MIAMI-DADE COUNTY

Typical Roadway Section and Zoned Right-of-Way Update Study

Kimley-Horn and Associates, Inc.

December 2007

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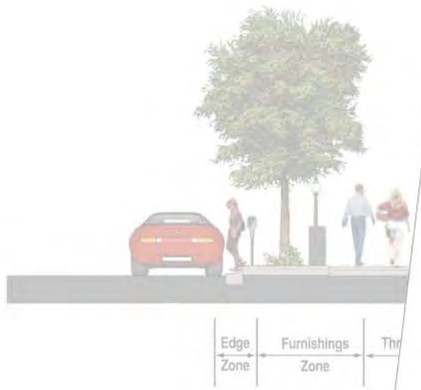

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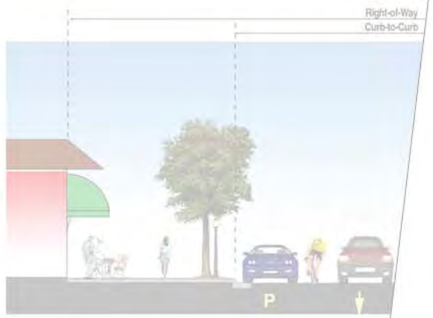


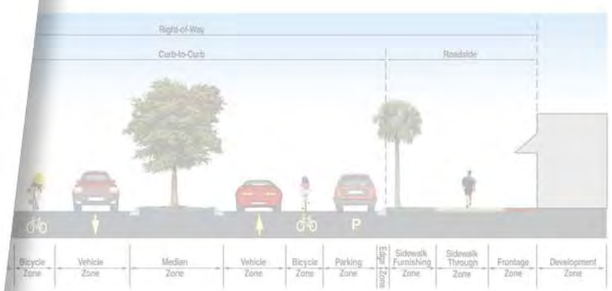
Frontage	Sidewalk	Furnishing	Parking	Lane
0.5'	10'	6'	8'	10'

*When 8' parking lane is provided, bicycle can be accommodated in the 14' travel lane.
Curb to curb dimension of study is from 4' curb.

Constrained ROW

0'	6'	0'	8'	10'

Required Optional Bicycles will not be accommodated in a constrained



Kimley-Horn and Associates, Inc.

October 15, 2007

Mr. David Henderson
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Mr. Subrata Basu, AIA, AICP
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Dear David and Subrata:

We are pleased to submit the final report of the Miami-Dade County Typical Roadway Section and Zoned Right-of-Way Update Study. We hope that you, the MPO and the County are as excited about receiving it as the Kimley-Horn team has been preparing it. The Study is an important component of the County's vision of providing a comprehensive multimodal transportation network. We believe it is the beginning of a trend in design of roadways that is sensitive to the land use context the roadway is located in and caters well to all modes of transportation.

The entire Study process, especially the participation from the Study Advisory Committee, was a pleasurable and valuable experience for us. We commend the Committee for its active involvement in this inclusive process and providing insight into the inherent issues in designing roadways within the County.

We sincerely appreciate being a part of this outstanding effort and look forward to the successful implementation of the Study recommendations. We also hope that the County undertakes the next steps to implement the recommendations in the Study.

Very truly yours,

KIMLEY-HORN AND ASSOCIATES, INC.

Timothy Stillings, AICP
Project Manager

Poorna Bhattacharya, AICP
Project Planner

TABLE OF CONTENTS

FOREWORD

The Miami-Dade County Typical Roadway Section and Zoned Right-of-Way Update Study (Study) is an important component of the County's vision of providing a comprehensive multimodal transportation network. The network must be sensitive to the needs of the users for all modes of transportation, while also meeting the long-term transportation demands of the County. This is one of the biggest challenges faced by the County planning and engineering staff. The overall intent of the Study is to provide clearer direction for the County's roadways and right-of-ways to achieve the vision. A Study Advisory Committee (SAC) was established consisting of representatives from various County departments and the Miami-Dade Metropolitan Planning Organization (MPO).

The two major goals for this Study were:

1. To identify a list of area types and roadway types representative of the land use and transportation mix within the County, and develop typical sections for each roadway type for future application within the County.
2. To identify and preserve the right-of-way needed for future transportation capacity improvements identified in the MPO's 2030 Long Range Transportation Plan through the County's zoned ROW ordinance.

To achieve these goals, the Study began with a review of (1) Miami-Dade County's public works manual, specifically the standard roadway details, (2) existing County roadway cross sections for roadways identified by the SAC, (3) the zoned right-of-ways included within the Miami-Dade County Code of Ordinances, and (4) several transportation planning documents comprising the "best practices" around the nation. The culmination of the review, along with input from the SAC, is this Study.

This Study presents a set of ideas, concepts, and design elements for typical roadway sections. These typical sections are intended for use in designing roadways that provide the best possible accommodation for all users. Presented by area and street type, each of the typical sections includes roadway elements consisting of vehicle travel lanes, designated bicycle lanes, on-street parking, sidewalk furnishing areas and pedestrian-friendly sidewalks.

Many roadways in the County are physically and/or politically constrained. Due to the limitations, certain roadways must be designed through prioritization of needs and user accommodation based upon the space available and community direction. Since this occurs in several areas of the county, this Study also provides a list of priority and optional design elements. The priority design elements are those elements that are strongly recommended to be included in a roadway section. The optional design elements represent those elements that are beneficial, if adequate right-of-way is available. Recommendations for constrained roadways are also provided in the Study which refer to the absolute minimum requirements that should be provided on a particular roadway type.

This Study is intended as a framework to guide future roadway improvement projects within the County. The typical sections recommended for the various roadway types are positive statements intended to be flexible. They were designed to be interpreted based on sound professional judgment, utilizing the recommendations presented in this Study. There can be several variants of the typical sections in this Study, depending on the design elements that are used. The appropriate combination needs to be decided by the designer based on the context of the surrounding area and the goals of the community. A range of design standards are also provided for the various design elements of a typical section, which provides the flexibility for the designer.

It is suggested that the designer understand the concepts presented in this Study and use them to develop typical sections specific to the community's needs, within the framework presented.

An additional part of this Study is to provide recommendations for changing the adopted zoned right-of-ways for corridors that are planned for future capacity improvements within the MPO's 2030 Long Range Transportation Plan. The recommended changes to the zoned right-of-ways have been calculated based on the typical sections presented in this Study. The zoned right-of-way recommendations will help the County preserve and eventually secure right-of-ways for future improvements. A draft ordinance recommending changes to Miami-Dade County Code Ordinances Section 33-133 is provided in this Study.

This Study should serve as one of the first steps to memorialize the County's vision of a comprehensive, multimodal transportation system. The next steps should include presenting the proposed zoned right-of-way ordinance to the Planning Board and County Commission for adoption, along with updating the Public Works Manual to include the typical sections within the Study. It will also be useful for right-of-way identification, presentation, and acquisition for the County to create a database of the existing right-of-way dimensions in GIS to track opportunities and changes. Finally, the County should establish typical drawings for intersections that include existing cross sections and proposed typical sections, as well as, develop typical drawings for transitions between the different street types.

INTRODUCTION

Communities across the nation are adopting a shift in philosophy with regard to transportation planning and design. Many are moving from an auto-oriented approach to a *complete street* approach. Miami-Dade is taking the steps to achieve the shift. The definition of a "complete street" is one that provides mobility, convenience, and safety for all users of the roadway including pedestrians, bicyclists, transit users, and motorists. This paradigm shift can be attributed to the renewed awareness that a street's purpose is not just to move cars, but to enhance the livability and the urban environment of the communities. Some other terms for a complete street as coined by respected transportation professionals, include context sensitive streets and great streets. A quote from Allan Jacobs' famous book Great Streets, defines a great street as follows:

"A great street should be the most desirable place to be, to spend time, to live, to play, to work, at the same time that it markedly contributes to what a city should be."

The Federal Highway Administration (FHWA), the State Departments of Transportation, and professionals and academicians in the transportation industry have been promoting a renewed and comprehensive approach to transportation planning and design. One in which roadway improvements reflect the context within which they are located and the needs of the community. This approach focuses on ensuring there are provisions for all modes of transportation.

Miami-Dade County has continued to experience significant growth in population, especially within the urban areas. Consequently, the demand for transportation infrastructure and services has increased considerably, putting a strain on the existing infrastructure. The County's Comprehensive Development Master Plan (CDMP) has designated several major urban areas as "urban centers" which are intended to be dense, compact, mixed-use areas with a high quality pedestrian environment. The CDMP requires the urban centers to offer a variety of transportation options and to be designed primarily for people and secondarily for automobiles and other motorized modes.

