

US-1 Intersection Improvement Study- Village of Pinecrest

Lehman Center for
Transportation Research, FIU



Miami, FL
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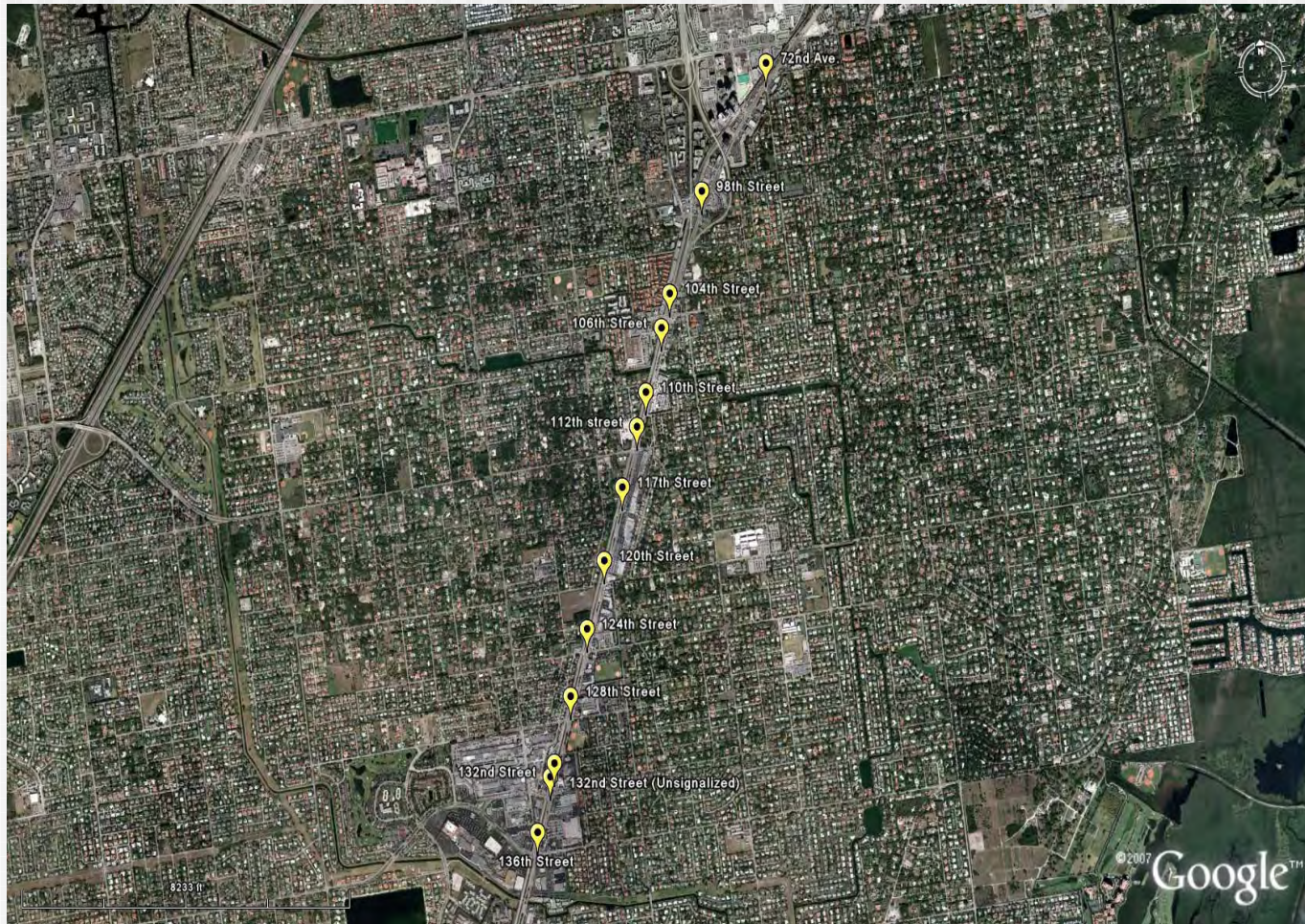
Objective

- The objective of this study is to identify safety, geometry, and operational issues and problems associated with current and forecasted US-1 corridor operations in the Village of Pinecrest and to propose and evaluate improvement alternatives to address these issues and problems.

Study Intersections

- US 1 and SW 72nd Avenue (Unsignalized)
- US 1 and SW 98th Street (Signalized)
- US 1 and SW104th Street (Signalized)
- US 1 and SW 106th Street (Unsignalized)
- US 1 and SW110th Street (Unsignalized)
- US 1 and SW 112th Street (Signalized)
- US 1 and SW117th Street (Unsignalized)
- US 1 and SW120th Street (Unsignalized)
- US 1 and SW124th Street (Signalized)
- US 1 and SW128th Street (Signalized)
- US 1 and SW132nd Street (Unsignalized on Westbound approach and signalized on Eastbound approach)
- US 1 and 136th Street (Signalized)

Study Intersections



Study Tasks

- Field observations
- Traffic Counts
- Operational analysis
 - Existing and improvement scenarios for 2007 and 2015
- Safety analysis
- Signal warrant analysis
- Right-of-way analysis
- Recommendations for Improvements

SW 72nd Avenue

■ 2007 Recommendation:

- Change intersection alignment to reduce the angle at which SW 72nd Ave. joins US-1.
- Re-stripe the pavement markings to form a 90 degree approach angle

SW 72nd Avenue



SW 98th Street

■ 2007 Recommendations:

- Parking needs to be formalized or prohibited by curbing
- Add a left turn on westbound and eastbound approaches and change to split phase.

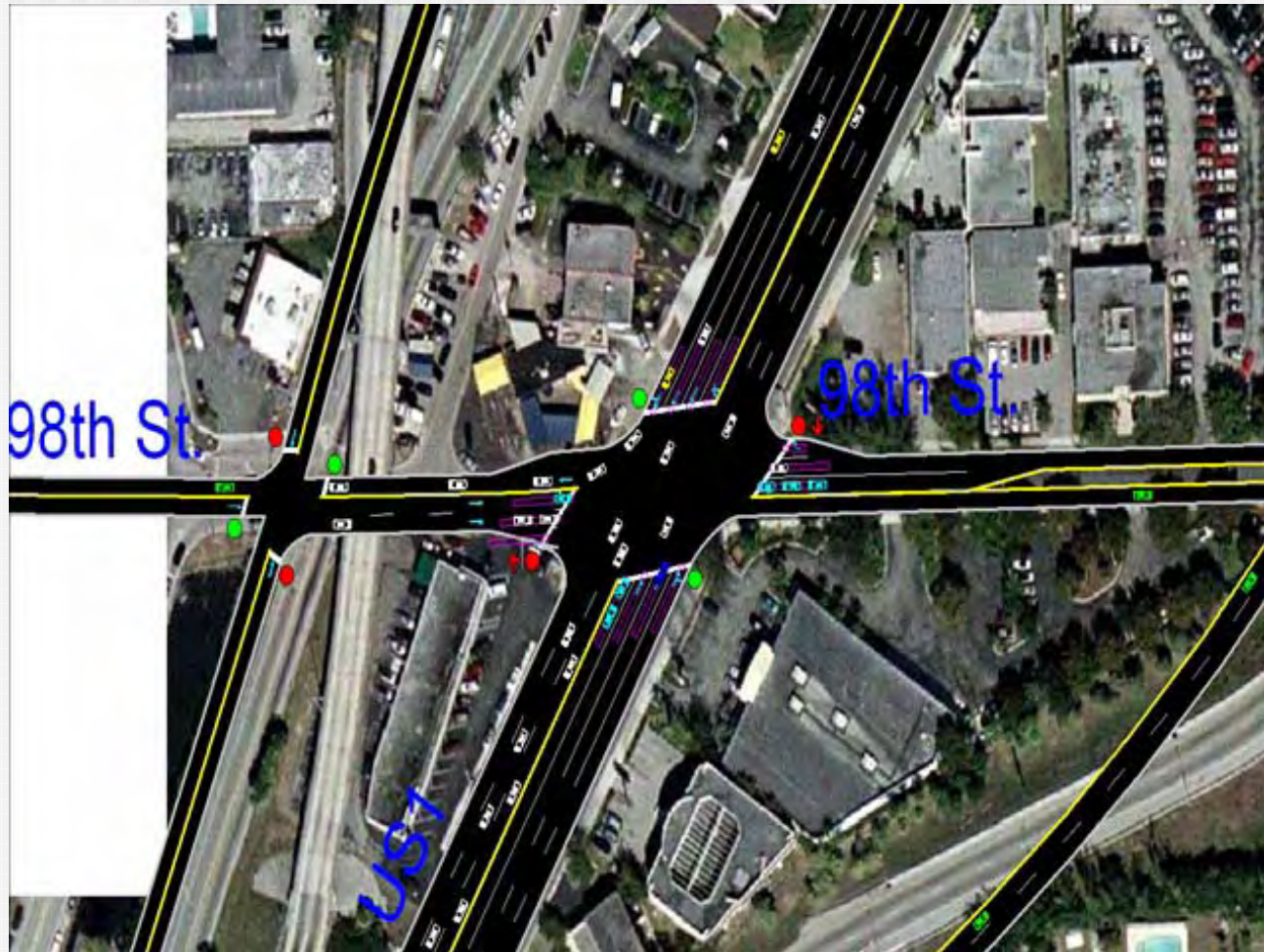
SW 98th Street



SW 98th Street (2007)



