

S.R. A1A

A1A Tomorrow | Space for Everyone

City of Cape Canaveral, FL

FDOT FM# 430202-5 (Phase I) Intersection Redesign at S.R. A1A and N. Atlantic Avenue

FDOT FM# 430202-8 (Phase 2) Roadway Redesign from N. Atlantic Avenue to George J King Boulevard



March 2022

AGENDA



HOW DID THE PROJECTS COME ABOUT?



HOW DO WE SUPPORT THE CITY'S NEEDS?



WHAT FEEDBACK HAVE WE RECEIVED?



WHAT'S NEXT?

**HOW DID THESE PROJECTS
COME ABOUT?**

WHAT HAVE RESIDENTS EXPRESSED?

Ability to safely and easily bike or walk *on* S.R. A1A

82% Very Important or Extremely Important

21% Very Satisfied or Satisfied

Ability to safely and easily bike or walk *across* S.R. A1A

88% Very Important or Extremely Important

22% Very Satisfied or Satisfied



2018 Community Survey Report



THE
SPACE
BETWEEN®

Dr. Tom Freijo, Ph.D., Management Consultant

Joshua Surprenant, Community Engagement Director



WHAT IS THE CITY'S VISION?

“The City Council continues to strongly emphasize, as a matter of local policy, **that bicycle, multimodal and pedestrian safety/connectivity through the S.R. A1A corridor be given *more* consideration** and emphasis to address the public safety needs of *all* people required to use S.R. A1A for transportation and connectivity.”

- 2019 City Resolution

GUIDING PRINCIPLES FROM THE CITY RESOLUTION



Slower roadway speeds



Organized vehicular access to destinations



Better pedestrian & bicycling facilities



Aesthetics & placemaking improvements



Increased safe crossing opportunities



Minimize right of way impacts

MANAGING SPEEDS IS KEY!



Slower roadway speeds



Organized vehicular access to destinations



Better pedestrian & bicycling facilities



Aesthetics & placemaking improvements



Increased safe crossing opportunities



Minimize right of way impacts

CORRIDOR CRASH HISTORY (2014 TO 2021)

220 Total Crashes

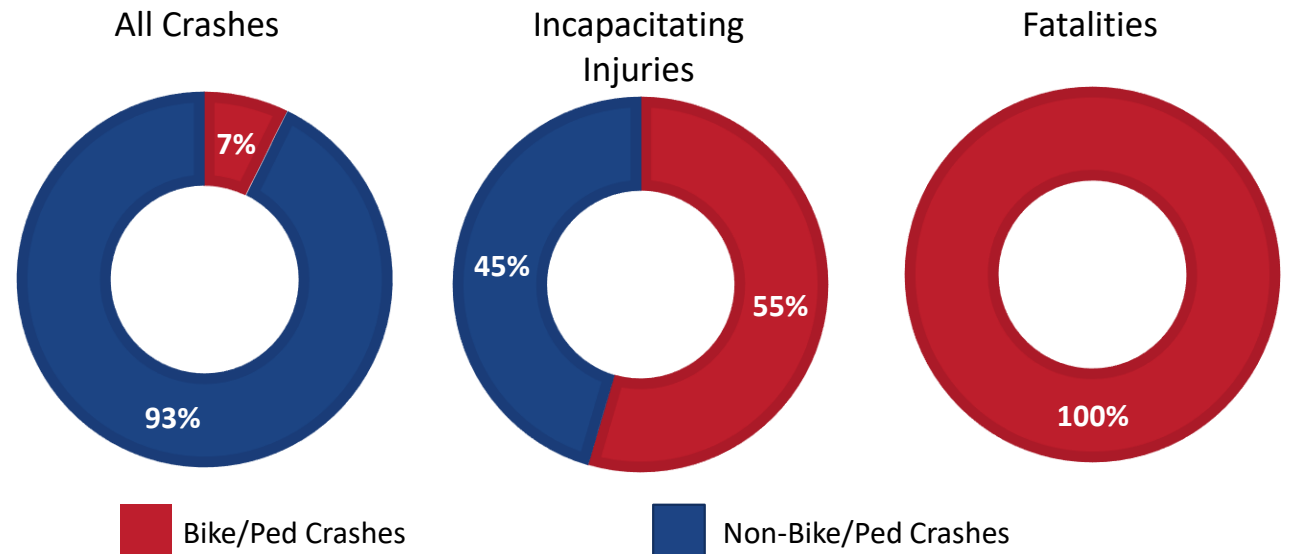
- Rear End (36%)
- Angle (15%)
- Head On (12%)
- Sideswipe (11%)
- Bicycle/Pedestrian (8%)

Severity	Number
Fatality	2
Incapacitating Injury	11
Non-Incapacitating Injury	34
Possible Injury	39
Property Damage Only	134
Total	220

