

Dade County
Metropolitan Planning
Organization

**Dade County
Transit Corridors
Transitional Analysis**

**Technical
Memorandum
Task 5:**
Detailed Definition
of Alternatives

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DADE COUNTY TRANSIT CORRIDORS TRANSITIONAL ANALYSIS

DETAILED DEFINITION OF ALTERNATIVES

This technical report describes in detail the various transit improvement alternatives analyzed and evaluated in each corridor. These detailed alternatives were developed in working sessions of the project team and with the MPO and reviewed at meetings of the project steering committee. These definitions include descriptions of services and station locations, and serve as the basis for ridership forecasts, capital and operating/maintenance cost estimates, and environmental assessments. The alternatives were developed on 1" = 400' scale aerial photos.

The following alternatives are described:

- System-wide TSM Alternative, including South Dixie Busway, Palmetto Metrorail Extension, and Airport Multimodal Access Facility.

South Corridor

- S1 Busway
- S2 "Hybrid" Metrorail
- S3 Metrorail

Kendall Corridor

- K1 Busway
- K2 "Hybrid" Metrorail
- K3 Metrorail

North Corridor

- N1 Reversible Bus Lane
- N2 Direct Metrorail
- N3 Golden Glades Metrorail

Northeast Corridor

- NE1 Busway
- NE2 Standard LRT
- NE3 "Hybrid" Metrorail
- NE4 Metrorail

West Corridor

- W1 Direct Metrorail
- W2 "Hybrid" Metrorail via SR 836
- W3 "Hybrid" Metrorail via SR 836 / SW 8th Street
- W4 Standard LRT via Flagler Street

Beach Corridor

- B1 MacArthur Causeway LRT

West Corridor-Beach Corridor Transit Proposal

- WB1 "Hybrid" LRT via Metrorail/MacArthur Causeway
- WB2 "Hybrid" LRT via SR 836/ MacArthur Causeway
- WB3 "Hybrid" LRT via SR 836/ Government Cut Tunnel

The following assumptions are included in all alternatives:

1. Current jitney service patterns will continue in both TSM and alternatives.
2. In order to provide comparability of various alternatives, additional Metrorail service will be provided from Dadeland to the Civic Center in the TSM Alternative and variations of this service will be included in all alternatives. (See TSM below.)

3. No systematic improvements to traffic operations are anticipated for the highway network except for an AM peak period reversible flow lane on Flagler Street, which will be included in TSM and all alternatives.

SYSTEM-WIDE TSM ALTERNATIVE

A county-wide Transportation Systems Management (TSM) Alternative is used as the basis against which alternatives in each corridor are analyzed. Elements of the TSM alternative are also included in corridor specific alternatives, unless specifically replaced by elements of the alternatives. The TSM alternative includes:

- Extension of Metromover to the Brickell and Omni areas and re-orientation of bus service to reduce bus demands on congested downtown streets.
- Additional Metrorail service from Dadeland South to Civic Center. In order to reflect a future need for increased service frequency on the central and southern segments of the Stage I Metrorail line and to provide a uniform comparison of various alternatives, an additional "short-turn" service from Dadeland South to the Earlington Heights Station is included in the TSM Alternative. The additional service would decrease the headways on that segment of the line, from 7.5 minutes to 3.75 minutes in peak periods, and from 15-20 minutes to 7.5 minutes in off-peak periods. The additional "short-turn" service will be modified as described in each alternative with through service on the Stage I Metrorail Line to extend to the new branches.
- Construction of a South Corridor busway along the South Dixie Highway from Cutler Ridge to Dadeland South, including the construction of several park-and-ride lots and the addition of express and park-and-ride bus service to Dadeland South from the Homestead/Florida City area and along the corridor.
- Extension of the Stage I Metrorail Line to a new station just west of the Palmetto expressway.
- The planned Multimodal Terminal near Miami International Airport and on-airport people mover system served by Tri-Rail and various Metrobus routes.
- Creation of park-and-ride lots and transit centers in the west corridor, with express bus service to the CBD via SR 836.
- Addition of a West Corridor MAX service from FIU to downtown Miami along SW 8th Street and Flagler Street, addition of a Beach MAX service from 71st Street to downtown Miami, and addition of a NW 67th Avenue MAX service from the Miami Springs area to the employment centers west of the airport.
- Extension of several local bus routes to serve growing areas in the western part of the county, as well as addition of new crosstown and other local routes connecting suburban growth areas.

SOUTH CORRIDOR

The South Dixie Busway as currently planned is included in the TSM Alternative for the South Corridor.

S1. Busway

This alternative consists of a busway along the F.E.C. right-of-way from the Dadeland South Metrorail station to SW 344th Street in Homestead.

Alignment:

- The alignment is within the F.E.C. right-of-way from the Dadeland South Metrorail station to SW 344th Street.

Stations:

- Stations would provide a pull-out where buses continuing through could pass stopped buses.
- Station locations are as indicated on the following page.
- Park-and-ride facilities are provided at all stations.

Operations:

- Buses would circulate within neighborhoods along the busway, then enter the busway and run to the Dadeland South Metrorail Station where passengers to other points in Dade County would transfer to Metrorail.
- Operations would be as described for the proposed South Dixie Busway except that buses from south of Cutler Ridge would be on the busway and make all stops listed south of that point.

S2. "Hybrid" Metrorail

This alternative consists of a "hybrid" light rail line along the F.E.C. right-of-way from the Dadeland South Metrorail station to SW 344th Street in Homestead/Florida City.

Alignment:

- The alignment is within the F.E.C. right-of-way from the Dadeland South Metrorail station to SW 344th Street.
- Alignment would be entirely at grade but would have standard railroad crossing gates allowing trains to preempt cross traffic.

Stations:

- Station locations are as indicated on the following page.
- Park-and-ride facilities are provided at all stations.

Operations:

- "Hybrid" Metrorail vehicles (fitted with pantographs for overhead power collection) would continue on the Stage I Metrorail line for a one-seat ride to downtown and points to the north.
- Bus routes in the area around the rail line would be adjusted to feed the rail stations.
- Operationally, the service would be an extension of the TSM "short turn route" operating at headways of 7.5 minutes peak and 15 minutes off-peak.