SW 98th Street 2007 Improvements

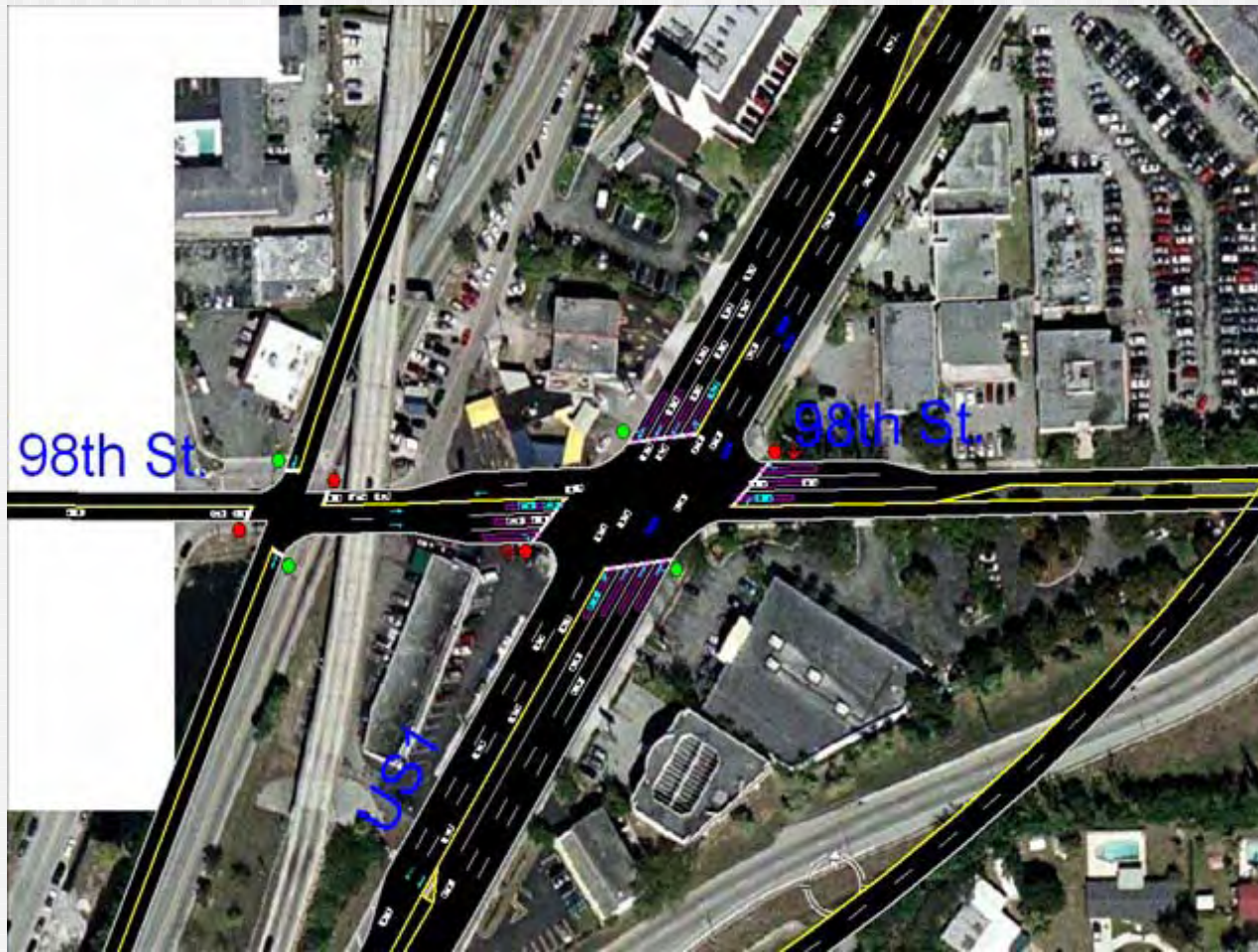


SW 98th Street

■ 2015 Recommendation:

- Add a 100 ft right-turn bay to WB approach and retime signal.
- Add a 50 ft right-turn bay to EB approach.

SW 98th Street 2015 Improvements



SW 98th Street

Planning Horizon	Current Year	Future Year
Right-of-Way Improvements	1. Westbound Left Turn Lane 2. Curb and Gutter on east approach	1. Westbound Right Turn Lane 2. Eastbound Right Turn Lane
Pavement Area required in Pinecrest	2,398 ft ²	1,595 ft ²
ROW Area required in Pinecrest	None	1,595 ft ²
Required ROW Appraised Value	Not Applicable	\$545,131

SW 104th Street

■ 2015 Recommendations:

- Add a second exclusive left turn EB in addition to the existing one and the one shared with the through.
- Add right-turn pocket to EB and extend passed busway
- Add an exclusive WB right-turn bay.
- Retime signal.