16 Ped/Bike Crashes

- 10 Pedestrian (2 fatality + 6 incapacitating injury)
- 6 Bicycle

Shared of Pedestrian/Bicycling Crashes



CORRIDOR SPEEDING



Roadway is Straight & Flat

- 85% of Drivers drive at/below 50 mph
- 50% of Drivers drive at/below 47 mph

PEDESTRIAN INJURY & FATALITY RATES AND VEHICULAR SPEEDS

Vehicular
Impact Speed

Pedestrian's Risk of Fatality
& Serious Injury

**20
MPH**

5%



**30
MPH**

45%

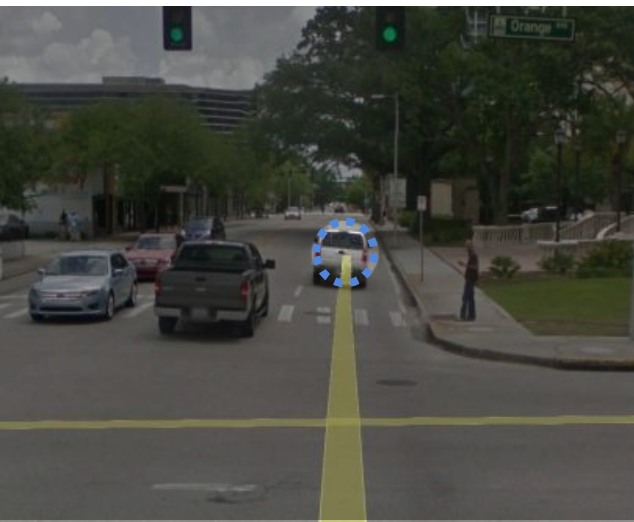


**40
MPH**

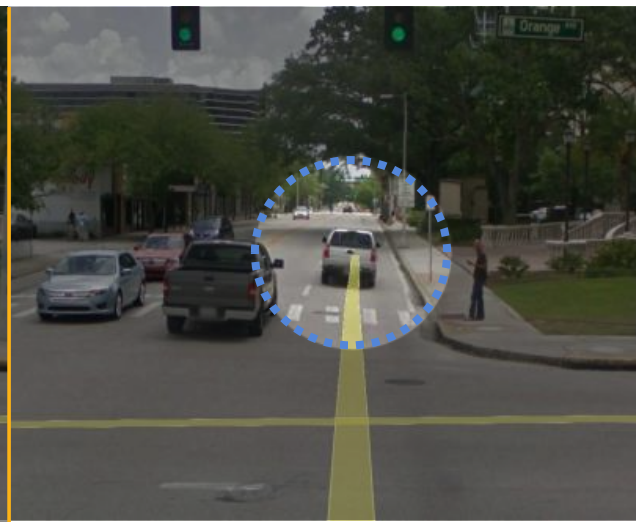
85%



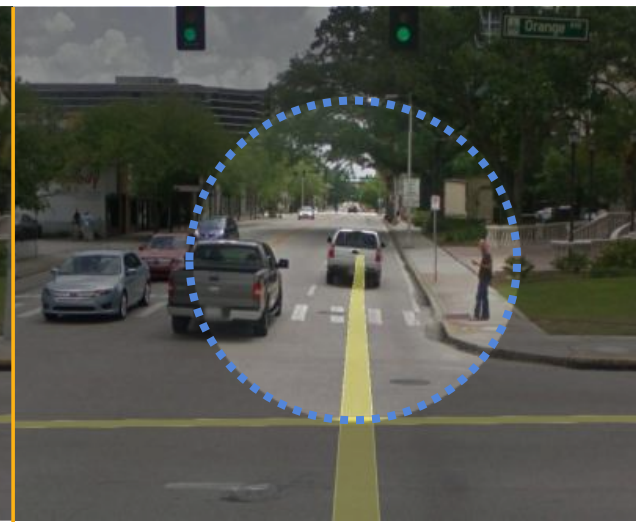
SPEED INFLUENCES DRIVER'S CONE OF VISION



