CORRADINO

FINAL REPORT

# 137th Avenue Corridor Study

Prepared for:

Miami-Dade Metropolitan Planning Organization




Prepared by:

The Corradino Group, Inc.

June 2007

# Executive Summary

The Miami-Dade County Metropolitan Planning Organization (MPO) is evaluating roadway and safety improvement alternatives along the 137th Avenue Corridor from SW 344th Street to the Extension of SR 836. The study area extends approximately twenty three (23) miles within Miami-Dade County, Florida. The project area is shown in Figure S-1. The proposed project is in the Planning phase in which preliminary planning and engineering studies are conducted.

Currently there are only three continuous north/south corridors between the Homestead/Florida City area and central Miami-Dade County:

- South Dixie Highway (U.S. 1)
- Homestead Extension of Florida's Turnpike (HEFT) (SR 821)
- Krome Avenue (SR 997)

The primary purpose of this study is to examine the feasibility of making 137th Avenue the fourth north/south facility between Homestead and Central Miami-Dade.

**Figure S-1**
**Project Location Map**




## Planning Issues

The development of a fourth north-south corridor in Miami-Dade County in the 137th Avenue corridor will require sections of new road, roadway improvements, and widening to result in a functional, safe facility. Currently, the County's Comprehensive Development Master Plan (CDMP) shows 137th Avenue as a continuous six-lane facility from NW 12th Street to SW 184th Street and as a continuous four-lane facility from SW 184th Street to SW 344th Street.

The Metropolitan Planning Organization (MPO) is ultimately responsible for planning transportation projects in Miami-Dade County. As part of their responsibilities, they produce several documents that identify projects to be implemented. The most immediate of these documents is the Transportation Improvement Program (TIP), which is a five-year, cost-feasible program of projects to be implemented. Table S-1 shows the projects listed in the TIP for 137th Avenue and/or other projects that would impact traffic along 137th Avenue.

**Table S-1**
**TIP Projects Impacting Corridor**

| MPO Project # | Facility | Limits | Project | Program Year |
|---|---|---|---|---|
| PS0000013 | NW 137th Avenue | NW 12th Street to NW 17th Street | New 4-lanes | NA* |
| PW20040343 | SW 137th Avenue | U.S. 1 to SW 200th Street | New 2 lane road | 2009 |
| PS0000017 | SW 137th Avenue | SW 72nd Street to SW 88th Street | Widen 4 to 6 lanes | NA |
| PW20040344 | SW 137th Avenue | U.S. 1 to HEFT | Widen 2 to 4 lanes | 2008 |
| PW671561 | SW 137th Avenue | SW 88th Street to SW 56th Street | Reconstruct and add curb and gutter | NA |
| XA83605 | SR 836 Extension | SW 137th Avenue to SW 107th Avenue | New 4-lane expressway extension | 2007 |
| PS0000114<br>PS0000124 | NW 17th Street | NW 127th Avenue to NW 137th Avenue | 2-lanes and ½ turn lane | NA |
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*A construction year is not identified in the TIP.

The MPO is also responsible for producing the County's Long-Range Transportation Plan (LRTP), which is a twenty-year forecast of transportation projects to be built.

First adopted by the MPO Governing Board in November 1990, the 137th Avenue projects were first proposed in the Metro-Dade Transportation Plan and Priorities Long Range Element to the Year 2010. The Plan listed 137th Avenue from SW 184th Street to U.S. 1 as a Priority II (1995-2000) project for roadway widening from two to six lanes. The four-lane widening of the 137th Avenue from U.S. 1 to SW 312th Street was listed as a Priority III (2000-2005) project. The two 137th Avenue corridor projects have remained in the County's LRTP through all subsequent updates.

The most recent version of the LRTP had several projects related to 137th Avenue as shown in Table S-2.

Table S-2
LRTP Projects Impacting Corridor

| Facility | Segment | Project |
|---|---|---|
| **Priority I** | | |
| NW 137th Avenue | NW 12th to NW 17th Street | New 4-lane |
| NW 137th Avenue | NW 12th to SW 8th Street | New 6-lane (construction complete Fall 2006) |
| SW 137th Avenue | SW 8th to SW 26th Street | Widen 4 to 6 lanes |
| SW 120th Street | SW 137th Avenue to SW 117th Avenue | Widen 4 to 6 lanes |
| **Priority II** | | |
| SW 137th Avenue | SW 120th to 128th Street | ITS (CCTV, Roadway sensors, arterial dynamic message signs, wireless comm.) |
| SW 137th Avenue | SW 200th Street to U.S. 1 | Widen 2 to 4 lanes |

In May 2005, the MPO amended the Long-Range Transportation Plan to include the 137th Avenue projects listed below:

- The extension of SW 137th Avenue from U.S. 1 to SW 200th Street as two-lane roadway in Priority I (2005-2009) of the LRTP.
- Widen SW 137th Avenue from U.S. 1 to the Homestead Extension of the Florida's Turnpike (HEFT) from two-lane to a four-lane roadway in Priority I (2005-2009) of the LRTP.
- Widen the extension of SW 137th Avenue from U.S. 1 to SW 200th Street from two-lane to a four-lane roadway in Priority III (2015-2020) of the LRTP.

As part of this analysis, it is acknowledged that South Dixie Highway (U.S. 1) corridor in South Dade has been the focus of an extensive planning effort since the mid-1990s. This effort has resulted in three unique zoning districts created to encourage mixed-use, pedestrian and transit-oriented development. The 137th Avenue alignment intersects with two of these districts, the Naranja Community Urban Center and Princeton Community Urban Center. Understanding the need for transit-oriented development, with its requisite opportunities for mobility, each roadway alternative considered for these areas should contain context sensitive roadway sections that incorporate the design elements set forth in the land development codes for these Urban Centers as approved by the Board of County Commissioners, such as wide sidewalks and on-street parking where appropriate. Additionally, it is emphasized that efforts should be undertaken to implement alternative modes of travel to move people more efficiently within the capacity provided in the early phases of the planned roadway improvement, if ridership numbers warrant those options, so as to adhere to the Policies set forth in the Miami Dade County Comprehensive Development Master Plan.

## Urban Development Boundary

One portion of the 137th Avenue alignment forms the Urban Development Boundary (UDB) between SW 184th Street and SW 200th Street. The portion of the corridor from SW 200th Street to just north of U.S. 1 lies outside of the UDB.

- Policy 2B of the land use element of the Miami-Dade CDMP states – Priority in the provision of services and facilities and the allocation of financial resources for services and facilities in the County shall be given first to serve the areas within the UDB of the Land Use Plan (LUP) map. Second priority shall support the staged development of the Urban Expansion Area (UEA). Urban services and facilities which support and encourage urban development in Agricultural and Open Land areas shall be avoided, except for those improvements necessary to protect public health and safety and which service the localized needs of these non-urban areas.

Given that, it will be necessary to review the project within the context of the UDB and existing zoning and development.

## Traffic Volumes

Currently, 137th Avenue functions very much like a suburban arterial. There are no obvious origins or destinations along the arterial and trips are made along the street to distribute to other major east-west arterials. As is evident in Table S-3, traffic volumes rise and fall as they approach major east/west cross streets. The high 24-hour north/south volumes on 137th Avenue are the highest closest to the major east-west arterials such as Kendall Drive, SW 56th Street and U.S. 41 indicating that 137th Avenue is feeding the east/west arterials.

**Table S-3**
**2005 Traffic Volumes***

| | 24 Hour Volumes | | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|---|---|
| **137th Avenue** | **SB** | **NB** | **SB** | **NB** | **SB** | **NB** |
| Coral Way | 20,081 | 20,407 | 744 | 1926 | 1836 | 1116 |
| Bird Road | 18908 | 18695 | 781 | 1553 | 1644 | 1063 |
| SW 56th Street | 20363 | 20777 | 818 | 1571 | 1613 | 1250 |
| SW 72nd Street | 16360 | 16783 | 1160 | 1321 | 1269 | 1311 |
| Kendall Drive | 21300 | 23813 | 1259 | 1227 | 1421 | 1531 |
| SW 104th Street | 21944 | 21763 | 1495 | 1496 | 1353 | 1409 |
| SW 152nd Street | 24665 | 23858 | 879 | 1992 | 1990 | 1174 |
| SW 288th Street | 9542 | 8516 | 780 | 665 | 742 | 664 |
| **Cross Streets** | **WB** | **EB** | **WB** | **EB** | **WB** | **EB** |
| U.S. 41 | 22000 | 20500 | n/a | n/a | n/a | n/a |
| Coral Way | 17561 | 16791 | 617 | 1282 | 1517 | 772 |
| Bird Road | 13733 | 13494 | 767 | 1780 | 1333 | 816 |
| SW 56th Street | 18473 | 19579 | 516 | 1744 | 1671 | 1146 |
| Kendall Drive | 41500 | 40,500 | n/a | n/a | n/a | n/a |
| SW 184th Street | 8793 | 7895 | 469 | 66 | 788 | 417 |
| SW 200th Street | 6327 | 6184 | 147 | 610 | 385 | 340 |
| SW 232nd Street | 2904 | 2311 | 50 | 264 | 158 | 63 |
| SW 288th Street | 9326 | 10919 | 214 | 707 | 582 | 745 |

* Available Miami-Dade Traffic Counts

This feeder function of the roadway can also be seen for the AM and PM peak period. At the north end of the corridor during the AM peak period, traffic is much higher going north (toward U.S. 41) than it is going south. In the center of the corridor, traffic is exactly evenly split as drivers head from both directions to SW 88th Street/Kendall Drive and SW 104th Street/Killian Drive to head east. The reverse phenomenon holds true in the PM peak period with traffic flowing from U.S. 41 at the north and traffic evenly split in the Kendall/Killian area.

The planned MDX extension of SR 874 to 137th Avenue along SW 136th Street would tie into the portion of 137th Avenue carrying the heaviest volumes. Table S-4 shows that the impacted portion of 137th Avenue is already carrying between 45,000 and 48,500 trips per day. The impact of the SR 874 extension on 137th Avenue will need to be carefully considered. This extension could either increase traffic on the facility as traffic accesses SR 874 or it could decrease volumes as trips are diverted to SR 874.

The volumes from the 2030 LRTP model for Miami-Dade County were obtained to examine the future demand for the corridor. The 2030 network includes all of the projects in the LRTP prior to the May 2005 amendment which extended 137th Avenue between SW 200th Street and U.S. 1. The 2030 network includes the extensions of both SR 836 and SR 874, but not the southerly extension of 137th Avenue. Table S-4 shows the growth in two-way 24-hour volumes within the corridor between 2005 and 2030. The traffic volume comparison was only based on model projections.

**Table S-4**
**137th Avenue**
**2005 – 2030 Traffic Volume Comparison**
**(2-Way, 24-Hour Volumes)**

| Segment | 2005 Volumes | 2030 Volume | % Increase |
|---|---|---|---|
| SR 836 to U.S. 41 | Under Construction | 70,748 | - |
| U.S. 41 to SW 26th Street (Coral Way) | *30,189 | 50,352 | 67% |
| Coral Way to SW 42nd Street (Bird Road) | 40,488 | 56,014 | 38% |
| Bird Road to SW 88th Street (Kendall Drive) | 37,603 | 46,875 | 25% |
| Kendall Drive to SW 136th Street | 45,113 | 52,011 | 15% |
| SW 136 St to SW 184th Street | 48,523 | 60,099 | 24% |
| SW 184 St to SW 200 Street | *15,426 | 22,738 | 47% |
| U.S. 1 to Florida's Turnpike | *7,437 | 14,226 | 91% |
| Florida's Turnpike to SW 344 Street | 18,058 | 25,775 | 43% |

2005 – Available Miami-Dade Traffic Counts
2030 – Miami-Dade County LRTP Model
* Calculated by interpolation between 2000-2030

## Land Use

The northern portion of the corridor is predominantly residential. Other designated uses along the corridor include business/office and institutional/public facility. In the area between SW 120th Street and SW 136th Street, Kendall-Tamiami Executive Airport abides on the western fringes of 137th Avenue.

The middle portion of the corridor is largely agricultural land. The area between SW 184th Street and SW 248th Street is adjacent to the Urban Development Boundary (UDB) and the area outside the UDB is entirely zoned agricultural. From SW 248th Street southward to SW 312th Street, the corridor is within the 2006 UDB and land adjacent to 137th Avenue is designated predominantly residential with some business/office areas. Between SW 312th Street and theoretical SW 336th Street the corridor is again outside the 2006 UDB and the land adjacent to 137th Avenue is designated agriculture. The year 2015 Urban Expansion Area (UEA) boundary extends curvilinear, from SW 312th Street to SW 344th Street, along the eastern and western frontages of 137th Avenue. The UEA is the area where current projections indicate that further urban development beyond the 2006 UDB is likely to be warranted some time between the years 2006 and 2015.

### Right-of-Way

The majority of the corridor has more than 100 foot right-of-way, however between SW 184th Street and the HEFT the right-of-way is extremely variable or does not exist at all. The CDMP requires that developers dedicate all required right-of-way for section line roads as the property is developed or subdivided. Currently all of the land along the corridor where no right-of-way exists is zoned agricultural and if that property is not rezoned and developed prior to the extension of 137th Avenue, the right-of-way will have to be acquired by the County.

## Corridor Alternatives and Analysis

Seven alternatives were identified to be considered for the 137th Avenue Corridor Study. Beyond the No Build and Transportation System Management (TSM) options, these were based on a realistic assessment of the type of facility that would be required to meet the goals of the study. Each of the following includes a brief description and statement concerning the likelihood of the alternative to satisfy the intent of the study.

- Alternative 1 - No-Build
- Alternative 2 - Transportation System Management (TSM)
- Alternative 3 - Four-Lane through facility, with neighborhood friendly design
- Alternative 4 - Five-Lane facility, providing full accessibility to all properties
- Alternative 5 - Six-Lane through divided facility
- Alternative 6 - High-Flow Arterial
- Alternative 7 - Parkway (Boulevard)

The consultant reviewed each of the alternatives to identify which could meet the objective of the study. The criteria used were:

- Ability to satisfy project goals.
- Ability to maximize level of service in the corridor.
- Ability to complement and enhance the transportation network.

Based on this evaluation, the following assessment of the alternatives to be considered further in the planning process was made (Table S-5).

**Table S-5**
**Assessment of Alternatives**

| Alternative | Evaluation |
|---|---|
| 1 | This alternative will not move forward because it does not meet the study objective. |
| 2 | The TSM alternative will not move forward as a stand alone alternative. The TSM improvements will be incorporated into the build alternatives. |
| 3 | This alternative will not provide the needed capacity to accommodate future traffic growth into the year 2030. This alternative will not move forward. |
| 4 | This alternative will not address safety and traffic operation issues along the corridor. This alternative will not move forward. |
| 5 | This alternative will move forward as one of the build alternatives. |
| 6 | This alternative will move forward as one of the build alternatives. |
| 7 | This alternative will move forward as one of the build alternatives. |

## Recommendations

Based on the analysis conducted in this study and documented in Chapter 3 of the final report, it is clear that the three build options are the only ones that would realistically meet the overall objectives of a facility improvement project in the 137th Street corridor, if it were to be constructed. These objectives are:

1. Increase capacity to accommodate future travel demand.
2. Improve access management.
3. Provide roadway continuity.

To achieve these goals, it is recommended that the alternatives be phased as follows:

- Phase 1: Parkway Facility (Boulevard with Context Sensitive Design) (former Alternative 7)
- Phase 2: Six-lane Major North-South Corridor (former Alternative 5)
- Phase 3: Six-lane, Grade-separated High Flow Facility (former Alternative 6)

The overall utility to the transportation system of the 137th Avenue corridor will be achieved by: (1) establishing corridor connectivity; (2) ensuring adequate capacity; and, (3) creating a roadway environment that is friendly to the community.

Based on the information developed in this study, the creation of a contiguous roadway along 137th Avenue is feasible. Accomplishing the above given funding realities and the realities of the roadway development process, the "phased" approach as recommended in Chapter 4 is a logical approach.

To be able to build the ultimate design, financial plans will have to be developed in different fiscal years by identifying the needs and priorities for improvements along this corridor. Phase 1 includes the cost for the following improvements:

- The widening from two-lane to a four-lane section between the HEFT and U.S. 1
- The addition of a new four-lane typical section roadway between U.S. 1 and SW 200th Street (Quail Roost)
- The widening from two-lane to a four-lane section between SW 200th Street (Quail Roost) and SW 184th Street (Eureka Drive)
- The widening from a four-lane to a six-lane section from SW 88th Street (Kendall Drive) to SW 56th Street
- The widening from a four-lane to a six-lane section from SW 26th (Coral Way) to SW 8th Street (U.S. 41)

The four-lane typicals will have a forty-eight-foot (48) wide median to accommodate a six lane widening during Phase 2. Phase 1 will include sidewalks, bike paths, landscaping, etc. as appropriate. Phase 2 includes the widening of all the sections with four lanes to a six-lane typical section between SW 288th Street and SW 184th Street (Eureka Drive). Phase 3 includes the cost for the construction of grade separated intersections at U.S. 1, SW 88th Street and U.S. 41.



**Phase 1: Parkway**



**Phase 2: Six-lane Through**



**Phase 3: Grade Separation**

The costs for each phase are as follows:

- Phase 1: $101,810,288
- Phase 2: $54,871,816
- Phase 3: $84,408,436

In addition to the roadway elements, it is recognized that transit is another alternative for mitigating this traffic congestion. Currently, there are other studies and actions that are considering transit alternatives for the corridor.

One project currently underway with a potential impact on 137th Avenue is the Kendall Drive Alternative Analysis (known as Kendall AA). The goal of this study is to develop several scenarios for the Kendall Drive Corridor. One scenario has a north-south element that considers the establishment of Bus Rapid Transit (BRT) along the SW 137th Avenue Corridor. If needed, the SW 137th Avenue Corridor has sufficient right-of-way to accommodate the roadway improvement, as well as future transit recommendations adopted by the community.

The work in this 137th Avenue study has been conducted in coordination with policies of the jurisdictions responsible for planning and eventual design and construction of the project. The study lays the groundwork for important improvements to the transportation network.

# Table of Contents

1. Introduction 1

2. Existing Conditions 3
   - 2.1 Consistency with Plans 3
   - 2.2 Roadway Continuity 6
   - 2.3 Traffic Volumes 9
   - 2.4 Land Use 11
   - 2.5 Right of Way 15
   - 2.6 Intersection Controls 17
   - 2.7 Transit 19

3. Corridor Alternatives and Analysis 20
   - 3.1 137th Avenue Analysis Segments 20
   - 3.2 Definition of Alternatives 20
   - 3.3 Evaluation of Alternatives 24
   - 3.4 Level of Service Analysis 25

4. Recommendations 32

5. Implementation and Costs 40

Appendix A – Proposed Intersection Grade Separations
Appendix B – Tables 4-1 and 4-2 from Generalized Annual Average Daily Volumes for Florida's Urban Areas
Appendix C – Schematic Plans
Appendix D – PowerPoint Presentation with Before and After Rendering
Appendix E – Kendall Corridor Study, 137th Avenue BRT Alternative

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# List of Figures


| | | |
|---|---|---|
| Figure 1-1 | Project Location Map | 2 |
| Figure 2-1 | SR 836 Extension Under Construction at 137th Avenue | 7 |
| Figure 2-2 | Four-lane Divided Section at SW 79th Street | 8 |
| Figure 2-3 | Six-lane Divided Section South of Kendall Drive | 8 |
| Figure 2-4 | Land Use in 137th Avenue Corridor | 12 |
| Figure 2-5 | Multi-family Residential Area | 13 |
| Figure 2-6 | Agricultural Area Inside the UDB Backed up by Warehousing | 13 |
| Figure 2-7 | Right of Way South of SW 222nd Street (55 ft.) | 15 |
| Figure 2-8 | SW 184th Street Intersection | 18 |
| Figure 2-9 | U.S. 1 Intersection | 18 |
| Figure 3-1 | 137th Avenue Analysis Segment | 21 |
| Figure 4-1 | Four-lane Proposed Typical Roadway Section | 36 |
| Figure 4-2 | Six-lane Proposed Typical Roadway Section | 38 |
| Figure 4-3 | Phase 3 Proposed Intersection Grade Separation | 39 |

# List of Tables


| | | |
|---|---|---|
| Table 2-1 | TIP Projects Impacting Corridor | 3 |
| Table 2-2 | LRTP Projects Impacting Corridor | 4 |
| Table 2-3 | Existing Roadway Characteristics | 9 |
| Table 2-4 | 2005 Traffic Volumes | 10 |
| Table 2-5 | 2005-2030 Traffic Volume Comparison | 10 |
| Table 2-6 | County's Adopted Levels of Service | 11 |
| Table 2-7 | Generalized Land Use in Corridor | 14 |
| Table 2-8 | Actual Right of Way Along Corridor | 15 |
| Table 2-9 | Signalized Intersections Along 137th Avenue | 17 |
| Table 2-10 | Bus Service | 19 |
| Table 3-1 | Assessment of Alternatives | 24 |
| Table 3-2 | Segment Volumes – No Build (Existing Conditions) | 25 |
| Table 3-3 | Segment Volumes – TIP and LRTP (Future Projects) | 26 |
| Table 3-4 | 2030 Level of Service – No Build (Existing Conditions) | 27 |
| Table 3-5 | 2030 Level of Service – TIP and LRTP (Future Projects) | 27 |
| Table 3-6 | Alternative 7 – Preliminary Level of Service Segment Analysis | 29 |
| Table 3-7 | Alternatives 5 & 6 – Preliminary Level of Service Segment Analysis | 29 |
| Table 3-8 | 2030 v/c Ratios – No Build (Existing Conditions) | 30 |
| Table 3-9 | 2030 v/c Ratios – Alternative 7 | 30 |
| Table 3-10 | 2030 v/c Ratios – Alternatives 5 & 6 | 31 |
| Table 5-1 | Phase 1 – Construction Estimate | 41 |
| Table 5-2 | Phase 2 – Construction Estimate | 42 |
| Table 5-3 | Phase 3 – Construction Estimate | 43 |

# 1. Introduction

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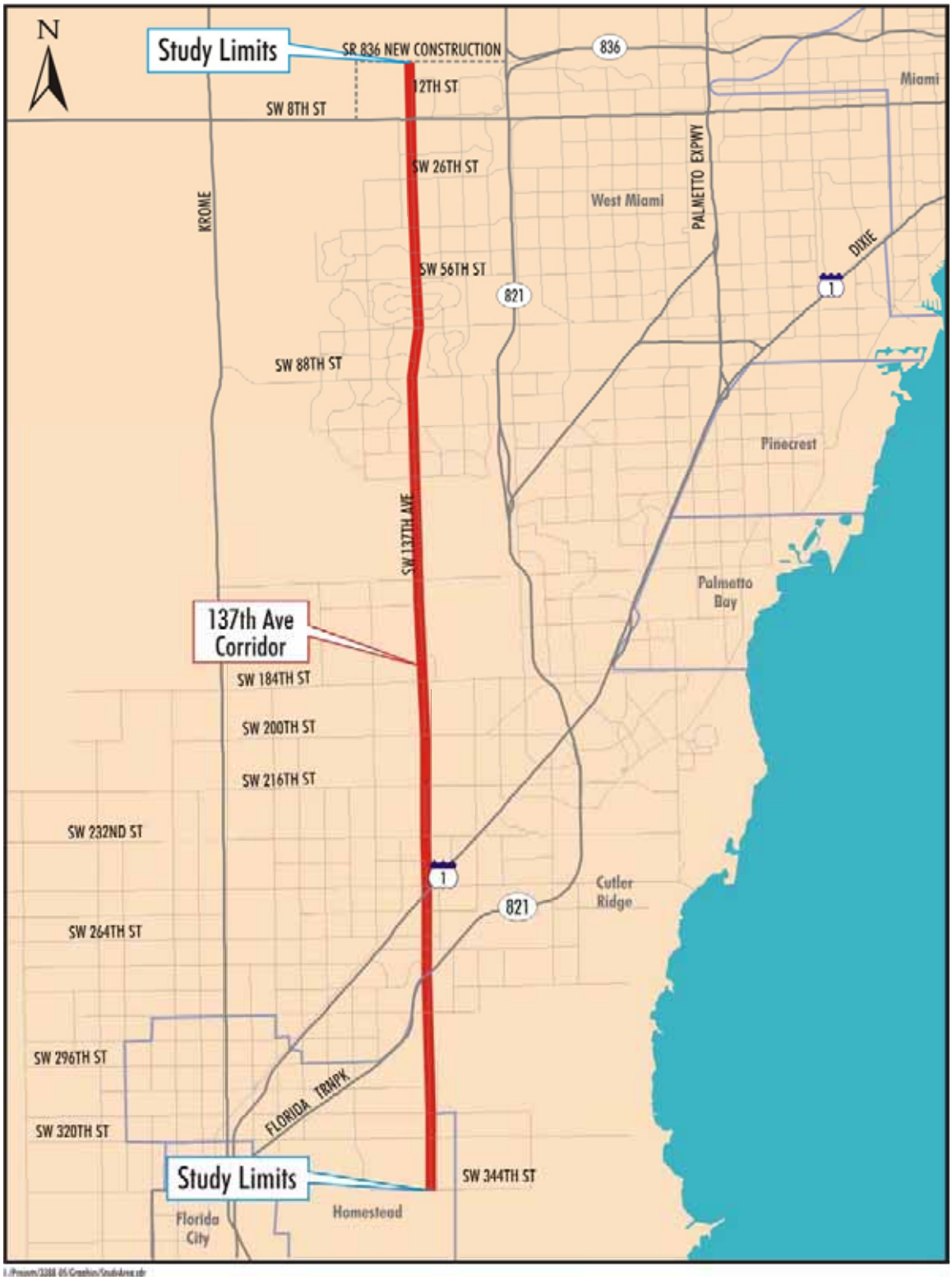
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This final report documents the work conducted in the study and presents the final recommendations and preliminary cost estimates.

Figure 1-1
Project Location Map



# 2. Existing Conditions

## 2.1 Consistency with Plans

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- Widen the extension of SW 137th Avenue from U.S. 1 to SW 200th Street from two-lane to a four-lane roadway in Priority III (2015-2020) of the LRTP.

## Miami-Dade County Planning Department

In order to reflect the updates to the LRTP and to make the two plans consistent, the Board of County Commissioners (BCC) adopted an application, in April 1991, filed by the County Planning Department to amend the County's Comprehensive Development Master Plan (CDMP) Traffic Circulation Element and 2000 and 2010 Land Use Plan Map. The four-lane widening and extension of 137th Avenue from SW 184th Street to U.S. 1 and the four-lane widening from U.S. 1 to the HEFT have continuously been designated in the CDMP since 1991.

The CDMP's adopted County roadway network for significant roadways shows 137th Avenue as a continuous six-lane facility from NW 12th Street to SW 184th Street and as a continuous four-lane facility from SW 184th Street to SW 344th Street. The CDMP's existing functional roadway classification for 137th Avenue shows that it is a state principal arterial from SW 88th Street to SW 152nd Street. Two portions, from SW 184th Street to SW 200th Street and from SW 8th Street to SW 88th Street, are shown as county minor arterials and the remainder of the facility is shown as a collector.

## Florida Department of Transportation

The planned roadway functional classification shows that it is a State Principal Arterial from SW 88th Street to SW 152nd Street; a County Minor Arterial from SR 836 to SW 88th Street and from SW 152nd Street to U.S. 1; and finally as a collector from U.S. 1 to SW 344th Street.

The FDOT Straight Line Diagram of Road Inventory currently classifies 137th Avenue as a State Urban Principal Arterial (SR 825) from SW 88th Street to SW 128th Street.

137th Avenue is a section-line road and, as such, is subject to policies in the CDMP. Policies 2A, 2B and 2 D directly impact the development of the corridor.

- Policy 2A states – The County shall continue to maintain and enforce the minimum right-of-way requirements to ensure countywide continuity of the thoroughfare system.

- Policy 2B states – The County shall require the dedication of the appropriate share of all necessary rights of way from all development at the time of development.

- Policy 2D states – The section-line, half-section line and quarter-section line road system should form a continuous network within developed areas, interrupted only when it would destroy the integrity of the neighborhood or development.

## Urban Development Boundary

One portion of the 137th Avenue alignment forms the Urban Development Boundary (UDB) between SW 184th Street and SW 200th Street. The portion of the corridor from SW 200th Street to just north of U.S. 1 lies outside of the UDB.

- Policy 2B of the land use element of the Miami-Dade CDMP states – Priority in the provision of services and facilities and the allocation of financial resources for services and facilities in the County shall be given first to serve the areas within the UDB of the Land Use Plan (LUP) map. Second priority shall support the staged development of the Urban Expansion Area (UEA). Urban services and facilities which support and encourage urban development in Agricultural and Open Land areas shall be avoided, except for those improvements necessary to protect public health and safety and which service the localized needs of these non-urban areas.

The 2003 adopted Evaluation and Appraisal Report of the CDMP evaluates this policy by stating that the "prohibitions of such urban services and expenditures on the construction of new roads the

extension of water and sewer lines and the development of park and recreation areas have been instrumental in maintaining the rural character of the western fringes."

- Land Use Policy 8H states – When considering land areas to add to the UDB, after demonstrating that a countywide need exists,

    1. The following areas shall not be considered:
        a. The Redlands area south of SW 184th Street/Eureka Drive.

    2. The following areas shall be avoided:
        a. Land designated Agricultural on the Land Use Plan Map.

    3. The following areas shall be given priority for inclusion, subject to conformance with policy 8G and the foregoing provision of this policy:
        a. Land contiguous to the UDB

Given that it may be a number of years before any improvement in this area is initiated, it will be necessary to review the project within the context of the UDB and existing zoning and development.

### Miami-Dade Expressway Authority

The Miami-Dade Expressway Authority (MDX) is responsible for operating and expanding toll facilities. The MDX system includes roadways such as State Road (SR) 836, SR 874, SR 878, SR 112, and SR 924. MDX currently has two major projects that directly impact this corridor.

The first project is under construction and is the extension of SR 836 from its current terminus at the HEFT to NW 137th Avenue. The SR 836 extension ends with ramps terminating at 137th Avenue and connecting the ramps to a six-lane divided arterial (137th Avenue) from NW 12th Street to SW 8th Street.

The second project is the result of a study conducted by the MPO in 2002 to evaluate the extension of SR 874 to SW 137th Avenue. The study concluded that SW 137th Avenue be connected to SR 874 by extending SW 136th Street as a four-lane divided arterial eastward over the CSX rail corridor, curving to the northeast following the CSX railroad alignment and connecting to SR 874. This project is currently in the MDX Long Range Plan, 2007 TIP, and in the 2030 LRTP. In addition to these projects, MDX's Long Range Plan also includes the SR 836 Kendall Extension, which will affect traffic in southwest Miami-Dade County.

## 2.2 Roadway Continuity

137th Avenue begins at the northern segment at NW 12th Street and runs south to SW 200th Street. The construction along 137th Avenue from NW 12th Street to SW 8th Street (U.S. 41) was completed in fall 2006. The construction included ramp connection to the SR 836 extension and the widening from two lanes undivided to six lanes divided. Figure 2-1 shows the construction of the connecting ramps from the terminus of SR 836 to 137th Avenue. South of U.S. 41 the roadway typical section is 110 feet wide, but is only two (2) lanes wide in each direction with a 48-foot wide median. This cross section exists between U.S. 41 and Coral Way (SW 26th Street). Through this two mile stretch there is only one traffic signal. The back sides of the majority of the residential properties are along

137th Avenue. The east side of the roadway (northbound) has very few curb cuts unlike the west side of the roadway (southbound).

**Figure 2-1**
**SR 836 Extension Under Construction at 137th Avenue**



South of SW 26th Street to SW 56th Street, 137th Avenue is a six-lane divided arterial within a 110-foot-wide typical section. Between SW 26th Street and SW 42nd Street every block creates a full intersection and many of the residential properties have driveways onto 137th Avenue. There are, however, no traffic control devices along this stretch of roadway. From SW 42nd Street to SW 56th Street the facility changes dramatically with no residential driveways and very few streets intersecting 137th Avenue. On the west side of the roadway is a landscaped berm with a bicycle path separating the houses from the roadway. This mile of roadway functions like a high-flow limited access road, which typically allows vehicles to travel at higher speeds.

The next segment of roadway is a four-lane divided typical section within a 110-foot-wide typical section between SW 56th Street and SW 88th Street/Kendall Drive (Figure 2-2). The heavily landscaped median is 48 feet wide through this section giving a parkway appearance. Just south of SW 56th Street there are single-family homes that front onto 137th Avenue with their associated driveway curb cuts. Most of the properties along this section are multi-family residential with a few driveways. From SW 72nd Street to SW 82nd Street the east side of the roadway (northbound), every block creates an intersection.

Figure 2-2
Four-lane Divided Section at SW 79th Street



From SW 88th Street to SW 184th Street, the roadway is a six-lane divided typical section (Figure 2-3) and from SW 184th Street to SW 200th Street, the roadway is a two-lane rural typical section.

Figure 2-3
Six-lane Divided Section South of Kendall Drive



Table 2-3 shows the existing roadway characteristics along the corridor.

**Table 2-3**
**Existing Roadway Characteristics**

| Segment | Roadway | Roadway Typical Section Width |
|---|---|---|
| NW 12th Street to SW 8th Street | 6-lane divided (construction complete in Fall 2006) | 96′ |
| SW 8th Street to SW 26th Street | 4-lane divided with protected turn lanes | 110′ |
| SW 26th Street to SW 56th Street | 6-lane divided with protected turn lanes | 110′ |
| SW 56th Street to SW 88th Street | 4-lane divided with protected turn lanes | 110′ |
| SW 88th Street to SW 184th Street | 6-lane divided with protected turn lanes | 110′ – 220′ |
| SW 184th Street to SW 200th Street | 2 lanes | 55′ – 110′ |
| SW 200th Street to SW 232nd Street | No improved roadway (dirt road) | 0′ – 90′ |
| SW 232nd Street to SW 248th Street | 2 lanes | 0′ – 80′ |
| SW 248th Street to U.S. 1 | No Roadway | - |
| U.S. 1 to SW 272nd Street | 2 lanes | 35′ – 90′ |
| SW 272nd Street to SW 280th Street | 6-lane divided with protected turn lanes | 75′ – 90′ |
| SW 280th Street to SW 344th Street | 4-lane divided with protected turn lanes | 55′ – 140′ |

## 2.3 Traffic Volumes

Currently, 137th Avenue functions very much like a suburban arterial. There are no obvious origins or destinations along the arterial and trips are made along the street to distribute to other major east-west arterials. As is evident in Table 2-4, traffic volumes rise and fall as they approach major east/west cross streets. The high 24-hour north/south volumes on 137th Avenue are the highest closest to the major east-west arterials such as Kendall Drive, SW 56th Street and U.S. 41 indicating that 137th Avenue is feeding the east/west arterials.

This feeder function of the roadway can also be seen for the AM and PM peak period. At the north end of the corridor during the AM peak period, traffic is much higher going north (toward U.S. 41) than it is going south. In the center of the corridor, traffic is exactly evenly split as drivers head from both directions to SW 88th Street/Kendall Drive and SW 104th Street/Killian Drive to head east. The reverse phenomenon holds true in the PM peak period with traffic flowing from U.S. 41 at the north and traffic evenly split in the Kendall/Killian area.

Table 2-4
2005 Traffic Volumes*

| | 24 Hour Volumes | | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|---|---|
| 137th Avenue | SB | NB | SB | NB | SB | NB |
| Coral Way | 20,081 | 20,407 | 744 | 1926 | 1836 | 1116 |
| Bird Road | 18908 | 18695 | 781 | 1553 | 1644 | 1063 |
| SW 56th Street | 20363 | 20777 | 818 | 1571 | 1613 | 1250 |
| SW 72nd Street | 16360 | 16783 | 1160 | 1321 | 1269 | 1311 |
| Kendall Drive | 21300 | 23813 | 1259 | 1227 | 1421 | 1531 |
| SW 104th Street | 21944 | 21763 | 1495 | 1496 | 1353 | 1409 |
| SW 152nd Street | 24665 | 23858 | 879 | 1992 | 1990 | 1174 |
| SW 288th Street | 9542 | 8516 | 780 | 665 | 742 | 664 |
| Cross Streets | WB | EB | WB | EB | WB | EB |
| U.S. 41 | 22000 | 20500 | n/a | n/a | n/a | n/a |
| Coral Way | 17561 | 16791 | 617 | 1282 | 1517 | 772 |
| Bird Road | 13733 | 13494 | 767 | 1780 | 1333 | 816 |
| SW 56th Street | 18473 | 19579 | 516 | 1744 | 1671 | 1146 |
| Kendall Drive | 41500 | 40,500 | n/a | n/a | n/a | n/a |
| SW 184th Street | 8793 | 7895 | 469 | 66 | 788 | 417 |
| SW 200th Street | 6327 | 6184 | 147 | 610 | 385 | 340 |
| SW 232nd Street | 2904 | 2311 | 50 | 264 | 158 | 63 |
| SW 288th Street | 9326 | 10919 | 214 | 707 | 582 | 745 |

* Available Miami-Dade Traffic Counts

The planned MDX extension of SR 874 to 137th Avenue along SW 136th Street would tie into the portion of 137th Avenue carrying the heaviest volumes. Table 2-5 shows that the impacted portion of 137th Avenue is already carrying between 45,000 and 48,500 trips per day. The impact of the SR 874 extension on 137th Avenue will need to be carefully considered. This extension could either increase traffic on the facility as traffic accesses SR 874 or it could decrease volumes as trips are diverted to SR 874.

The volumes from the 2030 LRTP model for Miami-Dade County were obtained to examine the future demand for the corridor. The 2030 network includes all of the projects in the LRTP prior to the May 2005 amendment which extended 137th Avenue between SW 200th Street and U.S. 1. The 2030 network includes the extensions of both SR 836 and SR 874, but not the southerly extension of 137th Avenue. Table 2-5 shows the growth in two-way 24-hour volumes within the corridor between 2005 and 2030. The traffic volume comparison was only based on model projections.

Table 2-5
137th Avenue
2005 – 2030 Traffic Volume Comparison
(2-Way, 24-Hour Volumes)

| Segment | 2005 Volumes | 2030 Volume | % Increase |
|---|---|---|---|
| SR 836 to U.S. 41 | Under Construction | 70,748 | - |
| U.S. 41 to SW 26th Street (Coral Way) | *30,189 | 50,352 | 67% |
| Coral Way to SW 42nd Street (Bird Road) | 40,488 | 56,014 | 38% |
| Bird Road to SW 88th Street (Kendall Drive) | 37,603 | 46,875 | 25% |
| Kendall Drive to SW 136th Street | 45,113 | 52,011 | 15% |
| SW 136 St to SW 184th Street | 48,523 | 60,099 | 24% |
| SW 184 St to SW 200 Street | *15,426 | 22,738 | 47% |
| U.S. 1 to Florida's Turnpike | *7,437 | 14,226 | 91% |
| Florida's Turnpike to SW 344 Street | 18,058 | 25,775 | 43% |

2005 – Available Miami-Dade Traffic Counts
2030 – Miami-Dade County LRTP Model
* Calculated by interpolation between 2000-2030

A report published in February 2004 by the Miami-Dade Department of Planning and Zoning provides the levels of service for this type of facility. Table 2-6 is a summary of the County's adopted levels of service for streets in different parts of the county.

**Table 2-6**
**County's Adopted Levels of Service**

| Location | Transit Availability | | |
|---|---|---|---|
| | No Transit Service | 20 min. headways within ½ mile | Rail service or express bus available |
| Outside UDB | LOS D- State Minor Arterials<br>LOS C – County Roads and State Principal Arterials | | |
| Between UIA and UDB | LOS D or<br>LOS E on State Urban Minor Arterial | LOS E<br>(100% of capacity) | 120% of Capacity |
| Inside the UIA | LOS E | 120% Capacity | 150% of capacity |

The corridor study area has segments inside and outside the UDB and portions with transit service. These segments are discussed in detail in the following sections.

## 2.4 Land Use

Figure 2-4 illustrates the land use in the corridor. The northern portion of the corridor is predominantly residential. Figure 2-5 illustrates the nature of the multi-family residential areas between SW 79th Street and Kendall Drive. Other designated uses along the corridor include business/office and institutional/public facility. In the area between SW 120th Street and SW 136th Street, Kendall-Tamiami Executive Airport abides on the western fringes of 137th Avenue.

The middle portion of the corridor is largely agricultural land, as shown by the tomato field in Figure 2-6. The area between SW 184th Street and SW 248th Street is adjacent to the Urban Development Boundary (UDB) and the area outside the UDB is entirely zoned agricultural. Table 2-7 identifies the land use along the 137th Avenue corridor. From SW 248th Street southward to SW 312th Street, the corridor is within the 2006 UDB and land adjacent to 137th Avenue is designated predominantly residential with some business/office areas. Between SW 312th Street and theoretical SW 336th Street the corridor is again outside the 2006 UDB and the land adjacent to 137th Avenue is designated agriculture. The year 2015 Urban Expansion Area (UEA) boundary extends curvilinear, from SW 312th Street to SW 344th Street, along the eastern and western frontages of 137th Avenue. The UEA is the area where current projections indicate that further urban development beyond the 2006 UDB is likely to be warranted some time between the years 2006 and 2015.

**Figure 2-4**
**Land Use in 137th Avenue Corridor**

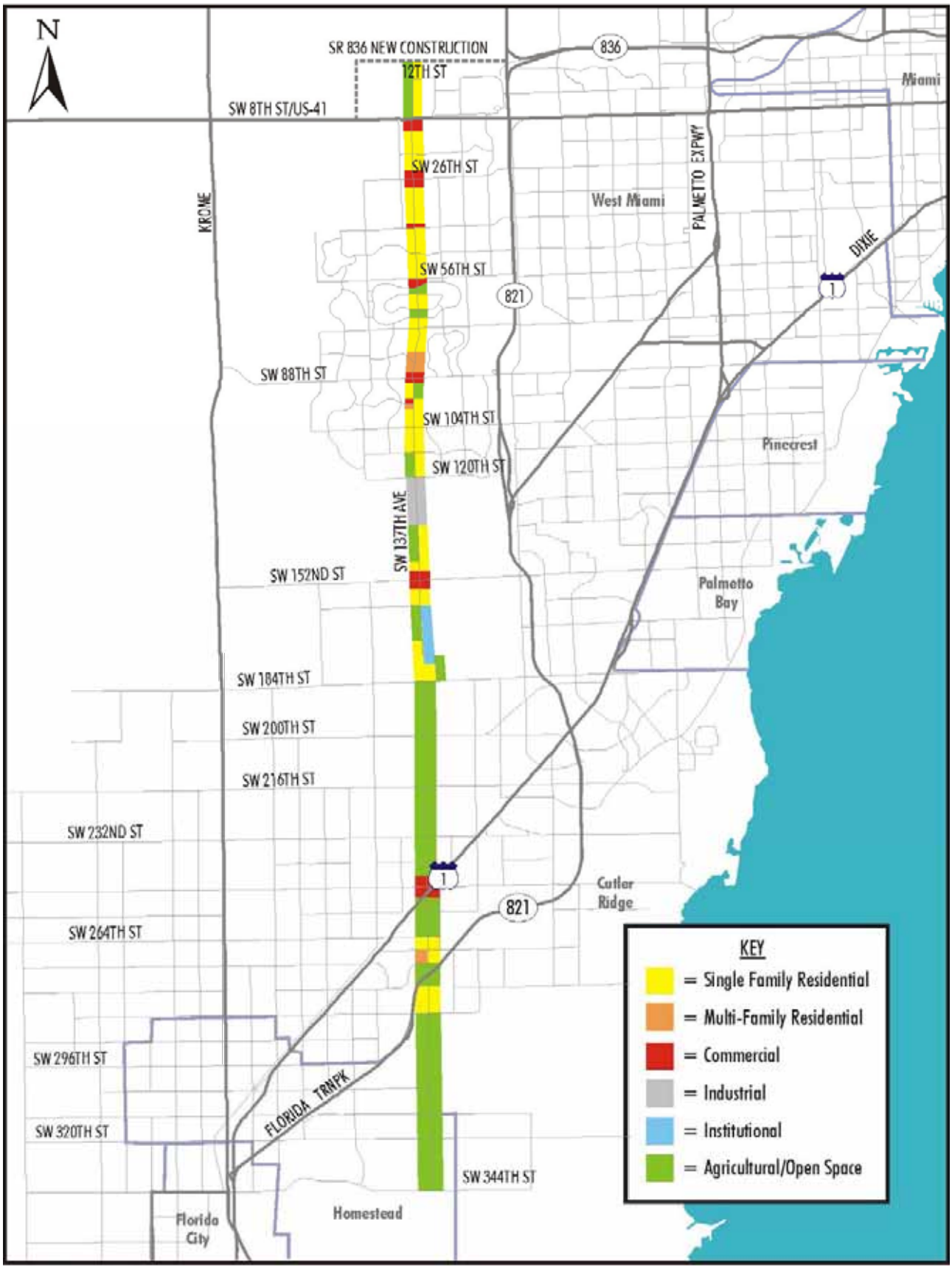


Figure 2-5
Multi-family Residential Area



Figure 2-6
Agricultural Area Inside the UDB Backed up by Warehousing



## Table 2-7
## Generalized Land Use in Corridor

| Segment | Land Use |
|---|---|
| NW 12th Street to U.S. 41 | Single family residential east side of road |
| U.S. 41 Intersection | Commercial south side of intersection |
| U.S. 41 to Coral Way | Single family residential on both sides backing onto road with barrier walls. |
| Coral Way Intersection | Commercial on all four corners |
| Coral Way to SW 62nd Street | Single family residential |
| Bird Road Intersection | Commercial north side of intersection |
| SW 56th Street Intersection | Commercial south side of intersection |
| SW 62nd Street to SW 66th Street | Multi-family residential both sides of street |
| SW 66th Street to SW 79th Street | Single family residential both sides of street |
| SW 79th Street to Kendall Drive | Multi-family residential both sides of street |
| Kendall Drive Intersection | Commercial all four corners |
| Kendall Drive to SW 100th Street | Single family residential west side; vacant east side |
| SW 96th Street Intersection | Commercial on NW side, Multi-family on SW side Single Family on east side |
| SW 100th Street to SW 112th Street | Single family residential both sides |
| SW 112th Street to SW 120th Street | Single family residential east side; vacant west side |
| SW 120th Street to SW 136th Street | Industrial east side; Airport west side |
| SW 136th Street to SW 144th Street | Single family residential east side; vacant west side |
| SW 144 Street to SW 160th Street | Single family residential both sides |
| SW 152nd Street Intersection | Commercial all four corners |
| SW 160th Street to SW 173rd Street | East side institutional, west side vacant |
| SW 173rd Street to SW 178th Street | East side institutional, west side single family residential |
| SW 178th Street to SW 184th Street | Single family residential both sides |
| SW 184th Street to SW 248th Street | Agricultural |
| U.S. 1 Intersection | Commercial all four corners |
| SW 250th Street to SW 264th Street | Vacant |
| SW 264th Street to SW 268th Street | Single family residential both sides |
| SW 268th Street to SW 272nd Street | Single family residential east side; multi-family residential west side |
| SW 272nd Street to SW 288th Street | Turnpike Interchange |
| SW 278th Street to SW 288th Street | Single Family Residential both sides |
| SW 288th Street to SE 344th Street | Vacant/Agricultural |

## 2.5 Right-of-Way

Table 2-8 shows the existing right-of-way along 137th Avenue, as recorded with the County. The majority of the corridor has more than 100 foot right-of-way, however between SW 184th Street and the HEFT the right-of-way is extremely variable or does not exist at all (Figure 2-7). The CDMP requires that developers dedicate all required right-of-way for section line roads as the property is developed or subdivided. Currently all of the land along the corridor where no right-of-way exists is zoned agricultural and if that property is not rezoned and developed prior to the extension of 137th Avenue, the right-of-way will have to be acquired by the County.

