EXECUTIVE SUMMARY

REVERSIBLE LANES

ALONG MAJOR THOROUGHFARES IN MIAMI-DADE COUNTY

Work Order No. GPC VI-4

September 2016

MIAMI-DADE METROPOLITAN PLANNING ORGANIZATION

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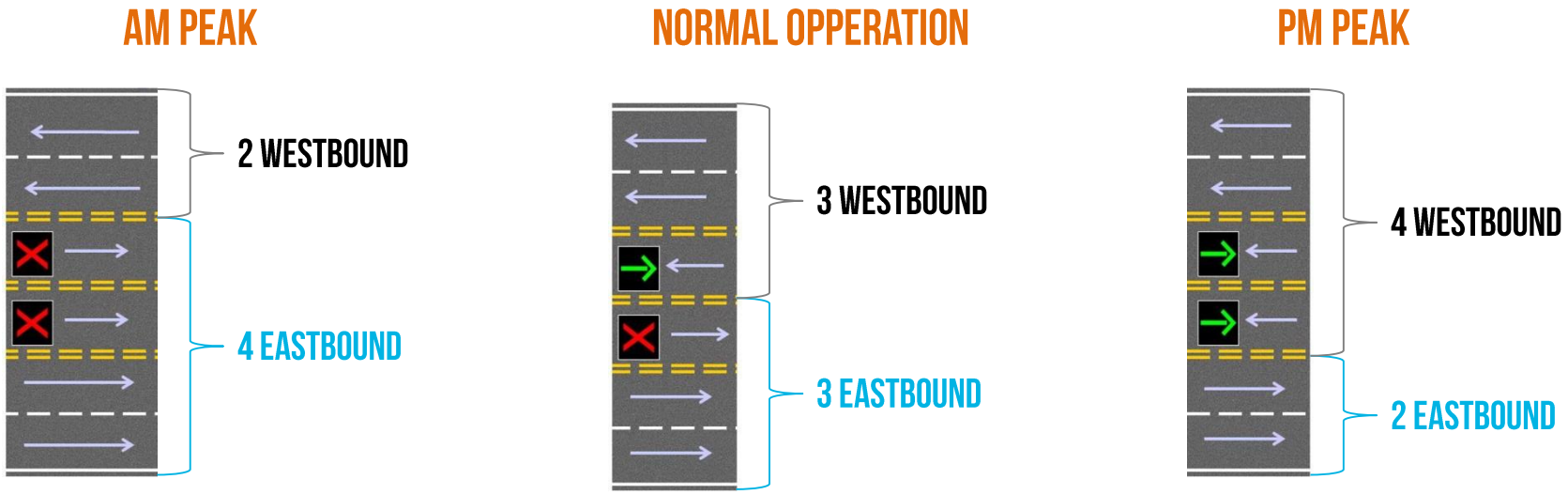
INTRODUCTION

Travel delays due to peak-period and peak-direction congestion affect the productivity and quality of life of nearly all travelers in Miami-Dade County. Adding roadway capacity to improve travel times is challenging due to high costs and environmental impacts associated with, designing, constructing, and purchasing Right of Way (ROW) for new travel lanes and/or roadways. Therefore, ensuring optimal utilization of existing transportation assets is crucial.

A reversible lane is one such transportation system management technique that ensures a higher utilization of existing transportation assets while reducing the negative externalities associated with the widening of roadway facilities. The reversible lane system designates traffic/travel flow in one direction during some period of time and reverses it to the opposing direction during some other period of time. This reversal of traffic/travel flow from one direction to another can take place along a single center lane, multiple center/inside lanes, shoulders, or the entire roadway. The direction of traffic/travel flow can be adjusted at different times to adapt to changing traffic/travel conditions. These conditions are most commonly based on demand associated with frequent and predictable unbalanced peak-period travel times such as on corridors that accommodate predominantly commuter traffic/travel. The basic principle is to configure the lanes of a roadway or the entire roadway to provide additional directional capacity to match anticipated periodic unbalanced directional traffic/travel demand. Reversible lanes allow transportation agencies to make better use of new or existing underutilized roadways by aligning the capacity with traffic demand.

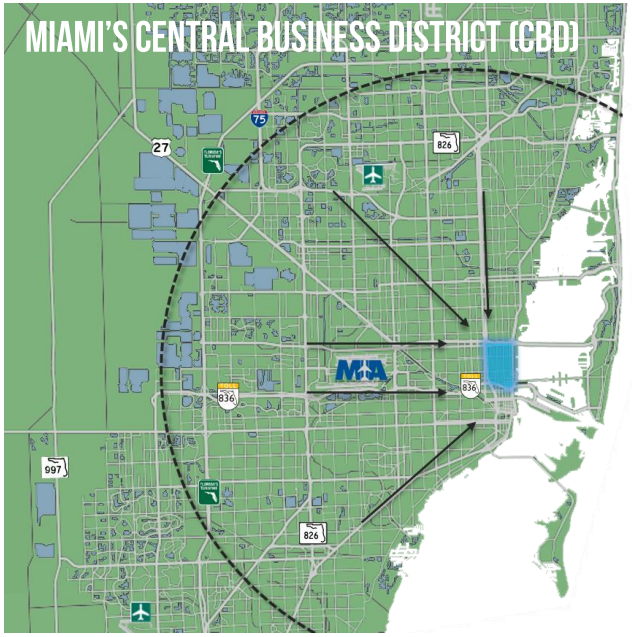


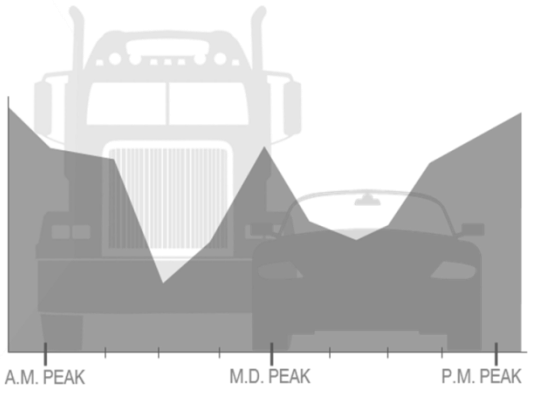
PROJECT NEED

Miami-Dade County is in need of possible solutions to the congestion problem associated with morning and afternoon peak travel periods. The purpose of this study is to evaluate the feasibility of implementing reversible lanes along major thoroughfares in Miami-Dade County, particularly during peak commute travel times with the intent of addressing traffic congestion in a cost-effective manner.

PROJECT OBJECTIVE

The objective of this study is to identify potential roadways throughout Miami-Dade County where a reversible lanes pilot program can be successfully implemented providing the community with the benefit of reduced congestion at a low cost.