Many of the roadways in the County, especially within these urban centers, are auto-oriented and do not provide sufficient right-of-way for all users. The urban areas are built-out, further limiting right-of-way available to serve all the competing interests and users on the roadway. As these urban centers continue to develop into denser, mixed-use communities, there is a need to increase the comfort and safety of all modes using the roadways, especially pedestrians, bicyclists and transit users.

The County Commission has adopted several policies supporting the development of a multimodal transportation system consistent with the complete street approach. In its broadest interpretation, multimodal transportation refers to an interconnected transportation system where the trips on the roadway are distributed among different modes. There are still elements of the county's planning and engineering policies and programs which need to be modified to be consistent with the goal of developing a multimodal transportation system. One specific example is the current public works manual.

The current Miami-Dade County Public Works Manual (Manual) contains roadway design standards that are auto-oriented. The Manual does not provide design standards for developing a multimodal transportation system and does not address the context of the roadway such as within dense mixed-use urban areas. The Public Works Manual is more than 50 years old and in need of an update to reflect the current transportation planning direction of the County. This Study serves as a guide for updating the manual.

Integration of transportation and land use planning activities, especially within urban areas, is an important goal for the County as contained in the CDMP. Often there is a lack of connection between the design of a roadway and the land uses along the roadway. The design of a roadway needs to take into account the land uses that it will serve and the context, the predominant mode of transportation, and the activities that will occur on the roadway. For example, an arterial roadway that passes through a predominately retail corridor may need to provide on-street parking and wide pedestrian walkways to support the retail activities, while an arterial passing through a residential neighborhood might need narrower travel lanes and a sidewalk separated from travel lanes by landscaping.

The primary objective of this Study is to develop and recommend typical sections for roadways that are consistent with the goal of a multimodal transportation system. The typical sections presented in this Study accommodate all modes and are context sensitive. This Study contains recommended Typical Roadway Sections and Guidelines that are a comprehensive approach to designing roadways within Miami-Dade County. The guidelines and the typical sections will provide the framework for Miami-Dade County to create a better transportation and land use connection, enhancing the livability of its communities.

The secondary objective of the Study is to recommend updates to the zoned right-of-ways contained in Section 33-133 of the Miami-Dade County Code of Ordinances. The recommendations are based on the anticipated improvements contained in the MPO's 2030 Long Range Transportation Plan and the proposed typical sections resulting from the Study. The recommended changes to the zoned right-of-ways will enable the County to preserve and potentially acquire the necessary right-of-way to implement the programmed improvements and develop a multimodal transportation network.

The Study is divided into the following major sections:

Section 1 – Best Practices
Section 2 – Planning Concepts
Section 3 – Typical Sections and Design Guidelines
Section 4 – Roadside Guidelines
Section 5 – Zoned Right-of-Ways

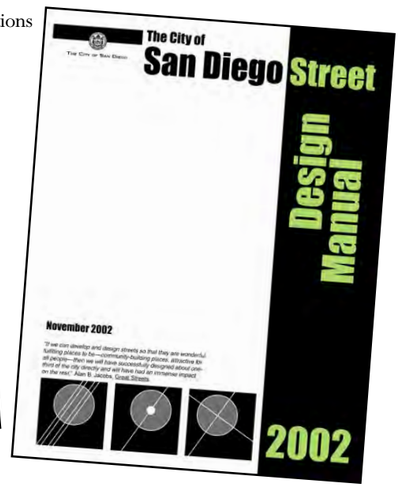
SECTION 1
BEST PRACTICES

To aid in the development of the area types, roadway types, typical sections, and the design guidelines for Miami-Dade County, a search was performed to identify communities across the nation that have developed multimodal roadway design standards. A summary of best practices was compiled. To understand the existing right-of-way conditions in Miami-Dade County, the County's Public Works Manual, existing County roadway cross sections, and the zoned right-of-way included within Section 33-133 of the Miami-Dade County Code of Ordinances were reviewed. A Study Advisory Committee (SAC) was also established to provide input for the development of the cross sections. The SAC meetings also helped establish consensus early in the process.

SURVEY OF BEST PRACTICES

It is always useful to build upon the successes of other communities that share the same planning direction and philosophies. The project team reviewed a number of transportation planning documents from jurisdictions across the United States that have adopted multimodal roadway design standards. The following eight documents represent a cross section of transportation planning efforts that were referenced during the Study. A more detailed report summarizing the eight studies is included as Appendix A.

1. ***Alachua County, FL, Corridor Design Manual (2002)*:** This manual provides design guidelines for six roadway types within seven land use classifications along with the required and optional design elements for each roadway type.
2. ***Arlington County,VA, Master Transportation Plan – Streets Element (2006):*** This plan re-examines streets in a comprehensive way to provide a master plan that safely accommodates multiple surface transportation modes.
3. ***City of Charlotte, NC, Urban Street Design Guidelines (2005):*** Charlotte's transportation plan provides an extensive breakdown of typical cross sections and desired streetscape elements in a comprehensive typology that overlays their street functional classifications.
4. ***City of Dallas, TX, Forward Dallas! Thoroughfare Plan (draft, 2005):*** The current update to the Dallas Thoroughfare Plan integrates context design into the planning and design process for the City's streets and roadways. The plan provides standards for various land-use-based street types within the context of the existing functional classification.
5. ***City of Denver, CO, Blueprint Denver Land Use and Transportation Plan (2002):*** The transportation component of Denver's blueprint plan presents transportation modes and initiatives as tools to the successful development of the city and its neighborhoods. The plan overlays existing functional classification on roadway types within its land use context.
6. ***City of Portland, OR, Transportation System Plan 2004 Technical Update (2004):*** This technical update refined the street design typology that was developed in the region's transportation plan. The plan provides various classifications for roadway, transit, truck, bicycle, and pedestrian infrastructure.
7. ***City of San Diego, CA, Street Design Manual (2002):*** The manual provides information and guidelines for the design of a public right-of-way that recognizes the many and varied purposes that a street serves. It provides detailed guidelines for roadway design, pedestrian design, traffic calming, street lighting, parkway configurations, and design standards.
8. ***City of Sarasota, FL, Downtown Master Plan 2020 (2001):*** This master plan provides a consolidated plan for downtown Sarasota to help guide and implement various planning initiatives that preceded this document. Although the master plan was developed as primarily a land planning document, it provides design standards and recommendations for roadways within the downtown, as well as new functional classifications for thoroughfare types.



STUDY ADVISORY COMMITTEE (SAC)

To provide multiple perspectives for this project, a SAC was formed comprising of staff representatives from the Miami-Dade Metropolitan Planning Organization (MPO), Florida Department of Transportation (FDOT), and several County departments including Planning, Public Works, Fire, Parks, and Miami-Dade Expressway. The SAC met four times during the development of the Study, beginning with the Study kick-off meeting on January 17, 2007.

The SAC members are directly involved in the planning and design of roadways within Miami-Dade County. Their review and input was integral to the development of the Study. These individuals will also be critical to the implementation of the recommendations and the incremental development of the multimodal transportation system.

SAC PREFERENCE QUESTIONNAIRE

A questionnaire was distributed to the SAC members at the beginning of the Study to gain insight regarding the key elements of "great streets" within Miami-Dade County. The challenges facing the SAC regarding roadway design and transportation planning were also a major focus of the questionnaire. The questionnaire provided an opportunity for SAC members to share valuable input on what they consider the "most desirable" and "least desirable" streets within the County.

Questionnaire

The questionnaire contained seven open-ended questions designed to solicit input from the SAC members. The questions included the following:

- Name three streets in Miami-Dade County that you would consider "great streets". What characterizes each as a great street?
- Name three streets in Miami-Dade County that you would consider examples of bad streets. Why?
- What are the most important considerations in street design (i.e. drainage, landscaping, etc.)?
- Rank the elements in order of importance for each street type: urban arterial/collector, suburban arterial/collector, and residential street.
- How would you describe mobility? What are your expectations about providing mobility?
- Is the current Public Works Manual adequate to address the multimodal needs for the County's roadways?
- What are some of the most common challenges of implementing street typical sections in the current Public Works Manual?

