



**PALM BEACH**  
Transportation  
Planning Agency

## **Transit Access Plan**

**Military Trail at W. Blue Heron Boulevard  
Riviera Beach, FL  
2019**





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Location Overview

Blue Heron Boulevard was selected by the Palm Beach Transportation Planning Agency (TPA) to conduct a transit access evaluation due to the high ridership Palm Tran bus stop located at the VA Hospital, with a monthly average of 13,388 riders. The evaluation included a field visit with key stakeholders, including representatives from Palm Tran, Palm Beach County and the City of Riviera Beach that identified safety and transit accessibility concerns and potential countermeasures. In order to create a safe, efficient and connected transportation system, we must provide safe access to transit for users of all ages and abilities.

The following pages include key findings with recommendations and cost estimates, including street planviews. Next steps will be to meet with key stakeholders and Right-of-Way (ROW) owners to discuss implementation of the proposed recommendations.

Overall Recommendations:

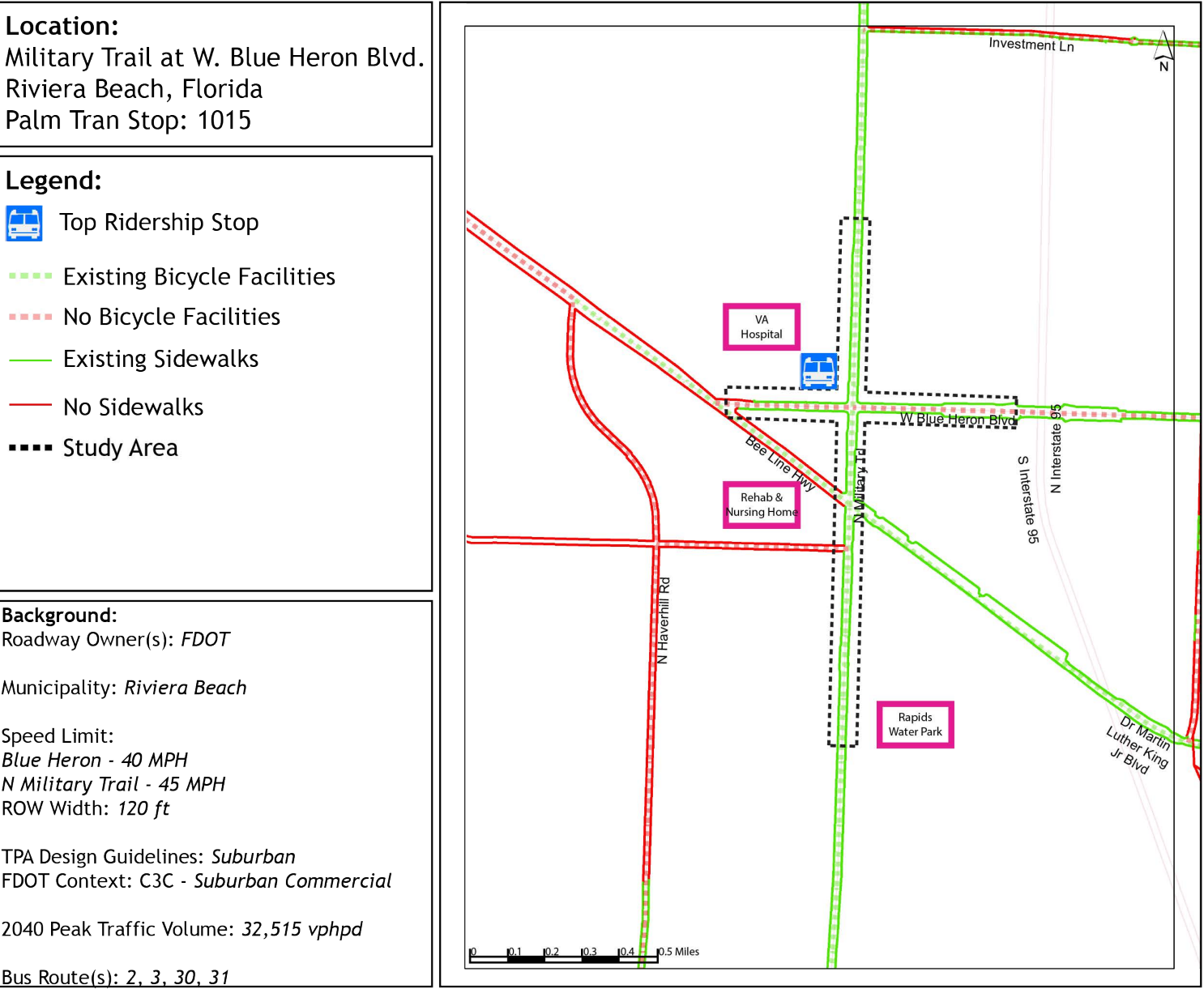
- 1. ADA compliant curb ramps
- 2. Pedestrian- level lighting
- 3. Signage along the route to indicate bicycle lanes and routes
- 4. Bringing bus stops to ADA compliance (level with landing pad of 5'X 8' or greater)
- 5. Making intersection crosswalks high emphasis with countdowns
- 6. If a bicycle share system is desired, Sky Bike is recommended, and the destination locations should be prioritized to hold a station: the VA Hospital, water park, and Kindred Hospital

Priorities on Military Trail:

