



Implementation Plan for Enhanced Bus Service along Flagler Street

Presented by:
Parsons Brinckerhoff, Inc.

**PARSONS
BRINCKERHOFF**



Today's Meeting



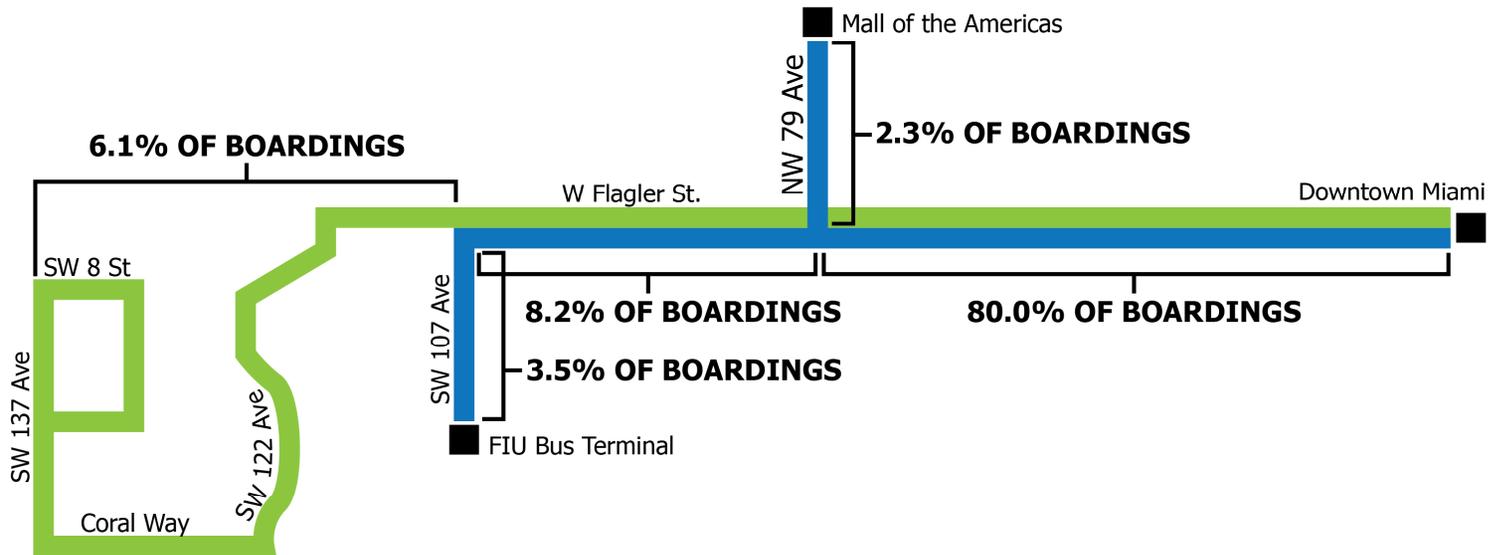
- Existing Corridor Characteristics
 - Passenger Movement
 - Traffic Conditions
 - Physical Constraints
 - Roadway Configuration Analysis
- EBS Recommendations
 - Service Plan
 - Station Locations
 - Park-and-Ride Locations
- EBS Implementation Plan



Existing Service Plan



Existing Weekday Boarding Activity on Routes 11 and 51



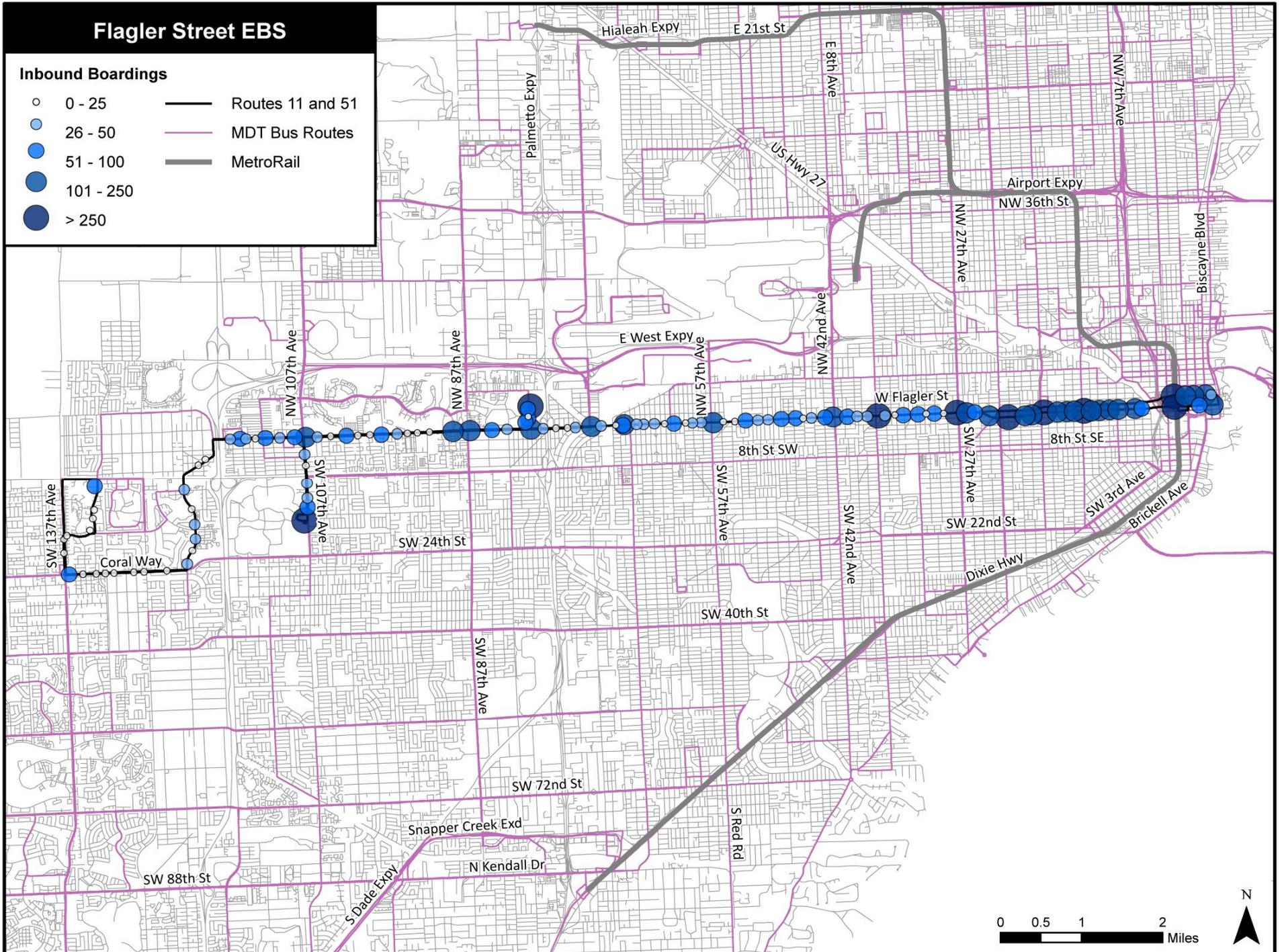
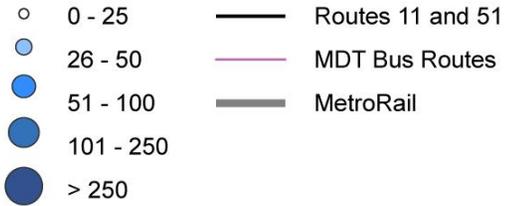
Estimated Daily Boardings: 16,300