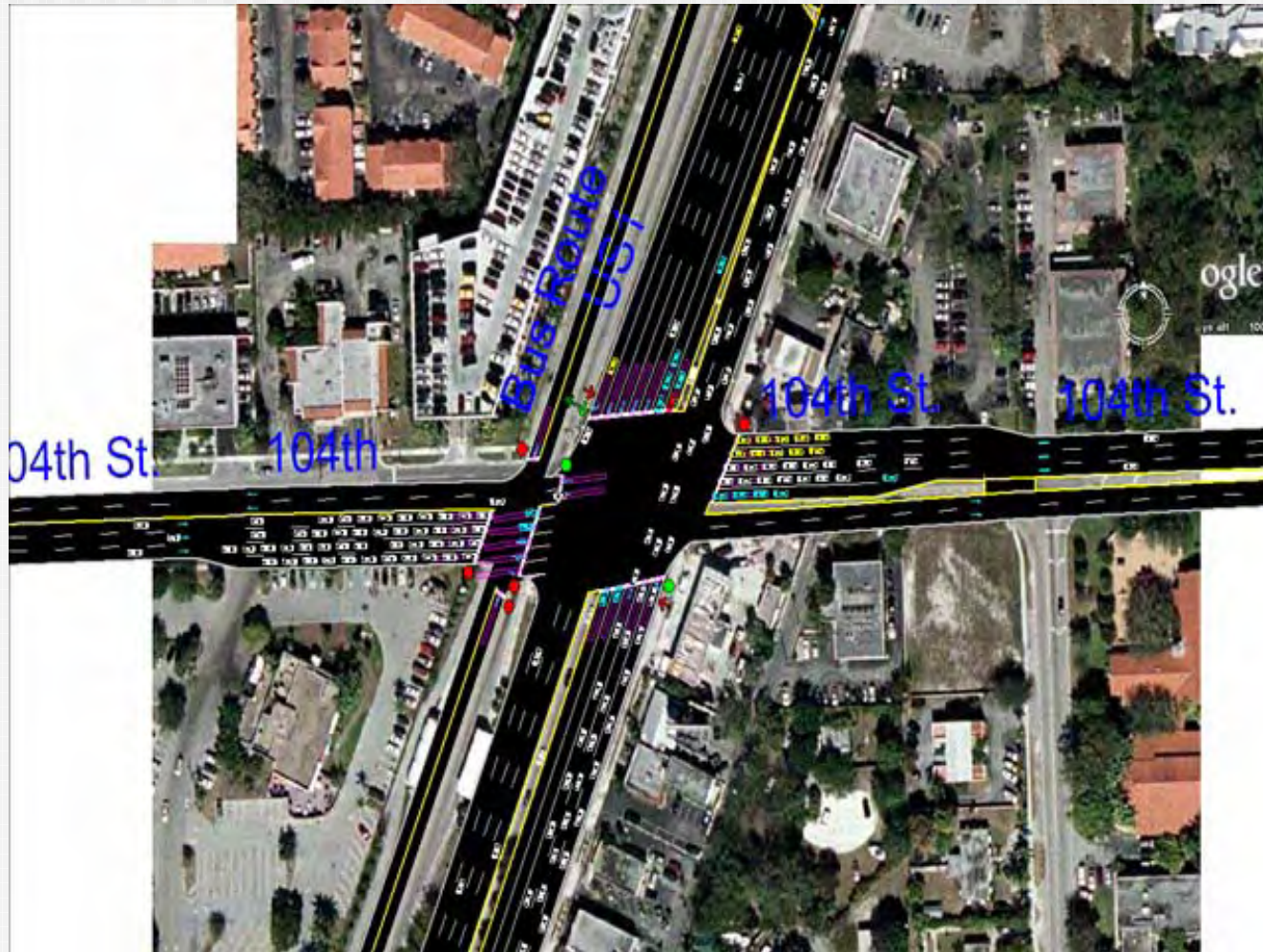
SW 104th Street



SW 104th Street 2015



SW 104th Street 2015 Improvements



SW 104th Street

Planning Horizon	Current Year	Future Year
Right-of-Way Improvements	1. Operational improvements no ROW changes	1. Eastbound Left Turn Lane 2. Eastbound Right Turn Lane 3. Westbound Right Turn Lane (Village of Pinecrest)
Pavement Area required in Pinecrest	None	3,267 ft ²
ROW Area required in Pinecrest	None	3,267 ft ²
Required ROW Appraised Value	Not Applicable	\$291,230

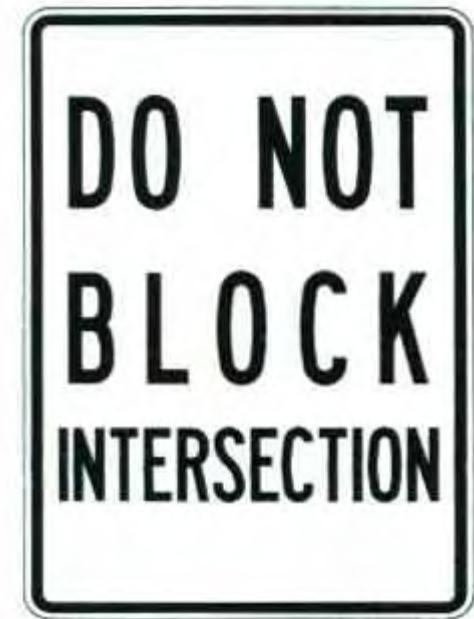
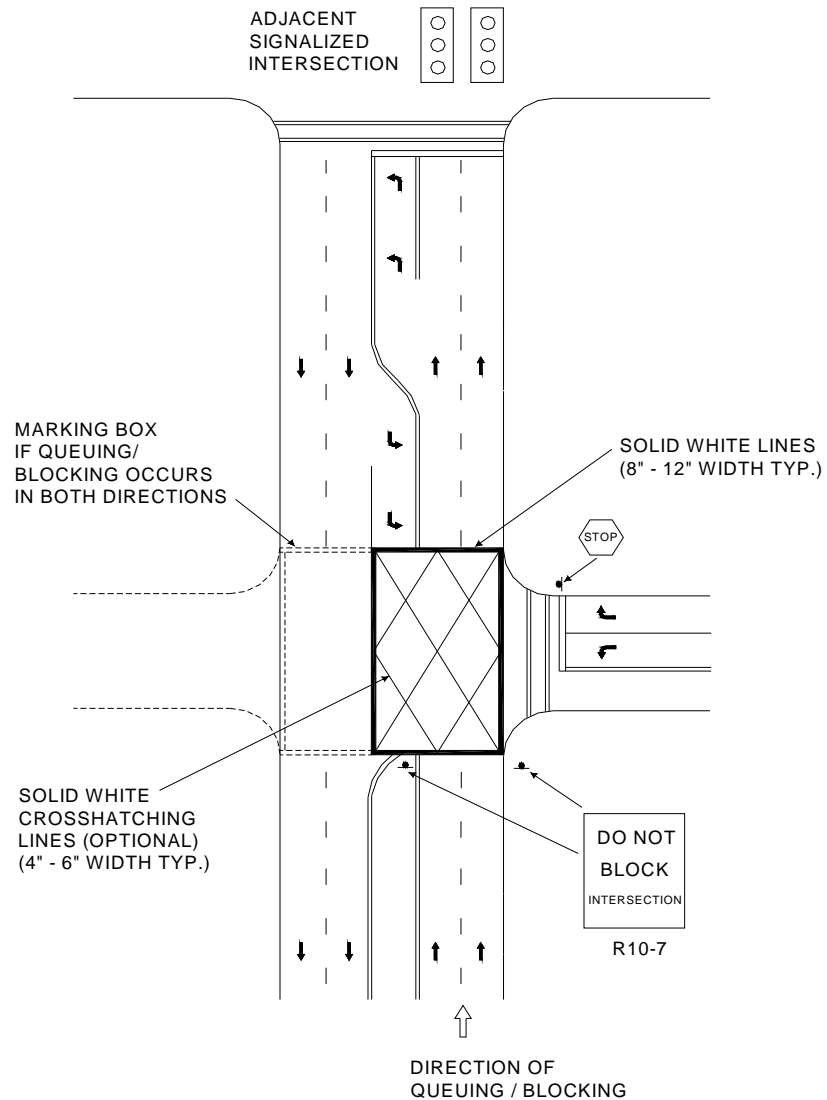
SW 106th, 110th, and 132nd Streets

- **2007 Recommendations:**
 - Put a detector and sign with flashing beacon and grid marking.
 - Sign informing motorists to not block cross Street when the queue backs up to the intersection

SW 106th Street



Signage Examples



SW 112th Street

■ 2007 Recommendations:

- Reconfigure the driveway access to Suniland Shopping Center to reduce the conflict caused by the entrance which is closest to SW 112th street
- Convert WBR lane into a shared right and through
- Extend the two EB lanes to 300 ft upstream from busway intersection.
- Reconfigure EB lanes to make the exclusive left shared with the through.