- 1. A midblock crossing is recommended outside of the Arbor Parc Community (north of VA Medical Clinic on the east side of Military Trail)
- 2. Trimming back branches on the southbound side of Military Trail due to current overgrowth blocking sidewalks
- 3. Blue Heron Boulevard & Military Trail intersection is not ADA compliant (platform does not meet width requirements)
- 4. Signalization of the crosswalks at the intersection of Beeline Highway and Military Trail is not consistent, possibly confusing users along the corridor

Priorities on Blue Heron Boulevard:

- 1. Add a 5-foot bicycle lane going west on W. Blue Heron Boulevard
- 2. Reducing lane widths to 11 feet
- 3. Add a bulb-out at the intersection of 42<sup>nd</sup> Way and Blue Heron Boulevard to slow turning cars
- 4. Create a bus only lane (bus bay) just past the bulb-out on Blue Heron Boulevard to eliminate traffic backups and make boarding and alighting safer
- 5. Add bus shelters to stops adjacent to bus bay
- 6. Widen sidewalks to 8'

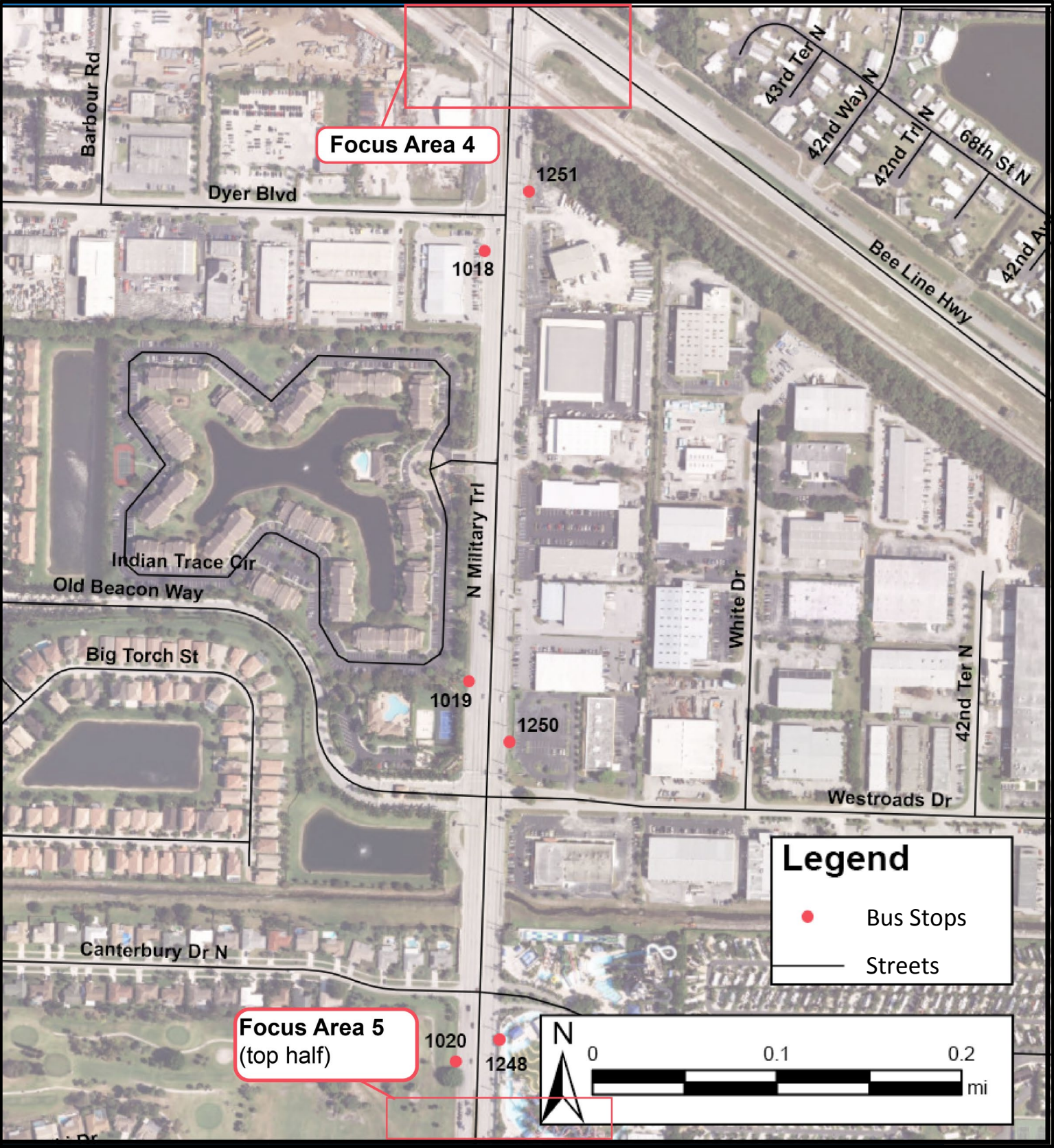
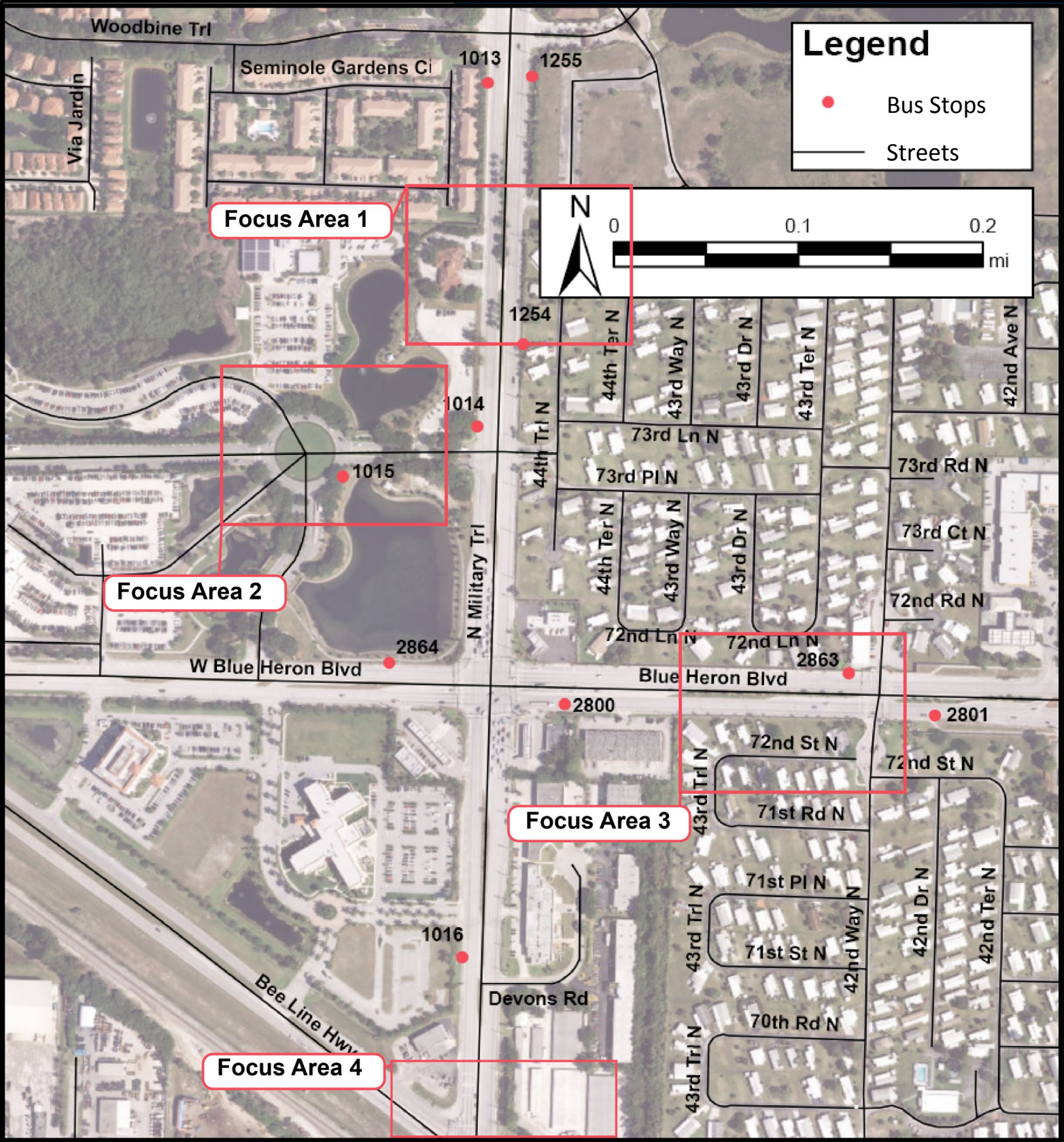