Flagler Routes

- █ Flagler Local Route 11
- █ Flagler MAX Route 51

Flagler Street EBS

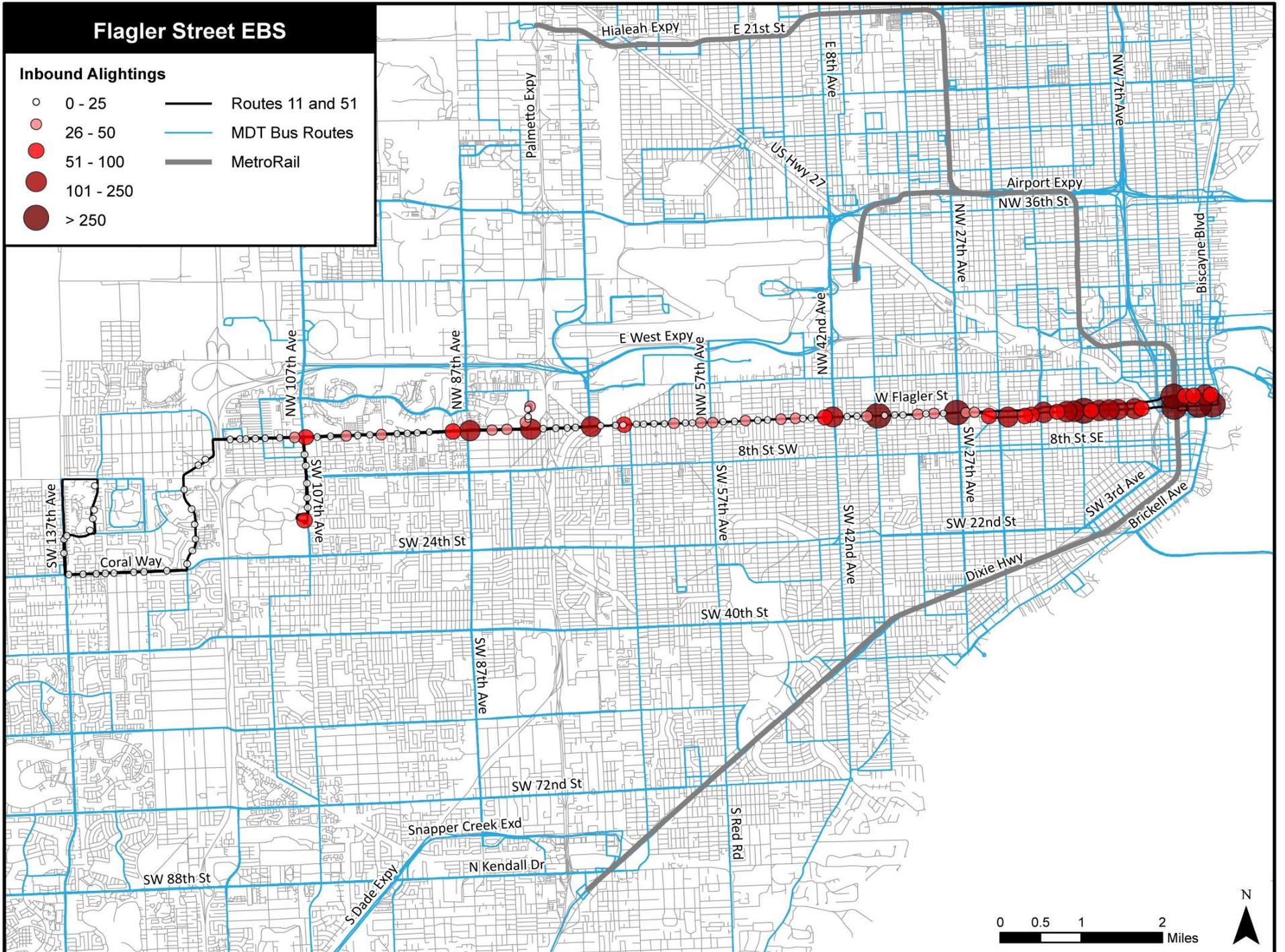
Inbound Boardings



Flagler Street EBS

Inbound Alightings

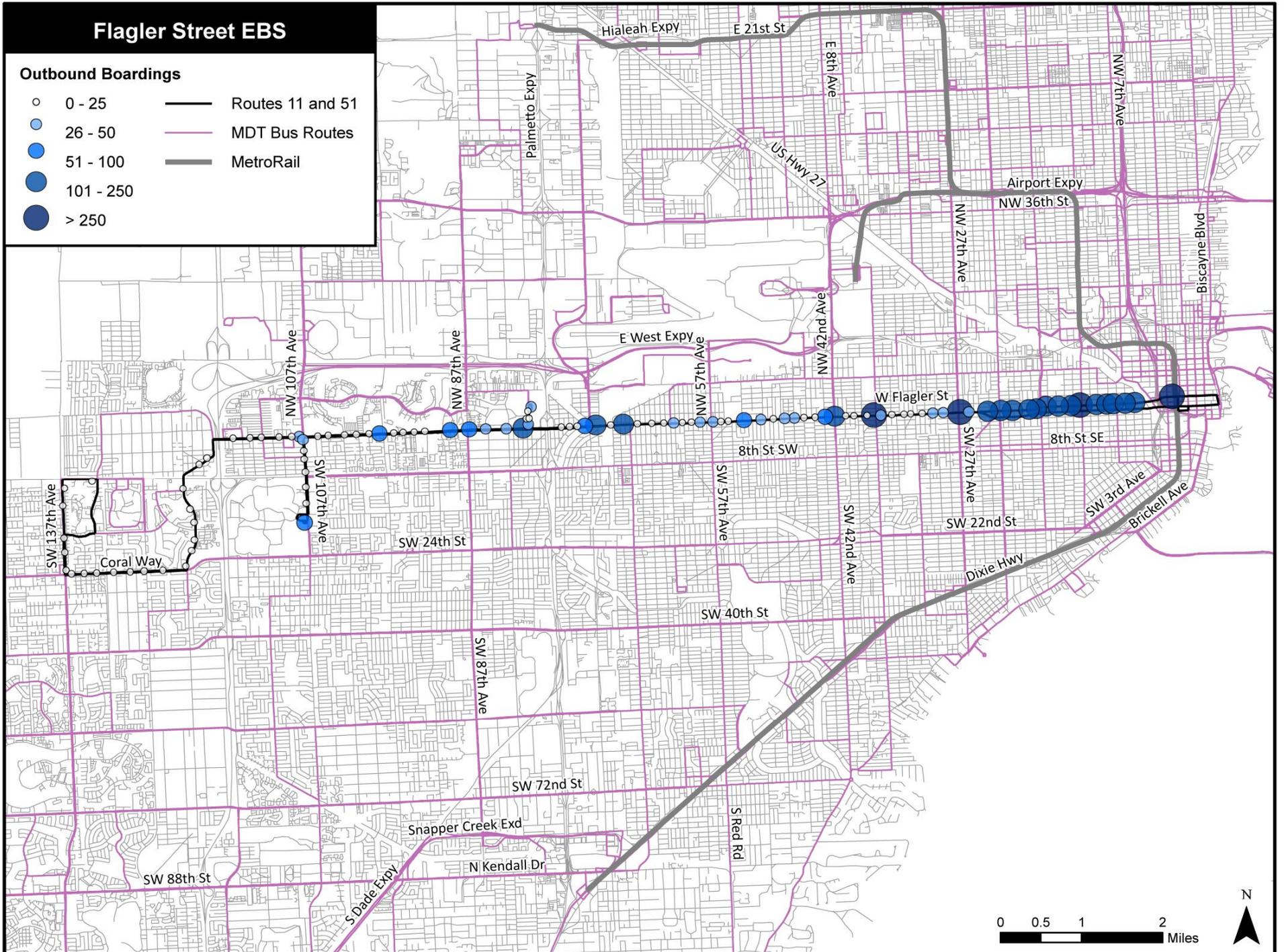
- 0 - 25
 - 26 - 50
 - 51 - 100
 - 101 - 250
 - > 250
- Routes 11 and 51
 - MDT Bus Routes
 - MetroRail