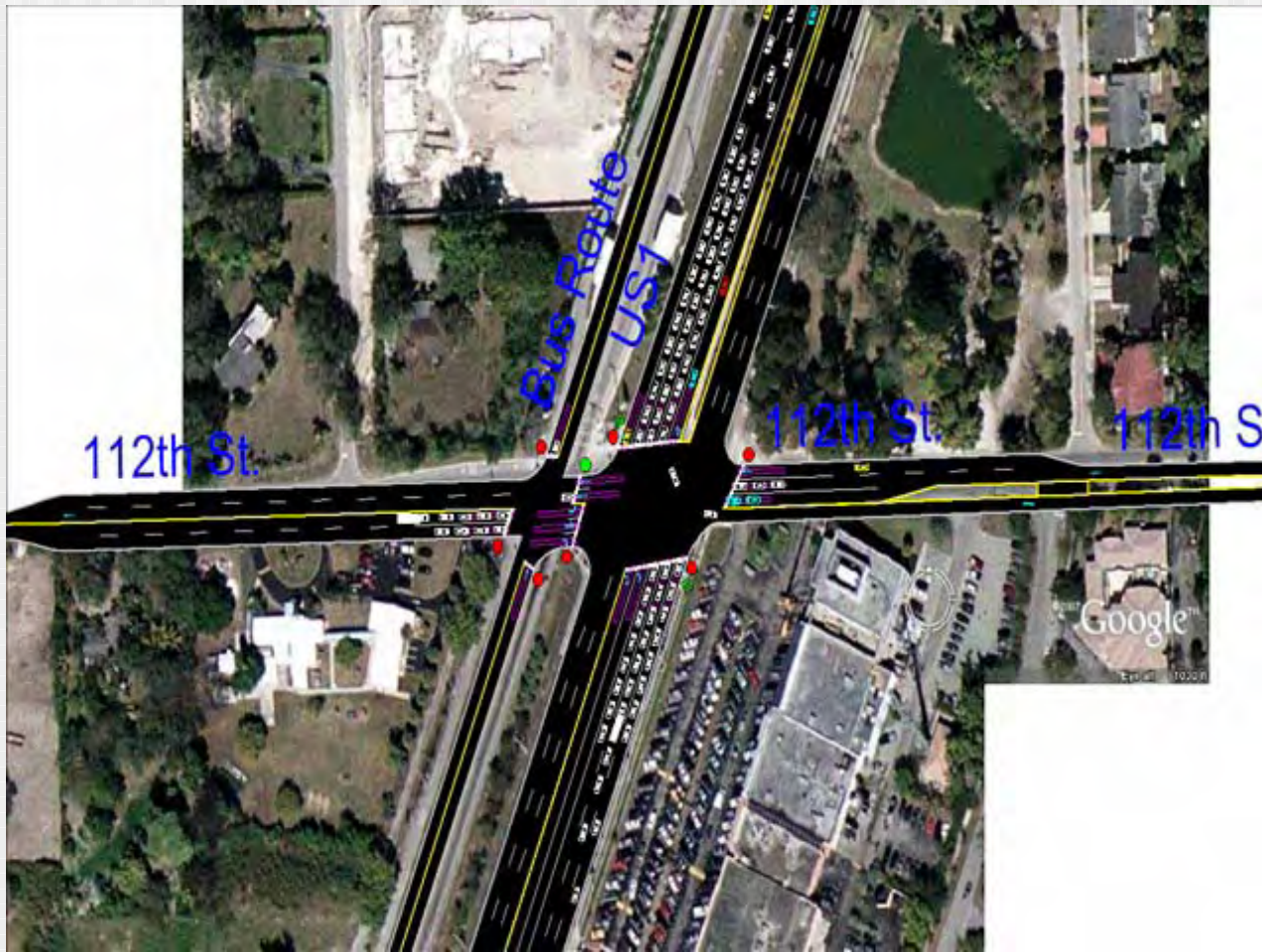
SW 112th Street



SW 112th Street (2007)



SW 112th Street 2007 Improvements



SW 112th Street

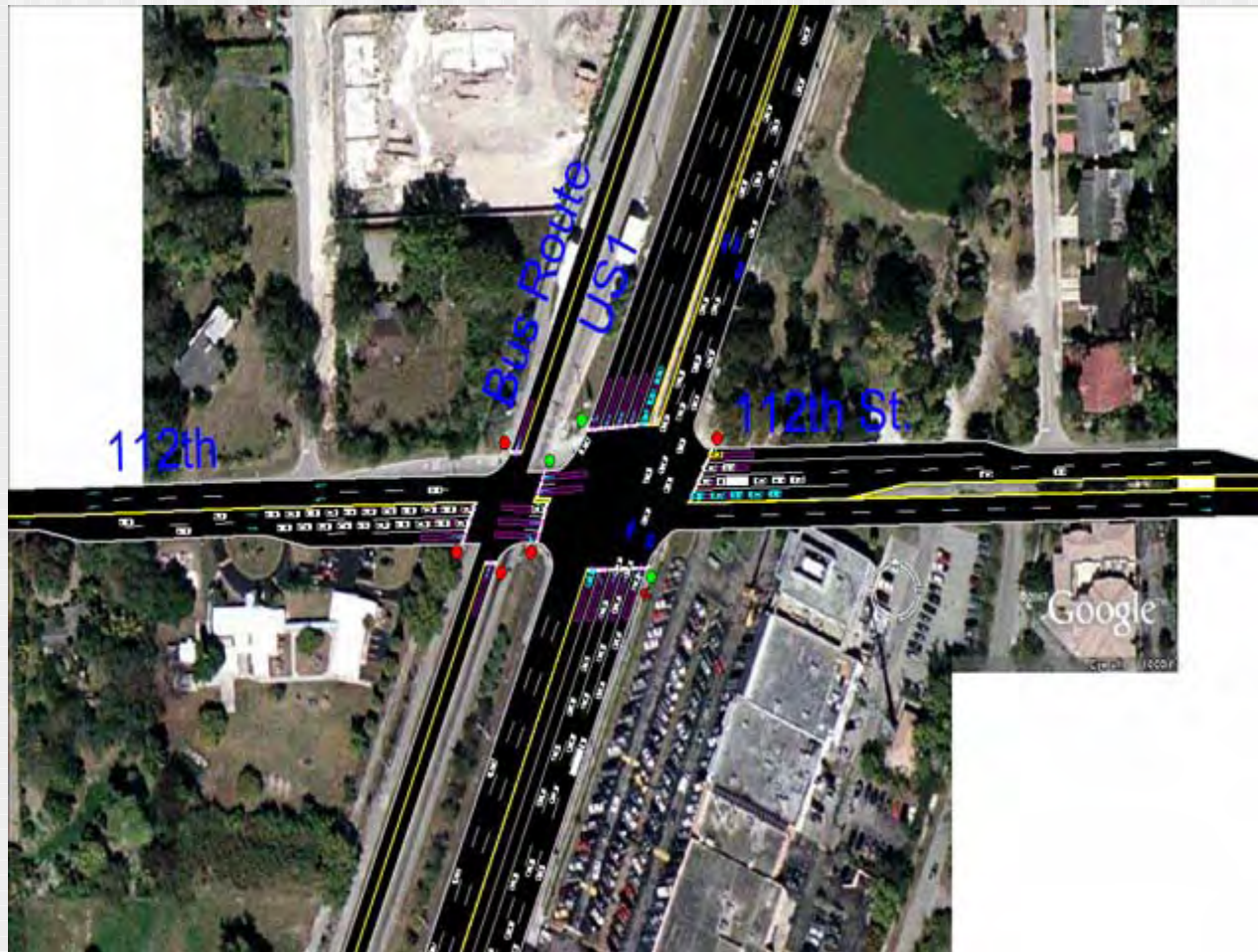
■ 2015 Recommendations:

- Add a second NB left turn bay to prevent vehicles from backing into through lanes
- Add a WBR turn bay and make the shared thru and RT in 2007 solution, a thru only lane.
- Extend the EBR lane 150 ft upstream of the bus way intersection

SW 112th Northbound Left



SW 112th Street 2015 Improvements



SW 112th Street

Planning Horizon	Current Year	Future Year
Right-of-Way Improvements	1. Northbound US-1 Left Turn Bay 2. Eastbound Lane Extensions 3. Westbound reconfiguration 4. Suniland Driveways	1. Westbound Right Turn Lane
Pavement Area in Pinecrest	None	1,595 ft ²
ROW Area in Pinecrest	None	1,595 ft ²
Required ROW Appraised Value	Not Applicable	\$236,223

SW 117th Street

■ 2007 Recommendations:

- Reconfigure the access to the bank to minimize the access points on the north side of the approach to the intersection of SW 117th Street and US-1.
- Put a detector and sign with flashing beacon and grid marking.
- Sign informing motorists to not block cross Street when the queue backs up to the intersection
- Implement a raised median on 117th Street to prevent left turns onto Southbound US-1