S3. Metrorail

This alternative consists of a grade-separated extension of Metrorail along the F.E.C. right-of-way from the Dadeland South Metrorail station to SW 344th Street in Homestead/Florida City.

Alignment:

- The alignment is within the F.E.C. right-of-way from the Dadeland South Metrorail station to SW 344th Street.
- Alignment would be entirely grade separated (elevated) at crossings. Some sections where no crossings are needed may be at grade.

Stations:

- Station locations are as indicated below.
- Park-and-ride facilities are provided at all stations.

Operations:

- Operation of this alternative would be similar to the "hybrid" Metrorail alternative discussed above.

SOUTH CORRIDOR STATIONS**Busway
Alternative**

Killian Dr. (SW 112th Street)
Chapman Field Dr. (SW 124th St.)
Howard Dr. (SW 136th St.)
Coral Reef Dr. (SW 152nd St.)
Perrine (SW 175th Street)
Marlin Road (SW 193rd St.)
Caribbean Blvd.(202nd Street)
Goulds (226th Street)
Coconut Palm Dr. (248th Street)
Moody Drive (268th Street)
Biscayne Drive (288th Street)
Campbell Drive (312th Street)
Florida City (344th Street)

**"Hybrid" LRT & Metrorail
Alternatives**

Killian Dr. (SW 112th Street)
Howard Dr. (SW 136th St.)
Coral Reef Dr. (SW 152nd St.)
Perrine (SW 175th Street)
*Marlin Road (SW 193rd St.)
Caribbean Blvd.(202nd Street)
Goulds (226th Street)
*Coconut Palm Dr. (248th Street)
Moody Drive (268th Street)
Biscayne Drive (288th Street)
Campbell Drive (312th Street)
Florida City (344th Street)

- * Omit in Metrorail alternative.

KENDALL CORRIDOR

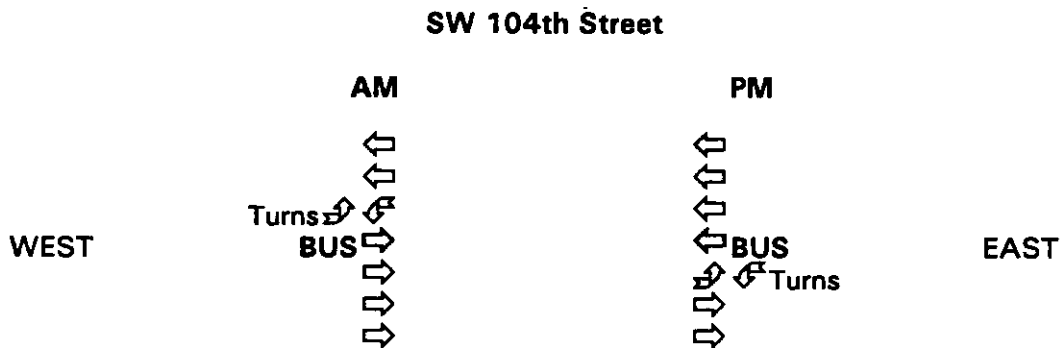
K1. Busway

This alternative consists of a reversible busway on the Snapper Creek and Shula Expressways and a reversible bus lane on SW 104th Street.

Alignment:

- Transfer from Metrorail to buses at Dadeland North Metrorail Station.
- Follow existing mixed traffic ramps to the Snapper Creek Expressway (SR 878),
- at-grade exclusive reversible bus lane in the median of the Snapper Creek Expressway (SR 878),
- one-lane reversible ramp over northbound Shula Expressway and Kendall Drive intersection to side or median of Shula Expressway (SR 874),
- reversible fly-over ramp to center of SW 104th Street west of 97th Avenue,
- reversible bus lane in the center of SW 104th Street west to SW 137th Avenue.
- An additional transit-only fly-over ramp would be provided from the busway to Kendall Drive.

Arrangement of SW 104th Street would be reconfigured in the morning and evening by lane signals to provide three traffic lanes and a bus lane in peak direction and two lanes in reverse direction, plus a turn lane, as follows:



Stations:

- Stops (small median islands) approximately every half-mile on SW 104th Street as indicated at the end of this section.
- Park-and-ride facilities:
 - SW 127th Avenue and 104th Street.
 - SW 137th Avenue at SW 96th Street (off-line).

Operations:

- Express route collects at the 127th Avenue and 137th Avenue park-and-ride facilities and follows bus lanes to Dadeland North. Peak periods, peak direction only, 10-minute headway on each.
- Limited-stop routes circulate in neighborhoods, then enter bus lane, make all stops on 104th Street, then operate non-stop to Dadeland North. Peak periods, peak direction only, 10-minute headways. Sunset and Kendall KATs remain unchanged, Killian KAT is replaced.
- Local bus route and any buses operating in the reverse direction operate in local traffic on SW 104th Street.

- South County areas continue to be served by TSM routes from the South Dixie Busway.

K2. "Hybrid" Metrorail

The "hybrid" Metrorail alternative would operate at-grade in the median of Kendall Drive.

Alignment:

- Line diverges from the Stage I Metrorail line just south of the Dadeland North Station and returns to grade in the median of Kendall Drive east of the Palmetto Expy. (SR 826),
- continues as a double track line on exclusive right-of-way in the median of Kendall Drive to SW 137th Avenue.

Stations:

- In-median stations would be located at approximately 0.9-mile intervals as indicated on the following page.
- Park-and-Ride facilities would be provided at:
 - SW 97th Avenue
 - SW 117th Avenue
 - SW 127th Avenue
 - SW 137th Avenue

Operations:

- "Hybrid" rail vehicles would continue on the Stage I Metrorail line to Civic Center at headways of 7.5 minutes peak and 15 minutes off-peak. Rail vehicles would be governed by traffic signals on Kendall, no signal preemption is applied.
- KAT service: Sunset KAT remains unchanged, Killian KAT terminates at 97th Avenue/Kendall Drive LRT station, Kendall KAT is eliminated.
- Local bus service: Route 88/88A provides local service on Kendall at reduced frequencies. Existing north-south routes are reconfigured to feed rail stations where required. Additional routes (from TSM) feed rail service.
- South County areas are served by buses to South Dixie Busway.

K3. Metrorail

This alternative consists of an elevated extension of the Metrorail line on the Snapper Creek Expressway and Kendall Drive.