Questionnaire Results

1. Which streets are considered "great" or "bad" streets in Miami-Dade County.

The streets that were repeatedly identified as the "***most desirable***" streets by the SAC include:

- Miracle Mile (east of LeJeune Road) in Coral Gables
- Coral Way (from SW 37th Avenue to SW 57th Avenue)
- Alhambra Street (from Douglas Road to Bird Road)
- US 1/Brickell Avenue
- Biscayne Boulevard (north and south of downtown Miami)
- Old Cutler Road (from Cocoplum Road to Galloway Road)

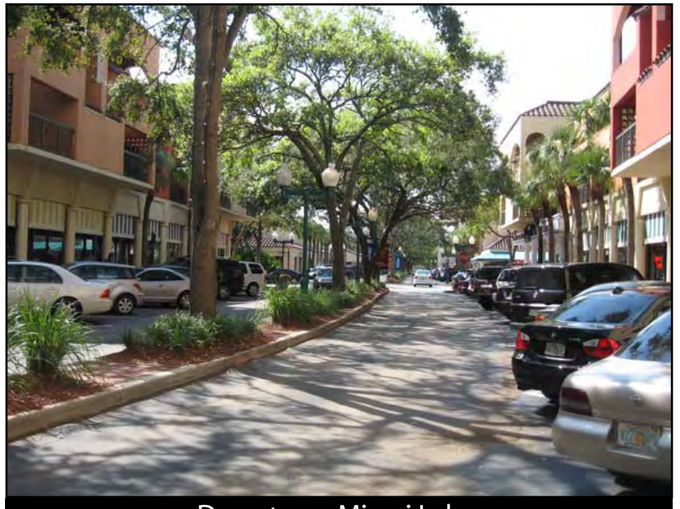
A majority of the respondents cited the following as integral qualities that make up "***great streets***" — human scale elements, enhanced landscaping, mix of land uses, on-street parking, pedestrian amenities including wide sidewalks and street furniture, wide outside lanes for bicyclists, and adequate traffic capacity.

EXAMPLES OF GREAT STREETS


Brickell Avenue north of Coral Way


Miracle Mile east of LeJeune Road


Old Cutler Road


Downtown Miami Lakes

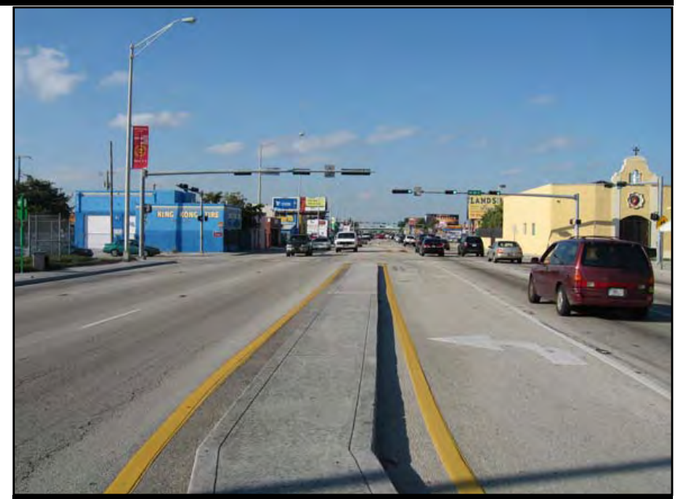
The following streets were repeatedly identified as ***"bad"*** streets within the County:

- SW 27th Avenue (from US 1 to Bayshore Avenue)
- Biscayne Boulevard (within downtown Miami)
- West Flagler Street
- Douglas Road (from US 1 to SW 8th Street)
- Okeechobee Road (from SR 826 to the Turnpike)
- US 441 (north of Golden Glades)

A majority of the responses by the SAC cited the following as the characteristics that are attributable to the ***"least desirable"*** streets — narrow sidewalks, traffic congestion, minimal landscaping or decorative elements, insufficient transportation options, too much concrete/pavement, suicide or two-way center left-turn lanes, interrupted sidewalks, lack of bicycle lanes, narrow outside lanes, and too much development.

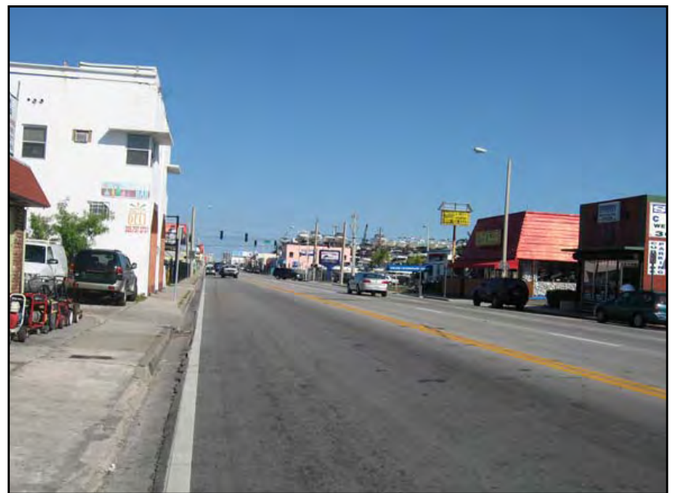
EXAMPLES OF LEAST DESIRABLE STREETS

US 441/SR 7



SW 27th Avenue

North Miami Avenue



NW 79th Street

Key Design Elements

2. Identify the key elements that should be considered during the street design process.

The design elements that were considered to be integral components of great streets included:

- Enhanced landscaping: street trees, median treatments, and landscaping buffers between roadway and sidewalks
- Pedestrian facilities: lighting, wide sidewalks, and pedestrian-friendly street crossings (corner and mid-block)
- Transit facilities: transit priority lanes, bus pull-outs/bays, ITS
- Other key elements within right-of-way including on-street parking, drainage, multi-use paths, and bike lanes
- Traffic calming treatments and operational enhancements, including roundabouts

The following table lists key design elements identified by the SAC as important components for the various types of roadways:

Urban Arterial/Collector	Suburban Arterial/Collector	Residential Street
Sidewalks	Planting strip between sidewalk and road	Traffic Calming Elements
On-Street Parking	Sidewalks	Sidewalks
Street Lighting	Mid-block pedestrian crossings	Planting strip between sidewalk and road
Transit Priority Lanes	Bike Lanes	On-Street Parking
Planting strip between sidewalk and road	Bus Pull-Outs/Bays	Street Lighting

Mobility

3. Define mobility and how it relates to "great streets."

A majority of the SAC responses identified mobility as a major concern in Miami-Dade County. Some referred to the automobile capacity of a roadway and travel speeds as measures of mobility, while others referred to multimodal accommodations as a better measure. Generally, the responses included the following characteristics of mobility:

- Quality, quantity, accessibility and utilization of transportation services and infrastructure
- Ability to travel efficiently from origin to destination
- Inclusion of facilities and amenities for motorists, pedestrians, bicyclists, and transit users
- Safe routes
- Reduced travel delay

Adequacy of the Public Works Manual

4. Does the current Public Works Manual contain the necessary guidance and standards to facilitate "great street" design?

There was a general consensus from the SAC that the current Public Works Manual does not adequately address all travel modes within the County. Many suggested inadequate right-of-way as an impediment to good roadway design. Other comments about the design standards in the Public Works Manual include:

- Minimal sidewalk widths and lack of guidance for pedestrian crossings
- Inadequate bicycle accommodations
- Lack of landscaping recommendations
- Lack of land use context for types of roadways

The SAC members stated that many aspects of the Public Works Manual need to be revised, including right-of-way provisions to accommodate multimodal needs to enhance mobility. They also identified a need to adopt non-conventional methods of assessing mobility.

The results of the questionnaire suggest that although "great streets" have been developed in Miami-Dade County, the current Public Works Manual needs to be revised to address the County's emerging multimodal needs. Further, it is clear from the responses that an update to the Public Works Manual must include not only the necessary design elements to enhance mobility, but it must also be supplemented by policies that help provide the necessary tools to facilitate the implementation of the design elements.

EXISTING ROADWAY SECTIONS

The project team performed a field review of several roadways within the County that were identified as either "great streets" or "bad streets" by the SAC. The cross sections are presented as Appendix B. These were also compared to their respective zoned right-of-ways to evaluate the difference between zoned right-of-way and actual right-of-way.

SECTION 2
PLANNING CONCEPTS

As mentioned earlier, the philosophy of context sensitive design has been incorporated in the concepts of this Study. According to the Institute of Transportation Engineers' (ITE) publication titled *Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities*, context sensitive design is defined as the process of developing transportation projects that serve all users and are compatible with the community and the environment through which they travel. Context sensitive design balances safety, mobility, community and environmental goals; incorporates aesthetics as an integral part of design; and provides flexibility in design standards. This section explains the planning concepts used in this Study. It includes a description of the proposed context zones, proposed roadway types, and the relationship between traditional functional classification and the proposed roadway types.

