

Congested Intersection Improvements

Volume I Action Plan



Congested Intersection Improvements

Volume I Action Plan

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DPA Project #06235



TABLE OF CONTENTS

1.0 INTRODUCTION.....1

2.0 COORDINATION1

3.0 LITERATURE RESEARCH.....1

4.0 DATA GATERINING2

5.0 INTERSECTION SCREENING2

6.0 INTERSECTION ANALYSIS.....2

INTERSECTIONS

1. West Dixie Hwy/Miami Gardens Drive4

2. NE 26 Avenue/NE 203 Street6

3. West Dixie Hwy/NE 172 Street.....8

4. SW 27 Avenue/W. Flagler10

5. SW 57 Avenue/8 Street.....12

6. SW 67 Court/Old Cutler Rd/SW 136 Street14

7. NW 77 Court/169 Street16

8. Biscayne Blvd./NE 178 Street18

9. Biscayne Blvd./NE 180 Street20

10. Biscayne Blvd./NE 182 Court.....22

11. Biscayne Blvd./NE 183 Street24

12. Biscayne Blvd./NE 186 Street26

13. Biscayne Blvd./NE 191 Street28

14. SW 127 Avenue/112 Street.....30

15. SW 152 Avenue/80 Street.....32

16. NW 7 Avenue/67 Street34

17. NW 37 Avenue/171 Street36

18 N. Miami Avenue/Memorial Hwy.....38

19 Segovia St./Biltmore Way40

20 Desoto Blvd./Sevilla Avenue/Granada Blvd.42

Appendix - Additional Suggestions & Comments

Volume 2 - Selected Data & Analysis

LIST OF EXHIBITS

<u>Exhibit</u>	<u>Page</u>
1 Intersection Locations.....	1
2 Schedule of Improvements.	2

1. Introduction

A few years ago the Miami Urbanized Area Metropolitan Planning Organization (MPO) created and implemented the concept of RUSH (Resourceful Utilization of Streets and Highways). This program is a streamlined way of selecting intersections suitable for quick improvements with relatively low cost but high benefits. Since that time, one round of intersections has been successfully implemented. This report documents the selection and recommendation effort for the second round. It includes twenty intersections as shown in Exhibit 1.

2. Coordination

The coordination task is critical to successful implementation of the study recommendations. For that reason, the following agencies were invited to participate in the study: Florida Department of Transportation (FDOT) and Miami-Dade Public Works Department (PWD); as well as other agencies, as appropriate. This group, the Study Advisory Committee (SAC), actively participated in providing information and feedback about the locations and recommended improvements.

3. Literature Research

Extensive research of intersection operational and capacity improvements was conducted. The following reference materials, among others, were reviewed:

- Evaluating Intersection Improvements: An Engineering Guide (NCHRP Report 457)
- Innovative Intersection Safety Improvement Strategies and Management Practices: A Domestic Scan (FHWA - USDOT)
- Signalized Intersections: Information Guide (FHWA – USDOT)
- A Toolbox For Alleviating Traffic Congestion and Enhancing Mobility (ITE)



Exhibit 1

These documents provided lists as well as a multitude of examples of low-cost, high-benefit intersection improvements. A checklist of treatments was created (see Volume II) that was then used to explore the most applicable improvement for each selected intersection.

4. Data Gathering

Research into available turning movement counts for the selected intersections yielded very little usable information. Traffic counts (full or sample counts), therefore, were secured in order to properly evaluate alternatives and ascertain the benefit of the selected improvements. In addition to the traffic counts, base intersection geometric information was also obtained from various sources.

5. Intersection Screening

The first level of screening was a “Fatal Flaw” review where violation of any one of the primary requirements (right-of-way availability, severe environmental or permitting problems, community impacts, etc.) would automatically disqualify a location from further analysis. The first level of Fatal Flaw review was a desktop examination of the primary criteria using aerial photo and other information readily available from the internet. The second level, for the locations surviving the desktop review, was a field inspection. Members of the SAC were also interviewed to gain further insight into the subject locations. Every effort was made to select improvements geographically distributed throughout the entire county (see map below). Finally, peak hour field observations were conducted to better understand the intersection capacity and/or operational issues, validate the effectiveness, as well as, the feasibility of the proposed improvements.

6. Intersection Analysis

Intersection capacity analysis of the recommended improvements was conducted for each intersection. This analysis provided a Measure of Effectiveness that allowed uniform comparison of the expected benefits. This measurement is the average percent reduction in overall intersection delay. A wide range of results was obtained due to the variation in the type and level of improvement by location. Even in the few cases where the delay benefit was found to be marginal, there were other operational and/or safety related benefits that would still make the recommended improvements worthwhile due to their relatively low cost. In some cases, construction of a roundabout was found to be very effective for those particular locations.)

7. Action Plan

The Action Plan is a compilation of the recommended improvements for each intersection. This takes the form of drawings depicting the proposed geometry, highlighting the proposed changes. Color has been used extensively to enhance the appearance and make the drawings easy to understand. In addition to the specific improvements, estimates of cost, and the time needed to have each improvement constructed are provided. The time to complete construction includes: planning; design; permitting; bidding; and construction (see figure below). In general terms, the improvements are classified as: short term (up to one year); medium term (up to two years; and long term (up to three years). For the most part, improvements in the medium and long term category are those anticipated to require more extensive permitting and coordination). The planning and construction schedule (subject to available funding) is shown in Exhibit 2.

For each intersection the following exhibits are also provided: a location map; an aerial view; and a picture. A written description of the issues, recommendations, as well as, the analysis, cost and schedule are provided. This report presents the recommendations resulting from this study. However, additional suggestions and comments found in the appendix should also be reviewed. Volume II of the report contains selected data and analysis as well as the toolbox form used in the study.

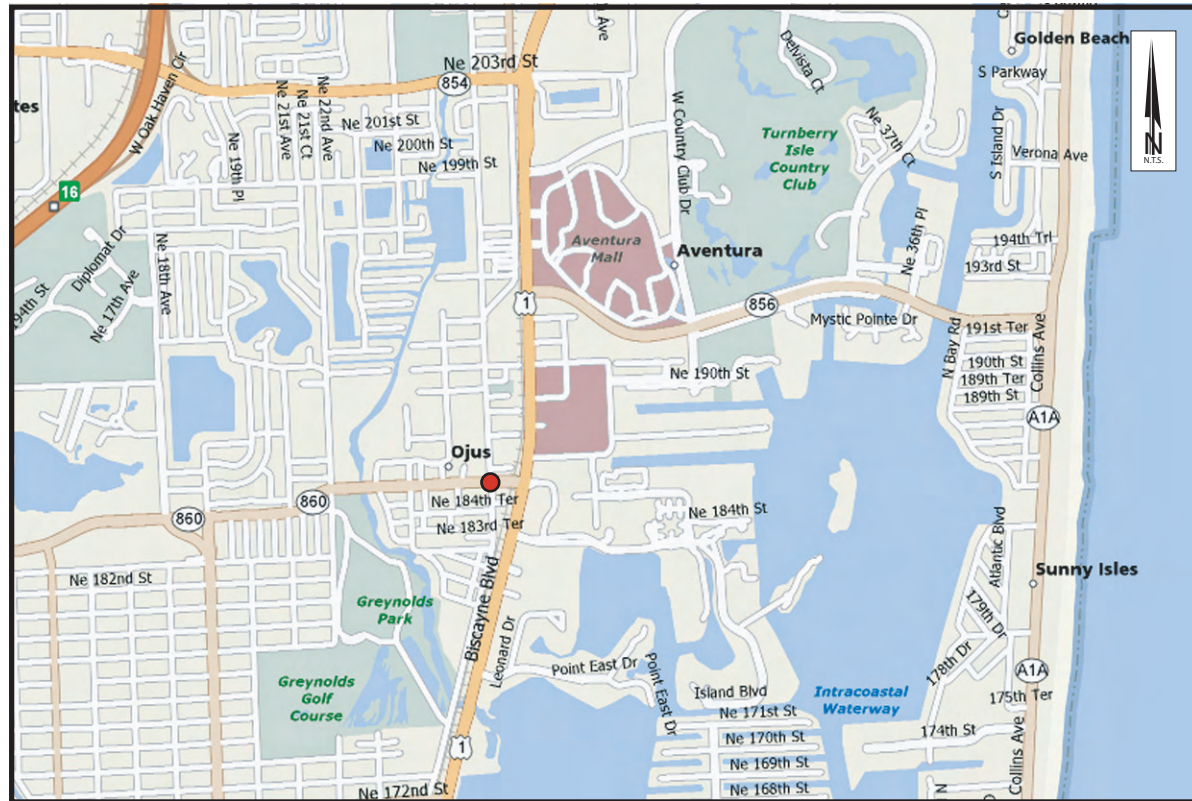
Exhibit 2
Planning and Construction Schedule of Improvements

Intersection	Term	Year 1				Year 2				Year 3			
1. West Dixie Hwy/ Miami Gardens Dr	Short												
2. NE 26 Ave/ NE 203 St	Medium												
3. West Dixie Hwy/ NE 172 St	Short												
4. SW 27 Ave/ W Flagler St	Medium												
5. SW 57 Ave/ 8 St	Medium												
6. SW 67 Ct/ Old Cutler Rd/ SW 136 St	Short												
7. NW 77 Ct/ 169 St	Long												
8. Biscayne Blvd/ NE 178 St	Medium												
9. Biscayne Blvd/ NE 180 St	Medium												
10. Biscayne Blvd/ NE 182 St	Medium												
11. Biscayne Blvd/ NE 183 St	Medium												
12. Biscayne Blvd/ NE 186 St	Long												
13. Biscayne Blvd/ NE 191 St	Short												
14. SW 127 Ave/ 112 St	Medium												
15. SW 152 Ave/ 80 St	Short												
16. NW 7 Ave/ 67 St	Short												
17. NW 37 Ave/ 171 St	Short												
18. N Miami Ave/ Memorial Hwy	Medium												
19. Segovia St/ Biltmore Way	Medium												
20. Desoto Blvd/ Sevilla Ave/ Granada Blvd	Medium												

- Planning/ Design - Construction

A photograph of a busy city street intersection, likely in San Francisco, with cars stopped at a red light. Tall buildings line the street, and a 'BRICKELL' sign is visible on the right. The image has a blue tint and a semi-transparent text overlay.

INTERSECTIONS



LOCATION: W DIXIE HIGHWAY / MIAMI GARDENS DRIVE

INTERSECTION DESCRIPTION / ISSUES

The intersection of West Dixie Hwy/Miami Gardens Dr (NE 186 St, SR 860) is located in northeast Miami-Dade County between Aventura and North Miami Beach. The area is dominated by commercial uses. Ojus Elementary School is located on the northwest corner of the intersection. East-west traffic on Miami Gardens Drive is extremely heavy during peak hours. The road, however, has restricted westbound capacity as a result of a lane being used for school bus and other parking in front of the school.

RECOMMENDED IMPROVEMENTS

The main improvement recommended for this intersection is the removal of parking from the outside (third) lane of westbound Miami Gardens Drive, increasing to three the number of through lanes in that direction. This will require relocation the school bus area to another street and adding pavement to transition back from 3 to 2 lanes westbound between NE 24 Pl and 24 Ct. The following improvements, among others, are also recommended: install right turn signals; extend turn lanes; install new pedestrian crossing markings; install missing pedestrian signals

ANALYSIS RESULTS / COST / SCHEDULE

The recommended improvements will reduce average peak hour delay at the intersection by 4%. The estimated construction cost is \$38,000 to 45,000. The intersection improvements are candidates for a short term construction schedule.



AERIAL VIEW



1. W DIXIE HIGHWAY / MIAMI GARDENS DRIVE



NOTES FOR THE INTERSECTION OF MIAMI GARDENS DRIVE/WEST DIXIE HWY:

1. REPLACE DAMAGED PEDESTRIAN SIGNAL DISPLAYS
2. UPDATE PEDESTRIAN RAMPS
3. ADD RIGHT TURN SIGNAL DISPLAY NORTHBOUND AND SOUTHBOUND

MDC ID NO. 2524

INTERSECTION #1



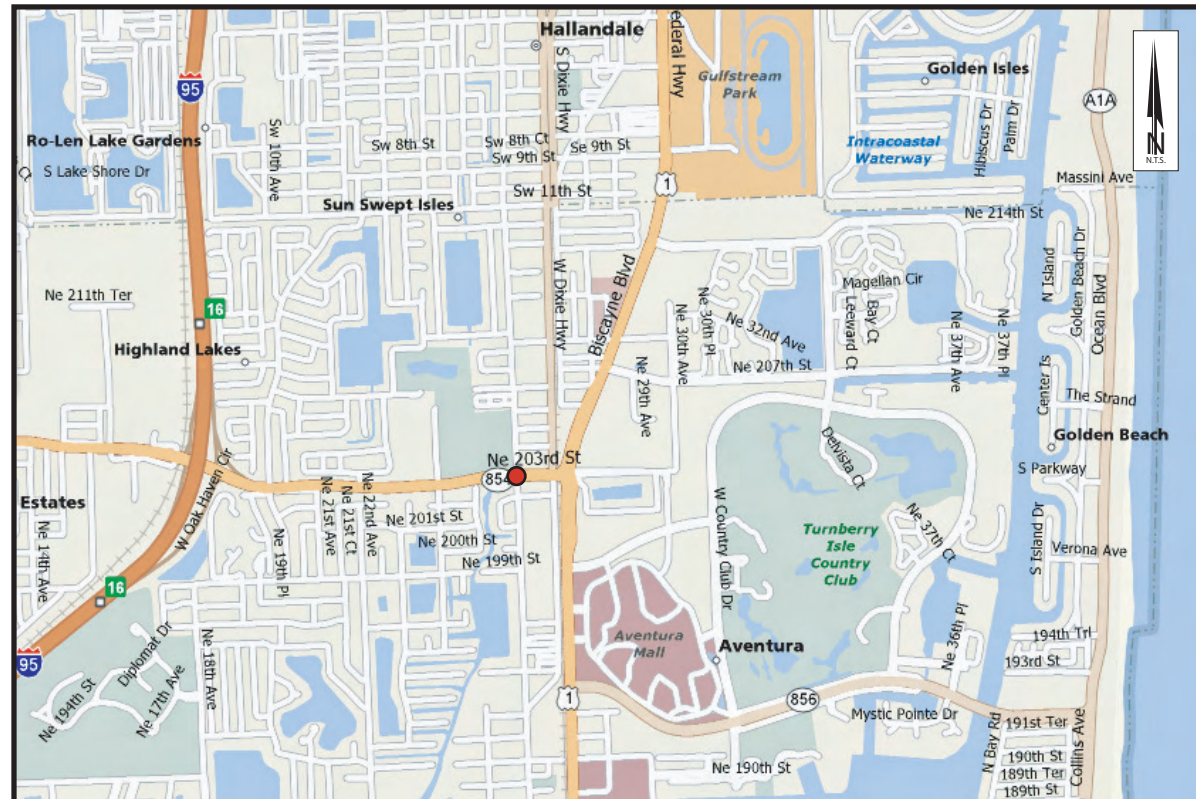
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PROJECT:
CONGESTED INTERSECTION IMPROVEMENTS STUDY
PHASE II
Page 5

TITLE:
WEST DIXIE HWY / MIAMI GARDENS DRIVE

DATE 12/21/07	PROJECT NO. 06235
DRAWN	SHEET NO.
CHECKED	
APPROVED	



LOCATION: NE 26 AVENUE / NE 203 STREET

INTERSECTION DESCRIPTION / ISSUES

The intersection of NE 26 Av/ NE 203 St is located in northeast Miami-Dade County immediately west of Aventura. Land uses in the area include commercial and residential. There is a private school on the northwest corner of the intersection. This intersection is also just west of a major grade separation (flyover) structure over the railroad tracks and Biscayne Blvd. East-west traffic on NE 203 Street (Ives Dairy Rd, SR 854) is extremely heavy during peak hours. The road, however, can benefit from carrying an extra through lane through the intersection then merging after the signal.

RECOMMENDED IMPROVEMENTS

The main improvement recommended for this intersection is the conversion of the existing westbound right turn lane to a through lane. This will require construction of a departure lane downstream from the signal. The extra lane will then be merged back onto the three other existing westbound lanes. The following improvements, among others, are also recommended: install new pedestrian crossing markings; and update pedestrian ramps.

ANALYSIS RESULTS / COST / SCHEDULE

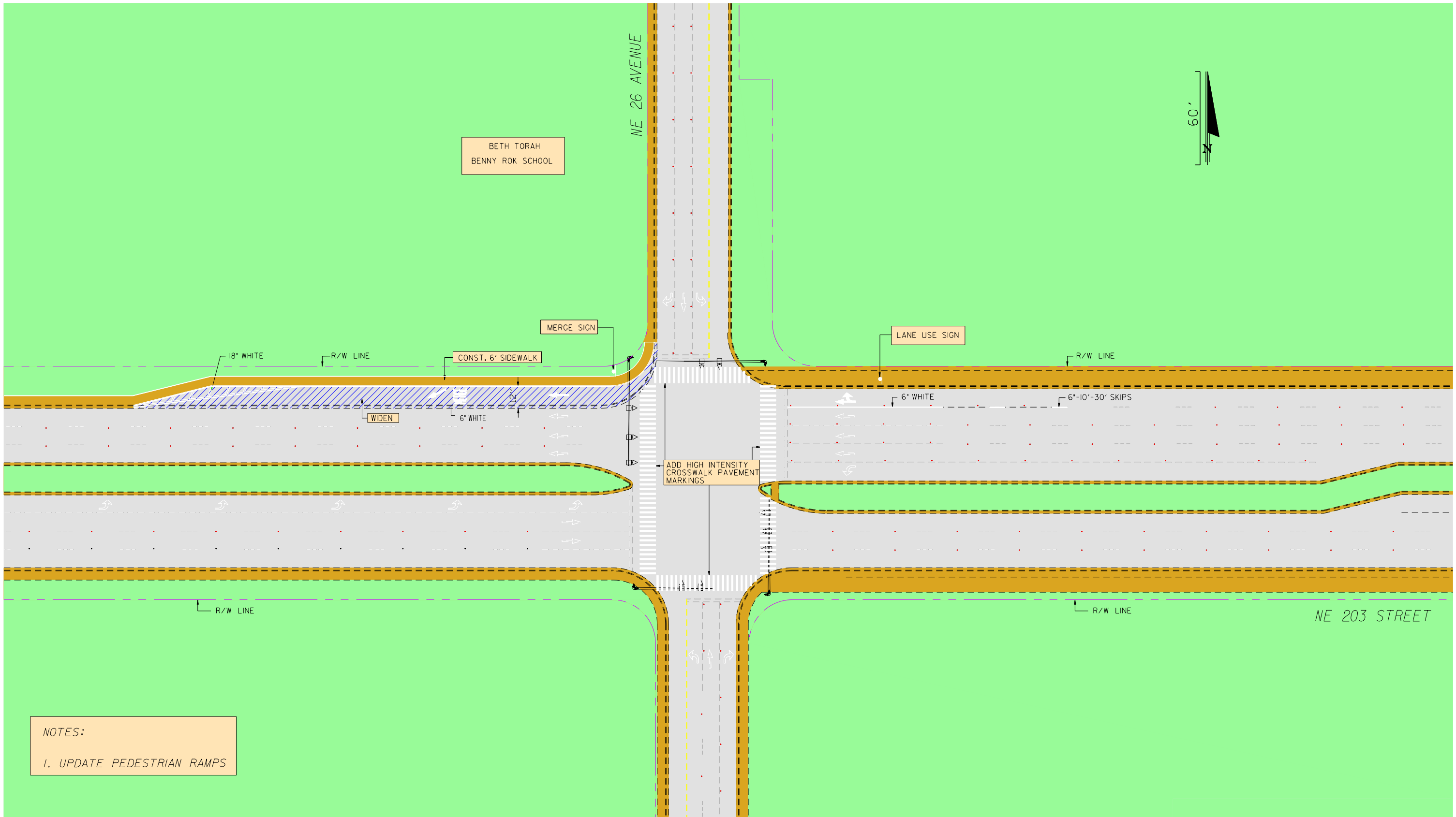
The recommended improvements will reduce average peak hour delay at the intersection by 12%. The estimated construction cost is \$68,000 to 83,000. The intersection improvements are candidates for a medium term construction schedule.



AERIAL VIEW



2. NE 26 AVENUE / NE 203 STREET



NOTES:
I. UPDATE PEDESTRIAN RAMPS

MDC ID NO. 3639

INTERSECTION # 2



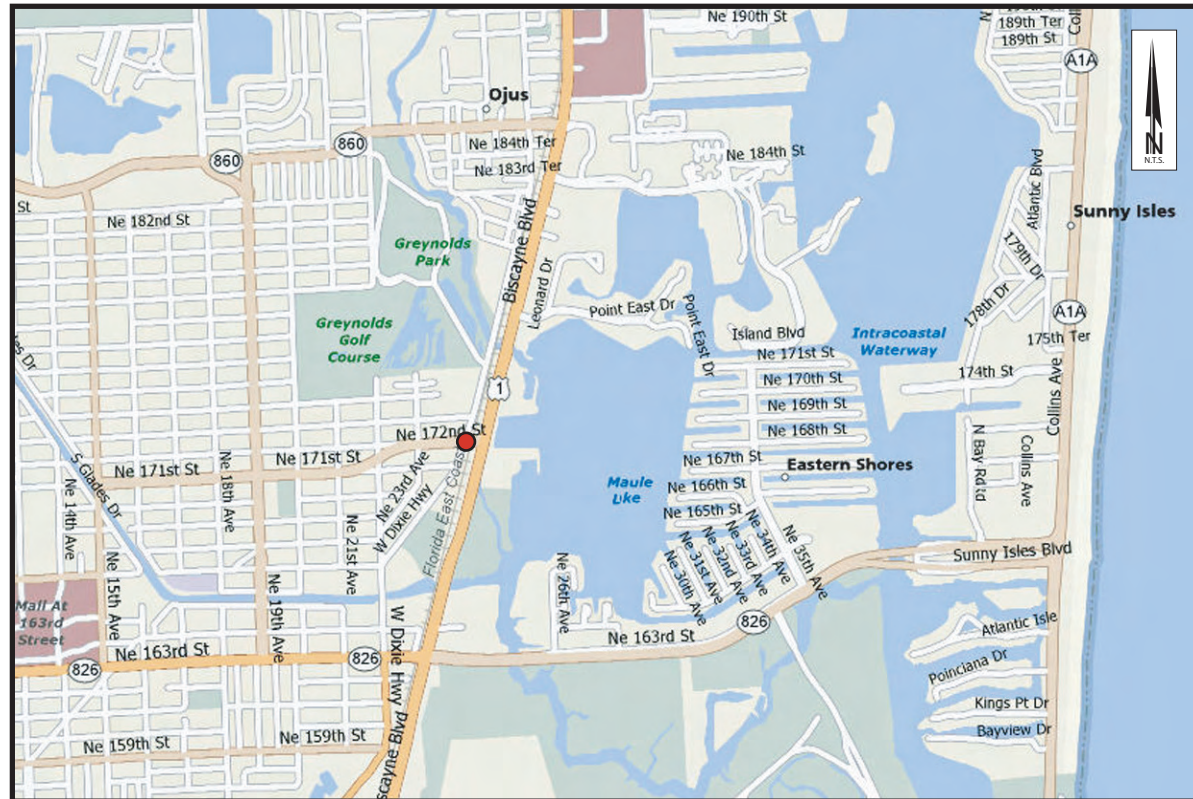
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Page 7

TITLE:
NE 203 STREET / NE 26 AVENUE

DATE 12/21/2017	PROJECT NO. 06235
DRAWN	SHEET NO.
CHECKED	
APPROVED	



LOCATION: W DIXIE HIGHWAY / NE 172 STREET

INTERSECTION DESCRIPTION / ISSUES

The intersection of West Dixie Hwy/NE 172 St is located in North Miami Beach. The intersection area is dominated by commercial uses and the FEC railroad to the east. The primary traffic flow is north-south on West Dixie Highway. Eastbound and westbound capacity are restricted by the lack of left turn lanes.

RECOMMENDED IMPROVEMENTS

The main improvement recommended for this intersection is the construction of an eastbound left turn lane. Construction of a westbound left turn lane is unfeasible at this time due to the required coordination with the FEC Railroad. The following improvements, among others, are also recommended: widen sidewalks on west side of West Dixie Highway to 8 ft, replace existing span wire signal with mast arms; construct sidewalks on the north side of NE 172 St east of West Dixie and install pedestrian gates at the railroad crossing; install pedestrian signals.

ANALYSIS RESULTS / COST / SCHEDULE

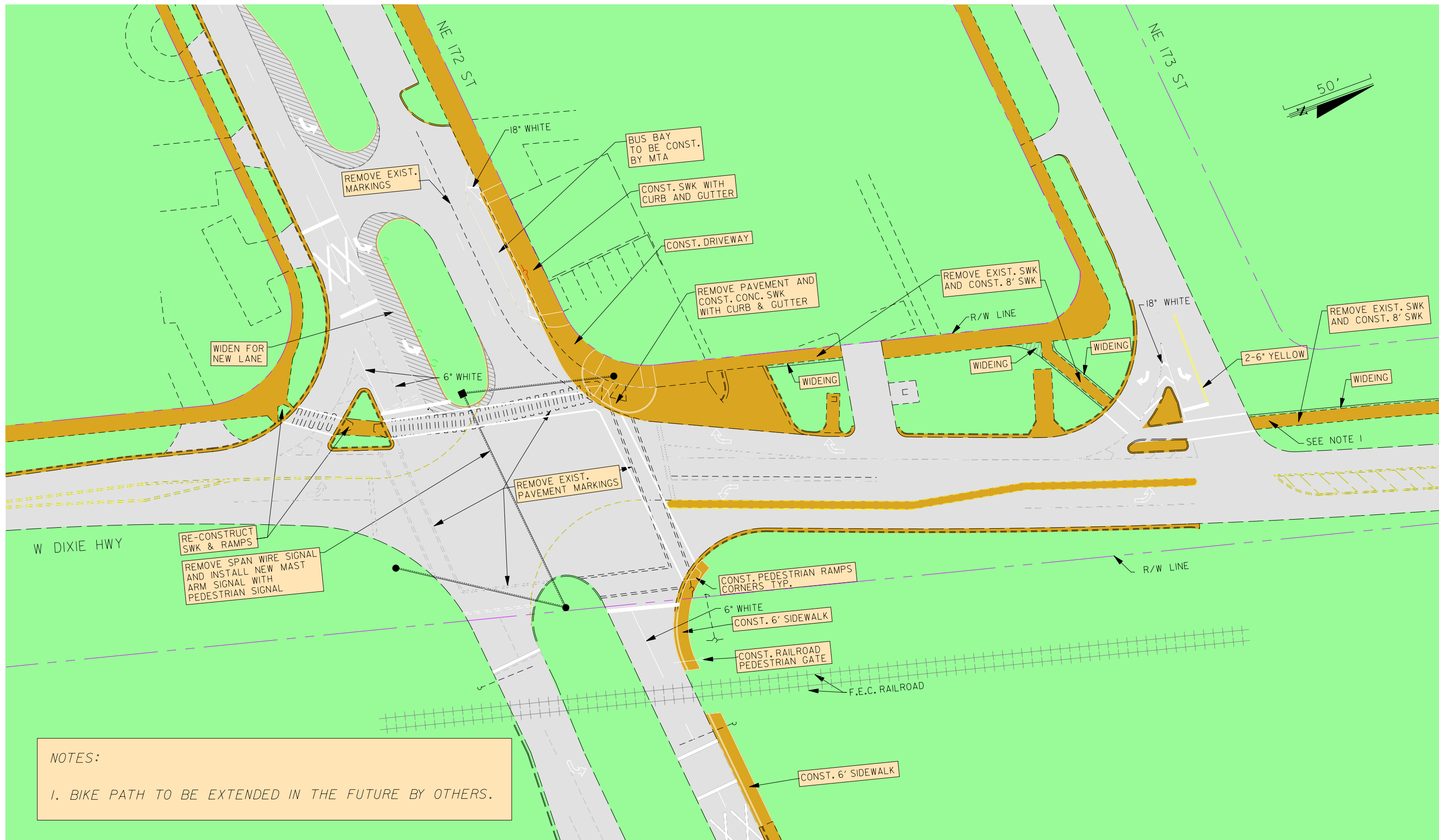
The recommended improvements will reduce average peak hour delay at the intersection by 4%. The estimated construction cost is \$315,000 to 385,000. The intersection improvements are candidates for a short term construction schedule.