Alignment:

- Diverges from the Stage I Metrorail line north of the Dadeland North Station,
- runs at-grade in the median of the Snapper Creek Expressway (SR 878),
- climbs on structure over the Shula Expressway (SR 874) to align with Kendall Drive median,
- runs elevated over the median of Kendall Drive to SW 137th Avenue.

Stations:

- Stations would be located at approximately 1.5-mile intervals as indicated on the next page.
- Park-and-ride facilities would be located at all stations except SW 87th Avenue.

Operations:

- Kendall Metrorail trains would operate to Civic Center at headways of 7.5 minutes peak and 15 minutes off-peak.

- KAT service: Sunset KAT remains unchanged, Killian KAT terminates at 97th Avenue/Kendall Drive LRT station, Kendall KAT is eliminated.
- Local bus service: Route 88/88A provides local service on Kendall at reduced frequencies. Existing north-south routes are reconfigured to feed LRT stations where required. Additional routes (from TSM) feed LRT.
- Southwest County area bus routes are directed to the Kendall Metrorail line.

KENDALL CORRIDOR STATIONS**Busway
Alternative (K1)**

Dadeland North
MDCC South
SW 117th Avenue
SW 127th Avenue P/R
SW 137th Avenue
Off-Line P/R (137 Av)

**"Hybrid" Metrorail
Alternative (K2)**

SW 78th Avenue
SW 87th Avenue (Hosp.)
SW 97th Avenue P/R
SW 107th Avenue
SW 117th Avenue P/R
SW 127th Avenue P/R
SW 137th Avenue P/R

**Metrorail
Alternative (K3)**

SW 87th Avenue
SW 99th Avenue
P/R
SW 107th Avenue
P/R
SW 123rd Avenue
P/R
SW 137th Avenue
P/R

NORTH CORRIDOR

N1. Reversible Bus Lane

This alternative consists of a reversible bus lane in the median of NW 27th Avenue.

Alignment:

- From the Northside Metrorail Station buses would operate in mixed traffic on NW 79th Street,
- one lane reversible busway begins in median of NW 27th Avenue at NW 79th Street and continues in median to NW 199th Street.
- No bus bays are provided, express buses must follow buses making stops.

Stations:

- On-line stops are provided for MAX limited-stop service at intervals of approximately 1.0 miles as indicated at the end of this section.
- Park-and-ride facilities would be provided at:
 - NW 119th Street
 - NW 166th Street (Palmetto Expy.)
 - NW 199th Street (Joe Robbie Stadium) (off-line facility)

Operations:

- Busway operates one-way in peak direction, all buses in opposite direction operate in mixed traffic. No signal preemption for buses.
- Express bus routes circulate in neighborhoods, collect at the 119th Street, 166th Street, or Joe Robbie Stadium park-and-ride facilities, then operate no-stop to Northside station. Headway = 15-30 min.
- 95X route from Miami Lakes would be rerouted to the busway via 166th Street park-and-ride.
- New express from Golden Glades to Metrorail via busway.
- 27th Avenue MAX uses busway and makes all stops.
- Route 27 would continue to operate in mixed traffic on NW 27th Avenue. East-west local routes would be rerouted to serve busway stations or park-and-rides where required.

N2. Direct Metrorail

This alternative consists of an extension of the Metrorail line north on NW 27th Avenue to NW 215th Street.

Alignment:

- The two track alignment branches from the Stage I Metrorail line at NW 79th Street,
- continues elevated over the median of NW 27th Avenue (and over the Palmetto Expy.) to 199th Street,
- diverges east at NW 199th Street over the Joe Robbie Stadium parking lot to a JRS station and park-and-ride facility,
- returns to NW 27th Avenue and continues to an end station south of the HEFT.

Stations:

- Stations would be located at approximately 1.2-mile intervals as indicated in the list at the end of this section.
- Park-and-ride facilities would be located at all stations except NW 113th Street (MDCC).

Operations:

- North line Metrorail trains would operate to Dadeland South at headways of 7.5 minutes peak and 15 minutes off-peak.
- Express bus routes (95X) are eliminated, replaced by existing local routes which feed rail stations.
- New express from Golden Glades to Metrorail extension at NW 135th Street.
- Route 27 would continue to operate in mixed traffic on NW 27th Avenue. East-west local routes would be rerouted to serve stations where required.
- 27th Avenue MAX eliminated.

N3. Metrorail via Golden Glades

This alternative consists of an extension of the Metrorail line to NW 215th Street via NW 27th Avenue and the Golden Glades Park-and-Ride Facility.

Alignment:

- The two track alignment branches from the Stage I Metrorail line at NW 79th Street,
- continues elevated over the median of NW 27th Avenue to the F.E.C. right-of-way,
- turns northeast on along the F.E.C. and returns to grade east of NW 22nd Avenue,
- after at-grade station along Tri-Rail Golden Glades park-and ride station, alignment climbs on structure over Palmetto Expressway ramps and follows west side of Florida's Turnpike to NW 199th Street,
- turns northwest over the Joe Robbie Stadium parking lot to a JRS station and park-and-ride facility on the northeast side of the stadium,
- continues elevated along the north side of JRS parking lots to NW 27th Avenue
- follows median of NW 27th Avenue to end south of the HEFT.

Stations:

- Stations would be located at approximately 1.5 mile intervals as indicated on the following page.
- Park-and-ride facilities would be located at all stations except NW 113th Street (MDCC).

Operations:

- North line Metrorail trains would operate to Dadeland South at headways of 7.5 minutes peak and 15 minutes off-peak.
- Express bus routes (95X) are eliminated, replaced by existing local routes which feed rail stations.
- Route 27 would continue to operate on NW 27th Avenue at reduced headways. East-west local routes would be rerouted to serve stations where required.
- 27th Avenue MAX eliminated.

