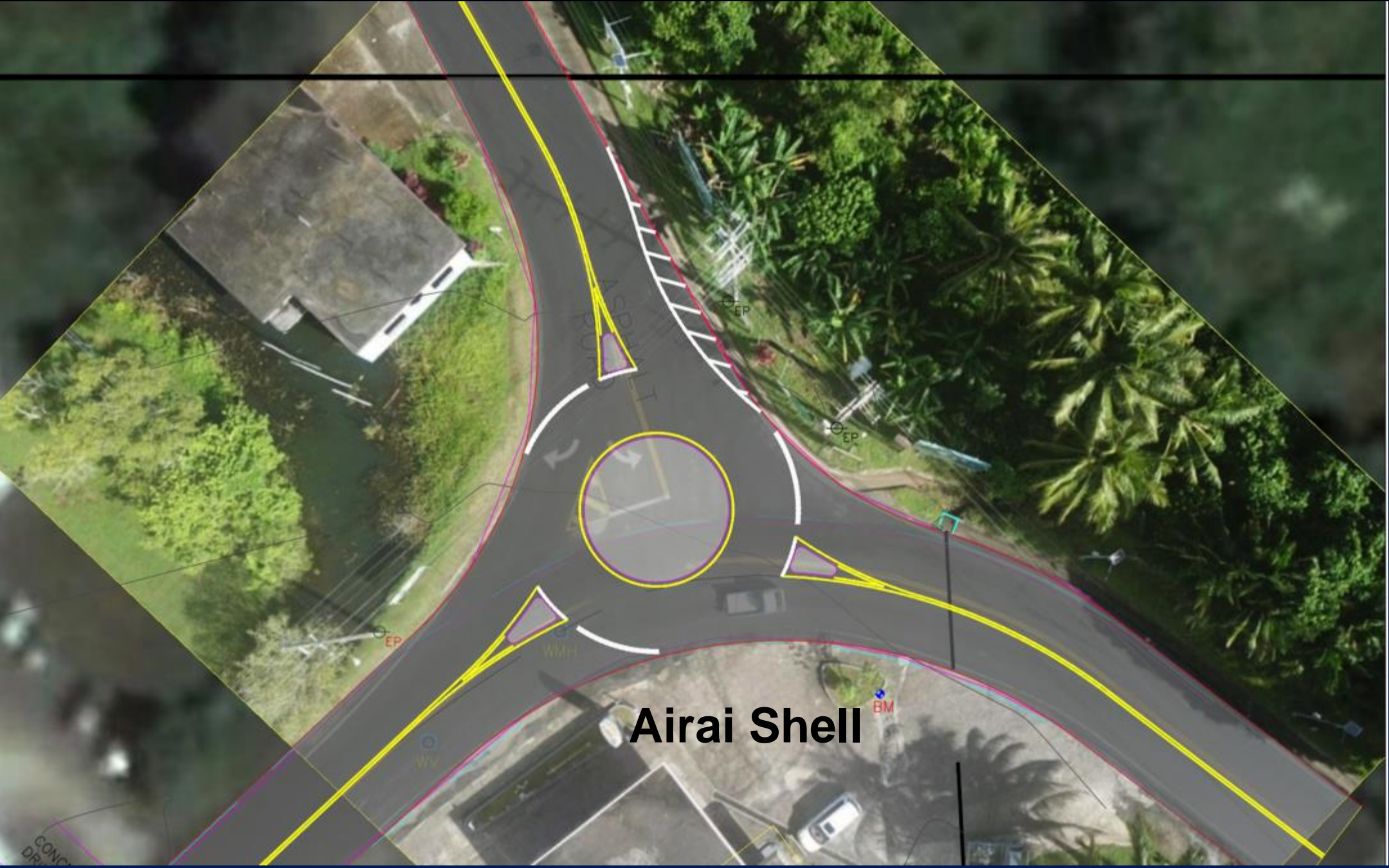
Crosswalk

Curb Ext.