**Figure 2-7**
**Right of Way South of 222nd Street (55 ft.)**



**Table 2-8**
**Actual Right of Way Along Corridor**

| Segments | Right of Way Width (ft) |
|---|---|
| SW 8th Street – SW 92nd Street | 110 |
| SW 92nd Street – SW 104th Street | 100 |
| SW 104th Street – SW 120th Street | 120 |
| SW 120th Street – SW 136th Street | Varies 110 to 120 |
| SW 136th St – SW 173rd Terrace | 110 |
| SW 173rd Terrace – SW 176th Street | Varies 110 to 130 |
| SW 176th Street – 400' south of SW 184th Street | 110 |
| Next 1120' | 70 |
| After 1120' up to SW 200th Street | 55 |
| 1270' south of SW 200th Street | 35 |
| Next 330' | No ROW |
| Next 660' | 35 |

Table 2-8 (continued)
Actual Right of Way Along Corridor

| Segments | Right of Way Width (ft) |
|---|---|
| Next 620′ up to SW 208th Street | 90 |
| Next 2350′ | No ROW |
| Next 330′ up to SW 216th Street | 35 |
| Next 600′ | 55 |
| Next 650′ | No ROW |
| Next 330′ | 55 |
| Next 330′ up to SW 222nd Street | No ROW |
| 300′ south of SW 222nd Street | 55 |
| Next 330′ | 95 |
| Next 1300′ | 55 |
| Next 2970′ | No ROW |
| Next 350′ | 35 |
| Next 650 up to SW 240th Street | No ROW |
| SW 240th Street – SW 244th Street | 80 |
| SW 244th Street – SW 248th Street | 50 |
| Next 850′ | No ROW |
| Next 2150′ (south of SW 256th Street) | 40 |
| Next 50′ | 80 |
| Next 300′ up to SW 258th Street | 40 |
| Next 1980′ up to SW 264th Street | No ROW |
| Next 330′ (south of SW 264th Street) | 35 |
| Next 940′ up to SW 268th Street | 90 |
| Next 200′ | 90 |
| Next 430′ | 75 |
| Next 5500′ up to SW 284th Street | Varies (HEFT Interchange) |
| Next 620′ | 80 |
| Next 570′ up to SW 288th Street | 100 |
| SW 288th Street – Waterstone Way | 128 |
| Waterstone Way – 1800′ south | 118 |
| Next 730′ up to SW 304th Street | 55 |
| SW 304th Street – 1700′ south | 55 |
| Next 850′ up to SW 312th Street | 90 |
| SW 312th Street – 960′ south | 110 |
| Next 330′ | Varies from 110 to 140 |
| Next 1320′ up to SW 320th Street | 60 |
| SW 320th Street – SW 344th Street | 60 |

Right of way width – Miami-Dade County Public Works

## 2.6 Intersection Controls

Twenty-eight signalized intersections exist along the 23 miles that make up the 137th Avenue corridor. The locations are listed in Table 2-9. With only one signal every 0.8 miles, this corridor would provide an excellent north/south alternative to the U.S. 1 and the Florida's Turnpike if it was continuous. The section of roadway from SW 56th Street to SW 71st Street has five signals in 15 blocks or one signal every three blocks. From Kendall Drive south to SW 160th Street there is consistently one signal every eight blocks.

**Table 2-9**
**Signalized Intersections Along 137th Avenue**

| |
|---|
| SW 18th Street |
| SW 26th Street (Coral Way) |
| SW 42nd Street (Bird Road) |
| SW 47th Street |
| SW 56th Street |
| SW 59th Street |
| SW 62nd Street |
| SW 68th Street |
| SW 72nd Street |
| SW 79th Street |
| SW 84th Street |
| SW 88th Street (Kendall Drive) |
| SW 96th Street |
| SW 104th Street |
| SW 112th Street |
| SW 120th Street |
| SW 128th Street |
| SW 136th Street |
| SW 146th Street |
| SW 152nd Street (Coral Reef Drive) |
| SW 160th Street |
| SW 180th Street |
| SW 184th Street (Eureka Drive) |
| U.S. 1 (Dixie Hwy.) |
| SW 268th Street |
| SW 288th Street (Biscayne) |
| Florida's Turnpike SB Off Ramp |

Figure 2-8 shows the intersection where 137th Avenue drops from three lanes in each direction to one lane in each direction. Figure 2-9 shows the intersection with U.S. 1 where the corridor starts again and runs south to the Homestead Speedway.

Figure 2-8
SW 184th Street Intersection



Figure 2-9
U.S. 1 Intersection



## 2.7 Transit

Table 2-10 indicates all of the transit routes that operate through or across the corridor. Route 137 is the only bus route that operates along a major portion of the corridor, running between SW 8th Street and SW 180th Street. Table 2-9 also indicates the number of passengers that board (get on) or alight (get off) bus service at 137th Avenue. Many of these movements represent transfers between route 137 and the major east/west routes on Kendall Drive, Killian Drive and Coral Reef Drive.

**Table 2-10**
**Bus Service**

| Route | Serves | Headway | On | Off |
|---|---|---|---|---|
| 137 | Southland Mall to International Mall | 30 minutes | 1112 | 1146 |
| 51 | 137th Avenue/10th Street to Convention Center | 12 minutes | | |
| 24 | 137th Avenue/Coral Way to Government Center | 30 minutes | | |
| 224 | 137 Avenue/Coral Way to Douglas Road Metro | 20 minutes | 18 | 8 |
| 40 | 147 Avenue/47 Street to Douglas Road Metro | 25 minutes | 44 | 53 |
| 240 | 147 Avenue/42 Street to Dadeland North | 20 minutes | 32 | 19 |
| 56 | 152 Avenue/47 Street to University of Miami | 50 minutes | | |
| 72 | 157 Avenue/88 Street to S. Miami Metro | 30 minutes | | |
| 88 | 157 Avenue/88 Street to Dadeland North | 20 minutes | 222 | 198 |
| 288 | 167 Avenue/88 Street to Dadeland North | 12 minutes | 40 | 53 |
| 104 | 157 Avenue/104 Street to Dadeland North | 30 minutes | 277 | 231 |
| 204 | 167 Avenue/88 Street to Dadeland North | 5 minutes | 67 | 61 |
| 147 | Tamiami Airport to Dolphin Mall | 30 minutes | | |
| 136 | 142 Avenue/136 Street to Dadeland South | 30 minutes | | |
| 252 | Country Walk to Dadeland South | 15 minutes | 144 | 188 |
| 70 | 212 Street/85 Avenue to Florida City | 30 minutes | | |

Source: Miami-Dade Transit

# 3. Corridor Alternatives and Analysis

The purpose of this chapter is to discuss the conceptual alternatives that were developed to assess the feasibility of a continuous corridor along 137th Avenue. All alternatives were developed in general and analyzed in order to select a preferred alternative. The alternatives were developed and refined with the objective of avoidance and minimization of impacts. Planning and engineering ideas to achieve this objective are described below.

## 3.1 137th Avenue Analysis Segments

To initiate the analysis, the study corridor was divided into nine individual segments for analysis (Figure 3-1). These segments were divided based on typical section, roadway physical characteristics, traffic and land use.

- Segment 1 – SW 344th Street to HEFT (4.3 miles)
- Segment 2 – Florida's Turnpike to U.S. 1 (1.6 miles)
- Segment 3 – U.S. 1 to SW 200th Street (Quail Roost) (3.2 miles)
- Segment 4 – SW 200th Street (Quail Roost) to SW 184th Street (Eureka Drive) (1.1 miles)
- Segment 5 – SW 184th Street (Eureka Drive) to SW 88th Street (6.1 miles)
- Segment 6 – SW 88th Street (Kendall Drive) to SW 56th Street (2.0 miles)
- Segment 7 – SW 56th Street to SW 26th Street (2.0 miles)
- Segment 8 – SW 26th Street (Coral Way) to U.S. 41 (1.2 miles)
- Segment 9 – SW 8th Street/U.S. 41 to SR-836 (1.6 miles)

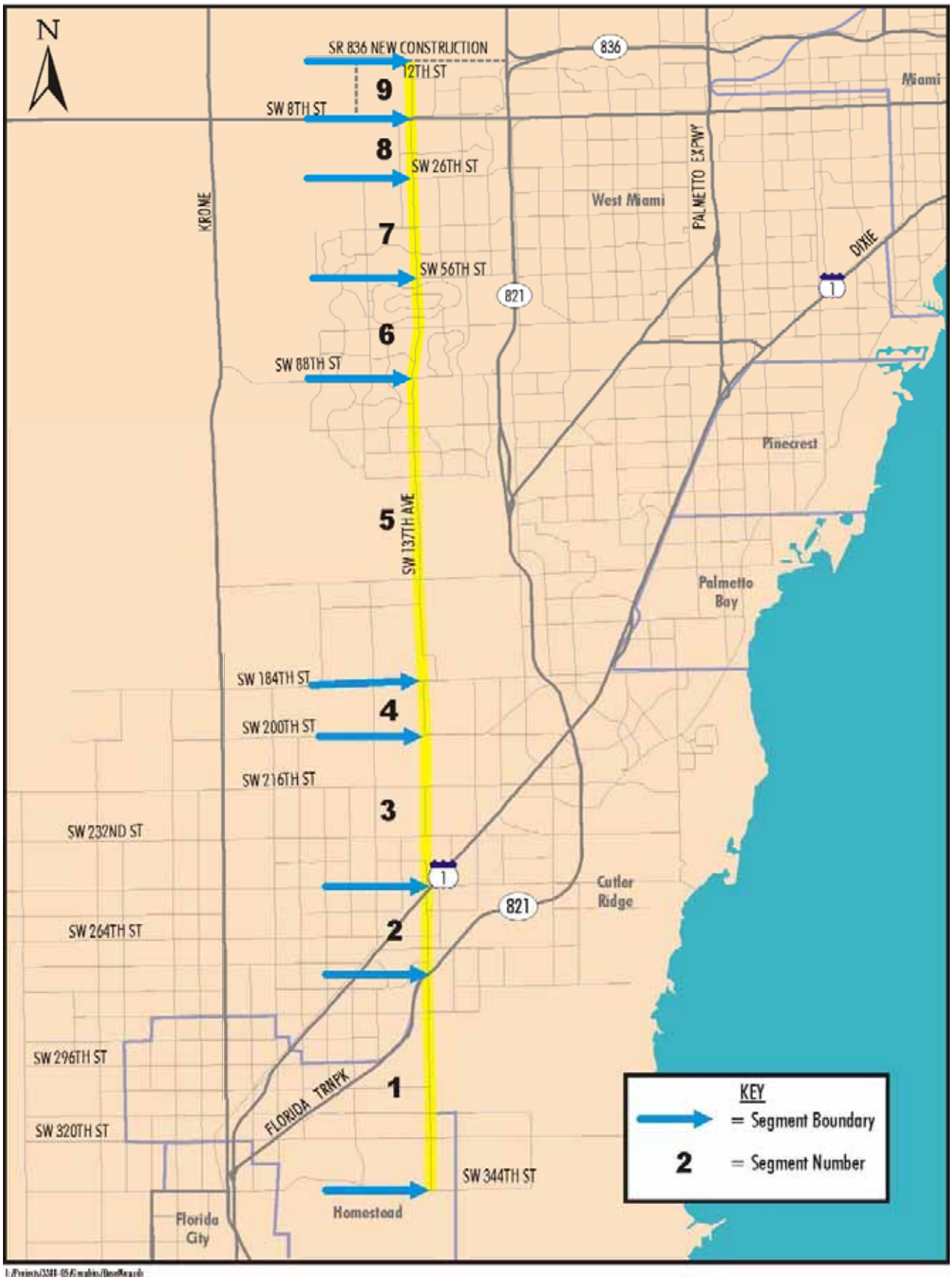
## 3.2 Definition of Alternatives

Seven alternatives were identified to be considered for the 137th Avenue Corridor Study. Beyond the No Build and Transportation System Management (TSM) options, these were based on a realistic assessment of the type of facility that would be required to meet the goals of the study. Each of the following includes a brief description and statement concerning the likelihood of the alternative to satisfy the intent of the study.

### ■ Alternative 1 - No-Build

This alternative proposes to keep the existing roadway layout and make no improvements. If no improvements are made, the roadway and its cross roads will likely experience congestion during peak hours. The congestion along the area may cause additional impacts to this roadway. Such impacts may include excessive delays in travel time, large reduction of average travel speeds, excess fuel consumption from idling vehicles, and increased air pollutants (particularly hydrocarbons and carbon monoxide).

Figure 3-1
137th Avenue Analysis Segment



## Alternative 2 - Transportation System Management (TSM)

This alternative involves selectively upgrading deficient roadway areas with improved signing, new turn lanes, pavement markings and access management improvements. This alternative will maximize its applicability on this project and will not satisfy the additional capacity needs along this section of roadway. The congestion along 137th Avenue is caused by a lack of thru lane capacity, roadway continuity and high turning volumes. The TSM alternative will only improve the operation of the signalized intersections and safety issues associated with this corridor.

## Alternative 3 - Four-Lane through facility, with neighborhood friendly design

This alternative consists of the following elements:

- Narrowing to a four-lane the segments that currently have a six-lane typical section.
- Widening to four-lane the segments that currently have a two-lane typical section.
- Constructing a new four-lane typical section to the segments that currently have no existing roadway.
- Constructing a shared use path for pedestrians and bicyclists along the entire corridor.
- Implementing landscape along the entire corridor.
- Adding pedestrian amenities (i.e. protected crosswalks, lighting, bus stops, etc.).

This roadway alternative will provide a more urban pedestrian sensitive design. It will also address the needed roadway connectivity to the south of the corridor but it will not address the needed roadway capacity, which would be one of the primary objectives of a new facility.

## Alternative 4 - Five-Lane facility, providing full accessibility to all properties

This alternative consists of the following elements:

- Maintaining the segments that currently have a six-lane typical section.
- Widening to five-lane the segments that currently have a two-lane typical section. The five-lane typical section will consist of two travel lanes in each direction and a center two-way left turn lane.
- Constructing a new five-lane typical section to the segments that currently have no existing roadway. The five-lane typical section will consist of two travel lanes in each direction and a center two-way left turn lane.

This alternative will provide the businesses and residents along the corridor full access to their properties. This alternative will also address the needed roadway connectivity to the south of the corridor but it will not improve intersections and queuing storage for the high turning volumes along the corridor.

A five-lane typical section permits unrestricted left-turn and right merges opportunities within the two-way left turn lane, which would result in a higher number of potential conflict points and possibly an increase in crash rates. Continuous left-turn lanes are also occasionally used as passing lanes.

- **Alternative 5 - Six-lane through divided facility (see Appendix C for schematic plans of this alternative)**

  This alternative consists of the following elements:

  - Maintaining the segments that currently have a six-lane typical section.
  - Widening to six-lane the segments that currently have a four-lane section.
  - Widening to six-lane the segments that currently have a two-lane typical section.
  - Constructing a new six-lane typical section to the segments that currently have no existing roadway.

  This alternative will provide and address the needed roadway connectivity to the south of the corridor as well as the needed capacity enhancements for the rest of the corridor. This alternative will also upgrade this road to a major north-south facility.

- **Alternative 6 - High-flow Arterial (see Appendix C for schematic plans of this alternative)**

  This alternative consists of the following elements:

  - Maintaining the segments that currently have a six-lane typical section.
  - Widening to four-lane or six-lane the segments that currently have a two-lane typical section.
  - Constructing a new four-lane or six-lane typical section to the segments that currently have no existing roadway.
  - Constructing grade separated intersections at specific locations to provide a north-south free flow movement at the busiest intersections.

  This alternative provides and addresses the needed roadway connectivity to the south of the corridor as well as the needed capacity enhancements for the rest of the corridor. This alternative will also upgrade this road to a high-flow arterial north-south facility.

- **Alternative 7 - Parkway (Boulevard) (see Appendix C for schematic plans of this alternative)**

  This alternative consists of the following elements:

  - Maintaining the segments that currently have a six-lane typical section.
  - Widening to four-lane the segments that currently have a two-lane typical section
  - Constructing a new four-lane typical section to the segments that currently have no existing roadway.
  - Implementing landscape to the entire corridor.
  - Adding pedestrian amenities (i.e. protected crosswalks, lighting, bus stops, etc.).
  - Constructing a shared use path for pedestrians and bicyclists along the entire corridor.

  This alternative provides to the roadway a more urban pedestrian sensitive design. It will also address the needed roadway connectivity to the south of the corridor but it will not address needed roadway capacity.

Roadway improvements around developed areas could present opposition by local agencies and neighborhood associations. In most of the cases, they will be in favor for the roadway improvements if the design provides a Context Sensitive Design (CSD) instead of a major roadway arterial. A CSD alternative will present a balance in providing some of the needed improvements and the support of the area residents and businesses.

This alternative will provide mobility improvements, enhancement of the natural environment, safety and preservation of community values.

## 3.3 Evaluation of Alternatives

The consultant reviewed each of the alternatives to identify which could meet the objective of the study. The criteria used were:

- Ability to satisfy project goals.
- Ability to maximize level of service in the corridor.
- Ability to complement and enhance the transportation network.

Based on this evaluation, the following assessment of the alternatives to be considered further in the planning process was made (Table 3-1).

**Table 3-1**
**Assessment of Alternatives**

| Alternative | Evaluation |
|---|---|
| 1 | This alternative will not move forward because it does not meet the study objective. |
| 2 | The TSM alternative will not move forward as a stand alone alternative. The TSM improvements will be incorporated into the build alternatives. |
| 3 | This alternative will not provide the needed capacity to accommodate future traffic growth into the year 2030. This alternative will not move forward. |
| 4 | This alternative will not address safety and traffic operation issues along the corridor. This alternative will not move forward. |
| 5 | This alternative will move forward as one of the build alternatives. |
| 6 | This alternative will move forward as one of the build alternatives. |
| 7 | This alternative will move forward as one of the build alternatives. |

## 3.4 Level of Service Analysis

To support the evaluation of the alternatives, a generalized planning level of service (LOS) analysis for the roadway sections was prepared. This section describes that process.

### 2030 Model Runs

The Miami-Dade Planning Area Travel Demand Model was used to obtain and develop the travel projections along 137th Avenue. The Miami-Dade model is based on the Florida Standard Urban Transportation Model Structure (FSUTMS). The model is recognized by FDOT and the Metropolitan Planning Organization (MPO) as one of the accepted travel demand modeling tools for the Miami-Dade region. This model is the same tool used for the South Link study efforts during the South Miami-Dade Corridor Study in April 2006.

Two initial model runs were performed during the analysis to compare the existing conditions with the TIP and LRTP projects programmed in the future.

- No Build (Existing Conditions)
- TIP and LRTP (Future Projects)

The No Build model run includes the existing lane configurations as of today including the improvements currently under construction between SR 836 and U.S. 41. The second model run includes all the TIP and LRTP projects along 137th Avenue and the surrounding cross roads. Tables 3-2 and 3-3 show the estimated volume projections. The yellow highlights in Table 3-3 represent changes in lane configuration.

**Table 3-2**
**No Build (Existing Conditions)**

| Segment Number | Limits | Existing Conditions | 2005 Volumes | 2030 Volumes |
|---|---|---|---|---|
| 1 | SW 344th Street to SW 288th Street (Biscayne) | 4-Lanes | 7,192 | 22,774 |
| | SW 288th Street (Biscayne) to Florida's Turnpike (SR 821) | 4-Lanes | 10,051 | 25,704 |
| 2 | HEFT (SR 821) to U.S. 1 | 2-Lanes | 7,419 | 14,118 |
| 3 | U.S. 1 to SW 200th Street (Quail Roost) | No roadway | No roadway | - |
| 4 | SW 200th Street (Quail Roost) to SW 184th Street (Eureka Drive) | 2-Lanes | 15,426 | 22,405 |
| 5 | SW 184th Street (Eureka Drive) to SW 88th Street (Kendall Drive) | 6-Lanes | 44,344 | 61,366 |
| 6 | SW 88th Street (Kendall Drive) to SW 72nd Street | 4-Lanes | 32,145 | 35,484 |
| | SW 72nd Street to SW 56th Street | 4-Lanes | 31,812 | 35,275 |
| 7 | SW 56th Street to SW 26th Street (Coral Way) | 6-Lanes | 40,488 | 54,028 |
| 8 | SW 26th Street (Coral Way) to SW 8th Street (U.S. 41) | 4-Lanes | 30,189 | 38,230 |
| 9 | SW 8th Street (U.S. 41) to SR 836 | 6-Lanes | Under construction | 70,708 |

Table 3-3
TIP and LRTP (Future Projects)

| Segment Number | Limits | Including TIP & LRTP Improvements | 2030 Volumes |
|---|---|---|---|
| 1 | SW 344th Street to SW 288th Street (Biscayne) | 4-Lanes | 26,834 |
| | SW 288th Street (Biscayne) to Florida's Turnpike (SR 821) | 4-Lanes | 35,546 |
| 2 | HEFT (SR 821) to U.S. 1 | 4-Lanes* | 31,954 |
| 3 | U.S. 1 to SW 200th Street (Quail Roost) | 2-Lanes | 15,968 |
| 4 | SW 200th Street (Quail Roost) to SW 184th Street (Eureka Drive) | 2-Lanes | 24,737 |
| 5 | SW 184th Street (Eureka Drive) to SW 88th Street (Kendall Drive) | 6-Lanes | 60,486 |
| 6 | SW 88th Street (Kendall Drive) to SW 72nd Street | 6-Lanes | 44,732 |
| | SW 72nd Street to SW 56th Street | 4-Lanes | 35,432 |
| 7 | SW 56th Street to SW 26th Street (Coral Way) | 6-Lanes | 55,549 |
| 8 | SW 26th Street (Coral Way) to SW 8th Street (U.S. 41) | 6-Lanes | 50,894 |
| 9 | SW 8th Street (U.S. 41) to SR 836 | 6-Lanes | 72,927 |

* The yellow shading represents change in lane configuration.

## Level of Service

Level of Service was examined based on state standards.[1] The analysis focused on assessing how the various roadway segments would perform in relation to LOS.

### No-Build Alternative and Future Programmed Projects

Tables 3-4 and 3-5 show the LOS for the No-Build (Existing Conditions) and for the TIP and LRTP (Future Projects). The 137th Avenue corridor falls under the Non-State Roadways classification. If this roadway becomes the fourth north-south corridor within this area of the county, the roadway may become a State Two-Way Arterial Class I or Class II classification. The following tables analyze both scenarios for future comparison. The green highlights represent changes in LOS.

[1] Refer to "2002 Quality Level of Service Handbook, Table 4-1 Generalized Annual Average Daily Volumes for Florida's Urbanized Areas" (see Appendix B).

Table 3-4
No Build (Existing Conditions)

| Segment Number | Limits | Existing Conditions | 2030 Volumes | 2030 Level of Service | | |
|---|---|---|---|---|---|---|
| | | | | Non-State Roadway | State Roadway Class II | State Roadway Class I |
| 1 | SW 344th Street to SW 288th Street (Biscayne) | 4-Lanes | 22,774 | D | C | B |
| | SW 288th Street (Biscayne) to Florida's Turnpike (SR 821) | 4-Lanes | 25,704 | D | D | B |
| 2 | HEFT (SR 821) to U.S. 1 | 2-Lanes | 14,118 | E | D | D |
| 3 | U.S. 1 to SW 200th Street (Quail Roost) | No roadway | - | - | - | - |
| 4 | SW 200th Street (Quail Roost) to SW 184th Street (Eureka Drive) | 2-Lanes | 22,405 | F | F | F |
| 5 | SW 184th Street (Eureka Drive) to SW 88th Street (Kendall Drive) | 6-Lanes | 61,366 | F | F | F |
| 6 | SW 88th Street (Kendall Drive) to SW 72nd Street | 4-Lanes | 35,484 | F | F | F |
| | SW 72nd Street to SW 56th St | 4-Lanes | 35,275 | F | F | F |
| 7 | SW 56th Street to SW 26th Street (Coral Way) | 6-Lanes | 54,028 | F | F | F |
| 8 | SW 26th Street (Coral Way) to SW 8th Street (U.S. 41) | 4-Lanes | 38,230 | F | F | F |
| 9 | SW 8th Street (U.S. 41) SR 836 | 6-Lanes | 70,708 | F | F | F |

Table 3-5
TIP and LRTP (Future Projects)

| Segment Number | Limits | Number of Lanes | 2030 Volumes | Non-State Roadway | State Roadway Class II | State Roadway Class I |
|---|---|---|---|---|---|---|
| 1 | SW 344th Street to SW 288th Street (Biscayne) | 4-Lanes | 26,834 | D | D** | B |
| | SW 288th Street (Biscayne) to Florida's Turnpike (SR 821) | 4-Lanes | 35,546 | F | F | F |
| 2 | HEFT (SR 821) to U.S. 1 | 4-Lanes* | 31,954 | E | E | C |
| 3 | U.S. 1 to SW 200th Street (Quail Roost) | 2-Lanes | 15,968 | F | F | E |
| 4 | SW 200th Street (Quail Roost) to SW 184th Street (Eureka Drive) | 2-Lanes | 24,737 | F | F | F |
| 5 | SW 184th Street (Eureka Drive) to SW 88th Street (Kendall Drive) | 6-Lanes | 60,486 | F | F | F |
| 6 | SW 88th Street (Kendall Drive) to SW 72nd Street | 6-Lanes | 44,732 | E | E | C |
| | SW 72nd Street to SW 56th St | 4-Lanes | 35,432 | F | F | F |
| 7 | SW 56th Street to SW 26th Street (Coral Way) | 6-Lanes | 55,549 | F | F | F |
| 8 | SW 26th Street (Coral Way) to SW 8th Street (U.S. 41) | 6-Lanes | 50,894 | F | F | D |
| 9 | SW 8th Street (U.S. 41) SR 836 | 6-Lanes | 72,927 | F | F | F |

*See note on Table 3-3
** Green shading represents changes in LOS.

### Build Alternatives

A generalized planning LOS analysis of the proposed alternatives was completed. The purpose of this analysis was to combine the year 2030 traffic projection estimates with the physical roadway characteristics of the proposed alternatives to determine the projected LOS. This analysis also helped to define the preliminary design details, such as intersection layouts and typical sections. Alternatives 5 and 6 have the same traffic six-lane typical section but Alternative 6 includes three new grade separated intersections at U.S. 1, Kendall Drive and U.S. 41. These intersection improvements will affect the LOS analysis, which in this planning study will only focus on the number of lanes and the volume/capacity (v/c) ratio along the segments. For traffic purposes, Alternatives 5 and 6 will have the same LOS results.

Tables 3-6 and 3-7 show the LOS for the build alternatives. The 137th Avenue corridor falls under the Non-State Roadways classification. If this roadway becomes the fourth north-south corridor within this area of the county, the roadway may become a State Two-Way Arterial Class I or Class II classification. The following tables analyze both scenarios for future comparison. The green highlights represent changes in LOS.

## Volume/Capacity Ratio

The generalized planning LOS analysis was done to help identify the need for improvements along 137th Avenue and to determine the areas that will require to add capacity and provide roadway continuity within this area of the Miami-Dade County.

After the alternatives were identified, the Miami-Dade Planning Area Travel Demand Model was used to obtain and develop the volume/capacity (v/c) ratios along 137th Avenue. The v/c ratio analysis is mostly used to determine if the amount of lanes in any given road can handle the projected volume. The only disadvantage of this analysis is that it does not take in consideration the vehicle delays at the intersections, concentrating only along the segments of the roadway. The results of this analysis should support the decisions made during the alternative analysis. The v/c ratio results should show an improvement between the existing conditions and the build alternatives. If the v/c ratio analysis does not show any improvement, then the proposed number of lanes would have to be revised.

Tables 3-8 through 3-10 show the v/c ratios for the No-Build (Existing Conditions) and for the Build Alternatives.

Table 3-6
Alternative 7 – Preliminary Level of Service Segment Analysis

| Segment Number | Limits | Number of Lanes | 2030 Volumes | Non-State Roadway | State Roadway Class II | State Roadway Class I |
|---|---|---|---|---|---|---|
| 1 | SW 344th Street to SW 288th Street (Biscayne) | 4-Lanes | 26,839 | D | D | B |
| | SW 288th Street (Biscayne) to Florida's Turnpike (SR 821) | 4-Lanes | 36,190 | F | F | F |
| 2 | HEFT (SR 821) to U.S. 1 | 4-Lanes | 32,372 | F | F | C |
| 3 | U.S. 1 to SW 200th Street (Quail Roost) | 4-Lanes | 26,941 | D | D | B |
| 4 | SW 200th Street (Quail Roost) to SW 184th Street (Eureka Drive) | 4-Lanes | 30,232 | E | D | C |
| 5 | SW 184th Street (Eureka Drive) to SW 88th Street (Kendall Drive) | 6-Lanes | 65,961 | F | F | F |
| 6 | SW 88th Street (Kendall Drive) to SW 72nd Street | 4-Lanes | 39,071 | F | F | F |
| | SW 72nd Street to SW 56th Street | 4-Lanes | 40,743 | F | F | F |
| 7 | SW 56th Street to SW 26th Street (Coral Way) | 6-Lanes | 54,239 | F | F | F |
| 8 | SW 26th Street (Coral Way) to SW 8th Street (U.S. 41) | 4-Lanes | 41,310 | F | F | F |
| 9 | SW 8th Street (U.S. 41) SR 836 | 6-Lanes | 73,410 | F | F | F |

Table 3-7
Alternatives 5 and 6 – Preliminary Level of Service Segment Analysis

| Segment Number | Limits | Number of Lanes | 2030 Volumes | Non-State Roadway | State Roadway Class II | State Roadway Class I |
|---|---|---|---|---|---|---|
| 1 | SW 344th Street to SW 288th Street (Biscayne) | 4-Lanes | 28,046 | D | D | C |
| | SW 288th Street (Biscayne) to Florida's Turnpike (SR 821) | 6-Lanes | 38,294 | D | D | B |
| 2 | HEFT (SR 821) to U.S. 1 | 6-Lanes | 37,010 | D | C | B |
| 3 | U.S. 1 to SW 200th Street (Quail Roost) | 6-Lanes | 32,413 | D | C | B |
| 4 | SW 200th Street (Quail Roost) to SW 184th Street (Eureka Drive) | 6-Lanes | 37,937 | D | C | B |
| 5 | SW 184th Street (Eureka Drive) to SW 88th Street (Kendall Drive) | 6-Lanes | 66,857 | F | F | F |
| 6 | SW 88th Street (Kendall Drive) to SW 72nd Street | 6-Lanes | 53,870 | F | F | F |
| | SW 72nd Street to SW 56th St | 6-Lanes | 59,446 | F | F | F |
| 7 | SW 56th Street to SW 26th Street (Coral Way) | 6-Lanes | 59,813 | F | F | F |
| 8 | SW 26th Street (Coral Way) to SW 8th Street (U.S. 41) | 6-Lanes | 54,872 | F | F | F |
| 9 | SW 8th Street (U.S. 41) SR 836 | 6-Lanes | 79,310 | F | F | F |

**Table 3-8**
**v/c Ratios**
**No Build (Existing Conditions)**

| Segment Number | Limits | Existing Conditions | 2030 Model V/C Ratio |
|---|---|---|---|
| 1 | SW 344th Street to SW 288th Street (Biscayne) | 4-Lanes | 0.32 |
| | SW 288th Street (Biscayne) to Florida's Turnpike (SR 821) | 4-Lanes | 0.36 |
| 2 | HEFT (SR 821) to U.S. 1 | 2-Lanes | 1.53 |
| 3 | U.S. 1 to SW 200th Street (Quail Roost) | No roadway | - |
| 4 | SW 200th Street (Quail Roost) to SW 184th Street (Eureka Drive) | 2-Lanes | 1.09 |
| 5 | SW 184th Street (Eureka Drive) to SW 88th Street (Kendall Drive) | 6-Lanes | 1.18 |
| 6 | SW 88th Street (Kendall Drive) to SW 72nd Street | 4-Lanes | 1.03 |
| | SW 72nd Street to SW 56th Street | 4-Lanes | 1.06 |
| 7 | SW 56th Street to SW 26th Street (Coral Way) | 6-Lanes | 0.99 |
| 8 | SW 26th Street (Coral Way) to SW 8th Street (U.S. 41) | 4-Lanes | 1.12 |
| 9 | SW 8th Street (U.S. 41) to SR 836 | 6-Lanes | 1.43 |

**Table 3-9**
**v/c Ratios**
**Alternative 7**

| Segment Number | Limits | Including TIP & LRTP Improvements | 2030 V/C Ratio |
|---|---|---|---|
| 1 | SW 344th Street to SW 288th Street (Biscayne) | 4-Lanes | 0.38 |
| | SW 288th Street (Biscayne) to Florida's Turnpike (SR 821) | 4-Lanes | 0.51 |
| 2 | HEFT (SR 821) to U.S. 1 | 4-Lanes | 0.89 |
| 3 | U.S. 1 to SW 200th Street (Quail Roost) | 4-Lanes | 0.74 |
| 4 | SW 200th Street (Quail Roost) to SW 184th Street (Eureka Drive) | 4-Lanes | 0.91 |
| 5 | SW 184th Street (Eureka Drive) to SW 88th Street (Kendall Drive) | 6-Lanes | 1.21 |
| 6 | SW 88th Street (Kendall Drive) to SW 72nd Street | 4-Lanes | 1.08 |
| | SW 72nd Street to SW 56th Street | 4-Lanes | 1.12 |
| 7 | SW 56th Street to SW 26th Street (Coral Way) | 6-Lanes | 1.01 |
| 8 | SW 26th Street (Coral Way) to SW 8th Street (U.S. 41) | 4-Lanes | 1.14 |
| 9 | SW 8th Street (U.S. 41) to SR 836 | 6-Lanes | 1.35 |

**Table 3-10**
**v/c Ratios**
**Alternatives 5 and 6**

| Segment Number | Limits | Including TIP & LRTP Improvements | 2030 V/C Ratio |
|---|---|---|---|
| 1 | SW 344th Street to SW 288th Street (Biscayne) | 4-Lanes | 0.38 |
| | SW 288th Street (Biscayne) to Florida's Turnpike (SR 821) | 6-Lanes | 0.50 |
| 2 | HEFT (SR 821) to U.S. 1 | 6-Lanes | 0.65 |
| 3 | U.S. 1 to SW 200th Street (Quail Roost) | 6-Lanes | 0.60 |
| 4 | SW 200th Street (Quail Roost) to SW 184th Street (Eureka Drive) | 6-Lanes | 0.61 |
| 5 | SW 184th Street (Eureka Drive) to SW 88th Street (Kendall Drive) | 6-Lanes | 1.20 |
| 6 | SW 88th Street (Kendall Drive) to SW 72nd Street | 6-Lanes | 0.92 |
| | SW 72nd Street to SW 56th Street | 6-Lanes | 0.98 |
| 7 | SW 56th Street to SW 26th Street (Coral Way) | 6-Lanes | 1.10 |
| 8 | SW 26th Street (Coral Way) to SW 8th Street (U.S. 41) | 6-Lanes | 1.01 |
| 9 | SW 8th Street (U.S. 41) to SR 836 | 6-Lanes | 1.58 |

A more detailed traffic operational analysis will have to be performed during the next transportation phase (Project Development and Environment) to determine a more accurate LOS along the 137th Avenue Corridor.

The 137th Avenue Corridor overall LOS will depend on the intersection and arterial LOS. Intersection LOS corresponds to the average delay experienced by a vehicle passing through a given intersection. Arterial LOS is a function of the average travel speed through a project segment.

# 4. Recommendations

Based on the analysis conducted and documented in Chapter 3, it is clear that the three build options are the only ones that would realistically meet the overall objectives of a facility improvement project in the 137th Street corridor, if it were to be constructed. These objectives are:

1. Increase capacity to accommodate future travel demand.
2. Improve access management.
3. Provide roadway continuity.

To achieve these goals, it is recommended that the alternatives be phased as follows:

- Phase 1: Parkway Facility (Boulevard with Context Sensitive Design) (former Alternative 7)
- Phase 2: Six-lane Major North-South Corridor (former Alternative 5)
- Phase 3: Six-lane, Grade-separated High Flow Facility (former Alternative 6)

The following discussion addresses the specifics of each phase. The basis for the recommendation is the fact that given the relatively mature state of parts of the corridor, the overall evolution of the corridor into a contiguous north-south arterial will be done over time as project funding allows. The discussion of the phases identifies only the improvements that would be implemented with each phase. In addition to engineering features, the parkway phase will include elements such as sidewalks, bike paths, landscaping, illumination, signage, etc. These would be carried forward into subsequent phases. Appendix D presents a PowerPoint presentation that presents before and after scenarios for each phase.

As part of this analysis, it is acknowledged that South Dixie Highway (U.S. 1) corridor in South Dade has been the focus of an extensive planning effort since the mid-1990s. This effort has resulted in three unique zoning districts created to encourage mixed-use, pedestrian and transit-oriented development. The 137th Avenue alignment intersects with two of these districts, the Naranja Community Urban Center and Princeton Community Urban Center. Understanding the need for transit-oriented development, with its requisite opportunities for mobility, each roadway alternative considered for these areas should contain context sensitive roadway sections that incorporate the design elements set forth in the land development codes for these Urban Centers as approved by the Board of County Commissioners, such as wide sidewalks and on-street parking where appropriate. Additionally, it is emphasized that efforts should be undertaken to implement alternative modes of travel to move people more efficiently within the capacity provided in the early phases of the planned roadway improvement, if ridership numbers warrant those options, so as to adhere to the Policies set forth in the Miami Dade County Comprehensive Development Master Plan. More information about transit issues is provided at the end of this section.

## Phase 1 (Alternative 7) – Parkway Facility (Boulevard with Context Sensitive Design)

This alternative will consist of the following potential improvements by segment:

### Segment 1 - SW 344th Street to the HEFT

Intersection Improvements

- HEFT On-Ramp
  - Extend northbound storage left turn lane
- SW 288th Street
  - Add dual northbound left turn lanes

### Segment 2 - HEFT to U.S. 1

Recommended Improvements:

- Widening from two-lane to four-lane from HEFT to U.S. 1
- Drainage system improvements
- Roadway continuity beyond U.S. 1

Intersection Improvements

- HEFT Off-ramp
  - Add a northbound acceleration lane
  - Add dual westbound left turn lanes

### Segment 3 - U.S. 1 to SW 200th Street (Quail Roost)

Recommended Improvements

- New construction of a two-lane roadway as established by MPO Board Resolution #21-05
- Roadway continuity beyond U.S. 1 to SW 200th Street
- Drainage system improvements

Intersection Improvements

- New four-lane at grade intersection at U.S. 1
- New four-lane at grade intersection at SW 200th Street
  - Add a traffic signal

### Segment 4 - SW 200th Street (Quail Roost) to SW 184th Street (Eureka Drive)

Recommended Improvements

- Widening from two-lane to four-lane from SW 200th Street to SW 184th Street
- Drainage system improvements
- New directional median opening at SW 192nd Street

### Segment 5 - SW 184th Street (Eureka Drive) to SW 88th Street

Recommended Improvements

- Provide a six-lane continuity within the segment intersections

Intersection Improvements
- Extend storage queues at all signalized intersections
- Improve signal timing by coordinating all traffic signals
- SW 152nd Street
  - Add an eastbound right-turn lane
  - Provide six-lane continuity along 137th Avenue
- SW 136th Street
  - Add an eastbound right-turn lane
  - Provide six-lane continuity along 137th Avenue
- SW 120th Street
  - Add a northbound right-turn lane
  - Add a southbound right-turn lane
  - Add dual northbound left-turn lanes

### Segment 6 - SW 88th Street (Kendall Drive) to SW 56th Street

Recommended Improvements
- Widening from four-lane to six-lane from SW 88th Street to SW 56th Street
- The proposed widening can be accommodated along the existing median (inside) or along the existing swales (outside)

Intersection Improvements
- Extend storage queues at all signalized intersections
- Improve signal timing by coordinating all traffic signals
- Access management
  - Close five (5) full directional median openings
  - Construct two (2) dual directional median openings
  - Construct two (2) northbound directional median openings
  - Construct six (6) southbound directional median openings

### Segment 7 - SW 56th Street to SW 26th Street

Intersection Improvements
- Extend storage queues at all signalized intersections
- Improve signal timing by coordinating all traffic signals
- Access management
  - Close two (2) full median openings
  - Construct five (5) dual directional median openings
  - Construct two (2) northbound directional median openings
  - Construct two (2) southbound directional median openings
- SW 56th Street
  - Add a northbound right-turn lane
- SW 42nd Street
  - Add a westbound right-turn lane

### Segment 8 - SW 26th Street (Coral Way) to U.S. 41

Recommended Improvements

- Widening from four-lane to six-lane from SW 26th Street to U.S. 41
- The proposed widening can be accommodated along the existing median (inside) or along the existing swales (outside)

Intersection Improvements

- Extend storage queues at all signalized intersections
- Improve signal timing by coordinating all traffic signals
- U.S. 41
  - Re-align intersection
- Access management
  - Close three full directional median openings
  - Construct four dual directional median openings
  - Construct four northbound directional median openings

### Segment 9 -U.S. 41 to SR-836

No improvements needed in this area.

### Summary

This alternative provides capacity improvements along the existing two-lane typical sections and the new four-lane connection between U.S. 1 and SW 200th Street. The goal of this alternative is to offer a neighborhood friendly environment that can balance the needs of the roadway and the preservation of community values.

Right of way acquisition will be required to accommodate the capacity improvements along the segments that currently have a two-lane typical section and along Segment #3. Some of the intersection improvements may also need right-of-way acquisitions to accommodate the new turn lanes.

Figure 4-1 shows the proposed four-lane typical section.