40 MPH



30 MPH



20 MPH



15 MPH

SPEED MANAGEMENT DESIGN STRATEGIES

- Enclosure
- Engagement
- Deflection

To be used in conjunction



**HOW DO WE SUPPORT THE
CITY'S NEEDS?**

OPPORTUNITIES TO ADDRESS CITY NEEDS

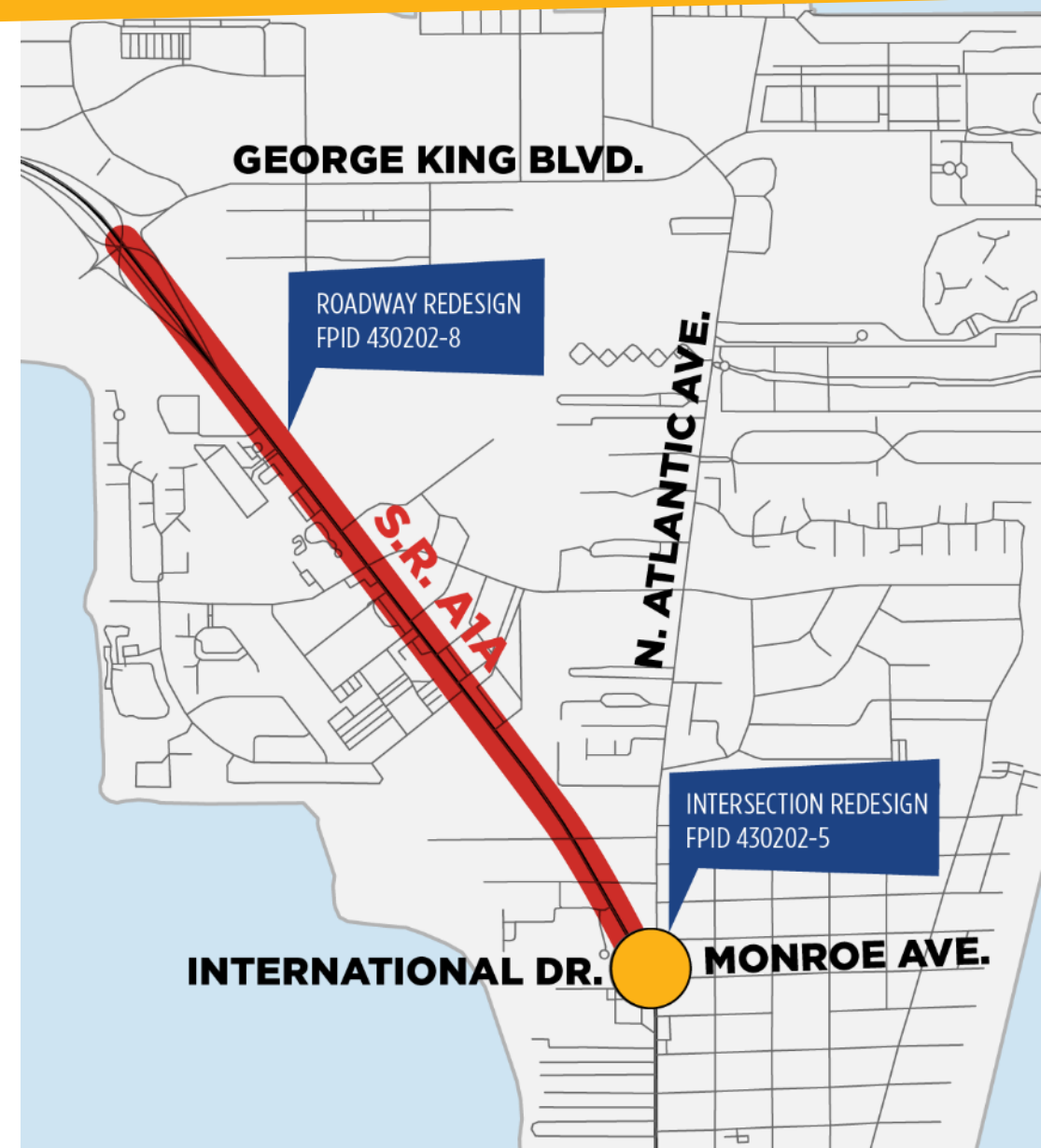
1

Redesign the Intersection of S.R. A1A & N. Atlantic Ave.

2

Redesign the road from N. Atlantic Ave. to George King Blvd.

These two projects work together. How we improve the intersection will determine how we can improve the whole corridor.

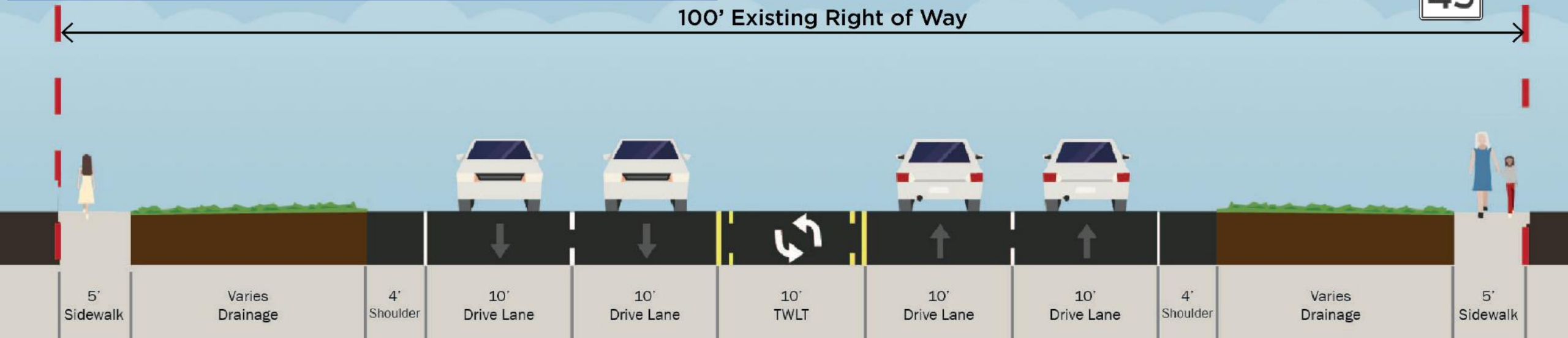


CURRENT CONDITION



- Two closely spaced three-leg intersections.
- Two alternatives to realign International Dr. to create a four-leg intersection.
- The selected solution for this intersection will determine how we can redesign the road.