PROJECT BACKGROUND

Reversible lanes have been studied in the past along a few roadways in the County (i.e. NW 199th Street, US-1, NW 7th Avenue). Only NW 199th Street currently operates in Miami-Dade County, but only during special events. The studies that have examined reversible lanes in the County are:

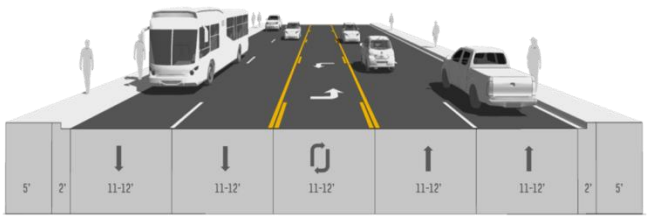
1. Miami-Dade MPO US-1 Reversible Flow Lane Study (2007)
2. Miami-Dade County / Florida Department of Transportation State Road 7 (NW 7th Avenue) Reversible Lane Project (2007)
3. Miami-Dade MPO Special-Use Lanes Study (2005)
4. Miami-Dade MPO Flagler Street Reversible Flow Study (1992)

WHAT ARE REVERSIBLE LANES?

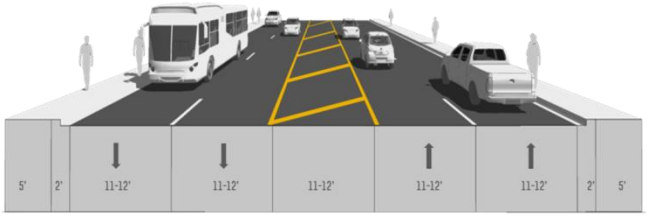
A reversible lane, or reversible roadway, is a transportation facility on which the direction of travel flow changes during some specified period of time to serve the direction with greater travel demand. Its purpose is to increase the directional capacity of the roadway during the daily peak travel period. In essence, reversible lanes "shift" the directional capacity of roadways.

REVERSIBLE LANE APPLICATION

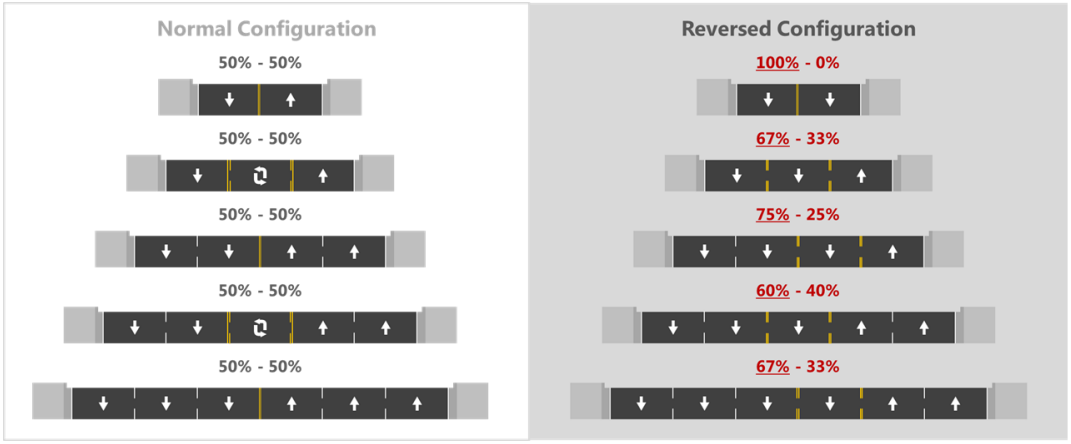
For expedited implementation, minimized complexity, and reduced reconstruction, the ideal roadway cross section for reversible lane treatment should have a center Two-Way Left Turn Lane (TWLTL) or a paved median. Furthermore, roadways with an odd number of lanes and with more than five (5) lanes are preferred since these characteristics will maintain at least two (2) lanes for the non-peak direction of travel throughout the day. That is, these characteristics ensure that the non-peak direction does not become oversaturated with traffic flow when "shifting" the capacity of the roadway to favor the peak direction. Roadways with three (3) and four (4) lanes will only have one (1) lane serving the non-peak direction and this could easily become oversaturated in emergency situations when the lane is, or needs to be closed.

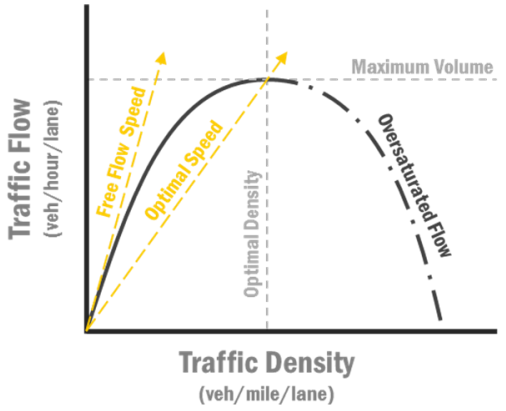


TWLTL



Paved Median





THE APPROACH

This study began with a literature review to understand the cost, safety, operations, design, and success of reversible lanes on relevant corridors with similar environments as Miami-Dade County. Applying the knowledge obtained from this research, a system-level analysis and tiered screening process was ensued to determine the best corridors in the County that could benefit commuters by implementing reversible lanes. Two (2) selected corridors were then further examined by creating concept plans, developing a cost estimate, and creating an implementation plan.

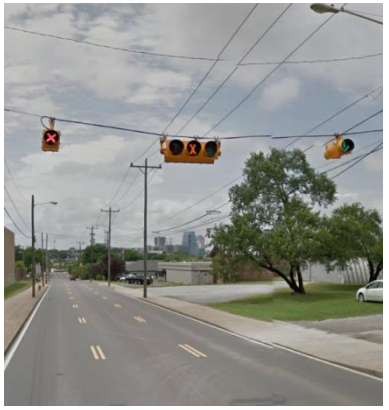
LITERATURE REVIEW & RELEVANT CORRIDORS

In the literature review 16 studies focused on major arterial and collector roadways were reviewed to extract important lessons pertaining to reversible lanes. These lessons resulted in the following conclusions:

- Traffic demand should exceed existing roadway supply
- Traffic congestion should be, to most extent, periodic and predictable
- The ratio between major and minor roadway traffic volumes should be 2:1 or 3:1, preferably, to avoid traffic issues on side-streets
- One-way pairs, where applicable, are preferred over reversible lanes
- Reversible lane termini should have sufficient capacity to avoid bottlenecks
- NCHRP Synthesis 340 provides evidence that suggest reversible lanes do not contribute significantly to increased frequency or severity of crashes
- Reversible lanes tend to be commuter oriented, deemphasizing pedestrians, bicyclists, and community revitalization