## Phase 2 (Alternative 5) – Six-Lane Divided Facility (Major North-South Corridor)

This alternative will consist of the following potential improvements by segment:

### Segment 1 - SW 344th Street to the HEFT

Recommended Improvements

- Widening from four-lane to six-lane from SW 288th Street to HEFT

### Segment 2 - HEFT to U.S. 1

Recommended Improvements

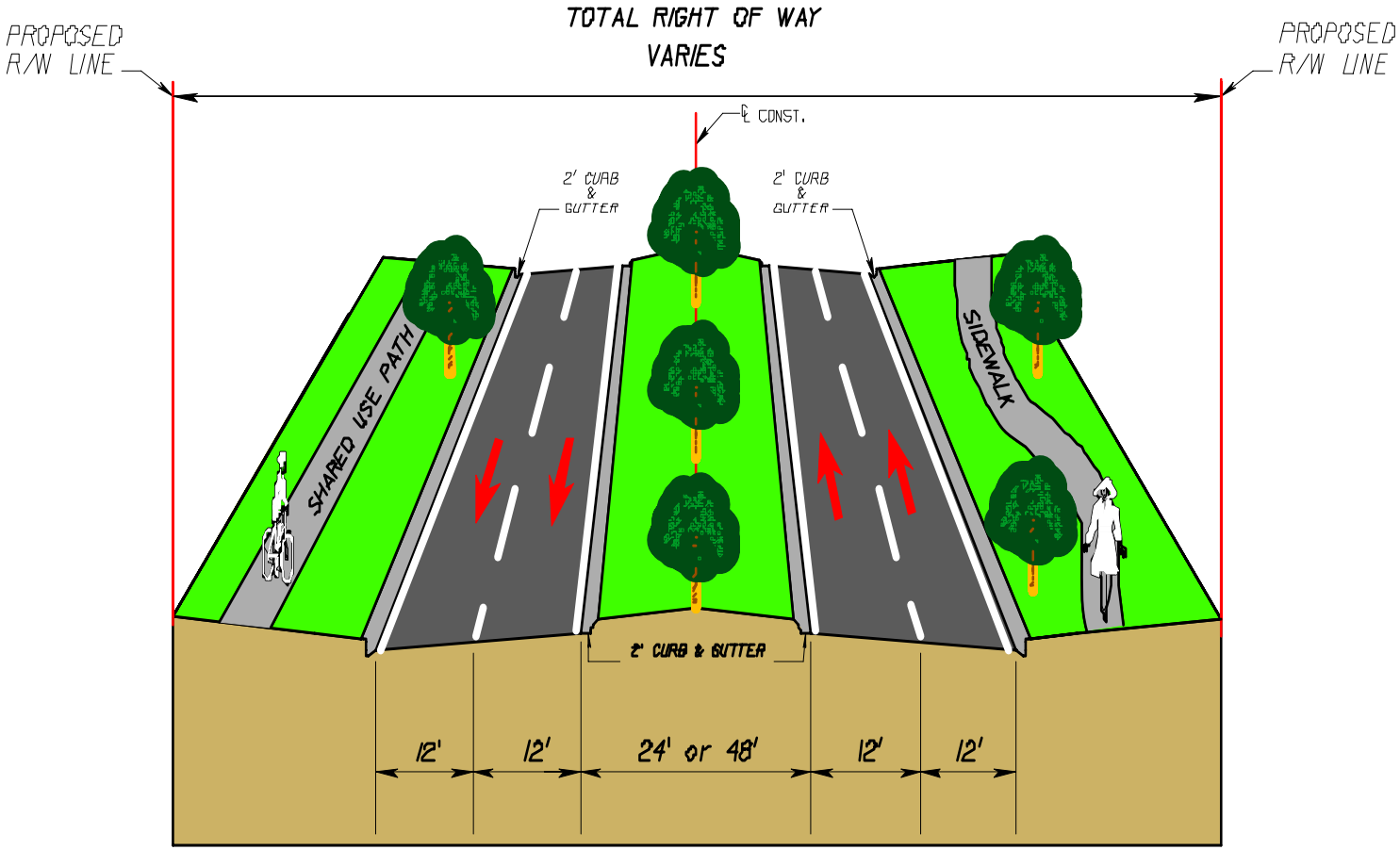
- Widening from four-lane to six-lane from HEFT to U.S. 1

### Segment 3 - U.S. 1 to SW 200th Street (Quail Roost)

Recommended Improvements

- Widening from two-lane to four-lane from U.S. 1 to SW 200th Street, as established in MPO Board Resolution #21-05

Figure 4-1
Four-Lane Proposed Typical Roadway Section



### Segment 4 - SW 200th Street (Quail Roost) to SW 184th Street (Eureka Drive)

Recommended Improvements

- Widening from four-lane to six-lane from SW 200th Street to SW 184th Street

### Summary

Phase 2, when completed, will result in a six-lane roadway facility along the 137th Avenue Corridor from SW 288th Street to SR 836.

Right of way acquisition will not be required to accommodate the capacity improvements along the segments that currently have a four-lane typical section. The widening from four to six lanes will be accommodated by using the median. The median will be reduced from 48' to 24' wide.

Figure 4-2 shows the proposed six-lane typical section.

## Phase 3 (Alternative 6) – High-Flow Arterial Facility (Major North-South Urban Principal Arterial)

This alternative will consist of the following potential improvements by segment:

### Segment 3 - U.S. 1 to SW 200th Street (Quail Roost)

Intersection Improvements

- New four-lane grade separation intersection at U.S. 1

### Segment 6 -SW 88th Street (Kendall Drive) to SW 56th Street

Intersection Improvements

- New four-lane grade separation at SW 88th Street

### Segment 8 -SW 26th Street (Coral Way) to U.S. 41 (SW 8th Street)

Intersection Improvements

- U.S. 41
  - New four-lane grade separation intersection

### Summary

The proposed intersection improvements will require right-of-way acquisitions to accommodate the new turn lanes and the grade separation improvements. The grade separation improvements will require temporary construction easements to accommodate the maintenance of traffic and the construction phases.

Figure 4-3 shows the proposed grade separation. Appendix A shows the proposed intersection grade separation typical sections.

Figure 4-2
Six-Lane Proposed Typical Roadway Section

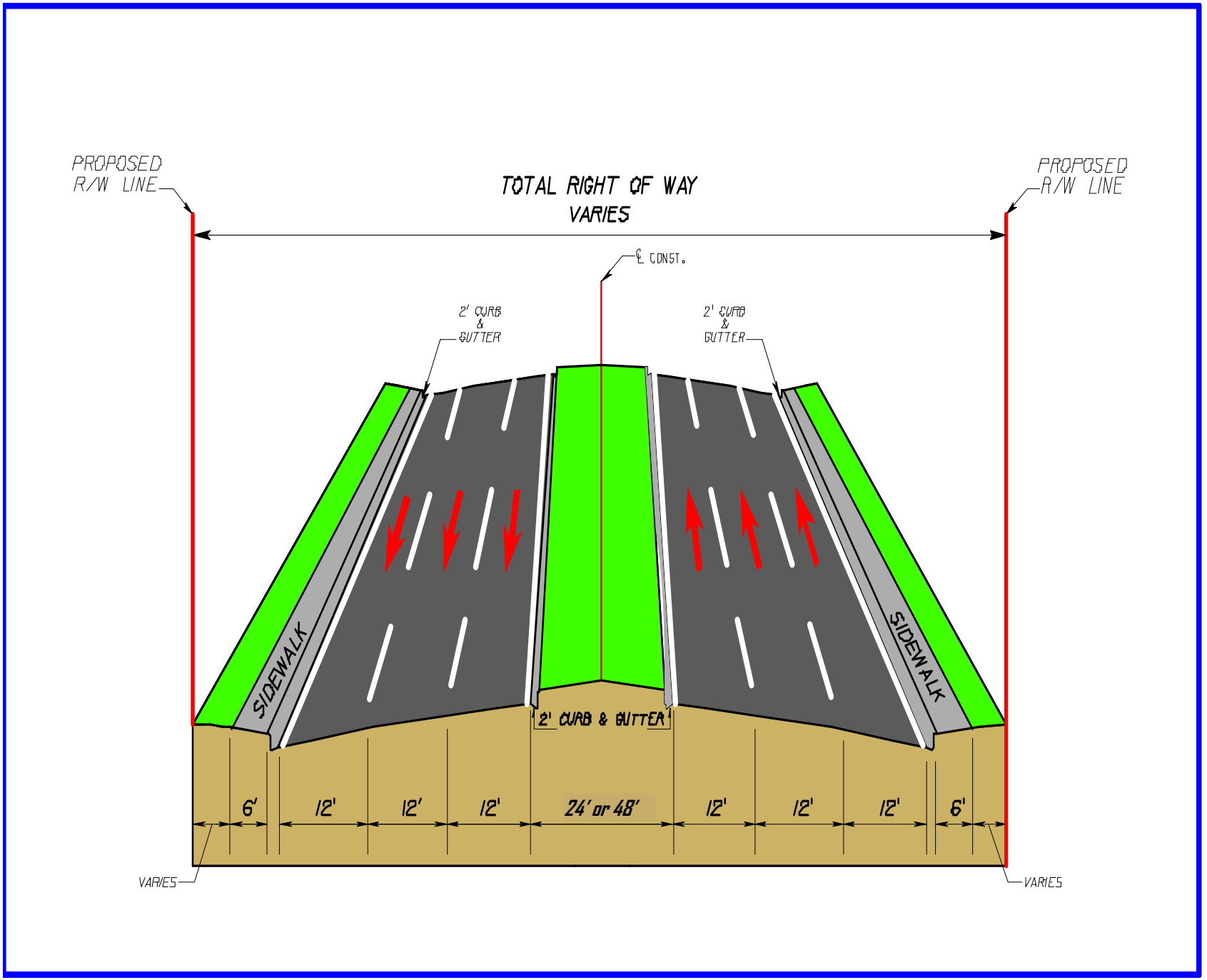
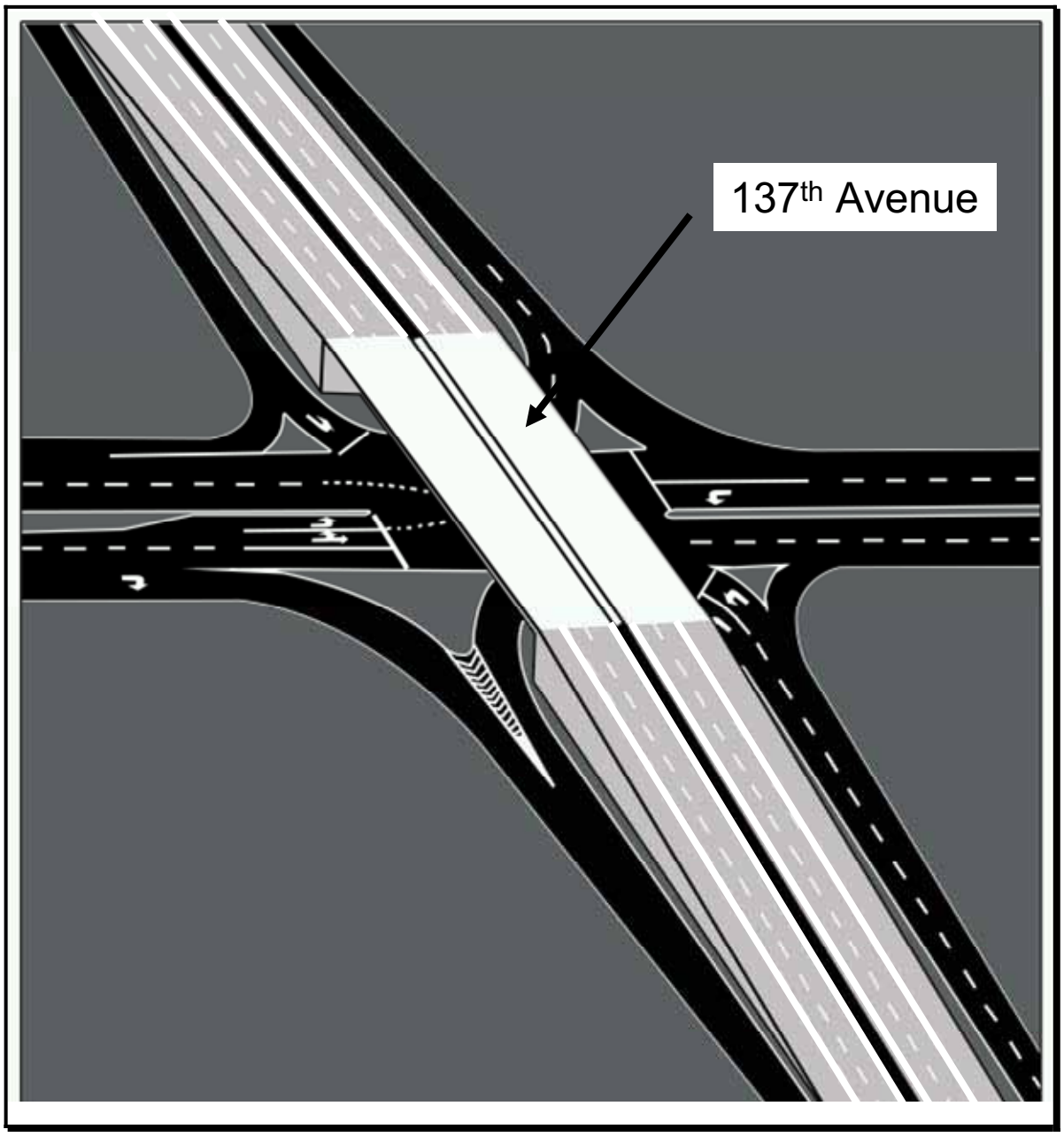


Figure 4-3
Phase 3 Proposed Intersection Grade Separation



## Transit Element

As indicated in Chapter 2, the corridor is served by several transit routes. Most of them are using a portion of the corridor and only Route #137 serves the corridor from SW 8th Street to SW 180th Street. Even though this is an important element, the objective of this study was focused on providing additional roadway capacity and safety improvements to the corridor due to the current traffic congestion which has been worsened by the additional 11,400 vehicles per day coming from the recent connection of SR 836 to the northern part of SW 137th Avenue.

However, transit is another alternative for mitigating this traffic congestion. Currently, there are other studies and actions that are considering transit alternatives for the corridor. During the development of the study, coordination was established with the appropriate entities and the following considerations were discussed.

### Kendall Drive Alternative Analysis (known as Kendall Link)

The goal of this study is to develop several transit scenarios for the Kendall Drive Corridor. This corridor has a north-south element that considers the establishment of a Bus Rapid Transit (BRT) along SW 137th Corridor. This study is underway and no final decision has been taken. This is a major transit improvement to the corridor. Based on this situation, no transit improvements are suggested for the corridor, pending the final recommendations.

### Right-of-Way

The SW 137th Avenue Corridor has enough right-of-way to accommodate the recommended roadway improvements, as well as future transit recommendations adopted by the community.

### Bus Improvements

Currently, Miami-Dade Transit (MDT) is evaluating the bus system for improving their service.

### Express Service

With the connection of the SR 836, this corridor is an excellent candidate for expanding the bus-on-shoulders operation. An express route could be implemented (with minimum stops) along the corridor and use the SR 836 to serve the airport, the Civic Center and the downtown area.

### Future Transit Projects

Once the Kendall Alternatives Analysis Study has a recommended local preferred alternative (LPA), this 137th Avenue study should be revisited for accommodating the recommended LPA. Additionally, depending on the LPA, other transit improvements could also be considered to supplement the recommended roadway improvements.

# 5. Implementation and Costs

Based on the work conducted in this study, it is clear that a "build" project is necessary to achieve the goals of the study. The overall utility to the transportation system of the 137th Avenue corridor will be achieved by: (1) establishing corridor connectivity; (2) ensuring adequate capacity; and, (3) creating a roadway environment that is friendly to the community.

Based on the information developed in this study, the creation of a contiguous roadway along 137th Avenue is feasible. Accomplishing the above given funding realities and the realities of the roadway development process, the "phased" approach as recommended in Chapter 4 is a logical approach.



**Phase 1: Parkway**



**Phase 2: Six-lane Through**



**Phase 3: Grade Separation**

## Schedule

The corridor was divided in nine segments for detailed analyses and recommendations. Cost estimates were developed for each phase. However, priorities for the construction of the recommended improvements were neither ranked nor prioritized. The reason for this determination was based on the high number of improvements recommended by segment and phase. This approach provides the flexibility to the operational agencies for evaluating each segment based on availability of funding, need of the improvements and ease of implementation.

The recommended improvements include short-, medium- and long-term projects. Some of the safety improvement recommendations, as well as the access management could be implemented within three years. Others, such as the widening of some segments, could take four to eight years for implementation. Finally, recommendations regarding a major improvement such as grade separation would require over eight years for implementation. Based on the magnitude of recommended actions, some projects will require amending the Transportation Improvement Program (TIP) and others need to be included and evaluated in the development of the next 2035 Long Range Transportation Plan (LRTP).

It is important to consider other projects that in one way or another might affect the level of service along this corridor, among them:

- Kendall Link
- Extension of the SR 874 to SW 137th Avenue through SW 136th Street
- SW 152nd Street Corridor Study
- Construction of a two-lane road from U.S. 1 to SW 200th Street
- Implementation of the Electronic Toll Road (ETD) system along the SR 836 (Dolphin Expressway)

As these projects move on to the implementation phase, the recommendations of this 137th Avenue Study should be re-evaluated as appropriate.

## Costs

Tables 5-1 through 5-3 show the ranges in construction costs estimated for all three phases. These are conceptual, in 2006 dollars, and do not include right-of-way acquisition costs. The project phases were divided due to the type and scope of the improvements recommended. The improvements should be implemented as the traffic demand increases and maintenance improvements not longer achieve the goals and visions of the County for this corridor.

To be able to build the ultimate design, financial plans will have to be developed in different fiscal years by identifying the needs and priorities for improvements along this corridor. Phase 1 (Table 5-1) includes the cost for the following improvements:

- The widening from two-lane to a four-lane section between the HEFT and U.S. 1
- The addition of a new four-lane typical section roadway between U.S. 1 and SW 200th Street (Quail Roost)
- The widening from two-lane to a four-lane section between SW 200th Street (Quail Roost) and SW 184th Street (Eureka Drive)
- The widening from a four-lane to a six-lane section from SW 88th Street (Kendall Drive) to SW 56th Street
- The widening from a four-lane to a six-lane section from SW 26th (Coral Way) to SW 8th Street (U.S. 41)

Table 5-1
Phase 1 – Construction Estimate

| Major Pay Items | Quantity | Unit | Unit Price | Estimate |
|---|---|---|---|---|
| | | | | |
| New Turn Lanes | 11.00 | ea | $40,000 | $440,000 |
| | | | | |
| **Widening from 2 to 4 lanes** | | | | |
| Clear and Grubbing | 14.00 | ac | $40,000 | $560,000 |
| Excavation Regular | 45,056.00 | cy | $15 | $675,840 |
| Roadway | 1.60 | mi | $1,750,000 | $2,800,000 |
| Drainage | 1.60 | mi | $1,630,000 | $2,608,000 |
| Signing | 1.60 | mi | $36,300 | $58,080 |
| Median | 1.60 | mi | $470,100 | $752,160 |
| Mill and Resurface Existing | 1.60 | mi | $500,000 | $800,000 |
| Sidewalks | 9,400.00 | sy | $36 | $338,400 |
| | | | | |
| **Widening from 4 to 6 lanes** | | | | |
| Clear and Grubbing | 19.40 | ac | $40,000 | $776,000 |
| Roadway | 3.20 | mi | $3,500,000 | $11,200,000 |
| Drainage | 3.20 | mi | $394,200 | $1,261,440 |
| Signing | 3.20 | mi | $18,000 | $57,600 |
| Median | 3.20 | mi | $470,100 | $1,504,320 |
| Mill and Resurface Existing | 3.20 | mi | $600,000 | $1,920,000 |
| Sidewalks | 18,774 | sy | $36 | $675,864 |
| | | | | |
| **New 4 lanes** | | | | |
| Clear and Grubbing | 62.50 | ac | $40,000 | $2,500,000 |
| Excavation Regular | 201,800.00 | cy | $15 | $3,027,000 |
| Roadway | 4.30 | mi | $2,130,000 | $9,159,000 |
| Drainage | 4.30 | mi | $1,450,000 | $6,235,000 |
| Signing | 4.30 | mi | $36,300 | $156,090 |
| Median | 4.30 | mi | $470,100 | $2,021,430 |
| Sidewalks | 25,200.00 | sy | $36 | $907,200 |
| Embankment | 201,800.00 | cy | $25 | $5,045,000 |
| Lighting | 4.30 | mi | $530,000 | $2,279,000 |
| | | | | |
| Mast Arms | 3.00 | ea | $180,000 | $540,000 |
| | | | | |
| U.S. 41 Re-alignment | 1.00 | ea | $300,000 | $300,000 |
| | | | | |
| Access Management Improvements | 3.50 | mi | $470,100 | $1,645,350 |
| | | | | |
| **Construction Cost** | | | | **$60,242,774** |
| | | | | |
| Landscape | 4% | | | $2,409,711 |
| Maintenance of Traffic | 10% | | | $6,024,277 |
| Mobilization | 10% | | | $6,024,277 |
| Contingency | 15% | | | $9,036,416 |
| CEI | 15% | | | $9,036,416 |
| Design | 15% | | | $9,036,416 |
| **Total Estimated Construction Cost** | | | | **$101,810,288** |

Table 5-2
Phase 2 – Construction Estimate

| Major Pay Items | Quantity | Unit | Unit Price | Estimate |
|---|---|---|---|---|
| | | | | |
| **Widening from 4 to 6 lanes** | | | | |
| Clear and Grubbing | 36.00 | ac | $40,000 | $1,440,000 |
| Roadway | 5.90 | mi | $3,500,000 | $20,650,000 |
| Drainage | 5.90 | mi | $394,200 | $2,325,780 |
| Signing | 5.90 | mi | $18,000 | $106,200 |
| Median | 5.90 | mi | $470,100 | $2,773,590 |
| Mill and Resurface Existing | 5.90 | mi | $600,000 | $3,540,000 |
| Sidewalks | 45,360 | sy | $36 | $1,632,960 |
| | | | | |
| **Construction Cost** | | | | **$32,468,530** |
| | | | | |
| Landscape | 4% | | | $1,298,741 |
| Maintenance of Traffic | 10% | | | $3,246,853 |
| Mobilization | 10% | | | $3,246,853 |
| Contingency | 15% | | | $4,870,280 |
| CEI | 15% | | | $4,870,280 |
| Design | 15% | | | $4,870,280 |
| **Total Estimated Construction Cost** | | | | **$54,871,816** |

Table 5-3
Phase 3 – Construction Estimate

| Major Pay Items | Quantity | Unit | Unit Price | Estimate |
|---|---|---|---|---|
| | | | | |
| **Grade Separation** | 3.00 | | | |
| | | | | |
| Clear and Grubbing | 31.40 | ac | $40,000 | $1,256,000 |
| Embankment | 360,000.00 | cy | $25 | $9,000,000 |
| MSE Walls | 202,500.00 | sf | $35 | $7,087,500 |
| Retaining Wall (Temporary) | 135,000.00 | sf | $11 | $1,485,000 |
| Bridge Structure | 39,170.00 | sf | $200 | $7,834,000 |
| Concrete Barrier Wall | 81,000.00 | ft | $167 | $13,527,000 |
| Turn/Ramp Lanes | 1.15 | mi | $500,000 | $575,000 |
| Roadway | 1.70 | mi | $2,130,000 | $3,621,000 |
| Median | 1.70 | mi | $470,100 | $799,170 |
| Drainage | 1.70 | mi | $1,450,000 | $2,465,000 |
| Ligthing | 1.70 | mi | $530,000 | $901,000 |
| Mast Arms | 6.00 | ea | $180,000 | $1,080,000 |
| Sidewalks | 7,040.00 | sy | $36 | $253,440 |
| Signing | 1.70 | mi | $36,300 | $61,710 |
| | | | | |
| **Construction Cost** | | | | **$49,945,820** |
| | | | | |
| Landscape | 4% | | | $1,997,833 |
| Maintenance of Traffic | 10% | | | $4,994,582 |
| Mobilization | 10% | | | $4,994,582 |
| Contingency | 15% | | | $7,491,873 |
| CEI | 15% | | | $7,491,873 |
| Design | 15% | | | $7,491,873 |
| **Total Estimated Construction Cost** | | | | **$84,408,436** |

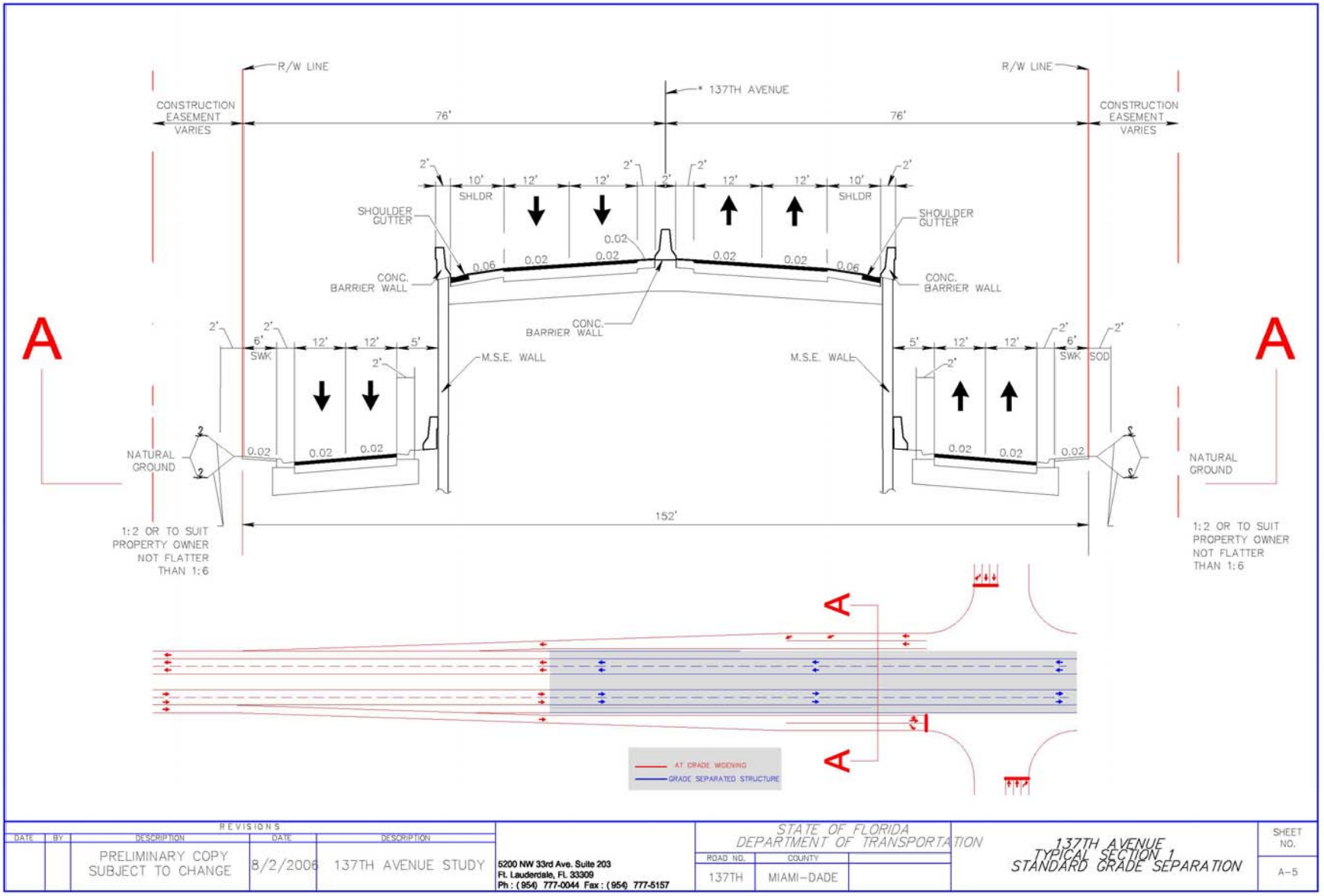
The four-lane typicals will have a forty-eight-foot (48) wide median to accommodate a six lane widening during Phase 2. Phase 2 (Table 5-2) includes the widening of all the sections with four lanes to a six-lane typical section between SW 288th Street and SW 184th Street (Eureka Drive). Phase 3 (Table 5-2) includes the cost for the construction of grade separated intersections at U.S. 1, SW 88th Street and U.S. 41.

Appendix C illustrates preliminary concepts for Phase 1 (Parkway), Phase 2 (Six-lane Through), and Phase 3 (Grade Separation). The concept drawings represent how the corridor would look if the plan were fully implemented.

Appendix D presents a series of PowerPoint slides that review the project and show concepts of how it could look under the various phases.

# Appendix A

## Proposed Intersection Grade Separations




| REVISIONS | | | | | | | |
|---|---|---|---|---|---|---|---|
| DATE | BY | DESCRIPTION | DATE | DESCRIPTION | | | |
| | | PRELIMINARY COPY SUBJECT TO CHANGE | 8/2/2006 | 137TH AVENUE STUDY | | | |

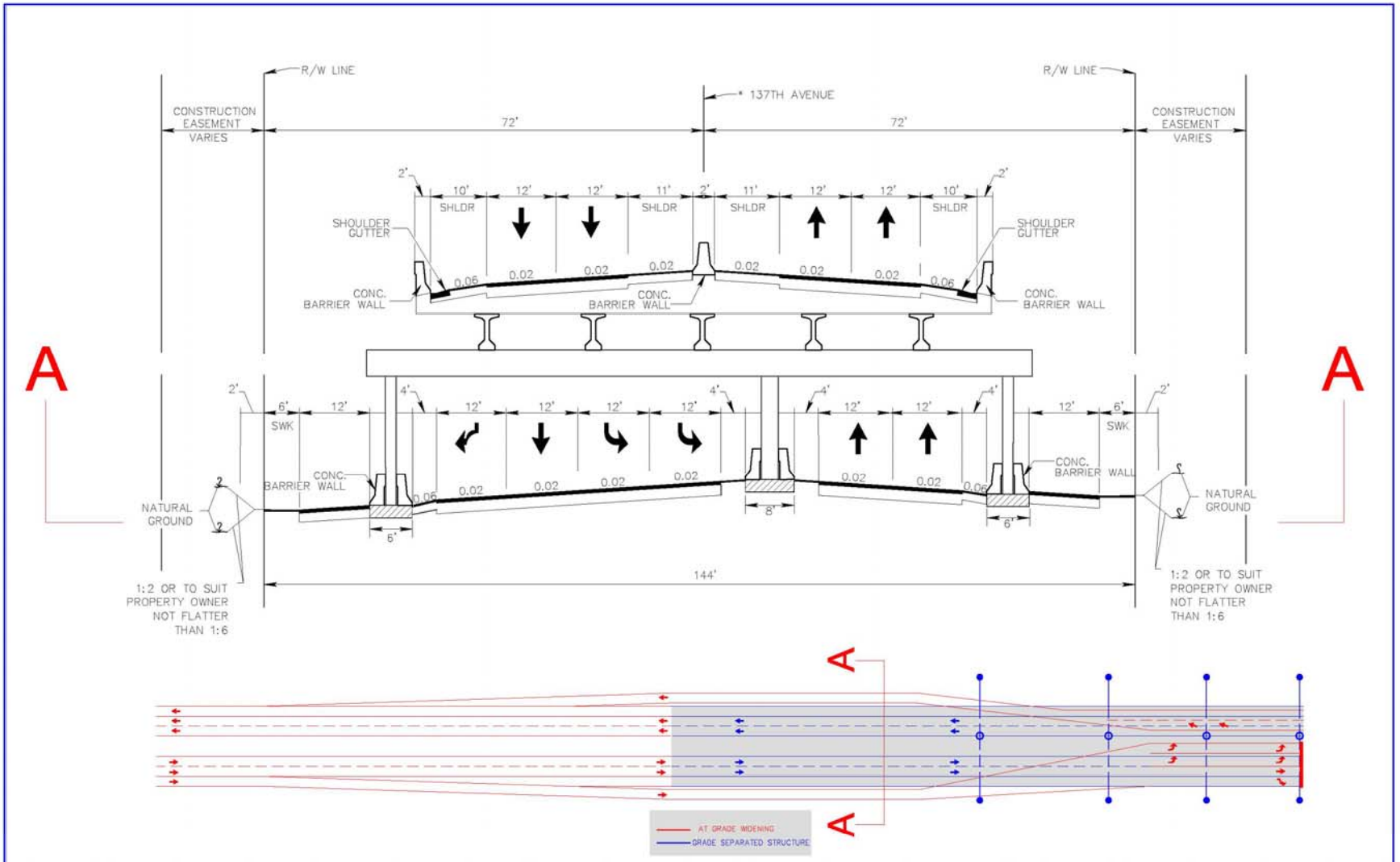
5200 NW 33rd Ave. Suite 203
Ft. Lauderdale, FL 33309
Ph : ( 954) 777-0044 Fax : ( 954) 777-5157

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | |
|---|---|---|
| 137TH | MIAMI-DADE | |

137TH AVENUE
TYPICAL SECTION 1
STANDARD GRADE SEPARATION

SHEET NO. A-5




| REVISIONS | | | | | | | |
|---|---|---|---|---|---|---|---|
| DATE | BY | DESCRIPTION | DATE | DESCRIPTION | | | |
| | | PRELIMINARY COPY SUBJECT TO CHANGE | 8/2/2006 | 137TH AVENUE STUDY | | | |

5200 NW 33rd Ave. Suite 203
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | |
|---|---|---|
| 137TH | MIAMI-DADE | |

137TH AVENUE
TYPICAL SECTION 2
STRADDLE BENT GRADE SEPARATION

SHEET NO. A-6

# Appendix B

## Tables 4-1 and 4-2 from Generalized Annual Average Daily Volumes for Florida's Urban Areas

# TABLE 4 - 1
# GENERALIZED **ANNUAL AVERAGE DAILY** VOLUMES FOR FLORIDA'S **URBANIZED AREAS***

## UNINTERRUPTED FLOW HIGHWAYS

| Lanes | Divided | Level of Service A | B | C | D | E |
|---|---|---|---|---|---|---|
| 2 | Undivided | 2,000 | 7,000 | 13,800 | 19,600 | 27,000 |
| 4 | Divided | 20,400 | 33,000 | 47,800 | 61,800 | 70,200 |
| 6 | Divided | 30,500 | 49,500 | 71,600 | 92,700 | 105,400 |

## STATE TWO-WAY ARTERIALS

Class I (>0.00 to 1.99 signalized intersections per mile)

| Lanes | Divided | Level of Service A | B | C | D | E |
|---|---|---|---|---|---|---|
| 2 | Undivided | ** | 4,200 | 13,800 | 16,400 | 16,900 |
| 4 | Divided | 4,800 | 29,300 | 34,700 | 35,700 | *** |
| 6 | Divided | 7,300 | 44,700 | 52,100 | 53,500 | *** |
| 8 | Divided | 9,400 | 58,000 | 66,100 | 67,800 | *** |

Class II (2.00 to 4.50 signalized intersections per mile)

| Lanes | Divided | Level of Service A | B | C | D | E |
|---|---|---|---|---|---|---|
| 2 | Undivided | ** | 1,900 | 11,200 | 15,400 | 16,300 |
| 4 | Divided | ** | 4,100 | 26,000 | 32,700 | 34,500 |
| 6 | Divided | ** | 6,500 | 40,300 | 49,200 | 51,800 |
| 8 | Divided | ** | 8,500 | 53,300 | 63,800 | 67,000 |

Class III (more than 4.5 signalized intersections per mile and not within primary city central business district of an urbanized area over 750,000)

| Lanes | Divided | Level of Service A | B | C | D | E |
|---|---|---|---|---|---|---|
| 2 | Undivided | ** | ** | 5,300 | 12,600 | 15,500 |
| 4 | Divided | ** | ** | 12,400 | 28,900 | 32,800 |
| 6 | Divided | ** | ** | 19,500 | 44,700 | 49,300 |
| 8 | Divided | ** | ** | 25,800 | 58,700 | 63,800 |

Class IV (more than 4.5 signalized intersections per mile and within primary city central business district of an urbanized area over 750,000)

| Lanes | Divided | Level of Service A | B | C | D | E |
|---|---|---|---|---|---|---|
| 2 | Undivided | ** | ** | 5,200 | 13,700 | 15,000 |
| 4 | Divided | ** | ** | 12,300 | 30,300 | 31,700 |
| 6 | Divided | ** | ** | 19,100 | 45,800 | 47,600 |
| 8 | Divided | ** | ** | 25,900 | 59,900 | 62,200 |

## NON-STATE ROADWAYS

Major City/County Roadways

| Lanes | Divided | Level of Service A | B | C | D | E |
|---|---|---|---|---|---|---|
| 2 | Undivided | ** | ** | 9,100 | 14,600 | 15,600 |
| 4 | Divided | ** | ** | 21,400 | 31,100 | 32,900 |
| 6 | Divided | ** | ** | 33,400 | 46,800 | 49,300 |

Other Signalized Roadways
(signalized intersection analysis)

| Lanes | Divided | Level of Service A | B | C | D | E |
|---|---|---|---|---|---|---|
| 2 | Undivided | ** | ** | 4,800 | 10,000 | 12,600 |
| 4 | Divided | ** | ** | 11,100 | 21,700 | 25,200 |

Source: Florida Department of Transportation 02/22/02
Systems Planning Office
605 Suwannee Street, MS 19
Tallahassee, FL 32399-0450
http://www11.myflorida.com/planning/systems/sm/los/default.htm

## FREEWAYS

Interchange spacing ≥ 2 mi. apart

| Lanes | Level of Service A | B | C | D | E |
|---|---|---|---|---|---|
| 4 | 23,800 | 39,600 | 55,200 | 67,100 | 74,600 |
| 6 | 36,900 | 61,100 | 85,300 | 103,600 | 115,300 |
| 8 | 49,900 | 82,700 | 115,300 | 140,200 | 156,000 |
| 10 | 63,000 | 104,200 | 145,500 | 176,900 | 196,400 |
| 12 | 75,900 | 125,800 | 175,500 | 213,500 | 237,100 |

Interchange spacing < 2 mi. apart

| Lanes | Level of Service A | B | C | D | E |
|---|---|---|---|---|---|
| 4 | 22,000 | 36,000 | 52,000 | 67,200 | 76,500 |
| 6 | 34,800 | 56,500 | 81,700 | 105,800 | 120,200 |
| 8 | 47,500 | 77,000 | 111,400 | 144,300 | 163,900 |
| 10 | 60,200 | 97,500 | 141,200 | 182,600 | 207,600 |
| 12 | 72,900 | 118,100 | 170,900 | 221,100 | 251,200 |

## BICYCLE MODE

(**Note**: Level of service for the bicycle mode in this table is based on roadway geometrics at 40 mph posted speed and traffic conditions, not number of bicyclists using the facility.) (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

| Paved Shoulder/ Bicycle Lane Coverage | Level of Service A | B | C | D | E |
|---|---|---|---|---|---|
| 0-49% | ** | ** | 3,200 | 13,800 | >13,800 |
| 50-84% | ** | 2,500 | 4,100 | >4,100 | *** |
| 85-100% | 3,100 | 7,200 | >7,200 | *** | *** |

## PEDESTRIAN MODE

(**Note:** Level of service for the pedestrian mode in this table is based on roadway geometrics at 40 mph posted speed and traffic conditions, not number of pedestrians using the facility.) (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

| Sidewalk Coverage | Level of Service A | B | C | D | E |
|---|---|---|---|---|---|
| 0-49% | ** | ** | ** | 6,400 | 15,500 |
| 50-84% | ** | ** | ** | 9,900 | 19,000 |
| 85-100% | ** | 2,200 | 11,300 | >11,300 | *** |

## BUS MODE (Scheduled Fixed Route)

(Buses per hour)

(**Note:** Buses per hour shown are only for the **peak hour** in the **single direction** of the higher traffic flow.)

| Sidewalk Coverage | Level of Service A | B | C | D | E |
|---|---|---|---|---|---|
| 0-84% | ** | >5 | ≥4 | ≥3 | ≥2 |
| 85-100% | >6 | >4 | ≥3 | ≥2 | ≥1 |

## ARTERIAL/NON-STATE ROADWAY ADJUSTMENTS

DIVIDED/UNDIVIDED
(alter corresponding volume by the indicated percent)

| Lanes | Median | Left Turns Lanes | Adjustment Factors |
|---|---|---|---|
| 2 | Divided | Yes | +5% |
| 2 | Undivided | No | -20% |
| Multi | Undivided | Yes | -5% |
| Multi | Undivided | No | -25% |

ONE-WAY FACILITIES

Decrease corresponding two-directional volumes in this table by 40% to obtain the equivalent one directional volume for one-way facilities.

*This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Values shown are two-way annual average daily volumes (based on $K_{100}$ factors) for levels of service and are for the automobile/truck modes unless specifically stated. Level of service letter grade thresholds are probably not comparable across modes and, therefore, cross modal comparisons should be made with caution. Furthermore, combining levels of service of different modes into one overall roadway level of service is not recommended. The table's input value defaults and level of service criteria appear on the following page. Calculations are based on planning applications of the Highway Capacity Manual, Bicycle LOS Model, Pedestrian LOS Model and Transit Capacity and Quality of Service Manual, respectively for the automobile/truck, bicycle, pedestrian and bus modes.

**Cannot be achieved using table input value defaults.

***Not applicable for that level of service letter grade. For automobile/truck modes, volumes greater than level of service D become F because intersection capacities have been reached. For bicycle and pedestrian modes, the level of service letter grade (including F) is not achievable, because there is no maximum vehicle volume threshold using table input value defaults.

# TABLE 4 - 2
## GENERALIZED **ANNUAL AVERAGE DAILY** VOLUMES FOR FLORIDA'S **AREAS TRANSITIONING INTO URBANIZED AREAS** OR **AREAS OVER 5,000 NOT IN URBANIZED AREAS***

### UNINTERRUPTED FLOW HIGHWAYS

| Lanes | Divided | Level of Service A | B | C | D | E |
|---|---|---|---|---|---|---|
| 2 | Undivided | 2,100 | 6,900 | 12,900 | 18,200 | 24,900 |
| 4 | Divided | 18,600 | 30,200 | 43,600 | 56,500 | 64,200 |
| 6 | Divided | 27,900 | 45,200 | 65,500 | 84,700 | 96,200 |

### STATE TWO-WAY ARTERIALS

Class I (>0.00 to 1.99 signalized intersections per mile)

| Lanes | Divided | Level of Service A | B | C | D | E |
|---|---|---|---|---|---|---|
| 2 | Undivided | ** | 4,000 | 13,100 | 15,500 | 16,300 |
| 4 | Divided | 4,600 | 27,900 | 32,800 | 34,200 | *** |
| 6 | Divided | 6,900 | 42,800 | 49,300 | 51,400 | *** |

Class II (2.00 to 4.50 signalized intersections per mile)

| Lanes | Divided | Level of Service A | B | C | D | E |
|---|---|---|---|---|---|---|
| 2 | Undivided | ** | ** | 10,500 | 14,500 | 15,300 |
| 4 | Divided | ** | 3,700 | 24,400 | 30,600 | 32,200 |
| 6 | Divided | ** | 6,000 | 38,000 | 46,100 | 48,400 |

Class III (more than 4.5 signalized intersections per mile)

| Lanes | Divided | Level of Service A | B | C | D | E |
|---|---|---|---|---|---|---|
| 2 | Undivided | ** | ** | 5,000 | 11,800 | 14,600 |
| 4 | Divided | ** | ** | 11,700 | 27,200 | 30,800 |
| 6 | Divided | ** | ** | 18,400 | 42,100 | 46,300 |

### NON-STATE ROADWAYS

Major City/County Roadways

| Lanes | Divided | Level of Service A | B | C | D | E |
|---|---|---|---|---|---|---|
| 2 | Undivided | ** | ** | 7,000 | 13,600 | 14,600 |
| 4 | Divided | ** | ** | 16,400 | 29,300 | 30,900 |
| 6 | Divided | ** | ** | 25,700 | 44,100 | 46,400 |

Other Signalized Roadways
(signalized intersection analysis)

| Lanes | Divided | Level of Service A | B | C | D | E |
|---|---|---|---|---|---|---|
| 2 | Undivided | ** | ** | 4,400 | 9,400 | 12,000 |
| 4 | Divided | ** | ** | 10,300 | 20,200 | 24,000 |

Source: Florida Department of Transportation 02/22/02
Systems Planning Office
605 Suwannee Street, MS 19
Tallahassee, FL 32399-0450
http://www11.myflorida.com/planning/systems/sm/los/default.htm

### FREEWAYS

| Lanes | Level of Service A | B | C | D | E |
|---|---|---|---|---|---|
| 4 | 23,500 | 38,700 | 52,500 | 62,200 | 69,100 |
| 6 | 36,400 | 59,800 | 81,100 | 96,000 | 106,700 |
| 8 | 49,100 | 80,900 | 109,600 | 129,800 | 144,400 |
| 10 | 61,800 | 101,800 | 138,400 | 163,800 | 182,000 |

### BICYCLE MODE

(**Note:** Level of service for the bicycle mode in this table is based on roadway geometrics at 40 mph posted speed and traffic conditions, not number of bicyclists using the facility.) (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

| Paved Shoulder/ Bicycle Lane Coverage | Level of Service A | B | C | D | E |
|---|---|---|---|---|---|
| 0-49% | ** | 1,900 | 3,300 | 13,600 | >13,600 |
| 50-84% | ** | 2,500 | 4,000 | >4,000 | *** |
| 85-100% | 3,200 | 7,100 | >7,100 | *** | *** |

### PEDESTRIAN MODE

(**Note:** Level of service for the pedestrian mode in this table is based on roadway geometric at 40 mph posted speed and traffic conditions, not number of pedestrians using the facility.) (Multiply motorized vehicle volumes shown by number of directional roadway lanes to determine two-way maximum service volumes.)

| % Sidewalk Coverage | Level of Service A | B | C | D | E |
|---|---|---|---|---|---|
| 0-49% | ** | ** | ** | 6,300 | 15,400 |
| 50-84% | ** | ** | ** | 9,800 | 18,800 |
| 85-100% | ** | 2,200 | 11,200 | >11,200 | *** |

### ARTERIAL/NON-STATE ROADWAY ADJUSTMENTS

DIVIDED/UNDIVIDED

| Lanes | Median | Left Turn Lanes | Adjustment Factors |
|---|---|---|---|
| 2 | Divided | Yes | +5% |
| 2 | Undivided | No | -20% |
| Multi | Undivided | Yes | -5% |
| Multi | Undivided | No | -25% |

ONE-WAY FACILITIES

Decrease corresponding two-directional volumes in this table by 40% to obtain the equivalent one directional volume for one-way facilities.