NORTH CORRIDOR STATIONS**Bus Lane
Alternative (N1)**

NW 103rd Street
NW 113th St. (MDCC)
NW 119th St. P/R
NW 135th Street
NW 151st Street
NW 166th Street P/R
(Palmetto Expy.)
NW 183rd Street
Off-line NW 199th
Street P/R (JRS)

**Direct Metrorail
Alternative (N2)**

NW 103rd Street P/R
NW 113th St. (MDCC)
NW 135th Street P/R
NW 166th Street P/R
(Palmetto Expy.)
NW 183rd Street P/R
NW 199th Street P/R
(Joe Robbie Stad.)
NW 215th Street P/R
(Calder, HEFT)

**Metrorail via
Golden Glades
Alternative (N3)**

NW 103rd Street
P/R
NW 113th St.
(MDCC)
NW 135th Street
P/R
Golden Glades P/R
NW 183rd Street
P/R
Joe Robbie Stad.
P/R
NW 215th Street
P/R

NORTHEAST CORRIDOR

NE1. Busway

This alternative consists of a busway in the F.E.C. right-of-way from downtown Miami to N.E. 199th Street.

Alignment:

- The two-lane, at-grade busway would begin at NW 5th Street downtown and follow the F.E.C. right-of-way north to NE 199th Street.

Stations:

- The busway would include stops at approximately 1.0-mile intervals as indicated in the list on the following page.
- Bus bays would be provided at all stops to allow non-stop express buses to pass stopped buses.
- Park-and-ride facilities are same as TSM (Aventura Mall, 163rd, 125th, and 79th Streets).

Operations:

- Express buses circulate in neighborhoods (including beach communities) and/or serve a section of Biscayne Boulevard (US 1) with local service, stop at one of the park-and-ride facilities, then run non-stop to downtown where they circulate on a loop through downtown Miami. This arrangement provides one-seat rides from points along Biscayne Boulevard and in neighborhoods to downtown, local circulation along Biscayne, but prevents long rides on Biscayne from competing with busway services.
- A MAX bus route would make all stops on the busway, serve the Aventura Mall park-and-ride, and continue to Diplomat Mall in Broward County.
- Local service would be provided along Biscayne Boulevard by the northern segment of routes which enter the busway and become express to downtown Miami.
- Bus bays would be provided at all stops to allow non-stop express buses to pass stopped buses.

NE2. Standard Light Rail Transit

This alternative consists of an LRT line in the F.E.C. right-of-way which terminates in downtown Miami.

Alignment:

- The at-grade, two track line would begin adjacent to the Government Center Metrorail/Metromover station and follow the F.E.C. right-of-way to N.E. 199th Street.
- Street crossings near major intersections would be governed by traffic signals in conjunction with the intersections (no preemption), crossings farther from major intersections where cars can queue without obstructing intersections would have standard railroad crossing gates.

Stations:

- Stations would be located at approximately 1.0-mile intervals as indicated in the list at the end of this section.
- Park-and-ride facilities would be located at:
 - NE 79th Street
 - NE 125th Street
 - NE 163rd Street
 - NE 199th Street

Operations:

- Northeast Corridor trains would operate from Aventura Mall to Downtown on headways of 7.5 minutes peak and 15 minutes off-peak.
- Grade crossings would be governed by traffic signals where near intersections (no preemption) or by standard gates where farther from intersections (preemption).
- East-west bus routes would be adjusted to feed LRT stations, where required.
- Local service will be provided on Biscayne Boulevard by short, overlapping routes, each approximately three to four miles long, serving stations at both ends of each route.
- 95X to Aventura is eliminated.

NE3. "Hybrid" Metrorail

This alternative consists of a "hybrid" Metrorail line in the F.E.C. right-of-way which branches from the Stage I Metrorail line.

Alignment:

- The two track line would diverge from the Stage I Metrorail line north of the Overtown Station and follow the F.E.C. right-of-way to N.E. 199th Street.
- Overpasses would be provided at the following locations:
 - Metrorail junction to NW 11th Street
 - NE 79th Street
 - NE 163rd Street
 - NE 185th Street
- Other street crossings near intersections would have signal preemption and gates, crossings farther from intersections would have standard crossing gates.

Stations:

- Stations would be located at approximately 1.0-mile intervals as indicated in the list on the following page.
- Park-and-ride facilities would be located at
 - NE 79th Street
 - NE 125th Street
 - NE 163rd Street
 - NE 199th Street

Operations:

- Northeast Corridor trains would operate from Aventura Mall to Dadeland South on headways of 7.5 minutes peak and 15 minutes off-peak. Passengers to points on Metrorail would make a convenient transfer at Overtown or Government Center.
- East-west bus routes would be adjusted to feed LRT stations, where required.
- Local service will be provided on Biscayne Boulevard by short, overlapping routes, each approximately three to four miles long, serving stations at both ends of each route.
- 95X to Aventura is eliminated.

NE4. Metrorail

This alternative consists of a grade-separated extension of Metrorail from the Overtown Station to NE 199th Street on the F.E.C. right-of-way.

Alignment:

- The elevated line would diverge from the Stage I Metrorail line north of the Overtown Station and follow the F.E.C. right-of-way to N.E. 199th Street.

Stations:

- Stations would be located at approximately 1.5-mile intervals as indicated below.
- Park-and-ride facilities would be located at all stations except 15th Street.

Operations:

- Northeast Corridor trains would operate from Aventura Mall to Dadeland South on headways of 7.5 minutes peak and 15 minutes off-peak.
- East-west bus routes would be adjusted to feed stations, where required.
- Local service will be provided on Biscayne Boulevard by short, overlapping routes, each approximately three to four miles long, serving stations at both ends of each route.

NORTHEAST CORRIDOR STATIONS

Busway Alternative (NE1)	Standard LRT and "Hybrid" Metrorail Alts. (NE2,NE3)	Metrorail Alternative (NE4)
Downtown Miami	Downtown Miami	NW 15th Street
Overtown	Overtown	NE 36th Street P/R
NW 15th Street	NW 15th Street	NE 54th Street P/R
NE 20th Street	NE 20th Street	NE 79th Street P/R
NE 36th Street	NE 36th Street	NE 96th Street P/R
NE 46th Street	NE 54th Street	NE 125th Street
NE 54th Street	NE 61st Street	P/R
NE 61st Street	NE 79th Street P/R	NE 135th Street
NE 79th Street P/R	NE 96th Street	P/R
NE 96th Street	NE 125th Street P/R	NE 163rd Street
NE 125th Street P/R	NE 135th Street	P/R
NE 135th Street	NE 163rd Street P/R	NE 199th Street
NE 151st Street	NE 185th Street	P/R
NE 163rd Street P/R	NE 199th Street P/R	(Aventura Mall)
NE 185th Street	(Aventura Mall)	
NE 199th Street P/R (Aventura Mall)		