Priorities at the VA Hospital:

- 1. Separate the buses stopping at the bus stop via a 10-foot separator heading north toward the roundabout
- 2. Create a bus bay at the bus stop to allow traffic to keep moving at the roundabout
- 3. Connect the stop at the VA hospital from the east with a 6-foot sidewalk



Location Aerial



Map of focus areas and bus stops; Created by: CTS Engineering, Inc.

Map of focus areas and bus stops; Created by: CTS Engineering, Inc.

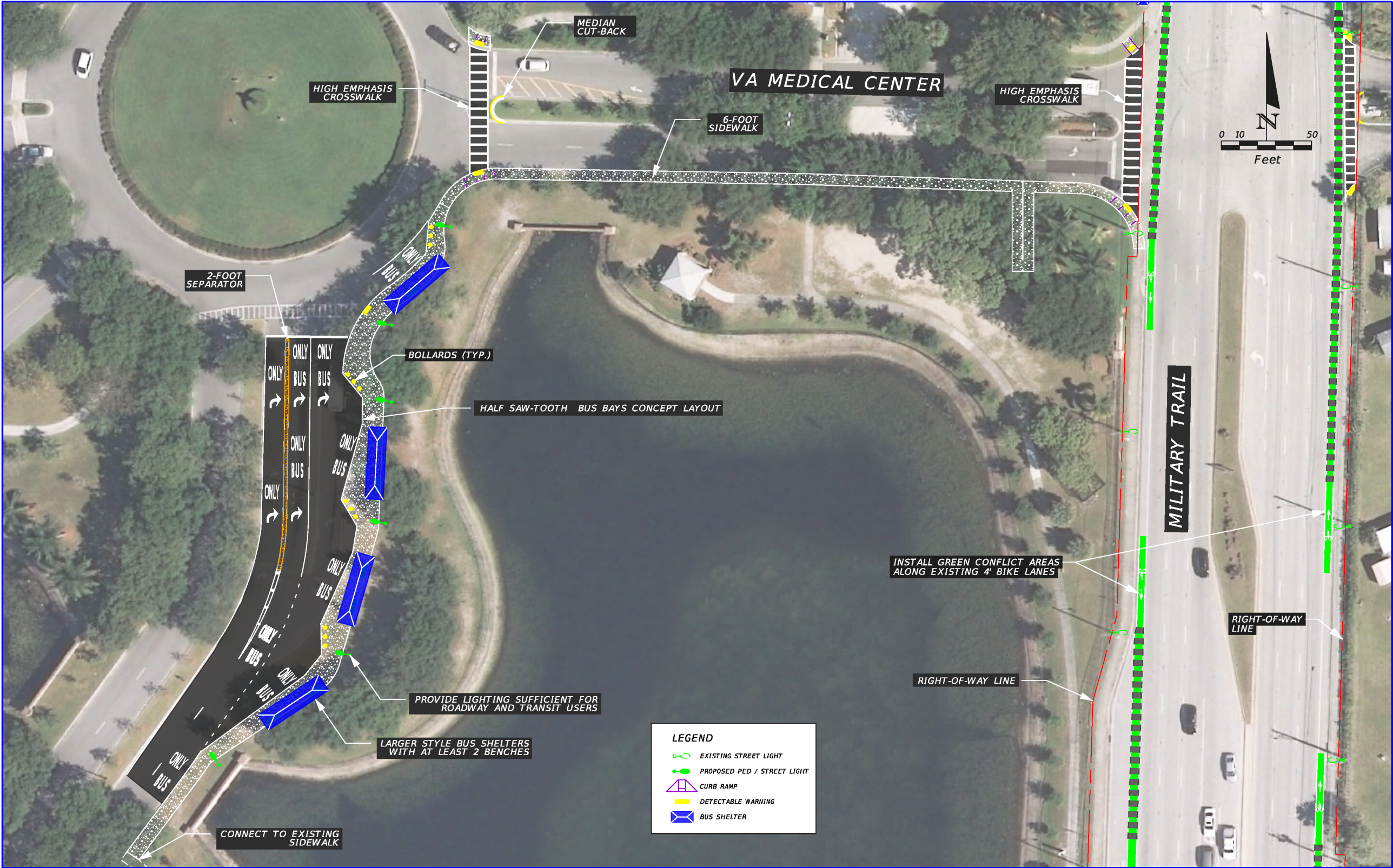




Riviera Beach: Focus Area 1  
Signalized midblock crossing with stop bars; add pedestrian lighting

Figure 4: Location 5, Focus Area 1; Map Creator: CTS Engineering, Inc



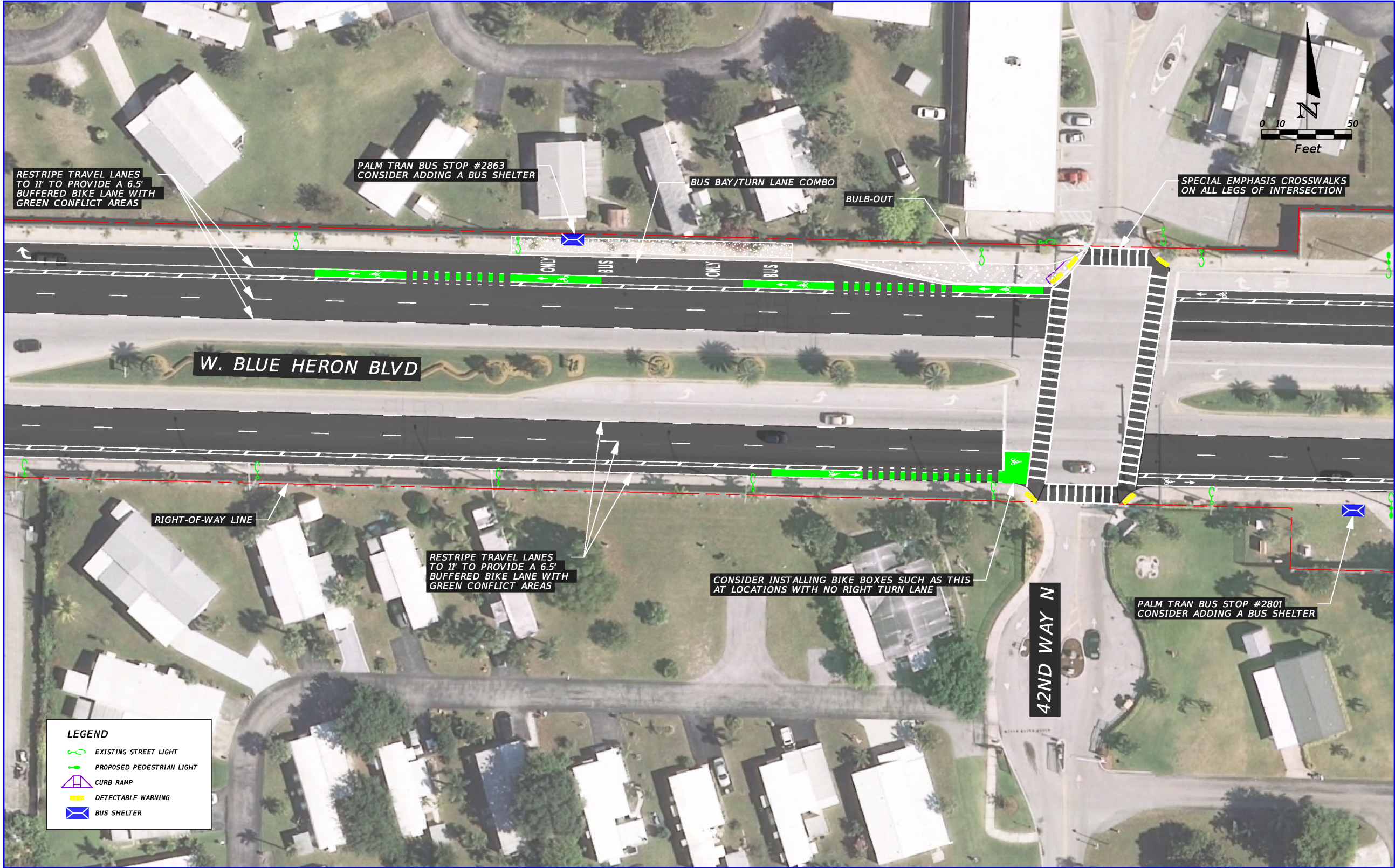


Riviera Beach: Focus Area 2

Figure 5: Location 5, Focus Area 2; Map Creator: CTS Engineering, Inc

Create a half saw-tooth bus bay for better onboarding, enhance bus shelters and make ADA accessible, add sufficient pedestrian lighting, add enhanced crosswalk and sidewalk connections