100' Existing Right of Way



ALTERNATIVE 1

SIGNALIZED INTERSECTION + 40 MPH



- Midblock crossings with refuge islands, pedestrian hybrid beacons
- Separated bicycle facility
- Curb & gutter adds to urban character
- Minimal speed management, lowest speed possible is 40 mph
- No additional placemaking element
- Slight right of way impacts
- No raised median due to design constraints
- Minimal landscaping

100' Existing Right of Way



ALTERNATIVE 2

MODERN ROUNDABOUT + 30 MPH



- Midblock crossings with raised crosswalks, refuge islands, and pedestrian hybrid beacons
- Separated bicycle facility
- Curb & gutter adds to urban character
- Raised median
- Landscaping on median and roadside
- Target speed of 30 mph through speed management
- Protected intersection and bulb-outs
- Additional placemaking elements and opportunity for City to implement wayfinding & special lighting
- Slight right of way impacts

100' Existing Right of Way



MIDBLOCK CROSSINGS & LANDSCAPING



Alternative 1 (Signalized Intersection + 40 MPH)

- 3 new crossings with pedestrian refuge islands and pedestrian hybrid beacons (red light)
- With 40 MPH travel speeds
 - We cannot raise crosswalks to slow vehicles down
 - Can only provide minimal landscaping



Alternative 2 (Modern Roundabout + 30 MPH)

- 3 new crossings with pedestrian refuge islands and pedestrian hybrid beacons (red light)
- With 30 MPH travel speeds
 - We can raise crosswalks to further slow vehicles down
 - Can provide more landscaping

ORGANIZING ACCESS POINTS & SENSE OF ENCLOSURE



Alternative 1 (Signalized Intersection + 40 MPH)

- With 40 MPH travel speeds
 - We can have some spot median islands
 - Most of the corridor will have continuous two-way left-turn lane
 - No sense of enclosure to help encourage slower speeds



Alternative 2 (Modern Roundabout + 30 MPH)

- With 30 MPH travel speeds
 - We can have continuous medians with designated access points
 - More vertical landscaping on medians and roadside provides sense enclosure to help encourage slower speeds

MODERN ROUNDABOUT VS. SIGNALIZED INTERSECTION



Traffic Operations

In 2030, this
modern roundabout will have

2.0X *Less Delay*
AM Peak

1.6X *Less Delay PM*
Peak

- Performs better throughout the day and during most congested times
- Responds to real-time traffic conditions, unexpected events like stalled vehicles, power outages, detours, and hurricanes.

MODERN ROUNDABOUT VS. SIGNALIZED INTERSECTION



Maintenance Costs

This modern roundabout will have

25% *Less*
Maintenance Costs

- No signal power, retiming, or signal cabinet maintenance
- Signals need to be re-timed every 3-5 years
- Lower overall life cycle costs