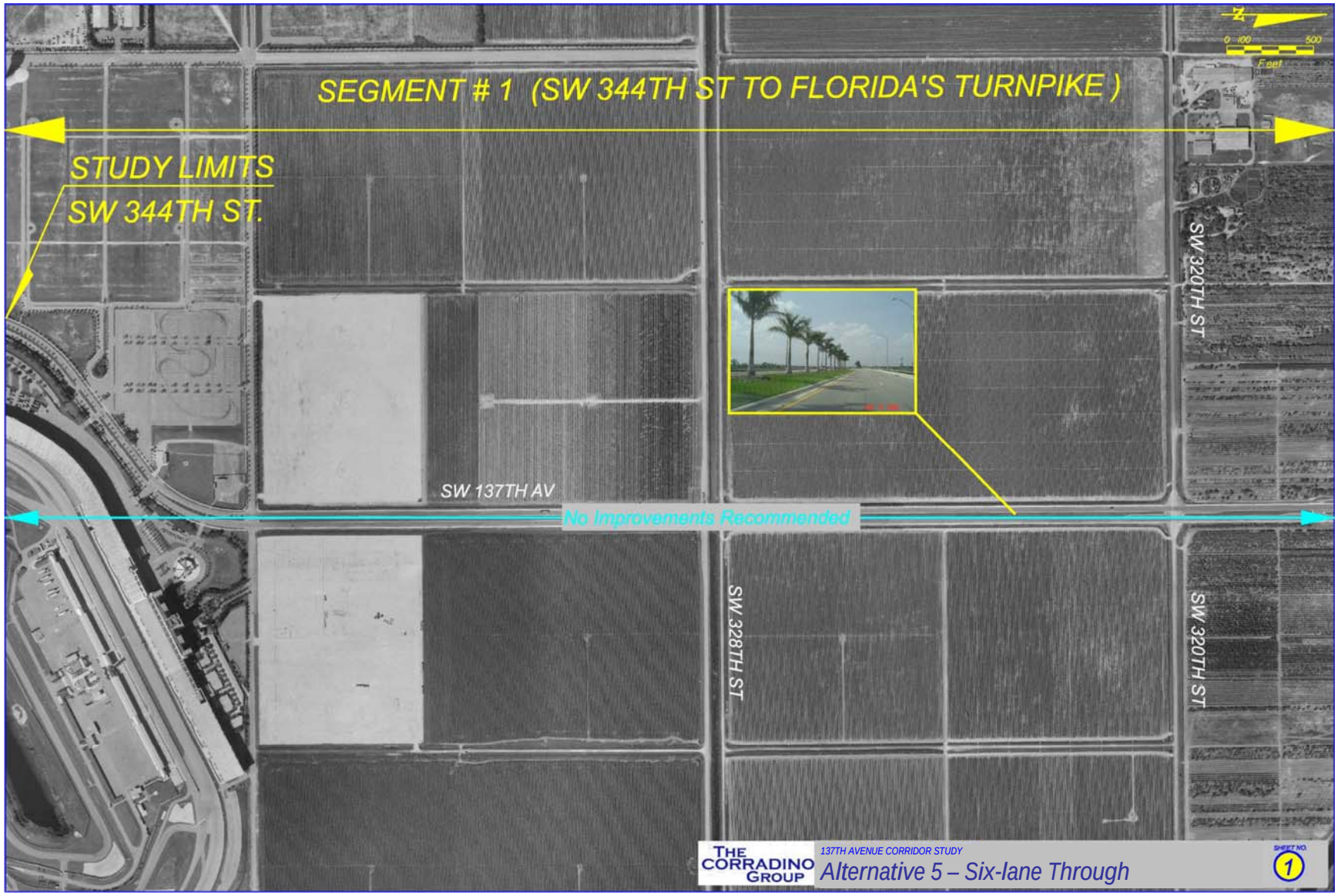
*This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Values shown are two-way annual average daily volumes (based on $K_{100}$ factors) for levels of service and are for the automobile/truck modes unless specifically stated. Level of service letter grade thresholds are probably not comparable across modes and, therefore, cross modal comparisons should be made with caution. Furthermore, combining levels of service of different modes into one overall roadway level of service is not recommended. The table's input value defaults and level of service criteria appear on the following page. Calculations are based on planning applications of the Highway Capacity Manual, Bicycle LOS Model, and Pedestrian LOS Model, respectively for the automobile/truck, bicycle and pedestrian modes.

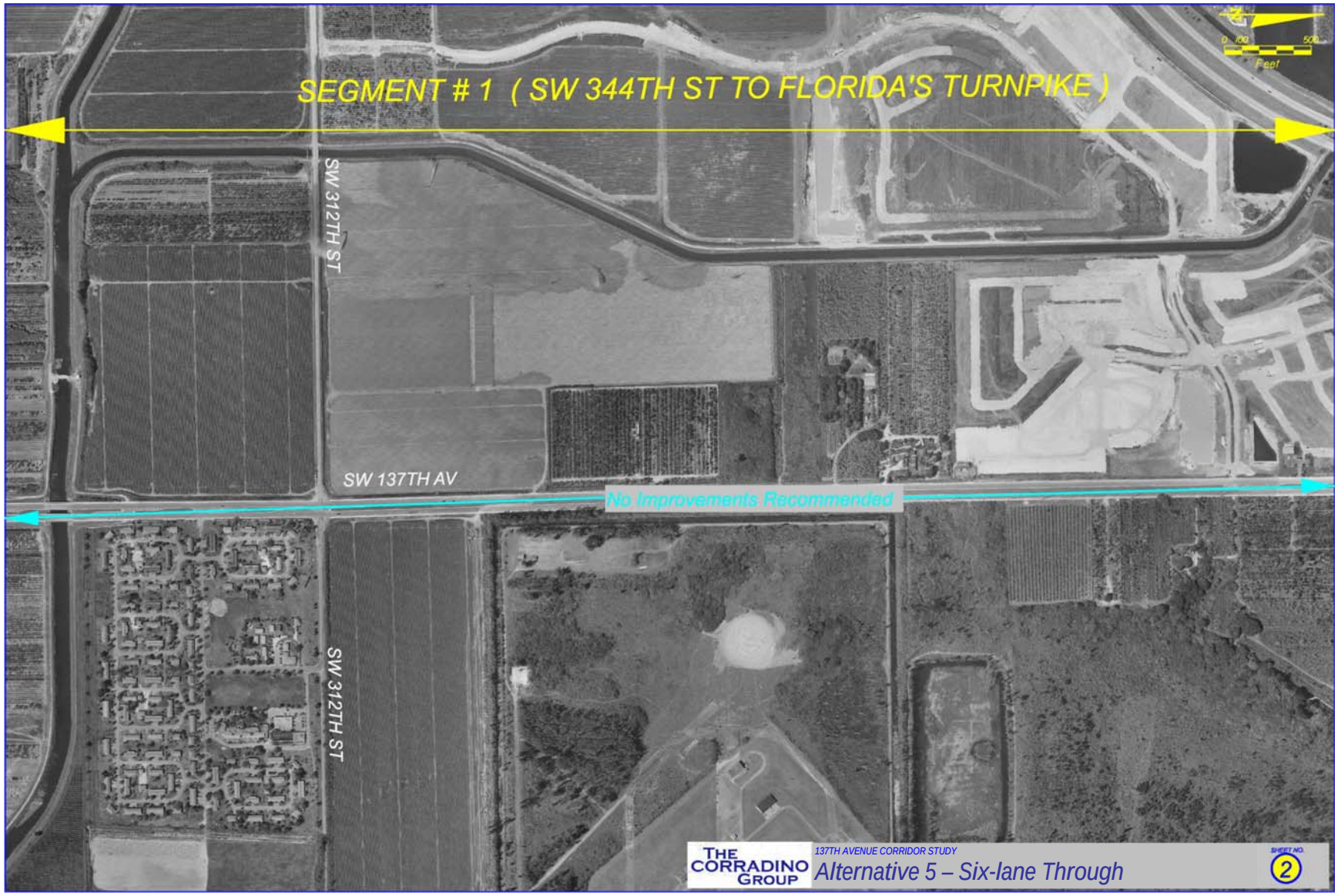
**Cannot be achieved using table input value defaults.

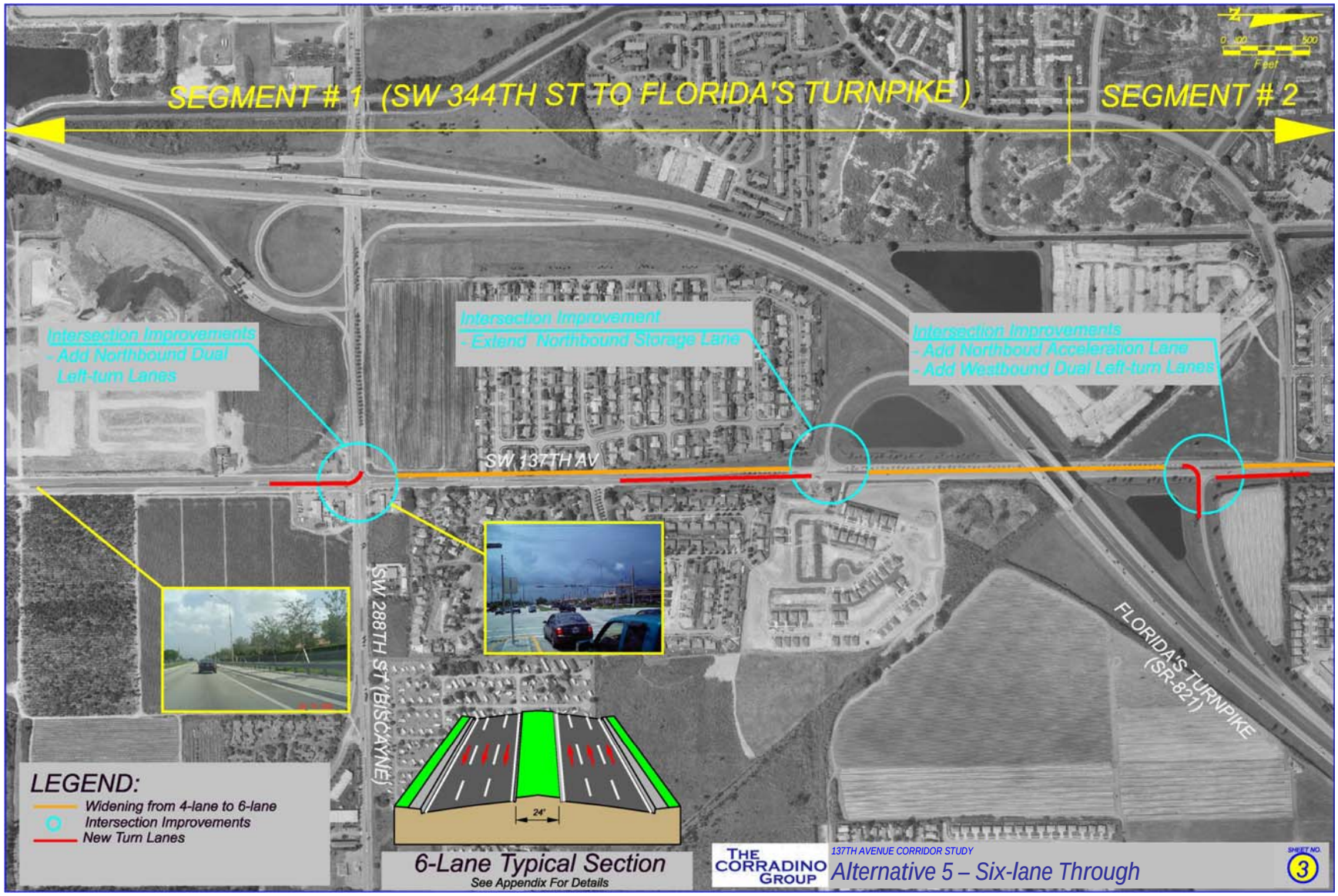
***Not applicable for the level of service letter grade. For automobile/truck modes, volumes greater than level of service D become F because intersection capacities have been reached. For bicycle and pedestrian modes, the level of service letter grade (including F) is not achievable, because there is no maximum vehicle volume threshold using table input value defaults.

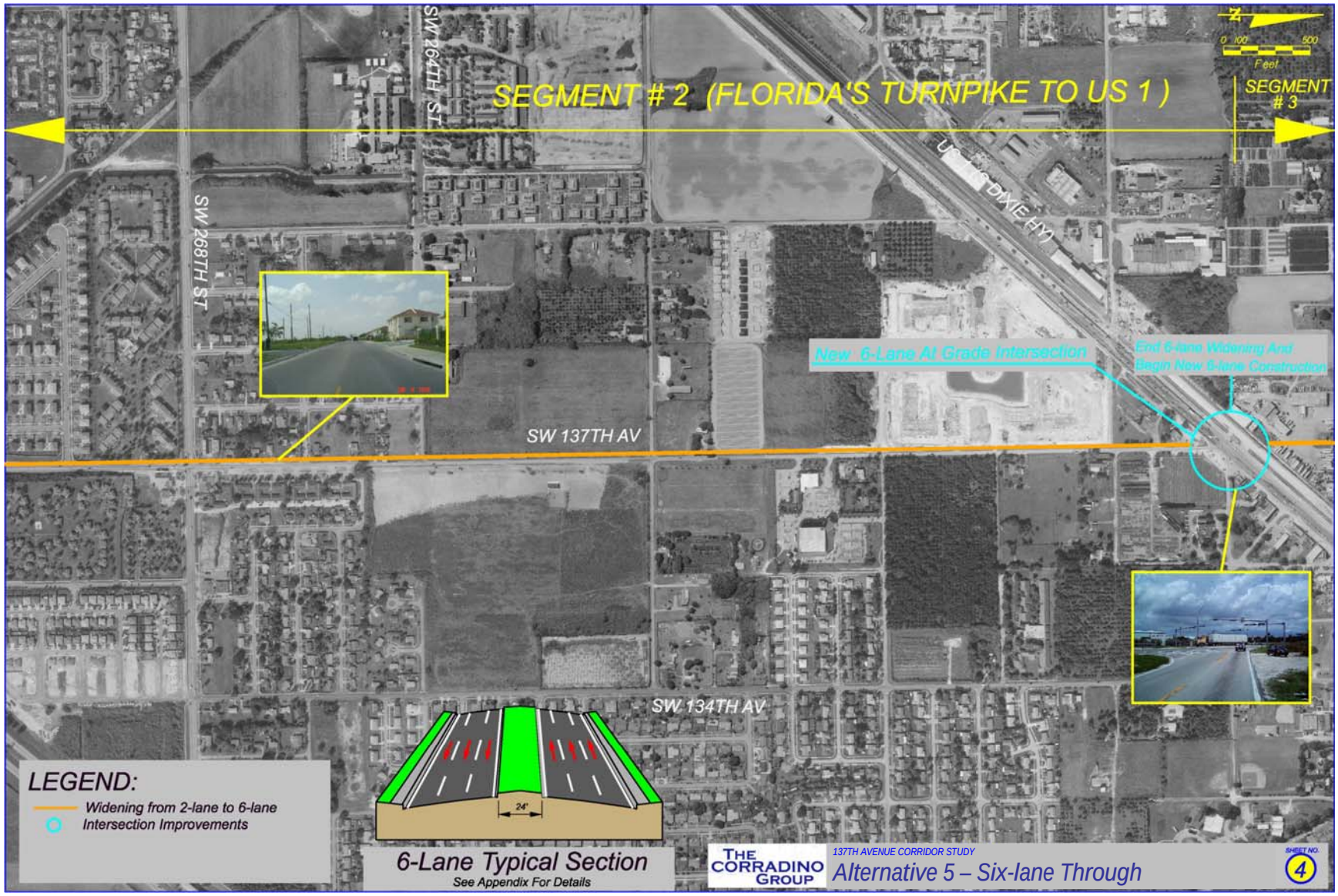
# Appendix C

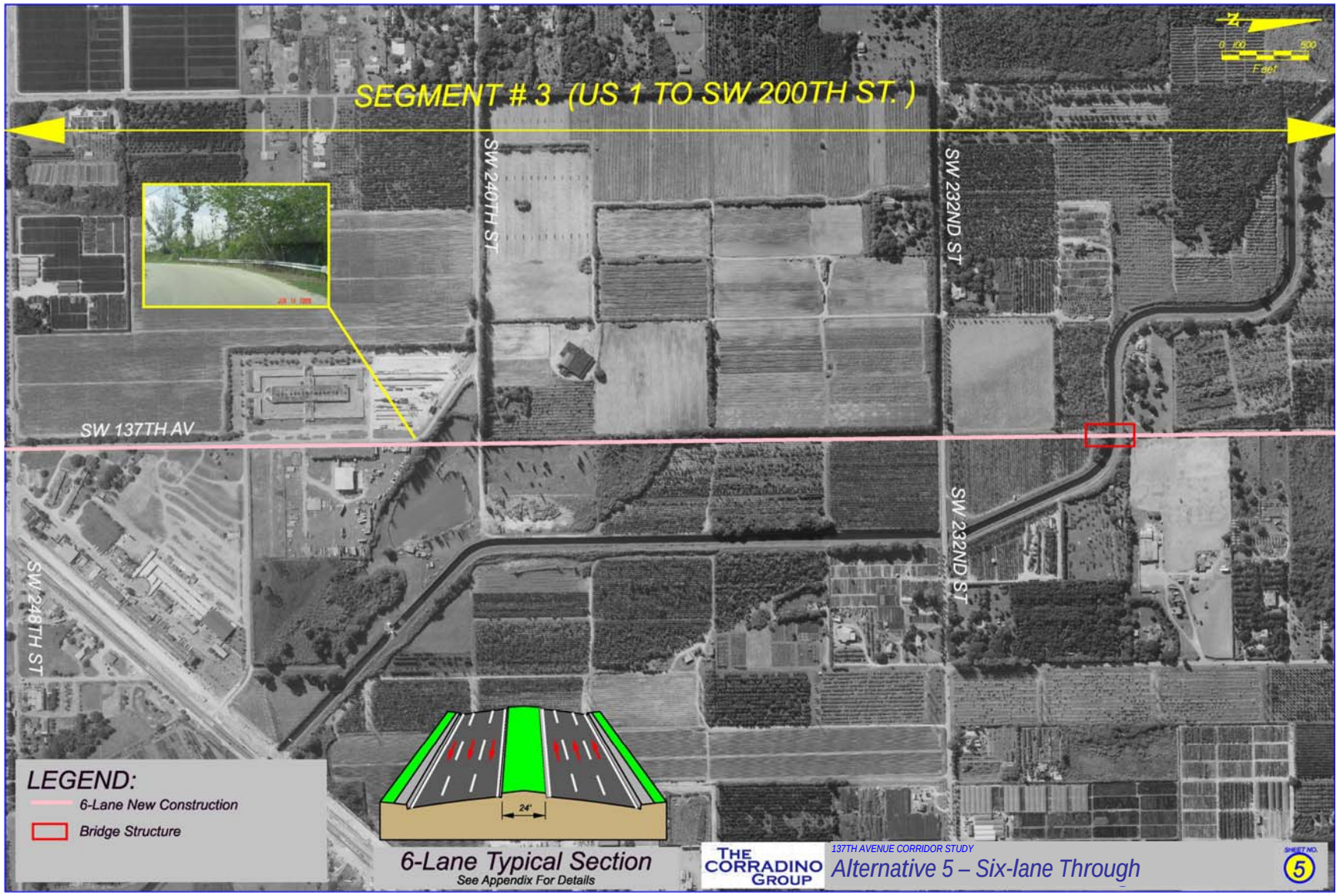
## Schematic Plans

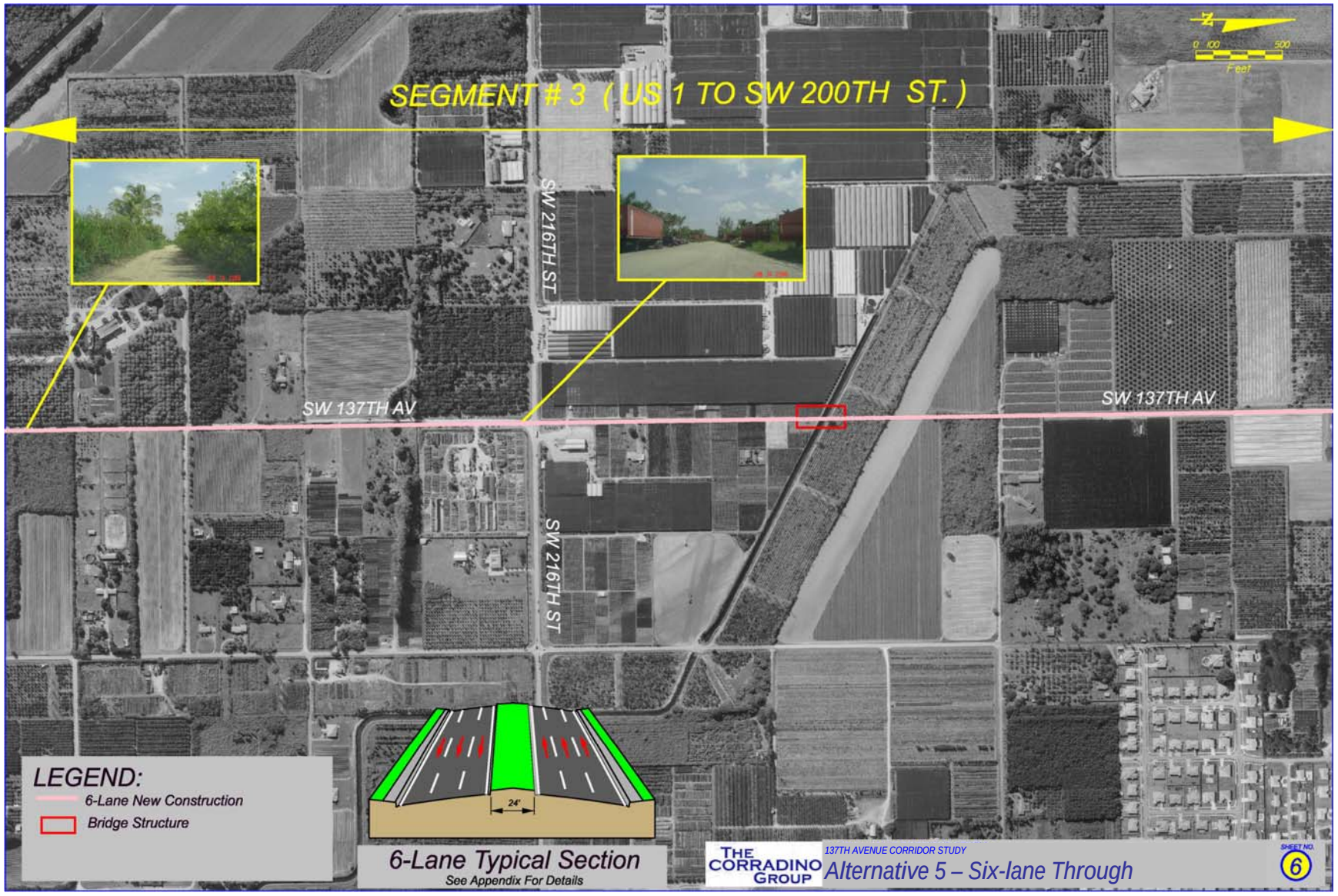

SEGMENT # 1 (SW 344TH ST TO FLORIDA'S TURNPIKE )
STUDY LIMITS
SW 344TH ST.
SW 320TH ST
SW 137TH AV
No Improvements Recommended
SW 328TH ST
SW 320TH ST
0 100 500
Feet
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 5 – Six-lane Through
SHEET NO.
1

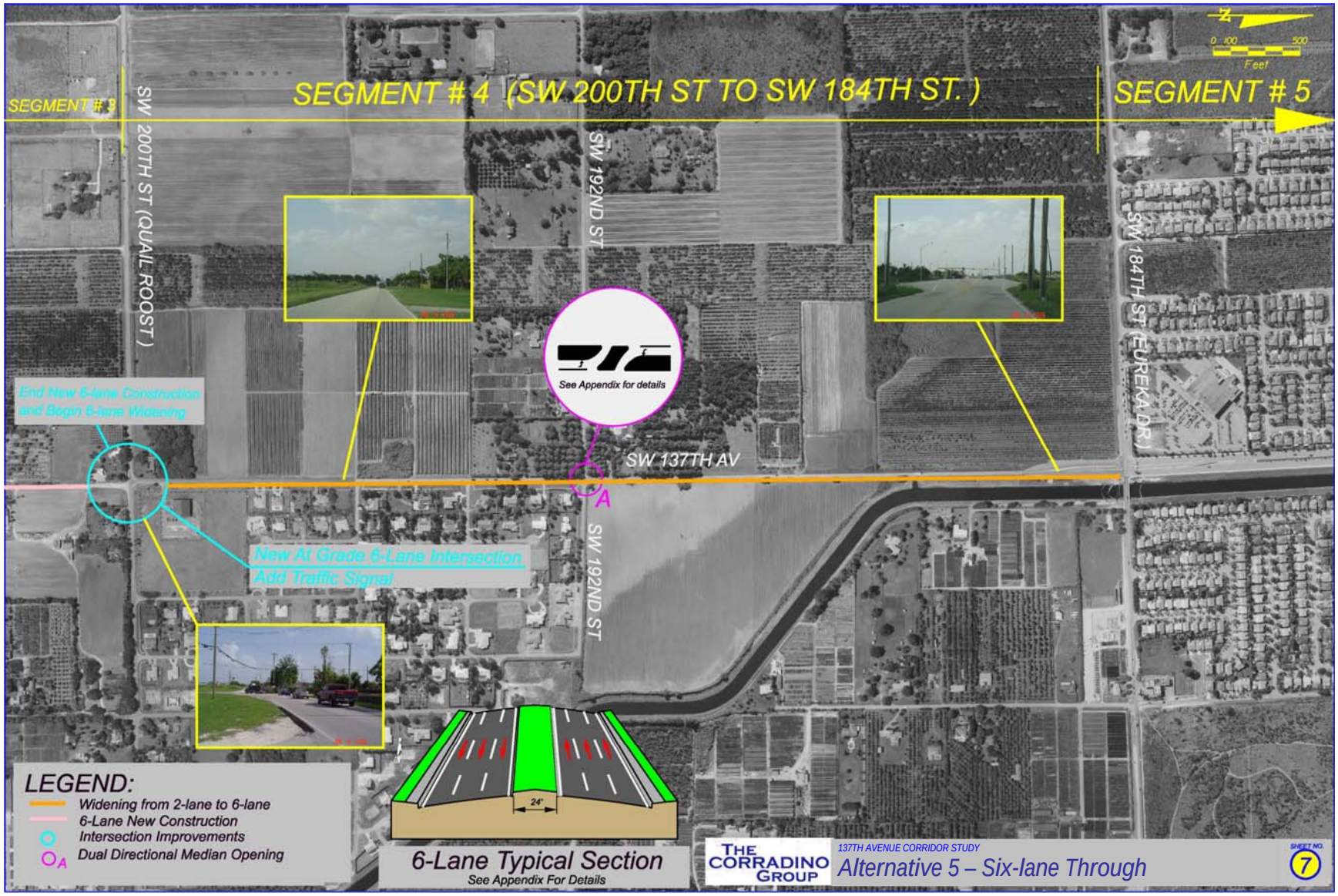

SEGMENT # 1 ( SW 344TH ST TO FLORIDA'S TURNPIKE )
SW 312TH ST
SW 137TH AV
No Improvements Recommended
SW 312TH ST
Feet
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 5 – Six-lane Through
SHEET NO.
2

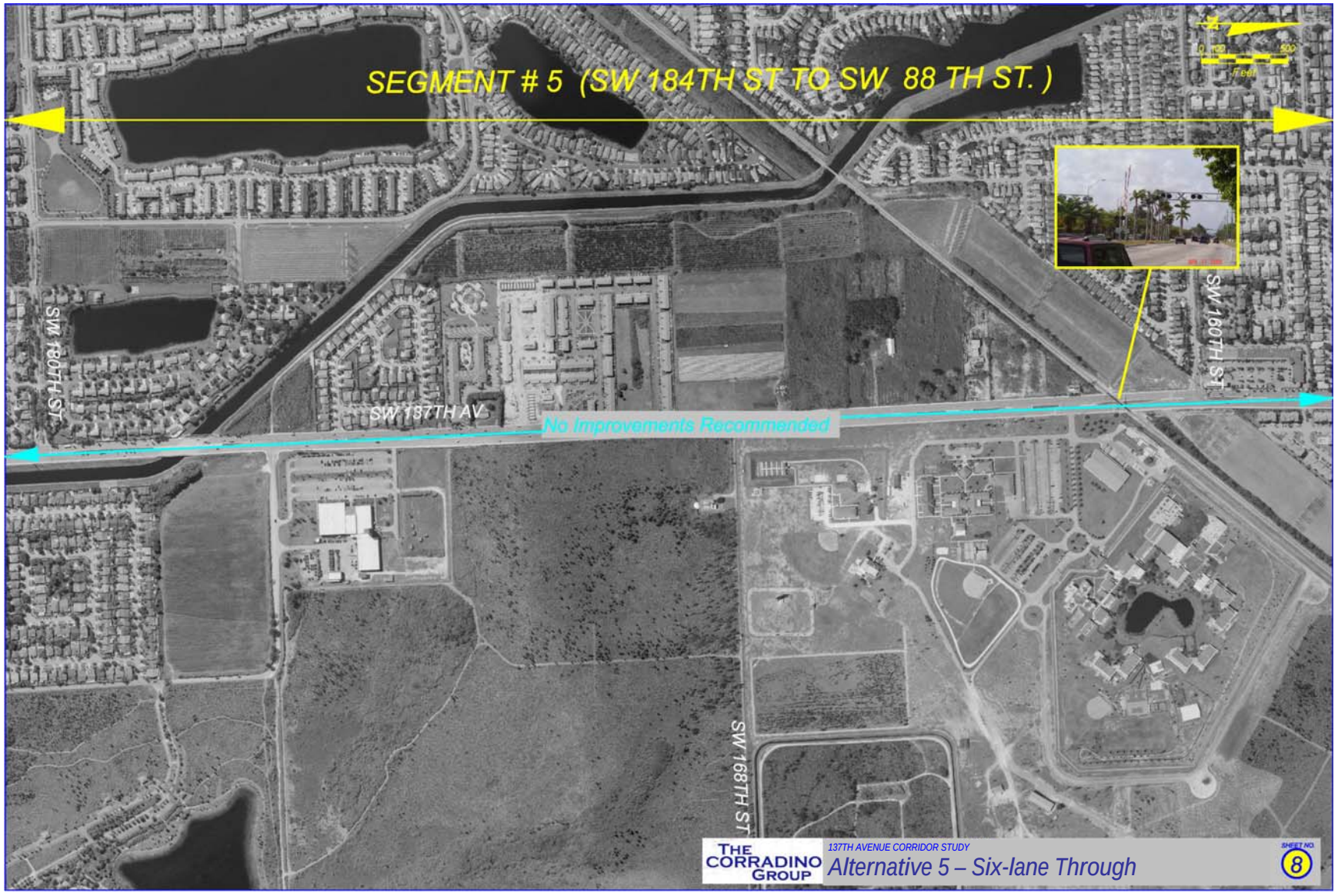

SEGMENT # 1 (SW 344TH ST TO FLORIDA'S TURNPIKE )
SEGMENT # 2
Intersection Improvements
- Add Northbound Dual
Left-turn Lanes
Intersection Improvement
- Extend Northbound Storage Lane
Intersection Improvements
- Add Northboud Acceleration Lane
- Add Westbound Dual Left-turn Lanes
SW 137TH AV
SW 288TH ST (BISCAYNE)
FLORIDA'S TURNPIKE (SR-821)
LEGEND:
Widening from 4-lane to 6-lane
Intersection Improvements
New Turn Lanes
24'
6-Lane Typical Section
See Appendix For Details
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 5 – Six-lane Through
SHEET NO.
3

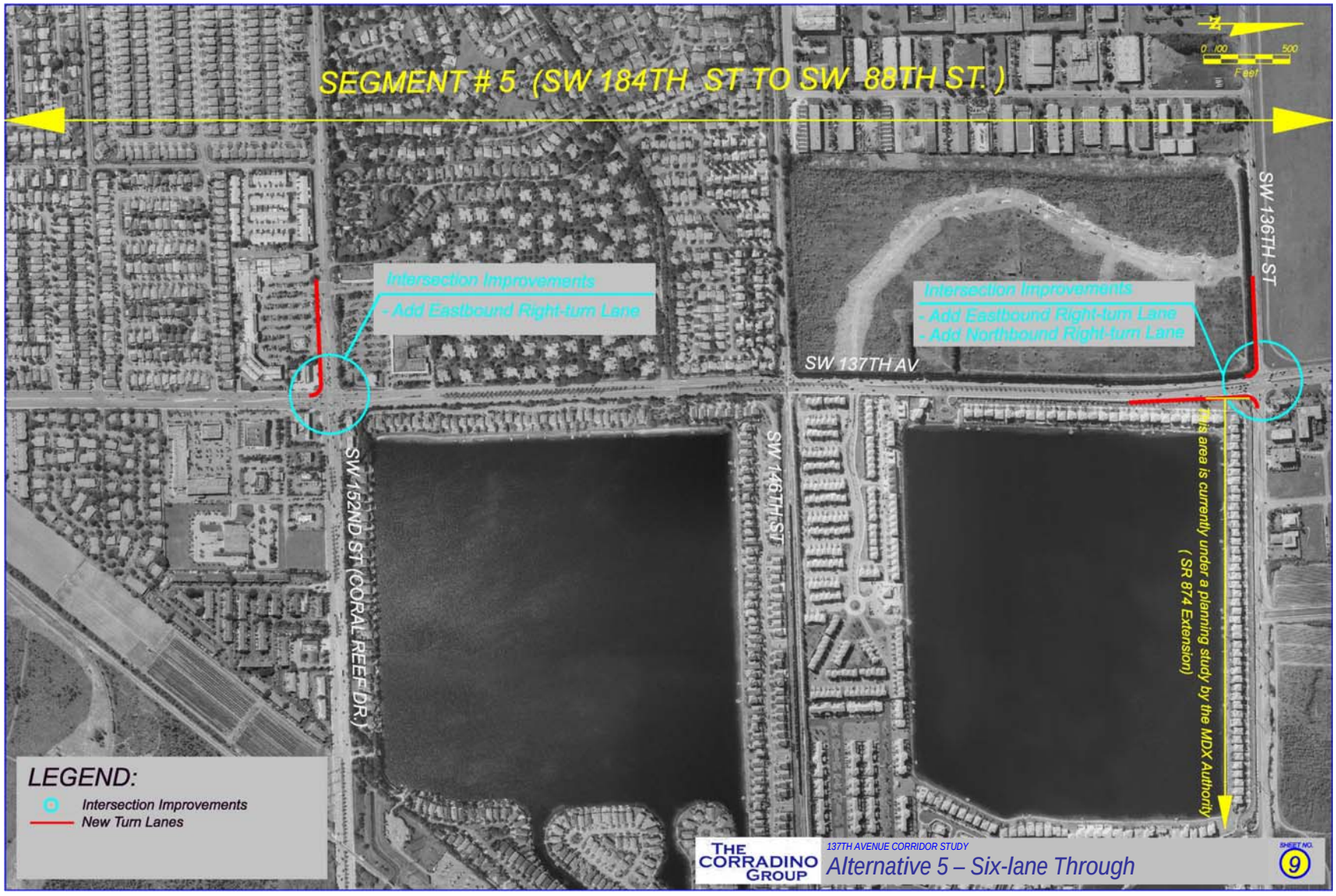

SEGMENT # 2 (FLORIDA'S TURNPIKE TO US 1 )
SEGMENT # 3
SW 264TH ST
SW 268TH ST
US 1 DIXIE HWY
SW 137TH AV
SW 134TH AV
New 6-Lane At Grade Intersection
End 6-lane Widening And Begin New 6-lane Construction
0 100 500
Feet
LEGEND:
Widening from 2-lane to 6-lane
Intersection Improvements
24'
6-Lane Typical Section
See Appendix For Details
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 5 – Six-lane Through
SHEET NO. 4


SEGMENT # 3 (US 1 TO SW 200TH ST. )
SW 240TH ST
SW 232ND ST
SW 137TH AV
SW 248TH ST
SW 232ND ST
LEGEND:
6-Lane New Construction
Bridge Structure
24'
6-Lane Typical Section
See Appendix For Details
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 5 – Six-lane Through
5


SEGMENT # 3 ( US 1 TO SW 200TH ST. )
SW 216TH ST
SW 137TH AV
SW 137TH AV
SW 216TH ST
0 100 500
Feet
LEGEND:
6-Lane New Construction
Bridge Structure
24'
6-Lane Typical Section
See Appendix For Details
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 5 – Six-lane Through
SHEET NO.
6


SEGMENT # 3
SEGMENT # 4 (SW 200TH ST TO SW 184TH ST. )
SEGMENT # 5
SW 200TH ST (QUAIL ROOST )
SW 192ND ST
SW 184TH ST (EUREKA DR.)
SW 137TH AV
See Appendix for details
End New 6-lane Construction and Begin 6-lane Widening
New At Grade 6-Lane Intersection Add Traffic Signal
A
0 100 500
Feet
LEGEND:
Widening from 2-lane to 6-lane
6-Lane New Construction
Intersection Improvements
Dual Directional Median Opening
24'
6-Lane Typical Section
See Appendix For Details
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 5 – Six-lane Through
SHEET NO. 7

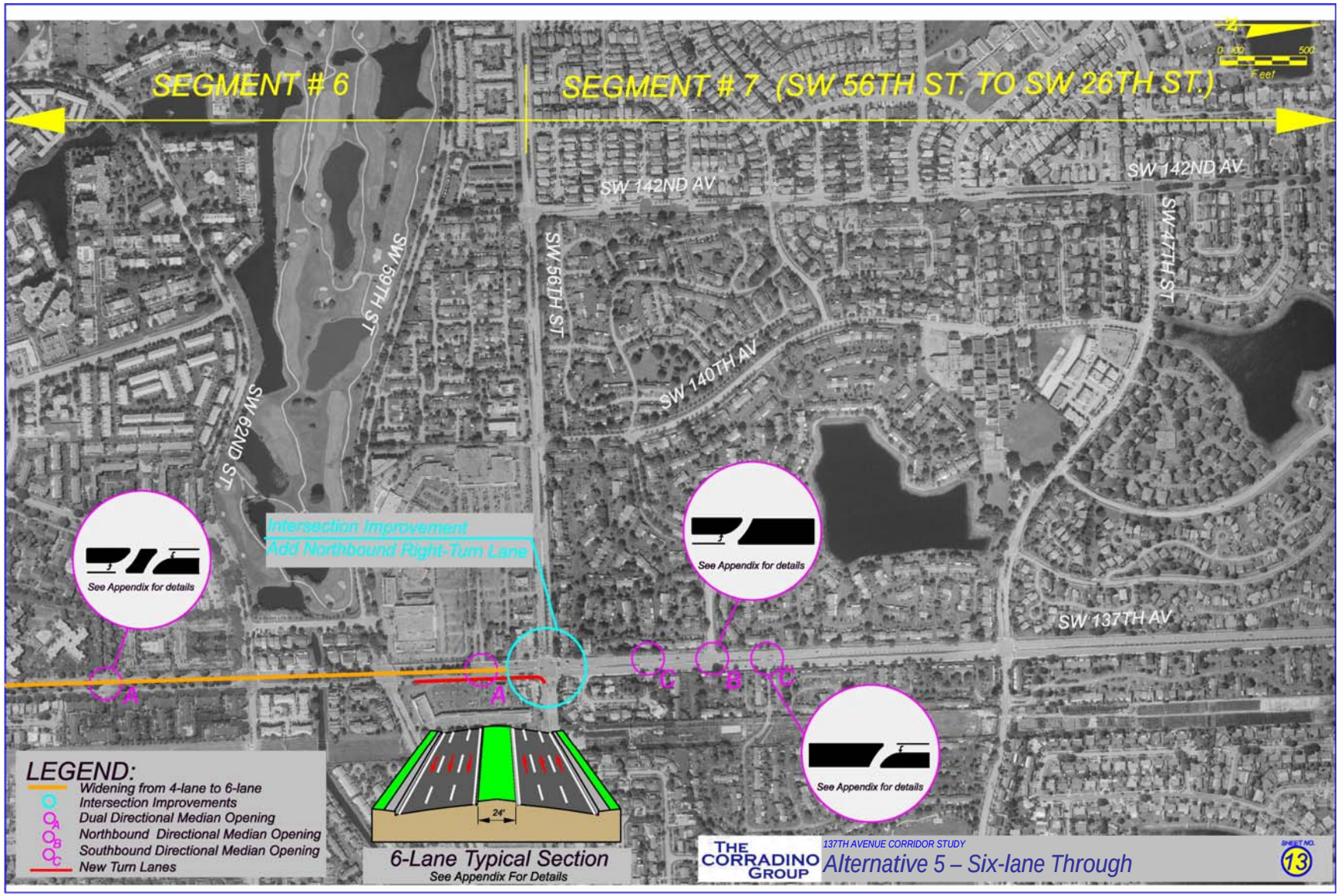

SEGMENT # 5 (SW 184TH ST TO SW 88 TH ST. )
SW 180TH ST
SW 187TH AV
No Improvements Recommended
SW 160TH ST
SW 168TH ST
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 5 – Six-lane Through
SHEET NO.
8