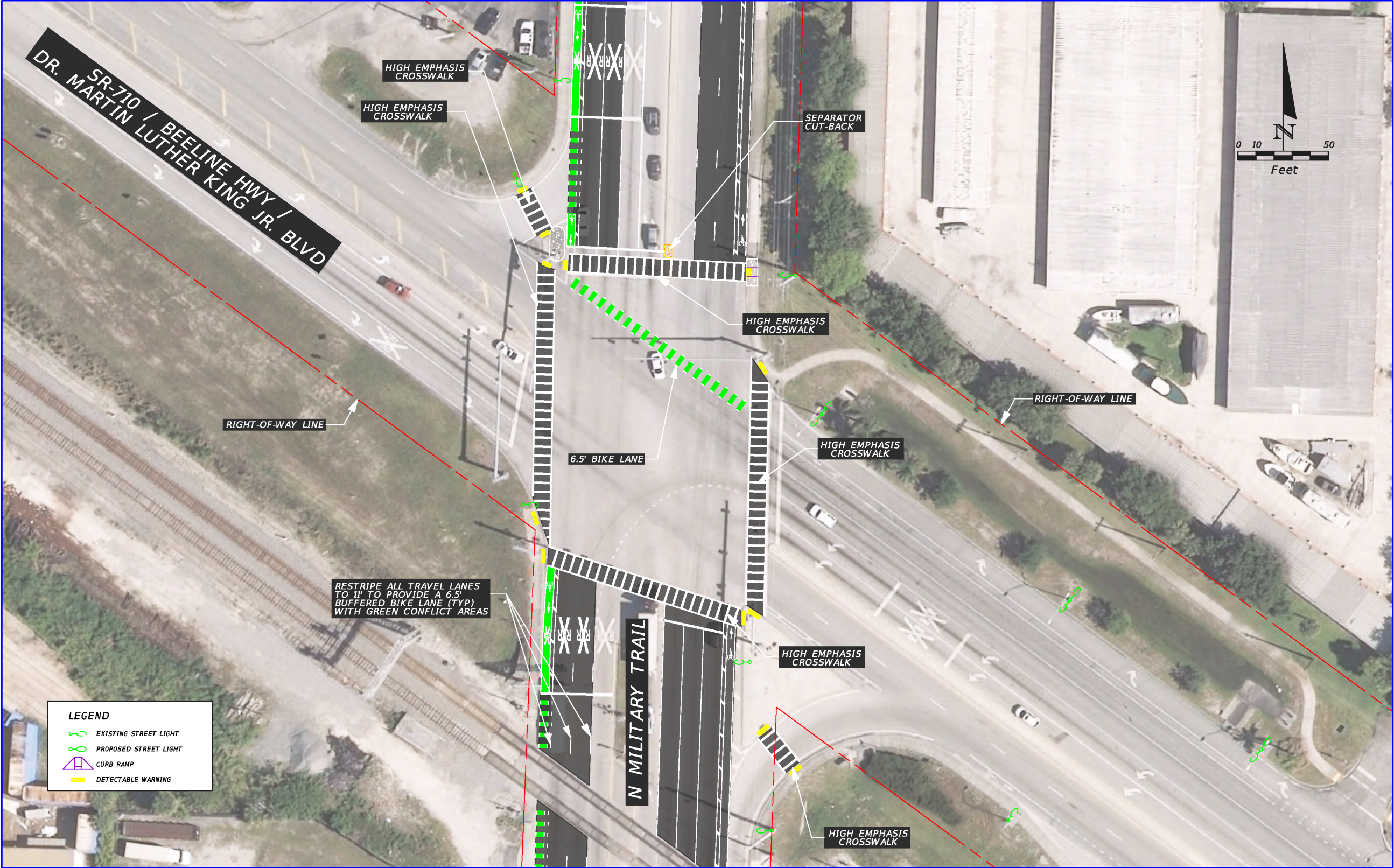


Riviera Beach: Focus Area 3

Figure 6: Location 5, Focus Area 3; Map Creator: CTS Engineering, Inc

Modify to make bike lanes buffered with bright green at conflict zones, install bike boxes, create a bus bay/turn lane combo, create a bulb-out to slow traffic, enhance bus stops, high emphasis crosswalks





Riviera Beach: Focus Area 4  
High emphasis crosswalks, modify lanes to accommodate a buffered bike lane with bright green at conflict zones, add pedestrian lighting