Furthermore, the literature review gave way to a review of relevant corridors with reversible lanes through the Americas. In total eleven (11) nation-wide facilities and three (3) international facilities were reviewed and the following conclusions were made:

- Most reversible lane facilities are two-way roadways with a center TWLTL
- On average reversible lane(s) segments are 2 miles long
- On average reversible lane(s) segments have 5 to 7 lanes
- Most corridors connect suburban areas to a Central Business District (CBD)
- Left turn prohibitions are common practice with reversible lane operation
- On-street parking removal/prohibitions are common practice as well
- Additional investment in traffic control devices and enforcement is needed
- Surrounding commercial land use is preferred over residential land use



ANALYSIS & SCREENING

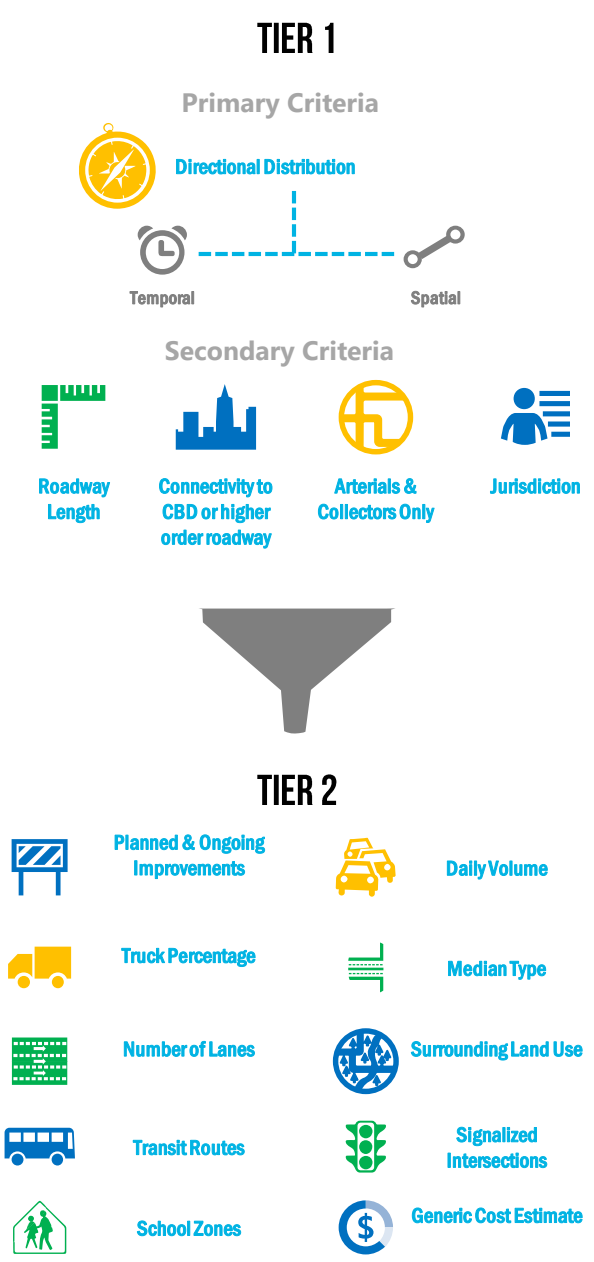
The tiered screening involved analyzing all arterials and collectors within Miami-Dade County using the following criteria:

<u>Tier 1: Preliminary Screening</u>

- Primary Criteria
  - Directional Distribution
    - Spatial: 60%/40% directional distribution preferred
    - Temporal: A frequency of directional distribution duration of 100% to 75% was preferred during both the AM and PM peak
- Secondary Criteria
  - Roadway Length: Thoroughfares longer than 2 miles were preferred
  - Connectivity to the CBD or higher order roadway: Corridors that serve as commuter routes to the CBD or that connected to higher order roadways were preferred
  - Arterial and Collectors: Freeways, ramps, and rural highways were not selected for further analysis
  - Jurisdiction: Roads with a single jurisdiction were preferred

<u>Tier 2: In-depth Screening</u>

- Planned & Ongoing Improvements: Roadways with capacity projects included in the Long Range Transportation Plan (LRTP) and in the Miami-Dade County Metropolitan Planning Organization (MPO) Transportation Improvement Program (TIP) were excluded from further consideration
- Daily Volume: Thoroughfares with high daily traffic were preferred since this characteristic indicates a greater need for improvement and a larger number of potential beneficiaries
- Truck Percentage: Corridors with more than 10% truck traffic are undesirable for reversible lane implementation due to geometric and operational constraints
- Median Type: Roadways with paved medians or center TWLTL were preferred over raised medians due to reduced construction costs and ease of implementation
- Number of Lanes: A minimum of two (2) lanes in each direction is suggested even with reversible operations
- Surrounding Land Use: Commercial land use adjacent to the corridor(s) was preferred
- Transit Routes: Roadways with one (1) or no transit routes were preferred
- Signalized Intersections: Thoroughfares with less than 10 traffic signals were encouraged
- School Zones: Roadways with reduced speed school zones were penalized
- Generic Capital Cost: A generic per mile capital cost estimate was developed and the lower the cost the better



In addition, roadways with on-street parking, mid-block pedestrian crossings, railroad crossings, part of an FDOT project, having high turning movement volumes, and having issues with access management were considered undesirable.

RESULTS

Through the screening process and agency coordination Tier 1 resulted in fifteen (15) feasible corridors in Miami-Dade County for reversible lane application. This corridors are:

1. NE 6th Avenue
2. NW 7th Avenue
3. NW 7th Street
4. NW 25th Street
5. NW 32nd Avenue
6. NW 36th Street
7. NW 87th Avenue
8. SW 40th Street
9. SW 104th Street
10. SW 152nd Avenue
11. SW 184th Street
12. US-1/Dixie Highway
13. SW 8th Street
14. SW 88th Street
15. NW 114th Avenue

Based on the Tier 2 criteria a grading matrix was developed to screen the aforementioned fifteen (15) corridors. From the grading matrix two (2) corridors ranked highest making them the best candidates for reversible lanes implementation. These thoroughfares are NW 7th Street and NW 32nd Avenue. As consequence, conceptual plans, visualization, and a preliminary cost estimates of improvements for these two (2) roadways were developed.