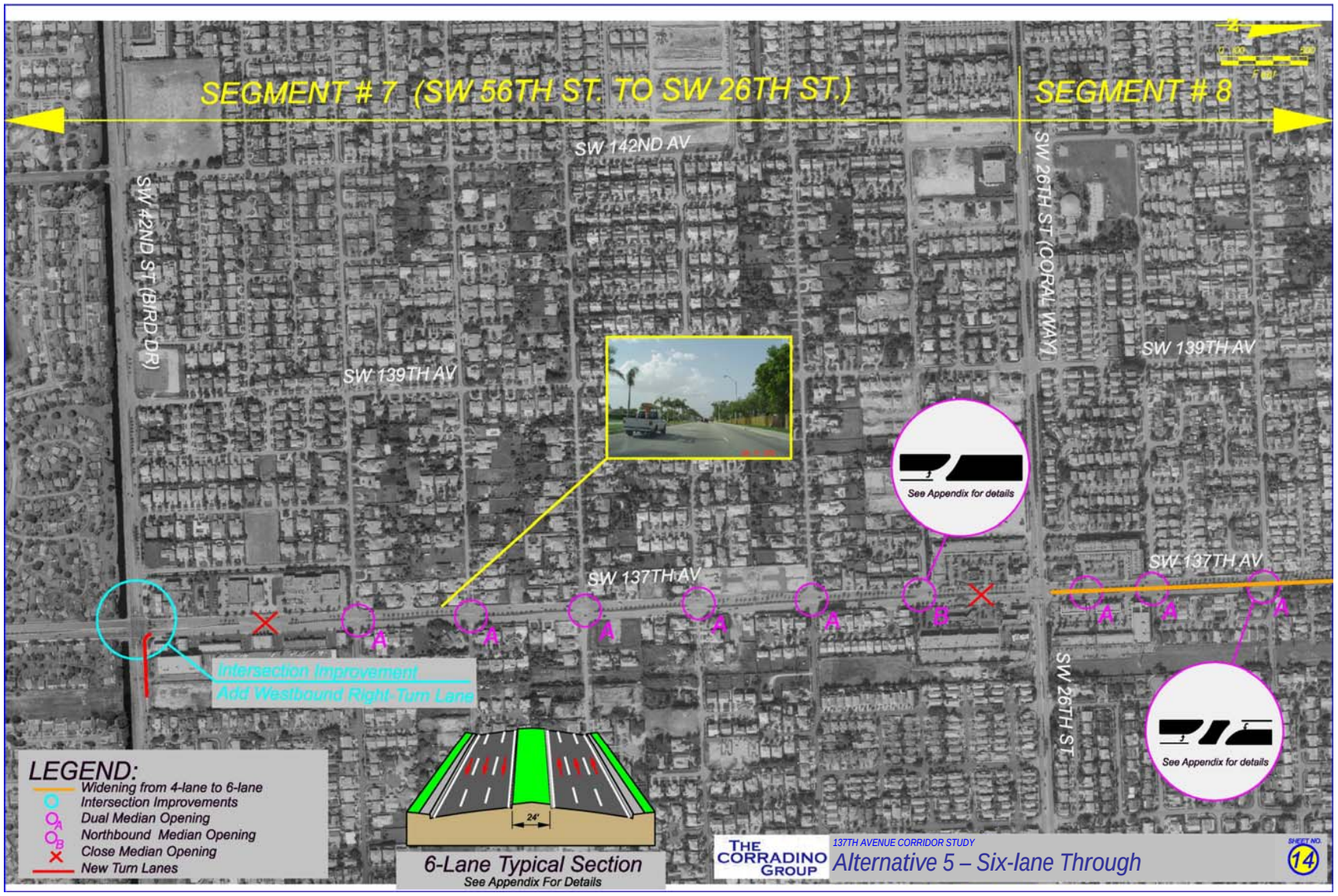

SEGMENT # 5 (SW 184TH ST TO SW 88TH ST.)
N
0 100 500
Feet
SW 136TH ST
SW 137TH AV
Intersection Improvements
- Add Eastbound Right-turn Lane
Intersection Improvements
- Add Eastbound Right-turn Lane
- Add Northbound Right-turn Lane
SW 152ND ST (CORAL REEF DR.)
SW 146TH ST
This area is currently under a planning study by the MDX Authority
( SR 874 Extension)
LEGEND:
Intersection Improvements
New Turn Lanes
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 5 – Six-lane Through
SHEET NO.
9

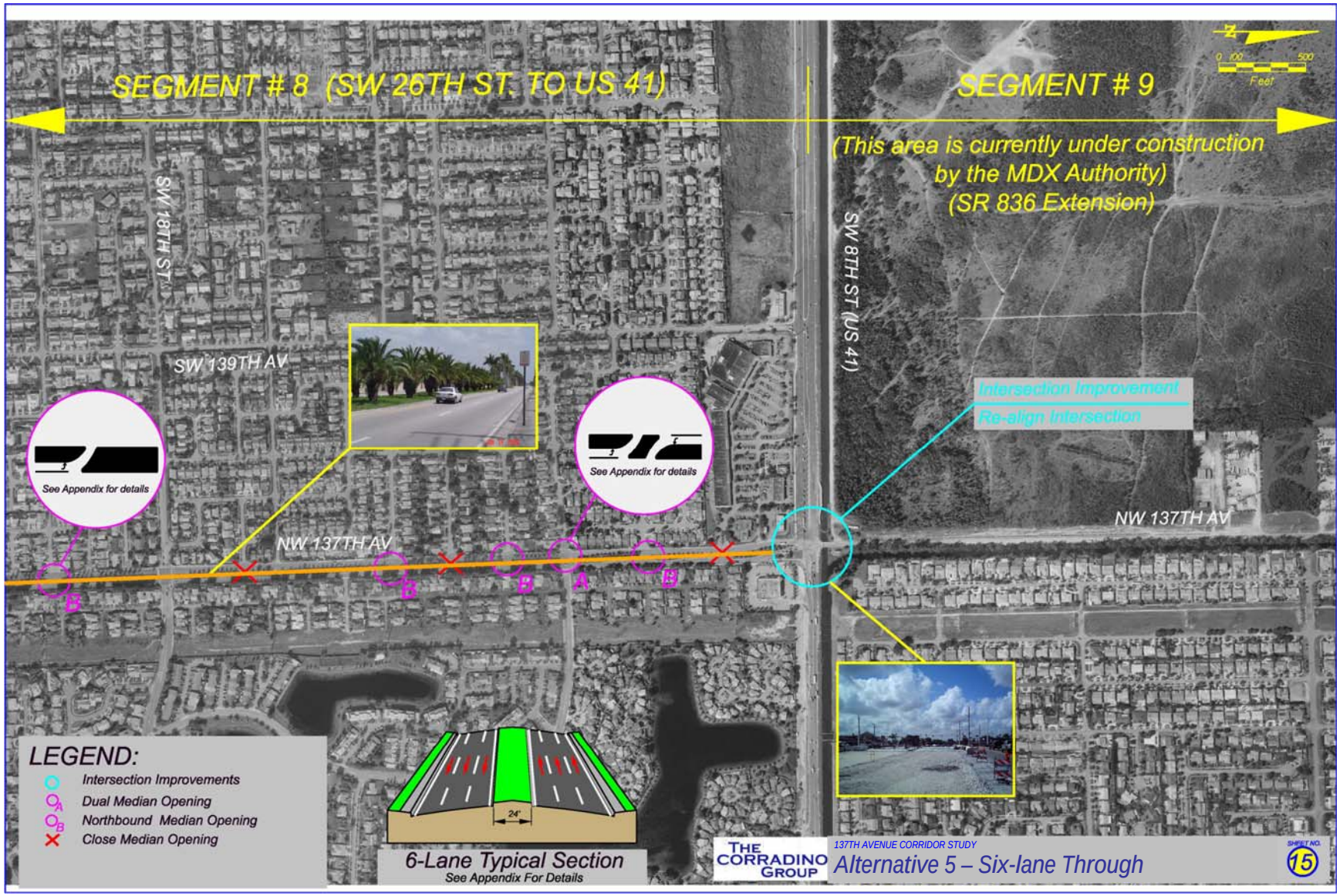

SEGMENT # 5 ( SW 184TH ST TO SW 88TH ST. )
SW 120TH ST
SW 112TH ST
SW 128TH ST
SW 137TH AV
Intersection Improvements
-Add Northbound Right-turn Lane
-Add Southbound Right-turn Lane
LEGEND:
Intersection Improvements
New Turn Lanes
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 5 – Six-lane Through
SHEET NO.
10


SEGMENT # 5 (SW 184TH ST TO SW 88TH ST.)
SW 142ND AV
SW 104TH ST (SR 990)
SW 142ND AV
SW 96TH ST
SW 137TH AV
No Improvements Recommended
SW 104TH ST
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 5 – Six-lane Through
SHEET NO.
11


SEGMENT # 6 (SW 88TH ST TO SW 56TH ST. )
SW 88TH ST (KENDALL DR.)
SW 142ND AV
SW 142ND AV
SW 72ND ST
SW 68TH ST
SW 66TH ST
SW 84TH ST
SW 137TH AV
SW 137TH AV
See Appendix for details
See Appendix for details
LEGEND:
Widening from 4-lane to 6-lane
Northbound Directional Median Opening
Southbound Directional Median Opening
Close Full Median Opening
24'
6-Lane Typical Section
See Appendix For Details
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 5 – Six-lane Through
SHEET NO.
12

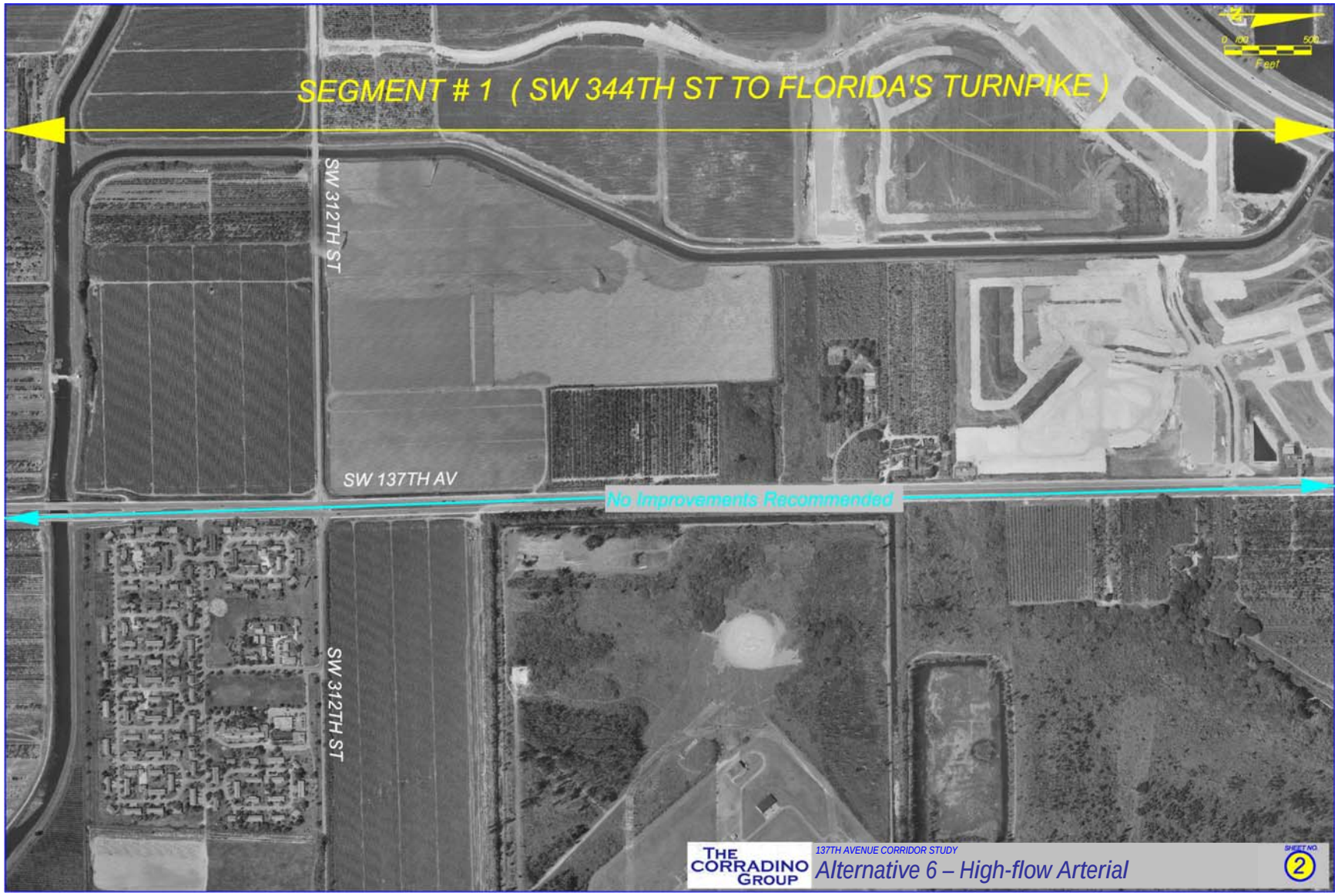

SEGMENT # 6
SEGMENT # 7 (SW 56TH ST. TO SW 26TH ST.)
SW 142ND AV
SW 142ND AV
SW 59TH ST
SW 56TH ST
SW 47TH ST
SW 62ND ST
SW 140TH AV
SW 137TH AV
Intersection Improvement
Add Northbound Right-Turn Lane
See Appendix for details
See Appendix for details
See Appendix for details
A
A
C
B
C
24'
LEGEND:
Widening from 4-lane to 6-lane
Intersection Improvements
Dual Directional Median Opening
Northbound Directional Median Opening
Southbound Directional Median Opening
New Turn Lanes
6-Lane Typical Section
See Appendix For Details
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 5 – Six-lane Through
SHEET NO.
13

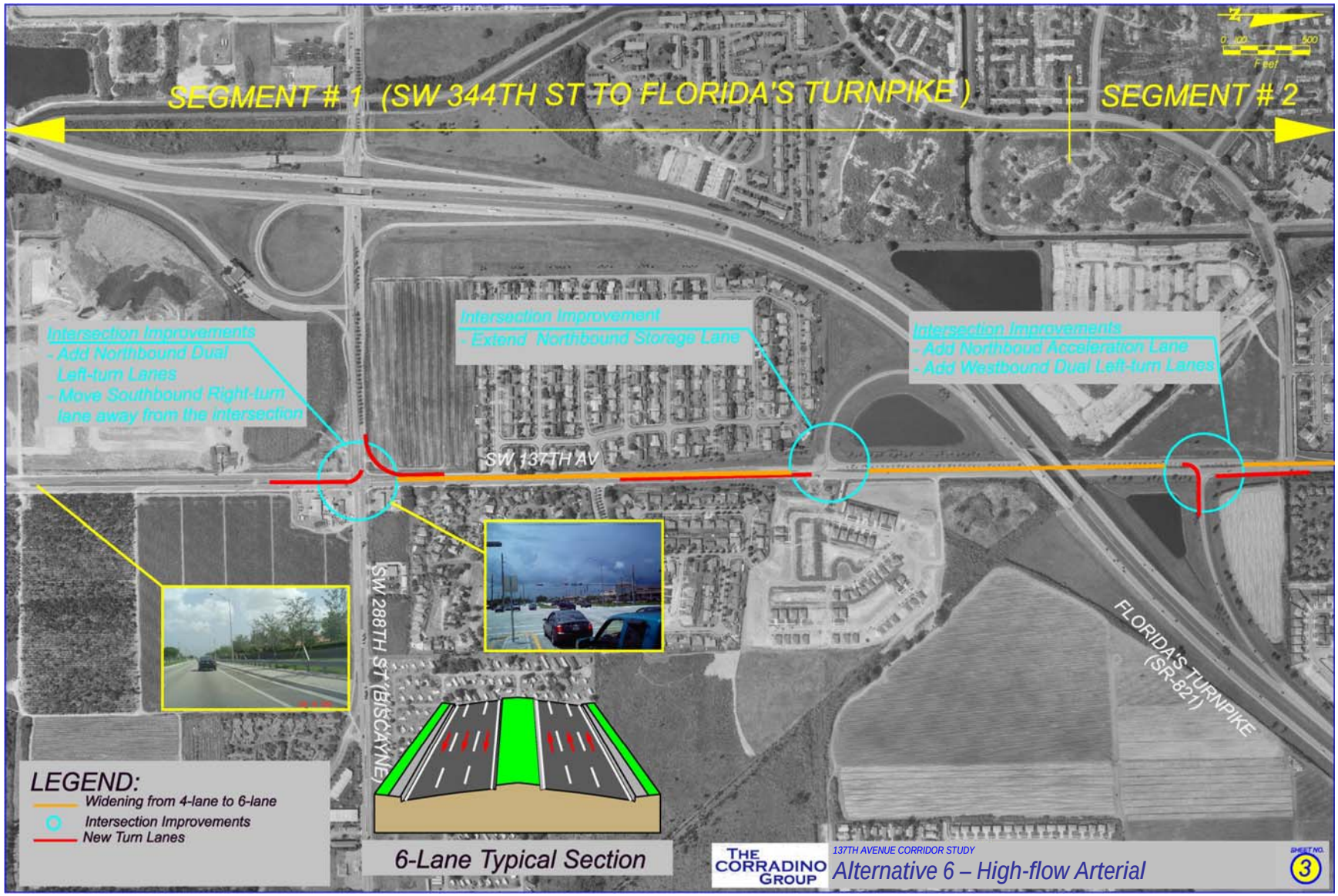

SEGMENT # 7 (SW 56TH ST. TO SW 26TH ST.)
SEGMENT # 8
SW 142ND AV
SW #2ND ST (BIRD DR)
SW 139TH AV
SW 26TH ST (CORAL WAY)
SW 139TH AV
SW 137TH AV
SW 137TH AV
SW 26TH ST
See Appendix for details
See Appendix for details
Intersection Improvement
Add Westbound Right-Turn Lane
LEGEND:
Widening from 4-lane to 6-lane
Intersection Improvements
Dual Median Opening
Northbound Median Opening
Close Median Opening
New Turn Lanes
24'
6-Lane Typical Section
See Appendix For Details
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 5 – Six-lane Through
SHEET NO.
14

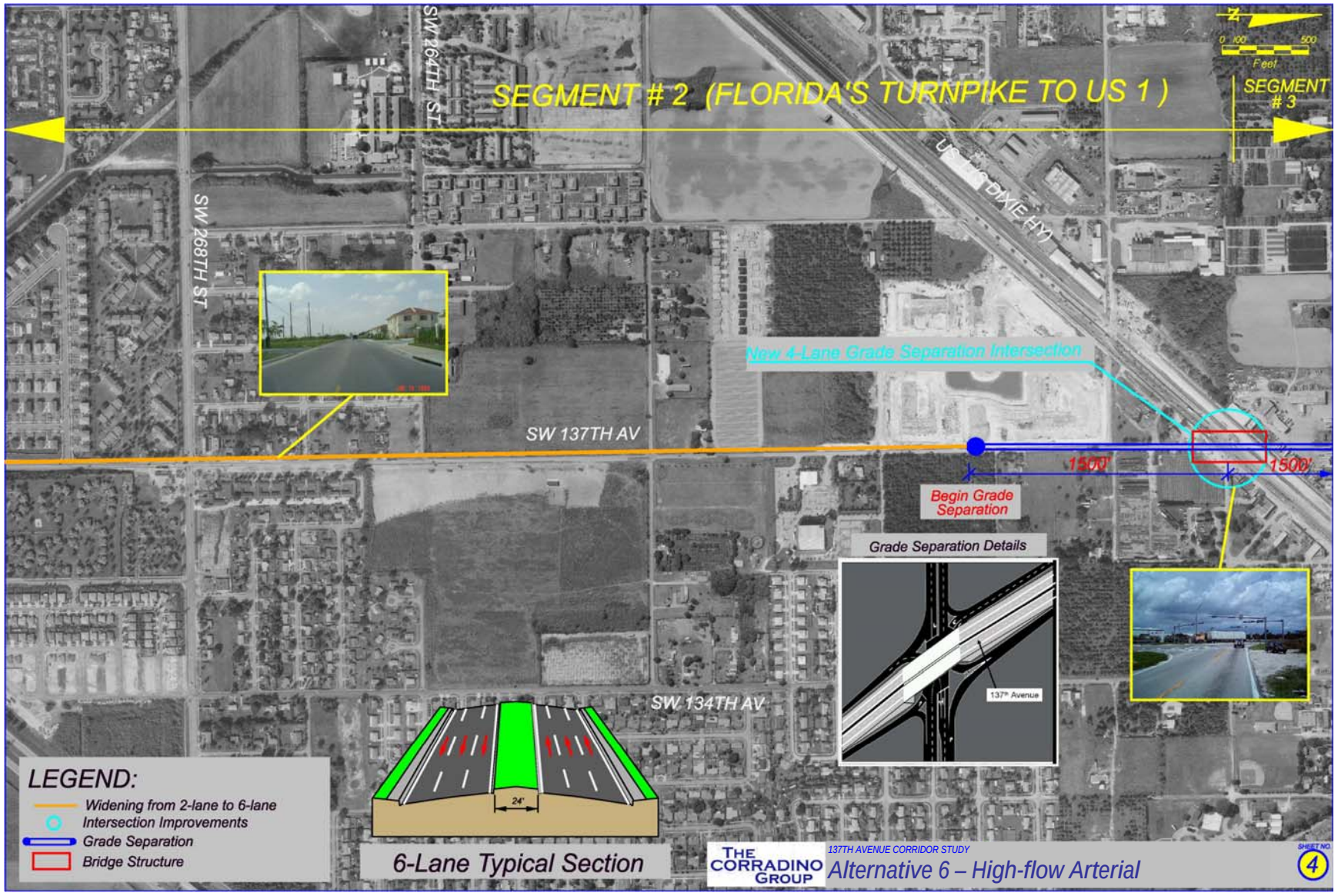

SEGMENT # 8 (SW 26TH ST. TO US 41)
SEGMENT # 9
(This area is currently under construction by the MDX Authority)
(SR 836 Extension)
SW 18TH ST
SW 139TH AV
SW 8TH ST (US 41)
NW 137TH AV
NW 137TH AV
Intersection Improvement
Re-align Intersection
See Appendix for details
See Appendix for details
B
B
B
A
B
LEGEND:
Intersection Improvements
Dual Median Opening
Northbound Median Opening
Close Median Opening
24'
6-Lane Typical Section
See Appendix For Details
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 5 – Six-lane Through
SHEET NO. 15

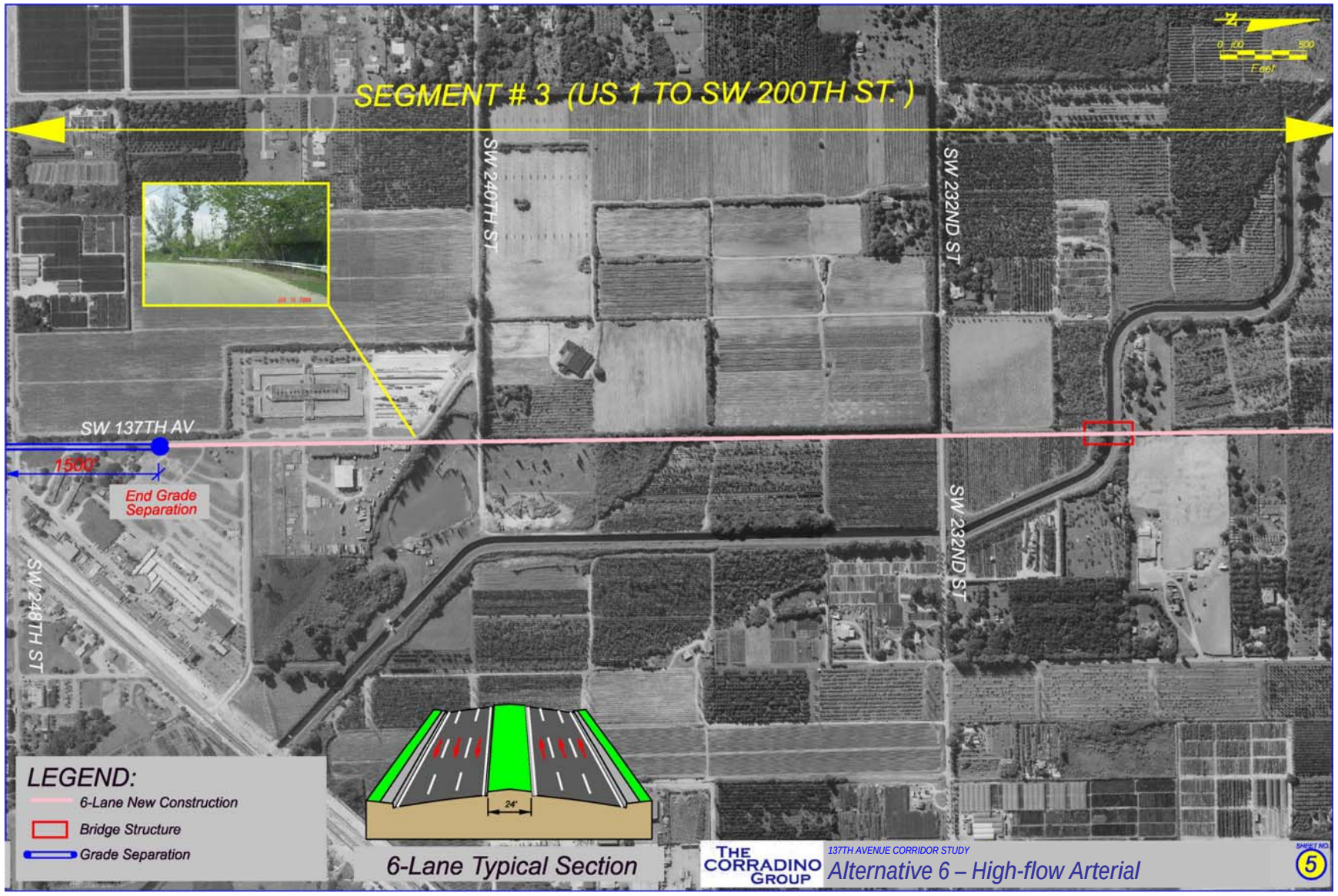

SEGMENT # 9 (US 41 TO SR 836 )
(This area is currently under construction by the MDX Authority)
(SR 836 Extension)
STUDY LIMITS
SR 836
NW 137TH AV
No Improvements Recommended
NW 12TH ST
SR 836
0 100 500
Feet
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 5 – Six-lane Through
SHEET NO. 16

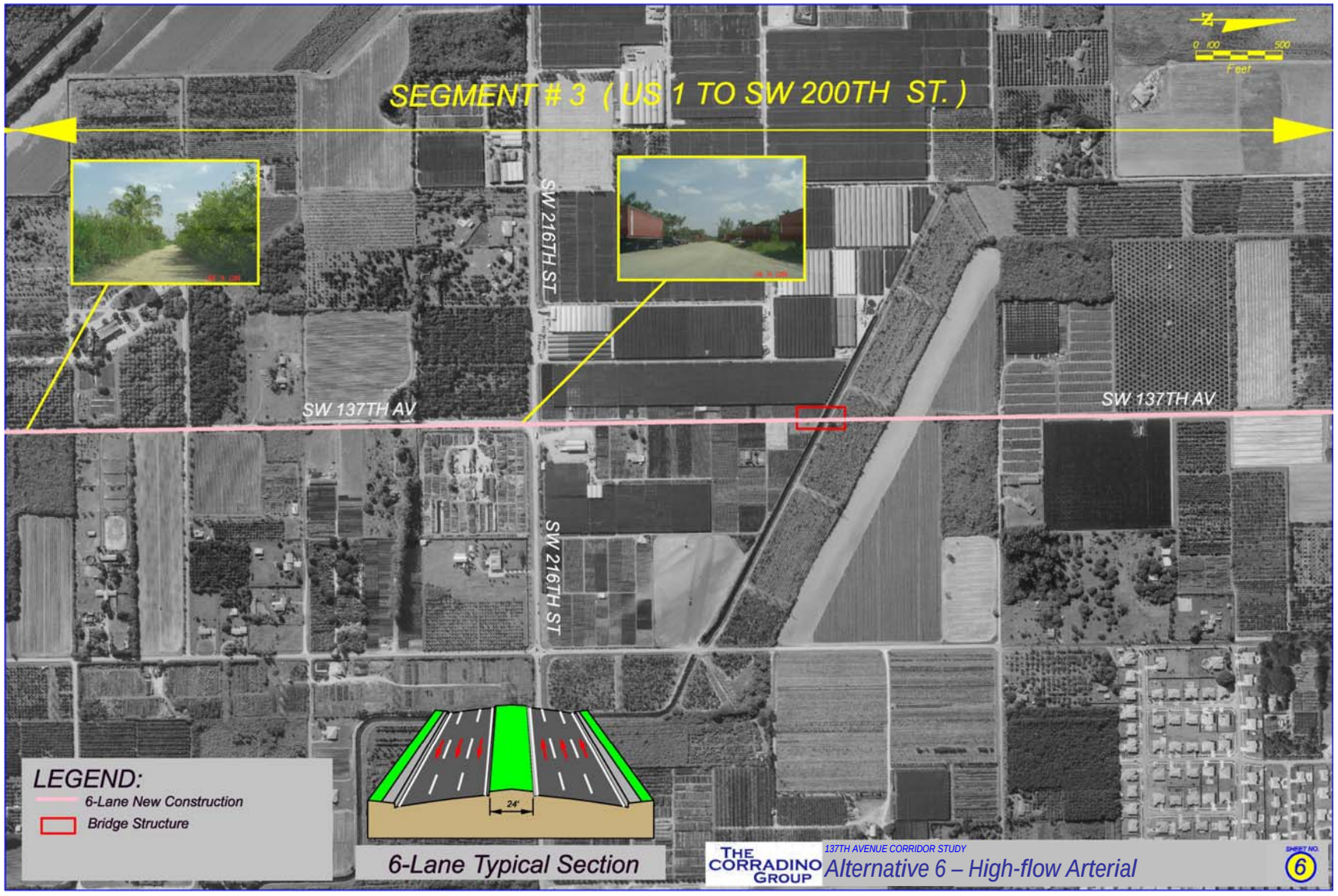

SEGMENT # 1 (SW 344TH ST TO FLORIDA'S TURNPIKE )
STUDY LIMITS
SW 344TH ST.
SW 320TH ST
SW 137TH AV
No Improvements Recommended
SW 328TH ST
SW 320TH ST
N
0 100 500
Feet
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 6 – High-flow Arterial
SHEET NO.
1

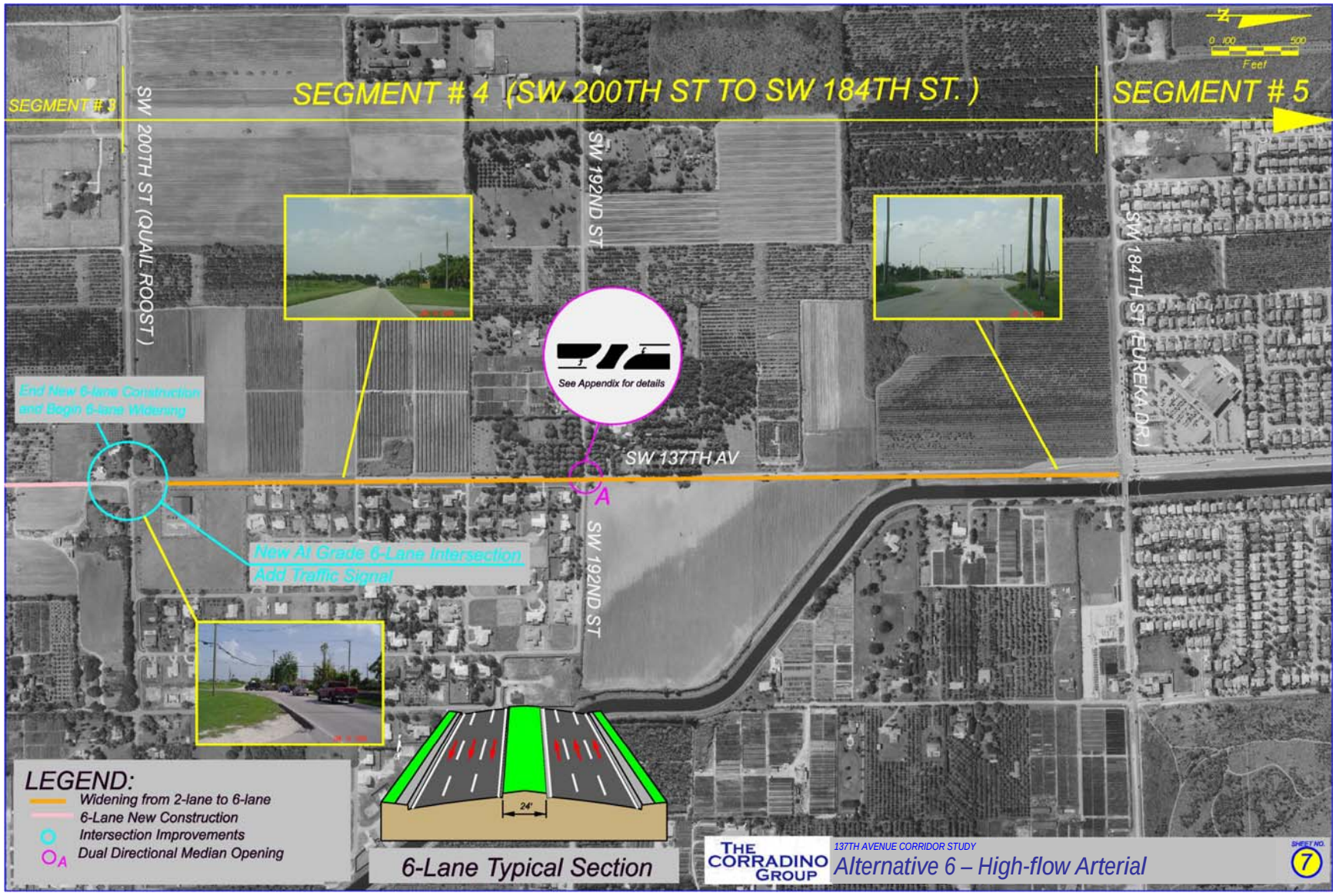

SEGMENT # 1 ( SW 344TH ST TO FLORIDA'S TURNPIKE )
SW 312TH ST
SW 137TH AV
No Improvements Recommended
SW 312TH ST
Feet
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 6 – High-flow Arterial
SHEET NO.
2

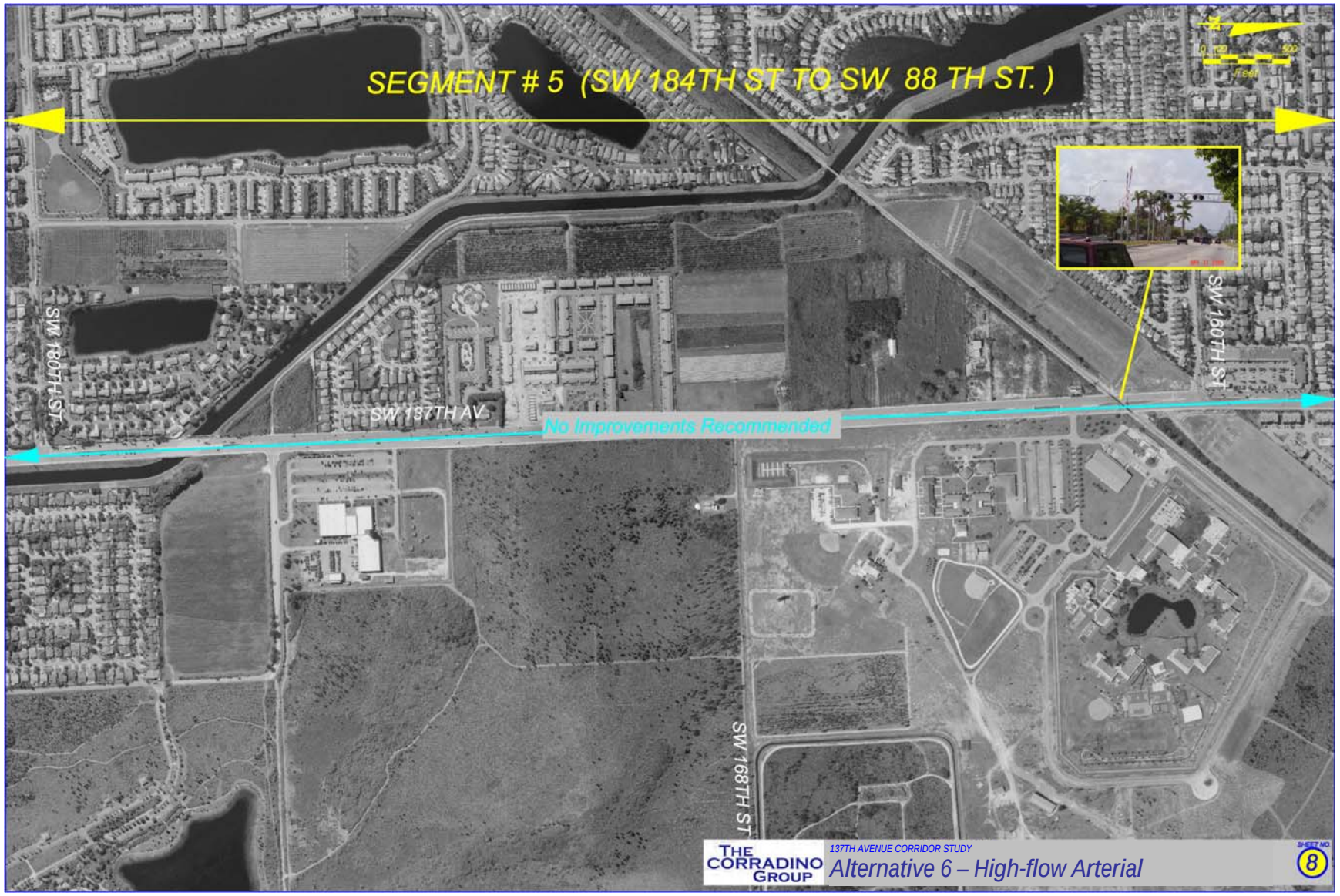

SEGMENT # 1 (SW 344TH ST TO FLORIDA'S TURNPIKE )
SEGMENT # 2
Intersection Improvements
- Add Northbound Dual Left-turn Lanes
- Move Southbound Right-turn lane away from the intersection
Intersection Improvement
- Extend Northbound Storage Lane
Intersection Improvements
- Add Northbound Acceleration Lane
- Add Westbound Dual Left-turn Lanes
SW 137TH AV
SW 288TH ST (BISCAYNE)
FLORIDA'S TURNPIKE (SR-821)
LEGEND:
Widening from 4-lane to 6-lane
Intersection Improvements
New Turn Lanes
6-Lane Typical Section
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 6 – High-flow Arterial
SHEET NO. 3

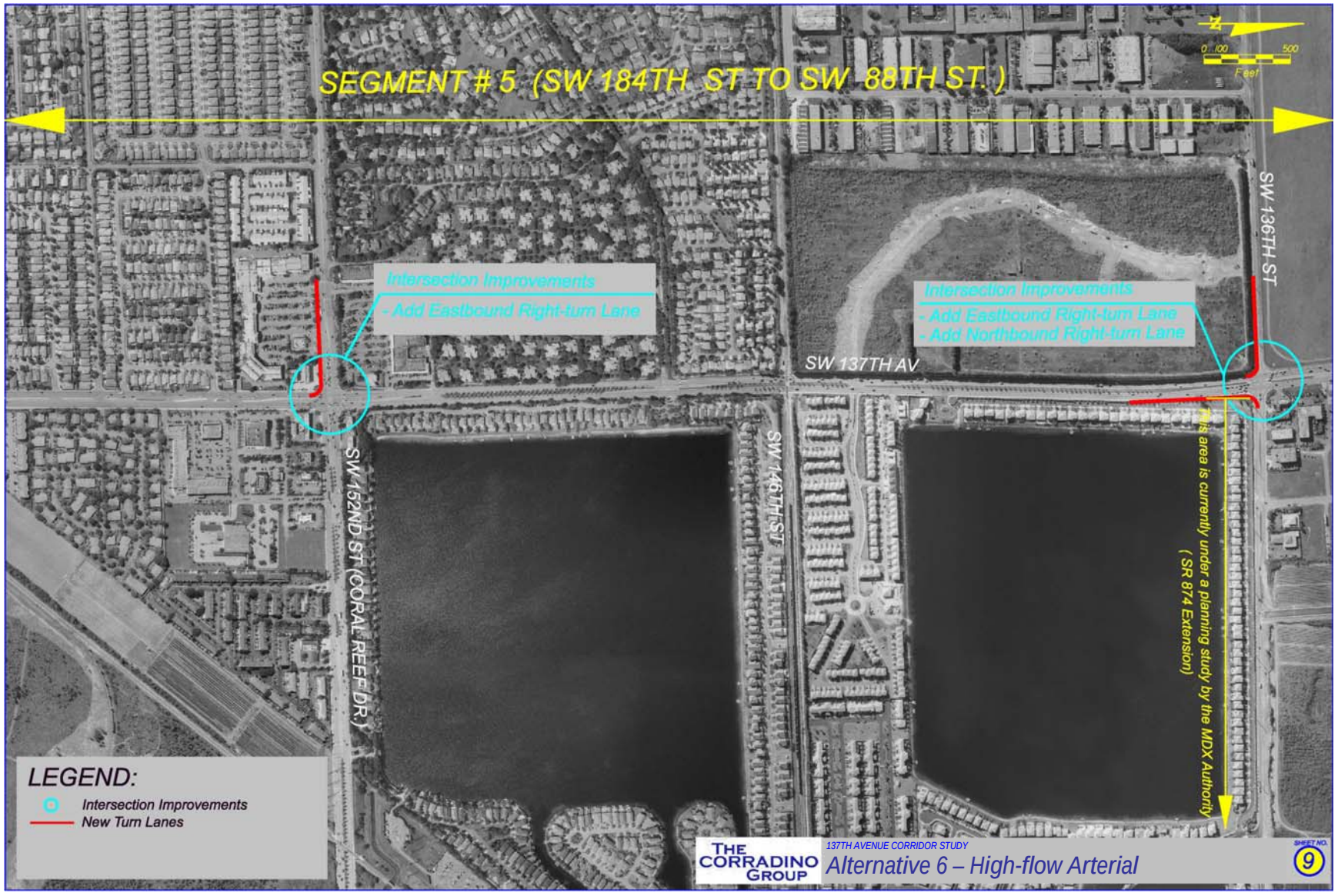

SEGMENT # 2 (FLORIDA'S TURNPIKE TO US 1 )
SEGMENT # 3
SW 164TH ST
SW 268TH ST
SW 137TH AV
SW 134TH AV
US 1 / DIXIE HWY
New 4-Lane Grade Separation Intersection
1500'
1500'
Begin Grade Separation
Grade Separation Details
137th Avenue
0 100 500
Feet
LEGEND:
Widening from 2-lane to 6-lane
Intersection Improvements
Grade Separation
Bridge Structure
24'
6-Lane Typical Section
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 6 – High-flow Arterial
SHEET NO.
4


SEGMENT # 3 (US 1 TO SW 200TH ST. )
SW 240TH ST
SW 232ND ST
SW 232ND ST
SW 137TH AV
1500'
End Grade Separation
SW 248TH ST
LEGEND:
6-Lane New Construction
Bridge Structure
Grade Separation
24'
6-Lane Typical Section
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 6 – High-flow Arterial
5

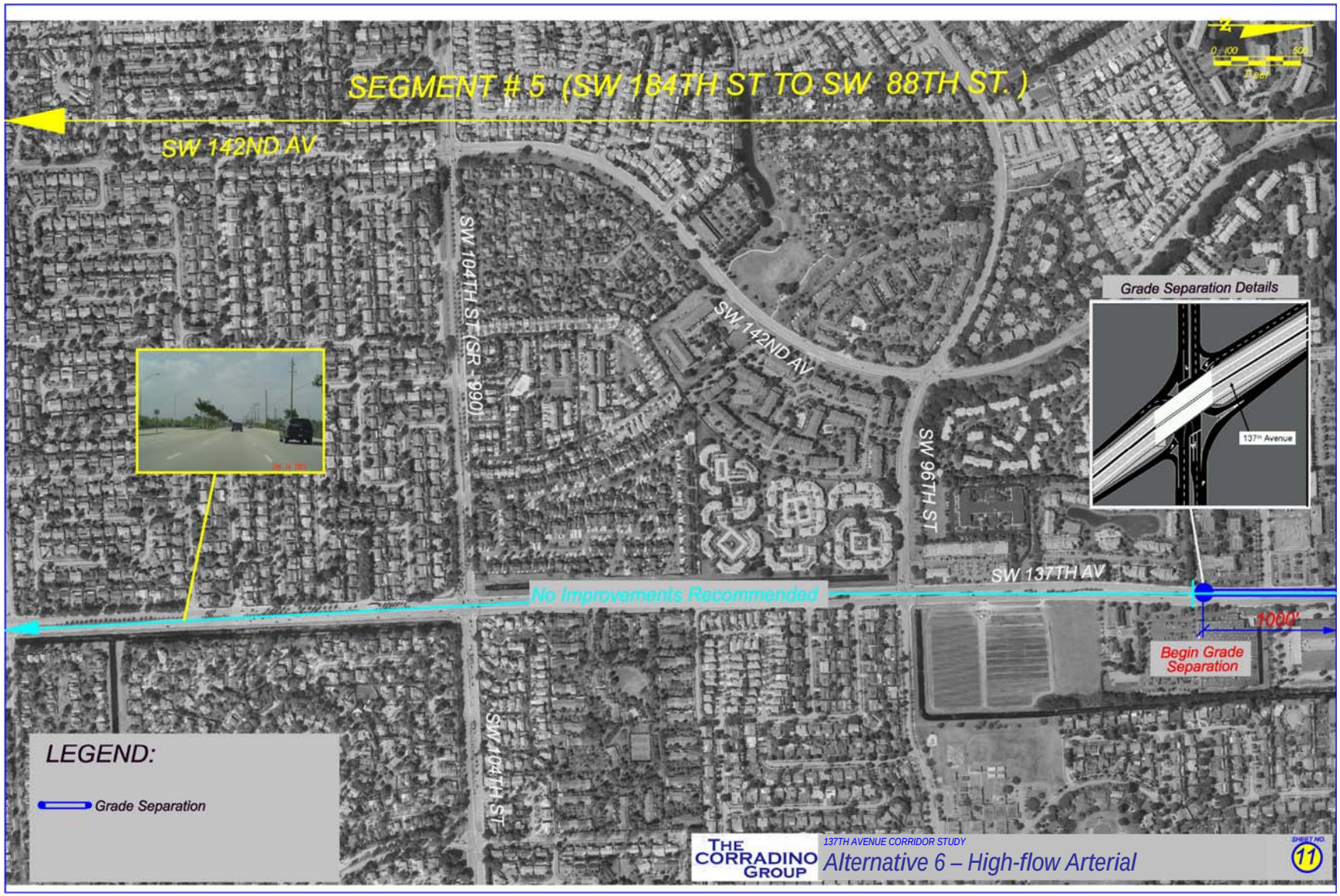

SEGMENT # 3 ( US 1 TO SW 200TH ST. )
SW 216TH ST
SW 137TH AV
SW 137TH AV
SW 216TH ST
0 100 500
Feet
LEGEND:
6-Lane New Construction
Bridge Structure
24'
6-Lane Typical Section
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 6 – High-flow Arterial
SHEET NO.
6

