ARTERIAL GRID ANALYSIS

PHASE II WORK ORDER

GPC V-05

Transportation Planning Council

January 13, 2014

MIAMI-DADE MPO Metropolitan Planning Organization

Kimley-Horn and Associates, Inc.

Study Purpose

- Update the Arterial Grid Analysis – Phase I study results (2006)
- Evaluate the operation of arterial grid roadway system in Miami-Dade County
  - Develop a consolidated database of traffic counts and estimate level of service
  - Develop roadway characteristics maps
  - Identify ways to improve capacity and efficiency of roadway network

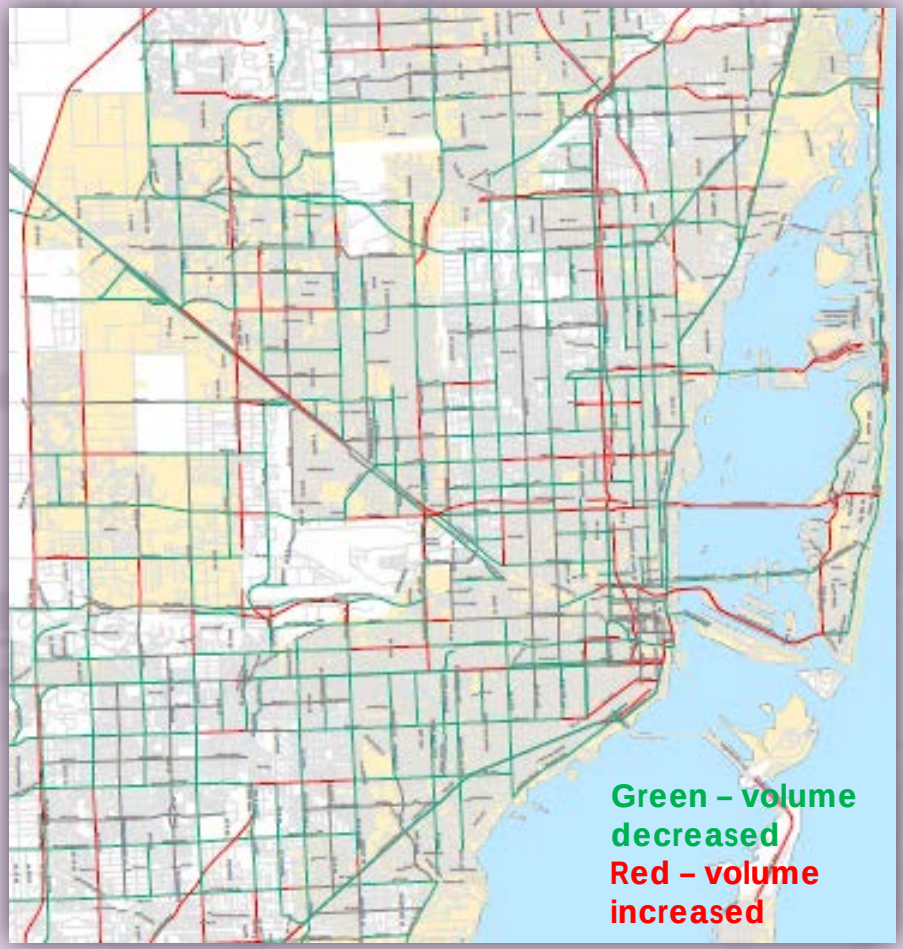
Grid Road System - Benefits

- Choice
- Redundancy
- Safety

- Economic activity
- Smart growth
- Healthy communities

Key Findings

- A decreasing trend of traffic volume between 2004/05 and 2011/12
  - Traffic volume decreased in 68% of roadway segments evaluated
  - Net change of Average Daily Traffic at 1040 roadway segments is (-)1.94 million vehicles
- Consistent with national trends



Key Findings

- Level of service deficiencies
  - 35% of arterial segments and 7% of collector segments operate at LOS F
  - Fewer deficient corridors compared to 2004/05
  - Connectivity improvements to collector roadways may help relieve adjacent failing arterials

LOS F Roadway Segments by Functional Classification

Functional Class	% LOS F Segments (2004/05 data)	% LOS F Segments (2011/12 data)
Collectors	17%	7%
Arterials	42%	35%

Key Findings

- Level of service deficiencies
  - A higher proportion of deficient corridors are located south of Flagler Street