AERIAL VIEW



3. W DIXIE HIGHWAY / NE 172 STREET



NOTES:

1. BIKE PATH TO BE EXTENDED IN THE FUTURE BY OTHERS.

MDC ID NO. 2023 INTERSECTION #3

12/21/2021 4:30 PM
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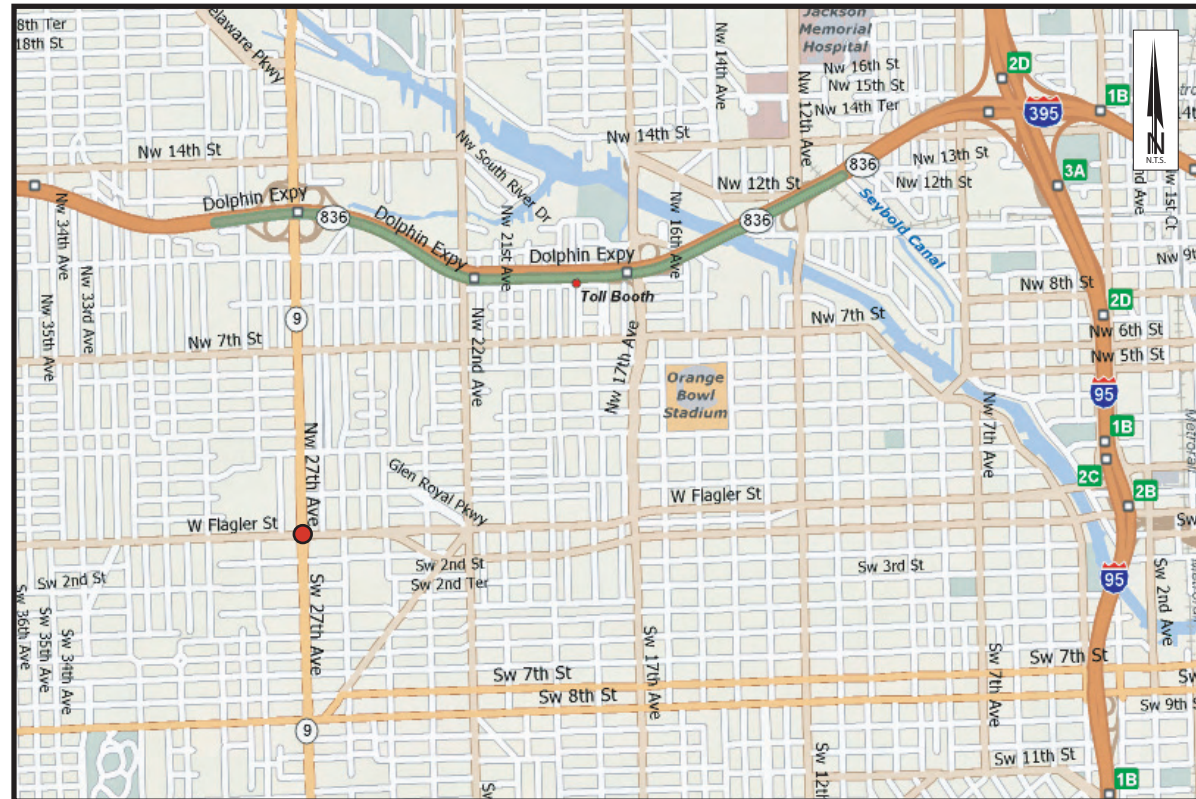


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PHASE II
Page 9

TITLE: WEST DIXIE HWY / NE 172 STREET		DATE: 12/21/2021	PROJECT NO.: 06235
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LOCATION: SW 27 AVENUE / W FLAGLER STREET

INTERSECTION DESCRIPTION / ISSUES

The intersection of W 27 Av (SR 9)/Flagler St (SR 968) is located in the central area of the City of Miami. Land uses in the area are primarily commercial. Traffic is very heavy during peak hours on both arterials. The intersection is already built-out to the right of way limits. Traffic operation type changes are the only feasible improvements.

RECOMMENDED IMPROVEMENTS

The main improvement recommended for this intersection is the prohibition of left turn movements from W 27 Av. This will require rerouting these movements using other local street in the area. The following improvements, among others, are also recommended: update pedestrian crossing markings and ramps.

ANALYSIS RESULTS / COST / SCHEDULE

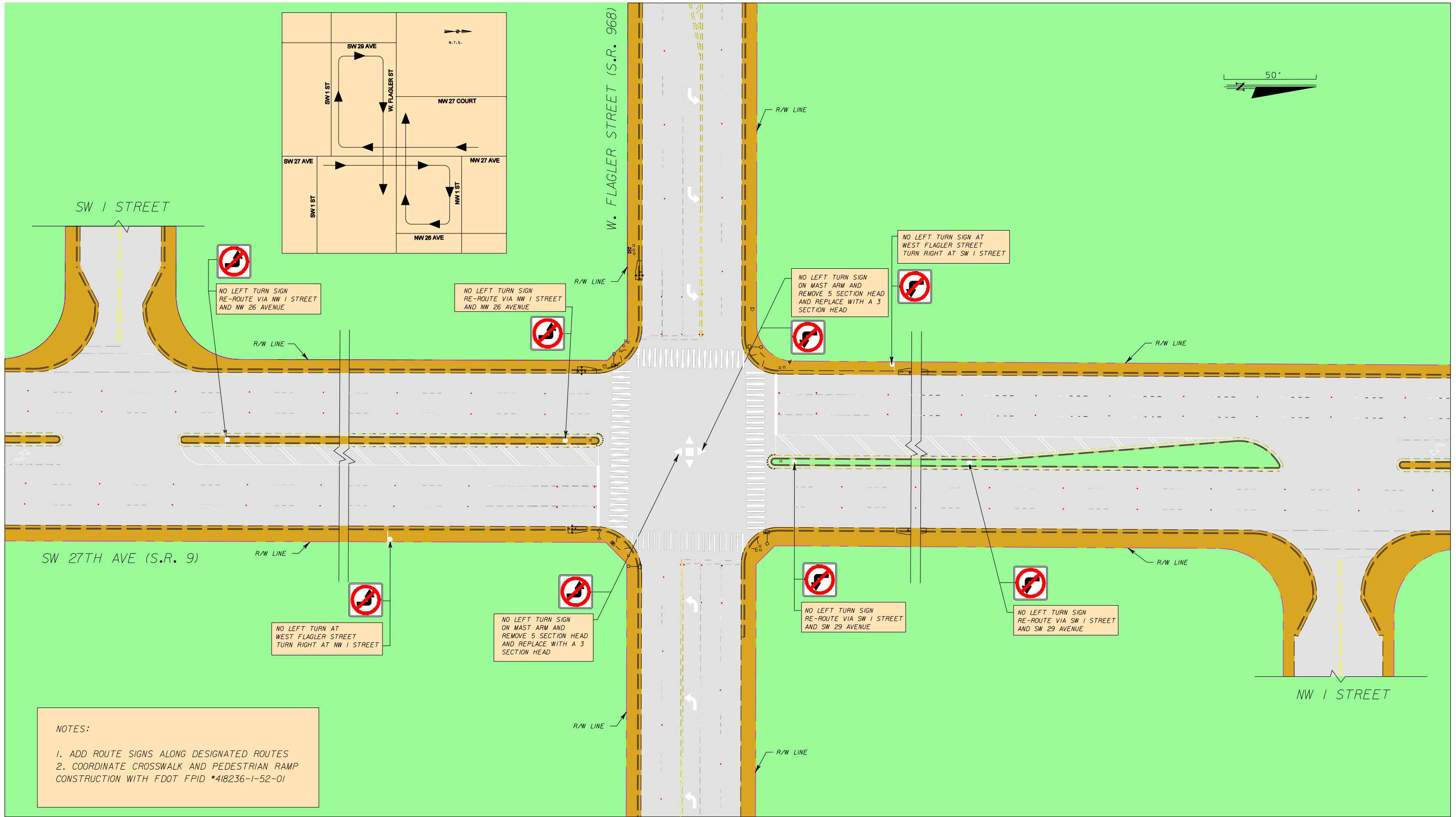
The recommended improvements will reduce average peak hour delay at the intersection by 17%. The estimated construction cost is \$27,000 to 33,000. The intersection improvements are candidates for a medium term construction schedule.



AERIAL VIEW



4. SW 27 AVENUE / W FLAGLER STREET



NOTES:

1. ADD ROUTE SIGNS ALONG DESIGNATED ROUTES
2. COORDINATE CROSSWALK AND PEDESTRIAN RAMP CONSTRUCTION WITH FDOT FPID #418236-1-52-01

MDC ID NO. 2204 INTERSECTION #4

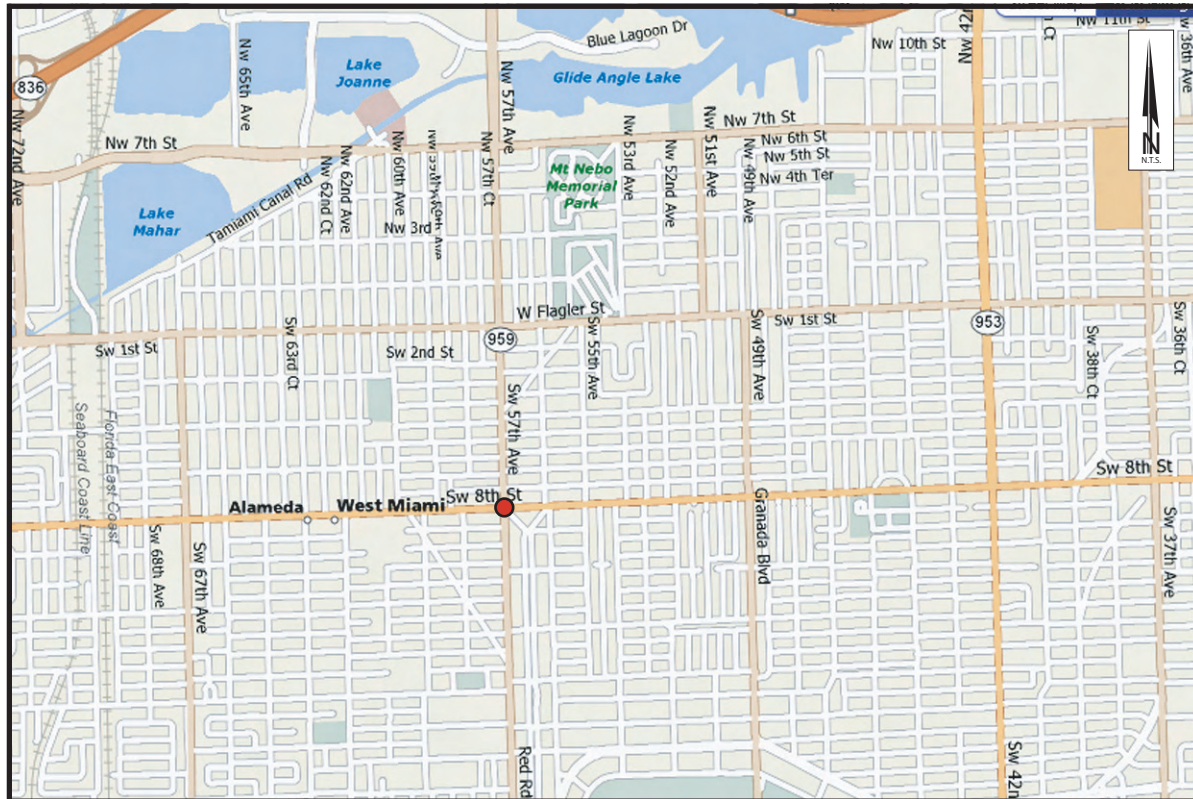


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PHASE II
Page 11

TITLE: WEST FLAGLER STREET / SW 27 AVENUE	
DATE: 12/21/07	PROJECT NO.: 06235
DRAWN:	SHEET NO.:
CHECKED:	
APPROVED:	



LOCATION: SW 57 AVENUE / SW 8 STREET

INTERSECTION DESCRIPTION / ISSUES

The intersection of SW 57 Av (SR 959) /8 St (US 41) is located on the boundary between the City of Coral Gables and the City of Miami. The area is dominated by commercial uses. The historic Country Club Prado corridor is located on the southeast corner of the intersection. Traffic on both arterials is very heavy during peak hours. The main capacity issue at this location is the absence of a northbound left turn lane. Operationally, this movement is prohibited during peak hours, however violations have been observed and disruption of flow is created throughout the day due to left turning vehicles blocking the through traffic.

RECOMMENDED IMPROVEMENTS

The main improvement recommended for this intersection is the construction of a northbound left turn lane by reallocating the use of the pavement on the south leg of the intersection and the available right of way, without impacting the nearby Country Club Prado monuments. The following improvement is also recommended: update pedestrian ramps.

ANALYSIS RESULTS / COST / SCHEDULE

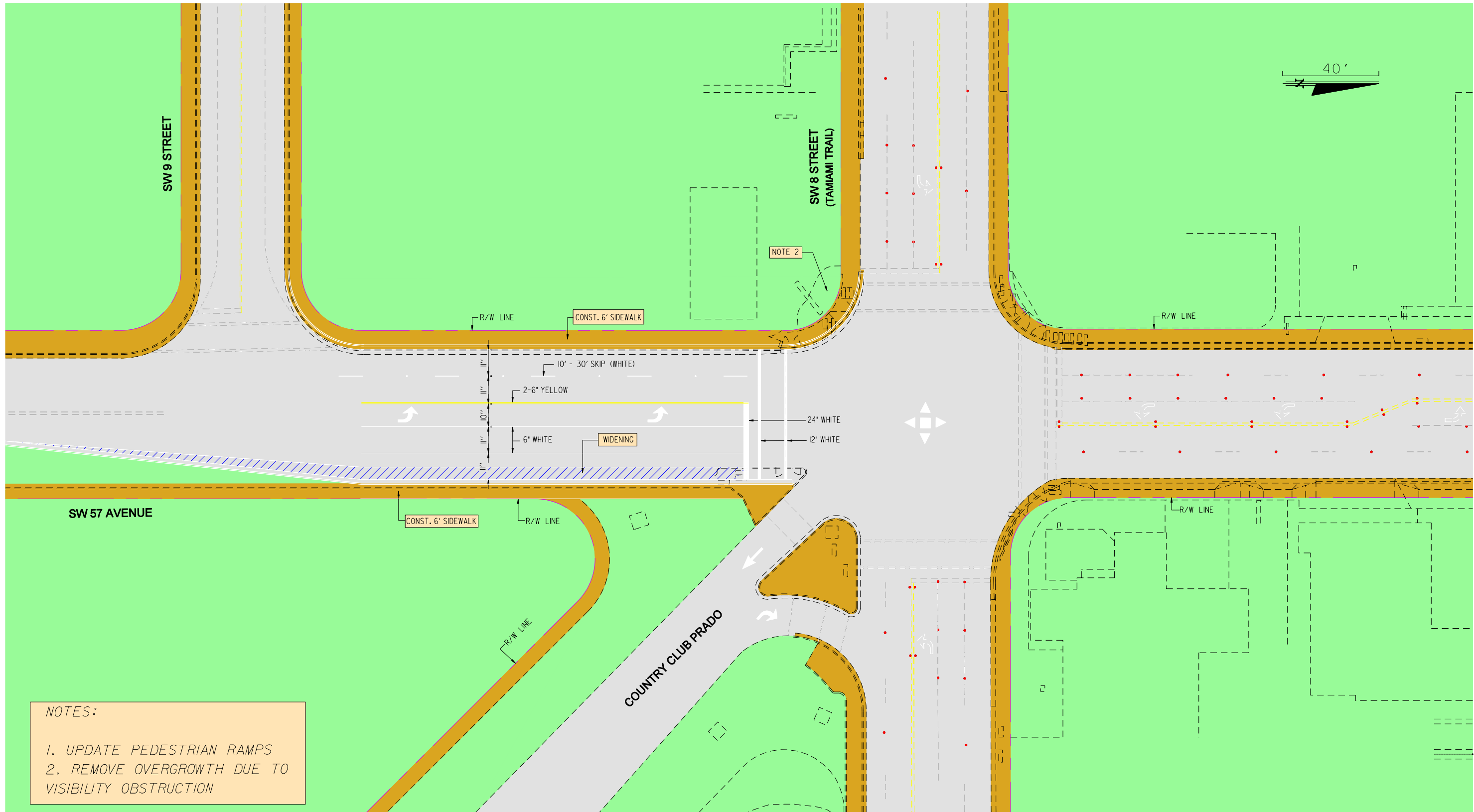
The recommended improvements will reduce average peak hour delay at the intersection by 11%. The estimated construction cost is \$68,000 to 83,000. The intersection improvements are candidates for a medium term construction schedule.



AERIAL VIEW



5. SW 57 AVENUE / SW 8 STREET



MDC ID NO. 2145

INTERSECTION #5



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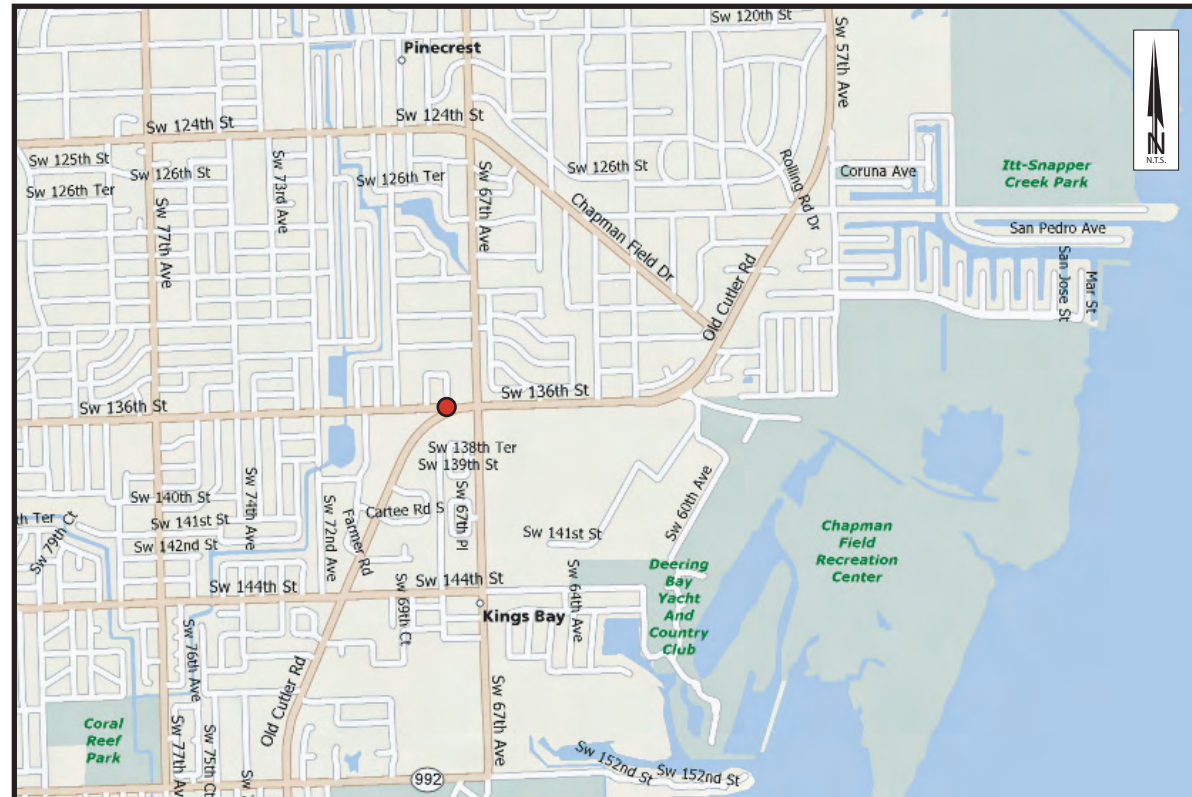
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PHASE II
Page 13

TITLE:

SW 57 AVENUE / SW 8 STREET

DATE 12/21/07	PROJECT NO. 06235
DRAWN	SHEET NO.
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APPROVED	



LOCATION: SW 67 CT / OLD CUTLER RD / SW 136 ST

INTERSECTION DESCRIPTION / ISSUES

The intersection of SW 67 Ct/Old Cutler Rd/SW 136 St is located in the Village of Palmetto Bay, immediately west of SW 67 Avenue. Land uses in the area are residential. Traffic is very heavy during peak hours, especially on Old Cutler Rd. The two streets meet at an acute angle that makes for geometry that is difficult to maneuver. The difficult and confusing geometrics and its proximity to SW 67 Av create a number of operational issues in addition to peak hour congestion.

RECOMMENDED IMPROVEMENTS

Several capacity and operational improvements are recommended for this intersection including: left turn lanes for the northbound and the eastbound directions; realigning the intersection point; and increasing the storage for the eastbound left turn lane at SW 67 Av. The following improvements, among others, are also recommended: install guide signs, and bike route signs.

ANALYSIS RESULTS / COST / SCHEDULE

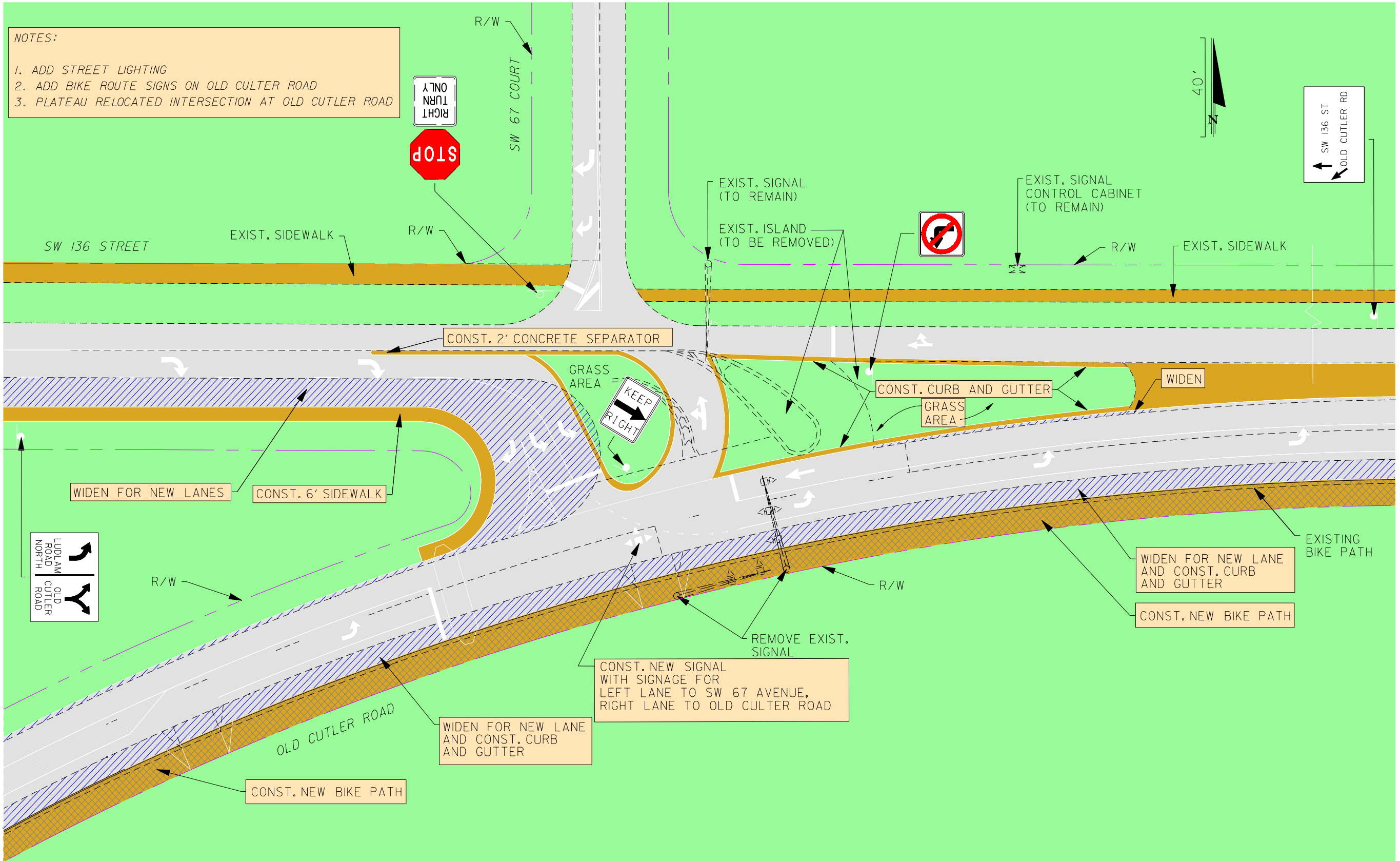
The recommended improvements will reduce average peak hour delay at the intersection by 21%. The estimated construction cost is \$360,000 to 440,000. The intersection improvements are candidates for a short term construction schedule.



AERIAL VIEW



6. SW 67 CT / OLD CUTLER RD / SW 136 ST



MDC ID NO. 6051

INTERSECTION #6



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PHASE II
Page 15

TITLE:

OLD CUTLER ROAD / SW 136 STREET

DATE

12/21/07

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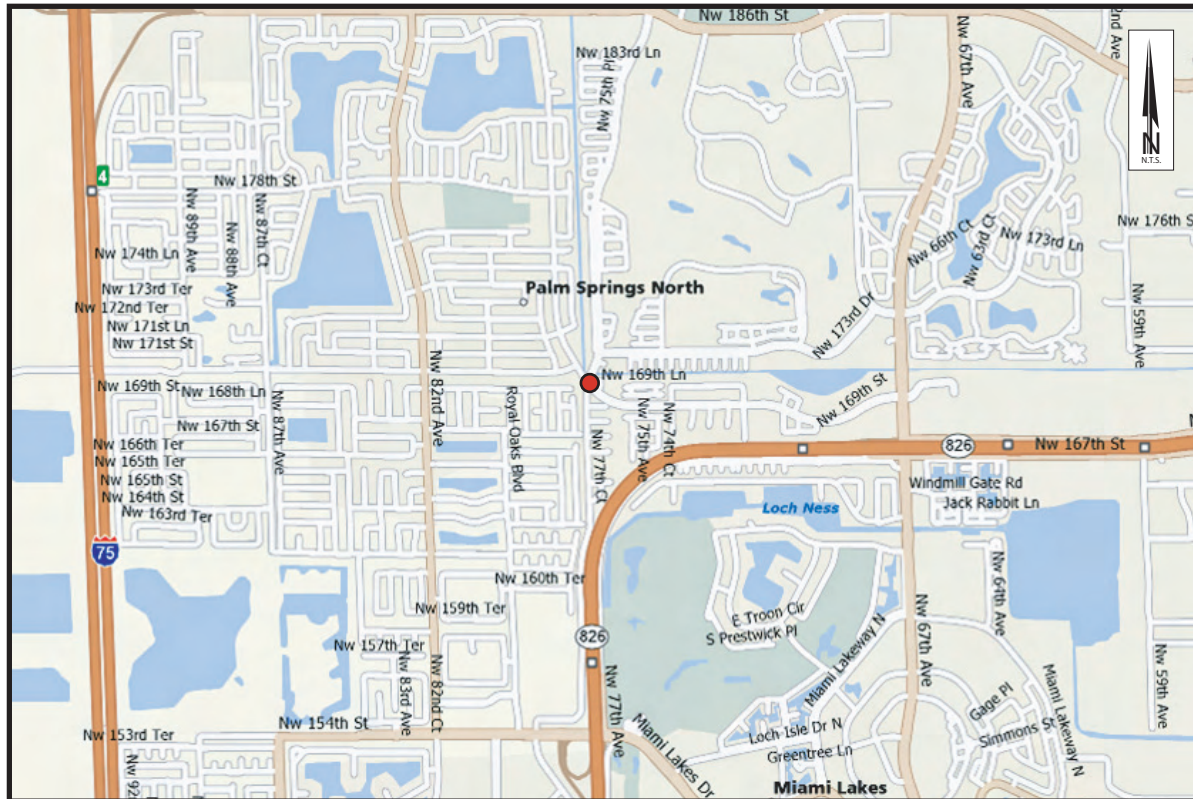
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PROJECT NO.

06235

SHEET NO.



LOCATION: NW 77 COURT / NW 169 STREET

INTERSECTION DESCRIPTION / ISSUES

The intersection of NW 77 Ct/169 St is located in northwest Miami-Dade County due north of the “Big Bend” of the Palmetto Expressway and immediately adjacent to the Palm Springs North community. The area is residential in nature. The intersection geometrics are unusual with curved roadway alignments and skewed angles. Additionally, a canal immediately west of NW 77 Ct creates a series of constraints and design issues. North-south traffic flow is very heavy during peak hours.

RECOMMENDED IMPROVEMENTS

The main improvement recommended for this intersection is the addition of one left turn and one right turn lane on the eastbound approach. This will require the widening of the existing culvert over the aforementioned canal. The following improvements, among others, are also recommended: extend westbound left turn lane; sidewalk construction; and adding raised channelization (islands/separators) to the intersection.