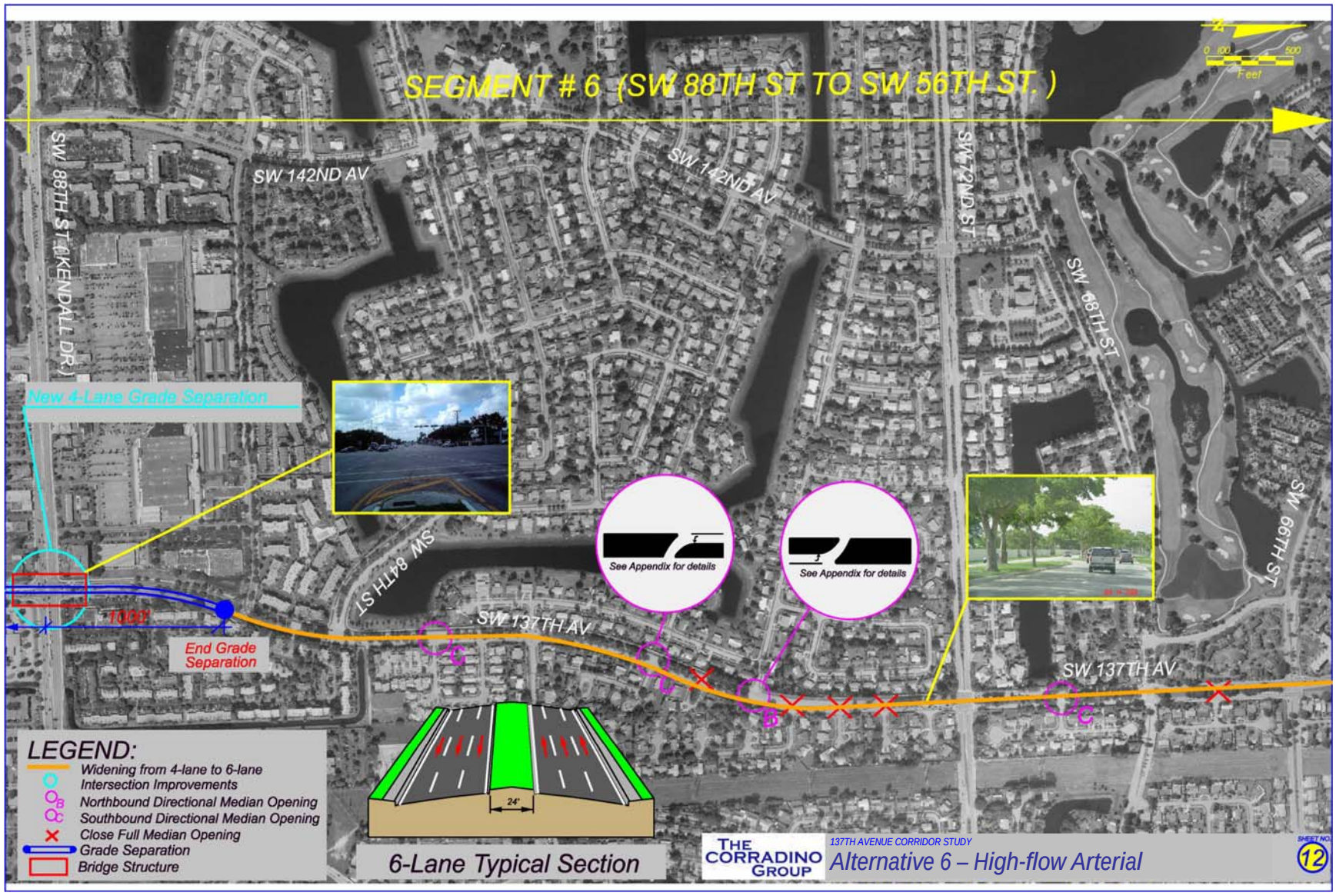

SEGMENT # 3
SEGMENT # 4 (SW 200TH ST TO SW 184TH ST. )
SEGMENT # 5
SW 200TH ST (QUAIL ROOST)
SW 192ND ST
SW 184TH ST (EUREKA DR.)
SW 137TH AV
See Appendix for details
End New 6-lane Construction and Begin 6-lane Widening
New At Grade 6-Lane Intersection Add Traffic Signal
A
LEGEND:
Widening from 2-lane to 6-lane
6-Lane New Construction
Intersection Improvements
Dual Directional Median Opening
24'
6-Lane Typical Section
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 6 – High-flow Arterial
SHEET NO.
7

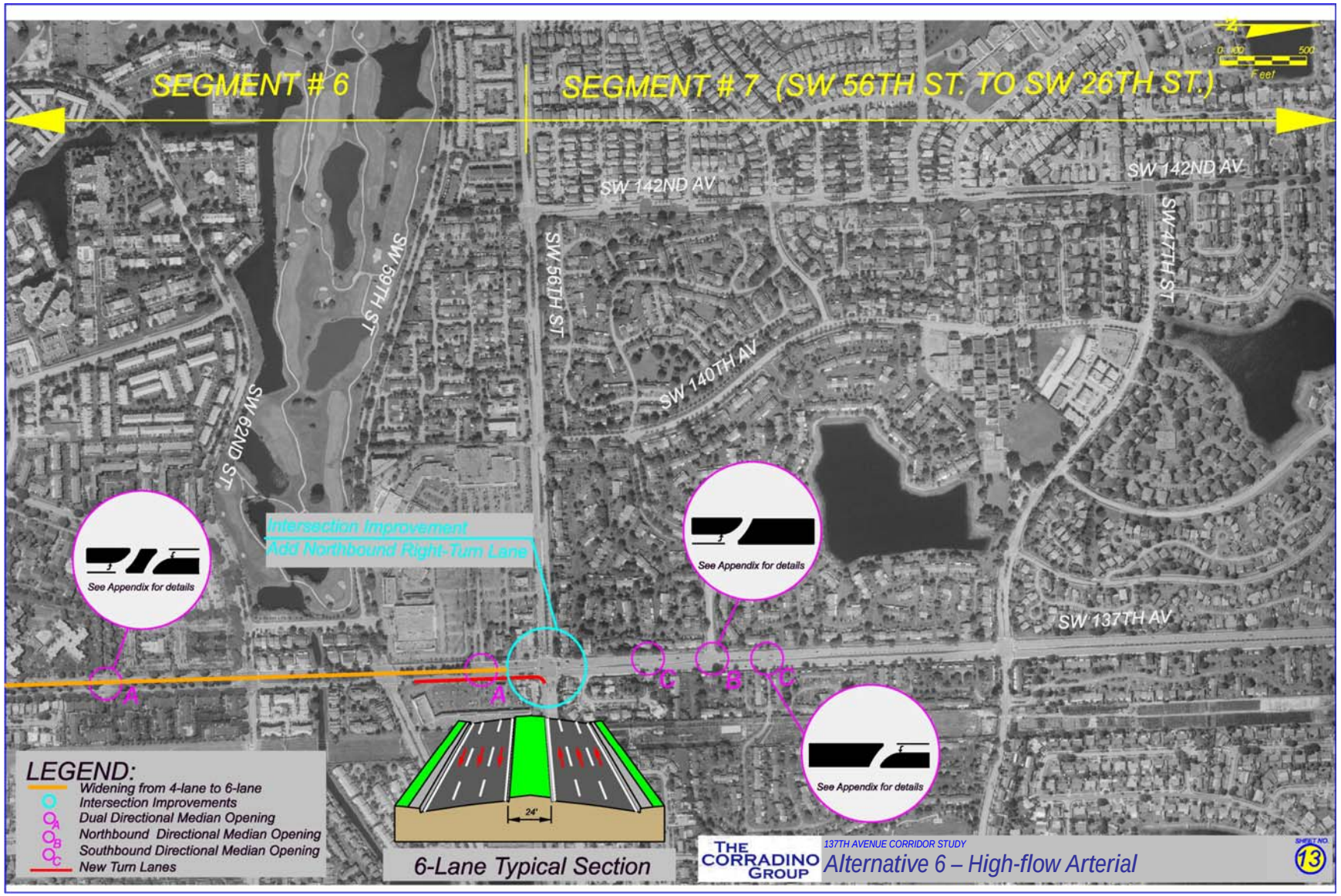

SEGMENT # 5 (SW 184TH ST TO SW 88 TH ST. )
SW 180TH ST.
SW 137TH AV.
No Improvements Recommended
SW 160TH ST.
SW 168TH ST.
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 6 – High-flow Arterial
8

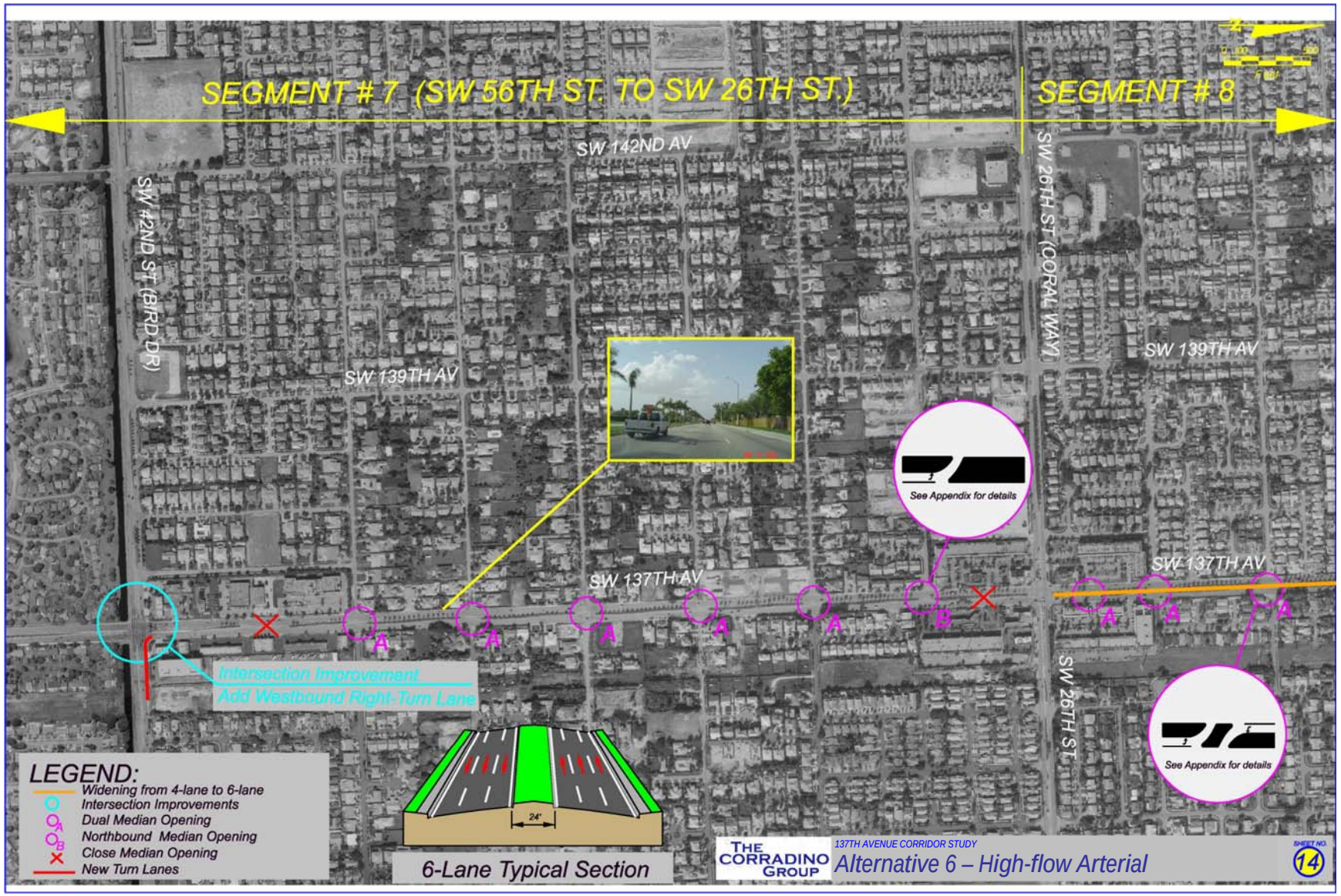

SEGMENT # 5 (SW 184TH ST TO SW 88TH ST.)
N
0 100 500
Feet
SW 136TH ST
SW 137TH AV
Intersection Improvements
- Add Eastbound Right-turn Lane
Intersection Improvements
- Add Eastbound Right-turn Lane
- Add Northbound Right-turn Lane
SW 152ND ST (CORAL REEF DR.)
SW 146TH ST
This area is currently under a planning study by the MDX Authority
( SR 874 Extension)
LEGEND:
Intersection Improvements
New Turn Lanes
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 6 – High-flow Arterial
SHEET NO.
9

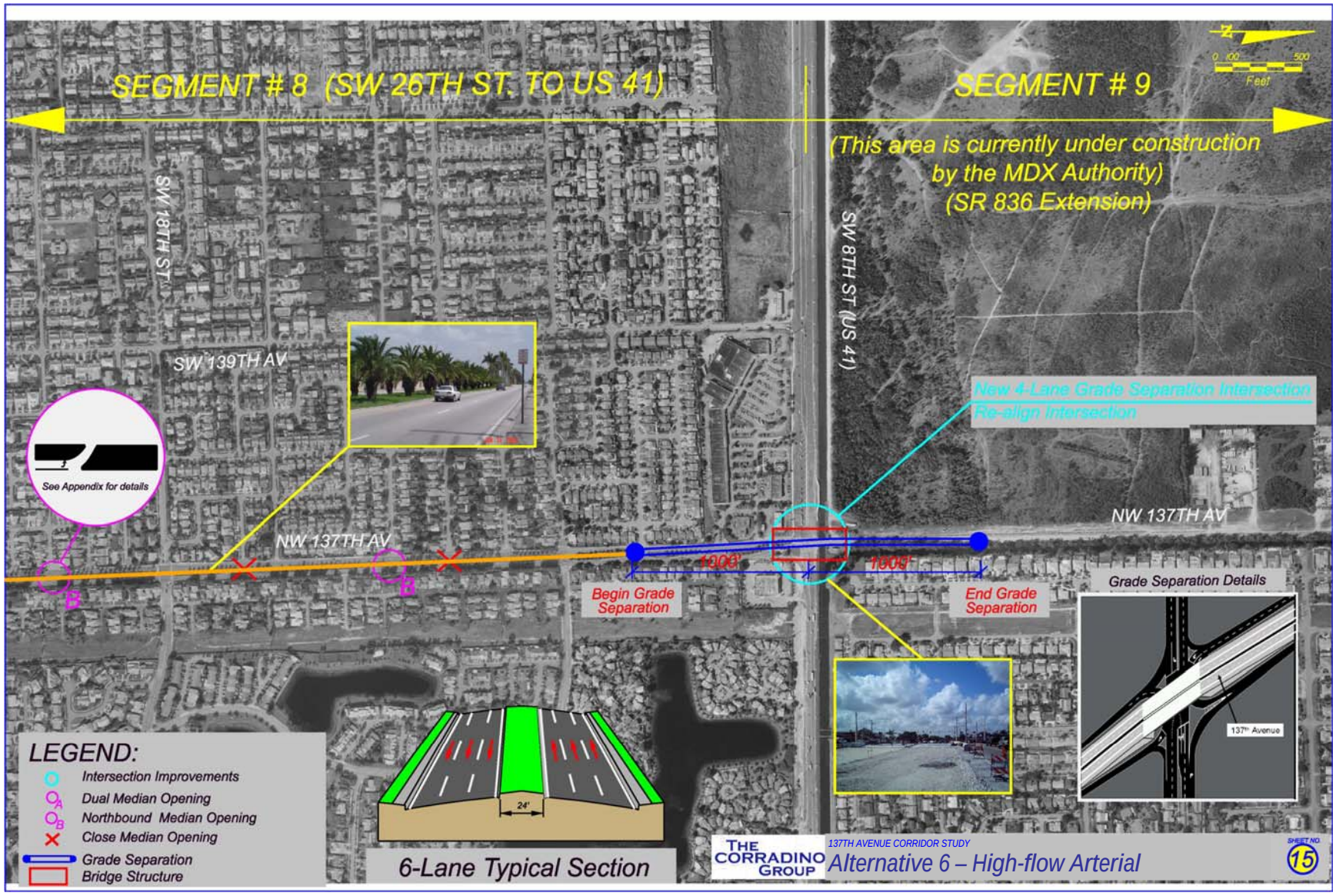

SEGMENT # 5 ( SW 184TH ST TO SW 88TH ST. )
SW 120TH ST
SW 112TH ST
SW 128TH ST
SW 137TH AV
Intersection Improvements
-Add Northbound Right-turn Lane
-Add Southbound Right-turn Lane
LEGEND:
Intersection Improvements
New Turn Lanes
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 6 – High-flow Arterial
SHEET NO.
10

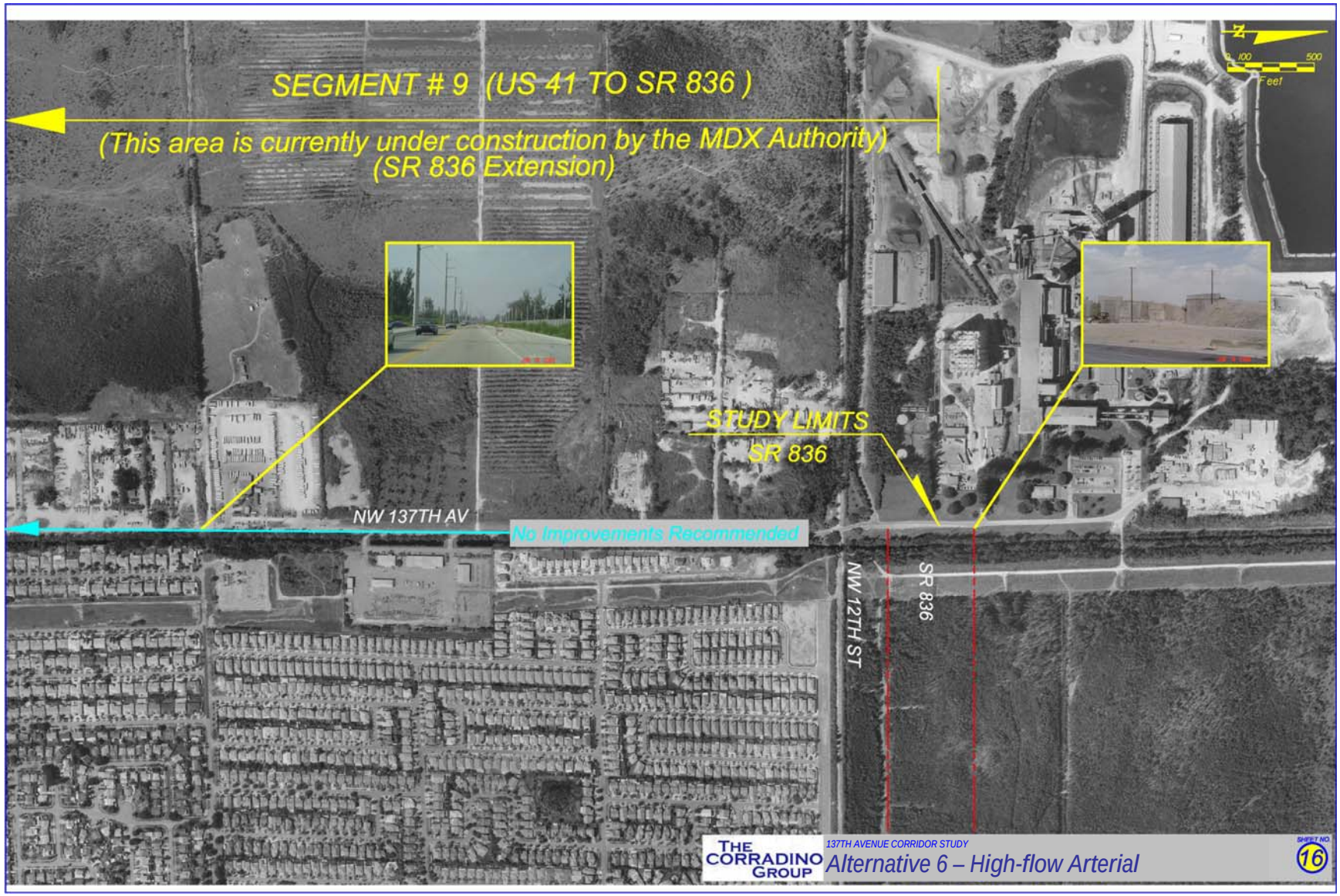

SEGMENT # 5 (SW 184TH ST TO SW 88TH ST.)
SW 142ND AV
SW 104TH ST (SR 990)
SW 142ND AV
SW 96TH ST
SW 137TH AV
Grade Separation Details
137th Avenue
No Improvements Recommended
1000'
Begin Grade Separation
SW 104TH ST
LEGEND:
Grade Separation
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 6 – High-flow Arterial
SHEET NO. 11

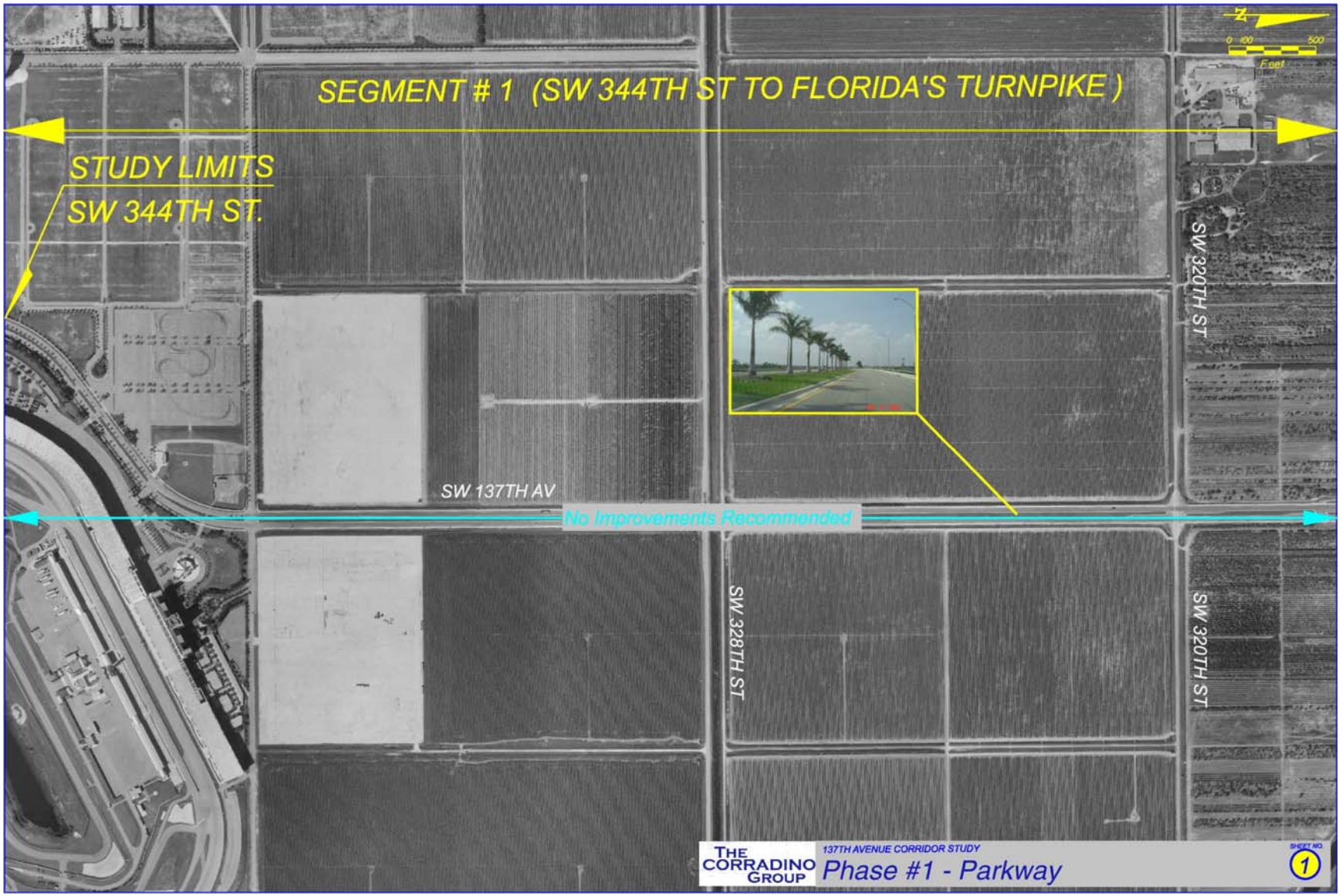

SEGMENT # 6 (SW 88TH ST TO SW 56TH ST. )
SW 88TH ST (KENDALL DR.)
SW 142ND AV
SW 142ND AV
SW 72ND ST
SW 68TH ST
SW 66TH ST
New 4-Lane Grade Separation
1000'
End Grade Separation
SW 84TH ST
SW 137TH AV
SW 137TH AV
See Appendix for details
See Appendix for details
LEGEND:
Widening from 4-lane to 6-lane
Intersection Improvements
Northbound Directional Median Opening
Southbound Directional Median Opening
Close Full Median Opening
Grade Separation
Bridge Structure
24'
6-Lane Typical Section
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 6 – High-flow Arterial
SHEET NO.
12

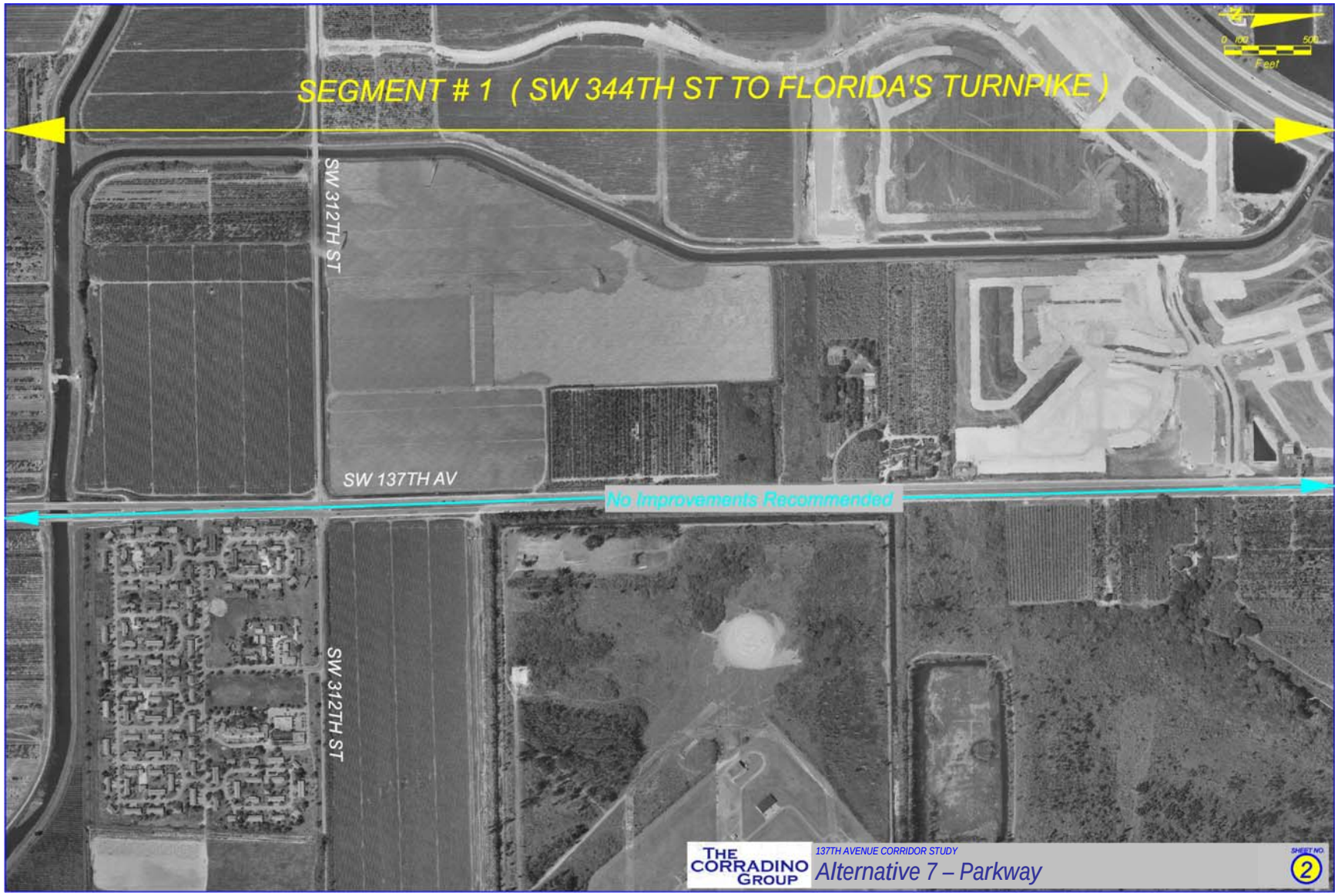

SEGMENT # 6
SEGMENT # 7 (SW 56TH ST. TO SW 26TH ST.)
0 250 500
Feet
SW 142ND AV
SW 142ND AV
SW 47TH ST
SW 56TH ST
SW 59TH ST
SW 62ND ST
SW 140TH AV
SW 137TH AV
Intersection Improvement
Add Northbound Right-Turn Lane
See Appendix for details
See Appendix for details
See Appendix for details
A
A
C
B
C
24'
6-Lane Typical Section
LEGEND:
Widening from 4-lane to 6-lane
Intersection Improvements
Dual Directional Median Opening
Northbound Directional Median Opening
Southbound Directional Median Opening
New Turn Lanes
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 6 – High-flow Arterial
SHEET NO.
13

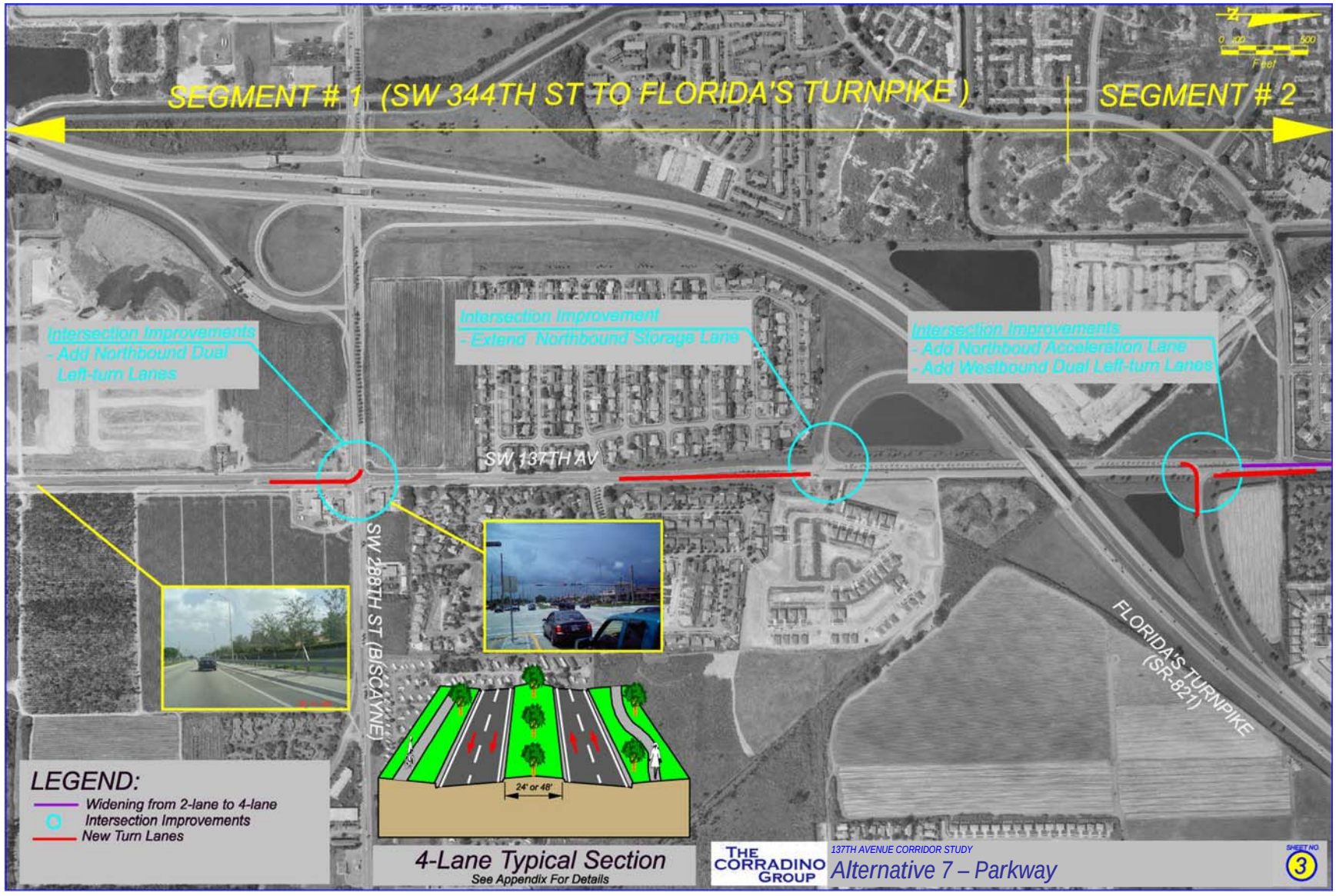

SEGMENT # 7 (SW 56TH ST. TO SW 26TH ST.)
SEGMENT # 8
SW 142ND AV
SW 42ND ST (BIRD DR)
SW 139TH AV
SW 26TH ST (CORAL WAY)
SW 139TH AV
SW 137TH AV
SW 137TH AV
SW 26TH ST
See Appendix for details
See Appendix for details
Intersection Improvement
Add Westbound Right-Turn Lane
LEGEND:
Widening from 4-lane to 6-lane
Intersection Improvements
Dual Median Opening
Northbound Median Opening
Close Median Opening
New Turn Lanes
24'
6-Lane Typical Section
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 6 – High-flow Arterial
SHEET NO.
14

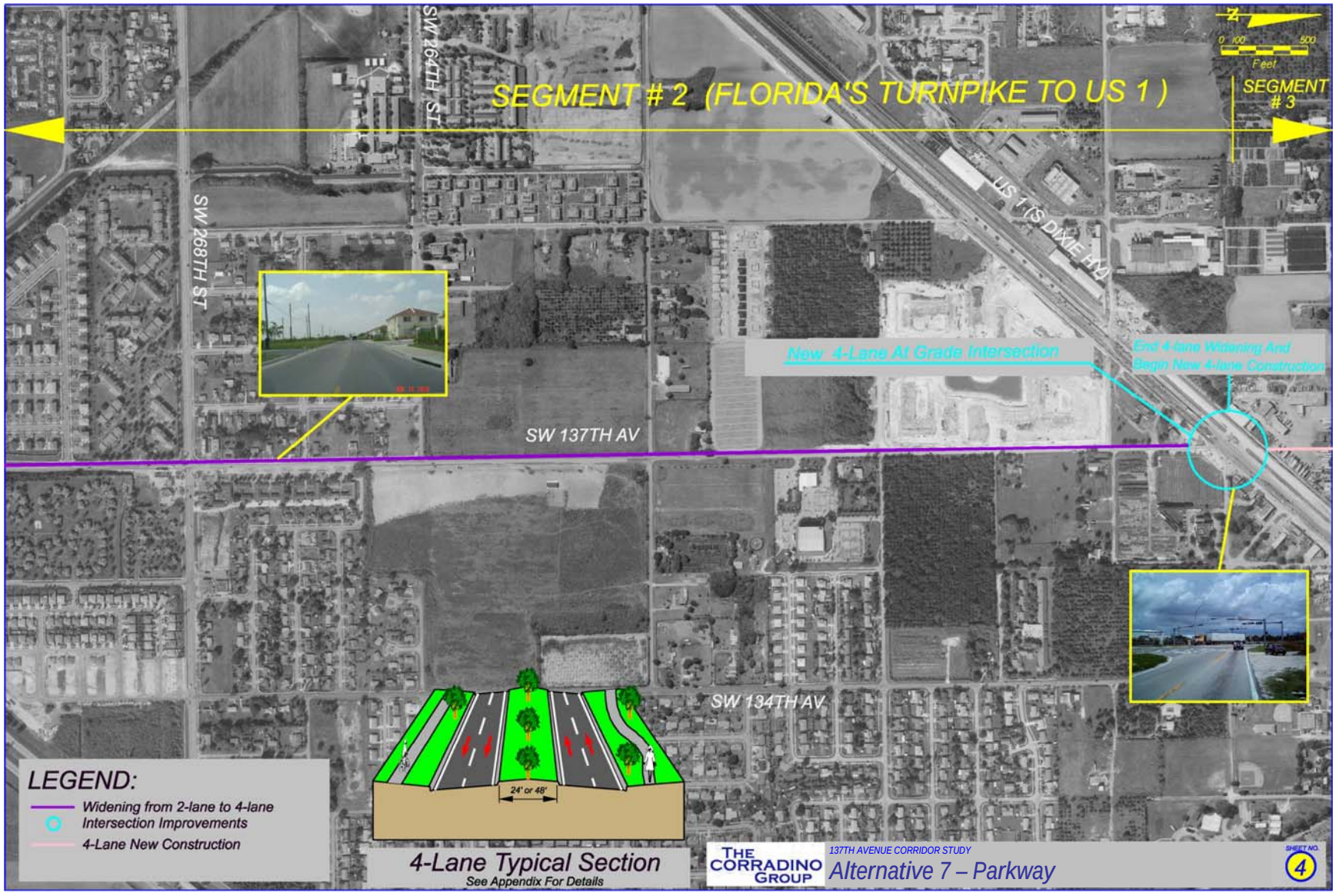

SEGMENT # 8 (SW 26TH ST. TO US 41)
SEGMENT # 9
(This area is currently under construction by the MDX Authority)
(SR 836 Extension)
SW 18TH ST
SW 139TH AV
SW 8TH ST (US 41)
NW 137TH AV
See Appendix for details
New 4-Lane Grade Separation Intersection
Re-align Intersection
1000'
1000'
Begin Grade Separation
End Grade Separation
Grade Separation Details
137th Avenue
24'
6-Lane Typical Section
LEGEND:
Intersection Improvements
Dual Median Opening
Northbound Median Opening
Close Median Opening
Grade Separation
Bridge Structure
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 6 – High-flow Arterial
SHEET NO. 15

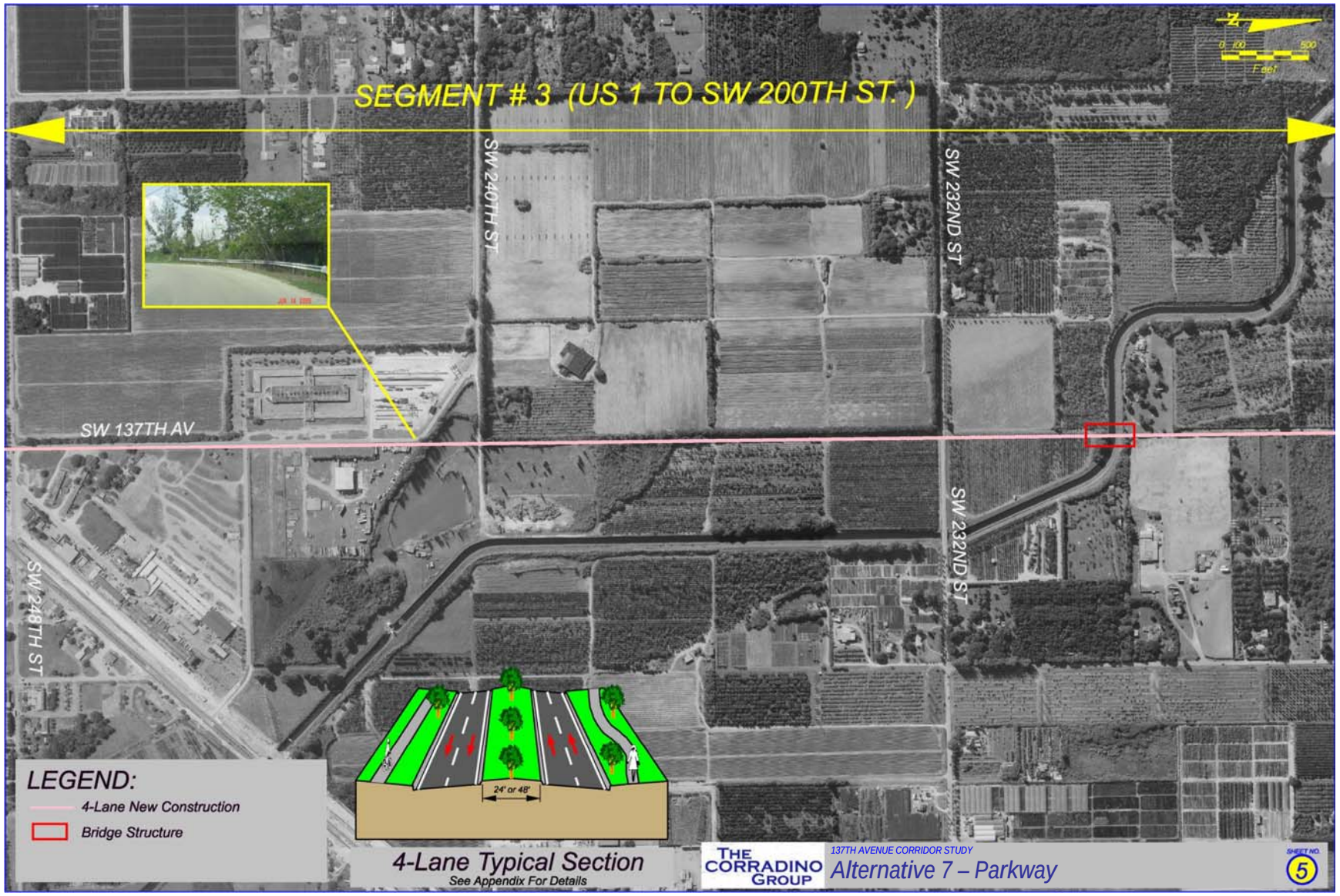

SEGMENT # 9 (US 41 TO SR 836 )
(This area is currently under construction by the MDX Authority)
(SR 836 Extension)
STUDY LIMITS
SR 836
NW 137TH AV
No Improvements Recommended
NW 12TH ST
SR 836
N
100
500
Feet
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 6 – High-flow Arterial
SHEET NO.
16