Work Order GPC-VI-4-Reversible Lanes-Along Major Arterial Thoroughfares

Matrix of Criteria and Ranking

Jurisdiction Initiative	SECTION NUMBER	LOCAL NAME	BMP	From	EMP	To	Length	Station	Daily Volume	Truck %	60%-40% Average DD AM		AM DD (4 hours)	60%-40% Average DD PM		PM DD (5 hrs)	Median	#lanes	Primary Land Use	Transit	Signals	School Zones	Market	Traffic Impacts	Implementation & Cost (Million)	Criteria	Pros	Cons
Single	87000426	NW 7 Street	1.000	NW 62 Avenue	1.475	NW 57 Avenue	0.475	1	26260	3	66.1%	33.9%	75%	34.2%	65.8%	80%	No	5	Commercial	1	2	No	Urban	Low	Short	45		
Single	87069500	NW 7 Street	1.475	NW 57 Avenue	2.990	NW 42 Avenue	1.515	2	37890	3	52.9%	47.1%	0%	44.8%	55.2%	0%	No	5	Commercial	1	5	No	Urban	Low	Short	37	• Ideal typical cross-section between NW 63 Avenue to NW 32 Avenue • Cornenercial area • Parallel to SR 836 • Single jurisdiction •Cost of Implementation per mile low	• Some intersections have raised medians • Although the segment is primary commercial there are some residential units • Pedestrian crossings mid-block • School zone • Parking affected
Single	87580501	NW 7 Street	0.000	NW 27 Avenue	1.525	NW 12 Avenue	1.525	4	26980	3	60.8%	39.2%	75%	38.5%	61.5%	60%	No	5	Commercial	1	6	Yes	Urban	Low	Short	41		
Single		**NW 7 Street**	**0.000**	**NW 62 Avenue**	**5.552**	**NW 12 Avenue**	**5.052**		**31775**	**3**	**58.0%**	**42.0%**	**38%**	**40.5%**	**59.5%**	**35%**	**No**	**5**	**Commercial**	**1**	**19**	**Yes**	**Urban**	**Low**	**Short + $5 Million**	**44.75**		
Single	87000178	NW 32 Avenue	0.910	SR 112	1.666	NW 54 Street	0.756	5	23110	12	44.9%	55.1%	0%	61.5%	38.5%	80%	No	5	Residential	1	4	Yes	Urban	Low	Short	35		
Single	87000208	NW 32 Avenue	0.000	NW 54 Street	1.526	NW 79 Street	0.526	6	23067	12	49.6%	50.4%	0%	61.0%	39.0%	80%	No	5	Residential	1	5	Yes	Urban	Low	Short	35		
Single	87000209	NW 32 Avenue	0.000	NW 79 Street	1.558	NW 103 Street	1.558	7	24569	12	38.2%	61.8%	100%	62.3%	37.7%	80%	No	5	Residential	1	4	No	Urban	Low	Short	39	• Ideal typical section • North-south corridor parallel to I-95 • Cost of Implementation per mile low	• Median at the northern side of the corridor • RKR • Residential houses along the corridor • Truck traffic
Single	87000208	NW 32 Avenue	0.000	NW 103 Street	1.019	Gragigny Pkwy	1.019	8	27320	12	40.0%	60.0%	75%	60.0%	40.0%	80%	Yes	4	Commercial	1	6	No	Urban	Low	Short	37		
Single		**NW 32 Avenue**	**0.000**	**SR 112**	**4.861**	**Gragigny Prkwy**	**4.861**		**24017**	**12**	**43.2%**	**56.8%**	**44%**	**61.2%**	**38.8%**	**80%**	**Yes**	**4**	**Residential**	**1**	**19**	**Yes**	**Urban**	**Low**	**Short + $4.9 Million**	**41.5**		
Multi	87000039	NW 25 Street	0.000	HEFT	1.498	NW 102 Avenue	1.498	878110	23500	*	60.7%	39.3%	50%	50.0%	50.0%	0%	No	5	Commercial	1	3	No	Urban	Low	Short	36		
Multi	87000184	NW 25 Street	0.000	NW 102 Street	1.530	NW 87 Avenue	1.530	877025	31000	15.8	65.4%	34.6%	100%	41.2%	58.8%	40%	No	5	Commercial	1	3	No	Urban	High	Short	38		
Multi	87000184	NW 25 Street	1.530	NW 87 Avenue	2.530	SR 826	1.000	877026	29000	17.9	63.6%	36.4%	75%	47.9%	52.1%	0%	Yes	6	Commercial	1	4	No	Urban	High	Short	32	• Ideal typical section between HEFT and 87 Avenue • No school zones • Cost of Implementation per mile low	• Heavy truck traffic • Raised median from 87 Avenue to SR 826 • DD during the PM peak appers not to be adequate
Multi		**NW 25 Street**	**0.000**	**HEFT**	**4.028**	**SR 826**	**4.028**		**27833**	**16.85**	**63.2%**	**36.8%**	**75%**	**46.4%**	**53.6%**	**13%**	**Yes**	**5**	**Commercial**	**1**	**10**	**No**	**Urban**	**Med**	**Short + $4.1 Million**	**40.3**		
Single	**87000964**	**SW 152 Avenue**	**0.000**	**SW 40 Street**	**2.229**	**SW 8 Street**	**2.229**	**878691**	**12600**	**5.8**	**67.5%**	**32.5%**	**75%**	**32.6%**	**67.4%**	**100%**	**No**	**5**	**Residential**	**1**	**3**	**Yes**	**Sub-urban**	**Low**	**Short + $2.3 Million**	**40.0**	• Ideal typical section • Good Directional Distribution • Cost of Implementation per mile low	• Sub-urban segment, limited market