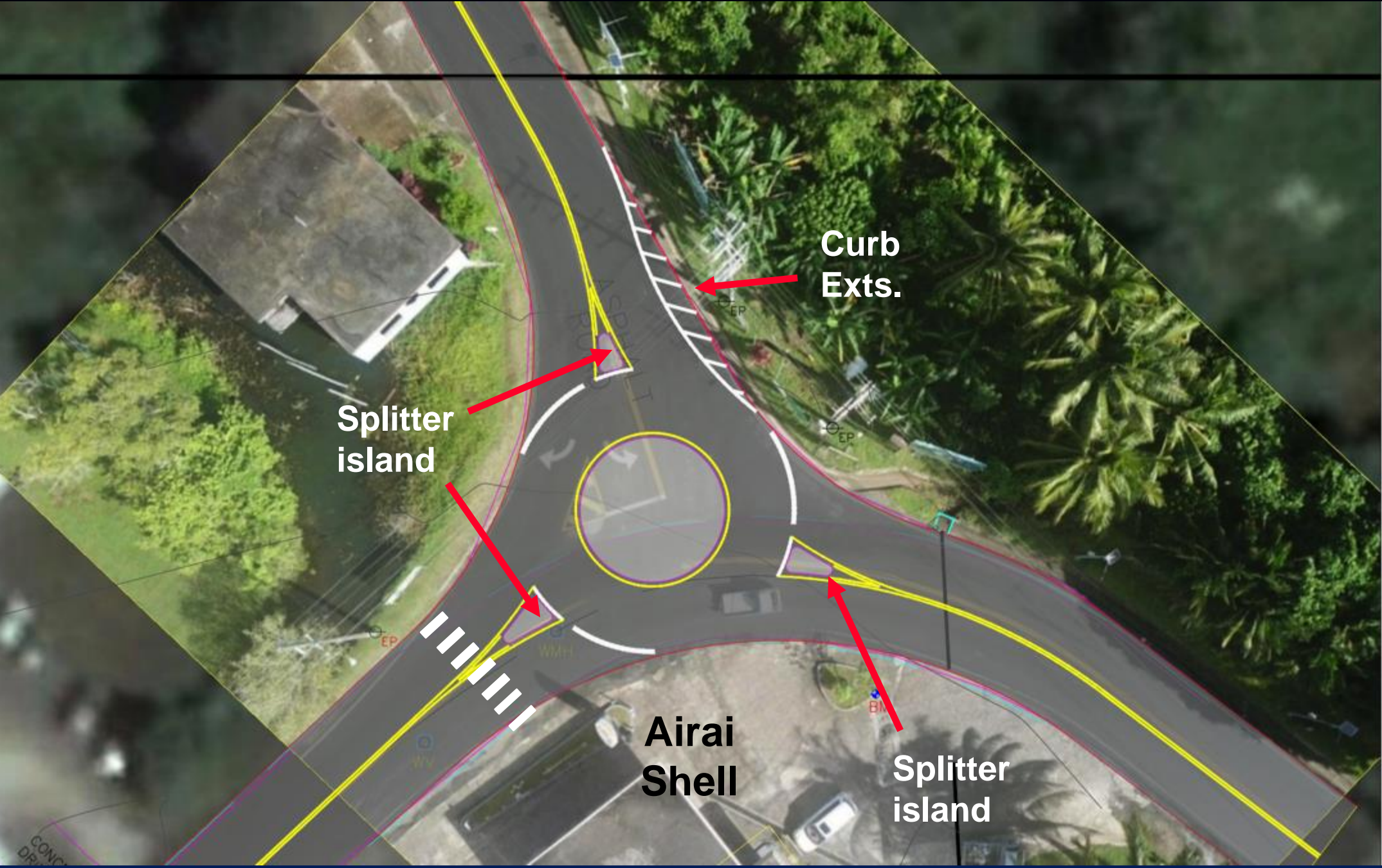
Splitter island

Crosswalk

Splitter island



Airai Shell



3. Main Road median islands







**Near Maris
Stella Elem.**

Hilo, HI



Konquer Walk pop-up crosswalks



3. Vertical delineators. Asahi Road/KES pathway











Tools for temporary demonstrations . . .