PROPOSED CONTEXT ZONES

The Study utilizes context zones to identify areas with distinct characteristics based upon the land use and location within the County. The current functional classification system of roadways defines contexts as either rural or urban. This Study follows the New Urbanism nomenclature of context zones which include:

- Rural
- Suburban
- Urban
- Urban Center
- Urban Core

The urban area is further divided into distinct contexts zones ranging from lower to higher density and intensity of development. The context zones may appear like a continuum in terms of development densities and intensities, from very low densities in the rural zone to very high densities in the urban core. In reality, however, they are dispersed patterns reflecting the complexity of the County.

The following page presents the context zones in a continuum to illustrate the increase in densities and intensities from the rural zone to the urban core. The pages following the illustration describe each of the context zones in further detail.

Rural

The rural context zone is the area west of Miami-Dade County's urban development boundary and consists primarily of agricultural land uses with scattered residential developments at low to very low densities. The agricultural land in this zone includes some ancillary uses supportive of agricultural activities, such as packing houses. The residential uses in this zone are primarily farm residences with densities that are less than one residential unit per five acres. The rural context zone may also include other ancillary uses that are supportive of the area's rural residential community, including houses of worship, business, and industrial. The business and industrial uses in the rural context zone are approved only if deemed supportive of local agricultural production.

Suburban

The suburban context zone is the most prevalent zone throughout Miami-Dade County. It is located between the rural and urban context zones in the western and the southern portions of the County. This zone is typically denser than the rural zone, but not as dense as the urban zone. This zone is also characterized by large areas of low to medium density residential uses with small pockets of commercial and/or other retail activities at major roadway nodes. Residential neighborhoods within the suburban context zone are characterized by detached buildings with landscaped yards and varying setbacks. The commercial areas within the suburban context zone consists primarily of business, office, and industrial uses, with some residential. Typical buildings within this zone are one to two stories in height and consist of street frontages such as lawns and/or porches.

Urban

The urban context zone is generally denser than the suburban zone and slightly less dense than an urban center. This zone is located along Miami-Dade County's east coast and within the northern half of the County. It consists of mixed uses from low, medium, and high density residential, with a range of commercial and civic activity at the neighborhood and community scale. The most commonly occurring uses within the urban context zone include low to high density residential, retail trade, business, professional and financial services, restaurants, and cultural and entertainment uses.

Urban Center

Urban centers are located throughout Miami-Dade County and generally coincide with the urban centers identified on the Miami-Dade County Future Land Use Map. Urban centers are characterized by physical cohesiveness, accessibility to various transportation options, and a high quality urban design. They are designed to be developed in a compact, mixed-use manner by accommodating moderate to high intensity development that promotes walkability. A major goal for development within an urban center is to create a distinctive sense of place through proper planning and design. Therefore, the urban center is designed to encourage convenient alternatives to automobile travel, promote more efficient uses of land, and create identifiable "town centers" for the county's diverse communities. The mix of uses found in an urban center includes business, office, civic, and a variety of high or moderate density residential housing types, all within walking distance of each other.

Urban Core

There is only one identified urban core within Miami-Dade County, which is the Downtown Miami Central Business District. The urban core is located south of the Julia Tuttle Causeway, east of the Miami International Airport, north of SW 7th Street, and west of the Intracoastal Waterway. This area features the most dense/intense development in Miami-Dade County, containing the county's largest concentration of high-rise buildings and employment.

Rural Context Zone

The rural context zone is the area west of Miami-Dade County's urban development boundary and consists primarily of agricultural land uses with dispersed residential developments at low to very low densities. The agricultural land in this zone includes some ancillary uses supportive of agricultural activities, such as packing houses. The residential consists of primarily farm residences with densities that are less than one residential unit per five acres. The rural context zone may also include other ancillary uses that are supportive of the area's rural residential community, including houses of worship, business, and industrial.

General characteristics of the rural context zone include:

1. Land Use Designations – As identified in the Miami-Dade CDMP, the land use designations include: agriculture, open land, and estate density residential.

2. Residential Density – The residential density is up to a maximum of 2.5 dwelling units per acre. Although residential uses in this zone are typically farm residences, there are enclaves of estate residential uses which were approved or grandfathered in prior to April 2001.

3. Non-Residential/Agricultural Uses – These uses are generally sporadic and lack development intensity. This development type is supplementary to the residential and agricultural uses and includes minor business and industrial.

These pictures illustrate the existing rural areas in Miami-Dade County.

RURAL

RURAL

Suburban Context Zone

The suburban context zone is the most prevalent zone in Miami-Dade County. It is located between the rural and urban context zones in the western and the southern portions of the County. This zone is typically denser than the rural zone, but not as dense as the urban zone. This zone is also characterized by large areas of low to medium density residential uses with small pockets of commercial and/or other retail activities at major roadway nodes. Residential neighborhoods within the suburban context zone are characterized by detached buildings with landscaped yards and varying setbacks. The commercial areas consist primarily of business, office, and industrial uses, with some residential. Typical buildings are one to two stories in height and consist of street frontages such as lawns and/or porches.

The suburban zone can be divided into two land use patterns: either predominantly commercial or predominantly residential. Predominantly commercial refers to areas where a majority of the uses fronting the street are associated with retail uses — generally mixed use developments. Predominantly residential are those areas where the majority of parcels fronting the street contain residential units. General characteristics of the suburban context zone include:

1. Land Use Designations – As identified in the Miami-Dade CDMP, the land use designations include: estate density residential, low density residential, low-medium density residential, medium density residential, business and office, and industrial and office.
2. Residential Density – The residential density is between one to 13 dwelling units per acre, which are typically detached single family homes.
3. Non-Residential Uses – Non-residential uses occur primarily along major thoroughfares with moderate intensity development (i.e., commercial and office strip centers).

These four pictures are examples of existing suburban residential and suburban commercial areas within Miami-Dade County.

SUBURBAN RESIDENTIAL

SUBURBAN COMMERCIAL

Urban Context Zone

The urban context zone is generally denser than the suburban zone and slightly less dense than an urban center. This zone is located along Miami-Dade County's east coast and within the northern half of the County. It consists of mixed uses from low, medium, and high density residential, with a range of commercial and civic activity at the neighborhood and community scale. The most commonly occurring uses include low to high density residential, retail trade, business, professional and financial services, restaurants, and cultural and entertainment uses.

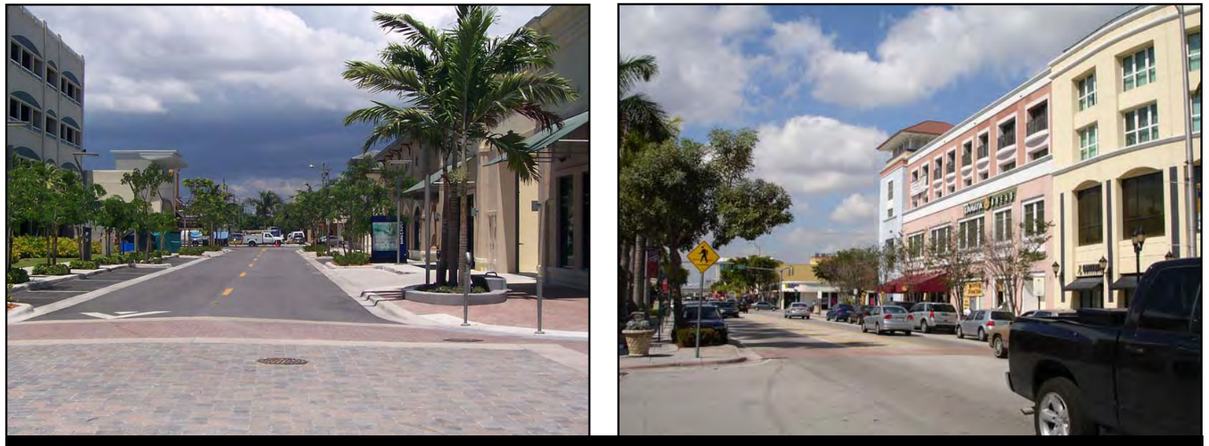
There can be a large variation between land uses within an urban context zone. Some areas are simply a denser version of a suburban area, or are areas that maintain an urban mixed-use pattern. Similar to the suburban context zone, this zone is made up of two land use patterns: either predominantly commercial or predominantly residential.