Single	**87000555**	**NW 114 Avenue**	**2.244**	**NW 36 Street**	**6.320**	**NW 106 Street**	**4.076**	**878584**	**12300**	**7.3**	**77.2%**	**22.8%**	**100%**	**28.5%**	**71.5%**	**100%**	**Yes**	**4**	**Residential**	**1**	**7**	**Yes**	**Urban**	**Med**	**Short + $4.1 Million**	**40.0**	• Portion of the segment Between NW 36 Street and NW 58 Street presents the ideal typical cross-section • Cost of Implementation low	• Residential area • Raised median north of NW 58 Street • Traffic patterns could be affected by widening of NW 74 Street
Single	87140000	NW 7 Avenue	2.054	NW 20 Street	3.075	NW 36 Street	1.021	875005	23500	4.3	37.6%	62.4%	75%	66.4%	33.6%	100%	No	5	Commercial	2	5	No	Urban	Med	Long	42.00		
Single	87140000	NW 7 Avenue	3.075	NW 36 Street	4.126	NW 54 Street	1.051	879030	22000	2.6	37.5%	62.5%	75%	64.5%	35.5%	80%	No	5	Commercial	2	7	No	Urban	Med	Long	41.00		
Single	87140000	NW 7 Avenue	4.126	NW 54 Street	4.695	NW 62 Street	0.569	875141	25500	5.1	41.2%	58.8%	25%	62.3%	37.7%	80%	No	5	Commercial	2	7	No	Urban	Med	Long	38.00		
Single	87140000	NW 7 Avenue	4.695	NW 62 Street	5.649	NW 79 Street	0.954	875144	24500	3	34.2%	65.8%	75%	63.2%	36.8%	60%	No	5	Commercial	2	8	No	Urban	Med	Long	41.00		
Single	87140000	NW 7 Avenue	5.649	NW 79 Street	6.112	NW 85 Road	0.463	870529	32000	3.3	37.1%	62.9%	75%	59.3%	40.7%	60%	No	5	Commercial	2	8	No	Urban	Med	Long	39.00		
Single	87140000	NW 7 Avenue	6.112	NW 85 Road	7.171	NW 103 Street	1.059	870235	32500	5.1	38.3%	61.7%	75%	67.2%	32.8%	100%	No	5	Commercial	2	3	No	Urban	Med	Long	42.00	• Ideal typical section • North-south corridor parallel to I-95 • Cost of Implementation per mile low	• New raised median segments • Complete street project by FDOT • Overall cost high • A previus study of reversible lanes was rejected.
Single	87140000	NW 7 Avenue	7.171	NW 103 Street	8.171	NW 119 Street	1.000	870214	32500	5.1	32.8%	67.2%	100%	60.5%	39.5%	40%	No	5	Commercial	2	3	No	Urban	Med	Long	40.00		
Single	87140000	NW 7 Avenue	8.171	NW 119 Street	9.172	NW 135 Street	1.001	870128	37500	5.1	29.9%	70.1%	100%	54.5%	45.5%	0%	Yes	6	Commercial	2	3	No	Urban	Med	Long	36.00		
Single	87140000	NW 7 Avenue	9.172	NW 135 Street	10.812	Golden Glades	1.640	870416	27000	4.9	33.1%	66.9%	100%	49.2%	50.8%	0%	Yes	6	Commercial	2	5	No	Urban	Med	Long	36.00		
Single		**NW 7 Avenue**	**0.000**	**NW 20 Street**	**8.758**	**Golden Glades**	**8.758**		**28556**	**4.27**	**35.7%**	**64.3%**	**78%**	**60.6%**	**39.4%**	**58%**	**Yes**	**6**	**Commercial**	**2**	**33**	**No**	**Urban**	**Med**	**Long + $8.7 Million**	**39.4**		
Multi	87000417	NW 36 Street	0.000	HEFT	1.187	NW 107 Avenue	1.187	877081	44000	7.2	67.9%	32.1%	100%	36.0%	64.0%	100%	Yes	6	Commercial	2	1	No	Urban	Med	Low	40		
Multi	87000429	NW 36 Street	0.000	NW 107 Avenue	0.500	NW 102 Avenue	0.500	878196	44000	10.2	66.3%	33.5%	75%	38.5%	61.5%	80%	Yes	6	Residential	2	1	No	Urban	Med	Low	38	• City of Doral most congested corridor • No school zone • Few signals per mile	• Reconet Traffic data not completely available between 87 Avenue and SR 826 • Heavy volume intersection at 87 Avenue Cost of implementation per mile high
Multi	87000181	NW 36 Street	0.000	NW 102 Avenue	0.808	NW 97 Court	0.808	877027	48500	5.2	69.1%	30.9%	100%	39.9%	60.1%	80%	Yes	6	Residential	2	2	No	Urban	Med	Low	38		
Multi	87673501	NW 36 Street	0.000	NW 93 Court	1.586	SR 826	1.586	878359	46000	*	*	*	*	*	*	*	Yes	6	Commercial	2	4	No	Urban	High	Low	38		
Multi		**NW 36 Street**	**0.000**	**HEFT**	**4.081**	**SR 826**	**4.081**		**45125**	**7.53**	**67.8%**	**32.2%**	**92%**	**38.1%**	**61.9%**	**87%**	**Yes**	**6**	**Commercial**	**2**	**8**	**No**	**Urban**	**Med**	**Long + $6.6 Million**	**38.5**		
Multi	**87000030**	**NW 87 Avenue**	**0**	**Okeechobee Blvd**	**4.12**	**NW 169 Street**	**4.12**	**878112**	**10200**	**2.6**	**80.0%**	**20.0%**	**100.0%**	**32.8%**	**67.2%**	**80.0%**	**Yes**	**5**	**Residential**	**0**	**8**	**No**	**Sub-urban**	**Low**	**Short + $3.5 Million**	**38.0**	• Ideal typical section • Cost of Implementation per mile Low	• Segment traffic not defined as several projects like the American Dream can change vehicular patterns and needs
Single	87001000	Kendall Drive	2.416	SW 152 Avenue	3.962	SW 137 Avenue	1.526	871080	47000	4	63.9%	36.1%	75%	43.6%	56.4%	0%	Yes	6	Commercial	2	7	No	Urban	High	High	36		