WEST CORRIDOR

The following assumptions apply to all West Corridor alternatives:

- The Airport Multimodal Access Facility and transit loop connecting the Facility to the airport terminal are included in TSM and, therefore, are present in all alternatives.
- No commuter park-and-ride is provided at the Multimodal Facility.
- Extension of Tri-Rail to the Multimodal Facility site is included in TSM and all alternatives.
- The Multimodal Facility is assumed to be located in the vicinity of NW 21st Street and LeJeune Road (sites 4 or 5).
- An alternative configuration for service to the airport in conjunction with the SR 836 alignments (W2 and W3) has been identified for further evaluation. In this configuration, an airport transfer station would be located along the north or south side of SR 836 west of LeJeune Road. The airport to multi-modal center transit facility would link this station to the terminal and other Multimodal Facility functions. This configuration eliminates the need for multiple branch services on the west line. A connection for through service to the airport terminal would be provided.

W1. Direct Metrorail

This alternative consists of a Metrorail line along SR 836, through the Airport Multimodal Center, to the Stage I Metrorail line at Earlington Heights.

Alignment:

- This Metrorail alignment begins at Florida International University (FIU) along the Turnpike Extension.
- From FIU the alignment follows the east side of the Turnpike Extension north to SR 836,
- turns east along the south side of SR 836,
- diverges south to approximately NW 8th Street in the vicinity of the Palmetto Expressway and Miami Merchandise Mart,
- returns to the south side of SR 836 and continues east to the Blue Lagoon area where it transitions to the north side of SR 836,
- Turns north along NW 42nd Avenue (Le Jeune Road) to NW 21st Street, then east to the Airport Multimodal Access Facility,
- continues north to the Airport Expressway (SR 112),
- turns east to join the Stage I Metrorail line west of Earlington Heights Station.

Stations:

- Stations would be as indicated in the list at the end of this section.
- Park-and-ride would be located at all stations west of the Airport Multimodal Center.
- No commuter park-and-ride would be provided at the Airport Multimodal Center.

Operations:

- West Corridor trains operate from F.I.U. to Dadeland South at headways of 7.5 minutes peak and 15 minutes off-peak.
- Express buses from West Dade are eliminated.
- Local north-south buses are rerouted to serve stations, where required.
- Bus service along Flagler Street would be enhanced including service to connect the Flagler Street corridor to the Airport Multimodal Access Facility.

W2. "Hybrid" Metrorail via SR 836

This alternative consists of a "hybrid" Metrorail alignment along SR 836 and a branch to the Airport Multimodal Access Facility.

Alignment:

- The alignment begins at Florida International University (FIU) along the Turnpike Extension.
- From FIU the alignment follows the east side of the Turnpike Extension north to SR 836,
- turns east along the south side of SR 836,
- diverges south to approximately NW 8th Street in the vicinity of the Palmetto Expressway and Miami Merchandise Mart,
- returns to the south side of SR 836 and continues east to the Miami River,
- follows NW 11th Street to join the Stage I Metrorail Line west of Culmer station.
- Airport Branch begins at the Airport Multimodal Access Facility,
- follows NW 42nd Avenue south to SR 836 where a "Y" junction allows service to the east and west.
- This alternative would be fully grade-separated at crossings.
- This alternative may be designed for "hybrid" LRT or Metrorail vehicles.

Stations:

- Stations would be located at approximately 1.1-mile intervals as indicated in the list at the end of this section.
- Park-and-ride facilities would be located at all stations from F.I.U. to NW 42nd Avenue.

Operations:

- Three rail services will be operated:
 - F.I.U. to Brickell Station at headways of 7.5 minutes peak and 15 minutes off-peak.
 - F.I.U. to Airport at headways of 15 minutes peak and off-peak.
 - Airport to Dadeland South at headways of 7.5 minutes peak and 15 minutes off-peak.
- Express buses from West Dade are replaced by LRT.
- Local north-south buses are rerouted to serve stations, where required.

W3. "Hybrid" Metrorail via SR 836/SW 8th Street

This alternative consists of a "hybrid" Metrorail alignment along SR 836, the Blue Lagoon area, and SW 8th Street and a branch to the Airport Multimodal Access Facility.

Alignment:

- "hybrid" Metrorail alignment begins at Florida International University (FIU),
- crosses intersection of SW 8th Street and SW 107th Avenue on elevated structure and returns to grade in median of SW 8th Street,
- continues in median of SW 8th Street to the F.E.C. Rwy. right-of-way (at SW 70th Avenue),
- turns north on the F.E.C. to the Tamiami Canal,
- follows the Tamiami Canal to join SR 836 in the vicinity of Red Road,
- continues on the south side of SR 836 east to the Miami River,
- follows NW 11th Street to join the Stage I Metrorail Line west of Culmer station.
- Airport Branch begins at the Airport Multimodal Access Facility,

- follows NW 37th Avenue south to SR 836 where a "Y" junction allows service to the east and west.
- Trains receive signal preemption on SW 8th Street west of F.E.C. right-of-way. Alignment would be fully grade-separated at crossings east of the F.E.C. right-of-way.

Stations:

- Stations would be located at approximately 1.0-mile intervals as indicated in the list at the end of this section.
- Park-and-ride facilities would be located at the following locations:
All stations from F.I.U. to NW 42nd Avenue except 107th Avenue.

Operations:

- Three rail services will be operated:
-F.I.U. to Brickell Station at headways of 7.5 minutes peak and 15 minutes off-peak.
-F.I.U. to Airport at headways of 15 minutes peak and off-peak.
-Airport to Dadeland South at headways of 7.5 minutes peak and 15 minutes off-peak.
- Trains to F.I.U. must use "hybrid" LRT equipment due to at-grade operation and through operation on Stage I Metrorail line (no regular LRT or Metrorail vehicles). Alignment east of the Airport may be designed for Metrorail equipment.
- Express buses from West Dade are replaced by LRT.
- Local north-south buses are rerouted to serve stations, where required.
- LRT would have signal preemption at crossings. Most left turns between major intersections on SW 8th Street would be eliminated.