Flagler Street EBS

Outbound Boardings

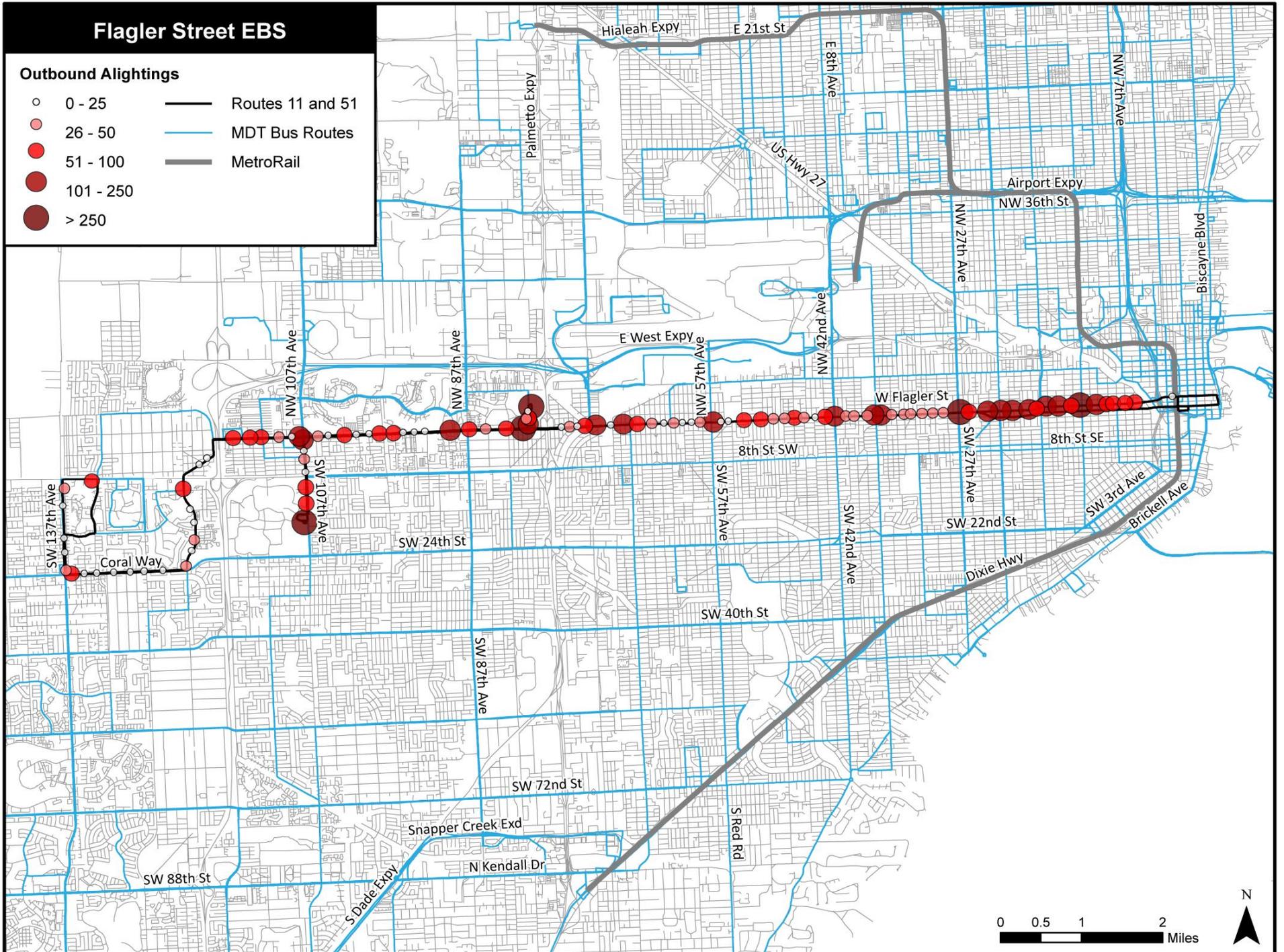
- | | |
|-------------|--------------------|
| ○ 0 - 25 | — Routes 11 and 51 |
| ● 26 - 50 | — MDT Bus Routes |
| ● 51 - 100 | — MetroRail |
| ● 101 - 250 | |
| ● > 250 | |