Single	87001000	Kendall Drive	3.962	SW 137 Avenue	4.958	SW 127 Avenue	0.992	870060	70500	5.6	63.2%	36.8%	50%	42.6%	57.4%	0%	Yes	6	Commercial	2	3	No	Urban	High	High	38		
Single	87001000	Kendall Drive	4.958	SW 127 Avenue	5.953	SW 117 Avenue	0.997	870062	71500	4	72.3%	27.8%	100%	44.4%	55.6%	0%	Yes	6	Commercial	2	7	No	Urban	High	High	39	• RKR • Raised Median • Access Management policy • Premium Transit Corredor under study • Cost of Implementation High	
Single	87001000	Kendall Drive	5.953	SW 117 Avenue	7.128	SW 107 Avenue	1.177	870592	66500	4.6	61.3%	38.7%	25%	43.0%	57.0%	0%	Yes	6	Commercial	2	3	No	Urban	High	High	39		
Single	87001000	Kendall Drive	7.128	SW 107 Avenue	8.136	SW 97 Avenue	1.008	870064	69500	3	62.8%	37.2%	50%	37.0%	63.0%	100%	Yes	6	Commercial	2	4	No	Urban	High	High	40	• Very high demand segment	
Single		**Kendall Drive**	**0.000**	**SW 152 Avenue**	**5.700**	**SW 97 Avenue**	**5.700**		**63800**	**4.24**	**64.7%**	**35.3%**	**60%**	**42.1%**	**57.9%**	**20%**	**Yes**	**6**	**Commercial**	**2**	**24**	**No**	**Urban**	**High**	**Long + $9.3 Million**	**37.8**		
Single	87034000	NE 6 Avenue	0.000	Biscayne Blvd	0.940	NE 103 Street	0.940	871009	9300	2.5	39.3%	60.7%	50%	54.0%	46.0%	20%	No	5	Residential	2	5	No	Urban	Med	low	33		
Single	87034000	NE 6 Avenue	0.940	NW 103 Street	2.343	NE 125 Street	1.403	871010	17200	2.3	31.9%	68.1%	75%	54.3%	45.7%	0%	Yes	6	Residential	2	4	Yes	Urban	Med	low	30		
Single	87034000	NE 6 Avenue	2.343	NE 125 Street	2.975	NE 135 Street	0.632	872539	16300	2.8	32.3%	67.7%	100%	53.7%	46.3%	0%	No	5	Residential	2	5	No	Urban	Med	low	35	• Ideal typical section • Cost of Implementation per mile Low	• RKR • Raised median along the segment • DD during the PM peak appears not to be adequate
Single		**NW 6 Avenue**	**0.000**	**Biscayne Blvd**	**2.975**	**NW 135 Street**	**2.975**		**14267**	**2.55**	**34.5%**	**65.5%**	**75%**	**54.2%**	**45.8%**	**7%**	**No**	**5**	**Residential**	**2**	**14**	**Yes**	**Urban**	**Med**	**Short + $3.0 Million**	**37.7**		
Single	87000477	SW 104 Street	0	SW 147 Avenue	0.997	SW 137 Avenue	0.997	878220	28000	3.0	75.4%	24.6%	100.0%	44.2%	55.8%	25.0%	Yes	4	Residential	2	2	No	Urban	Med	High	33		
Single	87000066	SW 104 Street	0	SW 137 Avenue	1.011	SW 127 Avenue	1.011	878175	43500	3.0	76.5%	23.5%	100.0%	38.5%	61.5%	100.0%	Yes	4	Residential	2	3	No	Urban	Med	High	38	• Connectivity to two expressways	• Residential Area • Four lane section road with lanscaping median • Cost of implementation High
Single	87000066	SW 104 Street	1.011	SW 127 Avenue	2.942	SR 874	1.931	878126	61000	3.0	71.7%	28.3%	100.0%	33.9%	66.1%	100.0%	Yes	4	Residential	2	7	No	Urban	Med	High	41		
Single		**SW104 Street**	**0**	**SW 147 Avenue**	**2.942**	**SR 874**	**2.942**		**35750**	**3.0**	**76.0%**	**24.1%**	**100.0%**	**41.4%**	**58.7%**	**62.5%**	**Yes**	**4**	**Residential**	**2**	**12**	**No**	**Urban**	**Med**	**High + $ 5.1 Million**	**37.3**		
Single	87000225	SW 184 Street	0.000	SW 147 Avenue	1.256	SW 134 Avenue	1.256	878170	18300	3.4	60.3%	39.7%	50%	46.0%	54.0%	0%	No	4	Residential	1	3	No	Sub-urban	Low	Short	28		
Single	87000084	SW 184 Street	0.000	SW 134 Avenue	1.774	SW 117 Avenue	1.774	877009	33000	4.4	68.5%	31.5%	100%	39.9%	60.1%	80%	No	4	Residential	1	4	No	Sub-urban	Low	Short	35	• Few intersections • Cost of Implementation per mile Low	• Sub-urban segment • Residential area
Single		**SW 184 Street**	**0.000**	**SW 147 Avenue**	**3.030**	**SW 117 Avenue**	**3.030**		**25550**	**3.9**	**64%**	**36%**	**75%**	**43.0%**	**57.1%**	**40%**	**No**	**4**	**Residential**	**1**	**7**	**No**	**Sub-urban**	**Low**	**Long + $3.1 Million**	**36.5**		
Single	87120000	SW 8 Street	4.010	SW 137 Avenue	5.028	SW 127 Avenue	1.018	870088	43500	5.9	65.8%	34.2%	100%	42.8%	57.2%	0%	Yes	6	Commercial	2	3	No	Urban	High	High	37		
Single	87120000	SW 8 Street	5.028	SW 127 Avenue	5.991	HEFT	0.963	877541	55000	5.9	68.6%	31.4%	100%	41.9%	58.1%	40%	Yes	6	Commercial	2	3	No	Urban	High	High	38		
Single	87120000	SW 8 Street	5.991	HEFT	7.045	SW 107 Avenue	1.054	870090	55000	3.8	64.4%	35.4%	100%	53.5%	46.5%	0%	Yes	6	Commercial	2	4	No	Urban	High	High	36		