General characteristics of the urban context zone include:

1. Land Use Designation – As identified in the Miami-Dade CDMP, land use designations include: low-medium density residential, medium density residential, medium-high density residential, high density residential, business and office, office/residential, and industrial and office.
2. Residential Density – The residential density is between 13 to 60 dwelling units per acre, which are typically multi-family attached housing units.
3. Non-Residential Uses – Non-residential uses are developed at high intensities, sometimes containing multiple stories.

These four pictures are examples of existing urban residential and urban commercial areas within Miami-Dade County.

URBAN RESIDENTIAL



URBAN COMMERCIAL

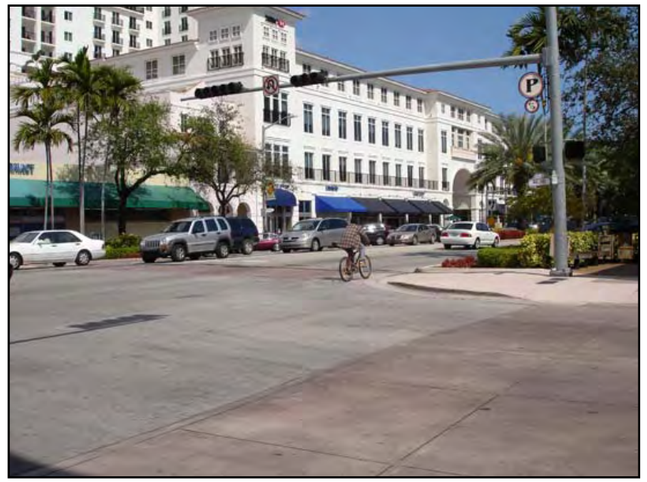
Urban Center

Urban centers are located throughout Miami-Dade County and generally coincide with the urban centers identified on the Miami-Dade County Future Land Use Map of the CDMP. Urban centers are characterized by physical cohesiveness, accessibility to various transportation options, and a high quality urban design. They are designed to be developed in a compact, mixed-use manner by accommodating moderate to high intensity development that promotes walkability. A major goal for development within an urban center is to create a distinctive sense of place through proper planning and design. Therefore, the urban center is designed to encourage convenient alternatives to automobile travel, promote more efficient uses of land, and create identifiable "town centers" for the County's diverse communities. The mix of uses found in an urban center includes business, office, civic, and a variety of high or moderate density residential housing types, all within walking distance of each other.

General characteristics of an urban center are identified below:

1. Land Use Designation – As identified in the Miami-Dade CDMP, land use designations include: medium density residential, medium-high Density residential, high density residential, business and office, and office/residential.
2. Residential Density – The residential density in an urban center is up to 125 dwelling units per acre in community urban centers and up to 250 dwelling units per acre in the metropolitan urban centers.
3. Non-Residential Uses – Non-residential uses are developed at high intensities, usually containing multiple stories. These zones are noted for having a mixed-use character and promoting pedestrian activities.

These four pictures are examples of existing urban centers within Miami-Dade County.



URBAN CENTER

Urban Core

There is only one identified urban core within Miami-Dade County: the Downtown Miami Central Business District. The urban core is located south of the Julia Tuttle Causeway, east of the Miami International Airport, north of SW 7th Street, and west of the Intracoastal Waterway. This area features the most dense/intense development in Miami-Dade County, containing the County's largest concentration of high-rise buildings and employment. General characteristics of the urban core include:

1. Land Use Designation – As identified in the Miami-Dade CDMP, land use designations that occur include: medium-high density residential, high density residential, business and office, office/residential, and institutional.

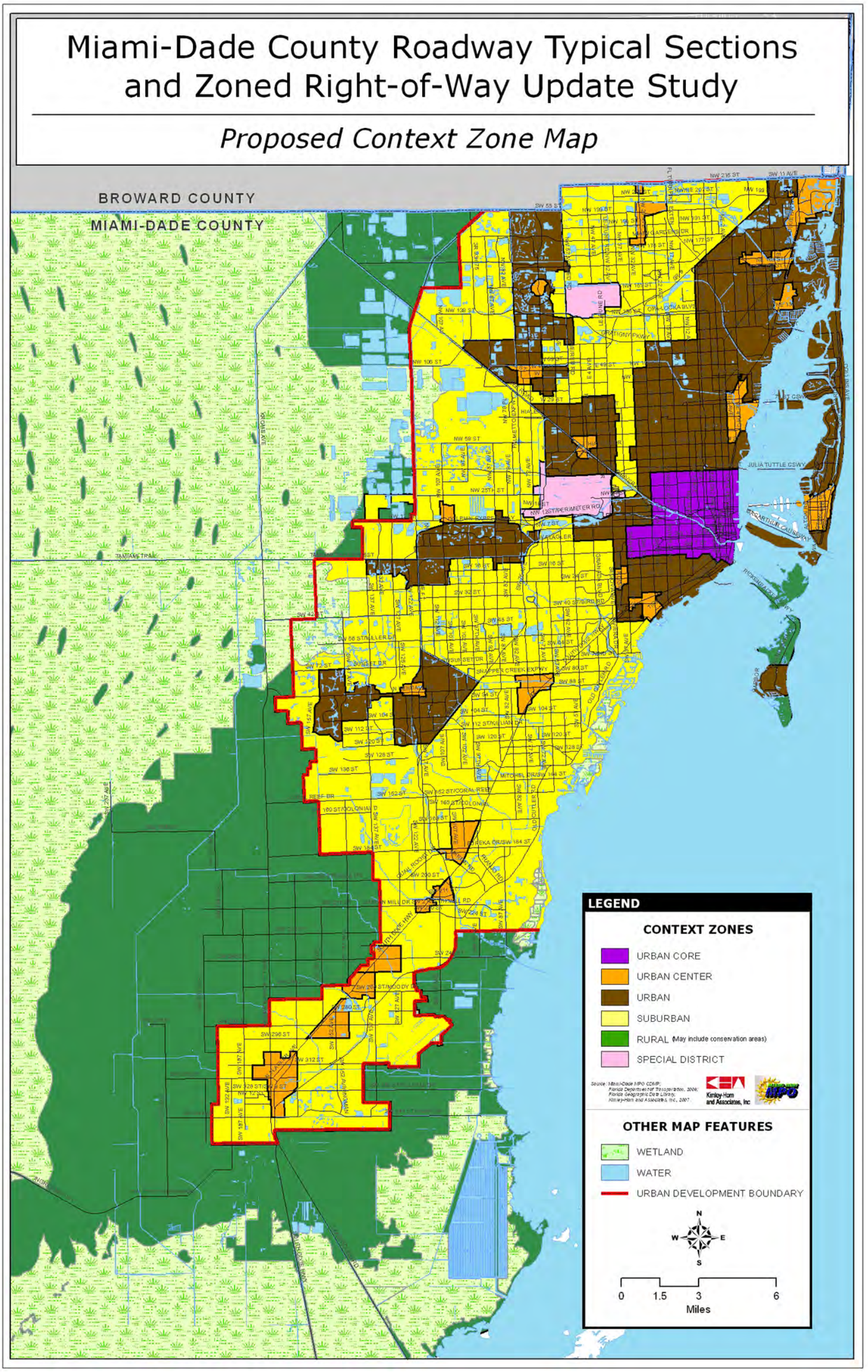
2. Residential Density – The residential densities in the urban core are allowed up to 1,000 dwelling units per acre, which are typically multi-family attached housing units.

3. Non-Residential Uses – Non-residential uses are developed at high intensities, usually containing multiple stories. The urban core features the most intense development of residential and non-residential uses and similar to an urban center, is typically mixed-use in character and pedestrian-friendly.

As part of the Study and the recommendations for the zoned right-of-ways, these context zones were laid out geographically within the County. The "Concept Zone Map" is a recommended delineation of the future land use areas of the County based upon the five context zones established for this Study. It is important to understand that the boundaries of these zones are fluid and change over time as development patterns change. Therefore, the design of a roadway within the County should consider the existing context zone as represented in the figure, identify if the zone is likely to change in the future, and provide the street elements to address the ultimate context zone.

These two pictures are examples of the urban core area of Miami-Dade County. The context zone boundaries are fluid and will change over time. While designing a particular roadway, the designer in consultation with Miami-Dade County, should determine the appropriate context zone to be applied. A preliminary context zone map has been prepared to provide initial guidance for context zone selection. The conceptual figure illustrating the various context zones within the County is provided on the following page.