SW 117th Street



SW 117th Street

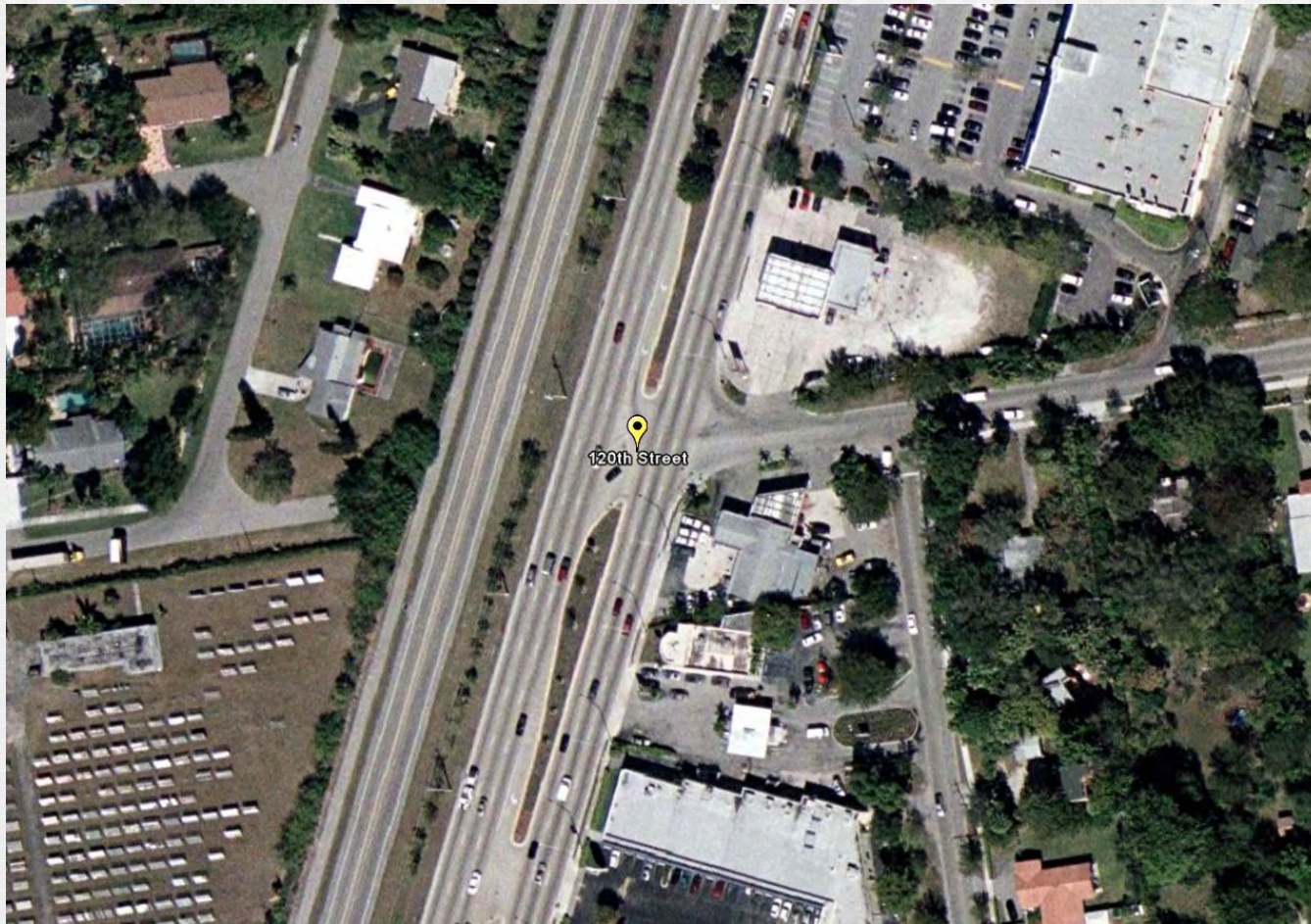
Planning Horizon	Current Year	Future Year
Right-of-Way Improvements	1. Bank Driveway Consolidation 2. Pinecrest Plaza Access	No additional changes
Pavement Area in Pinecrest	450 ft ²	None
ROW Area in Pinecrest	None	None
Required ROW Appraised Value	Not Applicable	Not Applicable

SW 120th Street

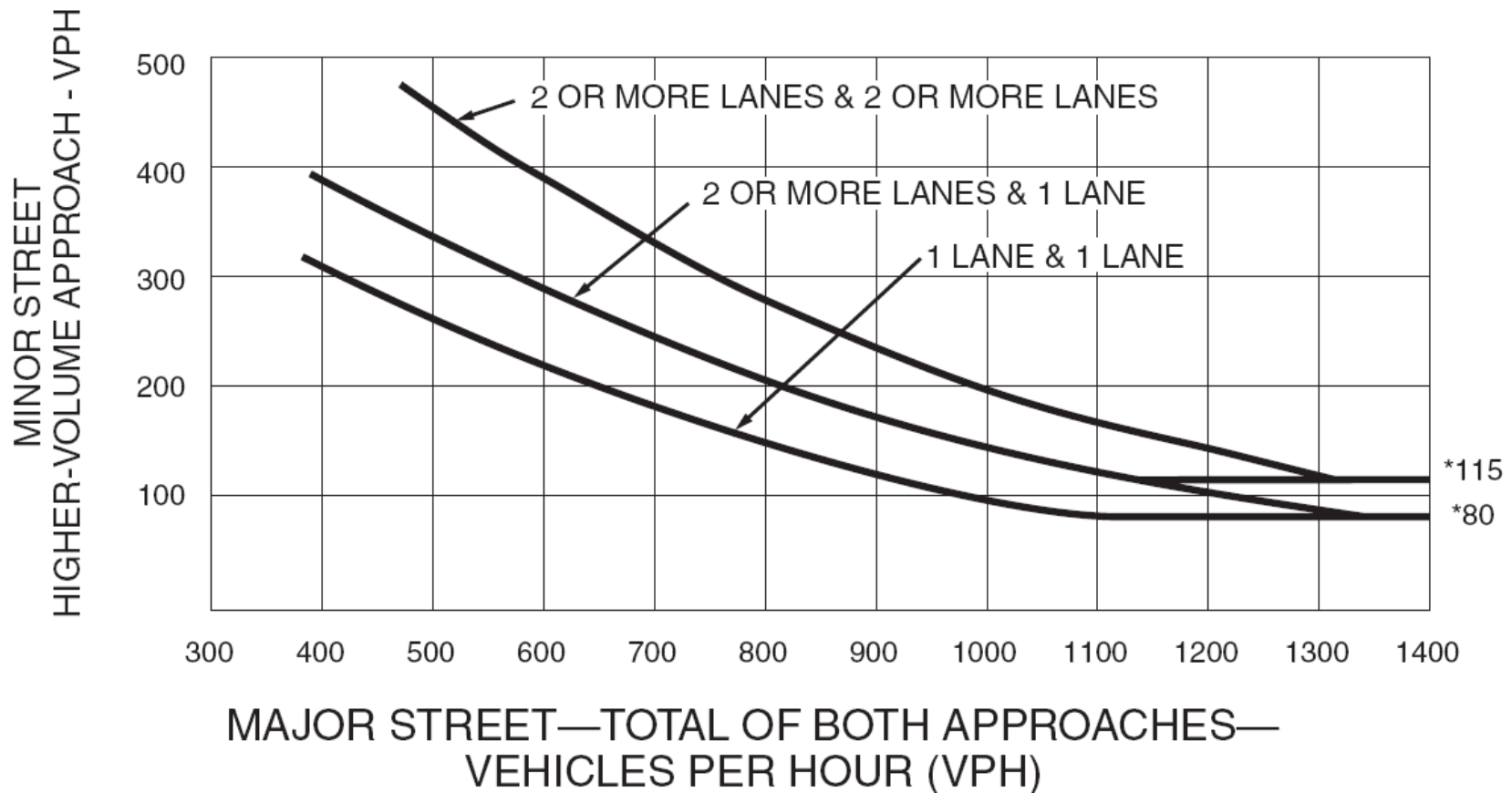
■ 2007 Recommendations:

- Signalize intersection, under the justification from Warrants 2 & 3.
- Consider flashing the signal during the light traffic periods.
- Prevent left turn from Northbound 82 Avenue onto Westbound 117th Street