ANALYSIS RESULTS / COST / SCHEDULE

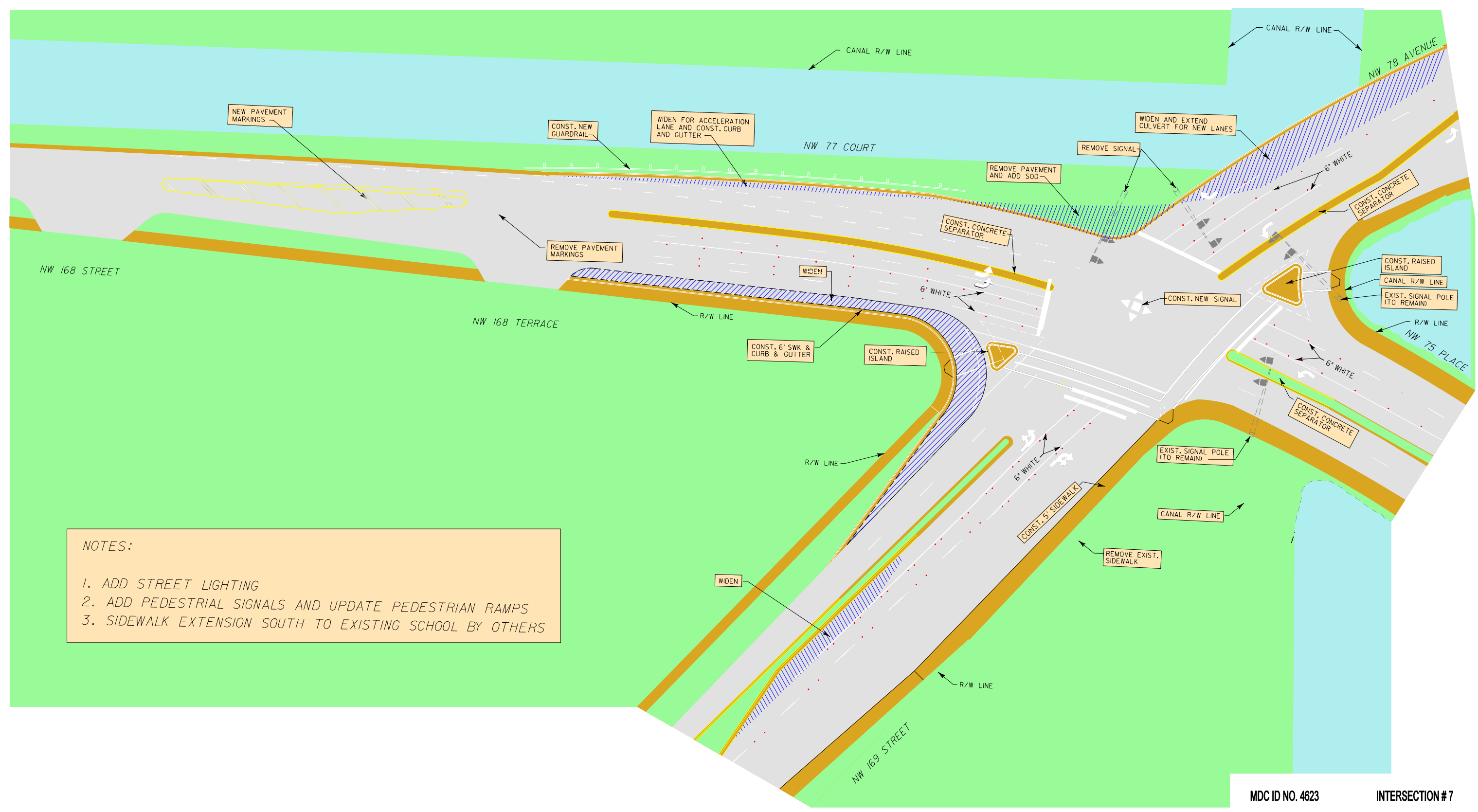
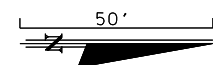
The recommended improvements will reduce average peak hour delay at the intersection by 19%. The estimated construction cost is \$360,000 to 440,000. The intersection improvements are candidates for a long term construction schedule.



AERIAL VIEW



7. NW 77 COURT / NW 169 STREET



NOTES:

1. ADD STREET LIGHTING
2. ADD PEDESTRIAN SIGNALS AND UPDATE PEDESTRIAN RAMPS
3. SIDEWALK EXTENSION SOUTH TO EXISTING SCHOOL BY OTHERS

MDC ID NO. 4623 INTERSECTION # 7

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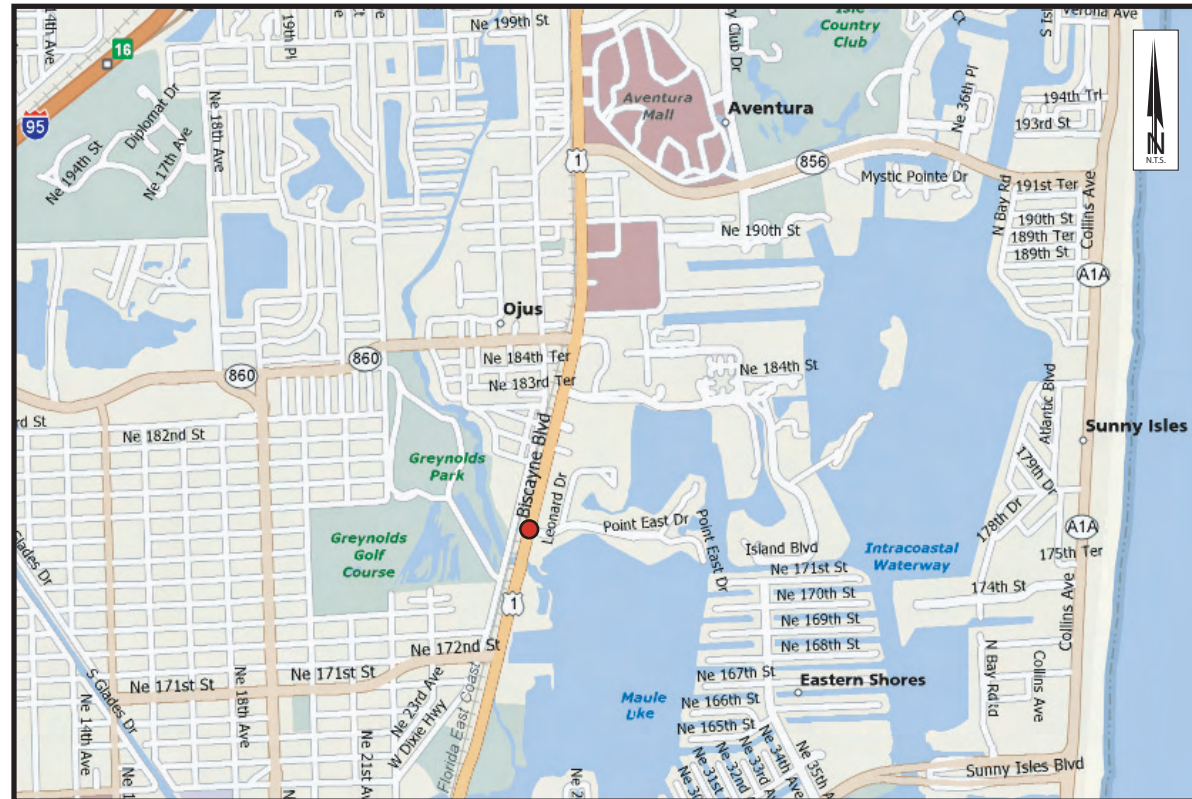


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Page 17

TITLE: NW 77 COURT / NW 169 STREET		DATE: 12/21/07	PROJECT NO.: 06235
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LOCATION: BISCAYNE BOULEVARD / NE 178 STREET

INTERSECTION DESCRIPTION / ISSUES

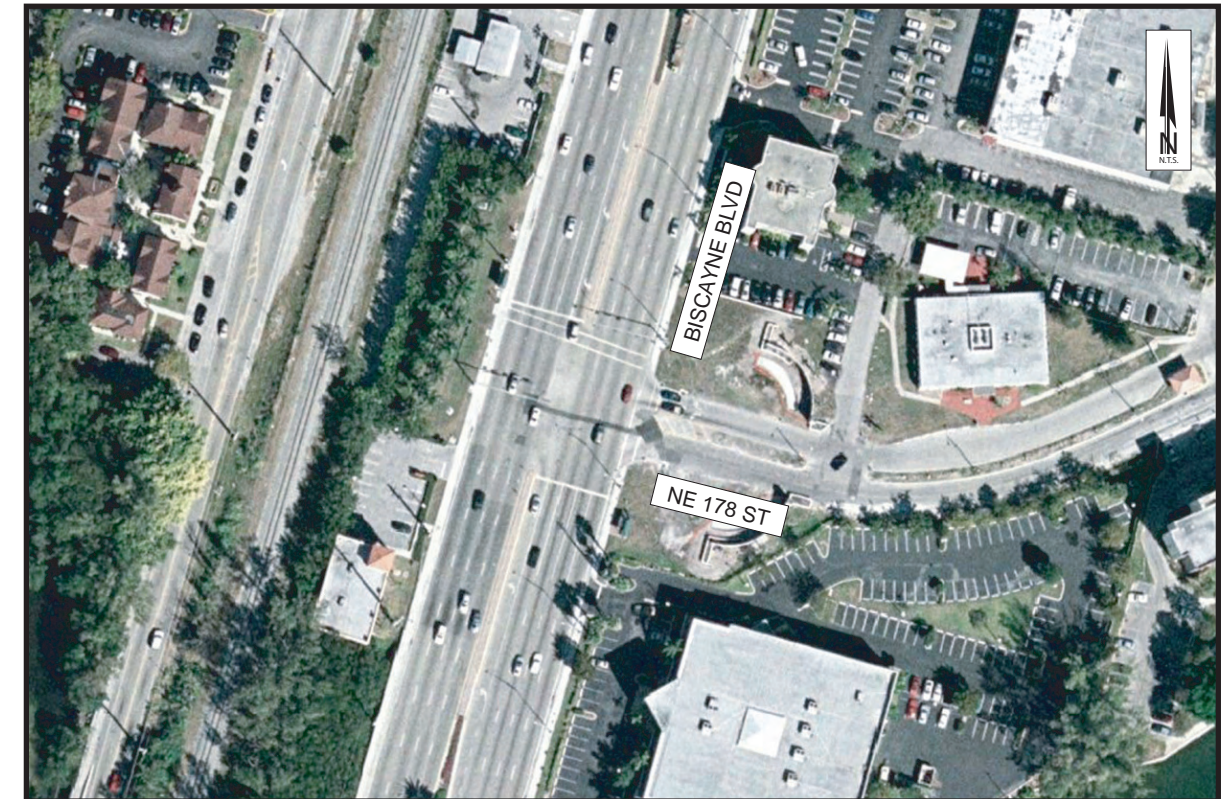
The intersection of Biscayne Blvd (US 1)/NE 178 St is located in the City of Aventura. The area is dominated by commercial uses along Biscayne Blvd. The FEC railroad is located west of Biscayne Blvd. Therefore, this is a T intersection, with the minor street (NE 178 St) to the east. The heaviest traffic flow is north-south on Biscayne Blvd. This configuration is typical in this area and provides ideal conditions for turbo lanes. A turbo lane is a geometric and traffic operation treatment where (in this case) only one of the four southbound lanes on Biscayne would stop at the signal. The fourth (inside) lane would stop to allow westbound left turning vehicles to turn onto southbound Biscayne Blvd using a protected signal indication.

RECOMMENDED IMPROVEMENTS

The main improvement recommended for this intersection is the creation of turbo lanes on the three outer southbound lanes of Biscayne Blvd. A special turbo lane operation, however, will be needed to address the needs of pedestrians crossing Biscayne Blvd. The three outer lanes would have separate signal indications that would allow a pedestrian actuated phase stopping all southbound and northbound lanes therefore allowing access to the bus stops on the west side of Biscayne. In the absence of pedestrian actuation, the three outer lanes would not stop, with the corresponding increase in the capacity of southbound Biscayne Blvd. The following improvements, among others, are also recommended: construct a bus bay (by Miami-Dade Transit) on the west side of Biscayne; and update pedestrian ramps.

ANALYSIS RESULTS / COST / SCHEDULE

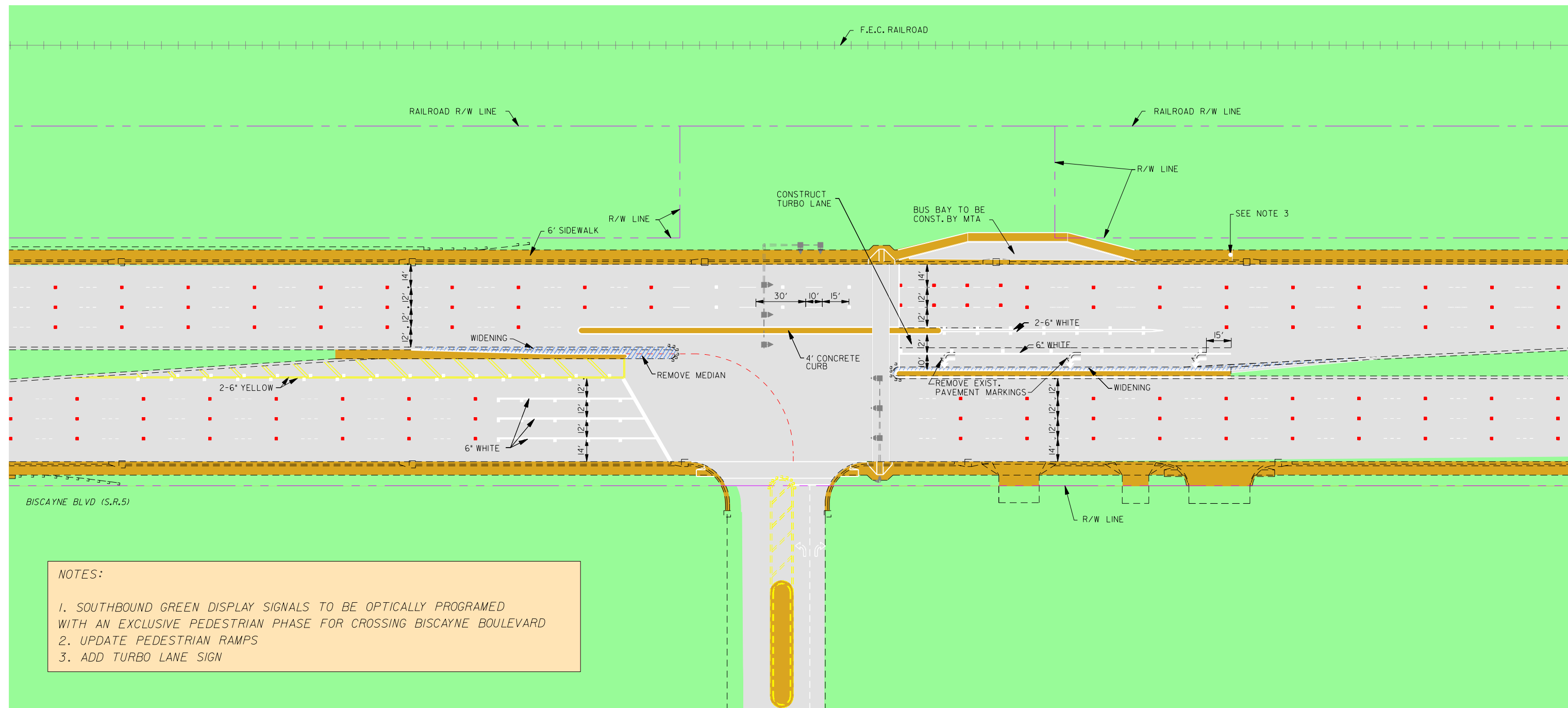
The recommended improvements will reduce average peak hour delay at the intersection by 20%. The estimated construction cost is \$200,000 to 240,000. The intersection improvements are candidates for a medium term construction schedule.



AERIAL VIEW



8. BISCAYNE BOULEVARD / NE 178 STREET



NOTES:

MDC ID NO. 3639

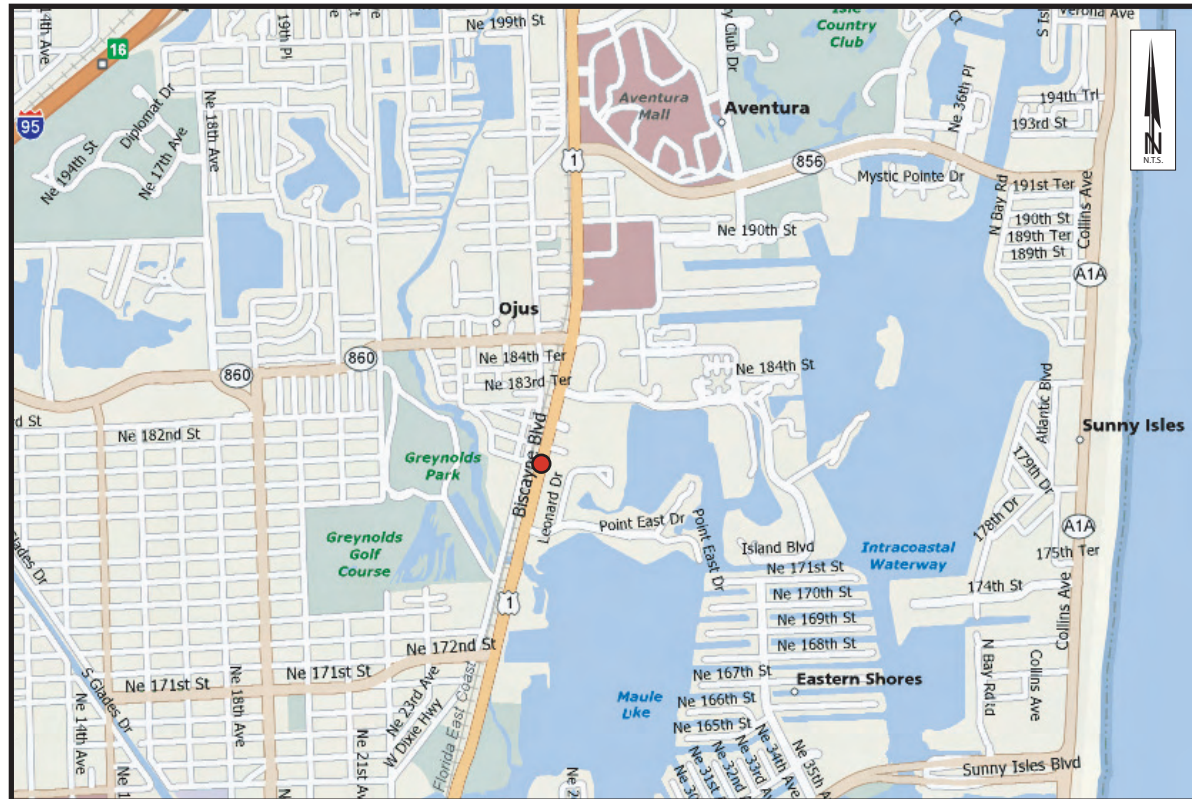


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LOCATION: BISCAYNE BOULEVARD / NE 180 STREET

INTERSECTION DESCRIPTION / ISSUES

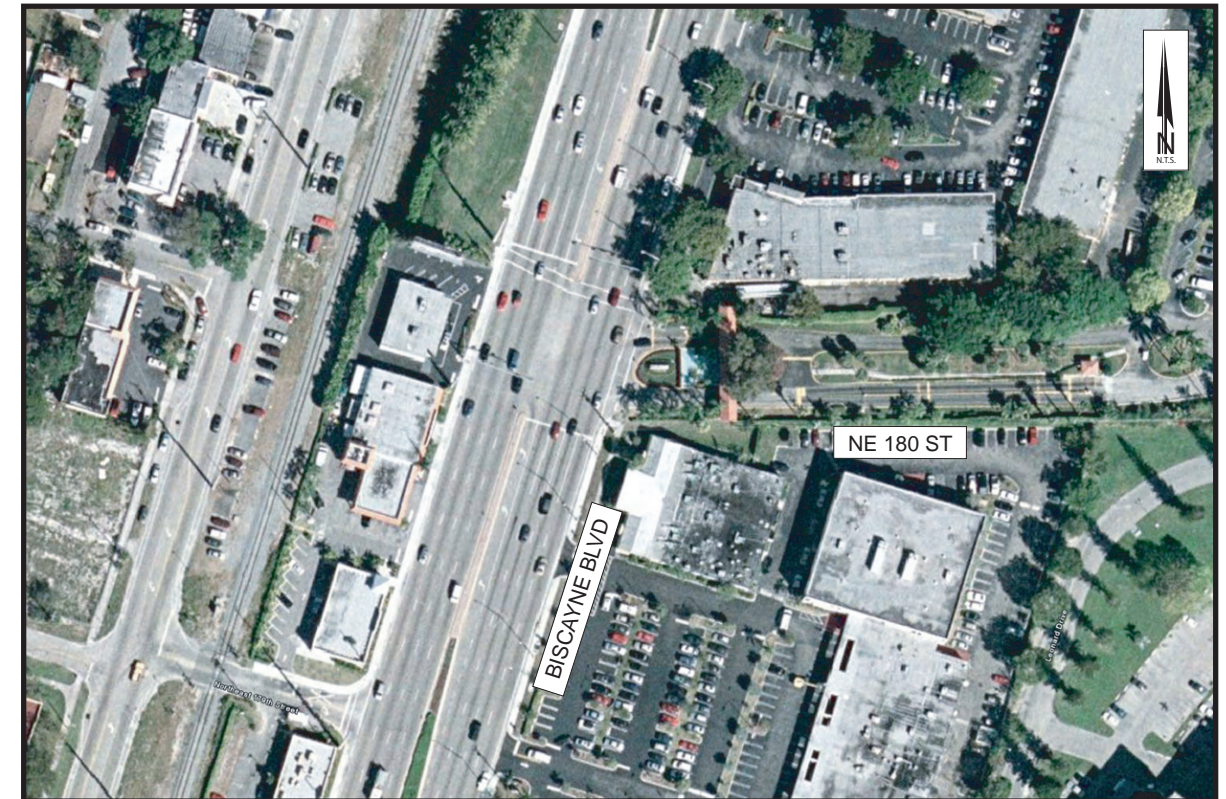
The intersection of Biscayne Blvd (US 1)/NE 180 St is located in the City of Aventura. The area is dominated by commercial uses along Biscayne Blvd. The FEC railroad is located west of Biscayne Blvd. Therefore, this is a T intersection, with the minor street (NE 180 St) to the east. The heaviest traffic flow is north-south on Biscayne Blvd. This configuration is typical in this area and provides ideal conditions for turbo lanes. A turbo lane is a geometric and traffic operation treatment where (in this case) only one of the four southbound lanes on Biscayne would stop at the signal. The fourth (inside) lane would stop to allow westbound left turning vehicles to turn onto southbound Biscayne Blvd using a protected signal indication.

RECOMMENDED IMPROVEMENTS

The main improvement recommended for this intersection is the creation of turbo lanes on the three outer southbound lanes of Biscayne Blvd. A special turbo lane operation, however, will be needed to address the needs of pedestrians crossing Biscayne Blvd. The three outer lanes would have separate signal indications that would allow a pedestrian actuated phase stopping all southbound and northbound lanes therefore allowing access to the bus stops on the west side of Biscayne. In the absence of pedestrian actuation, the three outer lanes would not stop, with the corresponding increase in the capacity of southbound Biscayne Blvd. The following improvements, among others, are also recommended: construct a bus bay (by Miami-Dade Transit) on the west side of Biscayne; installing a right turn signal westbound; and update pedestrian ramps.

ANALYSIS RESULTS / COST / SCHEDULE

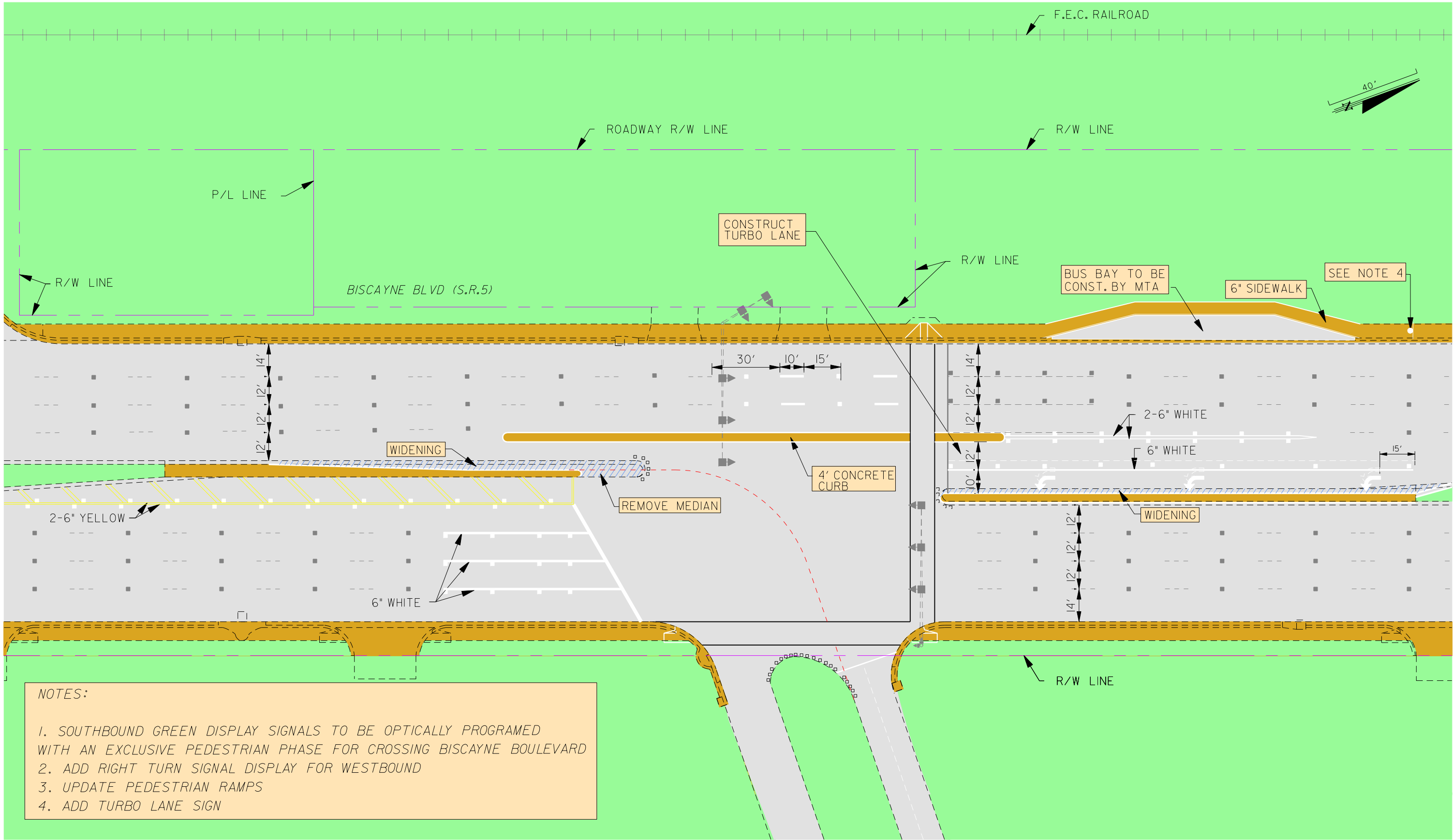
The recommended improvements will reduce average peak hour delay at the intersection by 41%. The estimated construction cost is \$200,000 to 240,000. The intersection improvements are candidates for a medium term construction schedule.



AERIAL VIEW



9. BISCAYNE BOULEVARD / NE 180 STREET



NOTES:

1. SOUTHBOUND GREEN DISPLAY SIGNALS TO BE OPTICALLY PROGRAMED WITH AN EXCLUSIVE PEDESTRIAN PHASE FOR CROSSING BISCAYNE BOULEVARD
2. ADD RIGHT TURN SIGNAL DISPLAY FOR WESTBOUND
3. UPDATE PEDESTRIAN RAMPS
4. ADD TURBO LANE SIGN

NE 180 STREET

MDC ID NO. 4280

INTERSECTION #9



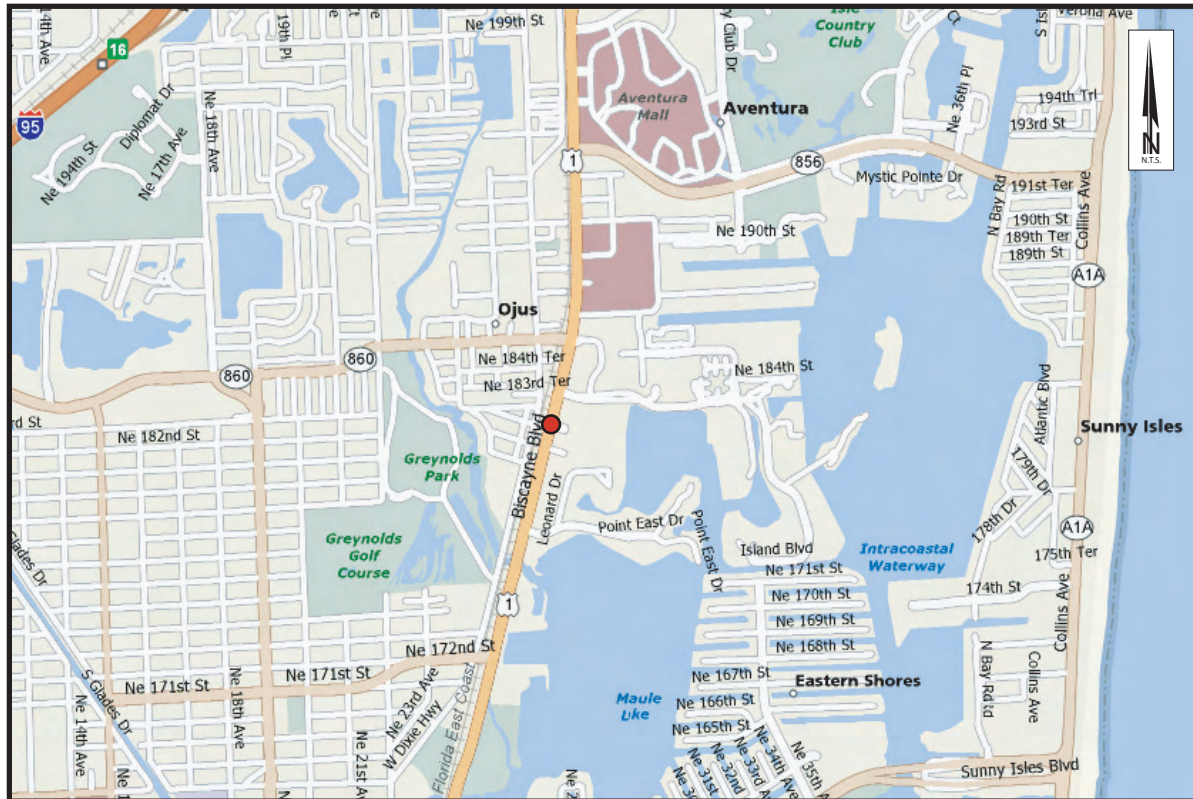
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CERTIFICATE OF AUTHORIZATION EB 2690

REVISIONS:	
CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LOCATE ALL UTILITIES BEFORE COMMENCING WITH PROJECT.	