URBAN CORE

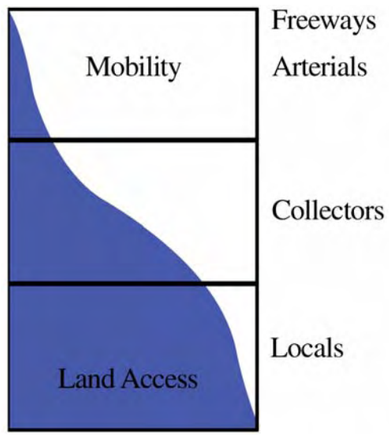

Miami-Dade County Roadway Typical Sections and Zoned Right-of-Way Update Study
Proposed Context Zone Map
BROWARD COUNTY
MIAMI-DADE COUNTY
LEGEND
CONTEXT ZONES
URBAN CORE
URBAN CENTER
URBAN
SUBURBAN
RURAL (May include conservation areas)
SPECIAL DISTRICT
OTHER MAP FEATURES
WETLAND
WATER
URBAN DEVELOPMENT BOUNDARY
N
W
E
S
0
1.5
3
6
Miles

ROADWAY TYPES

Conventionally, roadway design elements and standards have been determined based on the functional classification of a roadway. The functional classification defines a roadway's level of hierarchy in the overall network. As defined by American Association of State Highway and Transportation Officials (AASHTO), the functional classification of roadways includes arterials, collectors and local roadways. The following is a brief description of each functional classification:

- Arterials – Arterials provide a high level of mobility and a lower level of land access. They carry higher speeds on long distance regional trips and have limited access. Arterials are generally classified into two categories: principal and minor.
- Collectors – Collectors carry regional and local trips of moderate length and relatively lower speeds. They have moderate access to adjacent lands and provide connections to arterials.
- Local Roads – Local roads carry low speed and short distance trips. A local road's primary function is to provide access to adjacent lands. They have a low priority of providing mobility.

The graphic below illustrates the level of access and mobility provided by the three roadway functional classifications.



Functional classification has traditionally been used to guide the design characteristics and controls of roadways. Hence roadway design criteria includes roadway connectivity, level of land access, design speed, sight distance, type of freight service and trip lengths. These design criteria are typically auto-oriented and focused on vehicle speed and mobility. As a result of the functional classification system, most roadways include elements that primarily cater to the needs of the automobile and rarely provide facilities for pedestrians, bicyclists, and transit users.

As mentioned previously, one of the goals of this Study is to develop typical cross sections and design guidelines that accommodate all modes of transportation. This prompted a shift from the conventional auto-oriented functional classification system to a system based on context sensitive design or context zones. The new classification system eliminates the inherent bias toward automobiles and focuses on multimodal transportation.

PROPOSED ROADWAY TYPES

To break away from the conventional functional classification system, a new roadway classification is proposed based on context sensitive design principles. The new roadway types correspond to the previous classifications, but take into consideration the surrounding context to determine the physical configuration of the roadway.

Within the rural context three roadway types have been proposed:

- Highway
- Drive
- Road

Within the other context zones including, suburban, urban, urban centers and urban core, the proposed roadway types include:

- High-speed Boulevard
- Low-speed Boulevard
- Avenue
- Street

Definitions and example photos of each of the proposed roadway types are provided on the following page.

The "street" designation is further classified into the following:

- Main Street
- Low-Density Residential Street
- Medium-Density Residential Street
- High-Density Residential Street
- Commercial Street – Narrow
- Commercial Street – Wide
- Industrial Street – Narrow
- Industrial Street – Wide

The Study includes typical section recommendations for each of the proposed roadway types.

Rural | Suburban | Urban | Urban Center | Urban Core

HIGHWAY
A highway is similar in character to an arterial in that it is a long-distance, speed movement thoroughfare traversing the countryside. Highways are relatively free of intersections and driveways.

DRIVE
A drive is a thoroughfare carrying relatively moderate traffic volume and an average travel speed that distributes traffic between a highway and a road.

ROAD
A road is a small scale, slow movement, local thoroughfare providing frontage for low-density buildings. A road tends to be rural in character without curbs or on-street parking, and has clustered planting and paths instead of sidewalks.

HIGH-SPEED BOULEVARD
A boulevard is a divided arterial thoroughfare intended to move significant long distance traffic from one region to the other. Boulevards are primary goods movement and emergency response routes and use various access management techniques to manage access and maintain traffic flow.

High speed (40 to 45 mph) boulevards carry primarily higher speed, long distance traffic and typically have four to eight lanes with limited access to land. They may be transit corridors and accommodate pedestrians, but some high speed boulevards may not provide any pedestrian facilities. These boulevards emphasize traffic movement, and signalized pedestrian crossings and cross-streets may be widely spaced. Bicycles may be accommodated with bike lanes or on separate paths. Buildings or parking lots adjacent to boulevards typically have large landscaped setbacks.

LOW-SPEED BOULEVARD
Low speed (35 mph or less) boulevards are divided thoroughfares in walkable suburban/urban environments designed to carry both through and local traffic, pedestrians, and bicyclists. Boulevards may be long corridors, typically four lanes but sometimes wider, serve longer trips and provide limited access to land. Boulevards may be high ridership transit corridors.
Boulevards are oriented towards automobiles while also accommodating pedestrians and cyclists safely. It is recommended to have frontage streets on boulevards that are located along land uses with high pedestrian volumes to maintain pedestrian safety. On high volume boulevards, if adequate right-of-way is available, it is also recommended to place on-street parking along the frontage roads. On boulevards with no on-street parking, during off-peak hours and special occasions, one of the travel lanes can be used as a parking lane.

AVENUE
An avenue is a low-to-medium speed urban thoroughfare, and shorter in length than a boulevard. Avenues have higher access to abutting land than boulevards with speeds of 30 to 35 mph. Avenues serve as primary pedestrian and bicycle routes and may serve local transit routes. Avenues do not exceed four lanes and access to land is a primary function. Some avenues feature a raised landscaped median and usually provide curb parking.
Avenues are the most commonly occurring roadway types and serve a wide variety of land uses. Avenues carry a significant amount of traffic while also providing high quality bicycle and pedestrian accommodations. They provide a great balance for all modes of transportation unlike boulevards with higher priority for automobiles.

STREET
A street is a walkable, low speed (25 mph) thoroughfare primarily serving abutting property. Streets collect and distribute traffic between local roads or arterial roads and serve as a linkage between land access and mobility needs. Local streets are designed to connect residential neighborhoods with each other; connect neighborhoods with commercial and other districts; and connect local streets to arterials.

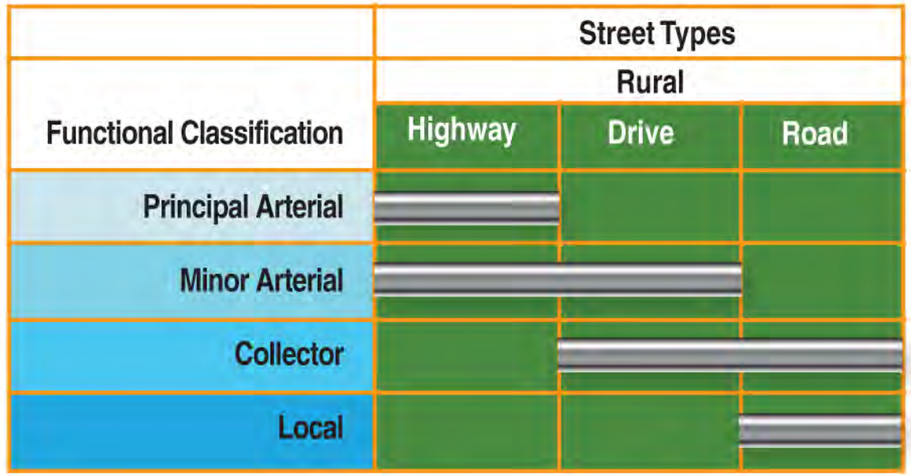
RELATIONSHIP BETWEEN FUNCTIONAL CLASSIFICATION AND ROADWAY TYPES

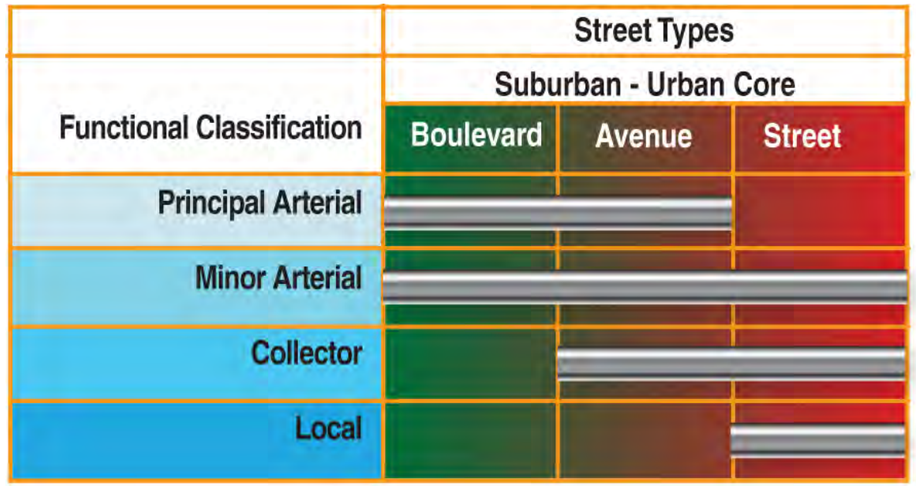
The table at right illustrates the relationship between the conventional functional classification and the proposed roadway types. More detailed descriptions of the roadway types are provided in Section 3 of this Study.