Flagler Street EBS

Outbound Alightings

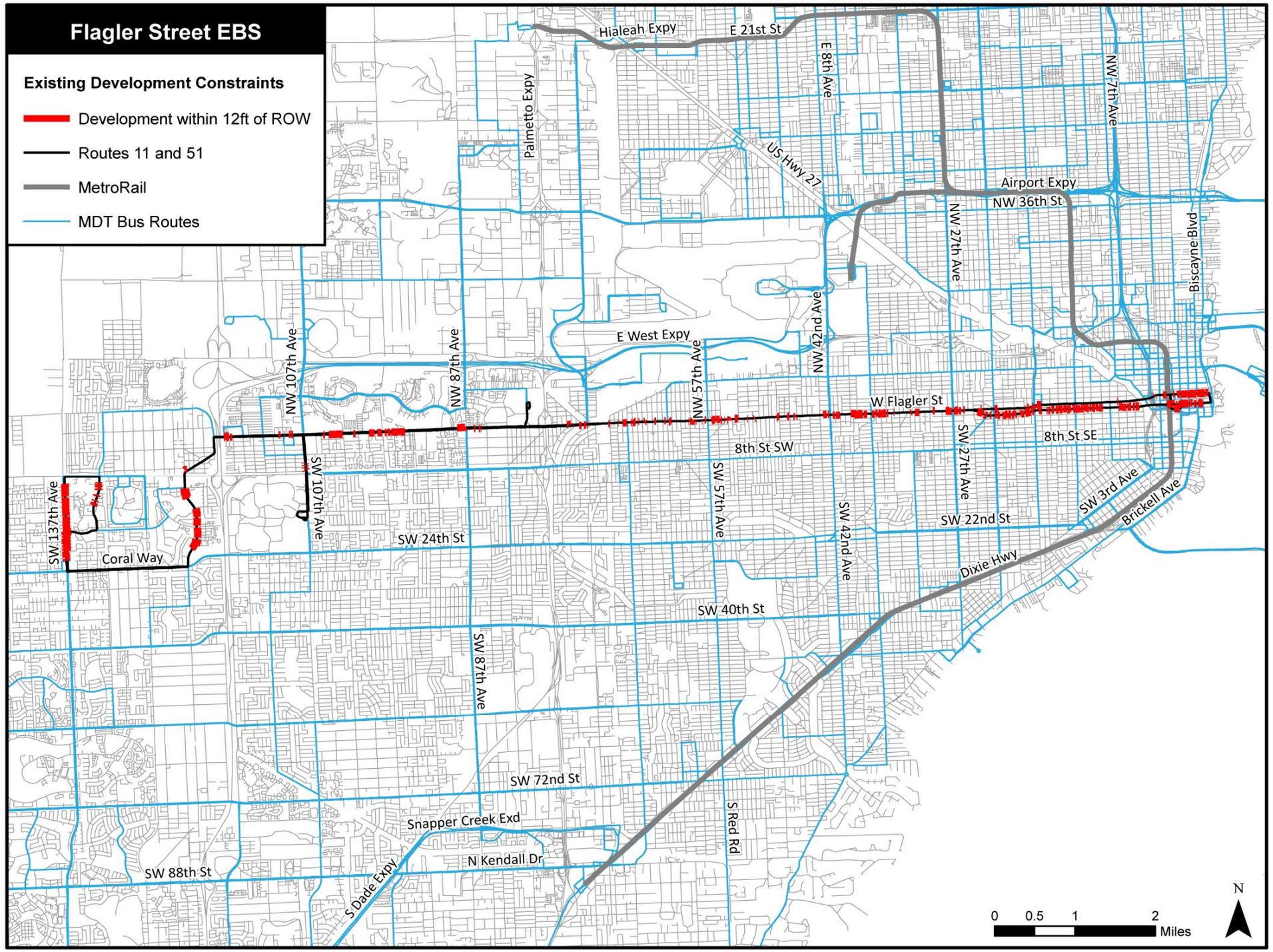
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| ● 51 - 100 | — MetroRail |
| ● 101 - 250 | |
| ● > 250 | |



Flagler Street EBS

Existing Development Constraints

- █ Development within 12ft of ROW
- Routes 11 and 51
- MetroRail
- MDT Bus Routes