W4. Standard LRT via Flagler Street

This alternative consists of an LRT alignment on Flagler Street and SW 8th Street.

Alignment:

- LRT alignment begins at Florida International University (FIU),
- crosses intersection of SW 8th Street and SW 107th Avenue on elevated structure and returns to grade in median of SW 8th Street,
- continues in median of SW 8th Street to the F.E.C. Rwy. right-of-way (at SW 70th Avenue),
- turns north on the F.E.C. to Flagler Street,
- turns east on Flagler Street, operating in mixed traffic along curb lanes to NW 25th Avenue,
- operates in exclusive rights-of-way on left sides of Flagler Street and SW 1st Street to approximately 8th Avenue,
- tracks are rejoined and transition to NW 1st Street in the vicinity of 8th Avenue, then climb on structure over the Miami River,
- continues elevated over I-95 and terminates at existing east-west station on third level of Metro-Dade Center.
- Airport Branch begins on the Airport Multimodal Access Facility,
- follows NW 37th Avenue to join the line from FIU in a "Y" junction at Flagler Street.
- Alignment is at-grade except structure over SW 107th Avenue / SW 8th Street intersection and bridge over Miami River and I-95 to Government Center.
- Trains receive signal preemption on SW 8th Street west of F.E.C. right-of-way. Operation is governed by traffic signals on Flagler east of F.E.C.

- On-street parking will be eliminated where present on Flagler Street between 25th Avenue and the F.E.C. right-of-way.

Stations:

- Stations would be located at approximately 0.75-mile intervals as indicated in the list on the following page.
- Park-and-ride facilities would be located at the following locations:
 - All stations from F.I.U. to Palmetto Expy./79th Ave. except 107th Avenue.
 - 57th Avenue.
 - NW 7th Street at 37th Avenue (on Airport Branch).

Operations:

- Three rail services will be operated:
 - F.I.U. to Government Center at headways of 7.5 minutes peak and 15 minutes off-peak.
 - F.I.U. to Airport at headways of 15 minutes peak and off-peak.
 - Airport to Government Center at headways of 7.5 minutes peak and 15 minutes off-peak.
- Express buses from West Dade are replaced by LRT.
- Local north-south buses are rerouted to serve stations, where required.
- LRT would have signal preemption at crossings west of F.E.C right-of-way. Most left turns between major intersections on SW 8th Street would be eliminated. LRTs would be governed by traffic signals (without preemption) on Flagler Street.

WEST CORRIDOR STATIONS

**SR 836
Alternative (W2)**

F.I.U. P/R
 107th Ave. P/R
 97th Ave. P/R
 87th Ave. P/R
 Palmetto Expy. P/R
 57th Ave. (Red Rd.) P/R
 42nd Ave. P/R

Airport Multimodal Facility

37th Ave.
 27th Ave.
 17th Ave. (Orange Bowl)
 12th Ave.

**SR 836/8th Street
Alternative (W3)**

F.I.U. P/R
 107th Ave.
 97th Ave. P/R
 87th Ave. P/R
 Palmetto Ex.-79 Av. P/R
 SW 8th Street @ F.E.C. P/R
 Flagler Street @ F.E.C. P/R
 57th Ave.(Red Rd.) P/R
 42nd Ave. (Le Jeune) P/R

Airport Multimodal Facility

37th Ave.
 27th Ave.
 17th Ave. (Orange Bowl)
 12th Ave.

**Direct Metrorail
Alternative (W1)**

F.I.U. P/R
 107th Ave. P/R
 97th Ave. P/R
 87th Ave. P/R
 Palmetto Expy. P/R
 57th Ave. (Red Rd.) P/R
 42nd Ave. P/R
 Airport Multimodal Facility

**Standard LRT via Flagler Street
Alternative (W4)**

F.I.U. P/R
 107th Ave.
 97th Ave. P/R
 87th Ave. P/R
 Palmetto Ex.-79 Av. P/R
 F.E.C. at 8th Street
 F.E.C. at Flagler St.
 57th Ave.(Red Rd.) P/R
 49th Ave.
 42nd Ave.

Airport Multimodal Facility
 7th St. P/R

37th Ave.
 32nd Ave.
 27th Ave.
 22nd Ave.
 17th Ave.
 12th St.
 8th Ave.
 Government Center Station

BEACH CORRIDOR

B1. Standard LRT via MacArthur Causeway

This alternative consists of an LRT alignment across the Mac Arthur Causeway to 71st Street in Miami Beach.

Alignment:

- Alignment begins at east-west station on third level of Government Center (elevated),
 - turns north over parking lots between Metrorail and NW 1st Avenue, passing over Metromover (elevated),
 - turns east to follow NE 7th Street to Biscayne Boulevard (elevated, passes over Metromover),
 - turns north to follow the east side of Biscayne Boulevard and the Metromover extension to the MacArthur Causeway,
- (Remainder of alignment is as described in the Miami Beach LRT Study plus an extension to 71st Street.)
- crosses Biscayne Bay in the median on the Causeway,
 - follows curb lanes on 5th Street to Washington Avenue,
 - turns north on Washington Street, passing the Miami Beach Convention Center,
 - follows Dade Boulevard, Indian Creek Drive, and Collins Avenue to 71st Street.

Stations:

- Stations would be located as indicated on the following page.
- Miami Beach stations are adopted from the Miami Beach Light Rail Transit Feasibility Study.
- Park-and-ride facilities would be located at the following locations:
 - Alton Road
 - 20th Street (Miami Beach Convention Center)
 - 71st Street

Operations:

- Trains operate at headways of 3.75 minutes peak and 7.5 minutes off-peak.
- Through local bus service is eliminated on Washington Avenue in Miami Beach. Other Miami Beach local bus services are reconfigured to compliment LRT service. Trans-bay service on MacArthur Causeway is eliminated.