Rural Context: Within the rural context, a highway can be a primary arterial or a minor arterial. A drive can be a minor arterial or a collector. A road can be a collector street or a local street.

Suburban, Urban, Urban Centers and Urban Core Contexts: Generally, boulevards serve an arterial function, avenues may be arterials or collectors, and streets may serve a collector or local function. A high-speed boulevard is equivalent to a principal arterial while a low-speed boulevard can serve as a principal or a minor arterial.

When developing roadway typical sections it is important to identify the roadway's functional classification since it serves as the determining factor for design criteria.





SECTION 3
TYPICAL SECTIONS AND DESIGN GUIDELINES

This section provides the design criteria and elements for developing typical sections to guide future roadway design within the County. These typical sections and design guidelines are meant to be used as a tool for the design of roadways in the County. Standards for various elements recommended in this Study should be created.

The roadway design guidelines presented in this Study are based on the following three principles:

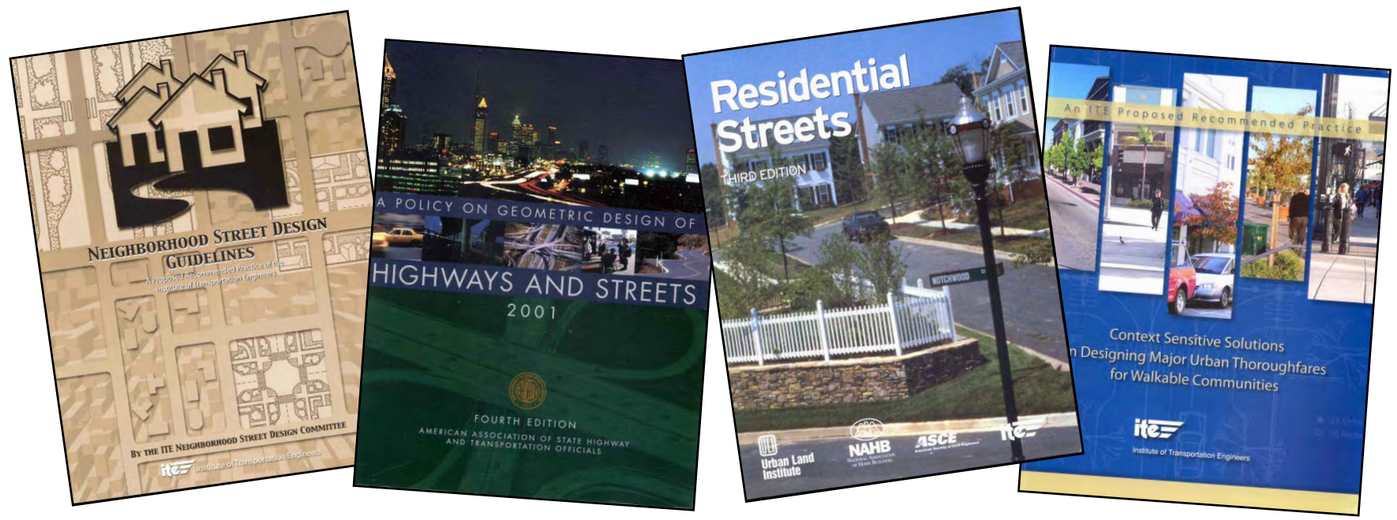
1. Create typical sections and design guidelines that accommodate all modes of transportation including pedestrians, bicyclists, transit, and automobiles. Within the urban centers especially, a need was identified to create more pedestrian- and transit-friendly roadways that are supportive of compact and dense land uses. This further reflects the paradigm shift from an auto-orientated transportation system to a multimodal transportation system.

2. Develop typical sections and design guidelines that create a balance between land use and transportation or are "context sensitive." The land use context should determine the elements contained within the right-of-way. For example, a roadway that passes through a rural agricultural area will have completely different characteristics than a roadway passing through a downtown mixed-use district. A road in the rural area will most likely be characterized by higher speeds (40 – 55 mph), low access management features, swale drainage, and separated sidewalks/multi-use paths. A road passing through a downtown district will be characterized by lower speeds (15 – 25 mph), on-street parking, wide sidewalks, curb and gutter drainage, pedestrian-friendly lighting, and other pedestrian-friendly features. It is important that roadway designs reflect the varied needs within the various land use contexts within Miami-Dade County.

3. Develop more flexible cross sections with a range of dimensions and design elements. The existing Miami-Dade Public Works Manual contains typical sections for fixed right-of-ways (50', 60', 70', 110', etc.,) with alternatives for swale drainage or curb and gutter. The typical sections recommended in this Study provide flexibility in choosing the specific combination of elements based upon the context and related influences. The successful implementation of these roadway design characteristics rely upon the discretion of the designer in choosing necessary design elements within a typical section based on site specific needs and community goals.

The typical sections and design guidelines recommended in this Study are modeled after the recommendations contained in the Institute of Transportation Engineers' (ITE) ballot publication titled *Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities*. The Study has also incorporated the concepts and ideas from the following publications and the literature review materials described in Section 1.

- State of Florida Department of Transportation's (FDOT), *Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways* (commonly referred to as the Florida Green Book)
- ITE's *Neighborhood Street Design Guidelines*
- ITE's *Residential Streets*
- U.S. Department of Transportation's *Selecting Roadway Design Treatments to Accommodate Bicycles*



DEVELOPING A CROSS SECTION

The roadway types and associated typical sections and design elements recommended in this Study are based on the context zones discussed in Section 2. Therefore, the first step is to identify the context for the roadway being considered. This step is detailed below along with the subsequent steps to develop a proposed cross section for a roadway utilizing the proposed context sensitive typical sections and design guidelines.

Step 1a: Identify appropriate context zone

Review Section 2 to identify which context zone best describes the area within which the proposed roadway is located, based on the illustrated context zone graphic. The determination of a context zone should be done in consultation with County staff.

Step 1b: Refine context zone

If the proposed roadway is located within the suburban or urban context zone, determine whether the predominant land uses along the roadway are commercial or residential. In addition to the existing land use, it is also recommended to identify the land use from the Future Land Use Map.

Step 2: Identify appropriate roadway type

Review Section 2 to identify which roadway description best fits the roadway that is proposed to be improved or constructed. The roadway type will provide the initial guidance for the cross section and design elements. It may be necessary to first define the functional classification using the conventional classification system and then determine which roadway type is best suited.

Step 3: Select appropriate typical section based on the refined context zone and roadway type selection

If the proposed roadway is located within a suburban commercial context zone and should be designed as a 6-lane divided high-speed boulevard, go to the high-speed boulevard recommendation. Use design guidelines in the section to develop the cross section. For constrained roadways, use the recommendations for constrained ROW irrespective of the context zone.

Step 4: Make appropriate adjustments to the design elements for the roadway

This step should take into consideration each of the required, optional, and incompatible elements as detailed in the recommended typical sections.

Step 5: Determine roadside design

The roadside consists of the edge zone, sidewalk, and frontage zone. These areas are detailed in Section 4 of the Study. The roadside is largely the pedestrian zone and should be carefully designed to ensure adequate space for the anticipated level of pedestrian and business activity within this area as guided by the context zone.

Step 6: Refine design of roadway to meet site specific requirements and goals of the project

This is the final step to creating a cross section for the proposed corridor that incorporates all of the design guidelines for the roadway and roadside.

As previously mentioned, these design guidelines are intended to further the concept of context sensitive roadway design that is both sensitive to its surroundings and accommodates all modes of transportation. The typical sections recommended in this guidebook include the best possible accommodations for all modes of transportation. For example, all typical sections illustrated in this guidebook include designated bicycle lanes, wide sidewalks, on-street parking, and sidewalk furnishings. It is recommended that all future roadway enhancements and new roadways incorporate as many modes of transportation as possible.