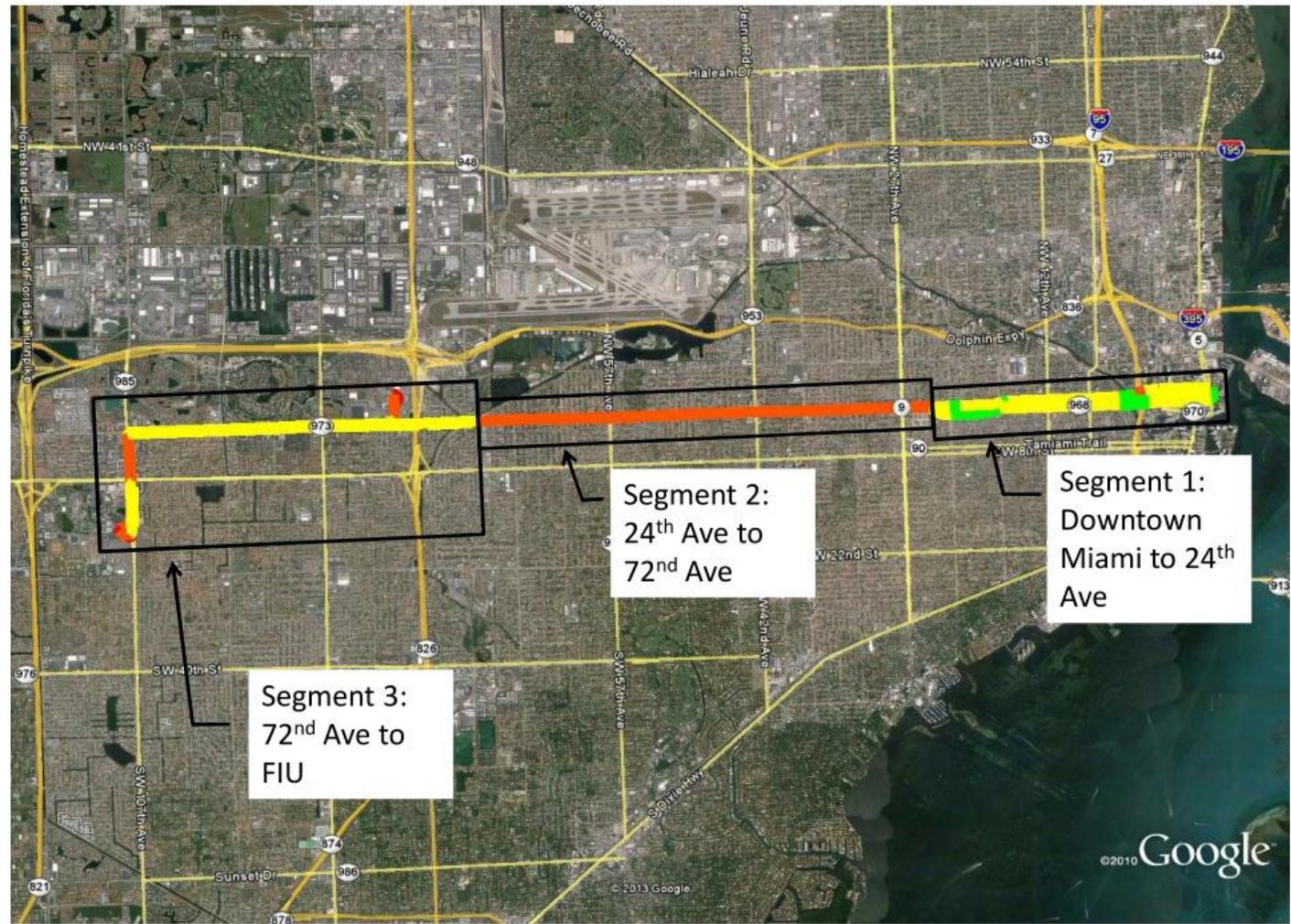


Roadway Configuration Analysis



Directional
through lanes

-  Green: 4
-  Yellow: 3
-  Orange: 2
-  Red: 1





Traffic Analysis



Segment	Description	EB Capacity	WB Capacity	AM EB Demand	AM WB Demand	PM EB Demand	PM WB Demand	Can we take a lane?			
								AM EB	AM WB	PM EB	PM WB
1	Two-way segment along Flagler St. from NW 107th Ave. to NW 87th Ave.	1,950	1,950	1,950	1,000	1,250	2,100	No	Yes	Yes	No
2	Two-way segment along Flagler St. from NW 87th Ave to Palmetto Expy.	2,859	2,859	1,950	1,250	1,700	2,150	No	Yes	Yes	No
3	Two-way segment along Flagler St. from Palmetto Expy to NW 72nd Ave.	2,859	2,859	2,300	1,300	1,800	2,550	No	Yes	Yes	No
4	Two-way segment along Flagler St. from NW 72nd Ave to NW 57th Ave.	1,888	1,888	1,200	1,250	1,300	1,800	No	No	No	No
5	Two-way segment along Flagler St. from NW 57th Ave to Le Jeune Rd.	1,888	1,888	1,100	800	1,200	1,400	No	Yes	No	No
6	Two-way segment along Flagler St. from Le Jeune Rd to NW 24th Ave.	1,888	1,888	1,150	900	1,150	1,250	No	Yes	No	No
7	One-way EB along SW 1st St. and One-way WB along Flagler St between NW 24th Ave and NW 12th Ave	2,340	2,340	2,250	1,100	1,700	2,000	No	Yes	No	No
8	One-way EB along SW 1st St. and two-way segment along Flagler St. from NW 12th Ave to NW 6th Ave.	2,340	2,340	1,350	950	1,050	1,200	Yes	Yes	Yes	Yes
9	One-way EB along SW 1st St. and One-way WB along Flagler St. from NW 6th Ave to I-95.	3,120	2,340	650	150	550	450	Yes	Yes	Yes	Yes
10	One-way EB along SW 1st St. and One-way WB along Flagler St. from I-95 to NW 2nd Ave.	2,340	780	675	150	550	475	Yes	No	Yes	No
11	One-way EB along SW 1st St. and two-way segment along Flagler St. from NW 2nd Ave to Biscayne Blvd.	2,340	780	500	200	600	400	Yes	No	Yes	No



Roadway Configuration Analysis



	Restricted Curbside Bus Lanes							Mixed Traffic
	Median Busway	Reversible Center Bus Lane	Curbside Busway	Restricted Curbside Bus Lane with Reversible Center Lane for Autos	Restricted Curbside Bus Lane (All Times)	Restricted Curbside Bus Lane (Peak Periods; Both Directions)	Restricted Curbside Bus Lane (Peak Periods; Peak Directions)	
Segment 1 Flagler Street and SW 1st Street One-Way Pair	Red	Red	Yellow	Red	Yellow	Yellow	Yellow	Green
Segment 2 Flagler Street between NW 24th Avenue and NW 72nd Avenue	Red	Red	Red	Yellow	Red	Red	Red	Green
Segment 3 Flagler Street between NW 72nd Avenue and SW 107th Avenue to FIU	Red	Red	Yellow	Yellow	Yellow	Yellow	Yellow	Green

Key: Red: Unlikely; Yellow: Possible; Green: Most Likely



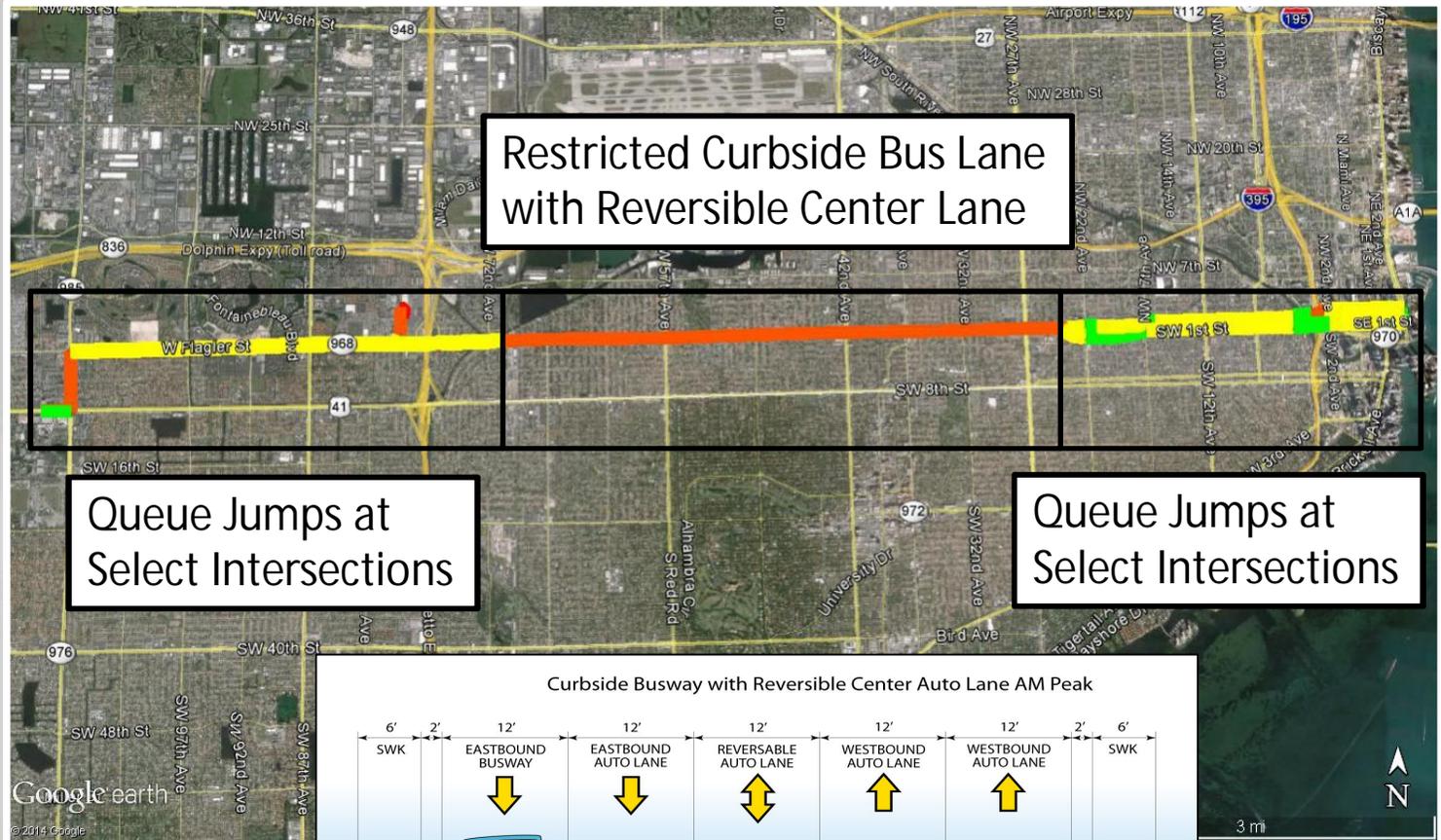
Queue Jump Lane Analysis



- Preliminary Screening
 - Station location
 - Segment Level of Service (LOS)
 - Availability of a right turn lane
 - Availability of right-of-way
- Secondary Screening:
 - AM/PM Peak period field observations
 - Queue length
 - Station location
 - Right-of-way constraints