Single	87120000	SW 8 Street	7.045	SW 107 Avenue	9.056	SW 87 Avenue	2.011	870589	57000	6.6	63.4%	36.6%	50%	46.2%	53.8%	0%	Yes	6	Commercial	2	6	No	Urban	High	High	36	• Very high demand segment	• DD during the PM peak appears not to be adequate • Raised Median • Access Management policy • Corridor under study by FDOT with multi-modal goals. • Cost of Implementation High
Single	87120000	SW 8 Street	9.056	SW 87 Avenue	10.021	SR 826	0.965	870092	69000	3.8	57.5%	42.5%	25%	38.7%	61.3%	0%	Yes	6	Commercial	2	3	No	Urban	High	High	35		
Single		**SW 8 Street**	**0.000**	**SW 137 Avenue**	**6.011**	**SR 826**	**6.011**		**55900**	**5.20**	**64.0%**	**36.0%**	**75%**	**44.6%**	**55.4%**	**8%**	**Yes**	**8**	**Commercial**	**2**	**18**	**No**	**Urban**	**High**	**Long + $9.8 Million**	**36.6**		
Multi	87000339	SW 40 Street	0.000	SW 142 Avenue	2.393	HEFT	2.393	877037	34000	3.1	69.2%	30.8%	100%	37.4%	62.6%	80%	Yes	6	Commercial	2	7	No	Urban	High	High	36		
Multi	87044000	SW 40 Street	0.000	HEFT	1.142	SW 107 Avenue	1.142	870072	52000	3.9	60.3%	39.7%	25%	46.0%	54.0%	0%	Yes	6	Commercial	2	5	No	Urban	High	High	33		
Multi	87048000	SW 40 Street	1.142	SW 107 Avenue	2.151	SW 97 Avenue	1.009	870074	54500	5.3	58.7%	41.3%	25%	58.7%	41.3%	0%	Yes	6	Commercial	2	4	Yes	Urban	High	High	34		
Multi	87044000	SW 40 Street	2.151	SW 97 Avenue	3.144	SW 87 Avenue	0.993	870076	54500	5.3	67.2%	32.8%	75%	38.6%	61.4%	80%	Yes	6	Commercial	2	2	No	Urban	High	High	39		
Multi	87044000	SW 40 Street	3.144	SW 87 Avenue	4.223	SR 826	1.079	870078	72000	5.3	61.6%	38.4%	50%	38.9%	61.1%	80%	Yes	6	Commercial	2	6	No	Urban	High	High	39	• Connectivity to two expressways • Very high traffic demand • Most segment can be considered commercial	• Congested intersections such as 107 & 87 Avenue could pose difficulty for reversed flows • Raised Median • Access Management policy • Multi-jurisdiction coordination • Corridor under study by FDOT with multi-modal goals • Cost of Implementation High
Multi	87044000	SW 40 Street	4.223	SR 826	5.200	SW 67 Avenue	0.977	871050	76500	4.4	70.8%	30.4%	100%	40.5%	59.5%	40%	Yes	6	Commercial	2	3	No	Urban	High	High	38		
Multi	87044000	SW 40 Street	5.200	SW 67 Avenue	6.219	SW 57 Avenue	1.019	870080	53500	5.3	64.4%	35.6%	75%	42.2%	57.8%	20%	Yes	6	Commercial	2	2	No	Urban	High	High	35		
Multi		**SW 40 Street**	**0.000**	**SW 142 Avenue**	**6.219**	**SW 57 Avenue**	**6.219**		**55571**	**5**	**65%**	**35%**	**64%**	**40.3%**	**59.7%**	**54.3%**	**Yes**	**6**	**Commercial**	**2**	**29**	**Yes**	**Urban**	**High**	**Long + $10.5 Million**	**36.3**		
Multi	87020000	US-1	12.014	SW 112 Avenue	14.139	SW 183 Street	2.125	870346	53500	6	71.3%	28.7%	100%	42.4%	57.6%	0%	Yes	6	Commercial	2	4	No	Urban	High	High	35		
Multi	87020000	US-1 Nb/SB	14.139	SW 183 Street	15.265	US-1 Split	1.126	872563	59000	5.2																	
Multi	87020000	US-1	15.265	US-1 Split	17.387	SW 136 Street	2.122	870332	65500	5.2	72.4%	27.6%	100%	42.9%	57.1%	0%	Yes	6	Commercial	2	7	No	Urban	High	High	38		
Multi	87020000	US-1	17.387	SW 136 Street	19.071	SW 112 Street	1.684	870014	79000	2.6	66.8%	33.2%	75%	43.3%	56.7%	0%	Yes	6	Commercial	2	6	No	Urban	High	High	38		
Multi	87020000	US-1	19.071	SW 112 Street	20.042	SR 826	0.971	870110	92500	5.2	65.1%	34.9%	75%	39.4%	60.6%	40%	Yes	6	Commercial	2	2	No	Urban	High	High	39		
Multi	87030000	US-1	0.000	SR 826	0.840	Kendall Drive	0.840	872532	48000	5.3	54.8%	45.2%	25%	40.9%	59.1%	40%	Yes	6	Commercial	2	5	No	Urban	High	High	32	• Very high demand segment	• Raised Median • Access Management policy • Multi-jurisdiction coordination • Corridor under study by FDOT with multi-modal goals • Cost of Implementation High
Multi	87030000	US-1	0.840	Kendall Drive	1.268	SR 878	0.448	870163	52000	3.7	54.7%	45.3%	25%	38.8%	61.2%	80%	Yes	6	Commercial	2	2	No	Urban	High	High	33		
Multi		**US-1**	**0.000**	**SW 112 Avenue**	**9.312**	**SR 878**	**9.312**		**64071**	**4.74**	**64.2%**	**35.8%**	**67%**	**41.3%**	**58.7%**	**27%**	**Yes**	**6**	**Commercial**	**2**	**25**	**No**	**Urban**	**High**	**Long + $15.2 Million**	**36.0**		