MODERN ROUNDABOUT VS. SIGNALIZED INTERSECTION



Safety for All

Modern Roundabouts provide



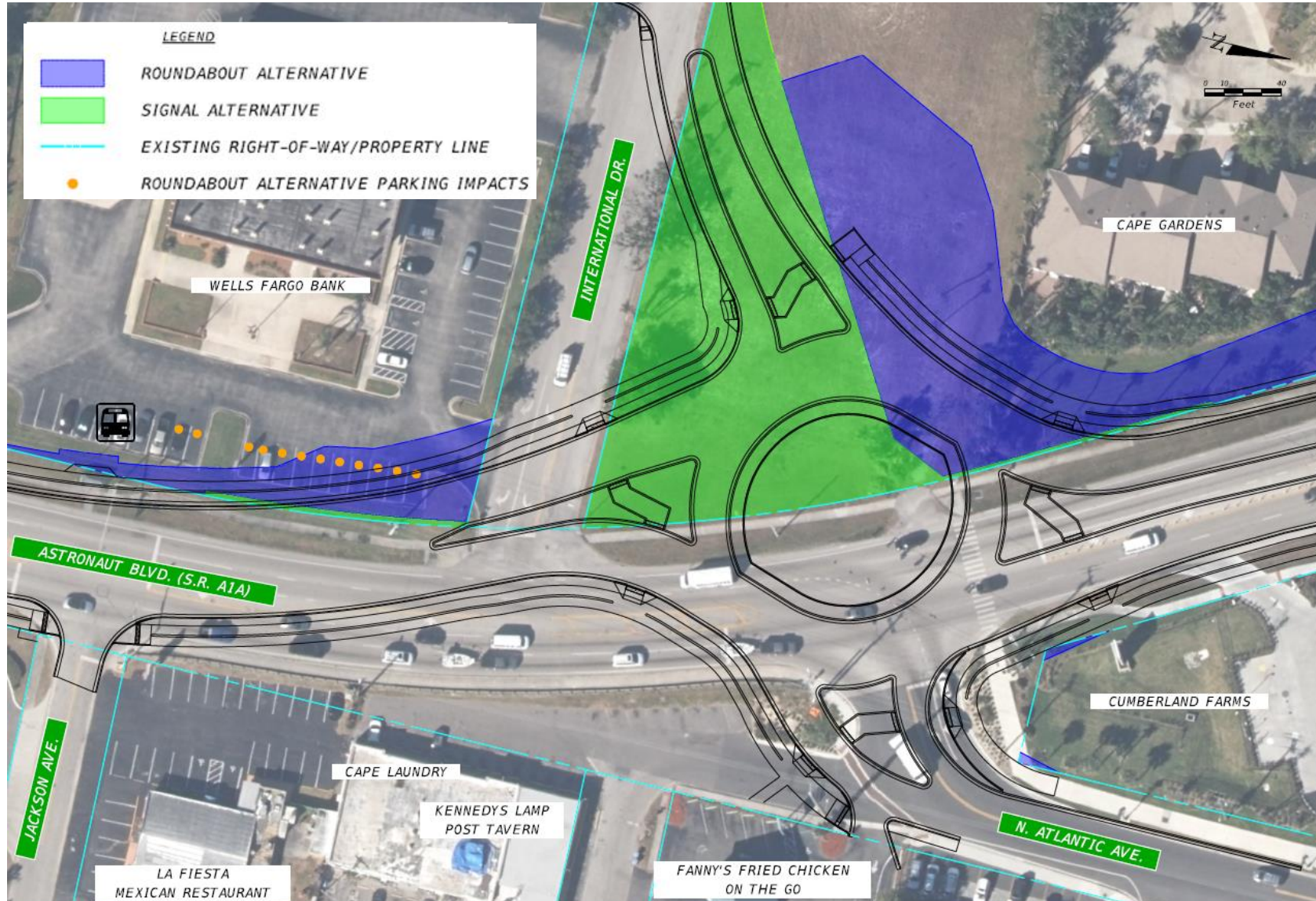
90%
fewer
deaths



75%
fewer
injuries

- Roundabouts naturally slow vehicles down (through roadway curvature).
- Signalized intersections do not slow vehicles down.
- Less severe crashes (fender benders) occur at roundabouts.