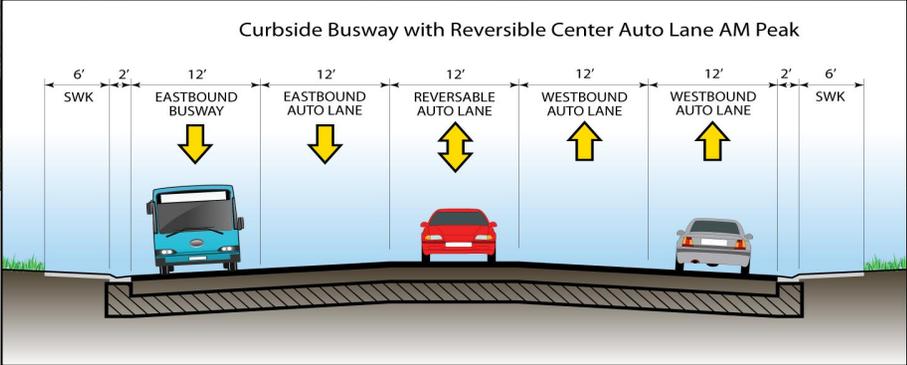
Recommended Roadway Configuration Analysis



Restricted Curbside Bus Lane with Reversible Center Lane

Queue Jumps at Select Intersections

Queue Jumps at Select Intersections





Service Plan Analysis



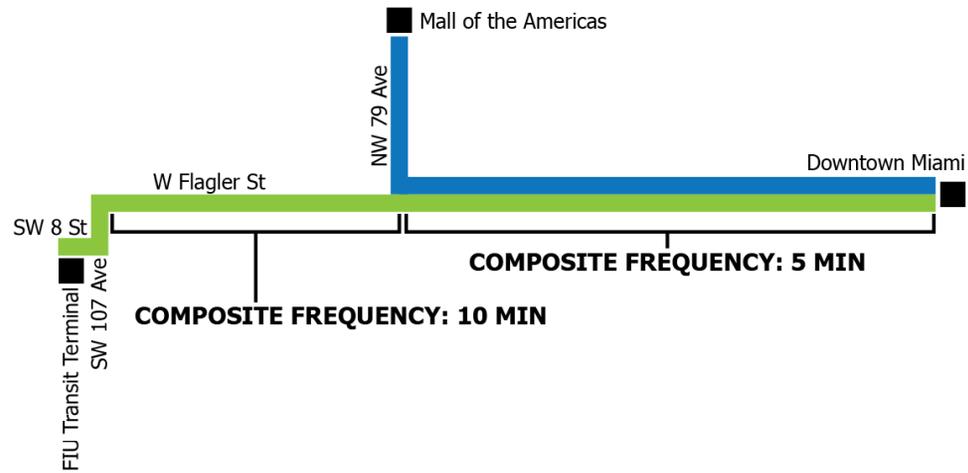
- Recommendation:
 - Concentrate all EBS service between FIU and Downtown Miami
 - Will improve travel times by:
 - Increasing frequency in some segments
 - Shifting trips to Limited Stop EBS service



Proposed Flagler EBS Service Plan



Flagler EBS: Peak Service Plan



Proposed Peak Service Frequencies

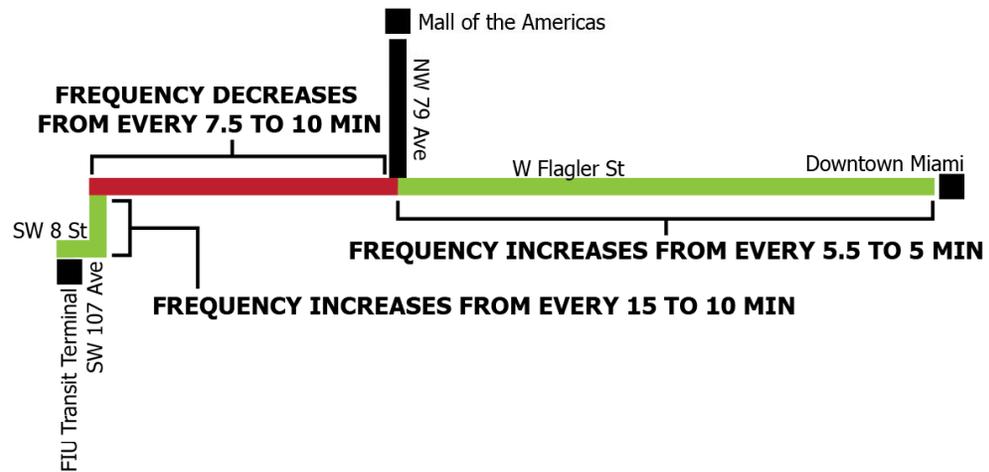
- Flagler EBS - Every 10 minutes
- Local - Every 10 minutes



Proposed Flagler EBS Service Plan



Flagler EBS: Peak Service Changes



Proposed Change in Service Levels

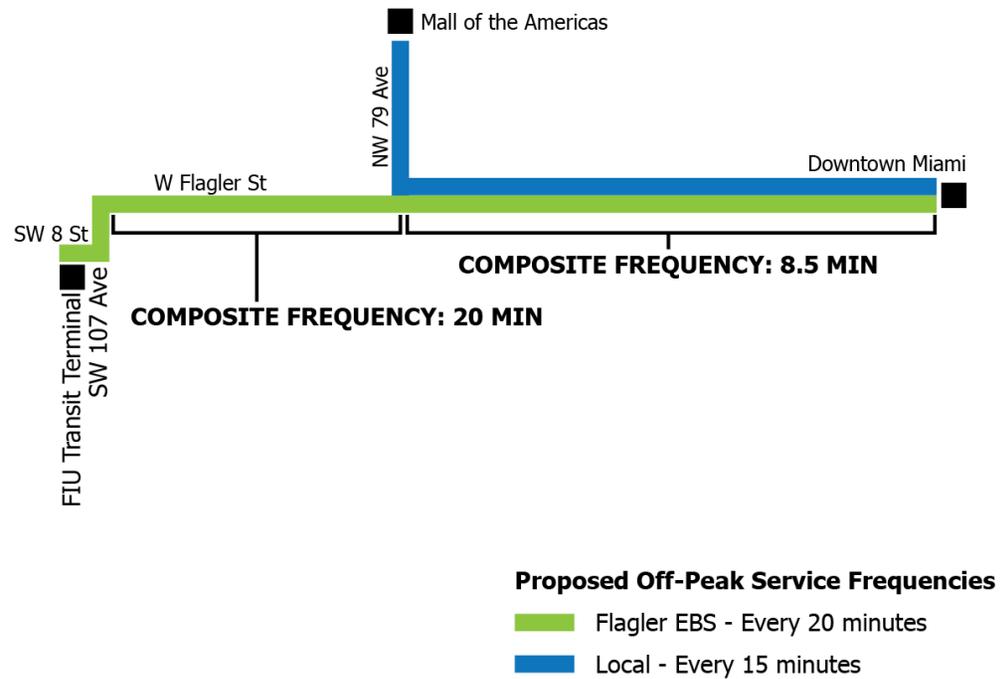
-  Service Level Increase
-  Service Level Decrease
-  No Change in Service Level