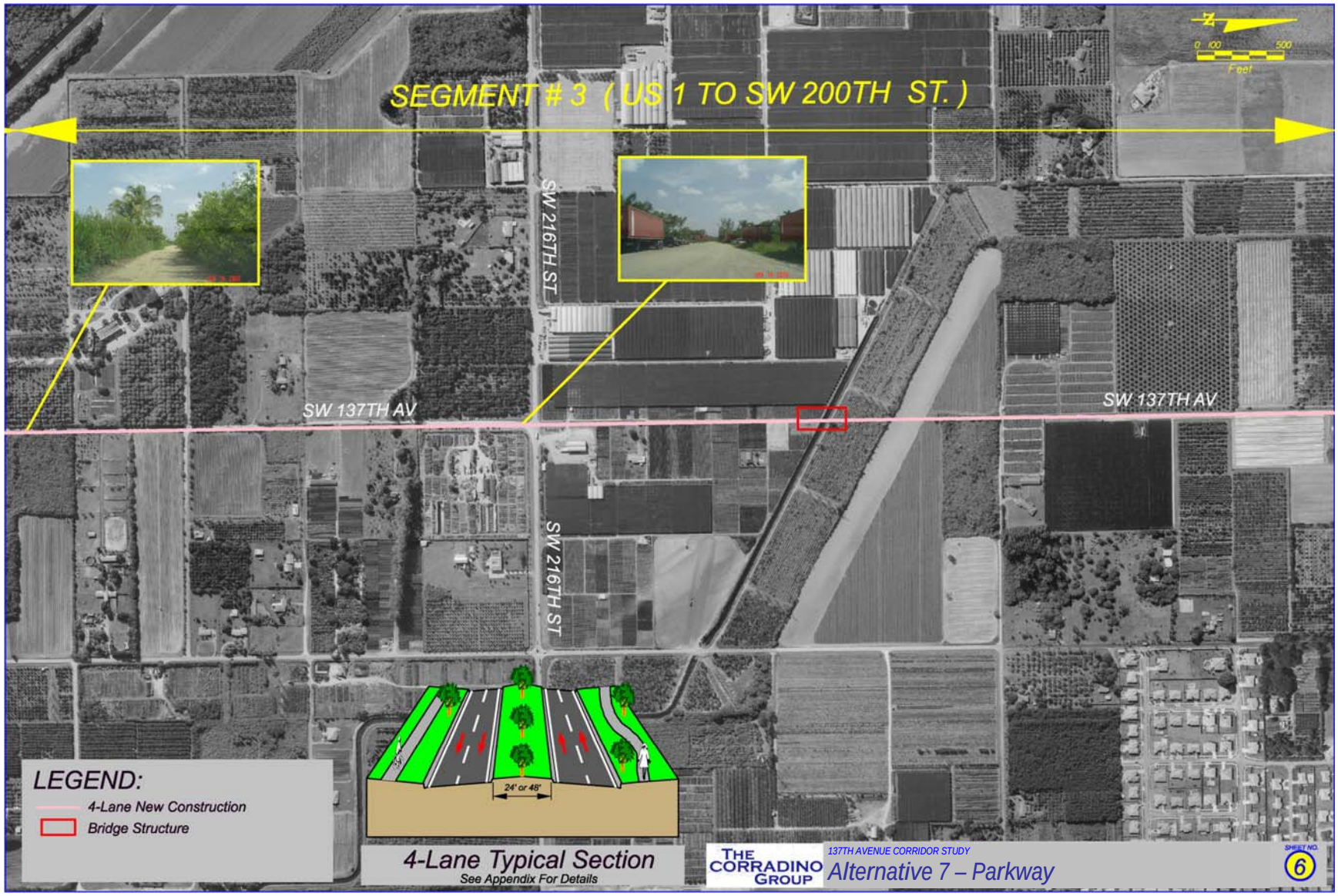

SEGMENT # 1 (SW 344TH ST TO FLORIDA'S TURNPIKE )
STUDY LIMITS
SW 344TH ST.
SW 320TH ST
SW 137TH AV
No Improvements Recommended
SW 328TH ST
SW 320TH ST
0 100 500
Feet
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Phase #1 - Parkway
SHEET NO.
1

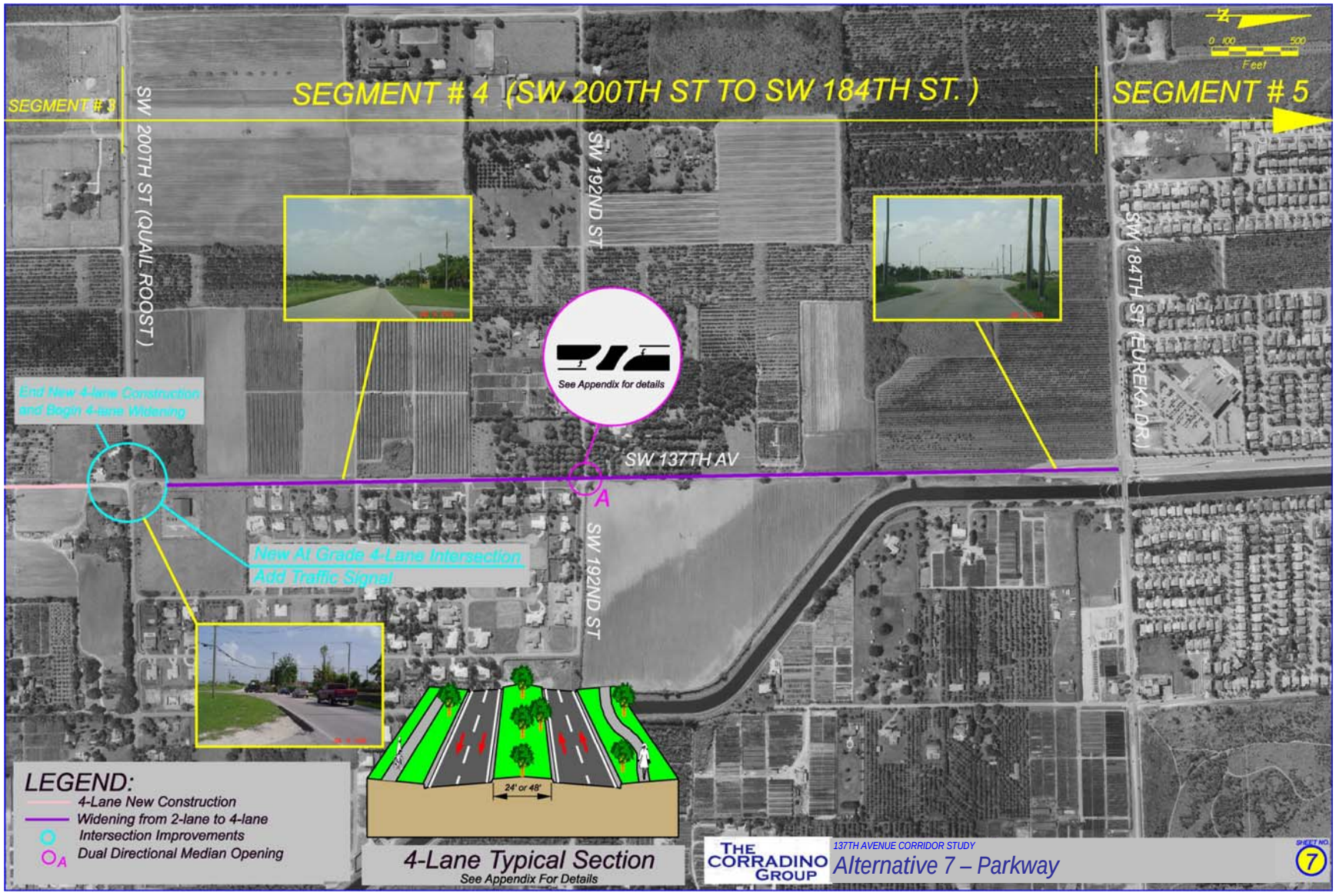

SEGMENT # 1 ( SW 344TH ST TO FLORIDA'S TURNPIKE )
SW 312TH ST
SW 137TH AV
No Improvements Recommended
SW 312TH ST
0 100 500
Feet
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 7 – Parkway
SHEET NO.
2

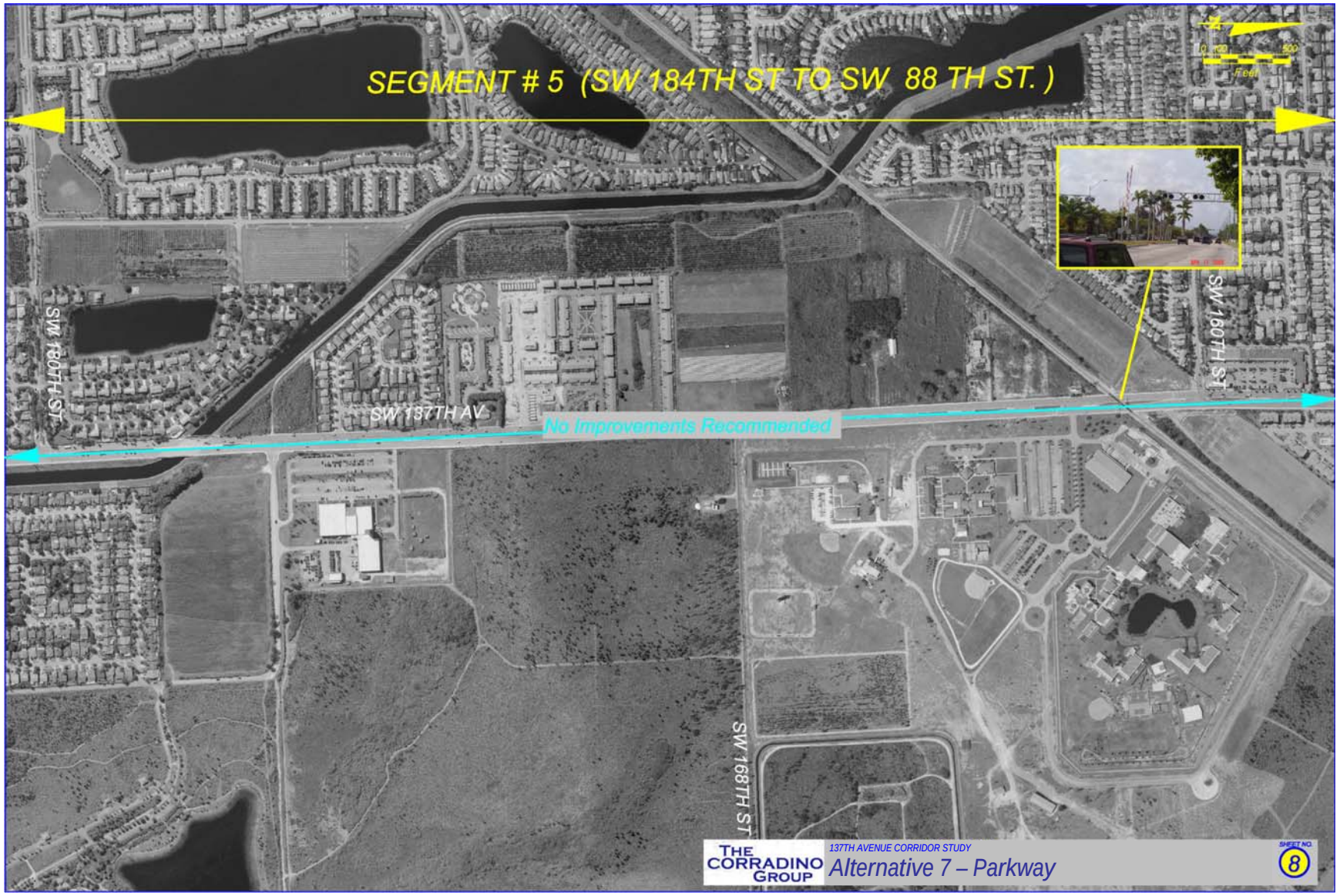

SEGMENT # 1 (SW 344TH ST TO FLORIDA'S TURNPIKE )
SEGMENT # 2
Intersection Improvements
- Add Northbound Dual
Left-turn Lanes
Intersection Improvement
- Extend Northbound Storage Lane
Intersection Improvements
- Add Northbound Acceleration Lane
- Add Westbound Dual Left-turn Lanes
SW 137TH AV
SW 288TH ST (BISCAYNE)
FLORIDA'S TURNPIKE (SR-821)
24' or 48'
LEGEND:
Widening from 2-lane to 4-lane
Intersection Improvements
New Turn Lanes
4-Lane Typical Section
See Appendix For Details
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 7 – Parkway
SHEET NO.
3

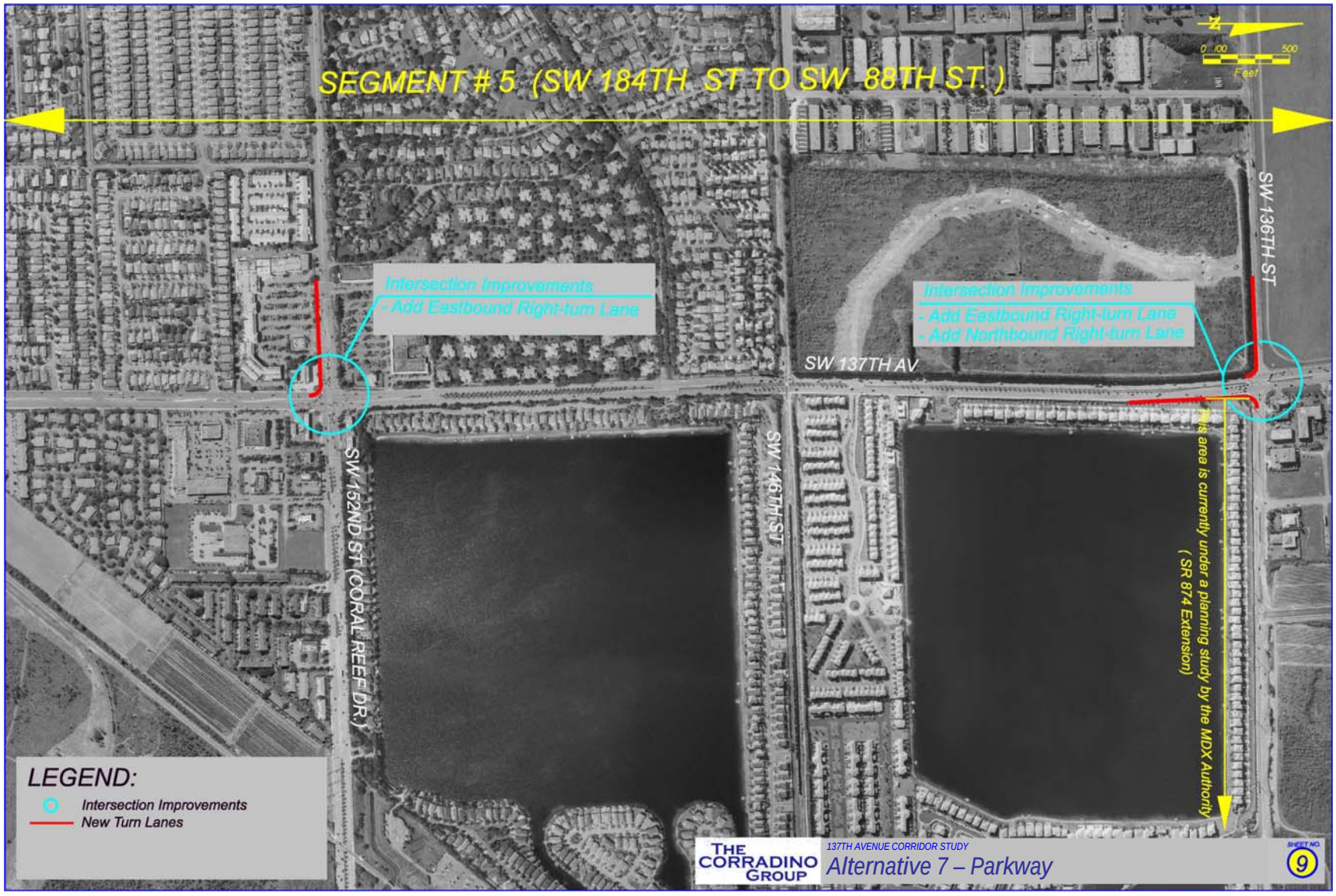

SEGMENT # 2 (FLORIDA'S TURNPIKE TO US 1 )
SEGMENT # 3
SW 264TH ST
SW 268TH ST
US 1 (S DIXIE HWY)
SW 137TH AV
SW 134TH AV
New 4-Lane At Grade Intersection
End 4-lane Widening And Begin New 4-lane Construction
0 100 500
Feet
LEGEND:
Widening from 2-lane to 4-lane
Intersection Improvements
4-Lane New Construction
24' or 48'
4-Lane Typical Section
See Appendix For Details
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 7 – Parkway
SHEET NO.
4


SEGMENT # 3 (US 1 TO SW 200TH ST. )
SW 240TH ST
SW 232ND ST
SW 137TH AV
SW 248TH ST
SW 232ND ST
LEGEND:
4-Lane New Construction
Bridge Structure
24' or 48'
4-Lane Typical Section
See Appendix For Details
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 7 – Parkway
SHEET NO.
5


SEGMENT # 3 ( US 1 TO SW 200TH ST. )
SW 216TH ST
SW 137TH AV
SW 137TH AV
SW 216TH ST
0 100 500
Feet
LEGEND:
4-Lane New Construction
Bridge Structure
24' or 48'
4-Lane Typical Section
See Appendix For Details
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 7 – Parkway
SHEET NO.
6

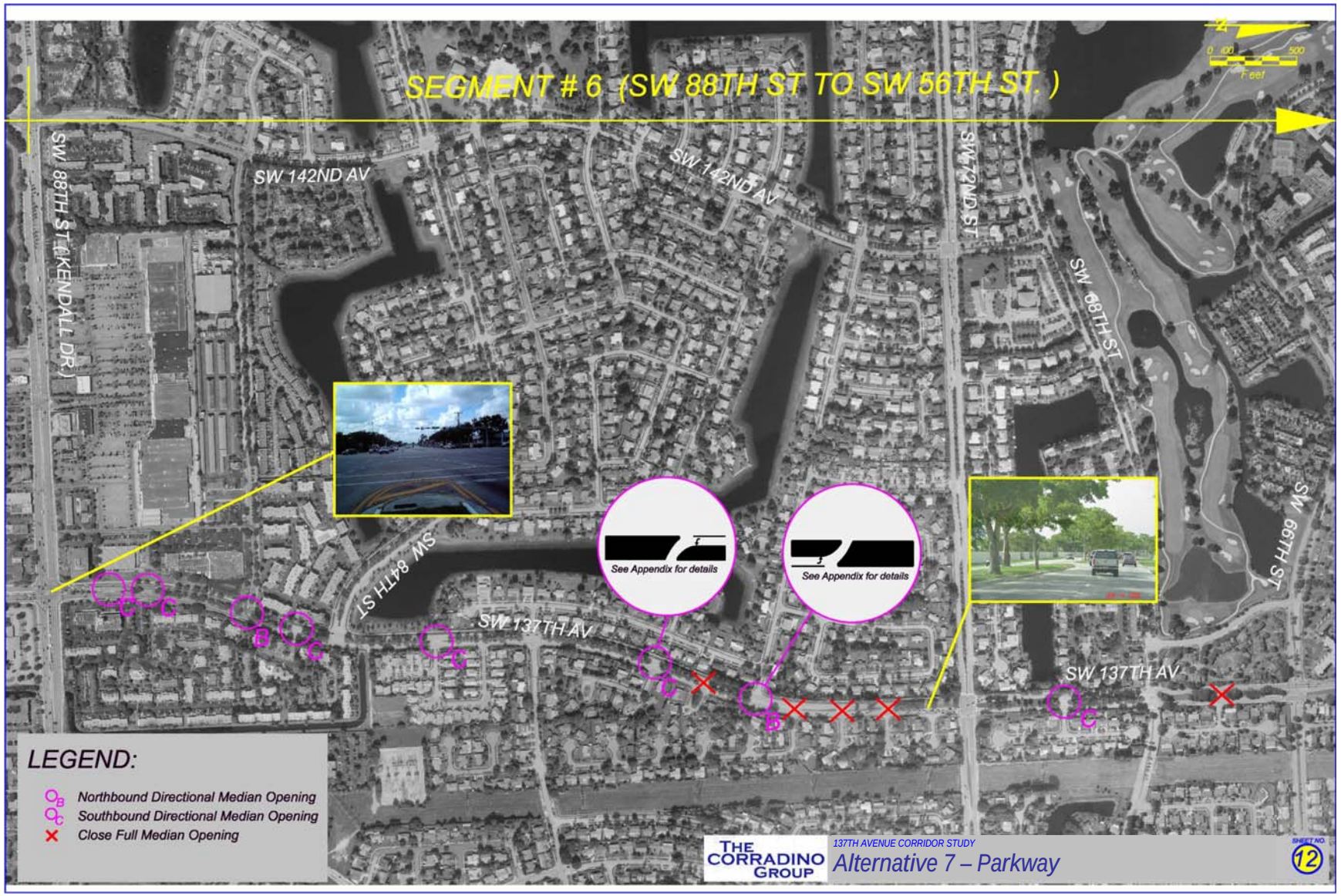

SEGMENT # 3
SEGMENT # 4 (SW 200TH ST TO SW 184TH ST. )
SEGMENT # 5
SW 200TH ST (QUAIL ROOST )
SW 192ND ST
SW 184TH ST (EUREKA DR. )
SW 137TH AV
See Appendix for details
End New 4-lane Construction and Begin 4-lane Widening
New At Grade 4-Lane Intersection Add Traffic Signal
A
0 100 500
Feet
LEGEND:
4-Lane New Construction
Widening from 2-lane to 4-lane
Intersection Improvements
Dual Directional Median Opening
24' or 48'
4-Lane Typical Section
See Appendix For Details
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 7 – Parkway
SHEET NO.
7

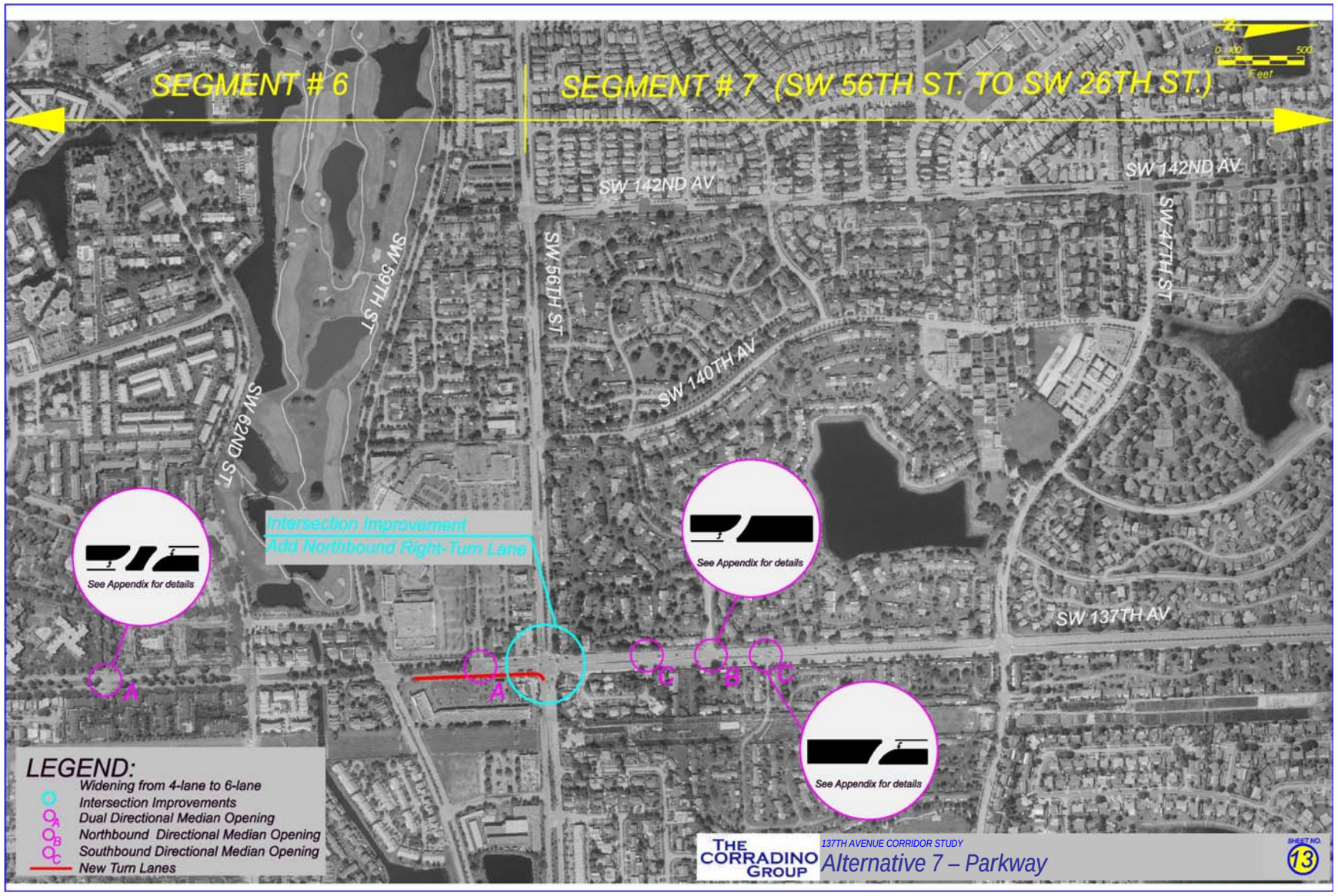

SEGMENT # 5 (SW 184TH ST TO SW 88 TH ST. )
SW 180TH ST
SW 137TH AV
No Improvements Recommended
SW 160TH ST
SW 168TH ST
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 7 – Parkway
SHEET NO.
8

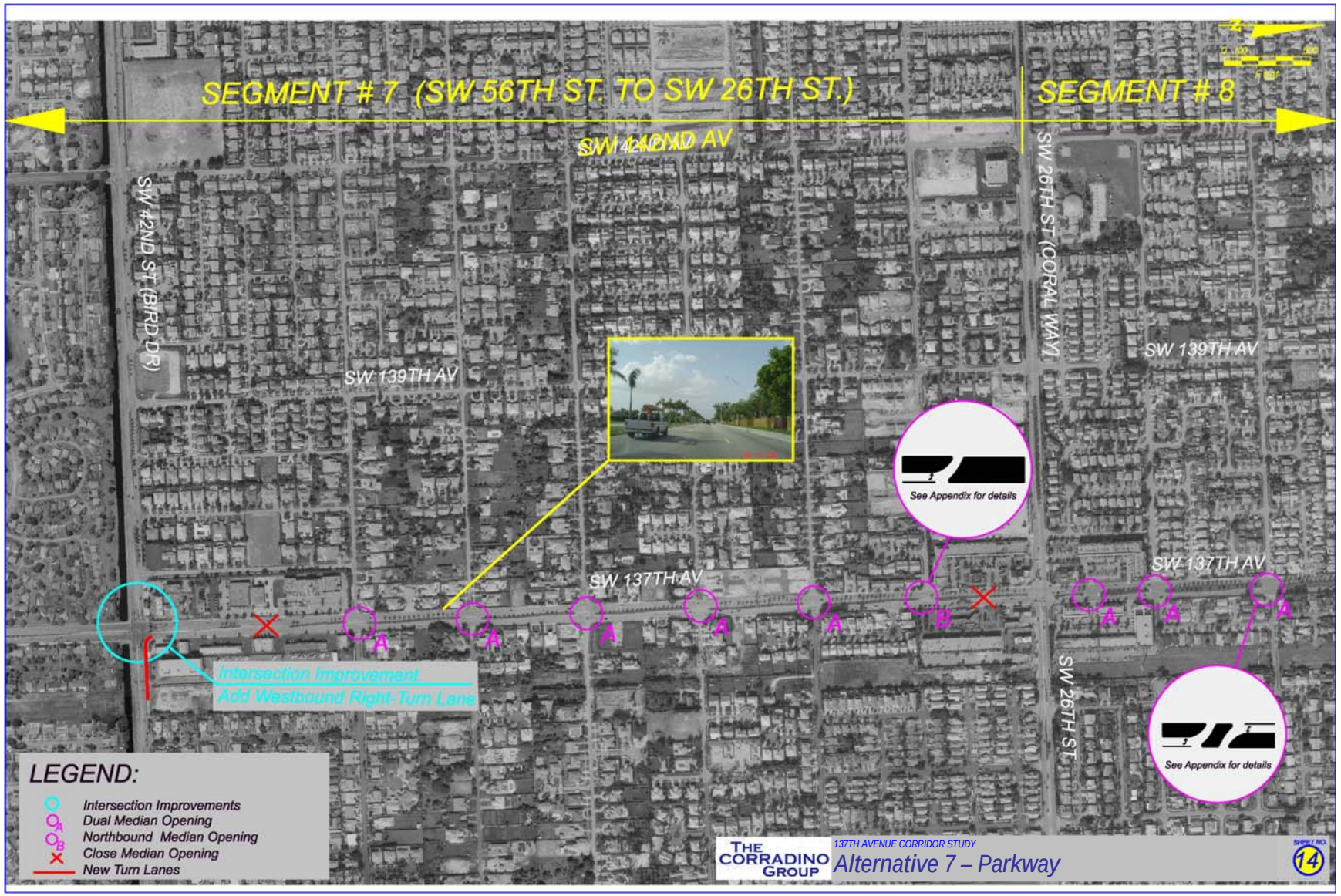

SEGMENT # 5 (SW 184TH ST TO SW 88TH ST.)
N
0 100 500
Feet
SW 136TH ST
Intersection Improvements
- Add Eastbound Right-turn Lane
Intersection Improvements
- Add Eastbound Right-turn Lane
- Add Northbound Right-turn Lane
SW 137TH AV
SW 152ND ST (CORAL REEF DR.)
SW 146TH ST
This area is currently under a planning study by the MDX Authority
( SR 874 Extension)
LEGEND:
Intersection Improvements
New Turn Lanes
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 7 – Parkway
SHEET NO.
9

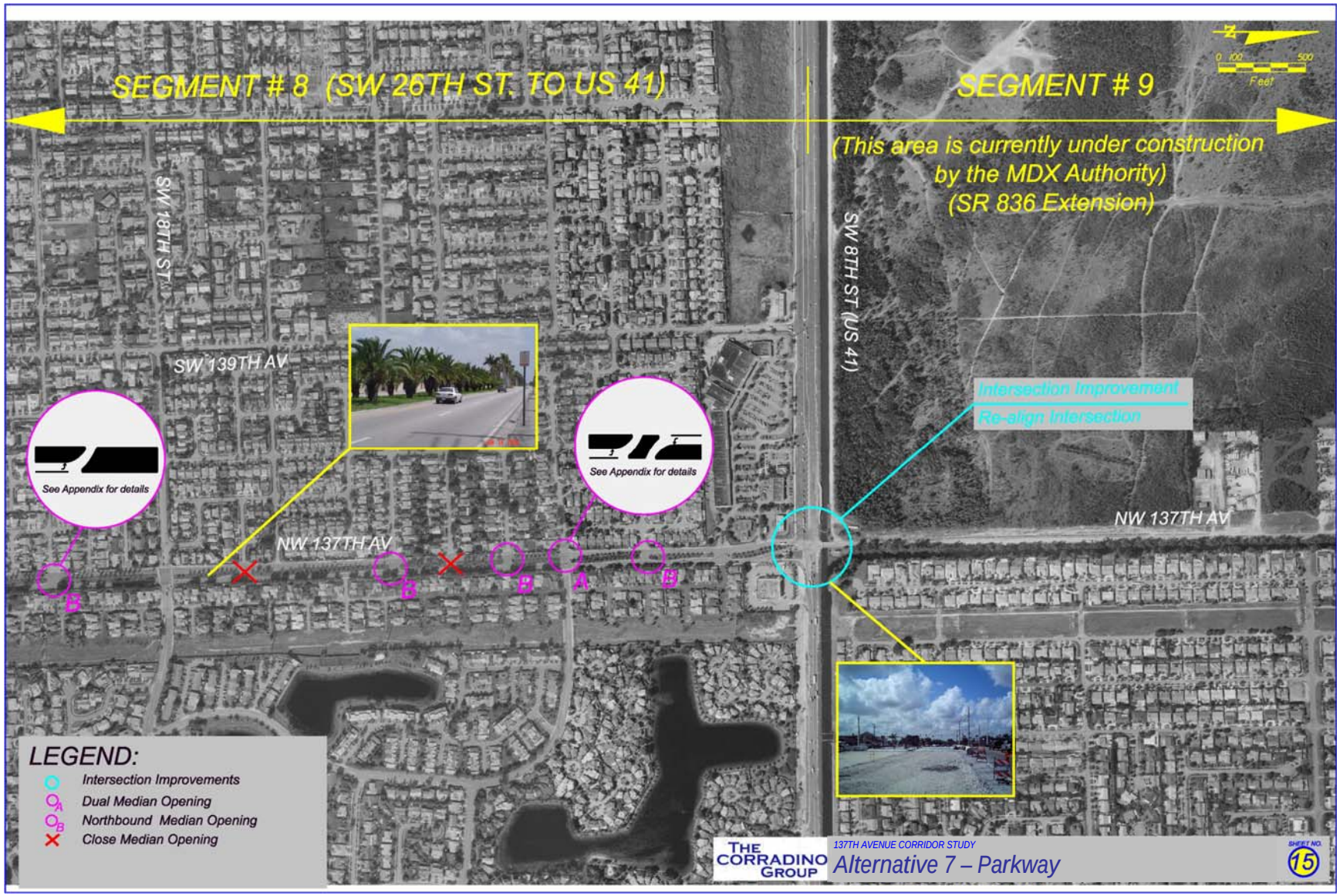

SEGMENT # 5 ( SW 184TH ST TO SW 88TH ST. )
SW 120TH ST
SW 112TH ST
SW 128TH ST
SW 137TH AV
Intersection Improvements
-Add Northbound Right-turn Lane
-Add Southbound Right-turn Lane
LEGEND:
Intersection Improvements
New Turn Lanes
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 7 – Parkway
10


SEGMENT # 5 (SW 184TH ST TO SW 88TH ST.)
SW 142ND AV
SW 104TH ST (SR 990)
SW 142ND AV
SW 96TH ST
SW 137TH AV
No Improvements Recommended
SW 104TH ST
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 7 – Parkway
SHEET NO.
11


SEGMENT # 6 (SW 88TH ST TO SW 56TH ST. )
SW 88TH ST (KENDALL DR.)
SW 142ND AV
SW 142ND AV
SW 72ND ST
SW 68TH ST
SW 84TH ST
SW 137TH AV
SW 137TH AV
SW 69TH ST
See Appendix for details
See Appendix for details
LEGEND:
Northbound Directional Median Opening
Southbound Directional Median Opening
Close Full Median Opening
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 7 – Parkway
12


SEGMENT # 6
SEGMENT # 7 (SW 56TH ST. TO SW 26TH ST.)
0 250 500
Feet
SW 142ND AV
SW 142ND AV
SW 59TH ST
SW 56TH ST
SW 47TH ST
SW 140TH AV
SW 62ND ST
SW 137TH AV
Intersection Improvement
Add Northbound Right-Turn Lane
See Appendix for details
See Appendix for details
See Appendix for details
A
A
C
B
C
LEGEND:
Widening from 4-lane to 6-lane
Intersection Improvements
Dual Directional Median Opening
Northbound Directional Median Opening
Southbound Directional Median Opening
New Turn Lanes
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 7 – Parkway
SHEET NO.
13


SEGMENT # 7 (SW 56TH ST. TO SW 26TH ST.)
SEGMENT # 8
SW 142ND AV
SW 42ND ST (BIRD DR)
SW 139TH AV
SW 26TH ST (CORAL WAY)
SW 139TH AV
SW 137TH AV
SW 137TH AV
SW 26TH ST
See Appendix for details
See Appendix for details
Intersection Improvement
Add Westbound Right-Turn Lane
LEGEND:
Intersection Improvements
Dual Median Opening
Northbound Median Opening
Close Median Opening
New Turn Lanes
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 7 – Parkway
SHEET NO.
14


SEGMENT # 8 (SW 26TH ST. TO US 41)
SEGMENT # 9
(This area is currently under construction by the MDX Authority)
(SR 836 Extension)
SW 18TH ST
SW 139TH AV
SW 8TH ST (US 41)
NW 137TH AV
NW 137TH AV
Intersection Improvement
Re-align Intersection
See Appendix for details
See Appendix for details
B
B
B
A
B
LEGEND:
Intersection Improvements
Dual Median Opening
Northbound Median Opening
Close Median Opening
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 7 – Parkway
15


SEGMENT # 9 (US 41 TO SR 836 )
(This area is currently under construction by the MDX Authority)
(SR 836 Extension)
STUDY LIMITS
SR 836
NW 137TH AV
No Improvements Recommended
NW 12TH ST
SR 836
THE CORRADINO GROUP
137TH AVENUE CORRIDOR STUDY
Alternative 7 – Parkway
SHEET NO.
16

# DIRECTIONAL MEDIAN OPENING DETAILS



A - DUAL DIRECTIONAL MEDIAN OPENING

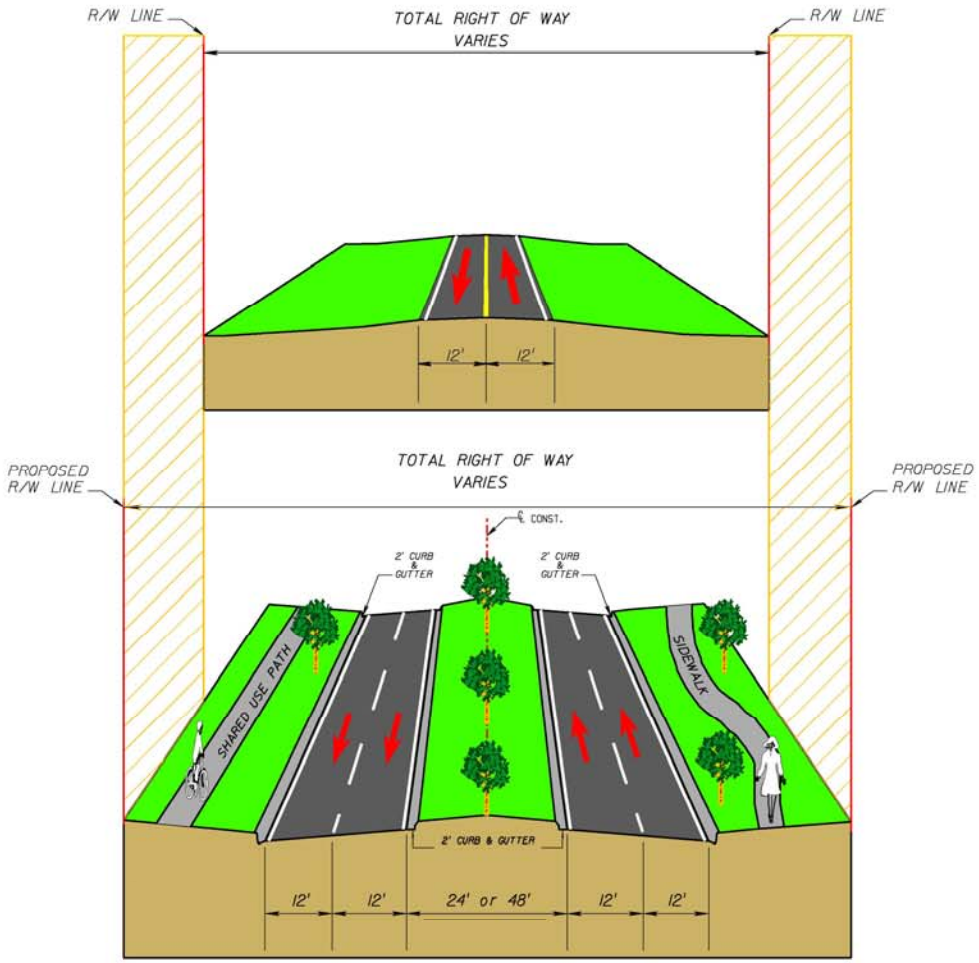


B - NORTHBOUND DIRECTIONAL MEDIAN OPENING



C- SOUTHBOUND DIRECTIONAL MEDIAN OPENING

| REVISIONS | | | | | THE CORRADINO GROUP | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | 137TH AVENUE DIRECTIONAL MEDIAN OPENING DETAILS | SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|---|
| DATE | BY | DESCRIPTION | DATE | DESCRIPTION | 5200 NW 33rd Ave. Suite 203<br>Ft. Lauderdale, FL 33309<br>Ph : (954) 777-0044 Fax : (954) 777-5157 | ROAD NO. | COUNTY | | | A-1 |
| | | PRELIMINARY COPY SUBJECT TO CHANGE | 8/2/2006 | 137TH AVENUE STUDY | | 137TH | MIAMI-DADE | | | |




| REVISIONS | | | | | |
|---|---|---|---|---|---|
| DATE | BY | DESCRIPTION | DATE | DESCRIPTION | |
| | | PRELIMINARY COPY SUBJECT TO CHANGE | 8/2/2006 | 137TH AVENUE STUDY | |

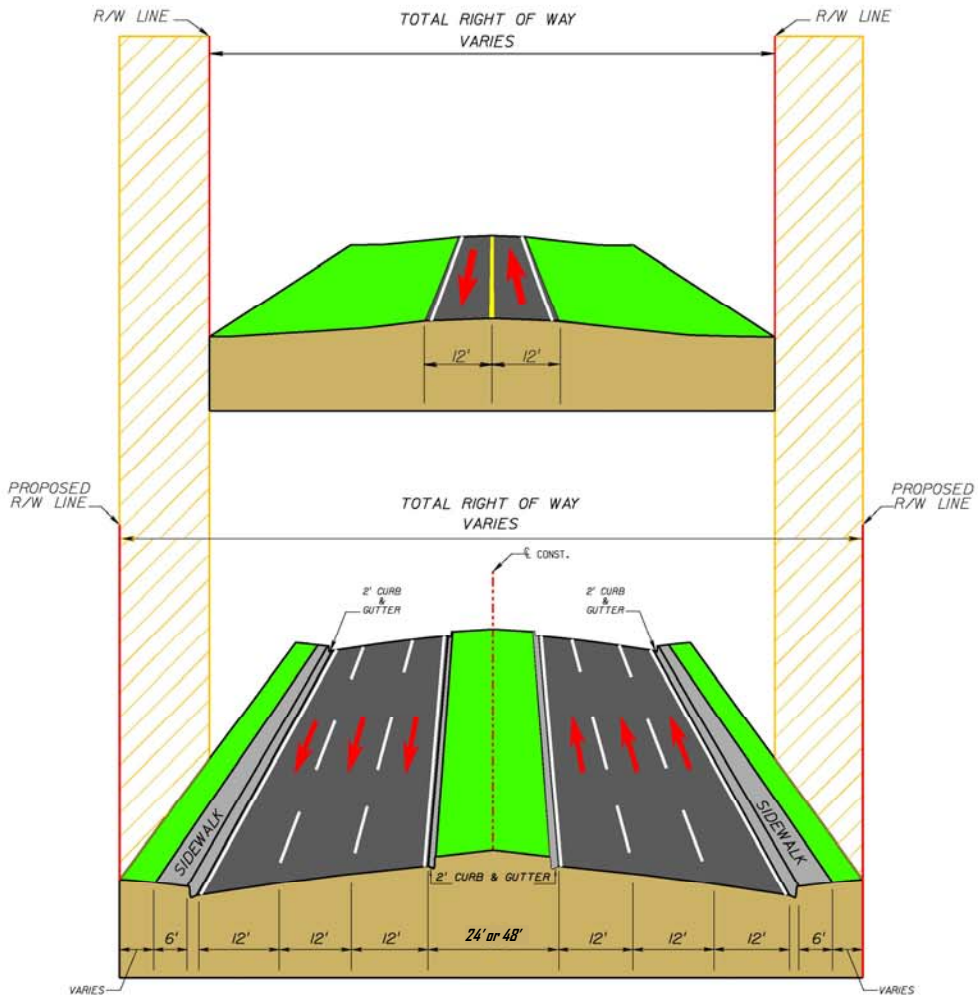
THE CORRADINO GROUP
5200 NW 33rd Ave. Suite 203
Ft. Lauderdale, FL 33309
Ph : (954) 777-0044 Fax : (954) 777-5157

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | |
|---|---|---|
| 137TH | MIAMI-DADE | |

**137TH AVENUE WIDENING FROM 2 - LANE TO 4 - LANE TYPICAL SECTION**

SHEET NO. A-2




| REVISIONS | | | | | |
|---|---|---|---|---|---|
| DATE | BY | DESCRIPTION | DATE | DESCRIPTION | |
| | | PRELIMINARY COPY SUBJECT TO CHANGE | 8/2/2006 | 137TH AVENUE STUDY | |

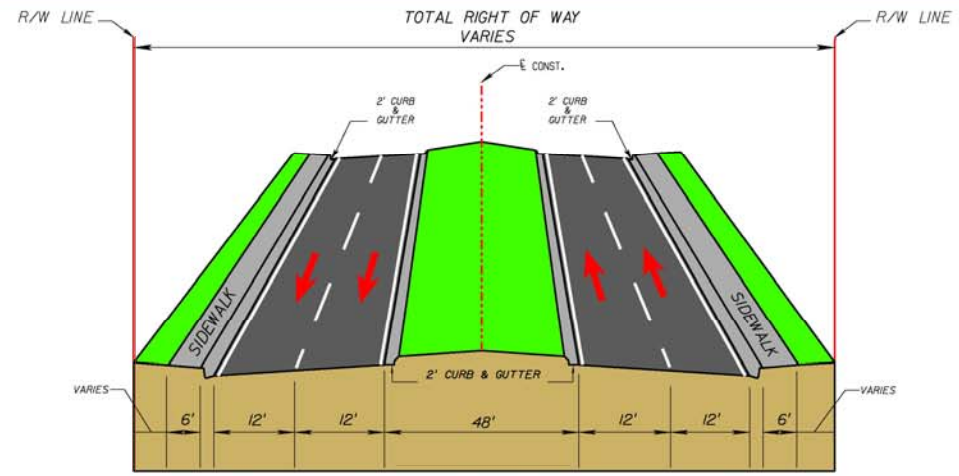
THE CORRADINO GROUP
5200 NW 33rd Ave. Suite 203
Ft. Lauderdale, FL 33309
Ph : (954) 777-0044 Fax : (954) 777-5157