Figure 7: Location 5, Focus Area 4; Map Creator: CTS Engineering, Inc



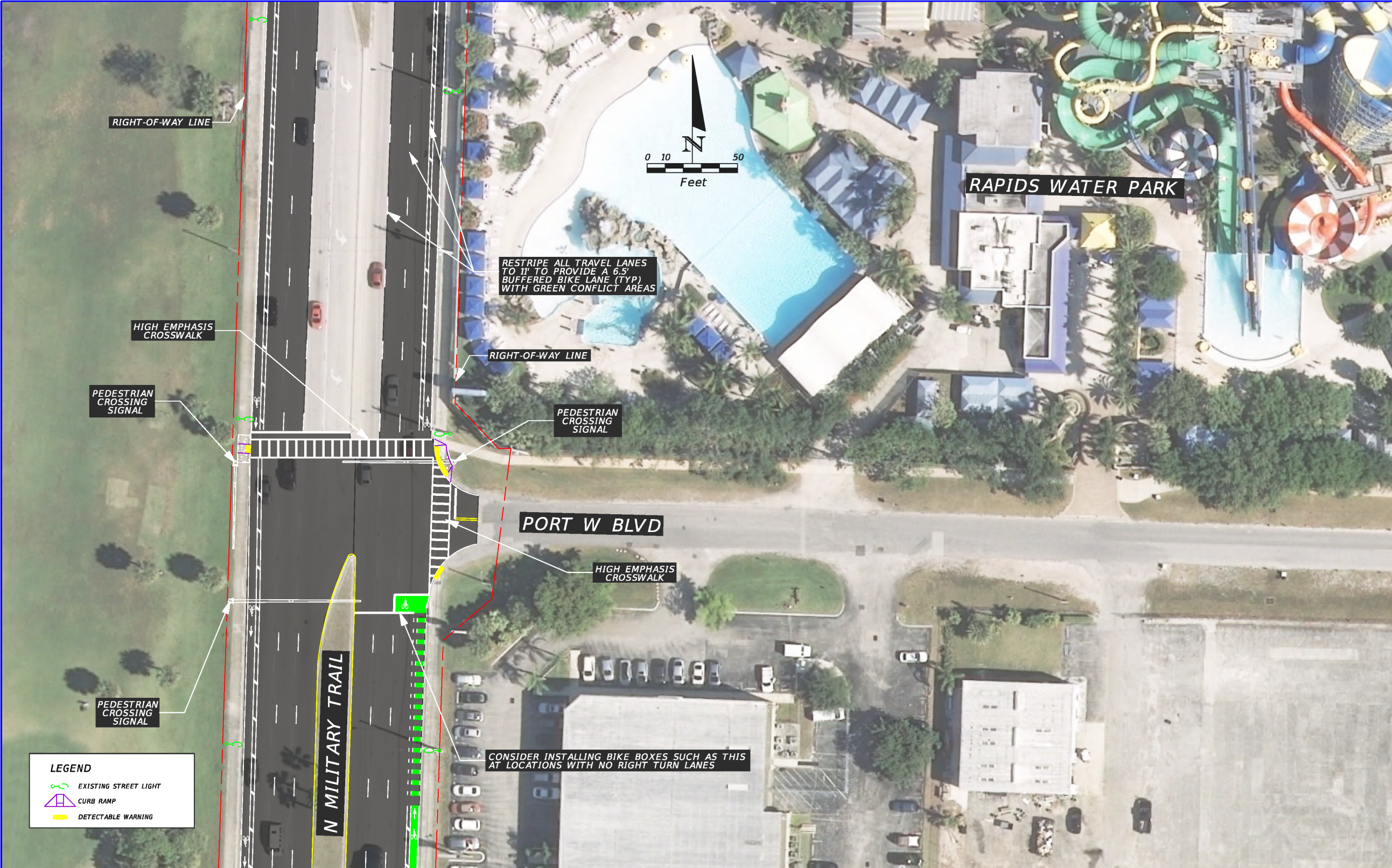


Figure 8: Location 5, Focus Area 5; Map Creator: CTS Engineering, Inc

Riviera Beach: Focus Area 5  
Modify to create a buffered bike lane with bright green at conflict zones, add bike boxes, create high emphasis crosswalks with pedestrian crossing signals, add pedestrian lighting



Location	Roadway Owner	Recommendations	Description	Cost Estimate	ROW Needed?
Bus stop 1015 at the VA Medical Center	Federal Government	1	Consider reconstructing bus stop using half-saw toothed style bus bays. This will allow for boarding and alighting to occur on the sidewalk areas rather than from the narrow median as some of the buses do currently. This style also allows easier ingress and egress of busses since they won't stack up directly behind one another, and will have more room to maneuver around each other.	\$560,000	No (coordination with the federal agency in control of the VA Center is required)
		2	Add crosswalk on east leg of roundabout and also add sidewalk to connect the bus stop to the existing sidewalk to the east and south.	\$30,000	
North of Blue Heron Boulevard at the existing Fire Station emergency crossing	State	3	Recommend adding a crosswalk to work in conjunction with the existing emergency signals such that it would operate as a signalized midblock crossing together with the pre-emption programmed for the emergency vehicles.	\$55,000	No
Blue Heron Boulevard from I-95 to SR-710/Beeline Highway		4	Restripe lanes to 11' to accommodate 6.5' buffered bicycle lanes.	\$700,000	
All throughout study limit at the signalized intersections		5	Install special emphasis crosswalk markings at all signalized intersections.	\$170,000	
Military Trail from Blue Heron Boulevard to south of Port W Boulevard		6	Restripe lanes to 11' to accommodate 7' buffered bicycle lanes.	\$875,000	
Military Trail at Beeline Highway Intersection		7	Add missing east/west crosswalk along northern leg of intersection. Also, for the westbound approaching bicycle lane, place green skip pavement markings across intersection to guide cyclists to the crosswalk since there is no bicycle lane to the west.	\$25,000	
All throughout study limits at signalized intersections where existing bicycle lanes have no turn lane on approaches. Along Military Trail: NB approach to Leo Lane, NB and SB approach to Dyer Road., NB approach to Westroads Drive. Along Blue Heron Boulevard: EB approach to Military Trail, EB approach to 42nd Way N.		8	Consider adding bicycle boxes to increase the visibility of bikes to right turning vehicles.	\$12,000	
Military Trail at Port W Intersection		9	Consider adding a signal at this intersection for the purpose of providing a pedestrian crossing. The signal would operate as a pedestrian actuated only. If signal is added, a bicycle box should be installed for the NB approach.	\$250,000	
Bus stop upgrades. All within study limits excluding stop 1015			10	Install boarding and alighting pads, bus shelter pads, bus shelters, benches, route maps, bicycle racks and trash receptacles at all stops located along Palm Beach Lakes. Connect all bus stops to existing sidewalks and crosswalks. For bus stop 2863 on NW corner of Blue Heron and 42nd Way - Create concrete sidewalk bulb out and stripe right turn lane as a bus-bay/right turn lane combo. Consider adding a shelter also.	\$250,000
*Cost estimate does not include ROW acquisition or drainage				Total Cost:   \$   3,027,000	