PROJECT: **CONGESTED INTERSECTION IMPROVEMENTS STUDY**
PHASE II
Page 21

TITLE: **BISCAYNE BOULEVARD / NE 180 STREET**

DATE	PROJECT NO.
12/21/07	06235
DRAWN	SHEET NO.
CHECKED	
APPROVED	



LOCATION: BISCAYNE BOULEVARD / NE 182 STREET

INTERSECTION DESCRIPTION / ISSUES

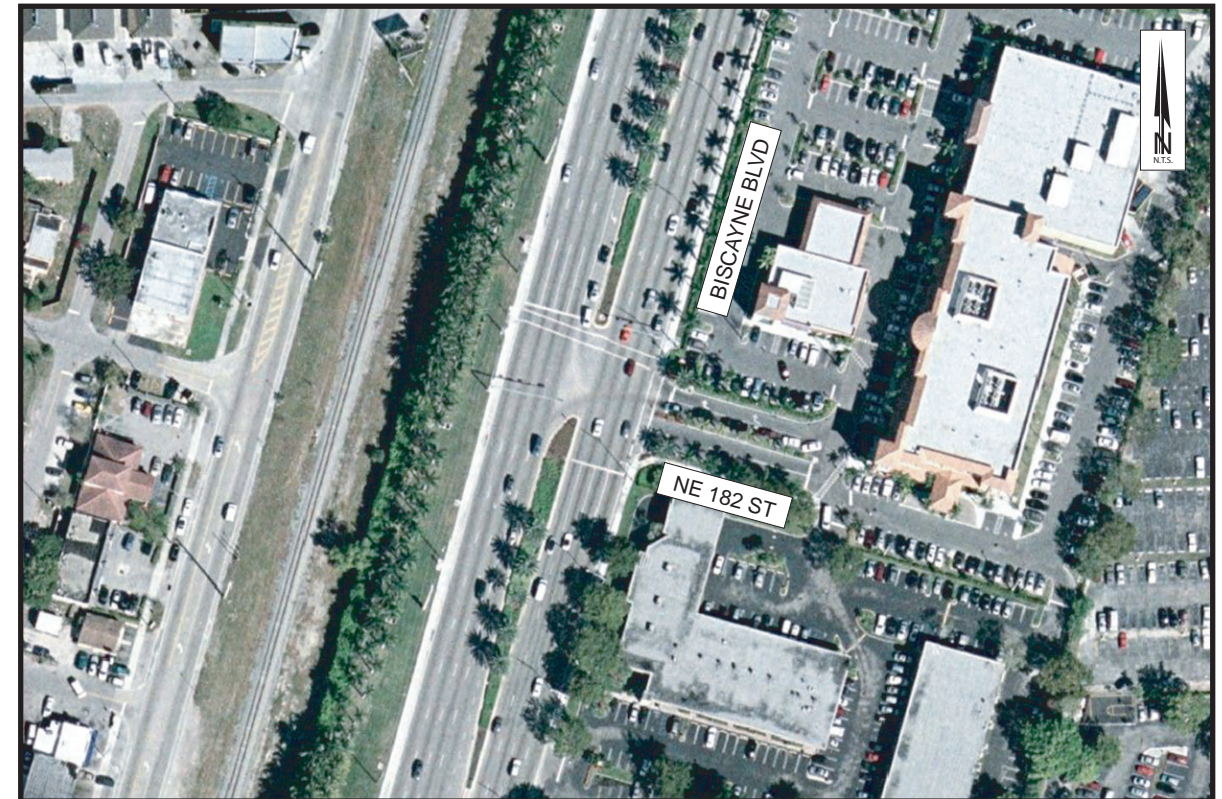
The intersection of Biscayne Blvd (US 1)/NE 182 St is located in the City of Aventura. The area is dominated by commercial uses along Biscayne Blvd. The FEC railroad is located west of Biscayne Blvd. Therefore, this is a T intersection, with the minor street (NE 182 St) to the east. The heaviest traffic flow is north-south on Biscayne Blvd. This configuration is typical in this area and provides ideal conditions for turbo lanes. A turbo lane is a geometric and traffic operation treatment where (in this case) only one of the four southbound lanes on Biscayne would stop at the signal. The fourth (inside) lane would stop to allow westbound left turning vehicles to turn onto southbound Biscayne Blvd using a protected signal indication.

RECOMMENDED IMPROVEMENTS

The main improvement recommended for this intersection is the creation of turbo lanes on the three outer southbound lanes of Biscayne Blvd. A special turbo lane operation, however, will be needed to address the needs of pedestrians crossing Biscayne Blvd. The three outer lanes would have separate signal indications that would allow a pedestrian actuated phase stopping all southbound and northbound lanes therefore allowing access to the bus stops on the west side of Biscayne. In the absence of pedestrian actuation, the three outer lanes would not stop, with the corresponding increase in the capacity of southbound Biscayne Blvd. The following improvements, among others, are also recommended: update pedestrian ramps.

ANALYSIS RESULTS / COST / SCHEDULE

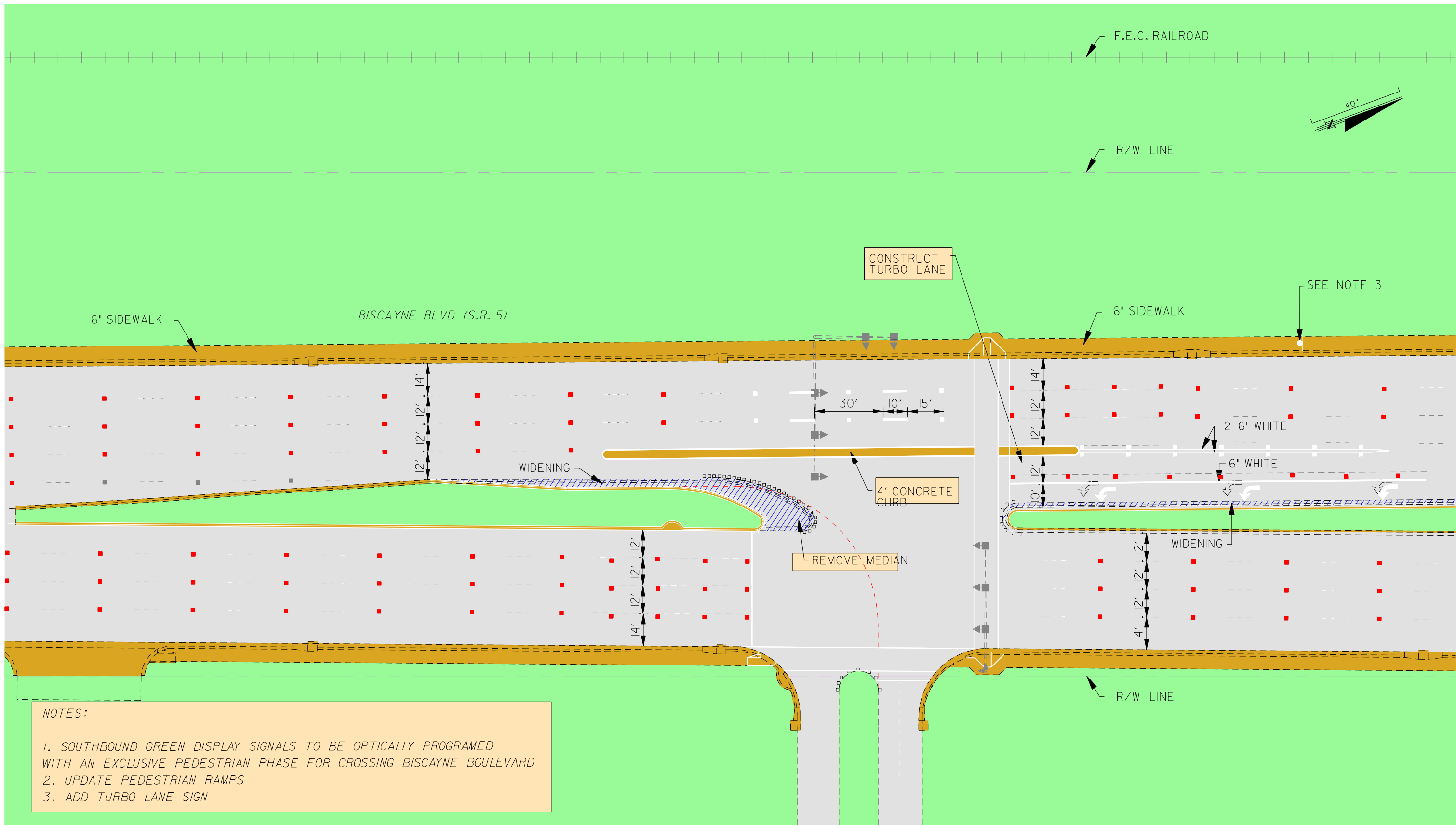
The recommended improvements will reduce average peak hour delay at the intersection by 13%. The estimated construction cost is \$200,000 to 240,000. The intersection improvements are candidates for a medium term construction schedule.



AERIAL VIEW



10. BISCAYNE BOULEVARD / NE 182 STREET



NOTES:

1. SOUTHBOUND GREEN DISPLAY SIGNALS TO BE OPTICALLY PROGRAMED WITH AN EXCLUSIVE PEDESTRIAN PHASE FOR CROSSING BISCAYNE BOULEVARD
2. UPDATE PEDESTRIAN RAMPS
3. ADD TURBO LANE SIGN

N.E. 182ND STREET

MDC ID NO. 4587

INTERSECTION # 10

4/30/2008
L:\proj\06235\Biscayne_NE_182_Street.dgn



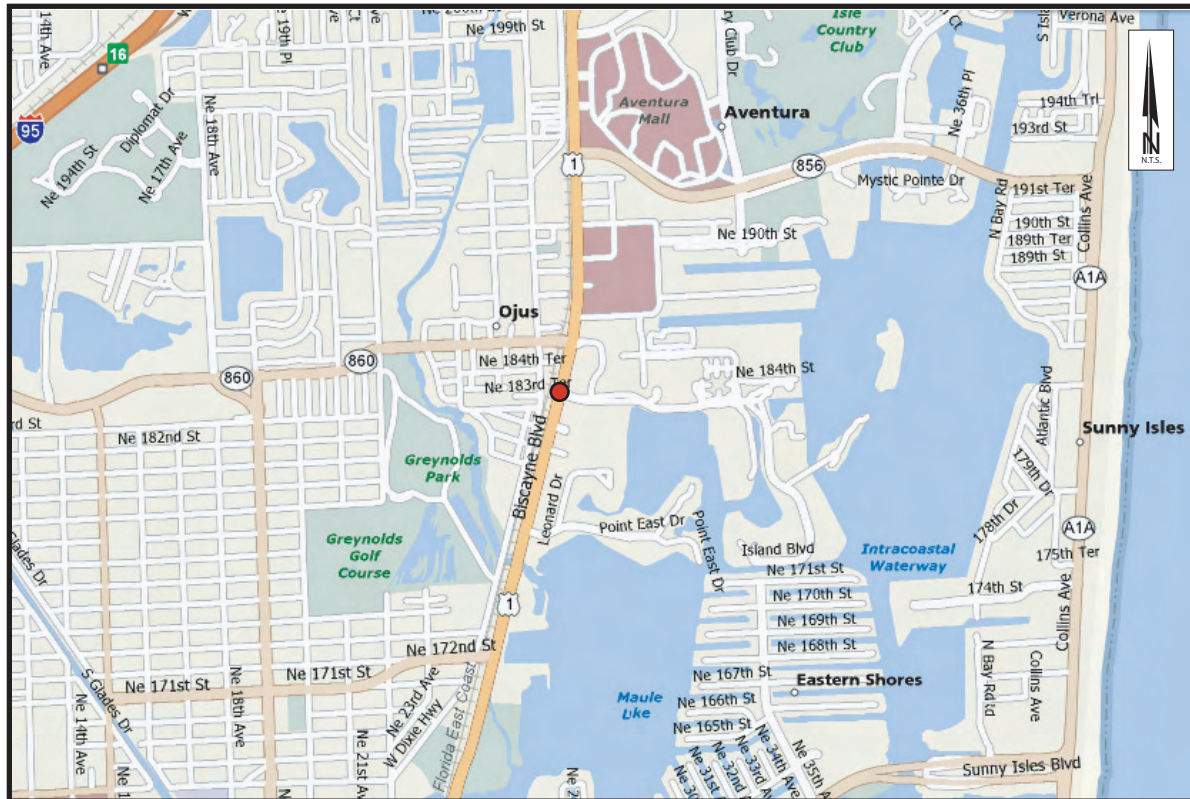
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CERTIFICATE OF AUTHORIZATION EB 2690

REVISIONS:	
CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LOCATE ALL UTILITIES BEFORE COMMENCING WITH PROJECT.	

PROJECT: **CONGESTED INTERSECTION IMPROVEMENTS STUDY**
PHASE II
Page 23

TITLE: **BISCAYNE BOULEVARD / NE 182 STREET**

DATE 12/21/07	PROJECT NO. 06235
DRAWN	SHEET NO.
CHECKED	
APPROVED	



LOCATION: BISCAYNE BOULEVARD / NE 183 STREET

INTERSECTION DESCRIPTION / ISSUES

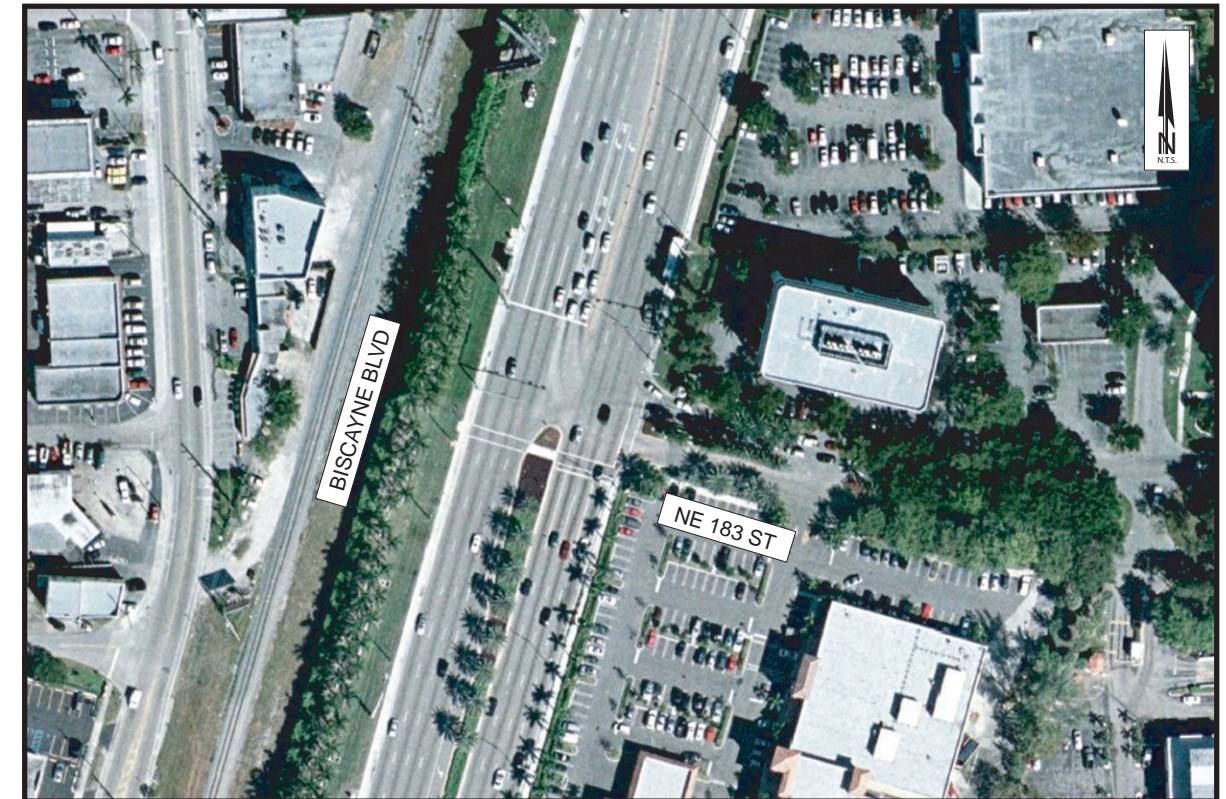
The intersection of Biscayne Blvd (US 1)/NE 183 St is located in the City of Aventura. The area is dominated by commercial uses along Biscayne Blvd. The FEC railroad is located west of Biscayne Blvd. Therefore, this is a T intersection, with the minor street (NE 183 St) to the east. The heaviest traffic flow is north-south on Biscayne Blvd. This configuration is typical in this area and provides ideal conditions for turbo lanes. A turbo lane is a geometric and traffic operation treatment where (in this case) only one of the four southbound lanes on Biscayne would stop at the signal. The fourth (inside) lane would stop to allow westbound left turning vehicles to turn onto southbound Biscayne Blvd using a protected signal indication.

RECOMMENDED IMPROVEMENTS

The main improvement recommended for this intersection is the creation of turbo lanes on the three outer southbound lanes of Biscayne Blvd. A special turbo lane operation, however, will be needed to address the needs of pedestrians crossing Biscayne Blvd. The three outer lanes would have separate signal indications that would allow a pedestrian actuated phase stopping all southbound and northbound lanes therefore allowing access to the bus stops on the west side of Biscayne. In the absence of pedestrian actuation, the three outer lanes would not stop, with the corresponding increase in the capacity of southbound Biscayne Blvd. The following improvements, among others, are also recommended: re-stripe second southbound lane for through and left turns, construct a bus bay (by Miami-Dade Transit) on the west side of Biscayne; and update pedestrian

ANALYSIS RESULTS / COST / SCHEDULE

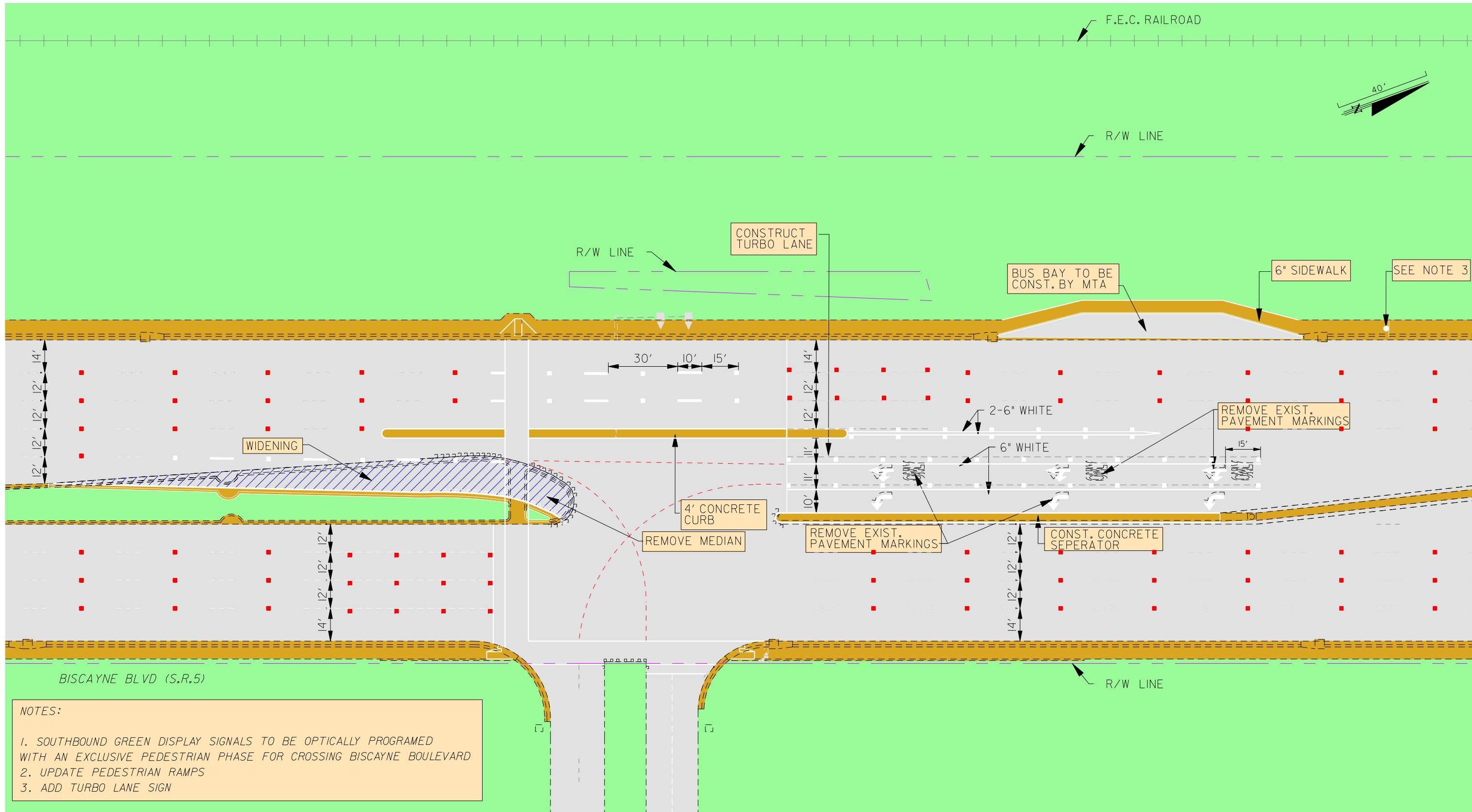
The recommended improvements will reduce average peak hour delay at the intersection by 18%. The estimated construction cost is \$210,000 to 250,000. The intersection improvements are candidates for a medium term construction schedule.



AERIAL VIEW



11. BISCAYNE BOULEVARD / NE 183 STREET



- NOTES:
1. SOUTHBOUND GREEN DISPLAY SIGNALS TO BE OPTICALLY PROGRAMED WITH AN EXCLUSIVE PEDESTRIAN PHASE FOR CROSSING BISCAYNE BOULEVARD
 2. UPDATE PEDESTRIAN RAMPS
 3. ADD TURBO LANE SIGN

N.E.183RD STREET

MDC ID NO. 3644

INTERSECTION # 11



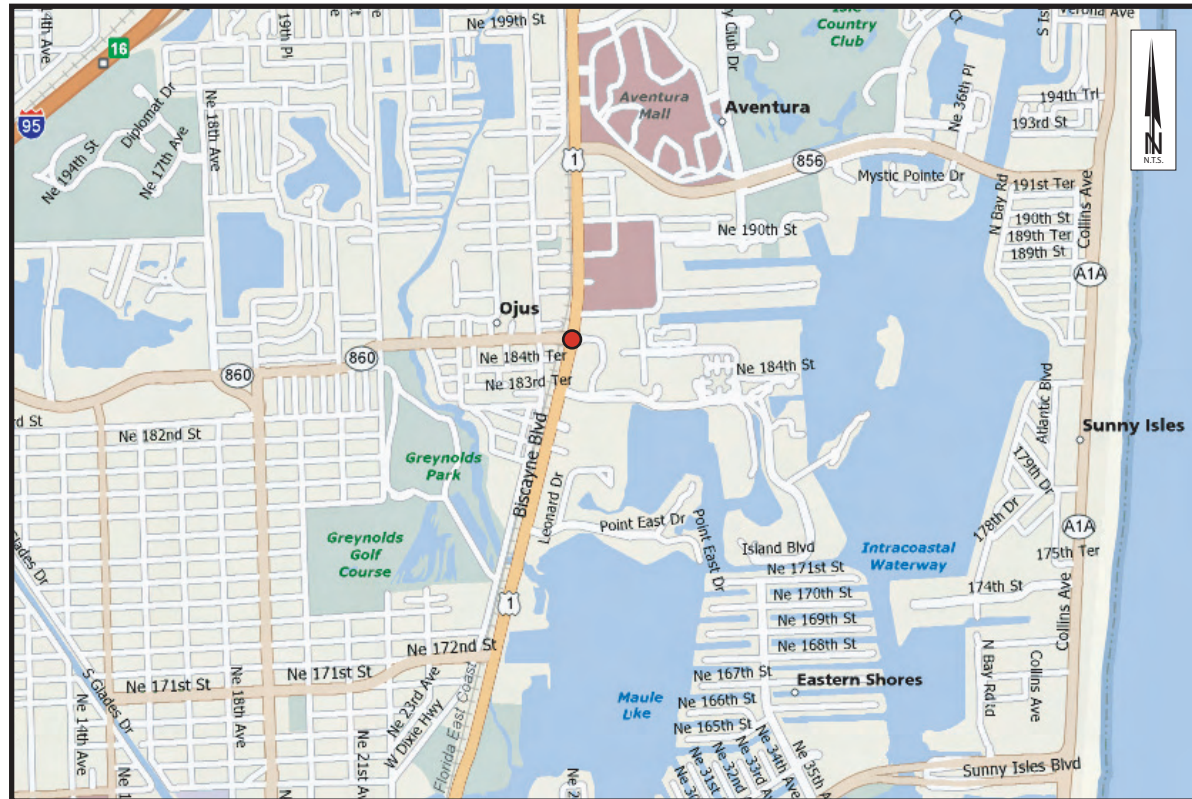
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CERTIFICATE OF AUTHORIZATION EB 2690

REVISIONS:	
CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LOCATE ALL UTILITIES BEFORE COMMENCING WITH PROJECT.	

PROJECT:
CONGESTED INTERSECTION IMPROVEMENTS STUDY
PHASE II
Page 25

TITLE:
BISCAYNE BOULEVARD / NE 183 STREET

DATE 12/21/07	PROJECT NO. 06235
DRAWN	SHEET NO.
CHECKED	
APPROVED	



LOCATION: BISCAYNE BOULEVARD / NE 186 STREET

INTERSECTION DESCRIPTION / ISSUES

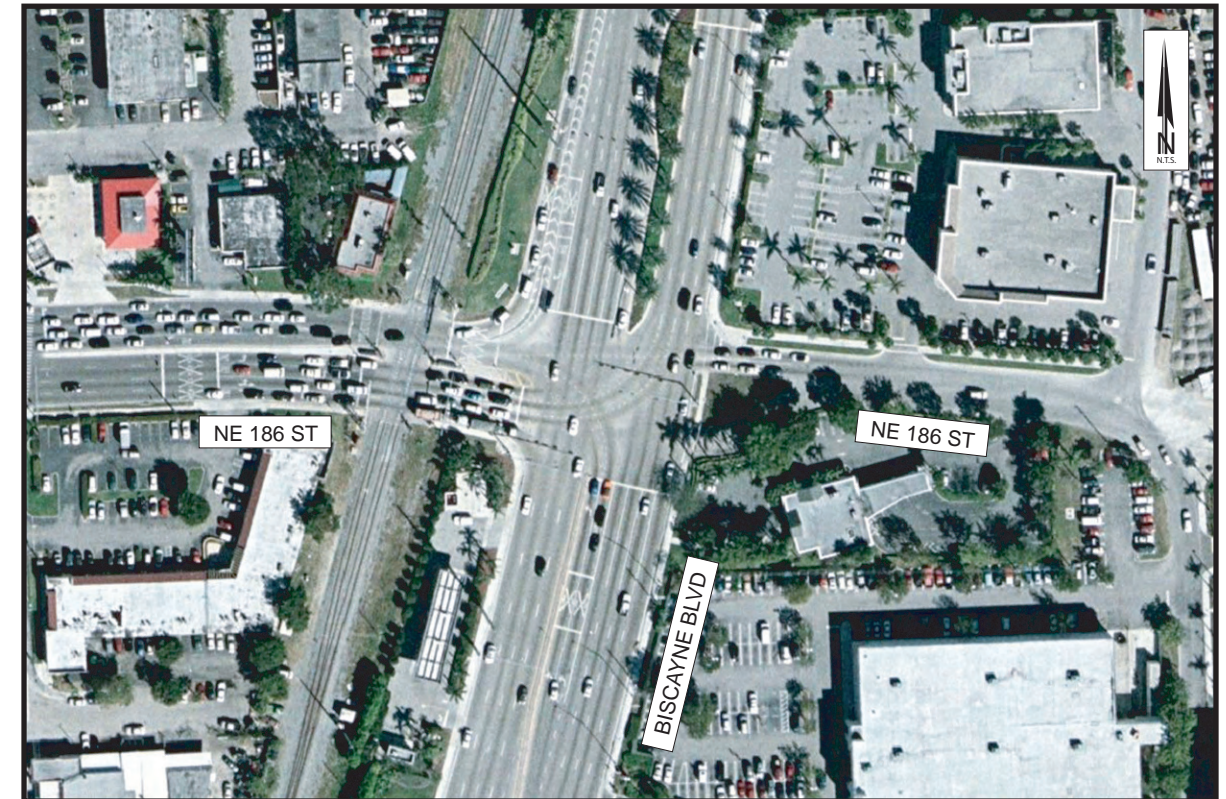
The intersection of Biscayne Blvd (US 1)/NE 186 St (Miami Gardens Dr, SR 860) is located in the City of Aventura. The area is dominated by commercial uses along Biscayne Blvd. The FEC railroad is located west of Biscayne Blvd. This is a major intersection that was recently modified by converting the east extension of NE 186 St into a more important connection to areas to the east and north. Both routes are heavily traveled. Therefore, additional capacity is needed at this location.