LOS Summary by % Centerline Miles

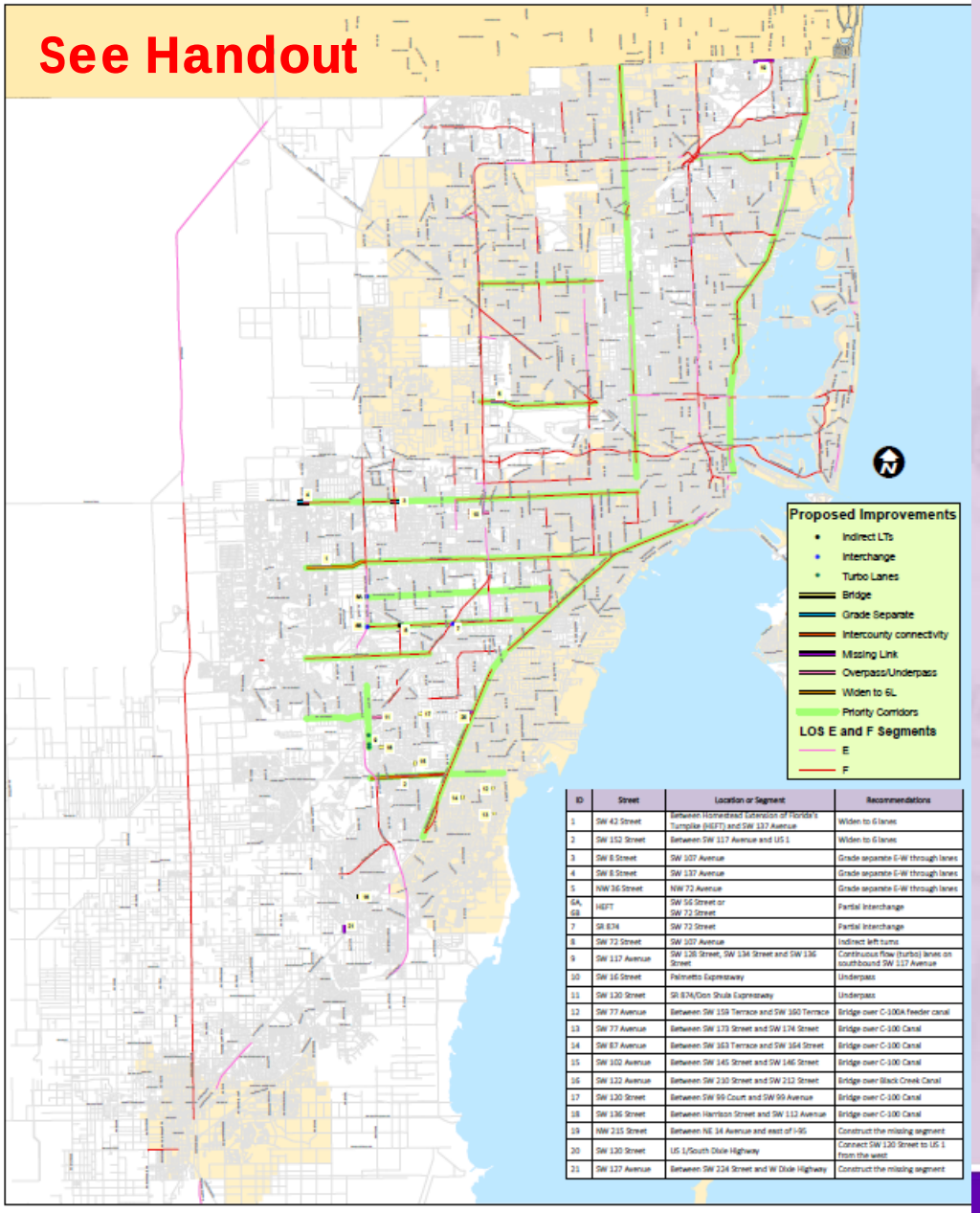
North/South County Distribution	C or better	D	E	F	Total
North of Flagler St	52%	24%	6%	18%	100%
South of Flagler St	44%	26%	6%	24%	100%
Total	48%	25%	6%	21%	100%

Improvement Strategies

- Improvements within Priority Corridors (Type 1 projects)
  - Roadway widening
  - Arterial grade separation
  - Interchanges at expressways
  - Intersection improvements
- Grid Network Connectivity (Type 2 projects)
  - At expressways
  - At canals
  - Other locations