MODERN ROUNDABOUT VS. SIGNALIZED INTERSECTION: RIGHT OF WAY COMPARISON

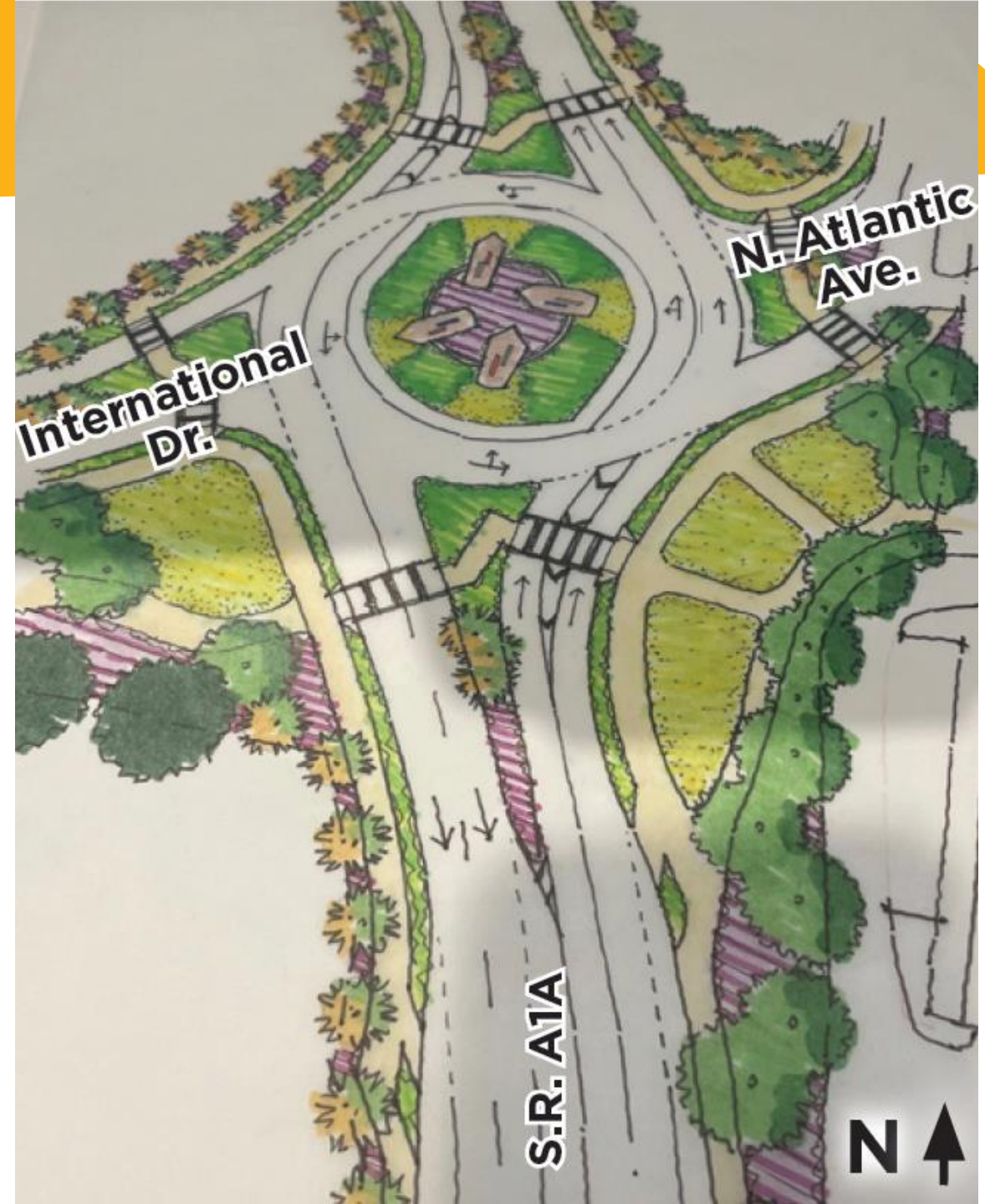


MODERN ROUNDABOUT VS. SIGNALIZED INTERSECTION

Placemaking & Aesthetic Features



- Gateway feature into the City
- Reinforces identity that City wants to establish
- Pocket parks around the intersection support placemaking goals