RECOMMENDED IMPROVEMENTS

As a major, four legged intersection, turbo lanes are not applicable here. Instead, a right turn lane is recommended southbound. The additional southbound right turn lane will be the third one in that direction, including the exiting free flow right turn lane that will be shifted further west to accommodate the extra turn lane. The following improvements, among others, are also recommended: add a southbound departure acceleration lane south bound; restripe the westbound left turn lane for left and through movements; add lane use signs; add pedestrian signals and update pedestrian ramps.

ANALYSIS RESULTS / COST / SCHEDULE

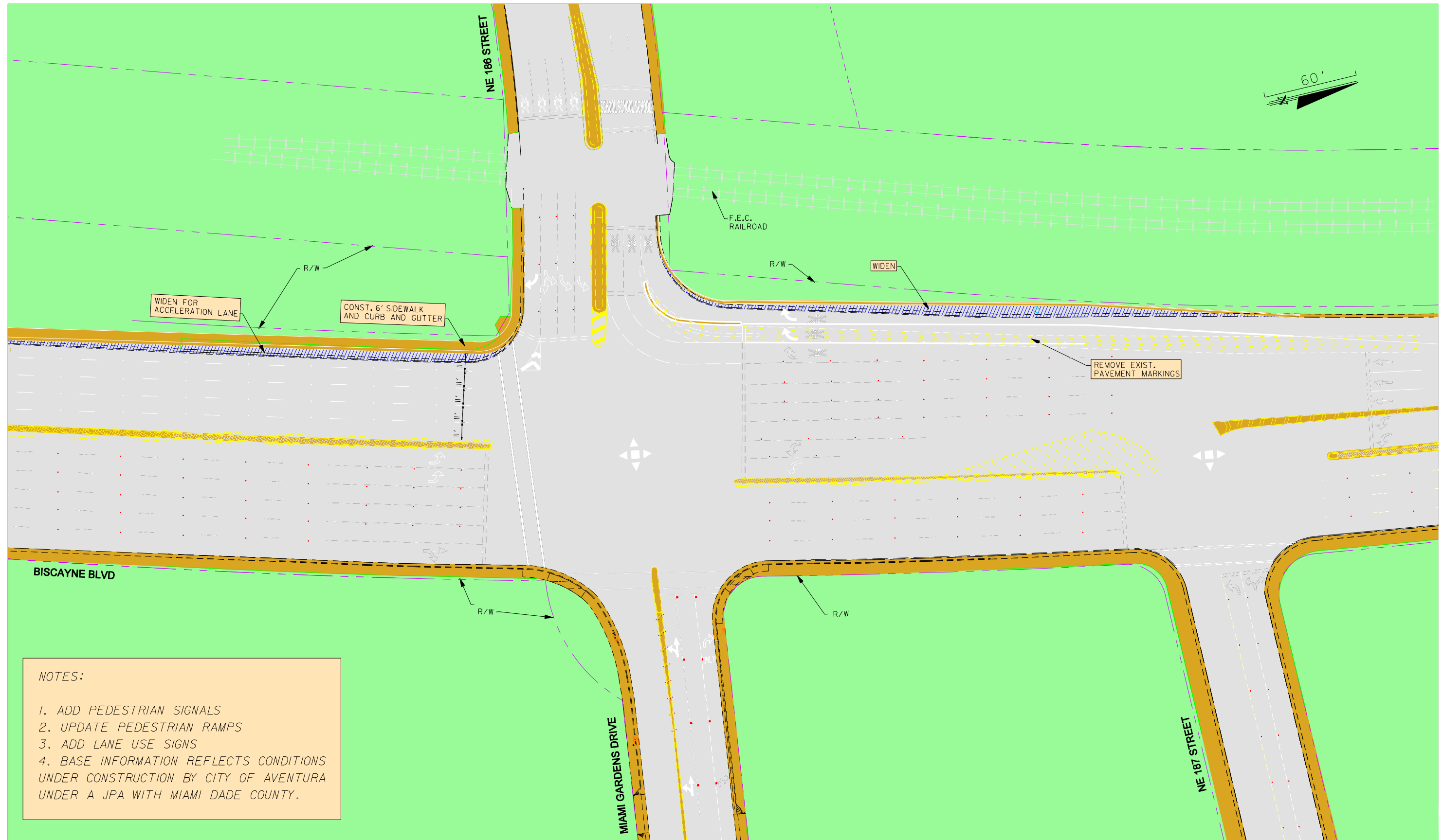
The recommended improvements will reduce average peak hour delay at the intersection by 16%. The estimated construction cost is \$360,000 to 440,000. The intersection improvements are candidates for a medium term construction schedule.



AERIAL VIEW



12. BISCAYNE BOULEVARD / NE 186 STREET



NOTES:

1. ADD PEDESTRIAN SIGNALS
2. UPDATE PEDESTRIAN RAMPS
3. ADD LANE USE SIGNS
4. BASE INFORMATION REFLECTS CONDITIONS UNDER CONSTRUCTION BY CITY OF AVENTURA UNDER A JPA WITH MIAMI DADE COUNTY.

MDC ID NO. 3469

INTERSECTION # 12



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REVISIONS:

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WITH PROJECT.

PROJECT:

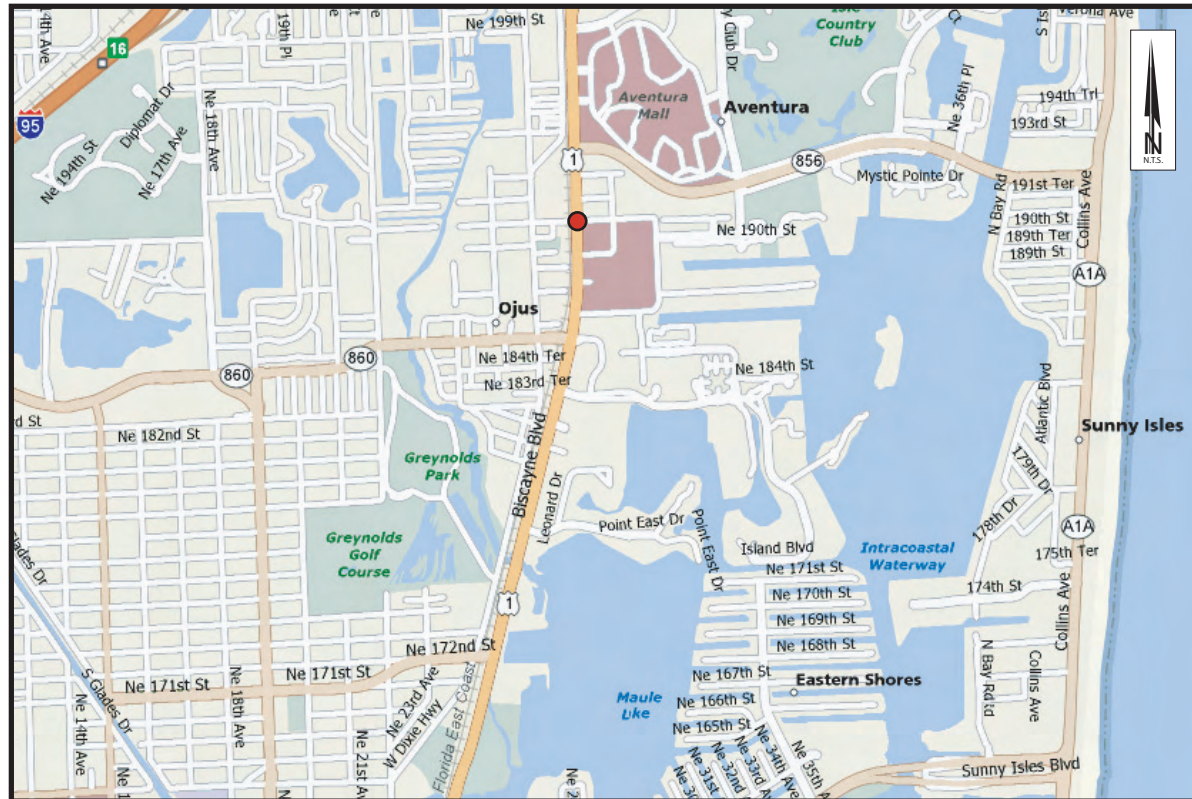
CONGESTED INTERSECTION IMPROVEMENTS STUDY

PHASE II
Page 27

TITLE:

BISCAYNE BOULEVARD / NE 186 STREET

DATE 12/21/07	PROJECT NO. 06235
DRAWN	SHEET NO.
CHECKED	
APPROVED	



LOCATION: BISCAYNE BOULEVARD / NE 191 STREET

INTERSECTION DESCRIPTION / ISSUES

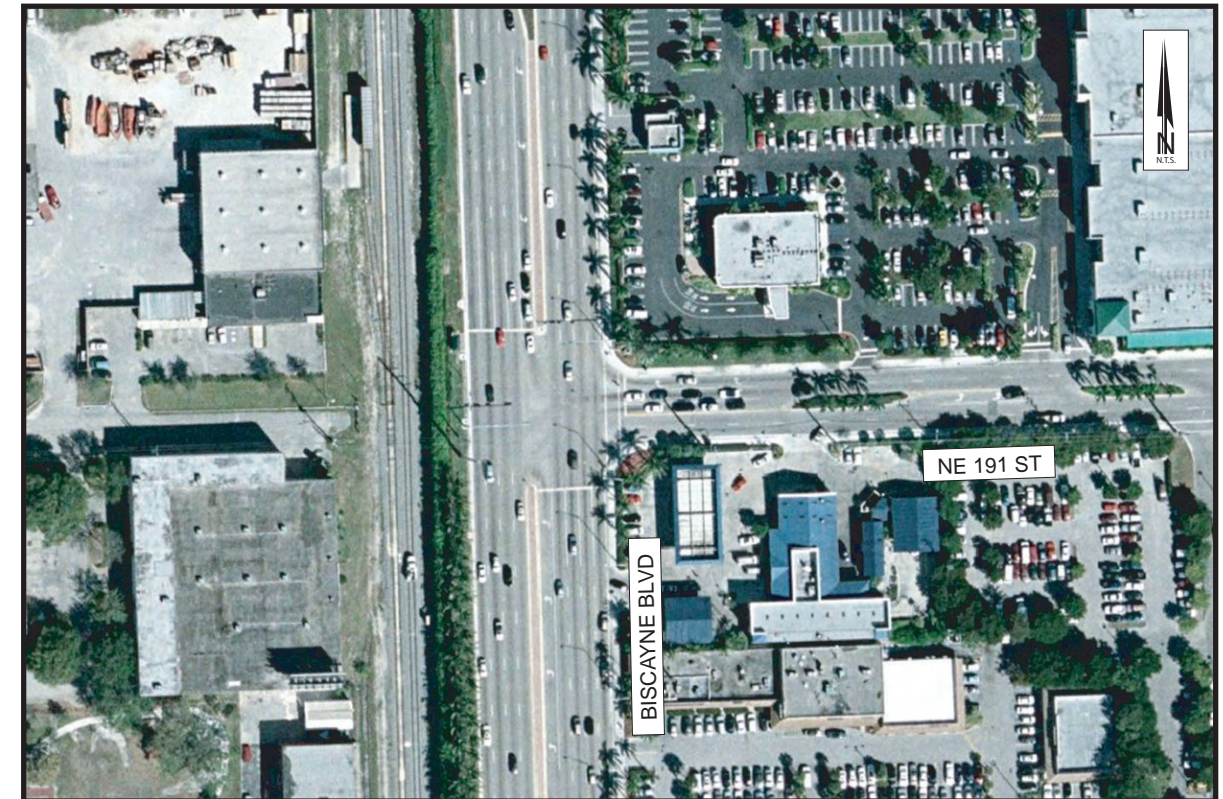
The intersection of Biscayne Blvd (US 1)/NE 191 St is located in the City of Aventura. The area is dominated by commercial uses along Biscayne Blvd. The FEC railroad is located west of Biscayne Blvd. Therefore, this is a T intersection, with the minor street (NE 191 St) to the east. The heaviest traffic flow is north-south on Biscayne Blvd. This configuration is typical in this area and provides ideal conditions for turbo lanes. A turbo lane is a geometric and traffic operation treatment where (in this case) only one of the four southbound lanes on Biscayne would stop at the signal. The fourth (inside) lane would stop to allow westbound left turning vehicles to turn onto southbound Biscayne Blvd using a protected signal indication.

RECOMMENDED IMPROVEMENTS

Turbo lanes were considered for this location. However, a number of operational issues precluded installation of turbo lanes at this intersection. The following improvement, instead, was recommended: update pedestrian ramps.

ANALYSIS RESULTS / COST / SCHEDULE

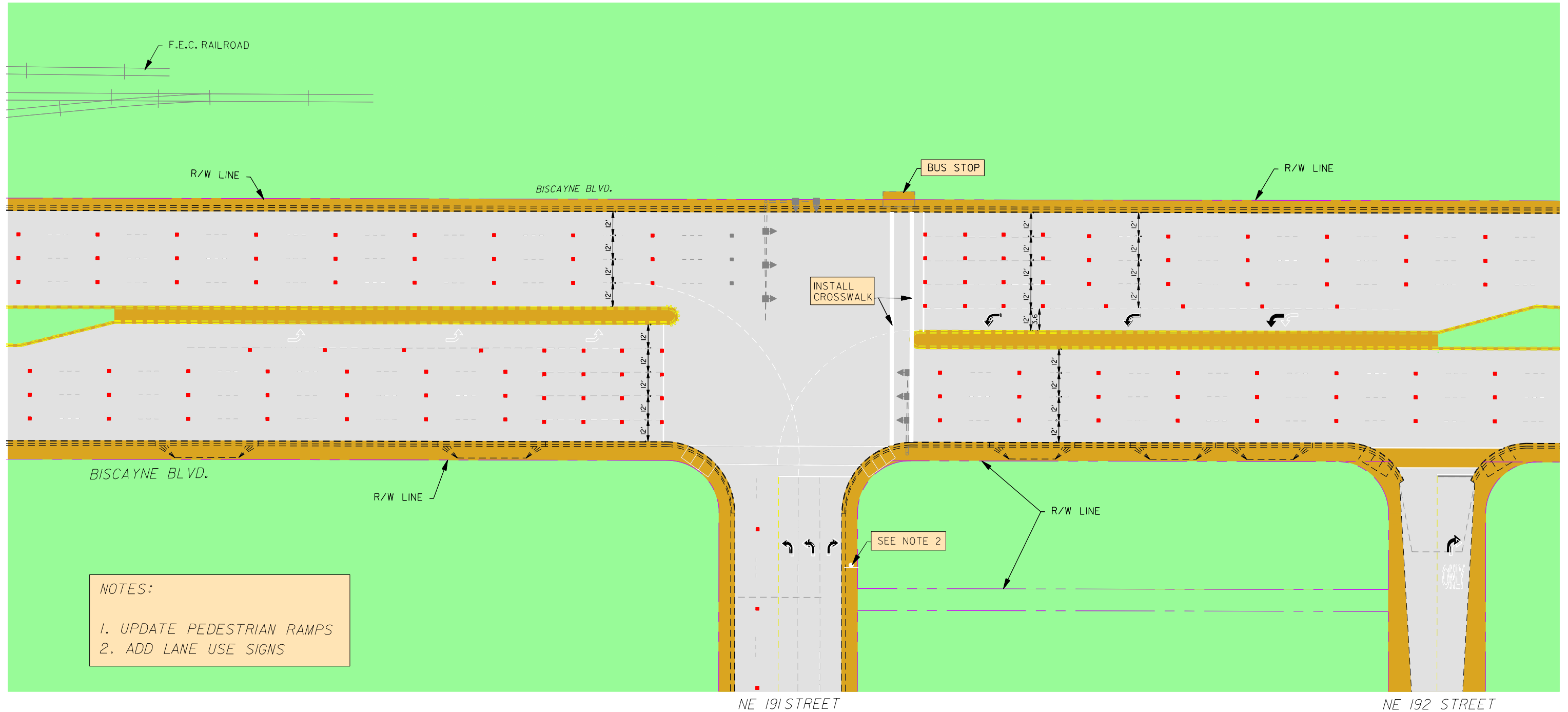
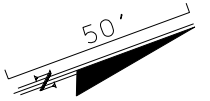
The effect of this improvement on delay at the intersection is not measurable. The estimated construction cost is \$4,500 to 5,500. The intersection improvements are candidates for a short term construction schedule.



AERIAL VIEW



13. BISCAYNE BOULEVARD / NE 191 STREET



MDC ID NO. 5269 INTERSECTION # 13

4/10/2008
UNPROJ06235Biscayne_NE_191 St.dgn



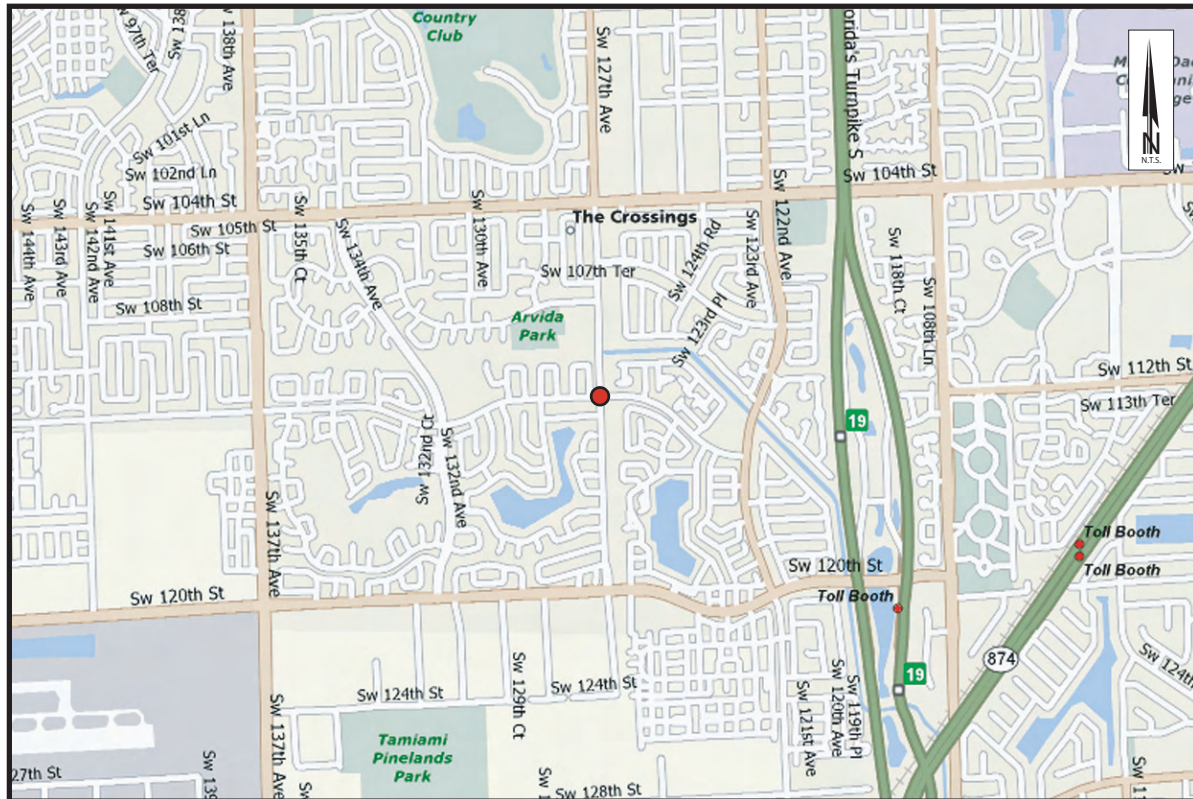
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CERTIFICATE OF AUTHORIZATION EB 2690

REVISIONS:	
CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LOCATE ALL UTILITIES BEFORE COMMENCING WITH PROJECT.	

PROJECT:
CONGESTED INTERSECTION IMPROVEMENTS STUDY
PHASE II
Page 29

TITLE:
BISCAYNE BOULEVARD / NE 191 STREET

DATE 12/21/07	PROJECT NO. 06235
DRAWN	SHEET NO.
CHECKED	
APPROVED	



LOCATION: SW 127 AVENUE / SW 112 STREET

INTERSECTION DESCRIPTION / ISSUES

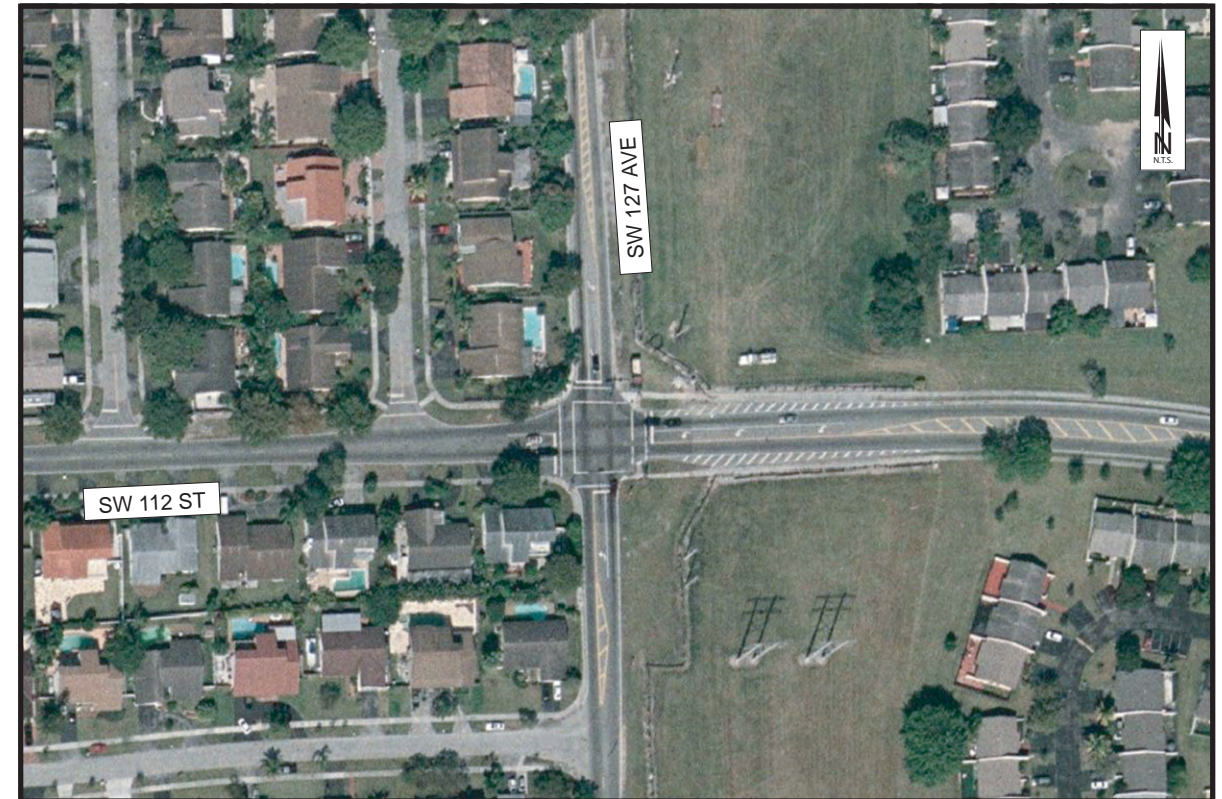
The intersection of SW 127 Av/112 St is located in the Kendall area in southwest Miami-Dade County. The area is primarily residential, however, Arvida Middle School is located north of the intersection. FPL has a major north-south utility corridor abutting SW 127 Av on the east. Traffic on SW 127 Av is very heavy during peak hours. This arterial, however, is planned for widening from two to four lanes in the immediate future.

RECOMMENDED IMPROVEMENTS

The main improvement recommended for this intersection is adding right turn lanes eastbound and westbound on SW 112 St. Improvements for SW 127 Av were not recommended as the widening project will substantially increase the capacity of that facility. The following improvements, are also recommended: add eastbound and westbound right turn signals.

ANALYSIS RESULTS / COST / SCHEDULE

The recommended improvements will reduce average peak hour delay at the intersection by 24%. The estimated construction cost is \$135,000 to 165,000. The intersection improvements are candidates for a medium term construction schedule. The improvement can be done independently of, or in conjunction with, the planned widening project.



AERIAL VIEW



14. SW 127 AVENUE / SW 112 STREET



NOTES:

1. SW 127 AVENUE CONSTRUCTION IMPROVEMENTS DONE UNDER MDCPW # 20030202

2. ADD RIGHT TURN SIGNAL DISPLAY FOR EASTBOUND AND WESTBOUND APPROACH

MDC ID NO. 4822 INTERSECTION # 14

4/10/2008
L:\PROJ\06235\SW 127 Ave-SW 112 St.dgn

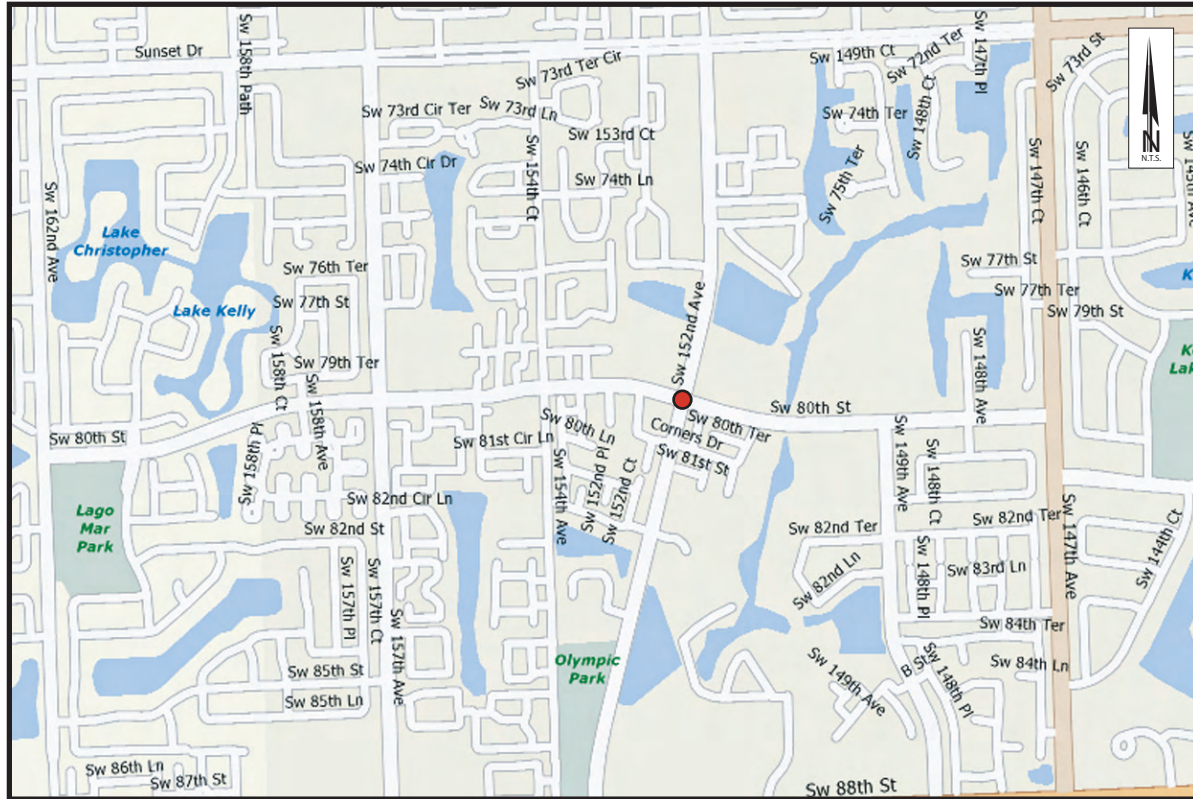


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REVISIONS:	
CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LOCATE ALL UTILITIES BEFORE COMMENCING WITH PROJECT.	