SW 120th Street

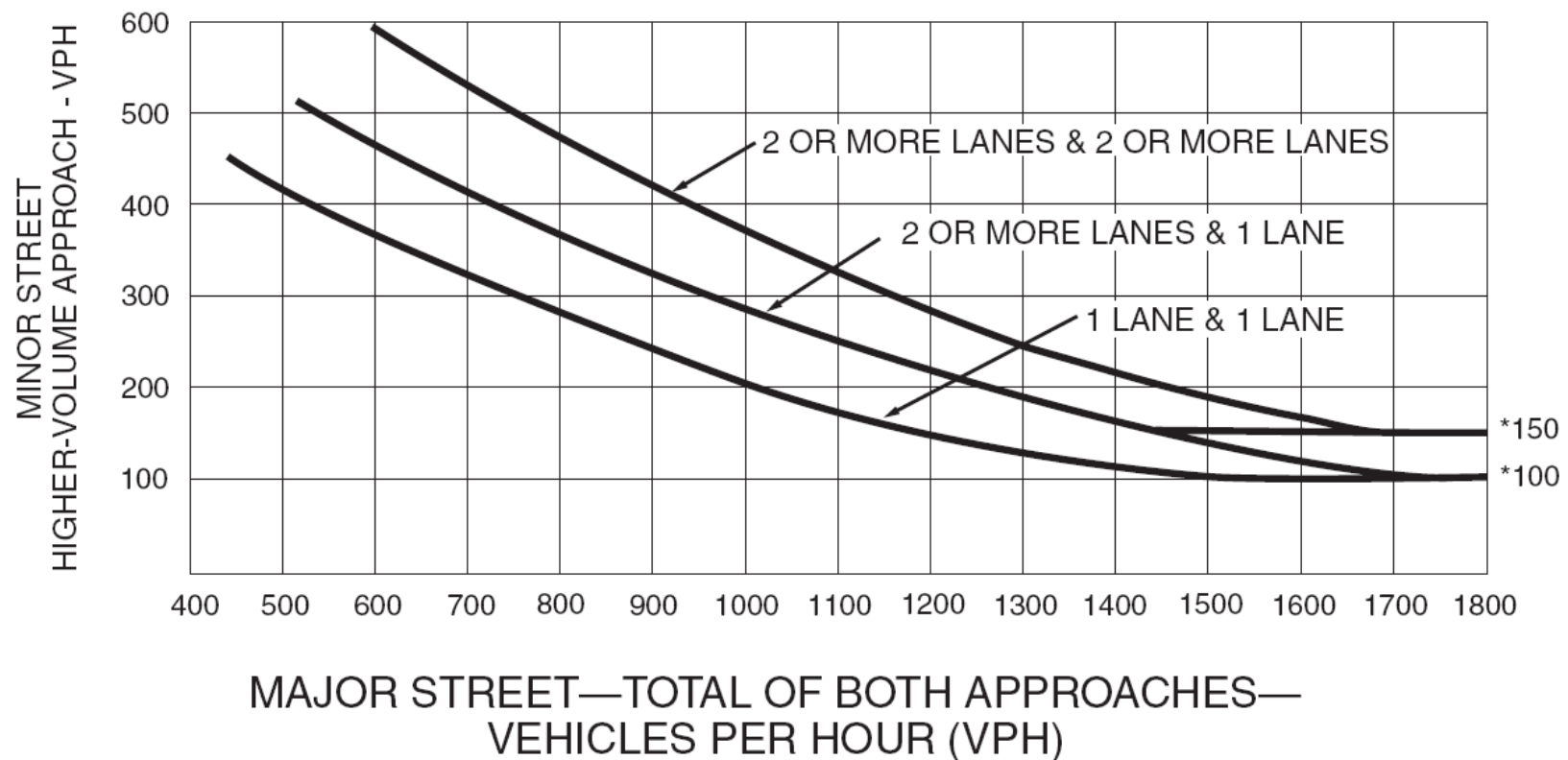


SW 120th Street Warrant 2



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

SW 120th Street Warrant 3



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

SW 124th Street

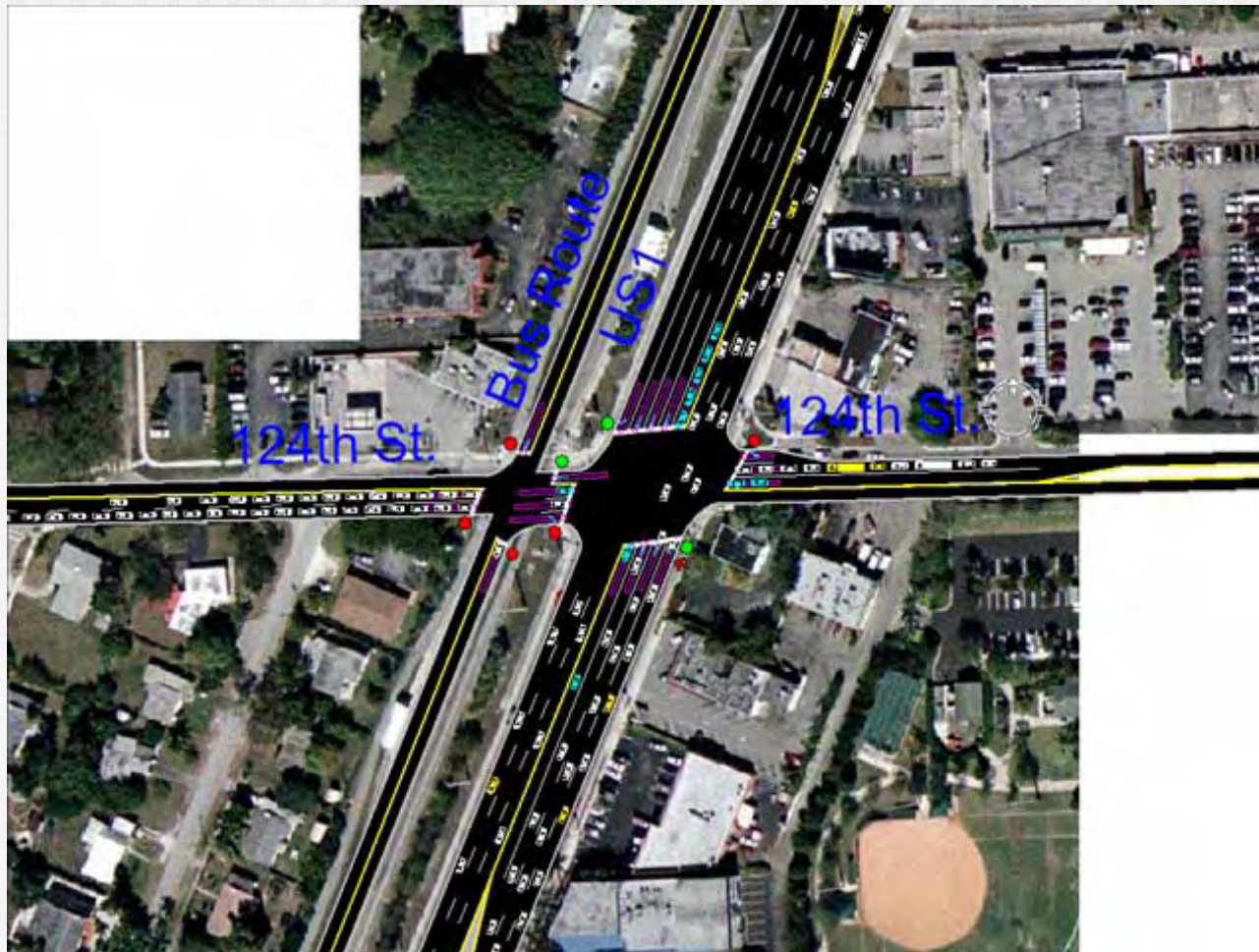
■ 2007 Recommendations:

- Extend westbound right turn bay further from the intersection. (235 ft.)
- Implement a special signal plan between 2:30 PM and 3:30 PM for SW 124th intersections with US-1 and SW 82nd Avenue.

SW 124th Street



SW 124th Street (2007)



SW 124th Street 2007 Improvements



SW 124th Street

■ 2015 Improvements:

- Add a WB shared lane between thru and left
- Extend EBR upstream of the bus-way

SW 124th Street 2015 Improvements



SW 124th Street

Planning Horizon	Current Year	Future Year
Right-of-Way Improvements	1. Westbound Right Turn Lane	1. Eastbound Lane Extensions 2. Westbound Shared Through / Left Turn Lane
Pavement Area in Pinecrest	2,585 ft ²	5,830 ft ²
ROW Area in Pinecrest	1,480 ft ²	5,830 ft ²
Required ROW Appraised Value	\$112,480	\$454,430

SW 128th Street

■ 2007 Recommendations:

- Add a WB right turn bay and extend 175 ft from the intersection.
- Implement a special signal plan between 2:30 PM and 3:30PM