BEACH CORRIDOR STATIONS

MacArthur Causeway

Alternative (B1)

Government Center	20th St. (Convention Center) P/R
Miami Avenue / Arena	23rd Street
Biscayne Boulevard / Bayside	26th Street
Bicentennial Park	33rd Street
Watson Island	41st Street
Palm Island	45th Street
Terminal Island	48th Street
Alton Road P/R	51st Street
Meridian Ave.	55th Street
7th Street	59th Street
12th Street	63rd Street
17th Street (Lincoln Rd. Mall)	71st Street P/R

WEST CORRIDOR - BEACH CORRIDOR TRANSIT PROPOSAL

This proposal includes aspects of the West and Beach Corridors and includes a connection from Miami International Airport to the Port of Miami via downtown Miami. The Airport Multimodal Access Facility and a transit loop connecting the Airport terminal to the Multimodal Facility are included in TSM and all alternatives and are assumed to be located along NW 21st Street.

An alternative configuration for service to the airport in conjunction with the SR 836 alignments (WB2 and WB3) has been identified for further evaluation. In this configuration, an airport transfer station would be located along the north or south side of SR 836 west of LeJeune Road. The airport to multi-modal center transit facility would link this station to the terminal and other Multimodal Facility functions. This configuration eliminates the need for multiple branch services on the west line. A connection for through service to the airport terminal would be provided.

WB1. "Hybrid" LRT via Metrorail/MacArthur Causeway

This "hybrid" LRT alternative includes an exclusive right-of-way from F.I.U. to the Stage I Metrorail line at Earlington Heights via SR 836 and the Airport Multimodal Access Facility, an elevated line from the Metrorail line at Overtown Station through the CBD, an at-grade alignment across the MacArthur Causeway to the Convention Center (20th Street) in Miami Beach, and a branch to the Seaport.

Alignment:

- The alignment begins at Florida International University (FIU) along the Turnpike Extension.
- From FIU the alignment follows the east side of the Turnpike Extension north to SR 836,
- turns east along the south side of SR 836,
- diverges south to approximately NW 8th Street in the vicinity of the Palmetto Expressway and Miami Merchandise Mart,
- returns to the south side of SR 836 and continues east to the Blue Lagoon area where it transitions to the north side of SR 836,
- Turns north along NW 42nd Avenue to NW 21st Street, then east to the Airport Multimodal Access Facility (elevated),
- continues north to the Airport Expressway (SR 112) (elevated),
- turns east to join the Stage I Metrorail line west of Earlington Heights Station (elevated).

- The alignment diverges from the Stage I Metrorail line at Overtown Station (elevated),
- turns east to follow NE 7th Street to Biscayne Boulevard (elevated, passes over Metromover),
- turns north to follow the east side of Biscayne Boulevard and the Metromover extension to the MacArthur Causeway (elevated),
- (Details for remainder of alignment are as described in the Miami Beach LRT Study.)
- crosses Biscayne Bay in the median on the MacArthur Causeway,
- follows curb lanes on 5th Street to Washington Avenue,
- turns north on Washington Street to end at the Miami Beach Convention Center (20th Street).

- Seaport Branch diverges from West-Beach line at NE 7th Street and Biscayne Boulevard (elevated),
- turns southeast to align with Seaport Access Bridge and merges to single track,
- single track crosses Seaport Access Bridge,

- enters one-way loop around seaport passenger terminals.
- This alternative would be fully grade-separated at crossings from F.I.U. and the Multimodal Facility through downtown to the MacArthur Causeway and to the Seaport. The alignment would be at-grade on the causeway and in Miami Beach.

Operations:

- Three regular rail services will be operated:
 - F.I.U. to Dadeland South at headways of 7.5 minutes peak and 15 minutes off-peak.
 - F.I.U. to Miami Beach Convention Center at headways of 7.5 minutes peak and 15 minutes off-peak.
 - Downtown Miami to Miami Beach Convention Center at headways of 7.5 minutes peak and 15 minutes off-peak.
- Only premium non-stop trains will operate on the seaport branch, connecting the Airport and Seaport. These trains may utilize special heavy rail vehicles (shorter or articulated cars) to negotiate sharper curves at the airport and seaport. (Riders on this service do not appear in modeling.)

WB2. "Hybrid" LRT via SR 836/MacArthur Causeway

This "hybrid" LRT alternative includes an exclusive right-of-way from F.I.U. to Downtown Miami along SR 836 and the Miami River, an at-grade alignment across the MacArthur Causeway to the Convention Center (20th Street) in Miami Beach, and branches to the Airport and the Seaport.

Alignment:

- The alignment begins at Florida International University (FIU) along the Turnpike Extension.
- From FIU the alignment follows the east side of the Turnpike Extension north to SR 836,
- turns east along the south side of SR 836,
- diverges south to approximately NW 8th Street in the vicinity of the Palmetto Expressway and Miami Merchandise Mart,
- returns to the south side of SR 836 and continues east to the Miami River,
- turns south along the west side of the Miami River,
- crosses over the river and turns east along NW 2nd Street, passing over I-95,
- enters existing east-west station on third level of Government Center (elevated),
- turns north over parking lots between Metrorail and NW 1st Avenue, passing over Metromover (elevated),
- turns east to follow NE 7th Street to Biscayne Boulevard (elevated, passes over Metromover),
- turns north to follow the east side of Biscayne Boulevard and the Metromover extension to the MacArthur Causeway,

(Details for remainder of alignment are as described in the Miami Beach LRT Study.) crosses Biscayne Bay in the median on the MacArthur Causeway, follows curb lanes on 5th Street to Washington Avenue, turns north on Washington Street to end at the Miami Beach Convention Center (20th Street).

- Airport Branch begins at the Airport Multimodal Access Facility,
- follows NW 42nd Avenue south to SR 836 where a "Y" junction allows service to both the east and west.

- Seaport Branch diverges from West-Beach line at NE 7th Street and Biscayne Boulevard (elevated),
- turns southeast to align with Seaport Access Bridge and merges to single track,
- single track crosses Seaport Access Bridge,
- enters one-way loop around seaport passenger terminals.
- This alternative would be fully grade-separated at crossings from F.I.U. and the Multimodal Facility through downtown to the MacArthur Causeway and to the Seaport. The alignment would be at-grade on the causeway and in Miami Beach.

Stations:

- Stations would be located as indicated in the list at the end of this section.
- Miami Beach stations are adopted from the Miami Beach Light Rail Transit Feasibility Study.
- Park-and-ride facilities would be located at the following locations:
 - All stations from F.I.U. to NW 42nd Avenue.
 - Alton Road
 - 20th Street (Miami Beach Convention Center)
- A station may be provided on seaport branch between proposed Bicentennial Park passenger ship terminals and Bayside to serve those terminals and Seaport-Bayside traffic.