Proposed Flagler EBS Service Plan



Flagler EBS: Off-Peak Service Plan

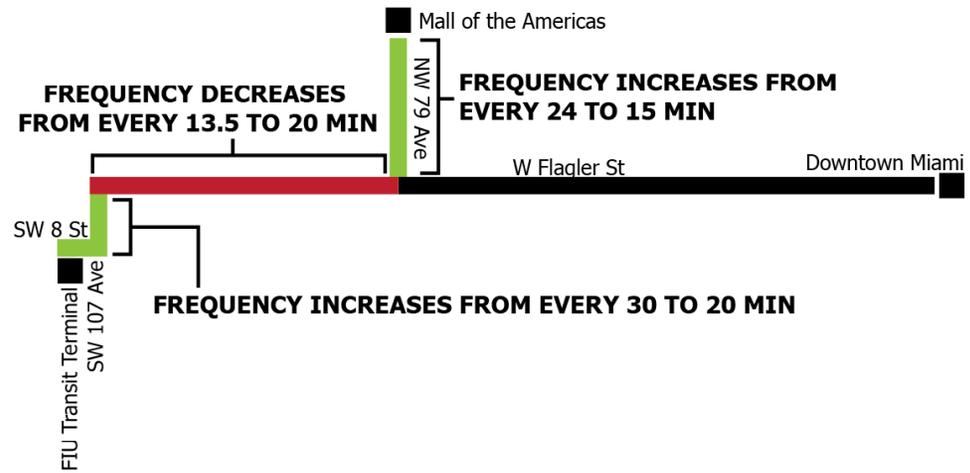




Proposed Flagler EBS Service Plan



Flagler EBS: Off-Peak Service Changes

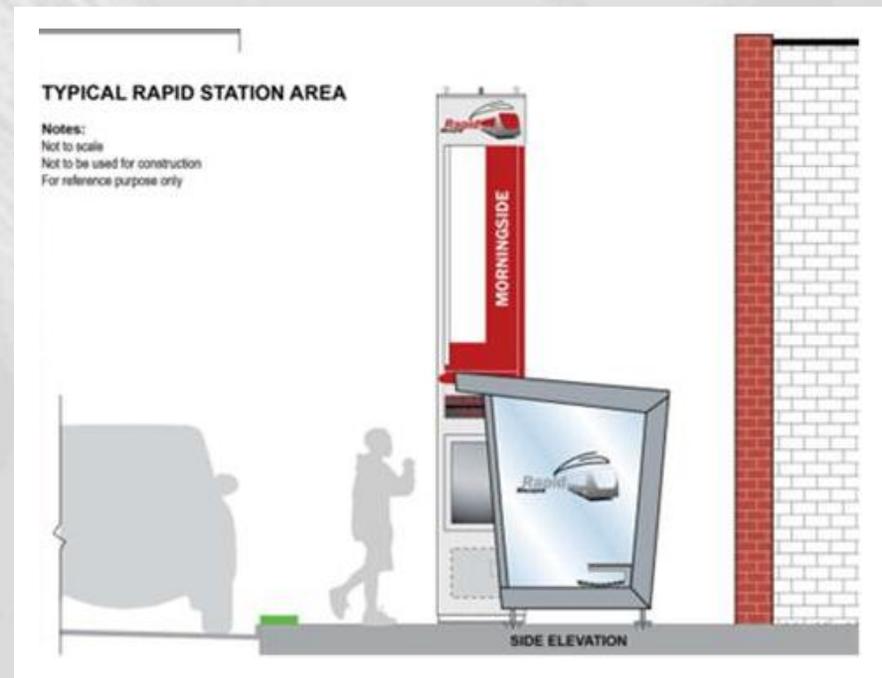


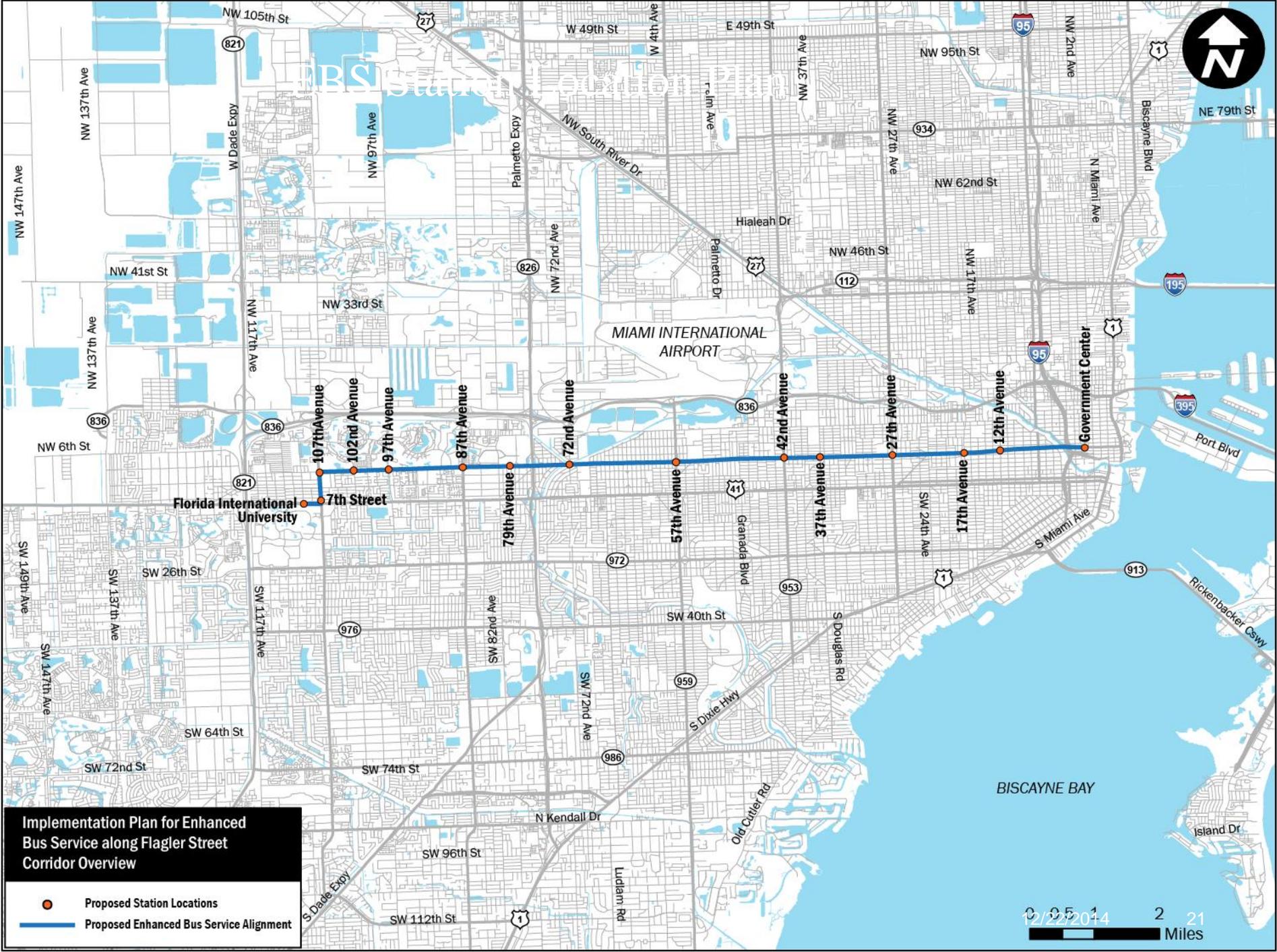


Recommended EBS Station Location Plan



- 28 mainline stations
- 1 Transit Center - New Panther Station at FIU
- 14 connecting stations at cross routes (eastbound and westbound):
 - 12th Avenue
 - 17th Avenue
 - 27th Avenue
 - 37th Avenue
 - Le Jeune/42nd Avenue
 - 57th Avenue
 - 107th Avenue