PROJECT: **CONGESTED INTERSECTION IMPROVEMENTS STUDY**
PHASE II
Page 31

TITLE: SW 127 AVENUE / SW 112 STREET	
DATE: 12/21/07	PROJECT NO.: 06235
DRAWN:	SHEET NO.:
CHECKED:	
APPROVED:	



LOCATION: SW 152 AVENUE / SW 80 STREET

INTERSECTION DESCRIPTION / ISSUES

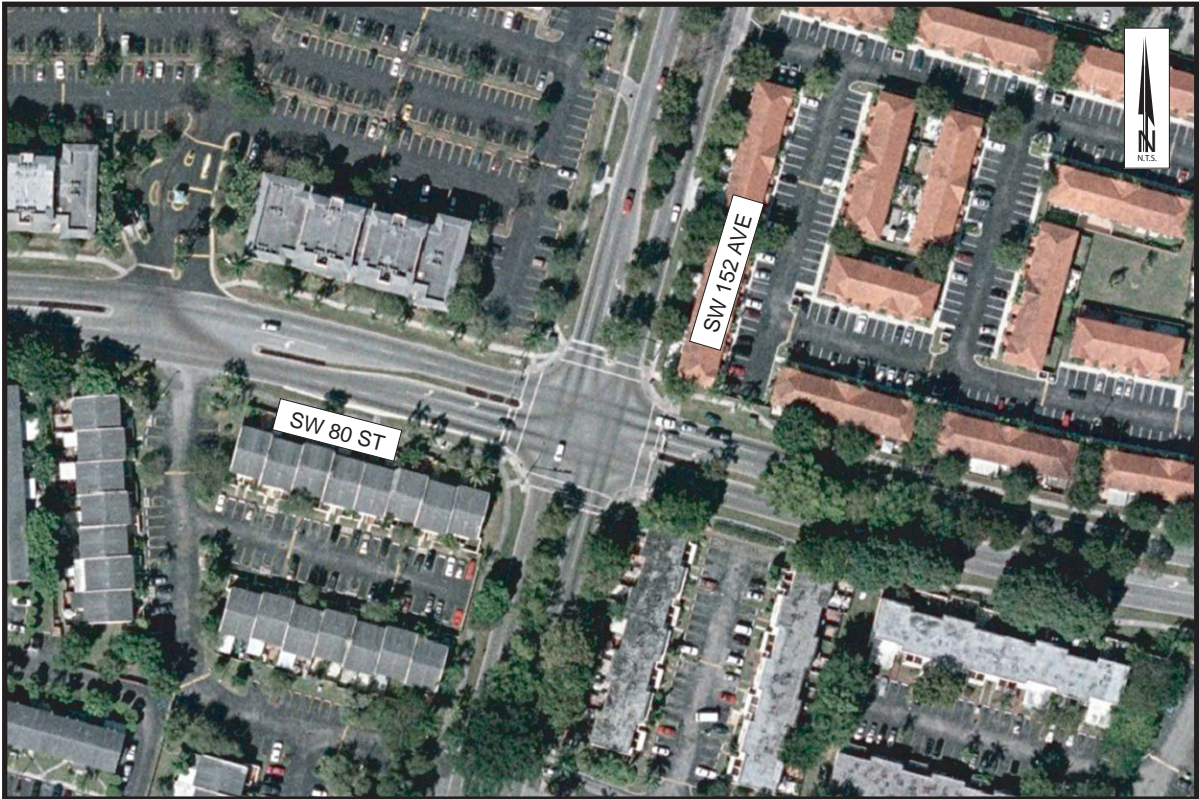
The intersection of SW 152 Av/80 St is located in the Kendall area in southwest Miami-Dade County. The area is dominated by multi-family residential buildings. The Pinecrest private school is located east of the intersection. The main traffic flow is north-south on SW 152 Av.

RECOMMENDED IMPROVEMENTS

The main improvements recommended for this intersection are adding an eastbound right turn lane and extending the eastbound and westbound left turn lanes. The following improvements, among others, are also recommended: construct bus bays (by Miami-Dade Transit) in both directions north of the intersection; install an eastbound right turn signal; install a northbound left turn signal; update pedestrian ramps, crosswalk markings, and signals; repair sidewalks.

ANALYSIS RESULTS / COST / SCHEDULE

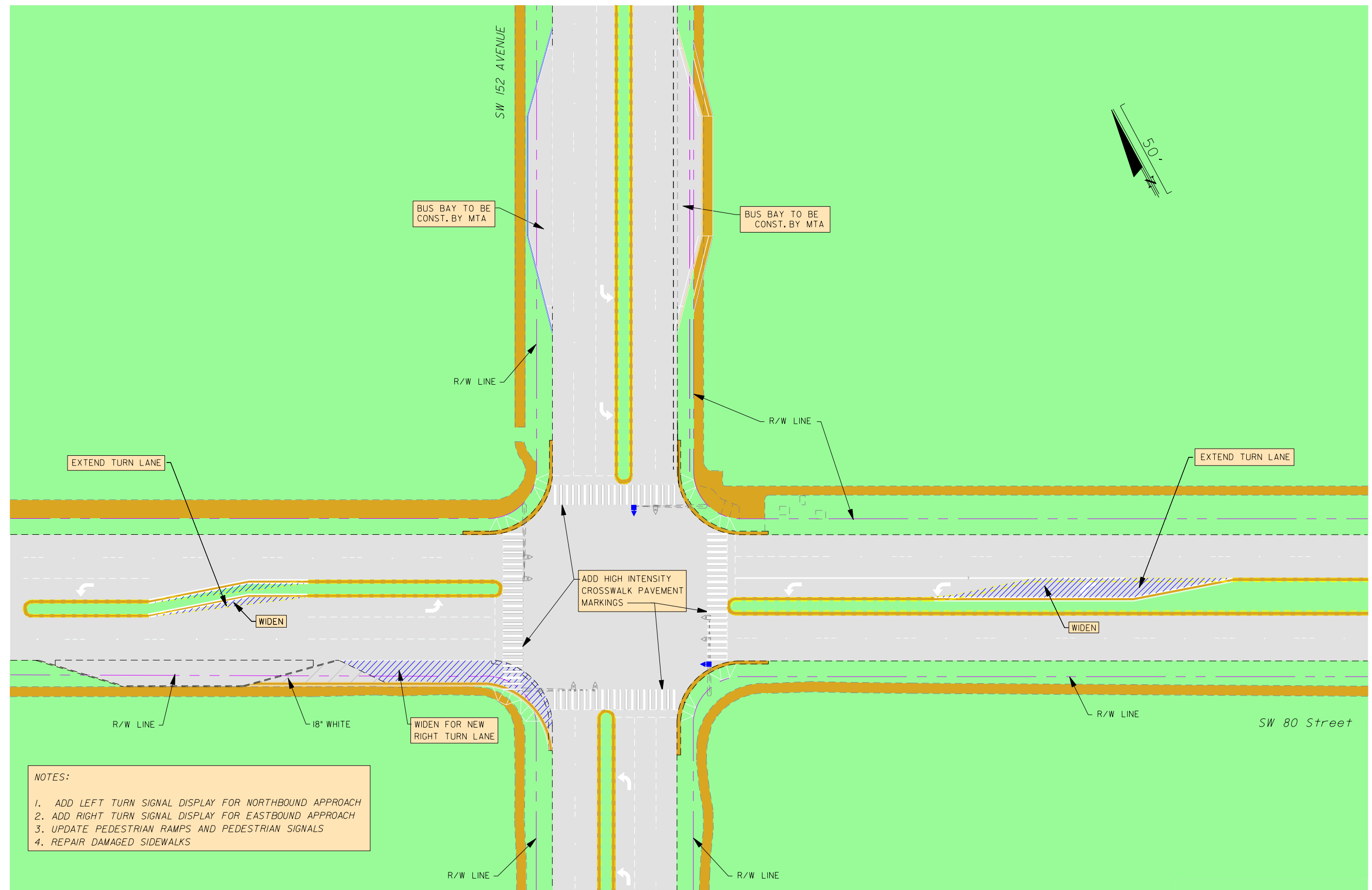
The recommended improvements will reduce average peak hour delay at the intersection by 3%. The estimated construction cost is \$162,000 to 198,000. The intersection improvements are candidates for a short term construction schedule.



AERIAL VIEW



15. SW 152 AVENUE / SW 180 STREET



- NOTES:
1. ADD LEFT TURN SIGNAL DISPLAY FOR NORTHBOUND APPROACH
 2. ADD RIGHT TURN SIGNAL DISPLAY FOR EASTBOUND APPROACH
 3. UPDATE PEDESTRIAN RAMPS AND PEDESTRIAN SIGNALS
 4. REPAIR DAMAGED SIDEWALKS

MDC ID NO. 5389 INTERSECTION # 15

4/10/2008
L:\proj\06235\SW 152 Ave_SW 80 St\SW 152 Ave_SW 80 St.dgn



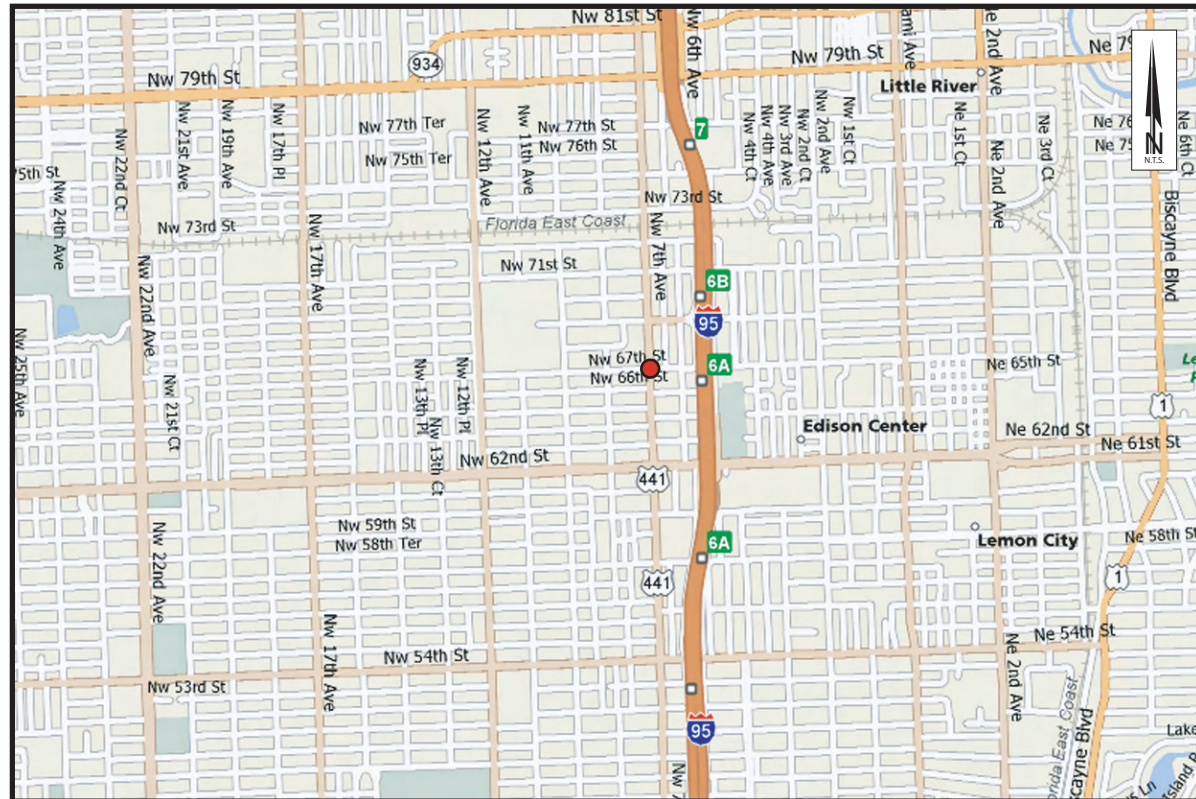
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REVISIONS:	
CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LOCATE ALL UTILITIES BEFORE COMMENCING WITH PROJECT.	

PROJECT:
CONGESTED INTERSECTION IMPROVEMENTS STUDY
PHASE II
Page 33

TITLE:
SW 152 AVENUE / SW 80 STREET

DATE 12/21/07	PROJECT NO. 06235
DRAWN	SHEET NO.
CHECKED	
APPROVED	



LOCATION: NW 7 AVENUE / NW 67 STREET

INTERSECTION DESCRIPTION / ISSUES

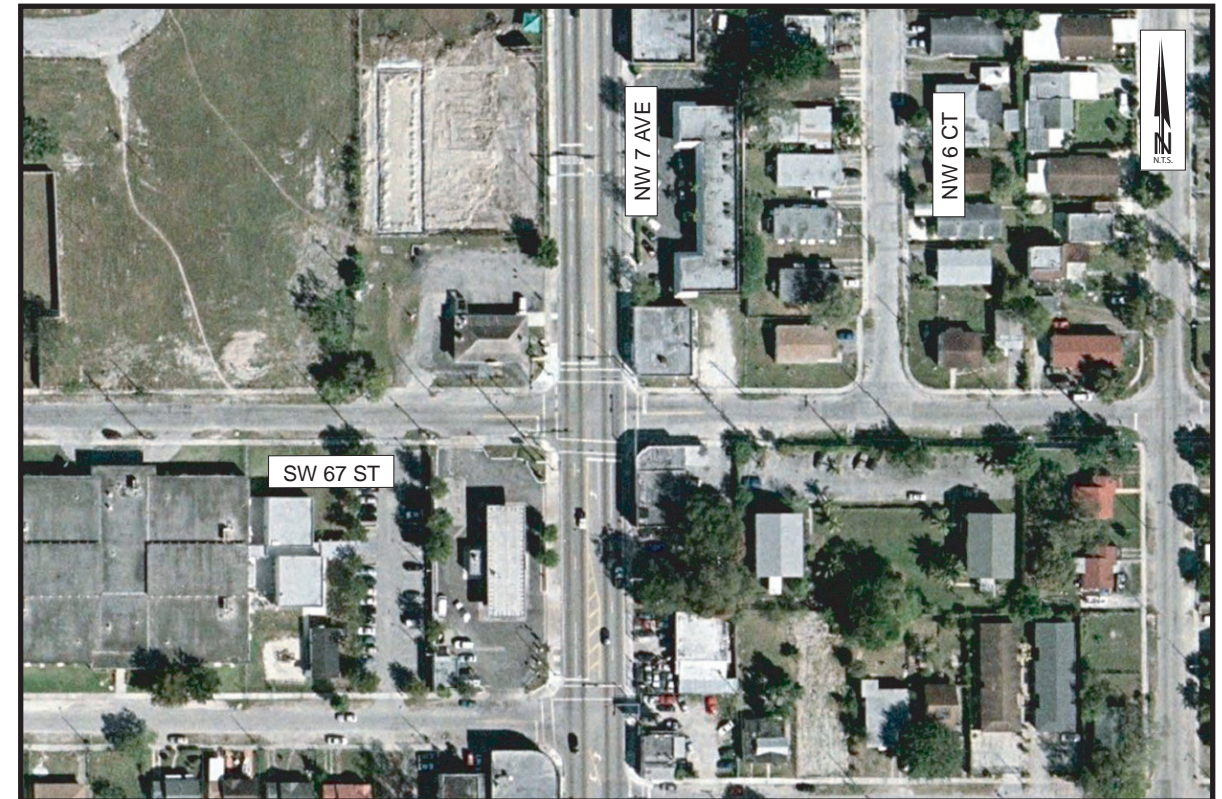
The intersection of NW 7 Av (SR 7)/67 St is located in the City of Miami. The area is dominated by commercial uses along NW 7 Av. NW 67 St is blocked by I 95 one block to the east. To the west, NW 67 St provides access to several schools. North-south traffic on NW 7 Av is very heavy during peak hours. A school speed zone affects flow on NW 7 Av on school days. The primary issues at this intersection are safety related.

RECOMMENDED IMPROVEMENTS

The main improvement recommended for this intersection is providing adequate lateral clearance to a newly installed, large utility pole on the southwest corner. This is done by constructing a raised (curb and gutter) bulb out between the pole and the edge of pavement on NW 67 St. The following improvement is also recommended: update pedestrian ramps.

ANALYSIS RESULTS / COST / SCHEDULE

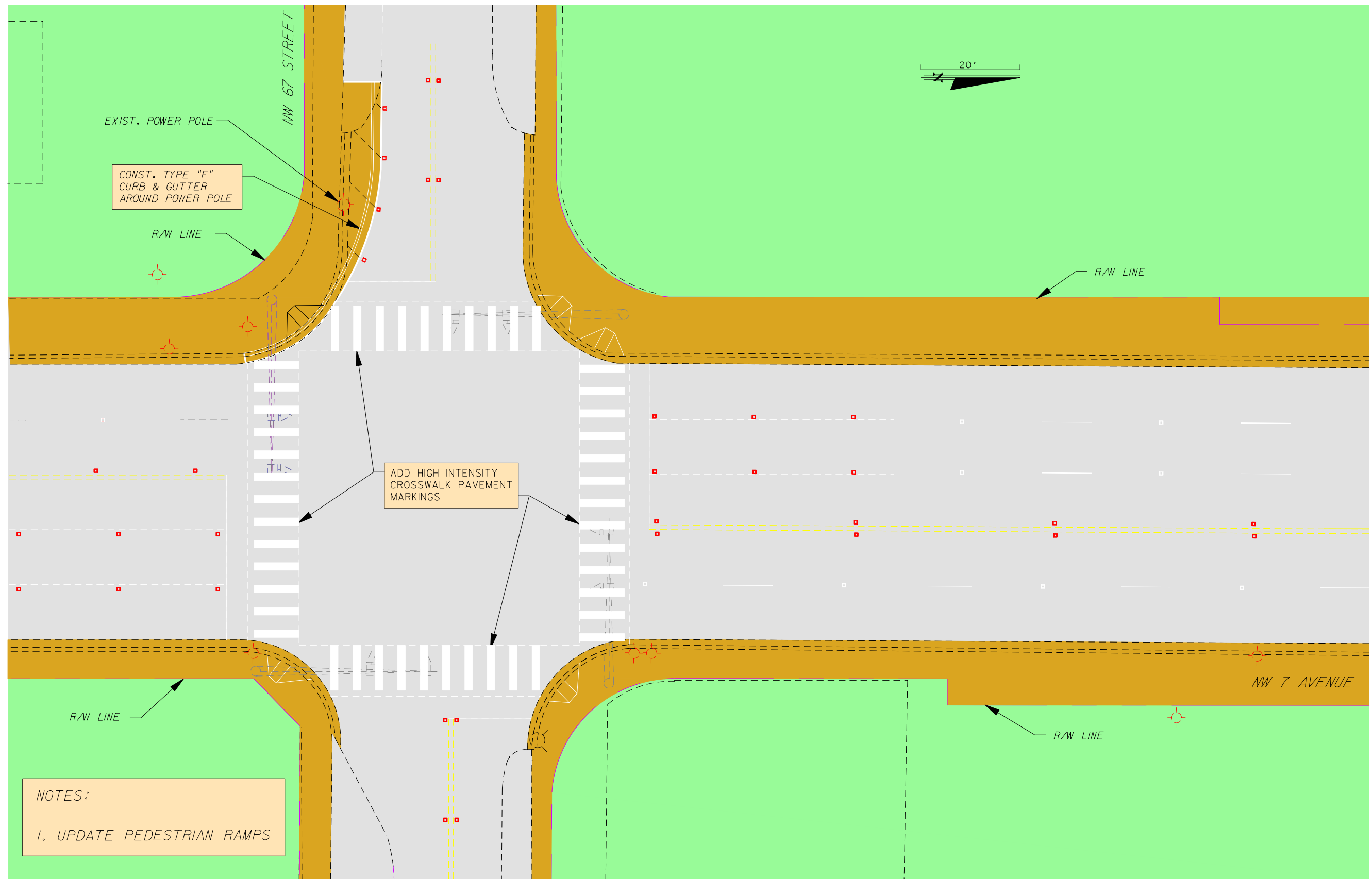
The effect of this improvement on delay at the intersection is not measurable. The estimated construction cost is \$54,000 to 66,000. The intersection improvements are candidates for a short term construction schedule.



AERIAL VIEW



16. NW 7 AVENUE / NW 67 STREET



MDC ID NO. 3726

INTERSECTION # 16

4/10/2008
L:\Projects\06235\NW 7 Ave_NW 67 Street\SH-NW 67 NW T.dwg



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REVISIONS:

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WITH PROJECT.

PROJECT:

CONGESTED INTERSECTION IMPROVEMENTS STUDY

PHASE II

Page 35

TITLE:

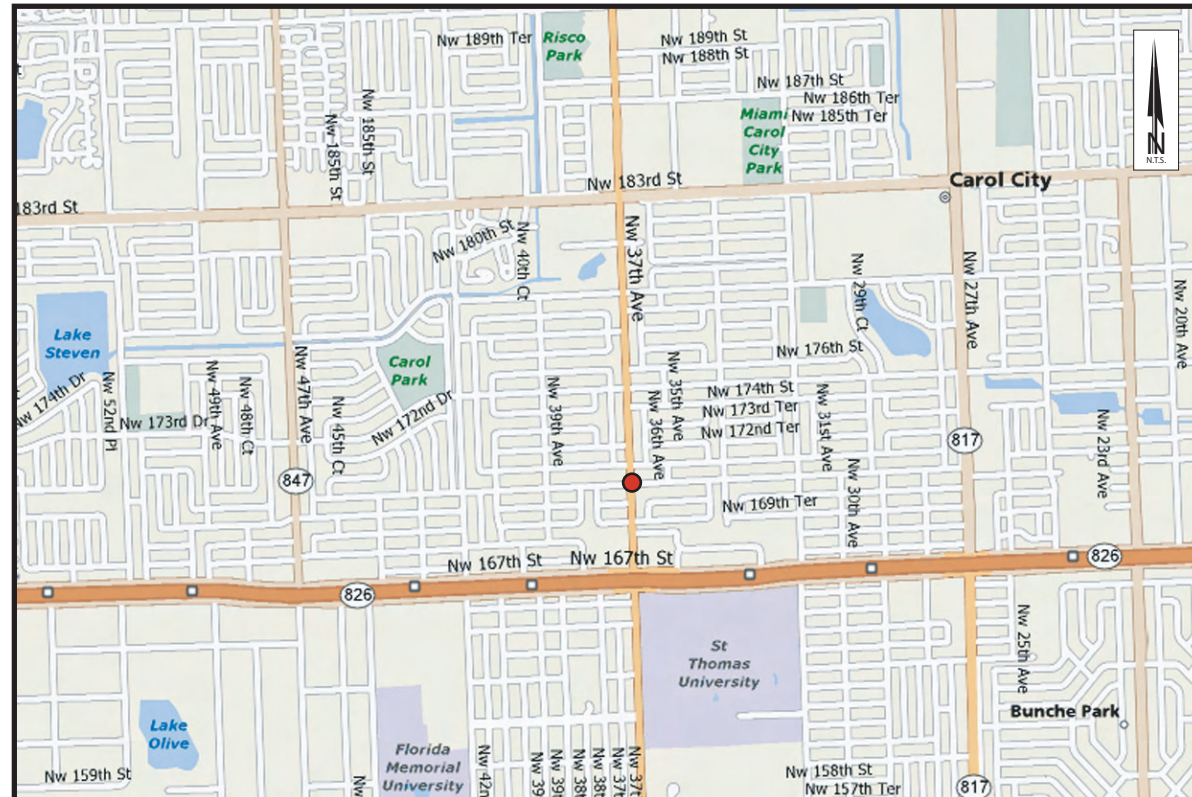
NW 7 AVENUE / NW 67 STREET

DATE: 12/21/07 PROJECT NO. 06235

DRAWN: SHEET NO.

CHECKED:

APPROVED:



LOCATION: NW 37 AVENUE / NW 171 STREET

INTERSECTION DESCRIPTION / ISSUES

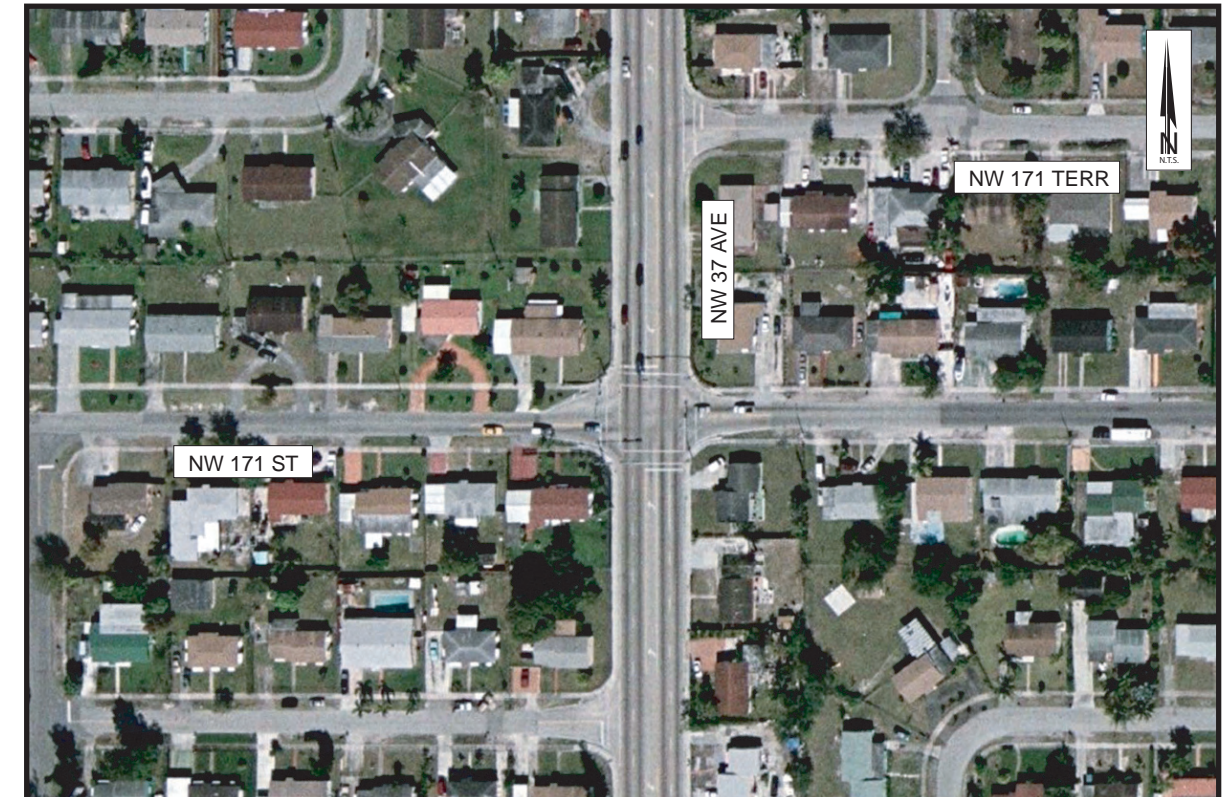
The intersection of NW 37 Av/171 St is located in the City of Miami Gardens. The area is primarily residential. The main traffic flow is north-south on NW 37 Av. NW 171 St is a route often used by commuters to bypass the Palmetto Expressway during congested conditions.

RECOMMENDED IMPROVEMENTS

The main improvements recommended for this intersection are adding an eastbound and westbound left turn lanes. The following improvement is also recommended: update pedestrian ramps.