Operations:

- Three rail services will be operated:
 - F.I.U. to Miami Beach Convention Center at headways of 7.5 minutes peak and 15 minutes off-peak.
 - F.I.U. to Airport at headways of 15 minutes peak and off-peak.
 - Airport to Miami Beach Convention Center at headways of 7.5 minutes peak and 15 minutes off-peak.
 This operation provides headways of 3.75 minutes peak and 7.5 minutes from NW 42nd Avenue to the Miami Beach Convention Center.
- Premium non-stop service between the Airport and Seaport would be provided as needed.
- Express buses from West Dade are replaced by LRT.
- Local crosstown buses are rerouted to serve stations, where required.
- Through local bus service is eliminated on Washington Avenue in Miami Beach. Other Miami Beach local bus services are as described in previous modeling.

WB3. "Hybrid" LRT via SR 836/Government Cut Tunnel

This "hybrid" LRT alternative includes an exclusive right-of-way from F.I.U. to Downtown Miami and the Seaport along SR 836 and the Miami River, a tunnel under Government Cut, an at-grade alignment to the Convention Center (20th Street) in Miami Beach, and a branch to the Airport Multimodal Access Facility.

Alignment:

- The alignment begins at Florida International University (FIU) along the Turnpike Extension.
- From FIU the alignment follows the east side of the Turnpike Extension north to SR 836,
- turns east along the south side of SR 836,
- diverges south to approximately NW 8th Street in the vicinity of the Palmetto Expressway and Miami Merchandise Mart,
- returns to the south side of SR 836 and continues east to the Miami River,

- turns south along the west side of the Miami River,
 - crosses over the river and turns east along NW 2nd Street, passing over I-95,
 - enters existing east-west station on third level of Government Center (elevated),
 - turns north over parking lots between Metrorail and NW 1st Avenue, passing over Metromover (elevated),
 - turns east to follow NE 7th Street to Biscayne Boulevard (elevated, passes over Metromover),
 - turns southeast to align with Seaport Access Bridge,
 - double track crosses on or adjacent to Seaport Access Bridge,
 - passes turnouts for Seaport Loop and central Seaport station,
 - enters tunnel under Dodge Island, Lummus Island, and Government Cut,
 - surfaces on Washington Avenue in Miami Beach at approximately 2nd Street (or as far south as possible),
- (Details for remainder of alignment are as described in the Miami Beach LRT Study.)
- continues north on Washington Street to end at the Miami Beach Convention Center (20th Street).
 - Airport Branch begins at the Airport Multimodal Access Facility,
 - follows NW 42nd Avenue south to SR 836 where a "Y" junction allows through service to both the east and west.
- Seaport Loop diverges from West-Beach line at west side of Seaport and circulates on one-way loop around seaport passenger terminals.
 - This alternative would be fully grade-separated at crossings from F.I.U. and the Multimodal Facility through downtown and the Seaport. The alignment would be at-grade in Miami Beach.

Stations:

- Stations would be located as indicated in the list on the following page.
- Miami Beach stations are adopted from the Miami Beach Light Rail Transit Feasibility Study.
- Park-and-ride facilities would be located at the following locations:
 - All stations from F.I.U. to NW 42nd Avenue.
 - Alton Road
 - 20th Street (Miami Beach Convention Center)

Operations:

- Three rail services will be operated:
 - F.I.U. to Miami Beach Convention Center at headways of 7.5 minutes peak and 15 minutes off-peak.
 - F.I.U. to Airport at headways of 15 minutes peak and off-peak.
 - Airport to Miami Beach Convention Center at headways of 7.5 minutes peak and 15 minutes off-peak.
- This operation provides headways of 3.75 minutes peak and 7.5 minutes from NW 42nd Avenue to the Miami Beach Convention Center.
- Premium non-stop service between the Airport and Seaport Loop would be provided as needed. These trains would be the only ones to use the loop around the Seaport serving individual passenger ship terminals and would also directly serve the Airport terminal loop.
- Express buses from West Dade are replaced by LRT.
- Local crosstown buses are rerouted to serve stations, where required.
- Through local bus service is eliminated on Washington Avenue in Miami Beach. Other Miami Beach local bus services are reconfigured to compliment the rail transit line.

WEST CORRIDOR-BEACH CORRIDOR TRANSIT PROPOSAL STATIONS

Metrorail/ MacArthur Causeway Alternative (WB1)	SR 836/MacArthur Causeway Alternative (WB2)	SR 836/Government Cut Alternative (WB3)
F.I.U.	F.I.U.	F.I.U.
107th Ave.	107th Ave.	107th Ave.
97th Ave.	97th Ave.	97th Ave.
87th Ave.	87th Ave.	87th Ave.
Palmetto Expy.	Palmetto Expy.	Palmetto Expy.
57th Ave.	57th Ave.	57th Ave.
42nd Ave.	42nd Ave.	42nd Ave.
Airport Multimodal Facility	Airport Multimodal Facility	Airport Multimodal Facility
<i>Earlington Heights</i>		
<i>Allapattah</i>		
<i>Santa Clara</i>	37th Ave.	
<i>Civic Center</i>	27th Ave.	
<i>Culmer</i>	17th Ave. (Orange Bowl)	37th Ave.
<i>Overtown/Arena</i>	12th Ave.	27th Ave.
Biscayne Boulevard - Bayside	8th Ave.	17th Ave.
Seaport	Government Center	12th Ave.
	Miami Ave. - Arena	8th Ave.
	Biscayne Boulevard - Bayside	Government Center
Bicentennial Park		Miami Ave. - Arena
Watson Island	Seaport	Biscayne Boulevard - Bayside
Palm Island		
Terminal Island	Bicentennial Park	(east side of
Alton Road P/R	Watson Island	Biscayne, also serves
Meridian Ave.	Palm Island	proposed
7th Street	Terminal Island	Bicentennial Park
12th Street	Alton Road P/R	passenger ship
17th Street	Meridian Ave.	terminals.)
20th Street P/R	7th Street	Seaport (+ Seaport
	12th Street	Loop)
	17th Street	3rd Street
	20th Street P/R	7th Street
		12th Street
		17th Street
		20th Street P/R