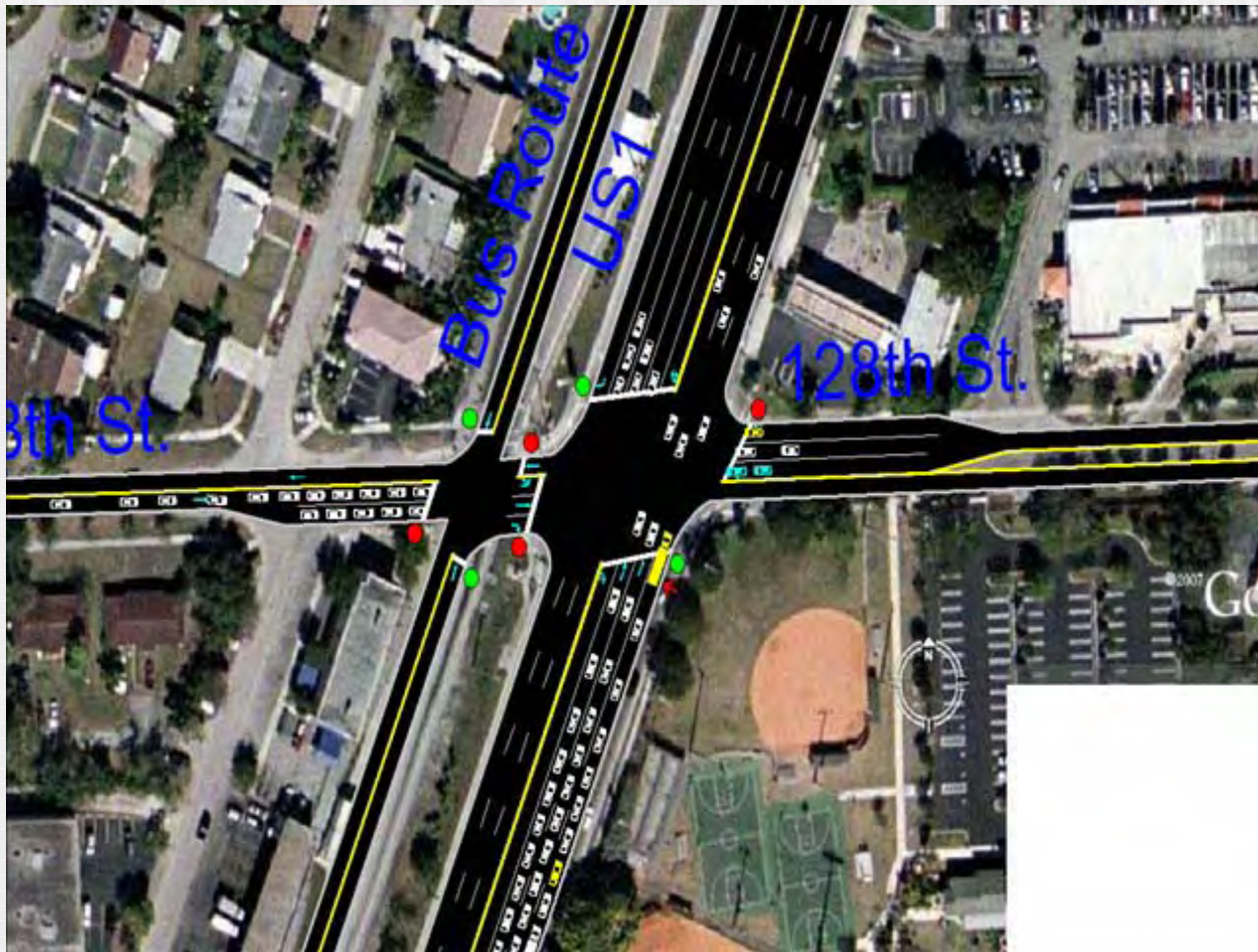
SW 128th Street



SW 128th Street (2007)



SW 128th Street 2007 Improvements



SW 128th Street

■ 2015 Recommendations:

- Add a lane shared between EBT and EBL
- Extend the two EB lanes to 500 ft upstream from bus-way intersection

SW 128th Street 2015 Improvements



SW 128th Street

Planning Horizon	Current Year	Future Year
Right-of-Way Improvements	Westbound Right Turn Lane	Eastbound Shared Through / Left Turn Lane
Pavement Area in Pinecrest	1,650 ft ²	None
ROW Area in Pinecrest	2,100 ft ²	None
Required ROW Appraised Value	\$168,000	Not Applicable

SW 136th Street

■ 2007 Recommendations:

- Reconfigure the ingress and egress of the mall at the southeast corner.
- Add an extra right-turn bay shared with through lane on the WB approach. This will require making the west approach departing (receiving) link three lanes.
- Close " The Falls" mall exit closest to US-1 due to vehicle trying to go North from the exit

SW 136th Street Cont.

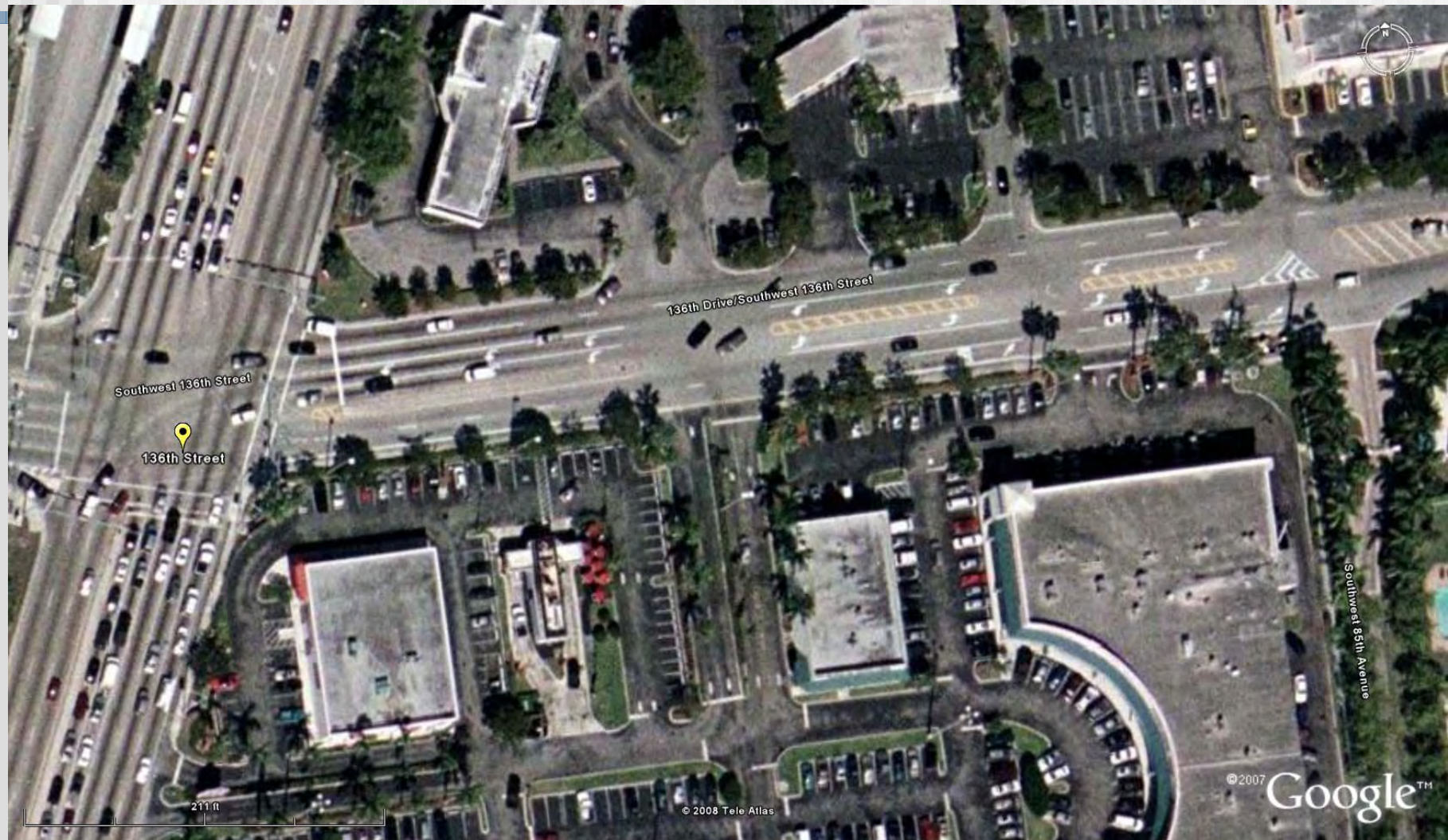
■ 2007 Recommendations Cont.

- Allow EBR during NBL (this will require a special signal head and signage)
- Add an acceleration lane for EBR (going south on US-1), separated by delineators to prevent conflict with WBL.
- Modify the south side of the EB link east of US-1 to eliminate the alignment that affects the line of sight of motorists turning from access points to SW 136 street.