Appendices



Appendix A: Field Observations

Road Users Observed during Visit		
Many users (both bicyclists and pedestrians), most of which appeared to be middle-aged to older adults. Closer to the VA Hospital two individuals were spotted in electric wheelchairs	Road users included walkers (for leisure, fitness or business), cyclists and scooters ranging from young adults to senior citizens	
Observations of Things that Worked		
Sidewalks were, overall, well connected. Major intersections included audible pedestrian countdown signals. Existing designated bicycle lanes appeared to be in good condition	Most intersections are striped with audible crosswalks	Most of the corridor radius offered both sidewalks and crosswalks at intersections for pedestrians
The VA Hospital Transit Hub (stop 1015) provided users with posted information on the routes of each bus electronically		

Observed Deficiencies				
Sidewalks & Crosswalks	ADA	Bicycle Facilities	Lighting	Bus Stops
Where there is a free-flow right turn (2 locations), the crosswalk should be straight. In both instances, they are not in-line with the main crosswalk, which decreases the visibility of the driver at the turn			Improvements could be made along the Blue Heron corridor with PED lighting	
Improvements could be made along the Blue Heron corridor with PED lighting and widening sidewalks to 8’ which would mean removing existing landscape along the sidewalk				
A midblock crossing could be implemented outside of the Arbor Parc Community (north of VA Medical Clinic on east side of Military Trail) so that PED and bicycle users can safely cross Military Trail				

Potential Pedestrian Perils	Potential Bicyclist Perils
The 2 locations with free-flow right turns	Bicycle lane signage needs improvement
Inadequate pedestrian lighting	There is often space for buffered bicycle lanes, and they are highly recommended due to fast traffic (45 mph which is typically exceeded) and wide lanes (12 feet)
Jay-walking on N Military Trail near the fire-station (north of VA Medical Center)	Low-hanging branches on the southbound side of Military Trail may pose as a danger for bicyclists



Overgrown landscape along the sidewalk often making passage difficult for pedestrians	
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Top Priorities Recommended from Site Visit by PB TPA	Easy Fixes by Location	Difficult Fixes by Location
Enhanced crosswalks everywhere	Pedestrian scale lining throughout the corridor	Resurfacing with lane width reductions and the implementation of buffered bicycle lanes
Mid-block crossing at the location by the fire station on the Military Trail north of the VA Hospital	Benches/ shelters at the bus stops	Installing bus shelters with trashcans and removing light pole obstructions along the sidewalks
Pedestrian scale lighting	Removing landscape on stretch of sidewalk between I-95 and Military Trail	
Buffered bicycle lanes and lane width reductions (to make bicycle lanes possible and to lower traffic speeds)		
Bus shelters for multiple bus stops		
Blue Heron Boulevard & Military Trail intersection is not ADA compliant (platform does not meet width requirements)		

Other Observations
Most pedestrian/ bicyclist activity of all locations to date
Easier access needed to VA Hospital campus for disable transit users
Crosswalk at Military Trail & Beeline Hwy intersection in not consistent with light signals of the intersection

Site Visit: June 27, 2018





Lighting at stop 1248 on south end of N Military Trail;  
Photo by: CTS Engineering, Inc.



Lighting at stop 1250 on N. Military north of  
Westroads Drive.; Photo by: CTS Engineering, Inc.

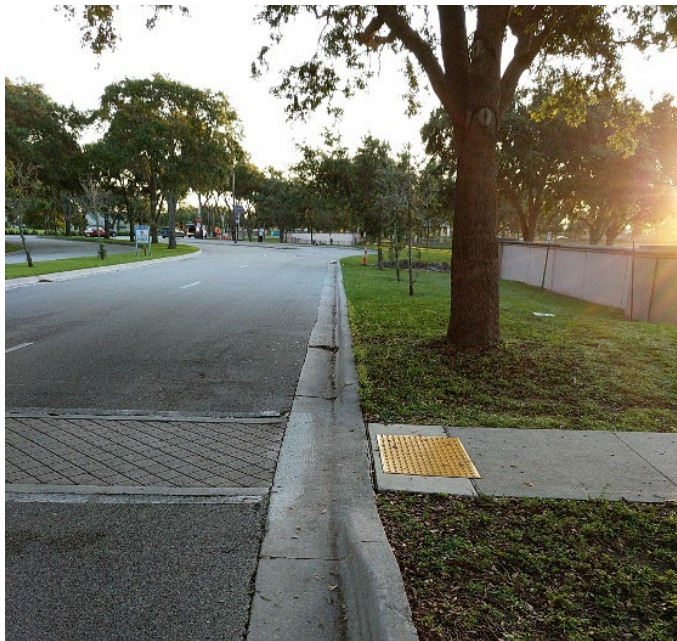


Lighting at stop 1018 on N. Military Trail.; Photo by: CTS Engineering, Inc.