Arterial Grid Study Recommendations

See Handout



ID	Street	Location or Segment	Recommendations
1	SW 42 Street	Between Homestead Extension of Florida's Turnpike (HEFT) and SW 137 Avenue	Widen to 6 lanes
2	SW 152 Street	Between SW 117 Avenue and US 1	Widen to 6 lanes
3	SW 8 Street	SW 107 Avenue	Grade separate E-W through lanes
4	SW 8 Street	SW 137 Avenue	Grade separate E-W through lanes
5	NW 36 Street	NW 72 Avenue	Grade separate E-W through lanes
6A, 6B	HEFT	SW 56 Street or SW 72 Street	Partial Interchange
7	SR 874	SW 72 Street	Partial Interchange
8	SW 72 Street	SW 107 Avenue	Indirect left turns
9	SW 117 Avenue	SW 136 Street, SW 134 Street and SW 136 Street	Continuous flow (turbo) lanes on southbound SW 117 Avenue
10	SW 16 Street	Palmetto Expressway	Underpass
11	SW 120 Street	SR 874/Don Shula Expressway	Underpass
12	SW 77 Avenue	Between SW 159 Terrace and SW 160 Terrace	Bridge over C-100A feeder canal
13	SW 77 Avenue	Between SW 173 Street and SW 174 Street	Bridge over C-100 Canal
14	SW 87 Avenue	Between SW 163 Terrace and SW 164 Street	Bridge over C-100 Canal
15	SW 102 Avenue	Between SW 145 Street and SW 146 Street	Bridge over C-100 Canal
16	SW 122 Avenue	Between SW 210 Street and SW 212 Street	Bridge over Black Creek Canal
17	SW 130 Street	Between SW 99 Court and SW 99 Avenue	Bridge over C-100 Canal
18	SW 136 Street	Between Harrison Street and SW 112 Avenue	Bridge over C-100 Canal
19	NW 215 Street	Between NE 14 Avenue and east of I-95	Construct the missing segment
20	SW 130 Street	US 1/South Dixie Highway	Connect SW 120 Street to US 1 from the west
21	SW 127 Avenue	Between SW 224 Street and W Dixie Highway	Construct the missing segment

Priority Corridor (Type 1) Projects

Road	From	To	Improvement	Category
SW 42 Street	HEFT	SW 137 Avenue	Widen to 6 lanes	Widening
SW 152 Street	SW 117 Avenue	US 1	Widen to 6 lanes	Widening
SW 8 Street	SW 107 Avenue		Grade separate E-W through lanes	Arterial grade separation
SW 8 Street	SW 137 Avenue		Grade separate E-W through lanes	Arterial grade separation
NW 36 Street	NW 72 Avenue		Grade separate E-W through lanes	Arterial grade separation
SW 56 Street or SW 72 Street	Homestead Extension of Florida's Turnpike		Partial interchange	Interchanges
SW 72 Street	SR 874 (Don Shula Expressway)		Partial interchange	Interchanges
SW 72 Street	SW 107 Avenue		Indirect left turns	Intersection improvements
SW 117 Avenue	SW 128 Street, SW 134 Street, and SW 136 Street		Continuous flow (turbo) lanes – southbound SW 117 Avenue	Intersection improvements

Priority Corridor (Type 1) Projects Benefits of Recommendations

Widening

- Would add 4.5 centerline miles (9 lane miles).
- Capacity of each widened segment would increase by 20,000 vehicles per day (at LOS D).

Arterial Grade Separation

- Would benefit approximately 315,000 vehicles per day through reduced conflicts and delay. (315,000 is the total ADT at the above three intersections).