ANALYSIS RESULTS / COST / SCHEDULE

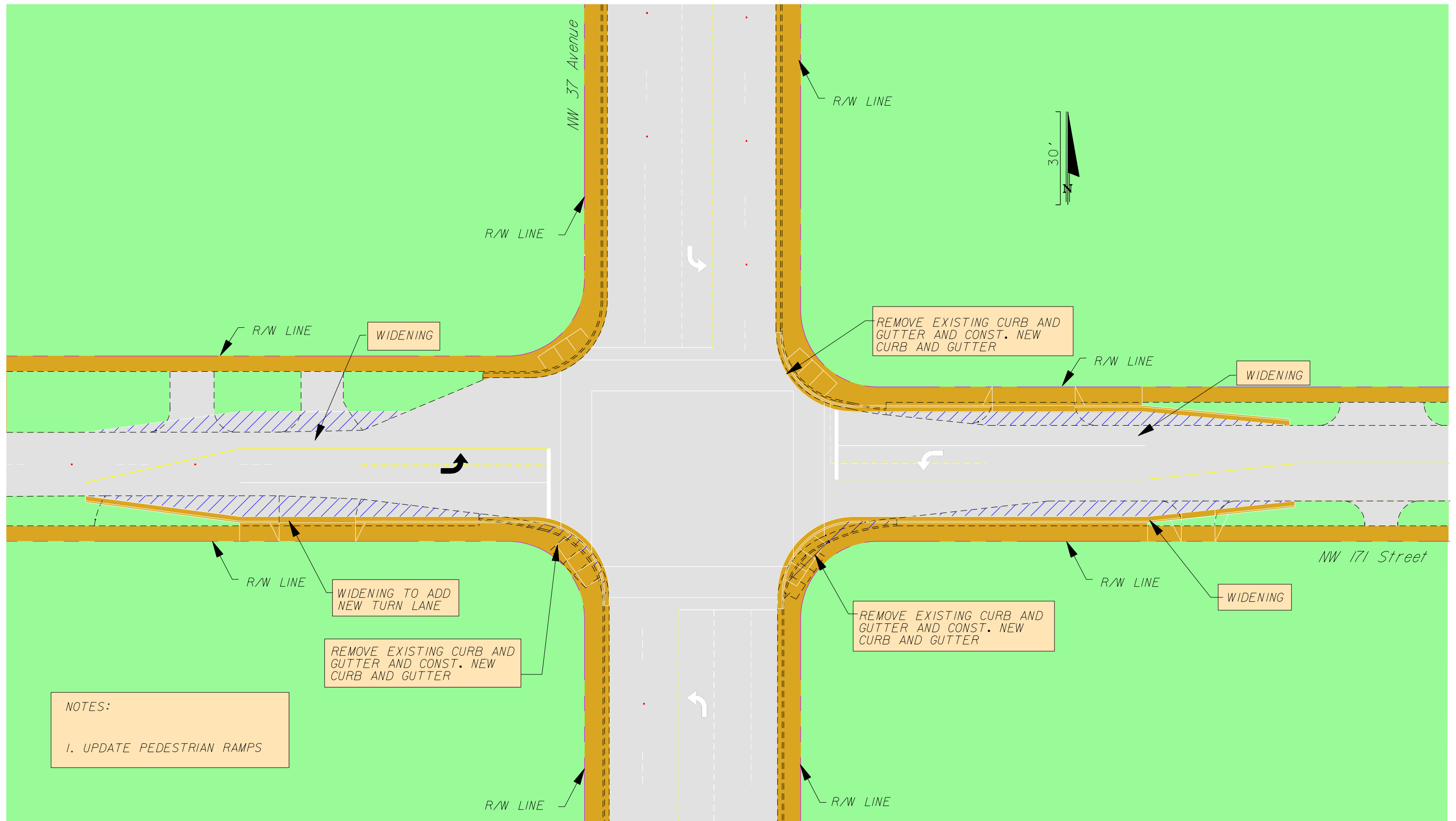
The recommended improvements will reduce average peak hour delay at the intersection by 9%. The estimated construction cost is \$50,000 to 61,000. The intersection improvements are candidates for a short term construction schedule.



AERIAL VIEW



17. NW 37 AVENUE / NW 171 STREET



NOTES:
1. UPDATE PEDESTRIAN RAMPS

MDC ID NO. 5662 INTERSECTION # 17

4/10/2008
L:\06235\NW 37 Ave NW 171 St\NW 37 Ave 171 St.dgn



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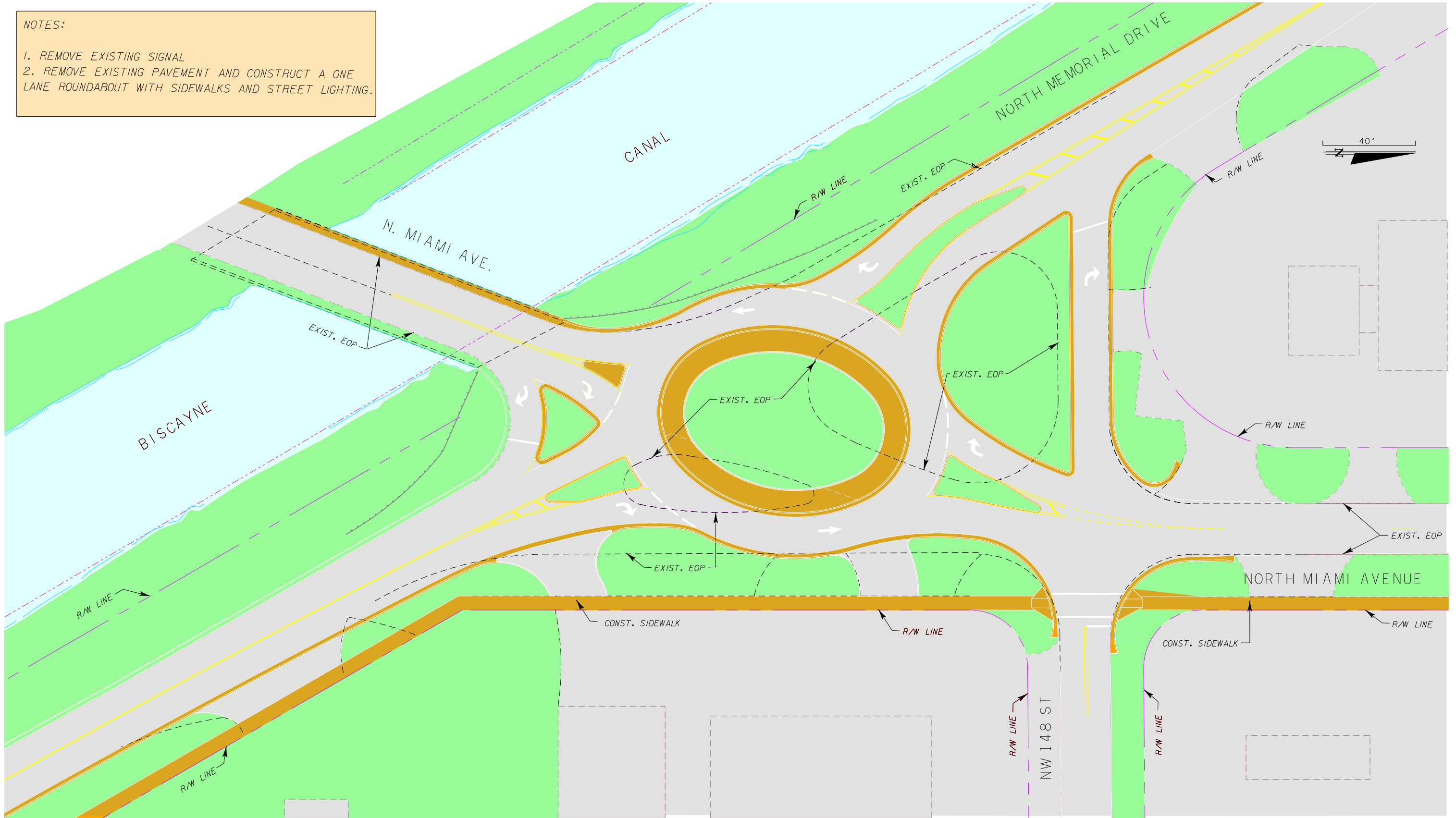
REVISIONS:	
CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LOCATE ALL UTILITIES BEFORE COMMENCING WITH PROJECT.	

PROJECT: **CONGESTED INTERSECTION IMPROVEMENTS STUDY**
PHASE II
Page 37

TITLE:		DATE	PROJECT NO.
NW 37 AVENUE / NW 171 STREET		12/21/07	06235
		DRAWN	SHEET NO.
		CHECKED	
		APPROVED	

NOTES:

1. REMOVE EXISTING SIGNAL
2. REMOVE EXISTING PAVEMENT AND CONSTRUCT A ONE LANE ROUNDABOUT WITH SIDEWALKS AND STREET LIGHTING.



MDC ID NO. 2477 INTERSECTION # 18



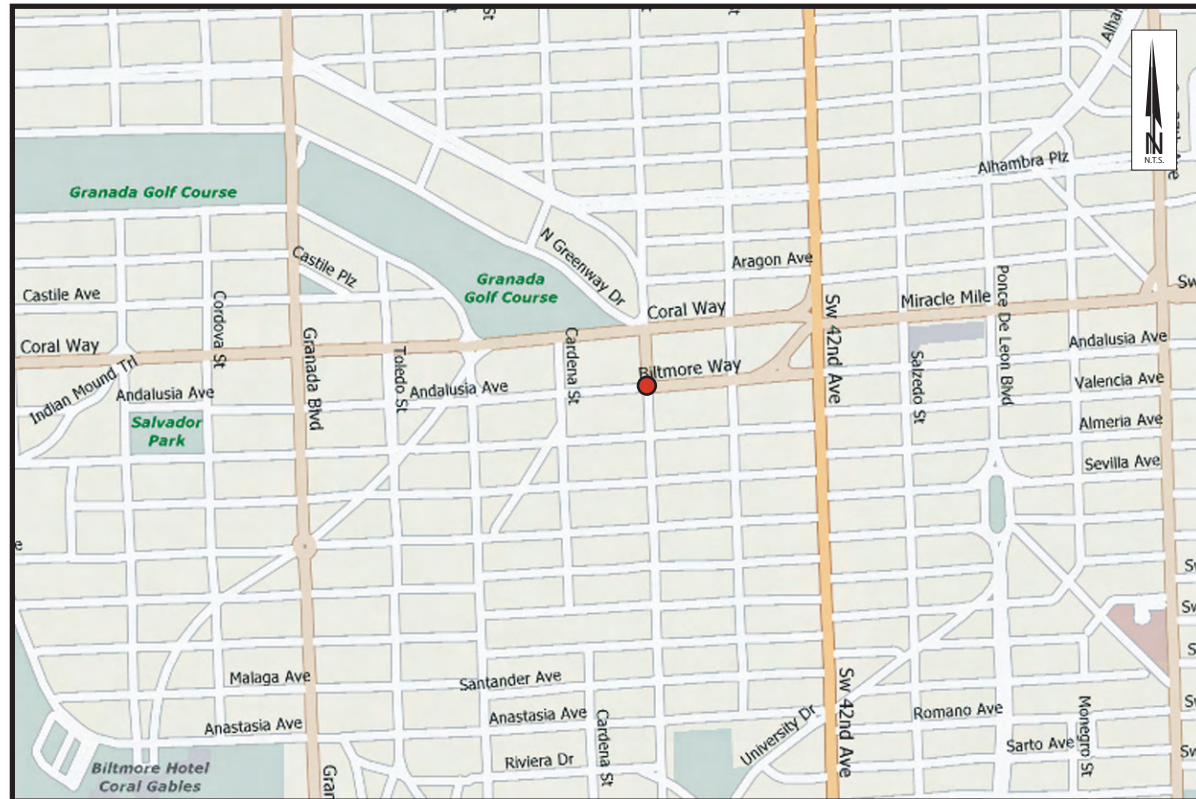
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REVISIONS:	
CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LOCATE ALL UTILITIES BEFORE COMMENCING WITH PROJECT.	

PROJECT: **CONGESTED INTERSECTION IMPROVEMENTS STUDY**
PHASE II
Page 39

TITLE: **NORTH MIAMI AVENUE / NORTH MEMORIAL DRIVE**

DATE 12/21/07	PROJECT NO. 06235
DRAWN	SHEET NO.
CHECKED	
APPROVED	



LOCATION: SEGOVIA STREET / BILTMORE WAY

INTERSECTION DESCRIPTION / ISSUES

The intersection of Segovia St/Biltmore Way is located in the City of Coral Gables. The intersection is surrounded by commercial uses to the east and multi-family residential to the west. The intersection geometry is complicated by the prevailing traffic flow that reroutes Coral Way eastbound traffic to Biltmore Way via Segovia because Coral Way is one-way east of Segovia.

RECOMMENDED IMPROVEMENTS

This location is ideal for a roundabout, therefore, one is recommended to replace the existing signalized intersection. The roundabout will help reduce delays and better organize the traffic flow through the intersection.

ANALYSIS RESULTS / COST / SCHEDULE

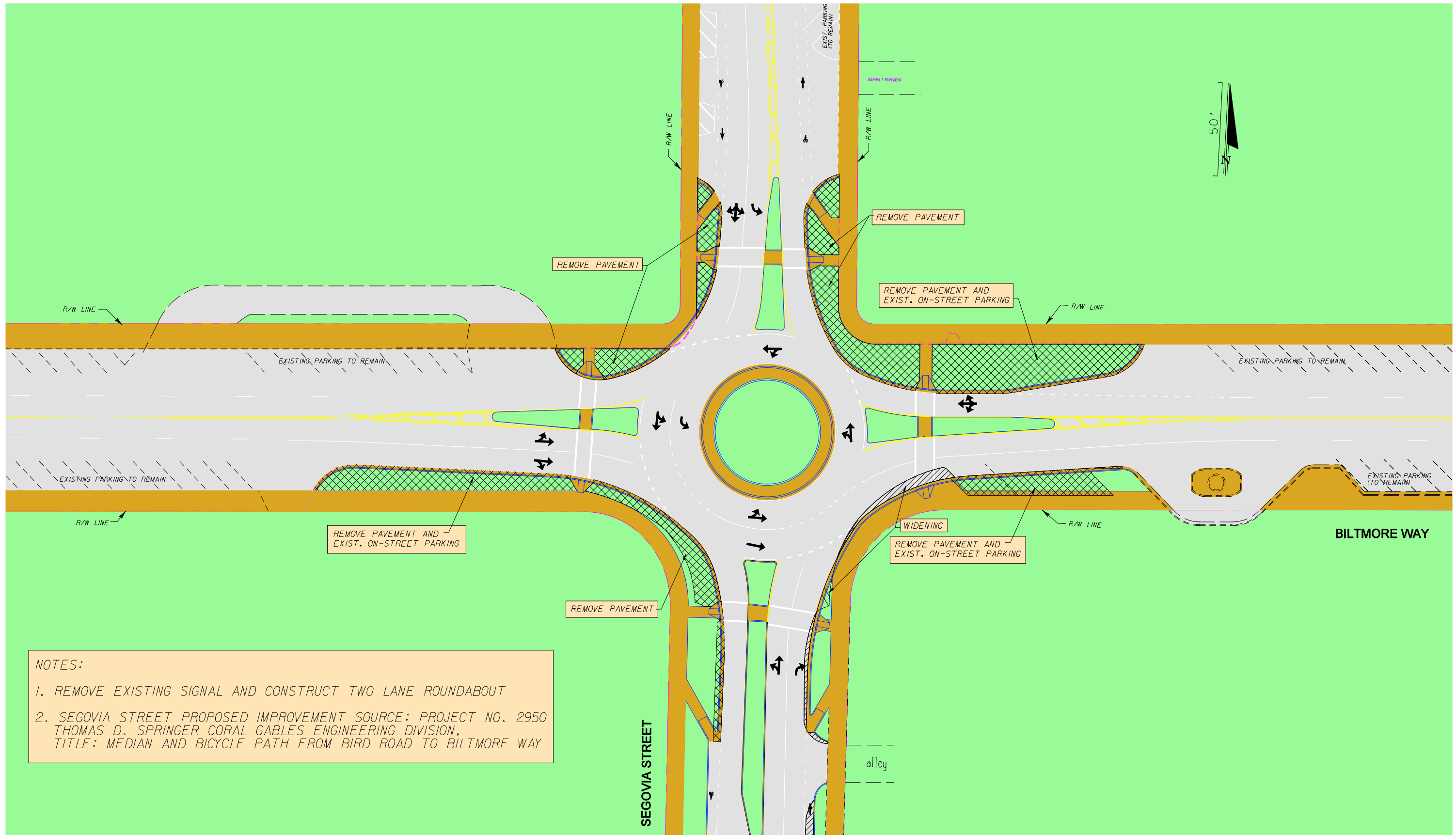
The recommended improvements will reduce average peak hour delay at the intersection by 35%. The estimated construction cost is \$290,000 to 350,000. The intersection improvements are candidates for a medium term construction schedule.



AERIAL VIEW



19. SEGOVIA STREET / BILTMORE WAY



NOTES:

1. REMOVE EXISTING SIGNAL AND CONSTRUCT TWO LANE ROUNDABOUT

2. SEGOVIA STREET PROPOSED IMPROVEMENT SOURCE: PROJECT NO. 2950
THOMAS D. SPRINGER CORAL GABLES ENGINEERING DIVISION,
TITLE: MEDIAN AND BICYCLE PATH FROM BIRD ROAD TO BILTMORE WAY

MDC ID NO. 2593 INTERSECTION # 19

4/10/2008
L:\proj\06235\Segovia_Biltmore Way\st_Segovia_Biltmore.dgn

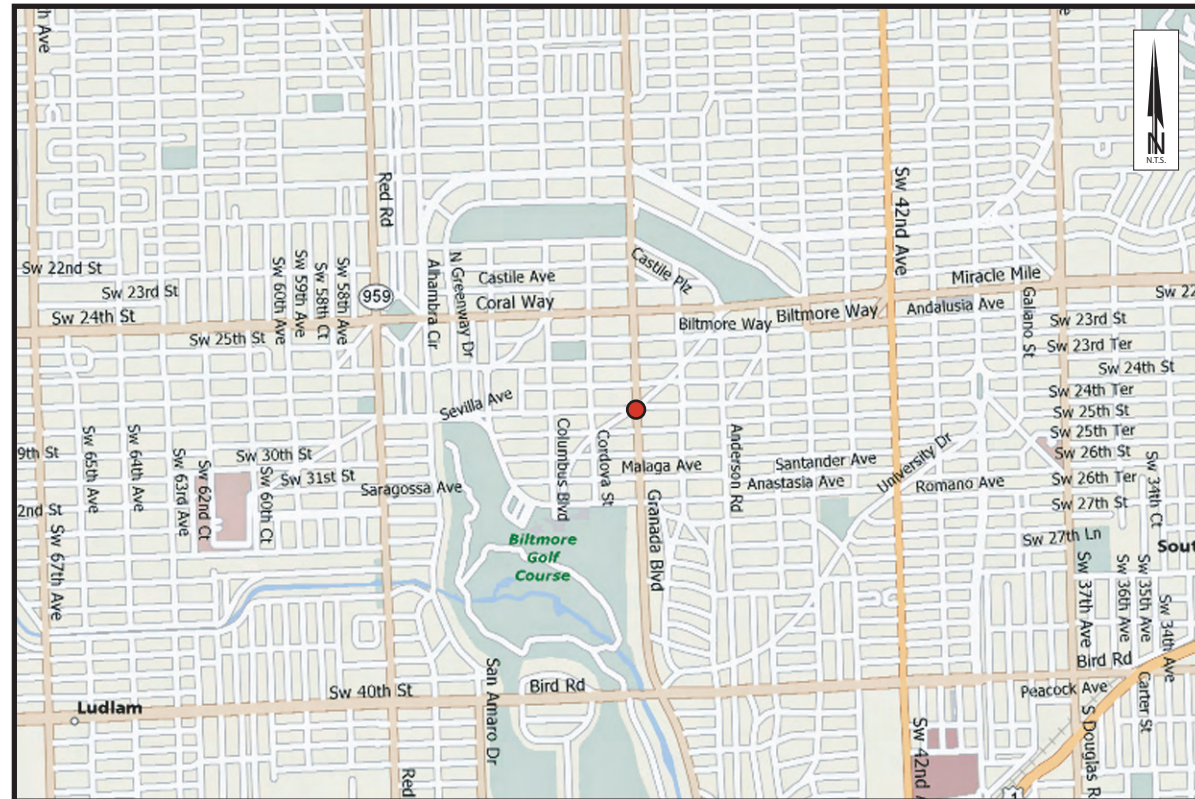


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REVISIONS:	
CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LOCATE ALL UTILITIES BEFORE COMMENCING WITH PROJECT.	

PROJECT: CONGESTED INTERSECTION IMPROVEMENTS STUDY
PHASE II
Page 41

TITLE:		DATE	PROJECT NO.
SEGOVIA STREET / BILTMORE WAY		12/21/07	06235
		DRAWN	SHEET NO.
		CHECKED	
		APPROVED	



LOCATION: DE SOTO BLVD / SEVILLA AVE / GRANADA BLVD

INTERSECTION DESCRIPTION / ISSUES

The intersection of De Soto Blvd/Sevilla Av/Granada Blvd is located in the City of Coral Gables. The intersection is surrounded by residential uses but is in close proximity of the historic Venetian Pool to the east. The intersection geometry is today is a traffic circle with the De Soto Fountain in the center and Granada Blvd as the main road (all other movements stop). Such traffic control is confusing and creates unexpected conflicts for left turns from Granada. Further complicating the intersection operation is the fact that this is a six legged intersection. The multiple intersecting streets are confusing and create "weaving" maneuvers by traffic traveling around any portion of the wide (width varies between the equivalent of four and seven lanes wide) roadway around the circle.

RECOMMENDED IMPROVEMENTS

This location is ideal for a roundabout not only because of the existing, historic central island with the fountain. A roundabout will introduce the correct geometrics and traffic control that will organize traffic flow through the intersection and reduce conflicts and confusion.

ANALYSIS RESULTS / COST / SCHEDULE

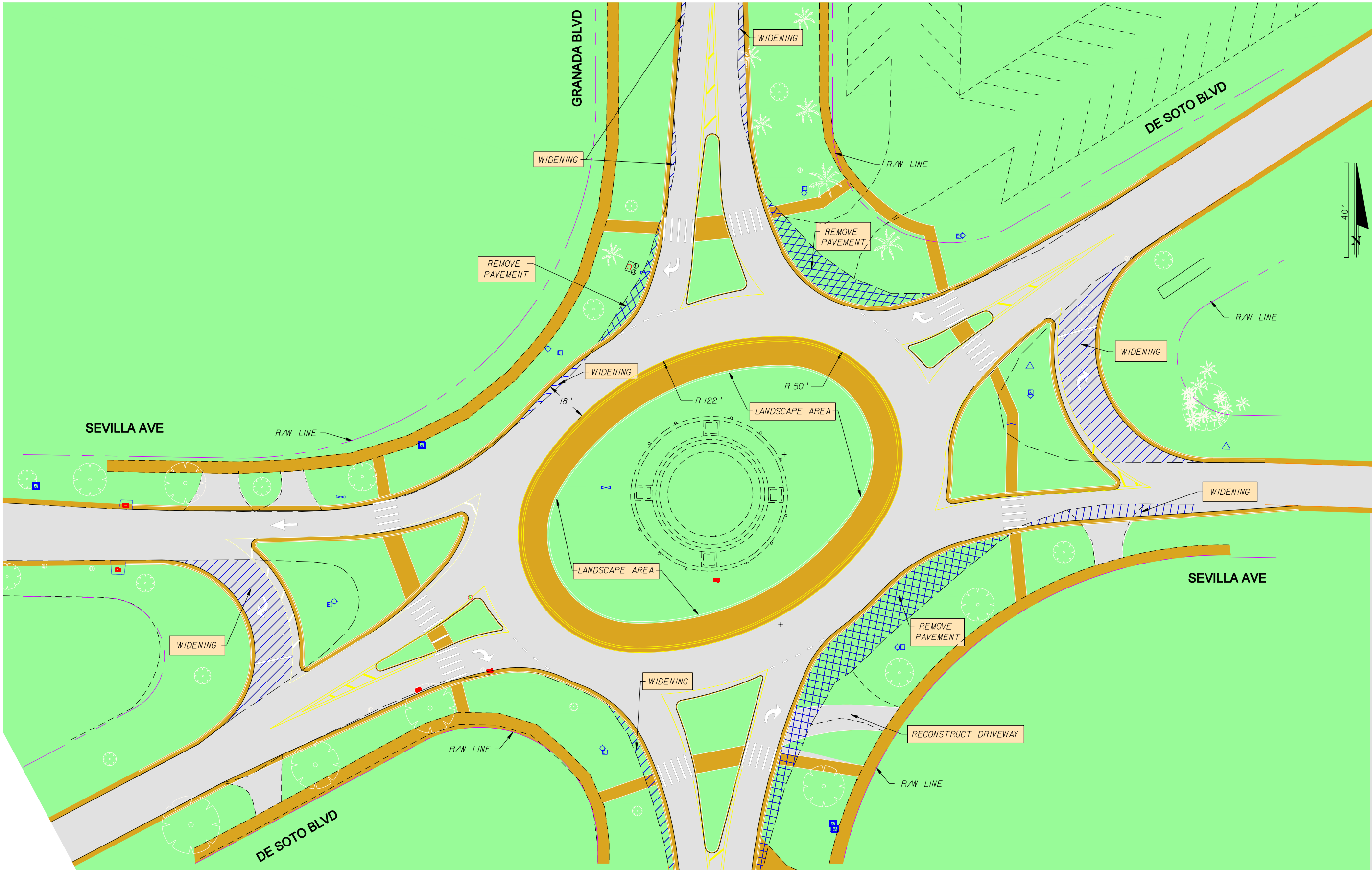
The effect of this improvement on delay at the intersection is not measurable. The estimated construction cost is \$270,000 to 330,000. The intersection improvements are candidates for a medium term construction schedule.



AERIAL VIEW



20. DE SOTO BLVD / SEVILLA AVE / GRANADA BLVD



MDC ID NO. N/A INTERSECTION # 20



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REVISIONS:	
CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LOCATE ALL UTILITIES BEFORE COMMENCING WITH PROJECT.	

PROJECT: **CONGESTED INTERSECTION IMPROVEMENTS STUDY**
PHASE II
Page 43

TITLE: SEVILLA AVENUE / DE SOTO BLVD		DATE: 12/21/07	PROJECT NO.: 06235
		DRAWN:	SHEET NO.:
		CHECKED:	
		APPROVED:	

APPENDIX

Congested Intersection Improvements

Volume I – Appendix

Additional Suggestions and Comments

Introduction

This study was overseen by both the Metropolitan Planning Organization (MPO) and a steering committee comprised by several transportation agencies. These agencies, in particular the Miami-Dade Public Works Department (MD PWD) and the Florida Department of Transportation (FDOT) had an active role reviewing and commenting on the proposed improvements. The conceptual drawings presented here represent the combined recommendations of the project consultant, the MPO and selected agencies. Multiple agencies, reviewers, timeframes and level of detail specified in the scope of services resulted in additional comments and suggestions that may be considered when the recommendations move to the next step in the process: design. The suggestions and comments are included in this appendix for future reference. Additionally, selected requests for specific information have been addressed in Volume II of this study report.

1. West Dixie Hwy/Miami Gardens Dr

A. Miami-Dade Public Works Department

Congested Intersection Improvements Study - Phase II			
Response to Comments			
Intersection:	West Dixie Hwy / Miami Gardens Dr.	Reviewer:	Robert Williams
MDC ID No.	2524	Intersection #	1
		Date of Comments:	08/06/07
Comments		Response	
1. Clarify the specific work required to convert the bus-parking to a WB thru lane on the WB departure of the intersection.		Revised, plans now indicate re-stripping.	
2. Confirm both FDOT and Ojus Elem. School have been advised of this upcoming improvement, and FDOT approves.		This is being coordinated with Mr. Muhammed Hasan.	
3. Show the ped ramps, all the signalization equipment, etc. This would be much easier if you'd start with the as-built plan instead of starting with a blank sheet.		Pedestrian ramps added. Signal equipment will be addressed during the design phase.	
4. Move the striped turn arrows upstream of the loops.		Revised	
5. Show the existing, 4th, EB departure lane.		Revised	
6. Use existing ROW to build a new WBRT bay.		The existing ROW at the E corner does not allow a proper radius for the RT lane.	
7. Consider buying ROW to extend the new WBRT bay back to US-1.		MDCPW project manager, Jesus Guera, is not allowing any ROW acquisitions for this project.	

B. Florida Department of Transportation

Reviewer: Amy Wang
Date of Comments: 01/07/08

C: How far can the proposed third lane go? During school hours, would drivers drop off/pick up students by using the school bus area? The existing condition provides the school bus area with a length of 400 ft between West Dixie Hwy and NE 25th Place. West of NE 25th Place provides a westbound right turn lane. If the proposed third lane only takes the school bus area, this proposal does not seem to benefit the traffic along Miami Gardens Drive.

R: The proposed conversion of this loading area to a through lane requires relocation of the school bus pick-up/drop-off area. The pick-up/drop-off point for parents is on West Dixie Highway. This conversion also requires the restriping of the westbound right turn lane to through and right. The restriping allows better utilization of the lane because the demand for through traffic is much greater than the right turn demand. Merging of traffic from the third westbound departure back onto the two other through lanes can be accomplished west of the signal where there is more capacity available because that area is not under the influence (and restricted capacity) of a traffic signal. Our drawings did not specify the length of this through lane west of West Dixie, but the drawing will be revised to show this information. We are considering extending the merge lane one more block subject to the verification of right-of-way.

Additionally, restriping of the right turn lane reduces the friction caused by lane changing between Biscayne Blvd and West Dixie. Presently, a vehicle turning right to Miami Gardens Dr from the free-flow southbound right turn lane on Biscayne must change lanes before reaching West Dixie in order to proceed straight ahead (the most likely path because a right turn would take them back north and they were just traveling south on Biscayne). Lane changing in this stretch between Biscayne and West Dixie is creating many conflicts that cause severe congestion. Any reduction of these conflicts will benefit traffic flow through both intersections.