Implementation Plan for Enhanced Bus Service along Flagler Street Corridor Overview

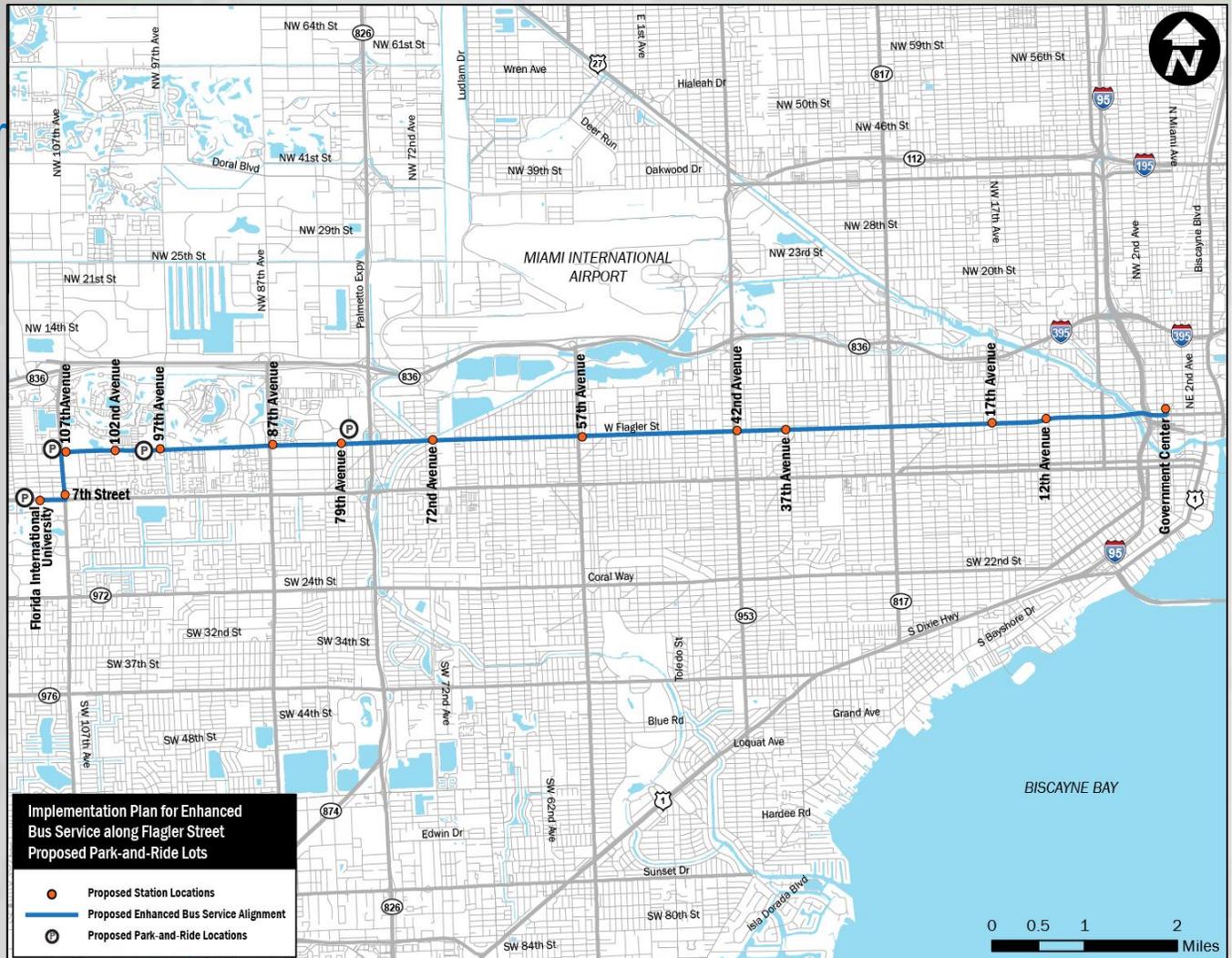
- Proposed Station Locations
- Proposed Enhanced Bus Service Alignment



Proposed Park-and-Ride Locations



- Panther Transit Center at FIU
- Flagler Street at 107th Avenue
- Flagler Street at SW 99th Street
- Mall of the Americas

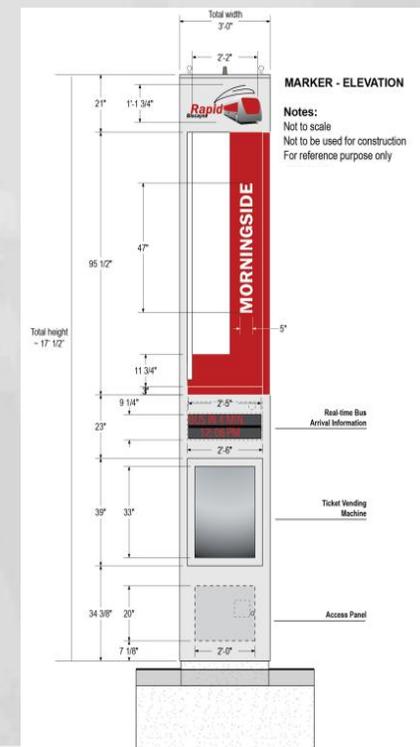




Proposed EBS Implementation Plan



- EBS Branded Service
- Immediate to Short Term (5 years)
 - EBS and local service
 - Peak period curbside lane east of NW 24th Avenue
 - Implement Transit Signal Priority
 - First tier of Queue jump locations
 - Park-and-Ride lots
- Short to Medium Term (5-10 years)
 - Peak period curbside lane with reversible center lane between 72nd Avenue and 24th Avenue
 - Second Tier of Queue Jump Lanes





EBS Implementation Plan



•Estimated Existing Operating Costs

	Revenue Hours	Cost per Revenue Hour	Revenue Miles	Cost per Revenue Mile	Operations Cost
Existing Route 11	67,424	\$52.65	725,979	\$3.16	\$5,843,975
Existing Route 51 - Flagler Max	24,718	\$52.65	380,205	\$3.16	\$2,502,851
Total	92,142	-	1,106,184	-	\$8,346,826

•Projected Project Operating Costs

	Revenue Hours	Cost per Revenue Hour	Revenue Miles	Cost per Revenue Mile	Operations Cost
Proposed Flagler EBS	28,013	\$52.65	430,899	\$3.16	\$2,836,504
Proposed Local Service	74,462	\$52.65	801,353	\$3.16	\$6,452,712
Total	102,475	-	1,232,252	-	\$9,289,216



EBS Implementation Plan



- Estimated Capital Costs and Projected Change in Operating Costs

Total Capital Costs	Net Projected Change in Total Annual O&M Costs
\$35,592,000	\$942,391



Questions?