Criteria	Points
Jurisdictions	
Multi	1
Single	2
Volume	
0-20,000	2
20,000-40000	4
40,000-60,000	6
60,000-100,000	8
Average Split	
65-35	3
60-40	2
<60-40	1
AM/PM DD	
100-80	3
80-50	2
50-0	1
Truck	
Less than 10%	3
More than 10%	1
Median	
Yes	1
No	3
Lanes	
>6	5
5	5
6	4
4	3
3	2
2	1
Primary Land Use	
Residential	0
Commercial	2
Signals	
More than 10 Signals	0
Less than 10 Signals	2
School Zones	
Yes	1
No	2
Transit	
1 or no routes	2
2 or More	1
Market Character	
Urban	5
Sub-urban	0
Traffic Pattern Impacts	
High	1
Mod	2
Low	3
Implementation Timeframe+Cost	
Short & Less than 5 M	5
Long & More than 5 M	0

NW 7TH STREET

FROM NW 57TH AVE TO NW 12TH AVE

EXISTING CONDITIONS

4.5 MILES

135 ON-STREET PARKING (BETWEEN NW 42ND AVE AND NW 17TH AVE)

19 SIGNALIZED INTERSECTIONS (7 MAJOR INTERSECTIONS)

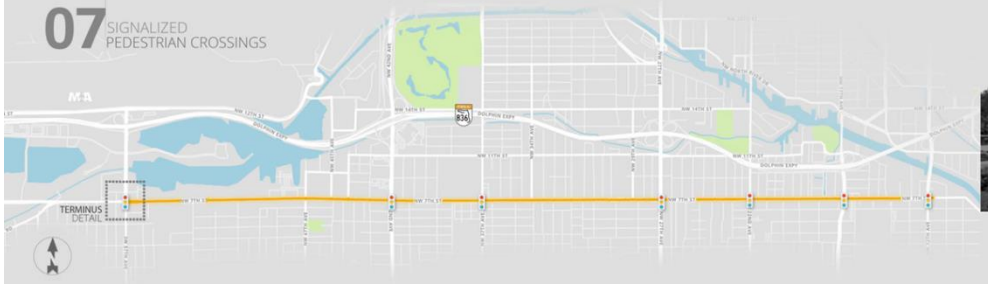
07 SIGNALIZED PEDESTRIAN CROSSINGS

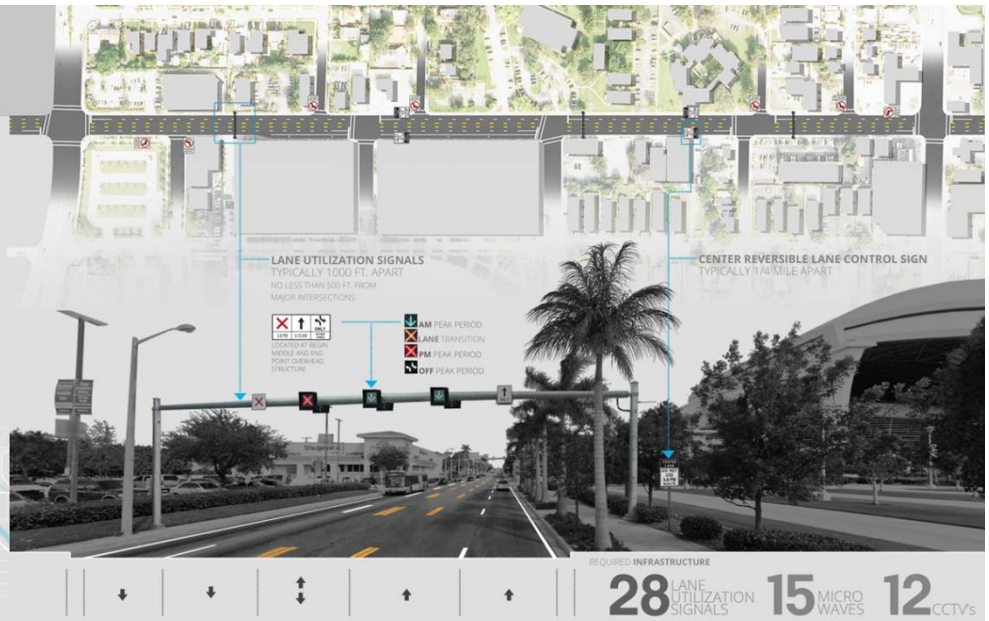
EXISTING ROADWAY TYPICAL SECTIONS

FROM NW 57TH AVE TO NW 42ND AVE

AND

FROM NW 17TH AVE TO NW 12TH AVE





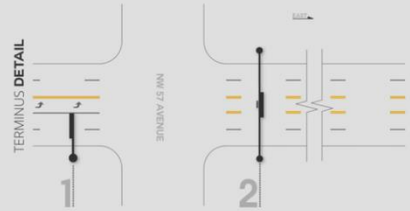
REQUIRED INFRASTRUCTURE

28 LANE UTILIZATION SIGNALS **15** MICRO WAVES **12** CCTV's

POTENTIAL COST

Includes resurfacing and restriping of the roadway pavement and installation of all equipment, signals, and signs.

$7.4M



TRANSITIONS at the entry to and exit from a section of roadway with reversible lanes shall be carefully reviewed, and advance signs shall be installed to notify or warn drivers of the boundaries of the reversible lane controls.

DYNAMIC MESSAGE SIGN
APPROACHING NW 57TH ST (LOOKING EAST)

WESTERN TERMINUS
BIG REVERSIBLE LANE AT NW 57TH AVE (LOOKING EAST)
SAME TREATMENT FOR EASTERN TERMINUS

WESTERN CONDITIONS
END REVERSIBLE LANE AT NW 57TH AVE (LOOKING WEST)
SAME TREATMENT FOR EASTERN TERMINUS

NW 32ND AVENUE

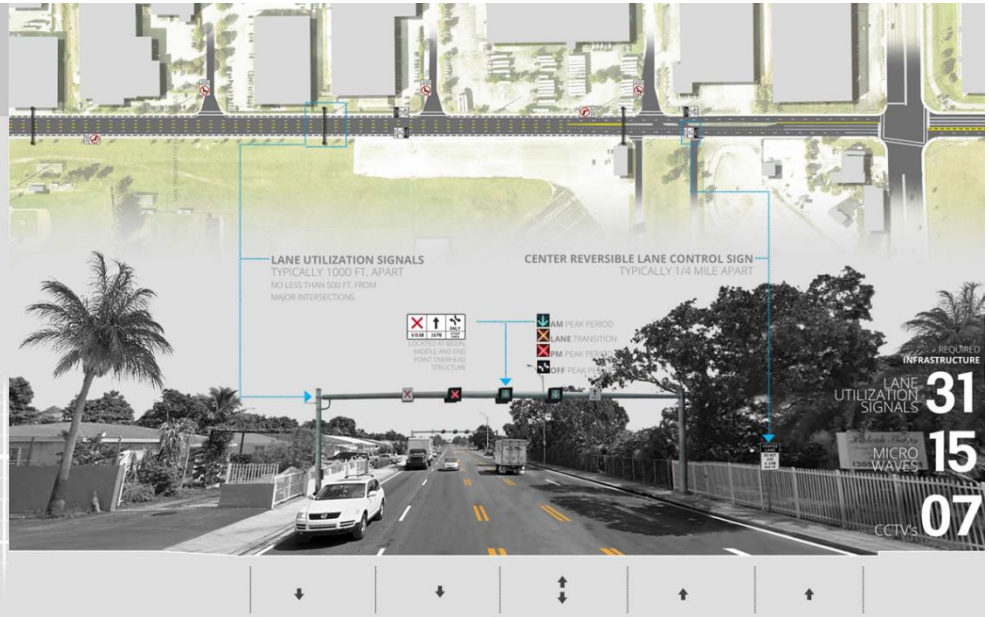
FROM NW 36TH ST TO NW 119TH ST

EXISTING CONDITIONS

05 MILES

15 SIGNALIZED INTERSECTIONS (8 MAJOR INTERSECTIONS)

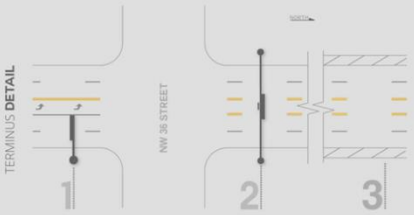
10 SIGNALIZED PEDESTRIAN CROSSING



POTENTIAL COST

Includes resurfacing and restriping of the roadway pavement and installation of all equipment, signals, and signs.

$7.7M



TRANSITIONS at the entry to and exit from a section of roadway with reversible lanes shall be carefully reviewed, and advance signs shall be installed to notify or warn drivers of the boundaries of the reversible lane controls.

DYNAMIC MESSAGE SIGN
APPROACHING NW 36TH ST (LOOKING NORTH)

SOUTHERN TERMINUS
END REVERSIBLE LANE AT NW 36TH STREET (LOOKING SOUTH)

NORTHERN CONDITIONS
FROM 103RD STREET TO 119TH STREET
UTILIZES PAVED SHOULDERS TO ACCOUNT

NEXT STEPS TO BE TAKEN

IMPLEMENTATION PLAN

A Project Development and Environmental (PD&E) Study requiring:

- A refinement of the preliminary conceptual alternatives
- A detailed traffic operations analysis study
- A detailed multimodal safety study
- An analysis of expressway accessibility
- A compatibility analysis with special events at Marlins Park
- An analysis of social and environmental impacts
- A community and stakeholder engagement

PHYSICAL IMPLEMENTATION

- Milling & Resurfacing existing asphalt pavement
- Minor reconstruction of existing medians and traffic separators
- Installation of new pavement markings and signage
- Installation of new intelligent transportation systems (ITS) and traffic control devices
- And utility coordination and potential relocation

MIAMI-DADE METROPOLITAN
PLANNING ORGANIZATION

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