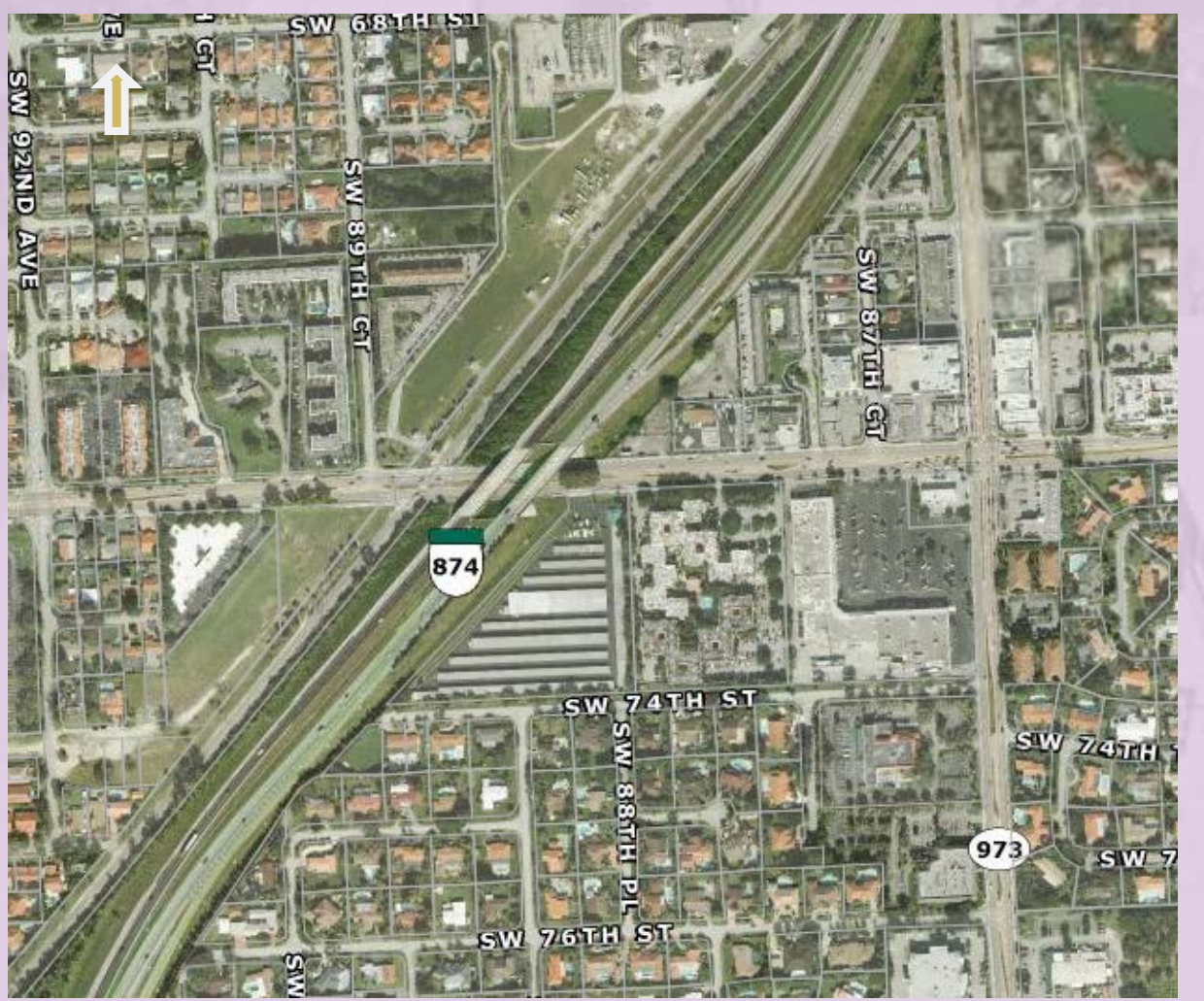
Interchanges

- Potential redistribution of traffic from SW 40 Street and SW 88 Street between SR 826 and HEFT.
- Relieve interchanges at HEFT and SW 40 Street, HEFT and SW 88 Street, SR 874 and SW 88 Street, and SW 72 Street and SR 826.

Intersection Improvements

- Reduction of overall peak period delay

Example – Type 1 Project
Partial Interchange - SW 72 Street and SR 874



Arterial Grid Network (Type 2) Projects

Road	From	To	Improvement	Category
SW 77 Avenue	SW 159 Terrace	SW 160 Terrace	Bridge over C-100A feeder canal	Missing link at canal
SW 77 Avenue	SW 173 Street	SW 174 Street	Bridge over C-100 canal	Missing link at canal
SW 87 Avenue	SW 163 Terrace	SW 164 Street	Bridge over C-100 canal	Missing link at canal
SW 102 Avenue	SW 145 Street	SW 146 Street	Bridge over C-100 canal	Missing link at canal
SW 122 Avenue	SW 210 Street	SW 212 Street	Bridge over Black Creek canal	Missing link at canal
SW 120 Street	SW 99 Court	SW 99 Avenue	Bridge over C-100C canal	Missing link at canal
SW 136 Street	Harrison Street	SW 112 Avenue	Bridge over C-100 canal	Missing link at canal
NE 215 Street	NE 14 Avenue	I-95	Construct 2 lane facility	Other missing links
SW 120 Street	SW 82 Road	US 1	Construct 2 lane facility	Other missing links
SW 127 Avenue	South of SW 224 Street	W Dixie Highway	Construct 2 lane facility	Other missing links
SW 16 Street	SR 826 (Palmetto Expressway)		Connect SW 16 Street	Missing link at expressway
SW 120 Street	SR 874 (Don Shula Expressway)		Connect SW 120 Street	Missing link at expressway

Arterial Grid Network (Type 2) Projects Benefits of Recommendations

Missing Links at Canals

- Improve continuity of the section-line and half section-line street network in South Miami-Dade County

Missing Links at Expressways

- SW 16 Street to serve as a secondary E-W street and relieve SW 8 Street
- Establish SW 120 Street as a continuous section-line road in south Miami-Dade County by completing missing segments

Other Missing Links

- Improve continuity of County Line Road
- Improve continuity of section-line street network in South Miami-Dade County

All Projects

- Provide opportunities for multimodal connections

Example – Type 2 Project
Missing Link - SW 120 Street at US 1

Next Steps

- Finalize the report
- Consider incorporating the recommended improvements into the planning and prioritization processes