

Congested Intersection Improvements

Executive Summary

March 2008



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INTRODUCTION

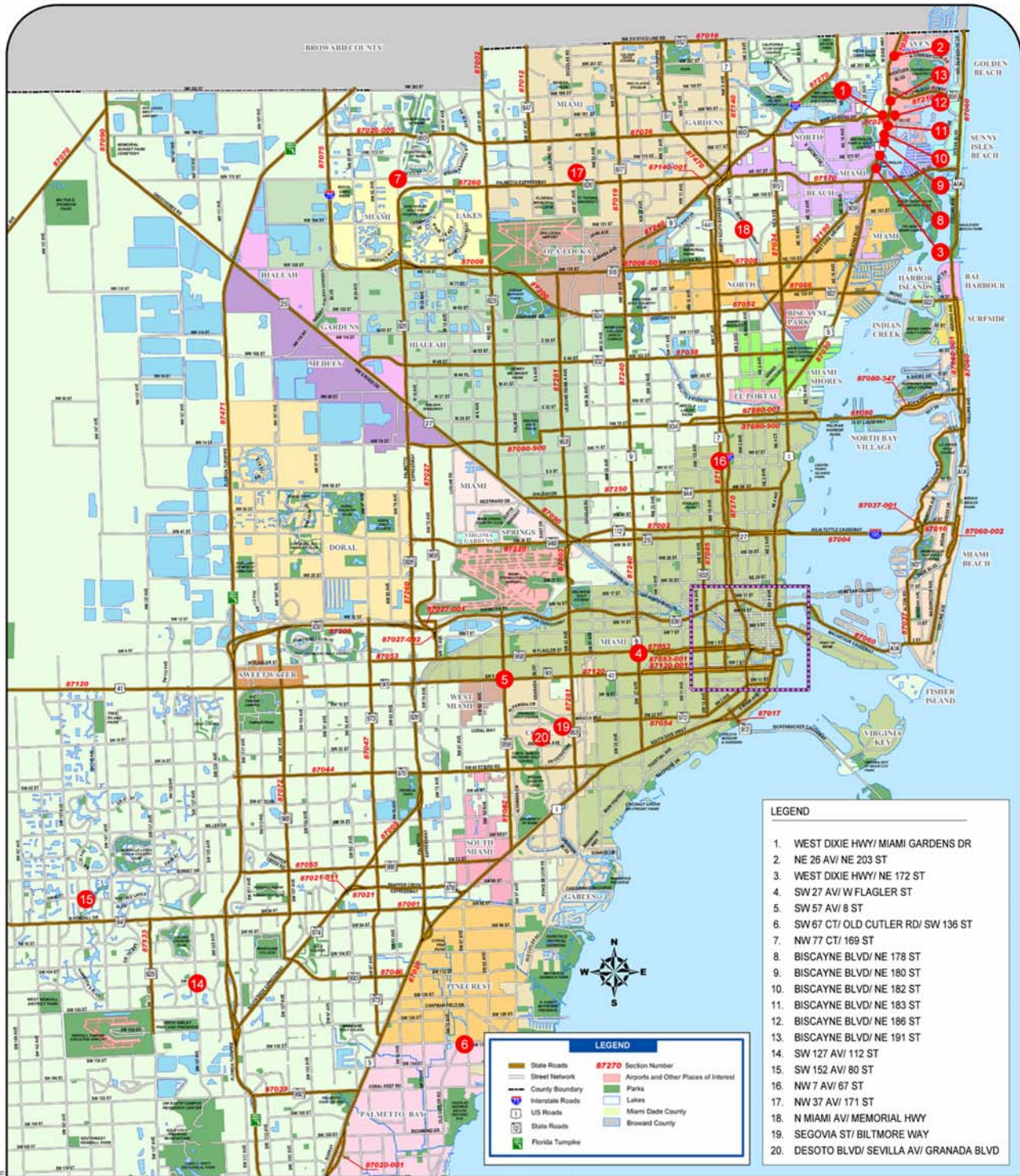
A few years ago the Miami Urbanized Area Metropolitan Planning Organization (MPO) created and implemented the concept of RUSH (Resourceful Utilization of Streets and Highways). This program is a streamlined way of selecting intersections suitable for quick improvements with relatively low cost but high 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.

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); Miami-Dade Public Works Department (PWD); and Miami Dade Transit (MDT). This group, the Study Advisory Committee (SAC), actively participated in providing information and feedback about the locations and recommended improvements.

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 photos 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 (Exhibit 1). 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.



- LEGEND**
1. WEST DIXIE HWY/ MIAMI GARDENS DR
 2. NE 26 AV/ NE 203 ST
 3. WEST DIXIE HWY/ NE 172 ST
 4. SW 27 AV/ W FLAGLER ST
 5. SW 57 AV/ 8 ST
 6. SW 67 CT/ OLD CUTLER RD/ SW 136 ST
 7. NW 77 CT/ 169 ST
 8. BISCAYNE BLVD/ NE 178 ST
 9. BISCAYNE BLVD/ NE 180 ST
 10. BISCAYNE BLVD/ NE 182 ST
 11. BISCAYNE BLVD/ NE 183 ST
 12. BISCAYNE BLVD/ NE 186 ST
 13. BISCAYNE BLVD/ NE 191 ST
 14. SW 127 AV/ 112 ST
 15. SW 152 AV/ 80 ST
 16. NW 7 AV/ 67 ST
 17. NW 37 AV/ 171 ST
 18. N MIAMI AV/ MEMORIAL HWY
 19. SEGOVIA ST/ BILTMORE WAY
 20. DESOTO BLVD/ SEVILLA AV/ GRANADA BLVD

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PROJECT: CONGESTED INTERSECTION IMPROVEMENTS
 PHASE II

TITLE: LOCATION MAP

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

Exhibit 1

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. For some locations, construction of a roundabout was found to be very effective.