SW 136th Street



SW 136th Street Mall Ingress and Egress Issues



SW 136th Street “The Falls” Exit Issue



SW 136th Alignment Issue



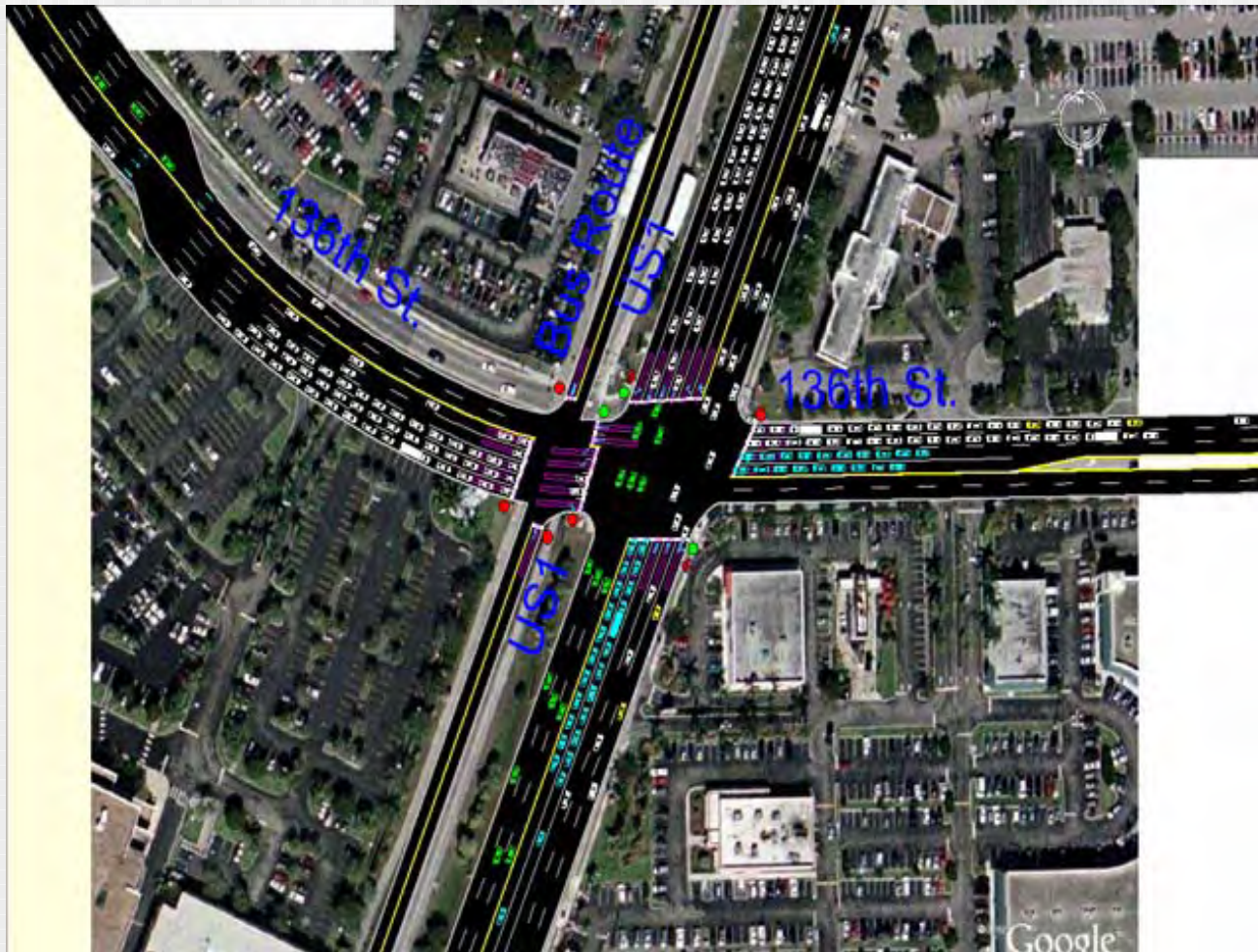
SW 136th Conflicts



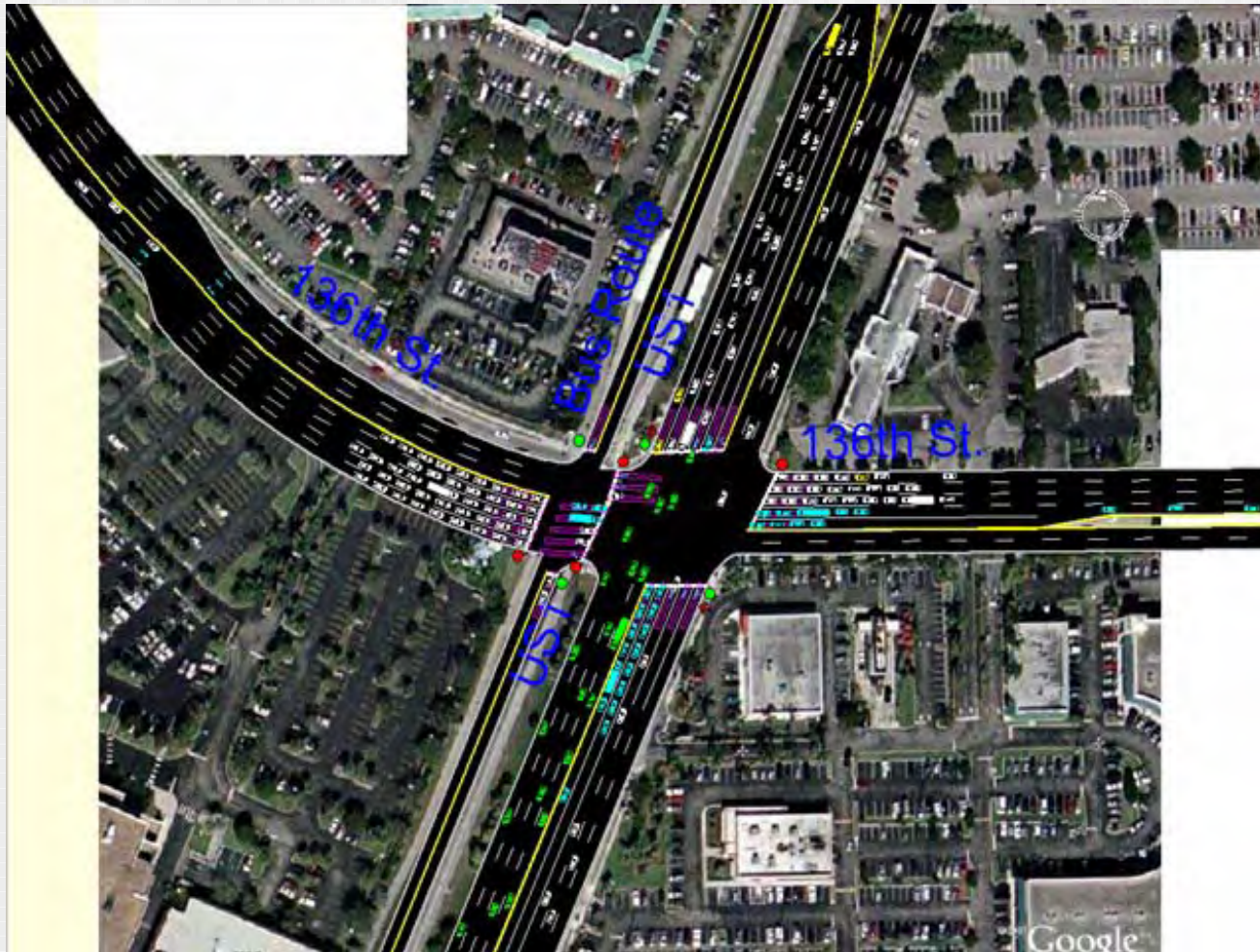
SW 136th Conflicts



SW 136th Street (2007)



SW 136th Street 2007 Improvements



SW 136th Street

Planning Horizon	Current Year	Future Year
Right-of-Way Improvements	1. Additional Westbound Shared Through / Right Turn Lane 2. Realignment of SW 136 th Street 3. Colonial Palm Plaza Driveway 4. Southbound US-1 Acceleration Lane	No additional changes
Pavement Area in Pinecrest	1,980 ft ²	None
ROW Area in Pinecrest	1,980 ft ²	None
Required ROW Appraised Value	\$138,600	Not Applicable

Questions?