Low lighting at stop 1015 at VA Hospital; Photo by: CTS Engineering, Inc.





No pedestrian connection to bus stop from south at VA Hospital; Photo by: CTS Engineering, Inc.



Sidewalk along Blue Heron; Photo by CTS Engineering, Inc.



Odd sidewalk cutouts along Blue Heron west of Military; Photo by: CTS Engineering, Inc.



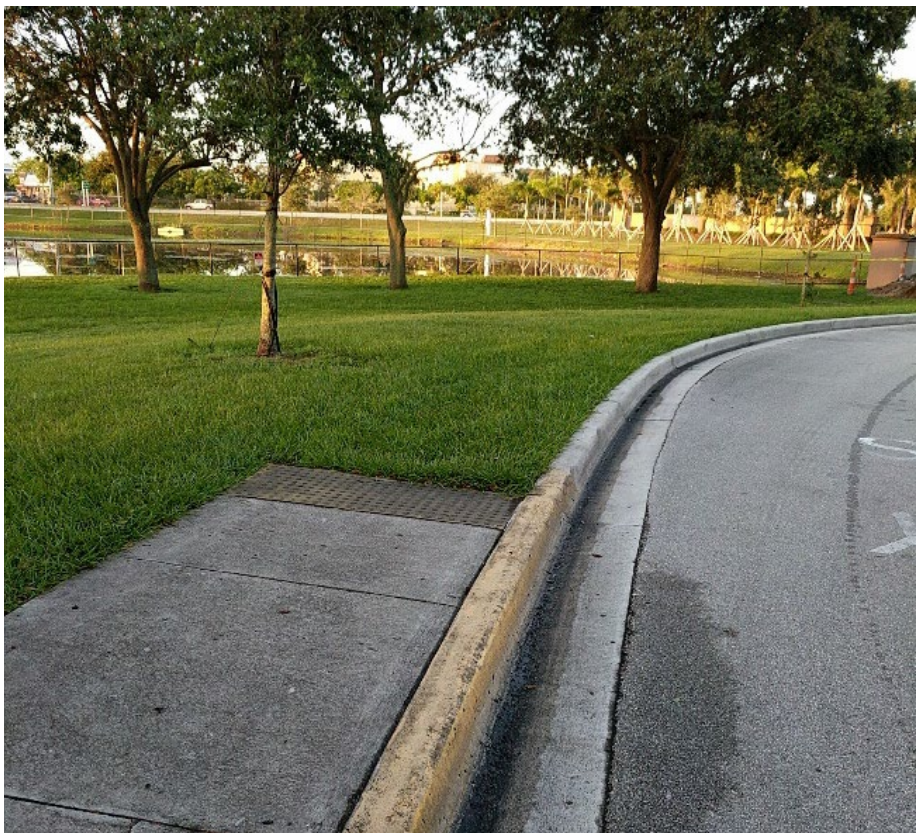
Shade offered by wall on Blue Heron just west of I-95; Photo by: CTS Engineering, Inc.



6 ft. sidewalk on Blue Heron east of Military; Photo by: CTS Engineering, Inc.



Pedestrian access to sidewalk from McDonalds on Blue Heron; Photo by: CTS Engineering, Inc.



Bad ADA connection at sidewalk end at VA Hospital; Photo by: CTS Engineering, Inc.





Crosswalk across Woodbine Trail along Military Trail;  
Photo by: CTS Engineering, Inc.



Countdown crosswalk on Blue Heron, east of  
Military; Photo by: CTS Engineering, Inc.



Crosswalk at Blue Heron and 42nd Way N.; Photo  
by: CTS Engineering, Inc.



New buttons at intersection of Blue Heron and 42nd  
Way N.; Photo by: CTS Engineering, Inc.



Crosswalk at the intersection of Military and Martin  
Luther King Jr.; Photo by: CTS Engineering, Inc.



Crosswalk at Blue Heron and Military Trail; Photo  
by: CTS Engineering, Inc.



Crosswalk at the intersection of Military and Old  
Beacon; Photo by: CTS Engineering, Inc.





Sign near intersection of Military and Blue Heron; Photo by: CTS Engineering, Inc.



Bicycle lane, north of Blue Heron on Military; Photo by: CTS Engineering, Inc.



Sign north of Blue Heron on Military; Photo by: CTS Engineering, Inc.



Sign on Blue Heron, east of Military; Photo by CTS Engineering, Inc



Designated bicycle lane on corridor; Photo by Palm Beach TPA





Shade from wall on stop 2863 on Blue Heron Boulevard; Photo by: CTS Engineering, Inc.



Stop 2864 on W. Blue Heron Boulevard; Photo by: CTS Engineering, Inc.



Stop 2800 on W. Blue Heron Boulevard; Photo by: CTS Engineering, Inc.



Stop 1255 on north end of N. Military Trail; Photo by: CTS Engineering, Inc.



Improper landing pad size at pickup location at stop 1015; Photo by: CTS Engineering, Inc.



Seating at stop 1014 on N. Military Trail; Photo by CTS Engineering, Inc.