ACTION PLAN

The Action Plan, contained within the main report, is a compilation of the recommended improvements for each intersection. This takes the form of drawings depicting the proposed geometry and 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 construct each improvement are provided. The time to complete construction includes: planning; design; permitting; bidding; and construction (Exhibit 2). In general terms, the improvements are classified as: short term (up to one year); medium term (up to two years; and long tem (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).

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

The following exhibits are also provided in the main report for each intersection: 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. A summary of that information is provided in Exhibit 3 for all the intersections.

Exhibit 3 Congested Intersections Study Summary of Recommendations

Intersection	Submitted By	Jurisdiction	Justification/ Benefit	Major Recommendations	Estimated Cost
1. West Dixie Hwy/Miami Gardens Dr	MD PWD	State/County	Delay Reduction	Extend turn lane, change lane configuration, extend merge lane, improve crosswalks	\$38,000 to \$45,000
2. NE 26 Av/ NE 203 St	MD PWD	State/County	Delay Reduction	Change lane configuration, construct merge lane, improve crosswalks	\$68,000 to \$83,000
3. West Dixie Hwy/NE 172 St	MD PWD	County/County	Delay Reduction	Construct turn lane, construct sidewalks, install pedestrian railroad crossing gate, construct bus bay	\$315,000 to \$385,000
4. SW 27 Av/W Flagler St	MD PWD	State/State	Delay Reduction	Prohibit/reroute left turn movements, retime signal, improve pedestrian ramps	\$27,000 to \$33,000
5. SW 57 Av/8 St	MD PWD	State/State	Delay Reduction	Construct turn lane, update pedestrian ramps	\$68,000 to \$83,000
6. SW 67 Ct/Old Cutler Rd/SW 136 St	MD PWD	County/County	Delay Reduction	Relocate signal, construct turn lanes, extend turn lanes, construct sidewalks, improve guide signs, install bicycle route signs	\$360,000 to \$440,000
7. NW 77 Ct/169 St	MD PWD	County/County	Delay Reduction	Construct turn lanes, extend merge lane, install channelization, construct sidewalks, install pedestrian signals	\$360,000 to \$440,000
8. Biscayne Blvd/NE 178 St	MD PWD	State/County	Delay Reduction	Construct turbo lane, construct bus bay, update pedestrian ramps	\$200,000 to \$240,000
9. Biscayne Blvd/NE 180 St	MD PWD	State/County	Delay Reduction	Construct turbo lane, install turn signal, construct bus bay, update pedestrian ramps	\$200,000 to \$240,000
10. Biscayne Blvd/NE 182 St	MD PWD	State/County	Delay Reduction	Construct turbo lane, update pedestrian ramps	\$200,000 to \$240,000
11. Biscayne Blvd/NE 183 St	MD PWD	State/County	Delay Reduction	Construct turbo lane, construct bus bay, update pedestrian ramps	\$210,000 to \$250,000
12. Biscayne Blvd/NE 186 St	MD PWD	State/State	Delay Reduction	Construct turn lanes, change lane configuration, install pedestrian signals	\$360,000 to \$440,000
13. Biscayne Blvd/NE 191 St	MD PWD	State/County	Safety	Install lane use signs, update pedestrian ramps	\$4,500 to \$5,500
14. SW 127 Av/112 St	Public	County/County	Delay Reduction	Construct turn lanes, install turn signals	\$135,000 to \$165,000
15. SW 152 Av/80 St	Public	County/County	Delay Reduction	Construct turn lane, bus bays, install turn signal, update pedestrian ramps	\$162,000 to \$198,000
16. NW 7 Av/67 St	Public	State/County	Safety	Extend curb and gutter, update pedestrian ramps, improve crosswalk	\$54,000 to \$66,000
17. NW 37 Av/171 St	Public	County/County	Delay Reduction	Construct turn lanes, update pedestrian ramps	\$50,000 to \$61,000
18. N Miami Av/Memorial Hwy	MD PWD	County/County	Delay Reduction	Construct roundabout	\$310,000 to \$380,000
19. Segovia St/Biltmore Way	Public	County/County	Delay Reduction	Construct roundabout	\$290,000 to \$350,000
20. Desoto Blvd/Sevilla Av/Granada Blvd	Public	County/County	Safety	Construct roundabout	\$270,000 to \$330,000
	14 MD PWD 6 Public	2 State/State 9 State/County 9 County/County	17 Delay Reduction 3 Safety		\$3,681,500 to \$4,474,500

Note: MD PWD = Miami-Dade Public Works Department

SUMMARY

The Congested Intersections Study has identified 20 intersections throughout Miami-Dade County that are candidates for improvements that are relatively easy to implement. Three of these can be fully or partially constructed within one year, 11 within 2 years and the remaining 6 in less than 3 years. All projects will improve intersection capacity and/or safety for the motorists in Miami-Dade.



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