Reviewer: Joey Bansen/Jessica Josselyn (Kittelson & Associates, on behalf of FDOT)
Date of Comments: 02/14/08

C: Intersection improvements include re-striping the westbound bus/parking lane to a third westbound lane through the intersection. This improvement directly affects the school located in the northwest quadrant of the intersection, and an alternate location for bus parking would need to be identified. If the proposed intersection improvements are to take place, a coordination effort between the involved parties should occur, and an alternate school bus parking location identified to ensure that this improvement is feasible.

RAAgree.

2. Ives Dairy Rd/NE 26 Av

A. Miami-Dade Public Works Department

Congested Intersection Improvements Study - Phase II			
Response to Comments			
Intersection: Ives Dairy Road / NE 26 Avenue		Reviewer:	Robert Williams
MDC ID No. 4603	Intersection # 2	Date of Comments:	05/10/07
Comments		Response	
1. Show the existing and proposed signs, loops, Sigop, and Signals		Agree, this will be addressed during the design phase.	
2. Move the striped SB arrows upstream of the loops.		The arrows have been moved, however, the loops will be shown in the design phase.	
3. Show the ID No. in the lower R corner		Revised	
4. Clarify the N leg striping. Does the NB departure lane merge into a SBLT lane?		Revised	

Reviewer: Jeff Cohen
Date of Comments: 02/27/08

C: Consider closing Ives Dairy Rd median and rerouting traffic.

R: Suggestion passed along to MPO study of Indirect Left Turns.

B. Florida Department of Transportation

Reviewer: Joey Bansen/Jessica Josselyn (Kittelson & Associates, on behalf of FDOT)
Date of Comments: 02/14/08

C: The study recommends addition of a fourth southbound lane through the intersection, which drops approximately 300 feet downstream. A lane use sign is specified on the westbound approach of the intersection. Please show the content of the sign on the improvement concept plan.

R: The southbound approach recommendation was changed. Sign details will be part of the design phase.

3. West Dixie Hwy/NE 172 St

A. Miami-Dade Public Works Department

Congested Intersection Improvements Study - Phase II			
Response to Comments			
Intersection: West Dixie Hwy / NE 172 Ave		Reviewer: Robert Williams	
MDC ID No. 2023	Intersection # 3	Date of Comments: 5/10/2007	
Comments		Response	
1. Show the existing and proposed signs, loops, Sigop, and Signals		Agree, this will be addressed during the design phase.	
2. Move the striped arrows upstream of the loops.		The arrows have been moved, however, the loops will be shown in the design phase.	
3. Show the ID No. in the lower R corner		Revised	
4. Add a 2nd SBRT striped arrow upstream of the first.		Revised	
5. Extend the EBLT bay by deleting the x-hatching.		Revised	

Reviewer: Jeff Cohen
Date of Comments: 02/27/08

- C: Consider closing east leg of intersection and railroad crossing.
- R: Investigate feasibility and impacts on area traffic patterns.

B. Florida Department of Transportation

No comments.

4. W Flagler St/W 27 Ave

A. Miami-Dade Public Works Department

<div>+</div> Congested Intersection Improvements Study - Phase II			
Response to Comments			
Intersection: Flagler Street / SW 27 Avenue		Reviewer:	Juan Pena
MDC ID No. 2204	Intersection # 4	Date of Comments:	8/3/2007
<u>Comments</u>		<u>Response</u>	
1. Delete the 4-arrow symbol in the center of the intersection and show the mastarms with signal heads and the modifications.		Agree, this will be addressed during the design phase. Any left turn signal display will be notes to be removed.	
2. Show the sign(s) that are mentioned in this plan. Also show the signs at the other intersections mentioned but not shown.		Agree, this will be addressed during the design phase.	
3. The NLT signs should be installed in the medians, closer to the line of sight of the motorist in the left lane thinking of making a LT at that intersection and should have additional signs installed farther upstream.		Revised	
4. In Notes #1, show the route signs.		Agree, this will be addressed during the design phase.	
5. In Notes # 2, that FDOT project is already under construction. How reasonable is it to add it to that project? Due to schedules/time frame, probably more realistic to show and construct the wheelchair ramps on this project.		This decision is left up to the MDCPW project manager.	

Reviewer: Jeff Cohen
Date of Comments: 02/27/08

- C: Show advance overhead sign structures and right-of-way impacts.
- R: Investigate need/feasibility of such structures.

B. Florida Department of Transportation

Reviewer: Amy Wang
Date of Comments: 01/07/08

C: Traffic is very heavy during peak hours on both arteries. Would the prohibition of NB/SB left turn movements bring a better Level of Service at this intersection and the impacted intersections? Without detailed study, the Department do not see the benefit of this left turn prohibition.

R: The turn prohibitions will allow a reduction in the number of signal phases from 4 to 3. This improves the intersection operation, delays and level of service by reducing the green time losses associated with the clearance intervals for the 4th (N/S LT) phase. Additionally, the time presently used by that phase can be reallocated to through movements which results in a more efficient use of the green time. The displaced left turns are rerouted on a right turn loop pattern that does not require the use of signalized intersections to rejoin their originally intended travel direction on Flagler Street. The subject right turn maneuvers can be accomplished using gaps in the flow on Flagler Street. A comparison of results with the improvement will be provided in the report appendices.

Reviewer: Joey Bansen/Jessica Josselyn (Kittelson & Associates, on behalf of FDOT)
Date of Comments: 02/14/08

C: a. The Flagler Street PD&E study, which was recently approved by FHWA included this intersection, and determined that the intersection configuration remain the same.
b. The FDOT Traffic Operations office is very unlikely to support the use of indirect left turns through local streets, such as those proposed for this intersection.
c. The prohibition of left-turns from SW 27th Avenue necessitates the re-routing of traffic though local streets (SW 1st Street and NW 1st Street). The study does not address the impact of neighborhood intrusion resulting from the addition of re-routed left-turn trips onto local streets. Analysis should indicate the number of re-routed trips and the operational effects on the local roads, especially at the intersections of West Flagler Street with NW 26th Avenue and NW 29th Avenue due to the added turning traffic.

R: Additional analysis for the intersection is included in Volume II. Regarding volumes on the local streets, these already experience some cut through traffic and traffic generated by the adjoining commercial establishments. The rerouted trips will be making right turn maneuvers that can be accommodated by gaps on the Flagler Street traffic flow.

5. Red Rd/SW 8 St

A. Miami-Dade Public Works Department

+ Congested Intersection Improvements Study - Phase II			
Response to Comments			
Intersection:	Red Road / SW 8 Street		Reviewer: Robert Williams
MDC ID No.	2145	Intersection #	5 Date of Comments: 5/10/2007
Comments		Response	
1. Show the existing and proposed signs, loops, Sigop, and Signals		Agree, this will be addressed during the design phase.	
2. Move the downstream NBLT striped arrow upstream of the loops.		The arrows have been moved, however, the loops will be shown in the design phase.	
3. Show the ID No. in the lower R corner		Revised	
4. Rotate the N arrow properly.		Revised	

Reviewer: Jeff Cohen
Date of Comments: 02/27/08

C: Close off diagonal intersection leg connecting to Country Club Prado.

R: Investigate feasibilty with City of Coral Gables.

B. Florida Department of Transportation

Reviewer: Joey Bansen/Jessica Josselyn (Kittelson & Associates, on behalf of FDOT)
Date of Comments: 02/14/08

C: a. An exclusive NB left-turn lane is recommended at the intersection. The study should indicate what type of left-turn phasing is proposed on SW 57th Avenue.
b. Both Red Road and Calle Ocho are designated as State Historic Highways within the vicinity of their intersection. As such, any intersection improvements will require coordination with State Historic Preservation Office (SHPO).

R: These will be addressed during the design phase.

6. Old Cutler Rd/SW 136 St

A. Miami-Dade Public Works Department

Congested Intersection Improvements Study - Phase II			
Response to Comments			
Intersection: Old Cutler Road / SW 136 Street		Reviewer: Juan Pena	
MDC ID No. 6051 Intersection # 6		Date of Comments: 8/6/2007	
Comments	Response		
1. Show the signal head details.	Agree, this will be addressed during the design phase.		
2. Show the SOP (phasing)	Agree, this will be addressed during the design phase.		
3. Show the items from Notes #1-3.	Agree, this will be addressed during the design phase.		
4. Show the existing RT-1 and RS-7A signs for SB SW 67 Ct at SW 136 St. Add a SBRT arrow. Consider adding a painted triangular island to reinforce the SB RTD movement.	Revised		
5. Delete the 3-headed signal head icon from the middle of the intersection.	Agree, this will be addressed during the design phase.		
6. Show the scale graphically.	Confirmed		
7. Relocate the W side crosswalk 30' to the SW and perpendicular to Old Cutler Rd, not L-shaped.	Revised		
8. Move the NEB stopbar and loop (L-1) upstream to the relocated crosswalk location. Show the loop sawcut out the back to a pullbox on the N side.	Revised, the stopbar. The loops will be addressed during the design phase.		
9. On the existing NEB/SWB mastarm for Old Cutler, remove the SWB heads and shorten it. Rotate it 90° to be perpendicular to the NEB approach lanes. Label the heads as TB & B.	After design is complete will determine if this option is feasible.		
10. Add a new signal pole/mast arm on the W corner by the relocated crosswalk for SWB and add a pair of Heads 2 and a No Turns sign. Consider adding a Head 6 on the back side to face NEB.	Agree, this will be addressed during the design phase.		
11. Remove the existing SB heads & mastarm but keep the signal pole. Add a new mastarm, from that signal pole, towards the SW with a pair of Heads 8 and a RT Head 8R.	Will consider during the design phase.		
12. Show both driveways for the house on the S side. Add a RTD sign for the eastern-most one which is just immediately E of the SB signal pole.	Agree, this will be addressed during the design phase.		
13. On the SB approach, add 5 loops (2 L-8 & 1 L-8R) with the sawcut out the back, move the stopbars upstream and the RT/LT arrows upstream behind the loops. Increase the radius of the lane line between the 2 LT lanes.	Revised, increased radius and moved the stopbar. Loops and other design elements will be addressed during the design phase.		
14. The chevron lines are backwards for the SBRT island.	Revised		
15. Add a SBLT guideline.	Revised		
16. Delete the thru arrows in the NEB lane.	Revised		
17. Show the Intersection ID # (MDC ID #) bigger.	Revised		
18. Show the existing bike path.	Revised		
19. Add a Keep Right sign on N corner facing NB vehicles.	Revised		
20. Add a dual headed LT arrow on the short NB lane showing a 30° and possibly a 45° LT.	Revised		
21. Modify the EB (SW 136 St) sign to show the R lane (Old Cutler) with a RT & LT arrow.	Revised		
22. Move the WB (SW 136 St) sign that shows arrows for SW 136 St & Old Cutler further upstream.	Revised		
23. Show the location of the cabinet.	Revised		
24. Move the WB (SW 136 St) stopbar upstream to be at 45' from the signal heads.	Revised		
25. Label the WB (SW 136 St) heads as 2A and the backside head as B and add a WB NLT sign. Add a WB TFR arrow upstream of the stopbar.	Revised, added the NLT sign and moved the stop bar. The signal heads will be addressed during the design phase.		

Reviewer: Jeff Cohen

Date of Comments: 02/27/08

C: Consider a roundabout as an alternate design.

R: Investigate feasibility of a roundabout.

B. Florida Department of Transportation

Reviewer: Joey Bansen/Jessica Josselyn (Kittelson & Associates, on behalf of FDOT)

Date of Comments: 02/14/08

C: Old Cutler Road is designated as a State Historic Highway within the vicinity of the study intersection. As such, any intersection improvements will require coordination with the State Historic Preservation Office (SHPO).

R: These will be addressed during the design phase.

7. NW 77 Ct/169 St

A. Miami-Dade Public Works Department

Congested Intersection Improvements Study - Phase II			
Response to Comments			
Intersection: NW 77 Court / NW 169 Street		Reviewer:	Juan Pena
MDC ID No. 4623	Intersection # 7	Date of Comments:	5/9/2007
Comments		Response	
1. Add the intersection ID # 4623 in the title box on the lower R corner		Revised	
2. Provide the signal plan to show all existing equipment and changes to the ped and signal heads.		Agree, this will be addressed during the design phase.	
3. Besides the existing mast arms, will span wires be added to install the new signal in the middle of the intersection? We agree that the SEB mast arm needs to be relocated downstream of the new stop bar, but the SWB mast arm appears to be OK as is.		Agree, this will be further evaluated during the design phase.	
4. If the stop bars are being relocated, then new loops have to be installed.		Agree, this will be addressed during the design phase.	
5. Move the pavement markings arrows back to be behind and not overlap the loops.		The arrows have been moved, however, the loops will be shown in the design phase.	
6. Add a yield sign on the N corner for the SWBRT vehicles.		Agree, this will be addressed during the design phase.	
7. Show 2 SEB departure lanes if there's 2 SEB approach lanes.		Revised	

Reviewer: Jeff Cohen
Date of Comments: 02/27/08

C: Consider a rounabout as an alternate design.

R: Investigate feasibility of a roundabout, coordinate with Miami-Dade Planning Department.

B. Florida Department of Transportation
No comments.

8. Biscayne Blvd/NW 178 St

A. Miami-Dade Public Works Department

Congested Intersection Improvements Study - Phase II			
Response to Comments			
Intersection: Biscayne Blvd / NE 178 Street		Reviewer:	Juan Pena
MDC ID No. 3639	Intersection # 8	Date of Comments:	8/24/2007
Comments		Response	
1. Why do all the sheets have different scales? Standardize them if possible.		Each intersection is unique and the area of improvements vary, therefore different scales are used to show the proper improvements.	
2. On Intersections 8, 9, 10 11 &13 show the <i>Updated Pedestrian Ramps</i> .		Revised	
3. On 8, 9, 10 11 &13, show and label the signal and pedestrian heads.		Agree, this will be addressed during the design phase.	
4. On 8, 9, 10 & 11, align the signal heads with the approach lane lines.		Agree, this will be addressed during the design phase.	
5. On 8, 9, 10 & 11, move the SBLT arrows ~ 3'-5' upstream to not overlap with the loops.		Revised	
6. On 8, 9, 10 & 11,add a thru arrow in the L-most NB approach lane.		Revised	
7. On 8, 9, & 10, increase the length of the mastarm and add a 2nd SBLT signal head.		Agree, this will be addressed during the design phase.	
8. On 8 & 9, rotate the NB stopbar CCW at the E. Side.		Revised	

Reviewer: Jeff Cohen
Date of Comments: 02/27/08

C: Create a new U-turn location nearby.

R: Investigate feasibility and location of a U-turn location in the area.

B. Florida Department of Transportation

Reviewer: Amy Wang
Date of Comments: 01/07/08

C: The Congested Intersection Improvements report recommends turbo lanes at these four adjacent intersections. The Department is interested in this idea, but the Department concerns the level of weaving, weaving effects at proposed openings, the short signal spacing, barrier type, and possible lane width reduction. We need to see the turning movement counts of these intersections in order to assist in better decision making.

R: The conceptual typical design for these locations was previously discussed with the Department and your consultant, as well as Miami-Dade Public Works and Traffic Control Center. All agencies seemed in agreement at that time. Admittedly, the comment regarding “weaving” was mentioned but there was no information readily available to address this issue at the time. We will provide the peak hour turning movement volumes developed from sample counts taken at these locations, in the report appendices.

Reviewer: Joey Bansen/Jessica Josselyn (Kittelson & Associates, on behalf of FDOT)
Date of Comments: 02/14/08

C: The study should ensure that southbound left-turn queue does not spill back into the southbound turbo lane (Intersections 8 – 11).

RAThis will be addressed during the design phase.

9. Biscayne Blvd/NE 180 St

A. Miami-Dade Public Works Department

Congested Intersection Improvements Study - Phase II			
Response to Comments			
+			
Intersection: Biscayne Blvd / NE 180 Street		Reviewer:	Juan Pena
MDC ID No. 4280	Intersection # 9	Date of Comments:	8/24/2007
Comments		Response	
1. Why do all the sheets have different scales? Standardize them if possible.		Each intersection is unique and the area of improvements vary, therefore different scales are used to show the proper improvements.	
2. On Intersections 8, 9, 10 11 &13 show the <i>Updated Pedestrian Ramps</i> .		Revised	
3. On 8, 9, 10 11 &13, show and label the signal and pedestrian heads.		Agree, this will be addressed during the design phase.	
4. On 8, 9, 10 & 11, align the signal heads with the approach lane lines.		Agree, this will be addressed during the design phase.	
5. On 8, 9, 10 & 11, move the SBLT arrows ~ 3'-5' upstream to not overlap with the loops.		Revised	
6. On 8, 9, 10 & 11,add a thru arrow in the L-most NB approach lane.		Revised	
7. On 8, 9, & 10, increase the length of the mastarm and add a 2nd SBLT signal head.		Agree, this will be addressed during the design phase.	
8. On 8 & 9, rotate the NB stopbar CCW at the E. Side.		Revised	
9. On 9, install a separate signal pole for the WB mastarm, rotate it CW to be perpendicular to the WB lanes and shift the heads L to align with the center of the approach lanes.		Agree, this will be addressed during the design phase.	

B. Florida Department of Transportation

Reviewer: Amy Wang
Date of Comments: 01/07/08

See Intersection 8 above.

10. Biscayne Blvd/NE 182 St

A. Miami-Dade Public Works Department

Congested Intersection Improvements Study - Phase II			
Response to Comments			
Intersection: Biscayne Blvd / NE 182 Street		Reviewer:	Juan Pena
MDC ID No. 4587	Intersection # 10	Date of Comments:	8/24/2007
Comments		Response	
1. Why do all the sheets have different scales? Standardize them if possible.		Each intersection is unique and the area of improvements vary, therefore different scales are used to show the proper improvements.	
2. On Intersections 8, 9, 10 11 &13 show the <i>Updated Pedestrian Ramps</i> .		Revised	
3. On 8, 9, 10 11 &13, show and label the signal and pedestrian heads.		Agree, this will be addressed during the design phase.	
4. On 8, 9, 10 & 11, align the signal heads with the approach lane lines.		Agree, this will be addressed during the design phase.	
5. On 8, 9, 10 & 11, move the SBLT arrows ~ 3'-5' upstream to not overlap with the loops.		Revised	
6. On 8, 9, 10 & 11,add a thru arrow in the L-most NB approach lane.		Revised	
7. On 10, move the SB stopbar downstream to be 5' from the crosswalk. Move the NB stopbar ~10' downstream to increase the efficiency of the intersection.		Revised	
8. On 8, 9, & 10, increase the length of the mastarm and add a 2nd SBLT signal head.		Agree, this will be addressed during the design phase.	

B. Florida Department of Transportation

Reviewer: Amy Wang
Date of Comments: 01/07/08

See Intersection 8 above.

11. Biscayne Blvd/NE 183 St

A. Miami-Dade Public Works Department

Congested Intersection Improvements Study - Phase II			
Response to Comments			
Intersection: Biscayne Blvd / NE 183 Street		Reviewer:	Juan Pena
MDC ID No. 3644	Intersection # 11	Date of Comments:	8/24/2007
Comments		Response	
1. Why do all the sheets have different scales? Standardize them if possible.		Each intersection is unique and the area of improvements vary, therefore different scales are used to show the proper improvements.	
2. On Intersections 8, 9, 10 11 &13 show the <i>Updated Pedestrian Ramps</i> .		Revised	
3. On 8, 9, 10 11 &13, show and label the signal and pedestrian heads.		Agree, this will be addressed during the design phase.	
4. On 8, 9, 10 & 11, align the signal heads with the approach lane lines.		Agree, this will be addressed during the design phase.	
5. On 8, 9, 10 & 11, move the SBLT arrows ~ 3'-5' upstream to not overlap with the loops.		Revised	
6. On 11, the S side median still encroaches on the crosswalk. The old crosswalk opening ~20' S needs to be removed.		Revised	
7. on 11, move the NB stopbar downstream to be 5' from the crosswalk.		Revised	
8. On 8, 9, 10 & 11,add a thru arrow in the L-most NB approach lane.		Revised	

B. Florida Department of Transportation

Reviewer: Amy Wang
Date of Comments: 01/07/08

See Intersection 8 above.

12. Biscayne Blvd/Miami Gardens Dr

A. Miami-Dade Public Works Department

Congested Intersection Improvements Study - Phase II			
Response to Comments			
Intersection: Biscayne Blvd / NE 186 Street		Reviewer:	Robert Williams
MDC ID No. 3469	Intersection # 12	Date of Comments:	5/10/2007
Comments	Response		
1. Show the existing and proposed signs, loops, Sigop, and Signals	Agree, this will be addressed during the design phase.		
2. Modify the plan to reflect the geometrics that are currently being built via City of Aventura Proj. No. 04-033, also designed by DPA.	Addressed by adding a note to plans (note number 4).		
3. Show the ID No. in the lower R corner	Revised		
4. Extend this project to WDH to improve the WB capacity there as well.	The adjacent intersection is addressed separately. Intersection # 1, ID No. 2524		

B. Florida Department of Transportation

Reviewer: Amy Wang
Date of Comments: 01/07/08

C: The report does not provide enough analysis for the Department to decide whether the third southbound right turn lane is needed. Also, there was a traffic study done by David Plummer at this intersection last year, please also relate to the recommendations from that study.

R: The southbound right turn volumes were expected to remain very high even after the intersection reconfiguration and improvements recently implemented at that location. Furthermore, the capacity of the existing southbound free-flow right turn lane is limited by the lane changing friction on westbound Miami Gardens drive as discussed above.

Our previous (but recent) DPA traffic study was focused on the impact of the newly constructed improvements. These improvements and the resulting estimated traffic volumes were included in our analysis for the MPO Congested Intersections Study. The analysis confirmed that, in fact,

more southbound right turning capacity would benefit the intersection. The analysis results will be provided in the report appendices.

Reviewer: Joey Bansen/Jessica Josselyn (Kittelson & Associates, on behalf of FDOT)
Date of Comments: 02/14/08

C: a. The westbound through movements appear to be aligned in a way that may confuse drivers about their appropriate receiving lanes on the west leg of the intersection. In order to mitigate the potential for sideswipe crashes, the westbound approach may need to be re-aligned to align the westbound through/left and through lanes with the two inside (closest to median) receiving lanes on the west leg of the intersection.
b. The study specifies the addition of an exclusive eastbound right-turn lane. It appears from the aerial image in the study that an eastbound right-turn lane currently exists, and the improvement to the intersection would be an exclusive southbound receiving lane for the eastbound right-turn lane. Please clarify this point in the study.

R: The westbound approach configuration was changed. A southbound departure acceleration lane was added to allow free flow turns from the eastbound right turn lane.

13. Biscayne Blvd/NE 191 St

A. Miami-Dade Public Works Department

✚ Congested Intersection Improvements Study - Phase II			
Response to Comments			
Intersection: Biscayne Blvd / NE 191 Street		Reviewer:	Juan Pena
MDC ID No. 5269	Intersection # 13	Date of Comments:	8/24/2007
Comments	Response		
1. Why do all the sheets have different scales? Standardize them if possible.	Each intersection is unique and the area of improvements vary, therefore different scales are used to show the proper improvements.		
2. On Intersections 8, 9, 10 11 &13 show the <i>Updated Pedestrian Ramps</i> .	Revised		
3. On 8, 9, 10 11 &13, show and label the signal and pedestrian heads.	Agree, this will be addressed during the design phase.		
4. On 13, change the two or three R-most SB lanes to turbo lanes. Consider removing the low volume NB U-turn lane since the width of the SB receiving area will be reduced by half.	This intersection was previously reviewed with Mr. Bob Williams and according to his suggestions there will not be any improvements made other than pedestrian ramp updates.		
5. On 13, consider making more efficient use of the five lanes on the E leg. The 2nd EB departure lane is useless and should be deleted. Either replace it with a 2nd WBRT lane or widen to accommodate four approach lanes.			
6. On 13, delete the SBLT guideline and add a WBLT guideline. Delete the SB striping in the middle of the intersection.	Revised		

B. Florida Department of Transportation

No comments.

14. SW 127 Ave/112 St

A. Miami-Dade Public Works Department

No comments.

B. Florida Department of Transportation

Reviewer: Joey Bansen/Jessica Josselyn (Kittelson & Associates, on behalf of FDOT)

Date of Comments: 02/14/08

C: a. The study should clarify if the estimated 24% reduction in average peak hour delay includes the widening of SW 127th Avenue, or if the estimate only includes the addition of the exclusive right-turn lanes on SW 112th Street.
b. Please indicate the proposed intersection improvements more clearly on the intersection concept drawing. Call out the addition of right-turn lanes and show the extent of necessary widening or re-striping.

R: The recommended right turn lanes, alone, account for 27% reduction in the delays at the intersection. The drawings have been modified to clarify the extent of the improvements.

15. SW 152 Ave/80 St

A. Miami-Dade Public Works Department

No comments.

B. Florida Department of Transportation

No comments.

16. NW 7 Ave/67 St

A. Miami-Dade Public Works Department

No comments.

B. Florida Department of Transportation

Reviewer: Amy Wang

Date of Comments: 01/07/08

C: Field review on January 3, 2008, it was observed that the pedestrian ramps were constructed recently.

R: Noted.

17. NW 37 Ave/171 St

A. Miami-Dade Public Works Department

No comments.

B. Florida Department of Transportation

Reviewer: Joey Bansen/Jessica Josselyn (Kittelsohn & Associates, on behalf of FDOT)

Date of Comments: 02/14/08

C: The alignment of the eastbound through movement on NW 171st Street as shown in the intersection improvement concept drawing is unacceptable. The through movement is aligned almost directly with the westbound left-turn lane, providing an unclear path for motorists through the intersection, and creating potential safety issues. More significant widening of the intersection may need to be done to align the through movements on NW 171st Street.

R: Recommendation was changed.

18. N Miami Ave/Memorial Hwy

A. Miami-Dade Public Works Department

Reviewer: Jeff Cohen

Date of Comments: 02/27/08

C: Consider shifting roundabout to the north.

R: Investigate effectiveness of alternate design.

B. Florida Department of Transportation

Reviewer: Joey Bansen/Jessica Josselyn (Kittelsohn & Associates, on behalf of FDOT)

Date of Comments: 02/14/08

C: a. The design of the roundabout should ensure that principles and guidance from the FHWA publication *Roundabouts- An Informational Guide* are followed.

b. The northbound approach from North Miami Avenue may need more deflection to control the speed entering the roundabout. This may require shifting the roundabout east, or making the circulatory roadway more circular. Additionally, at least 50 feet of raised splitter island should be provided on the approach.

c. Although unclear, it appears that a driveway access is proposed on the westbound entry to the roundabout from North Memorial Drive as well as from the circulatory roadway of the roundabout just before the exit to northbound North Miami Avenue. These driveway accesses will compromise the safety and operations of the proposed roundabout and should be closed.

d. Pedestrians have not been considered on any approach of the intersection. Similar to a conventional intersection, pedestrian treatments should be provided to cross the roadways safely and efficiently. Please see guidance in the FHWA publication *Roundabouts- An Informational Guide*.

R: Concept schematic has been revised.

19. Segovia St/Biltmore Way

A. Miami-Dade Public Works Department

No comments.

B. Florida Department of Transportation

Reviewer: Joey Bansen/Jessica Josselyn (Kittelson & Associates, on behalf of FDOT)

Date of Comments: 02/14/08

- C: a. The design of the roundabout should ensure that principles and guidance from the FHWA publication *Roundabouts- An Informational Guide* are followed.
- b. The proposed roundabout shown has an inscribed circle diameter of 140 feet. The minimum diameter for an urban double-lane roundabout is 150 feet to be able to accommodate design vehicles through the roundabout.
- c. The two-lane entries to the roundabout should be redesigned in order to avoid the phenomenon known as “path overlap,” where the natural driven path of vehicles entering the roundabout side by side intersect, creating a potential for sideswipe crashes. The entries should provide positive guidance, where each entry lane is clearly aimed at the corresponding circulating lane of the roundabout.

R: Concept schematic has been revised.

20. DeSoto Blvd/Sevilla Ave/Granada Blvd

A. Miami-Dade Public Works Department

Reviewer: Jeff Cohen

Date of Comments: 02/27/08

C: Consider connecting the DeSoto approaches to the roundabout.

R: City wants to implement traffic calming/diversions on DeSoto Blvd.

B. Florida Department of Transportation

Reviewer: Joey Bansen/Jessica Josselyn (Kittelson & Associates, on behalf of FDOT)

Date of Comments: 02/14/08

- C: a. The design of the roundabout should ensure that principles and guidance from the FHWA publication *Roundabouts- An Informational Guide* are followed.
- b. The northbound and southbound entries to the roundabout appear to lack adequate deflection to control the appropriate entry speed into the roundabout. Please refer to the guidance provided in the FHWA document *Roundabouts- An Informational Guide* to determine the appropriate entry radius to control the entry speed.
- c. Granada Boulevard is the major through street at this intersection, and should be used to name the intersection in the study.

R: Noted.

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