Safety “Candles”

Tools for temporary demonstrations (cont'd).



Delineators mounted in
concrete filled paint cans.

Can-mounted delineators
placed in painted tire stacks.

5. Complete Streets considerations.

Whereas . . .

- Introduce the term active transportation.
- Mention economic benefits of Complete Streets such as broader customer access; less cost to accommodating only cars (parking etc.); desirability of walkable housing

Resolved . . .

- Require the adoption of state of the art design guidance

Adopt these as design guidance:

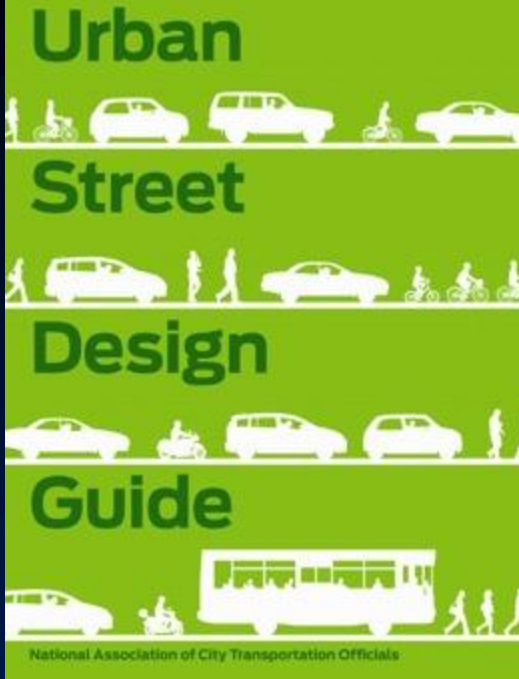


December 2016

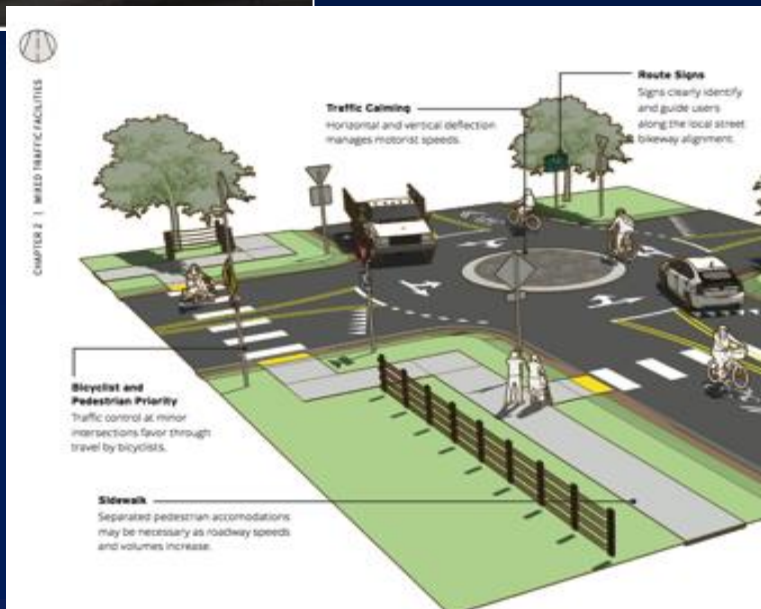
Small Town and Rural Multimodal Networks

U.S. Department of Transportation
Federal Highway Administration

Small Town
and Rural
Multimodal
Networks
fhwa.gov



Urban Street
Design Guide
nacto.com



www.markfenton.com

5. Complete Streets considerations.

Resolved . . .

- Provide more detail (and be more restrictive) in the allowance of exemptions to the policy. E.g. . . .
- “Excessive” Cost: Accommodations must exceed some percentage of total project cost. (10%? 20%?) And analysis must consider *best case* pedestrian and bicycle usage (not current use).
- Exemption certification required: Either by one or more top officials, or an appointed multi-sector oversight panel.