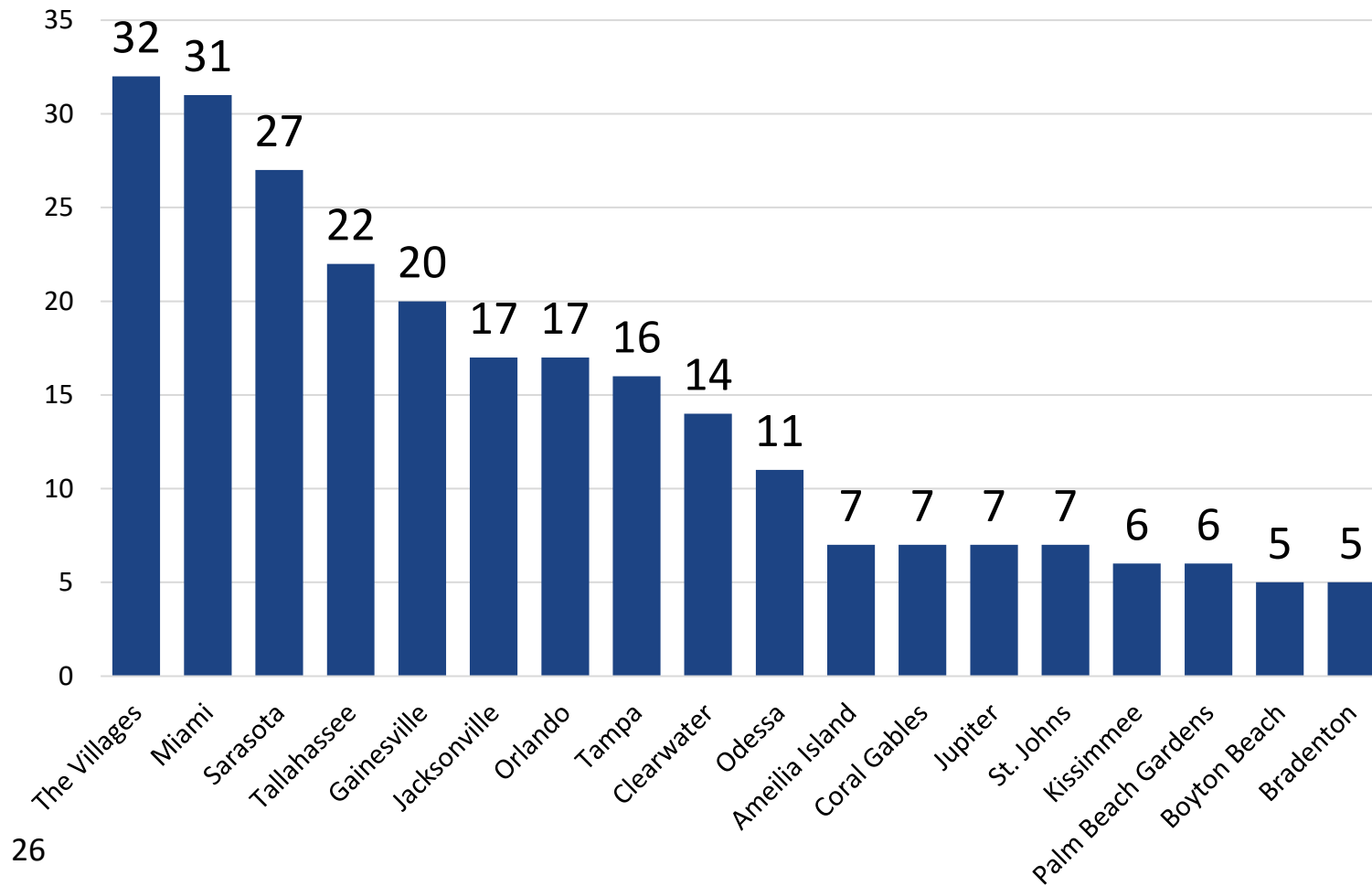
GATEWAY PUBLIC ART









An idea of public art celebrating City's identity of Sun, Space, and Sea

ROUNDBABOUTS CURRENTLY IN OPERATION

Florida has the most roundabouts in the country with 516 statewide



HOW WELL DO ALTERNATIVES ADDRESS CITY'S VISION & GUIDING PRINCIPLES?

ALTERNATIVE	 Slower Roadway Speeds	 Better Pedestrian and Bicycling Facilities	 Increased Safe Crossing Opportunities	 Organized Vehicular Access to Destinations	 Aesthetic and Placemaking Improvements	 Minimize Right of Way Impacts
Alternative 1 (Signalized Intersection + 40 mph)	No	Yes	Somewhat	No	Somewhat	Yes
Alternative 2 (Modern Roundabout + 30 mph)	Yes	Yes	Yes	Yes	Yes	Yes







***The two projects work together.
How we improve the intersection will determine how we can
improve the whole corridor.***

FLYTHROUGH VIDEO OF ALTERNATIVE 2 (MODERN ROUNDABOUT + 30 MPH)



ALTERNATIVE 3

HOW WELL DOES ALTERNATIVE 3 ADDRESS CITY'S VISION & GUIDING PRINCIPLES?

ALTERNATIVE	 Slower Roadway Speeds	 Better Pedestrian and Bicycling Facilities	 Increased Safe Crossing Opportunities	 Organized Vehicular Access to Destinations	 Aesthetic and Placemaking Improvements	 Minimize Right of Way Impacts
Alternative 3	No	Yes	Yes	Yes	Somewhat	No



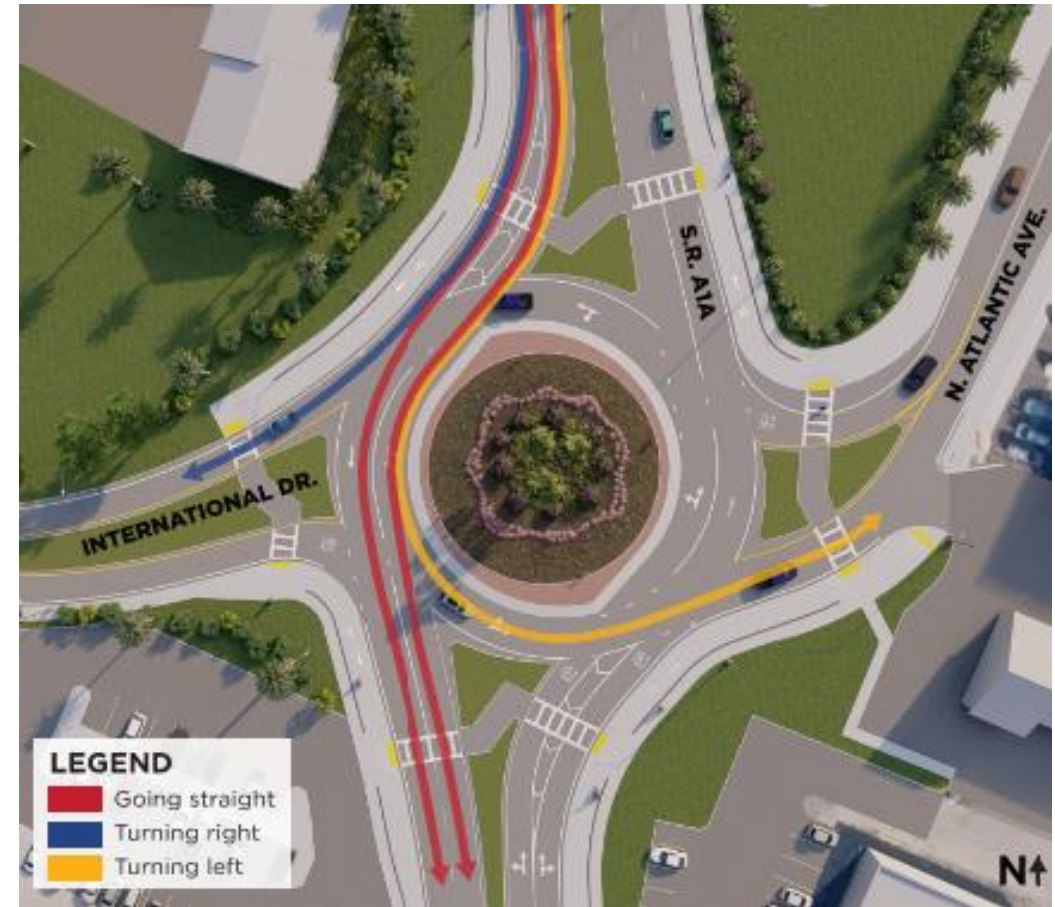
- Midblock crossings with raised crosswalks, refuge islands, and pedestrian hybrid beacons
- Separated bicycle facility
- Curb & gutter adds to urban character and raised median
- Landscaping on median and roadside
- Protected intersection and bulb-outs