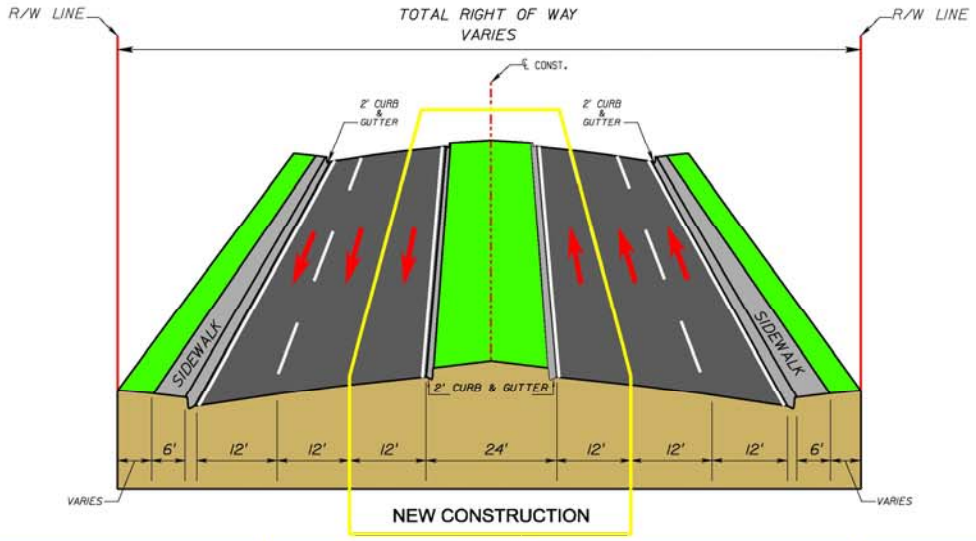
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | |
|---|---|---|
| 137TH | MIAMI-DADE | |

**137TH AVENUE WIDENING FROM 2 - LANE TO 6 - LANE TYPICAL SECTION**

SHEET NO. A-3




| REVISIONS | | | | | |
|---|---|---|---|---|---|
| DATE | BY | DESCRIPTION | DATE | DESCRIPTION | |
| | | PRELIMINARY COPY SUBJECT TO CHANGE | 8/2/2006 | 137TH AVENUE STUDY | |

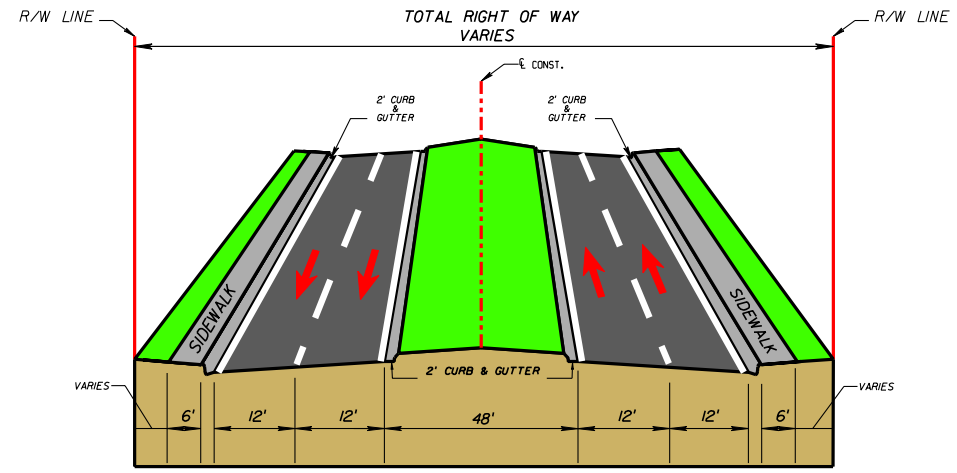
THE CORRADINO GROUP
5200 NW 33rd Ave. Suite 203
Ft. Lauderdale, FL 33309
Ph : (954) 777-0044 Fax : (954) 777-5157

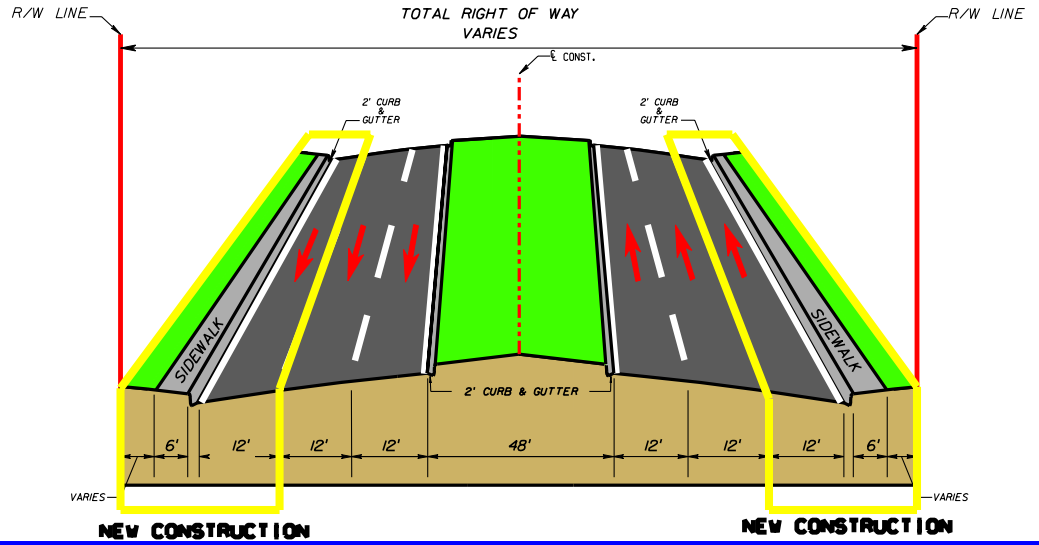
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | |
|---|---|---|
| 137TH | MIAMI-DADE | |

**137TH AVENUE WIDENING FROM 4 - LANE TO 6 - LANE TYPICAL SECTION**

SHEET NO. A-4




| REVISIONS | | | | | | | |
|---|---|---|---|---|---|---|---|
| DATE | BY | DESCRIPTION | DATE | DESCRIPTION | | | |
| | | PRELIMINARY COPY SUBJECT TO CHANGE | 8/2/2006 | 137TH AVENUE STUDY | | | |

5200 NW 33RD AVE. SUITE 203
FT. LAUDERDALE, FL 33309
PH :(954)777-0044 FAX :(954)777-5157

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

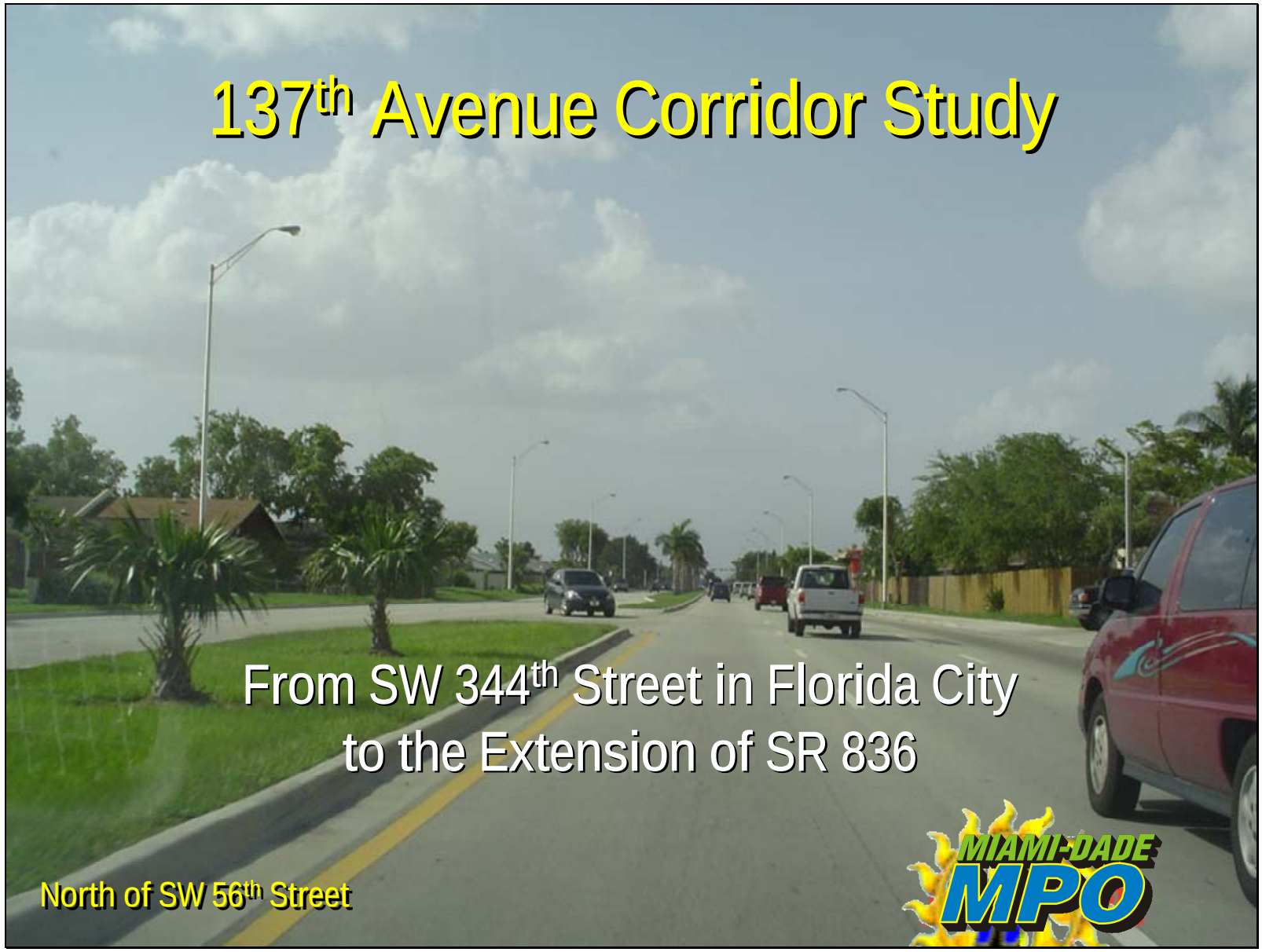
| ROAD NO. | COUNTY | |
|---|---|---|
| 137TH | MIAMI-DADE | |

**137TH AVENUE WIDENING FROM 4 - LANE TO 6 - LANE TYPICAL SECTION**

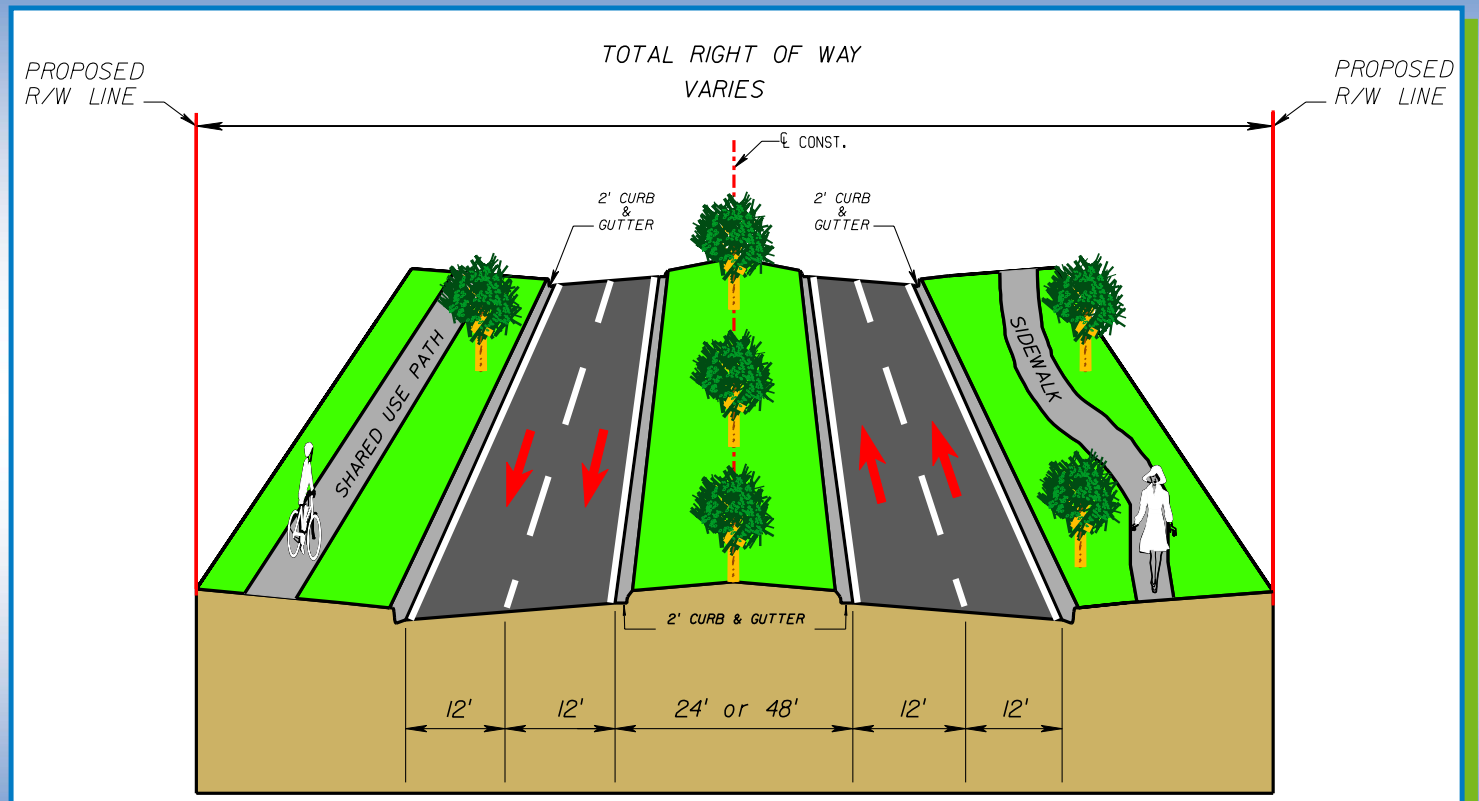
SHEET NO. A-4

# Appendix D

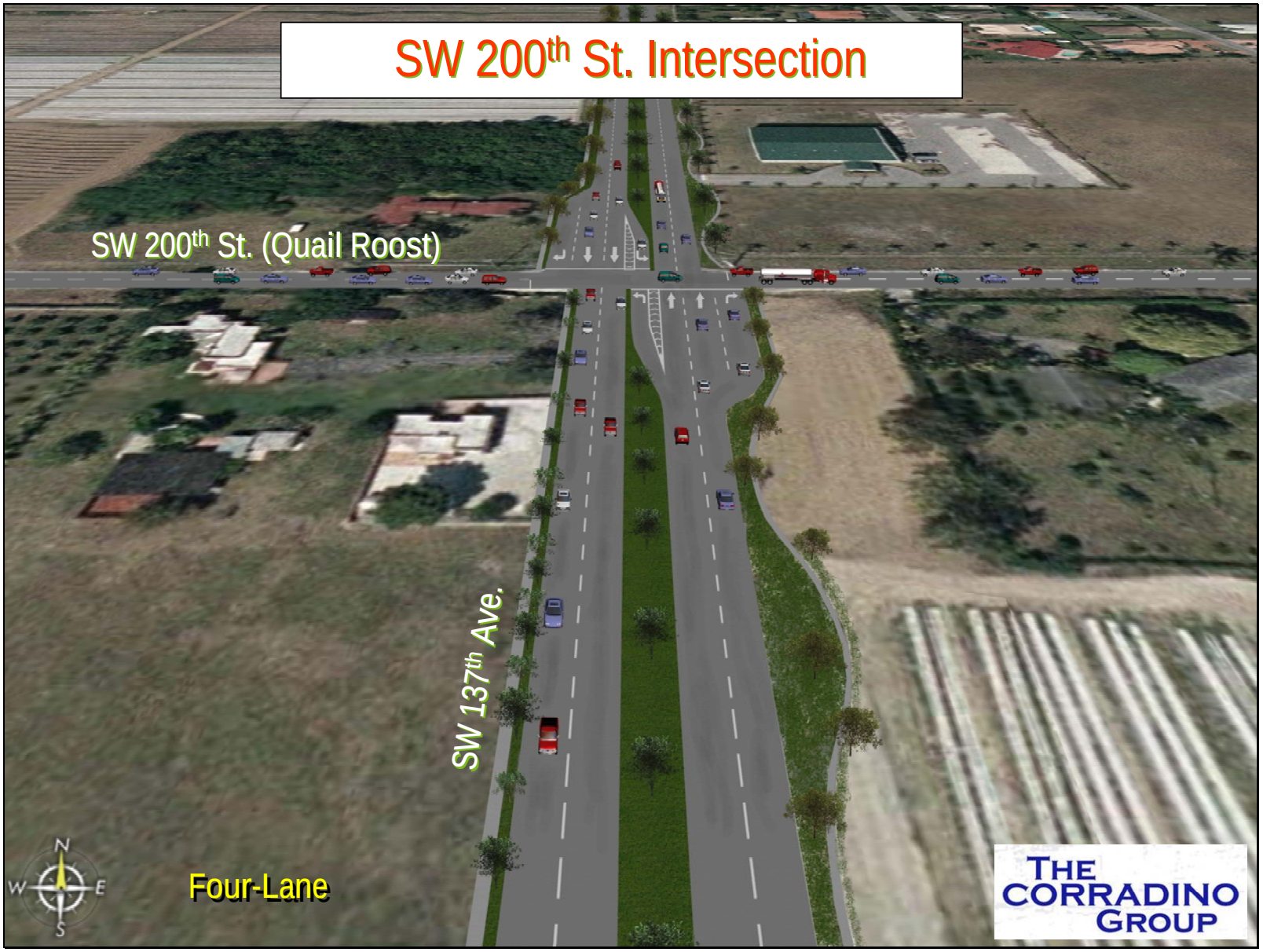
## PowerPoint Presentation with Before and After Renderings


137th Avenue Corridor Study
From SW 344th Street in Florida City
to the Extension of SR 836
North of SW 56th Street
MIAMI-DADE
MPO

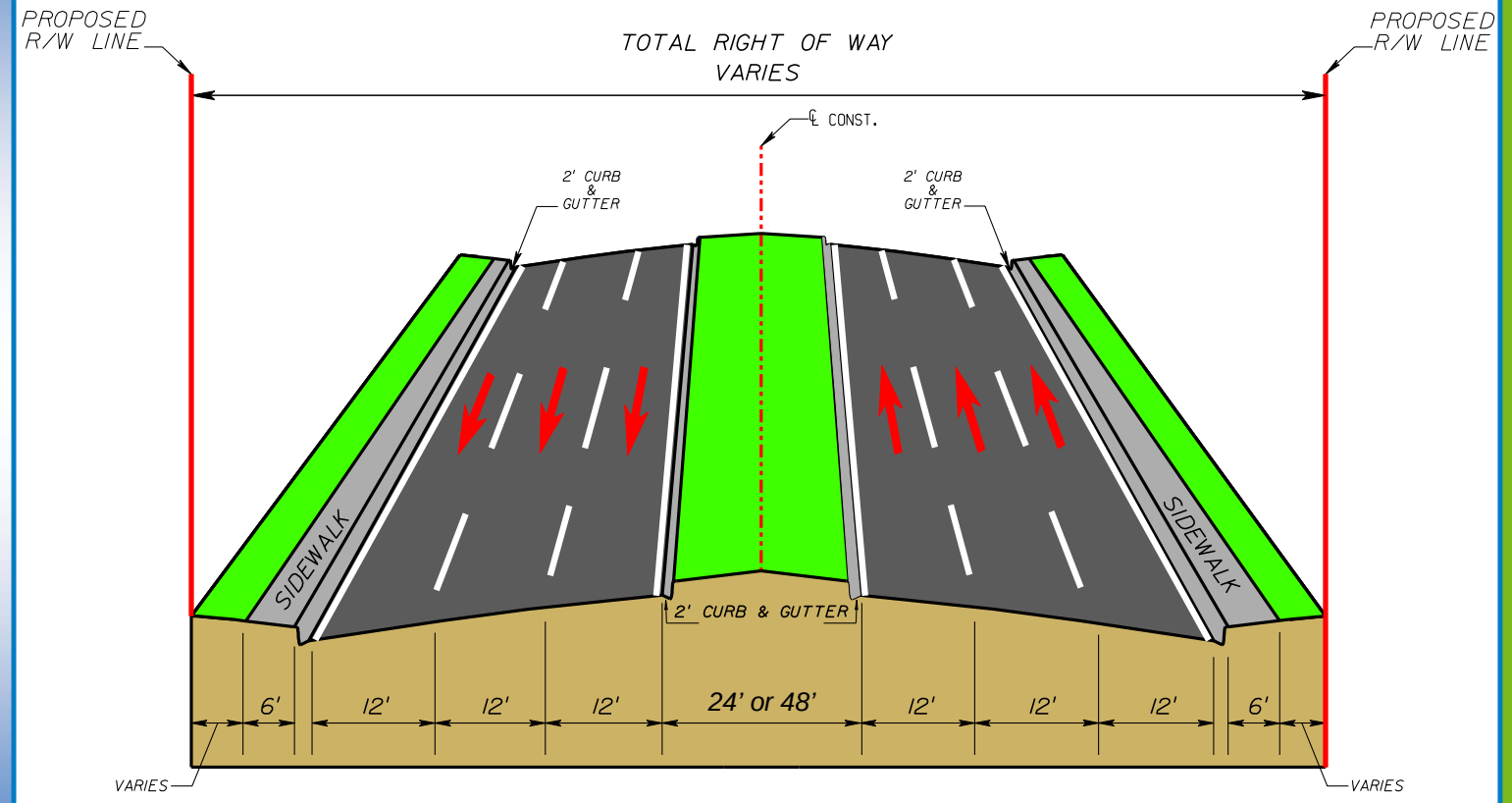
# Four-Lane
# Parkway Facility (Boulevard with CSD)




SW 200th St. Intersection
SW 200th St. (Quail Roost)
SW 137th Ave.
N
W
E
S
2007 Existing Conditions
THE CORRADINO GROUP


SW 200th St. Intersection
SW 200th St. (Quail Roost)
SW 137th Ave.
N
W
E
S
Four-Lane
THE CORRADINO GROUP

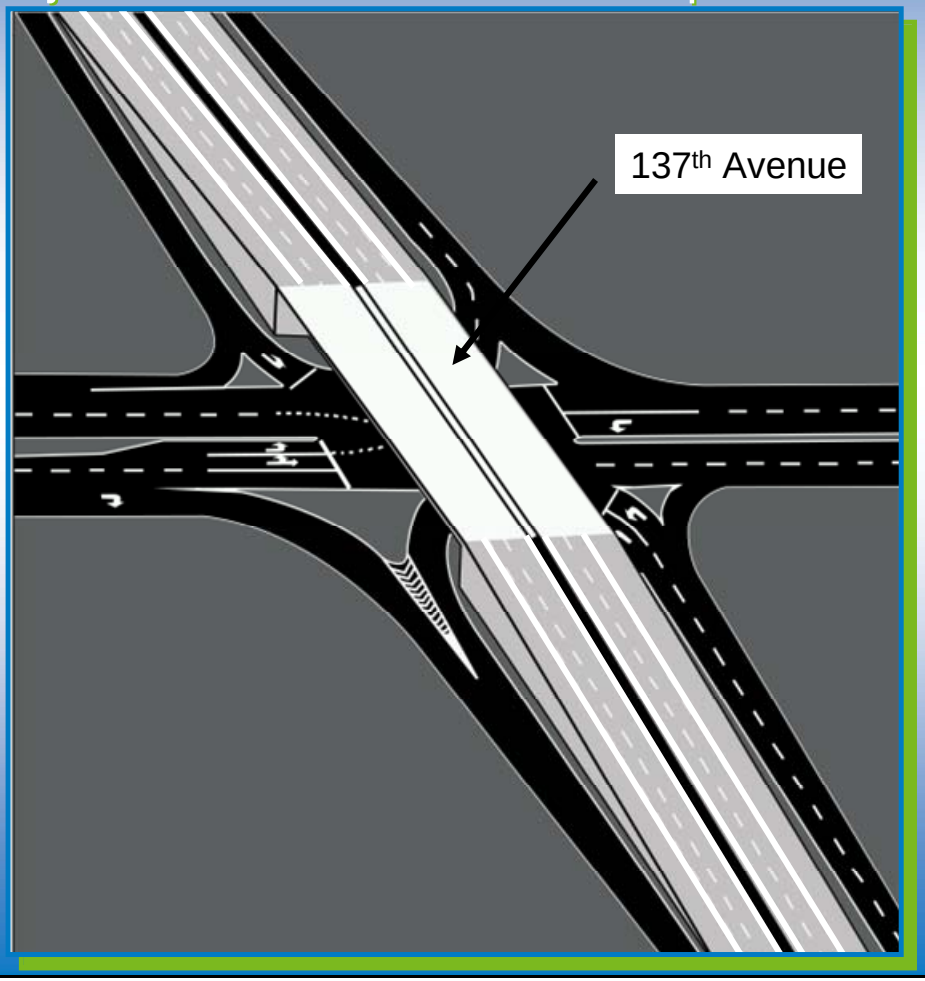
# Six-Lane
# Major North-South Corridor




North of SW 88th St. (Kendall Dr.)
SW 137th Ave.
2007 Existing Conditions
THE CORRADINO GROUP


North of SW 88th St. (Kendall Dr.)
SW 137th Ave.
Six-Lane
THE CORRADINO GROUP

# Six-Lane & Grade Separation
# High-Flow Arterial Facility
# (Major North-South Urban Principal Arterial)




MIAMI-DADE MPO


SW 88th St. Intersection
SW 137th Ave.
W
S
N
E
2007 Existing Conditions


SW 88th St. Intersection
SW 137th Ave.
Four-Lane Grade Separation
Looking West


SW 88th St. Intersection
SW 137th Ave.
N
W
E
S
Four-Lane Grade Separation
Looking North

# Appendix E

## Kendall Corridor Study
## 137th Avenue BRT Alternative

# Alternative D1 - SW 137th Avenue Corridor

## Bus Rapid Transit (BRT)










### Projected ridership

| | D1-BRT |
|---|---|
| Daily Trips | 7,785 |

### Estimated operating and capital costs (millions)

| | D1-BRT |
|---|---|
| Operating costs | $6.5 |
| Capital costs | $407.9 |
| Capital cost per passenger mile | $41.99 |

### Service characteristics and community impacts

| | System Characteristics | | | Community Indicators | | |
|---|---|---|---|---|---|---|
| | Capital cost | Operations cost | Potential ridership | Interaction with auto traffic | Noise and vibration | Potential land requirement |
| D1 - BRT | | | | | | |

High: Medium: Low:

### Travel Times

| Station | D1-BRT |
|---|---|
| Distance and travel time from SW 152ND Street / SW 117th Avenue Park and Ride | |
| • Cumulative Mileage | 0 |
| • Arrival time in minutes | — |
| Florida International University Metrorail Station | |
| • Cumulative Mileage | 12.63 |
| • Arrival time in minutes | 40 min |
| Miami Intermodal Center/Miami International Airport | |
| • Cumulative Mileage | 22.88 |
| • Arrival time in minutes | 55-60 min |
| Government Center | |
| • Cumulative Mileage | 30.58 |
| • Arrival time in minutes | 70-75 min |

# 137th Avenue Corridor Study

## Executive Summary

The Miami-Dade County Metropolitan Planning Organization (MPO) is evaluating roadway and safety improvement alternatives along the 137th Avenue Corridor from SW 344th Street to the Extension of SR 836. The study area extends approximately twenty three (23) miles within Miami-Dade County, Florida. The project area is shown in Figure S-1. The proposed project is in the Planning phase in which preliminary planning and engineering studies are conducted.

Figure S-1
Project Location Map




Currently there are only three continuous north/south corridors between the Homestead/Florida City area and central Miami-Dade County:

- South Dixie Highway (US 1)
- Homestead Extension of Florida's Turnpike (HEFT) (SR 821)
- Krome Avenue (SR 997)

The primary purpose of this study is to examine the feasibility of making 137th Avenue the fourth north/south facility between Homestead and Central Miami-Dade.

## Planning Issues

The development of a fourth north-south corridor in Miami-Dade County in the 137th Avenue corridor will require sections of new road, roadway improvements, and widening to result in a functional, safe facility. Currently, the County's Comprehensive Development Master Plan (CDMP) shows 137th Avenue as a continuous six-lane facility from NW 12th Street to SW 184th Street and as a continuous four-lane facility from SW 184th Street so SW 344th Street. The Metropolitan Planning Organization (MPO) is ultimately responsible for planning transportation projects in Miami-Dade County. As part of their responsibilities, they produce several documents that identify projects to be implemented. The most immediate of these documents is the Transportation Improvement Program (TIP), which is a five-year, cost-feasible program of projects to be implemented. Table S-1 shows the projects listed in the TIP for 137th Avenue and/or other projects that would impact traffic along 137th Avenue.

Table S-1
TIP Projects Impacting Corridor

| MPO Project # | Facility | Limits | Project | Program Year |
|---|---|---|---|---|
| PS0000013 | NW 137th Avenue | NW 12th Street to NW 17th Street | New 4-lanes | NA* |
| PW20040343 | SW 137th Avenue | US 1 to SW 200th Street | New 2 lane road | 2009 |
| PS0000017 | SW 137th Avenue | SW 72nd Street to SW 88th Street | Widen 4 to 6 lanes | NA |
| PW20040344 | SW 137th Avenue | US 1 to HEFT | Widen 2 to 4 lanes | 2008 |
| PW671561 | SW 137th Avenue | SW 88th Street to SW 56th Street | Reconstruct and add curb and gutter | NA |
| XA83605 | SR 836 Extension | SW 137th Avenue to SW 107th Avenue | New 4-lane expressway extension | 2007 |
| PS0000114<br>PS0000124 | NW 17th Street | NW 127th Avenue to NW 137th Avenue | 2-lanes and ½ turn lane | NA |
| PW671508 | SW 104th Street | SW 147th Avenue to SW 137th Avenue | Widen 4 to 6 lanes | NA |
| PW000321 | SW 160th Street | SW 147th Avenue to SW 137th Avenue | New 4-lane road | 2007 |
| PW67152AB | SW 184th Street | SW 147th Avenue to SW 127th Avenue | Widen 2 to 4 lanes | NA |
| PW20040347 | SW 180th Street | SW 147th Avenue to SW 137th Avenue | Traffic operations improvements | 2007 |
| PW20040350 | SW 264th Street | SW 147th Avenue to SW 137th Avenue | Traffic operations improvements | 2007 |
| PW0000149 | SW 268th Street | SW 147th Avenue to SW 112th Avenue | Add exclusive turn lanes | NA |
| PW000515 | SW 328th Street | US 1 to SW 137th Avenue | Widen 2 to 4 lanes | NA |

*A construction year is not identified in the TIP.

The MPO is also responsible for producing the County's Long-Range Transportation Plan (LRTP), which is a twenty-year forecast of transportation projects to be built.

First adopted by the MPO Governing Board in November 1990, the 137th Avenue projects were first proposed in the Metro-Dade Transportation Plan and Priorities Long Range Element to the Year 2010. The Plan listed 137th Avenue from SW 184th Street to US 1 as a Priority II (1995-2000) project for roadway widening from two to six lanes. The four-lane widening of the 137th Avenue from US 1 to SW 312th Street was listed as a Priority III (2000-2005) project. The two 137th Avenue corridor projects have remained in the County's LRTP through all subsequent updates.

The most recent version of the LRTP had several projects related to 137th Avenue as shown in Table S-2.

Table S-2
LRTP Projects Impacting Corridor

| Facility | Segment | Project |
|---|---|---|
| **Priority I** | | |
| NW 137th Avenue | NW 12th to NW 17th Street | New 4-lane |
| NW 137th Avenue | NW 12th to SW 8th Street | New 6-lane (construction complete Fall 2006) |
| SW 137th Avenue | SW 8th to SW 26th Street | Widen 4 to 6 lanes |
| SW 120th Street | SW 137th Avenue to SW 117 th Avenue | Widen 4 to 6 lanes |
| **Priority II** | | |
| SW 137th Avenue | SW 120th to 128th Street | ITS (CCTV, Roadway sensors, arterial dynamic message signs, wireless comm.) |
| SW 137th Avenue | SW 200th Street to US 1 | Widen 2 to 4 lanes |
| SW 120th Street | SW 147th Avenue to SW 137 th Avenue | Widen 2 to 4 lanes |

In May 2005, the MPO amended the Long-Range Transportation Plan to include the 137th Avenue projects listed below:

- The extension of SW 137th Avenue from US 1 to SW 200th Street as two-lane roadway in Priority I (2005-2009) of the LRTP.
- Widen SW 137th Avenue from US 1 to the Homestead Extension of the Florida's Turnpike (HEFT) from two-lane to a four-lane roadway in Priority I (2005-2009) of the LRTP.
- Widen the extension of SW 137th Avenue from US 1 to SW 200th Street from two-lane to a four lane roadway in Priority III (2015-2020) of the LRTP.

## Urban Development Boundary

One portion of the 137th Avenue alignment forms the Urban Development Boundary (UDB) between SW 184th Street and SW 200th Street. The portion of the corridor from SW 200th Street to just north of US 1 lies outside of the UDB.

- Policy 2B of the land use element of the Miami-Dade CDMP states Priority in the provision of services and facilities and the allocation of financial resources for services and facilities in the County shall be given first to serve the areas within the UDB of the Land Use Plan (LUP) map. Second priority shall support the staged development of the Urban Expansion Area (UEA). Urban services and facilities which support and encourage urban development in Agricultural and Open Land areas shall be avoided, except for those improvements necessary to protect public health and safety and which service the localized needs of these non-urban areas.

Given that, it will be necessary to review the project within the context of the UDB and existing zoning and development.

## Traffic Volumes

Currently, 137th Avenue functions very much like a suburban arterial. There are no obvious origins or destinations along the arterial and trips are made along the street to distribute to other major east-west arterials. As is evident in Table S-3, traffic volumes rise and fall as they approach major east/west cross streets. The high 24-hour north/south volumes on 137th Avenue are the highest closest to the major east-west arterials such as Kendall Drive, SW 56th Street and US 41 indicating that 137th Avenue is feeding the east/west arterials.

Table S-3
2005 Traffic Volumes*

| | 24 Hour Volumes | | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|---|---|
| **137th Avenue** | **SB** | **NB** | **SB** | **NB** | **SB** | **NB** |
| Coral Way | 20,081 | 20,407 | 744 | 1926 | 1836 | 1116 |
| Bird Road | 18908 | 18695 | 781 | 1553 | 1644 | 1063 |
| SW 56th Street | 20363 | 20777 | 818 | 1571 | 1613 | 1250 |
| SW 72nd Street | 16360 | 16783 | 1160 | 1321 | 1269 | 1311 |
| Kendall Drive | 21300 | 23813 | 1259 | 1227 | 1421 | 1531 |
| SW 104th Street | 21944 | 21763 | 1495 | 1496 | 1353 | 1409 |
| SW 152nd Street | 24665 | 23858 | 879 | 1992 | 1990 | 1174 |
| SW 288th Street | 9542 | 8516 | 780 | 665 | 742 | 664 |
| **Cross Streets** | **WB** | **EB** | **WB** | **EB** | **WB** | **EB** |
| US 41 | 22000 | 20500 | n/a | n/a | n/a | n/a |
| Coral Way | 17561 | 16791 | 617 | 1282 | 1517 | 772 |
| Bird Road | 13733 | 13494 | 767 | 1780 | 1333 | 816 |
| SW 56th Street | 18473 | 19579 | 516 | 1744 | 1671 | 1146 |
| Kendall Drive | 41500 | 40,500 | n/a | n/a | n/a | n/a |
| SW 184th Street | 8793 | 7895 | 469 | 66 | 788 | 417 |
| SW 200th Street | 6327 | 6184 | 147 | 610 | 385 | 340 |
| SW 232nd Street | 2904 | 2311 | 50 | 264 | 158 | 63 |
| SW 288th Street | 9326 | 10919 | 214 | 707 | 582 | 745 |

* Available Miami-Dade Traffic Counts

This feeder function of the roadway can also be seen for the AM and PM peak period. At the north end of the corridor during the AM peak period, traffic is much higher going north (toward US 41) than it is going south. In the center of the corridor, traffic is exactly evenly split as drivers head from both directions to SW 88th Street/Kendall Drive and SW 104th Street/Killian Drive to head east. The reverse phenomenon holds true in the PM peak period with traffic flowing from US 41 at the north and traffic evenly split in the Kendall/Killian area.

The planned MDX extension of SR 874 to 137th Avenue along SW 136th Street would tie into the portion of 137th Avenue carrying the heaviest volumes. Table S-4 shows that the impacted portion of 137th Avenue is already carrying between 45,000 and 48,500 trips per day. The impact of the SR 874 extension on 137th Avenue will need to be carefully considered. This extension could either increase traffic on the facility as traffic accesses SR 874 or it could decrease volumes as trips are diverted to SR 874.

The volumes from the 2030 LRTP model for Miami-Dade County were obtained to examine the future demand for the corridor. The 2030 network includes all of the projects in the LRTP prior to the May 2005 amendment which extended 137th Avenue between SW 200th Street and US 1. The 2030 network includes the extensions of both SR 836 and SR 874, but not the southerly extension of 137th Avenue. Table S-4 shows the growth in two-way 24-hour volumes within the corridor between 2005 and 2030. The traffic volume comparison was only based on model projections.

Table S-4
137th Avenue
2005 - 2030 Traffic Volume Comparison
(2-way, 24-Hour Volumes)

| Segment | 2005 Volumes | 2030 Volume | % Increase |
|---|---|---|---|
| SR 836 to US 41 | Under Construction | 70,748 | - |
| US 41 to SW 26th Street (Coral Way) | *30,189 | 50,352 | 67% |
| Coral Way to SW 42nd Street (Bird Road) | 40,488 | 56,014 | 38% |
| Bird Road to SW 88th Street (Kendall Drive) | 37,603 | 46,875 | 25% |
| Kendall Drive to SW 136th Street | 45,113 | 52,011 | 15% |
| SW 136 St to SW 184th Street | 48,523 | 60,099 | 24% |
| SW 184 St to SW 200 Street | *15,426 | 22,738 | 47% |
| US 1 to Florida's Turnpike | *7,437 | 14,226 | 91% |
| Florida's Turnpike to SW 344 Street | 18,058 | 25,775 | 43% |

2005 – Available Miami-Dade Traffic Counts
2030 – Miami-Dade County LRTP Model
* Calculated by interpolation between 2000-2030

## Land Use

The northern portion of the corridor is predominantly residential. Other designated uses along the corridor include business/office and institutional/public facility. In the area between SW 120th Street and SW 136th Street, Kendall-Tamiami Executive Airport abides on the western fringes of 137th Avenue.

The middle portion of the corridor is largely agricultural land. The area between SW 184th Street and SW 248th Street is adjacent to the Urban Development Boundary (UDB) and the area outside the UDB is entirely zoned agricultural. From SW 248th Street southward to SW 312th Street, the corridor is within the 2006 UDB and land adjacent to 137th

Avenue is designated predominantly residential with some business/office areas. Between SW 312th Street and theoretical SW 336th Street the corridor is again outside the 2006 UDB and the land adjacent to 137th Avenue is designated agriculture. The year 2015 Urban Expansion Area (UEA) boundary extends curvilinear, from SW 312th Street to SW 344th Street, along the eastern and western frontages of 137th Avenue. The UEA is the area where current projections indicate that further urban development beyond the 2006 UDB is likely to be warranted some time between the years 2006 and 2015.

## Right of Way

The majority of the corridor has more than 100 foot right-of-way, however between SW 184th Street and the HEFT the right of way is extremely variable or does not exist at all. The CDMP requires that developers dedicate all required right of way for section line roads as the property is developed or subdivided. Currently all of the land along the corridor where no right of way exists is zoned agricultural and if that property is not rezoned and developed prior to the extension of 137th Avenue, the right of way will have to be acquired by the County.

## Corridor Alternatives and Analysis

Seven alternatives were identified to be considered for the 137th Avenue Corridor Study. Beyond the No Build and Transportation System Management (TSM) options, these were based on a realistic assessment of the type of facility that would be required to meet the goals of the study. Each of the following includes a brief description and statement concerning the likelihood of the alternative to satisfy the intent of the study.

- Alternative 1 - No-Build
- Alternative 2 - Transportation System Management (TSM)
- Alternative 3 - Four-Lane through facility, with neighborhood friendly design
- Alternative 4 - Five-Lane facility, providing full accessibility to all properties
- Alternative 5 - Six-Lane through divided facility
- Alternative 6 - High-Flow Arterial
- Alternative 7 - Parkway (Boulevard)

The consultant reviewed each of the alternatives to identify which could meet the objective of the study. The criteria used were:

- Ability to satisfy project goals.
- Ability to maximize level of service in the corridor.
- Ability to complement and enhance the transportation network.

Based on this evaluation, the following assessment of the alternatives to be considered further in the planning process was made (Table S-5).

Table S-5
Assessment of Alternatives

| Alternative | Evaluation |
|---|---|
| 1 | This alternative will not move forward because it does not meet the study objective. |
| 2 | The TSM alternative will not move forward as a stand alone alternative. The TSM improvements will be incorporated into the build alternatives. |
| 3 | This alternative will not provide the needed capacity to accommodate future traffic growth into the year 2030. This alternative will not move forward. |
| 4 | This alternative will not address safety and traffic operation issues along the corridor. This alternative will not move forward. |
| 5 | This alternative will move forward as one of the build alternatives. |
| 6 | This alternative will move forward as one of the build alternatives. |
| 7 | This alternative will move forward as one of the build alternatives. |

## Recommendations

Based on the analysis conducted in this study and documented in Chapter 3 of the final report, it is clear that the three build options are the only ones that would realistically meet the overall objectives of a facility improvement project in the 137th Street corridor, if it were to be constructed. These objectives are:

1. Increase capacity to accommodate future travel demand.
2. Improve access management.
3. Provide roadway continuity.



**Phase 1: Parkway**

To achieve these goals, it is recommended that the alternatives be phased as follows:

- Phase 1: Parkway Facility (Boulevard with Context Sensitive Design) (former Alternative 7)
- Phase 2: Six-lane Major North-South Corridor (former Alternative 5)
- Phase 3: Six-lane, Grade-separated High Flow Facility (former Alternative 6)

The overall utility to the transportation system of the 137th Avenue corridor will be achieved by: (1) establishing corridor connectivity; (2) ensuring adequate capacity; and, (3) creating a roadway environment that is friendly to the community.

Based on the information developed in this study, the creation of a contiguous roadway along 137th Avenue is feasible.

Accomplishing the above given funding realities and the realities of the roadway development process, the "phased" approach as recommended in Chapter 4 is a logical approach.

To be able to build the ultimate design, financial plans will have to be developed in different fiscal years by identifying the needs and priorities for improvements along this corridor. Phase 1 includes the cost for the following improvements:

- The widening from two-lane to a four-lane section between the HEFT and US 1
- The addition of a new four-lane typical section roadway between US 1 and SW 200th Street (Quail Roost)
- The widening from two-lane to a four-lane section between SW 200th Street (Quail Roost) and SW 184th Street (Eureka Drive)
- The widening from a four-lane to a six-lane section from SW 88th Street (Kendall Drive) to SW 56th Street
- The widening from a four-lane to a six-lane section from SW 26th (Coral Way) to SW 8th Street (US 41)



**Phase 2: Six-lane Through**



**Phase 3: Grade Separation**

The four-lane typicals will have a forty-eight-foot (48) wide median to accommodate a six lane widening during Phase 2. Phase 2 includes the widening of all the sections with four lanes to a six-lane typical section between SW 288th Street and SW 184th Street (Eureka Drive). Phase 3 includes the cost for the construction of grade separated intersections at US 1, SW 88th Street and US 41.

The costs for each phase are as follows:

- Phase 1: $101,810,288
- Phase 2: $54,871,816
- Phase 3: $84,408,436

The work in this study has been conducted in coordination with policies of the jurisdictions responsible for planning and eventual design and construction of the project. The study lays the groundwork for important improvements to the transportation network.