- Minimal speed mgmt., lowest speed possible is 40 mph
- No additional placemaking element
- Significant ROW impacts
 - 41 parcels, parking impacts on 8 parcels (119 spaces)
 - Businesses impacted include: Radisson Resort at the Port, Columbia Commercial Complex, & Plaza (8660 Astronaut Bv.)

**WHAT FEEDBACK HAVE WE
RECEIVED?**

OCTOBER 2021 PUBLIC MEETING

- Presented initial concepts to address City Resolution goals



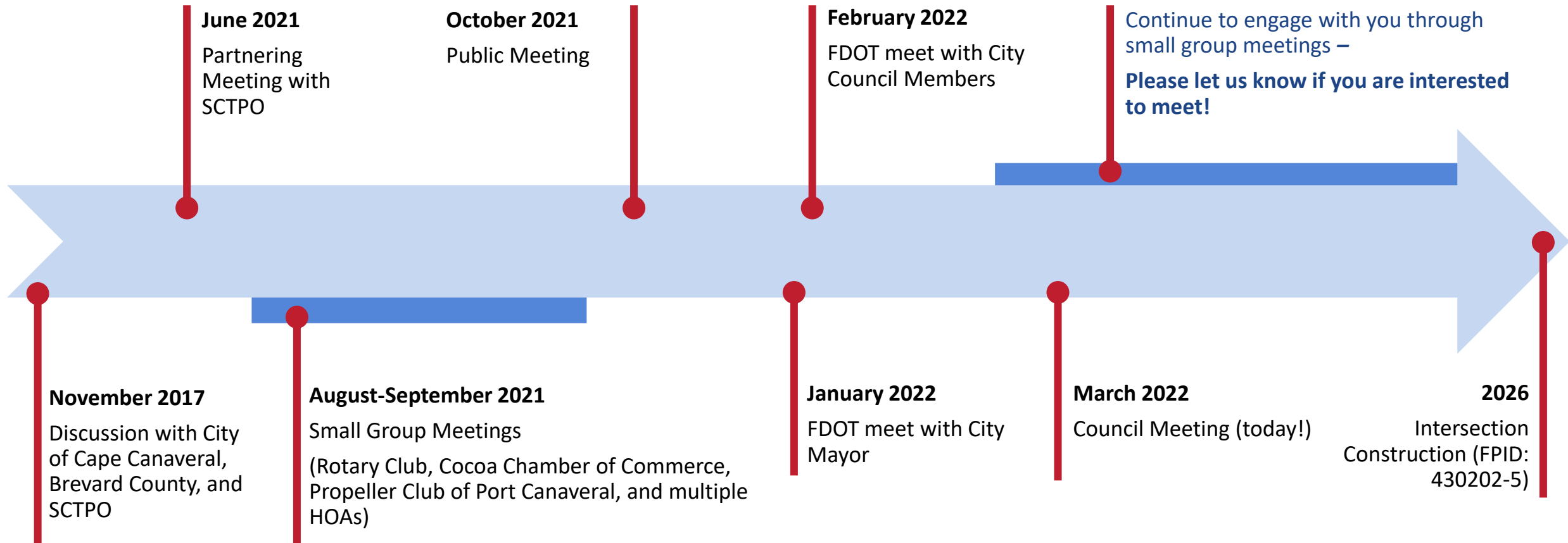
WHAT WE HEARD

- Support for **slowing vehicle speeds down & placemaking** (separated bicycle lanes, raised medians, landscaping, placemaking, and midblock crossings)
- Concerns about **the modern roundabout and access management**



WHAT'S NEXT?

CONTINUOUS ENGAGEMENT



*We are still in the early stages for both projects.
FPID 430202-5 (Intersection) is funded in 2026 for construction. FPID 430202-8 (Roadway) is not yet funded for construction.*

THANK YOU!

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**FDOT FM# 430202-8 Roadway Redesign
from George J King Boulevard to N. Atlantic Avenue**
<https://www.cflroads.com/project/430202-8>

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**FDOT FM# 430202-5 Intersection Redesign at S.R. A1A
and N. Atlantic Avenue**
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