Note: In cases where there are physical constraints on the right-of-way, it may not be possible to incorporate all of the elements that are recommended. Under each recommended typical section there are descriptions for required, optional, and incompatible elements. This flexibility provides options to meet the specific demands of the project, the constraints of the corridor, and ultimately the context.

COMPONENTS OF A ROADWAY

A roadway typical section comprises the following components as illustrated on the following page:

Development Zone

Development zone describes the area immediately adjacent to the right-of-way. The characteristics of the development zone influence the design considerations of the roadway. The development zone consists of the land use, building placement, building setbacks, and building design. For example, retail storefronts have small setbacks, wide sidewalks, sidewalk amenities with tree grates, street furniture and other pedestrian amenities, and on-street parking facilities. However, a single family residential neighborhood has large setbacks, sidewalks, and planting strips separating vehicular traffic from sidewalks.

Frontage Zone

Frontage zone is the area of the right-of-way immediately adjacent to the property line defined by a building facade, landscaping, fence, or screened parking area. Generally, pedestrians do not feel comfortable moving at a full pace immediately adjacent to a building facade or wall; hence the effective width of the throughway (sidewalk through) zone is limited by the tendency of pedestrians to shy away from the sidewalk next to the property line. This width at the edge of the private property line is the frontage zone, sometimes called the "shy zone". The recommended width of the frontage zone ranges between 0 to 2.5 feet depending on the context zone and the roadway type. In residential areas along lawn and ground cover, the frontage zone may be 0 feet; along low walls, fences and hedges, the frontage zone may be one foot; along facades and tall walls it may be 1.5 feet; and along heavy retail corridors it may be up to 2.5 feet. National research and standards suggest that a frontage zone or a shy zone is important to provide a buffer between pedestrians on the sidewalk and the property line (window shoppers in retail areas and fences in residential areas).

Sidewalk Through Zone

This refers to the unobstructed pedestrian area on the roadside that provides for through movement of pedestrians. This zone must remain free and clear of obstacles and amenities to enable free movement of pedestrians.

Sidewalk Furnishing Zone

This area of the roadside provides a buffer between pedestrians and vehicular traffic. In residential areas, the furnishing zone includes a continuous planting strip along the sidewalks with shade trees. In commercial areas, the furnishing zone consists of continuous pavement between the curb and the building line with tree grates/wells, street furniture, street lighting, public signage, transit stops, utilities, etc. In the graphic on the previous page, the right side illustrates a residential area with planting strips and the left side represents a commercial area with continuous pavement

Edge Zone

This is the area between the face of the curb and the furnishing zone. This is a required area of clearance between parked vehicles and appurtenances or landscaping.

Parking Zone

This is the area of on-street parking adjacent to the curb. This zone is strongly recommended in commercial areas to support the retail activities at the ground level and is optional in residential areas. On-street parking also provides a buffer between the roadside and the vehicle zone.

Bicycle Zone

This is the area within the right-of-way that accommodates bicyclists. The bicycle zone may include designated bicycle lanes or wide outer lanes that accommodate bicyclists. The bicycle zone should consider bicyclists of all skill levels. USDOT's publication titled *Selecting Roadway Design Treatments to Accommodate Bicycles*, categorizes advanced bicyclists as Group A, basic bicyclists as Group B, and children as Group C bicyclists. The report suggests that Group A bicyclists are best served by providing wide outside lanes on collector and arterial streets in an urban area and usable shoulders on highways built within a rural area. Group B and C bicyclists are best served by providing a network of designated bicycle facilities through arterial and collectors and usable roadway shoulders on rural highways. All typical sections illustrated in this Study include provisions for Group B and C bicyclists; however, this may not be appropriate for all roadways. The designer should use discretion in determining which skill level to cater to and which bicycle facilities to provide on a specific roadway.

Vehicle Zone

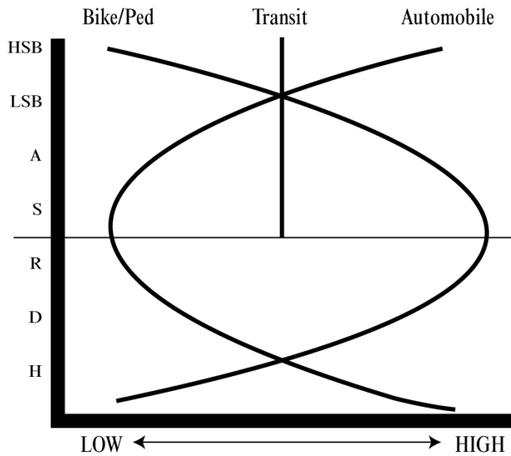
This refers to the area within the right-of-way that accommodates automobiles, trucks, and transit. This zone typically occupies more area within the right-of-way than any other zone.

Median Zone

This zone is applicable only to divided roadways. Medians provide separation between opposing flows of traffic, enhance the aesthetic appearance of a roadway, provide additional green space, and allow for pedestrian refuge.

Each roadway type recommended in this Study has different modal priorities. For example the modal priority on a boulevard is oriented towards motor vehicles while the modal priority on an avenue is balanced between all modes. The table below shows the modal priority for the various roadway types within the suburban, urban, urban centers, and urban core.

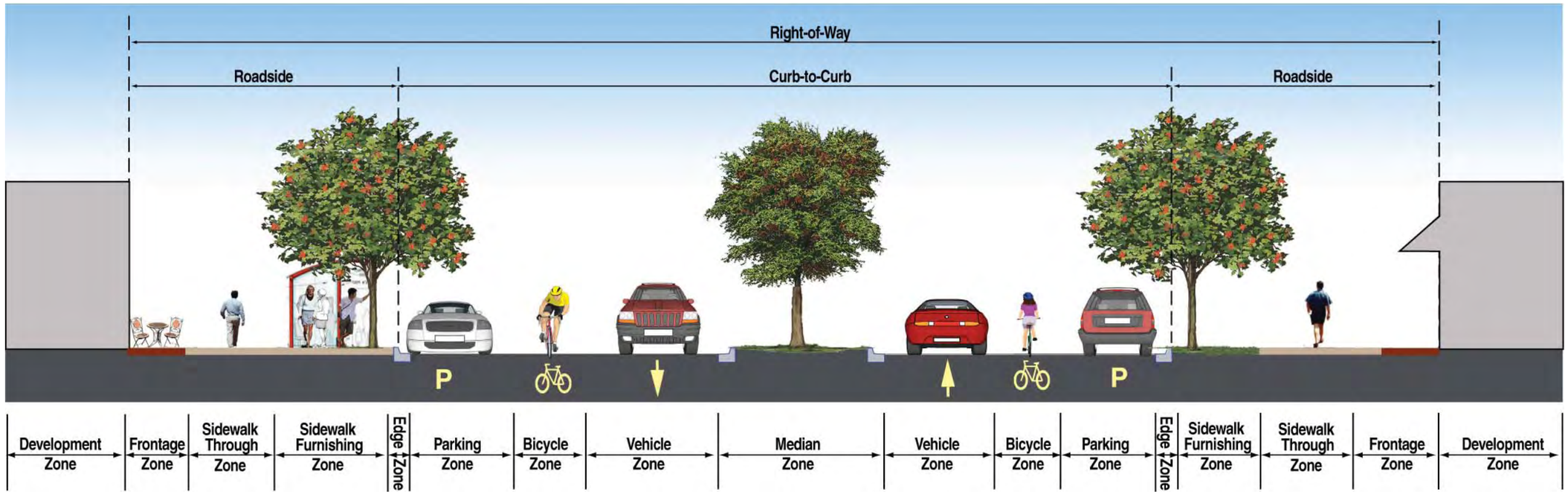
The roadway cross-section on the following page illustrates the various components of the roadway described above. The pages following the graphic describe each of the roadway types in detail along with the proposed typical sections and design elements.



MODAL PRIORITIES

Travel Modes	Suburban – Urban – Urban Center – Urban Core				Rural		
	High-Speed Boulevard	Low-Speed Boulevard	Avenue	Street	Highway	Drive	Road
Automobile	High	High	High – Medium	Low	High	High	Medium
Transit	Medium	Medium	Medium	Low	None	None	None
Bicycle	Low	Medium	High – Medium	High	Low	Low	None
Pedestrian	Low	Medium	High – Medium	High	Low	Low	Low

COMPONENTS OF A ROADWAY



NOT TO SCALE

RECOMMENDED TYPICAL SECTIONS

The remainder of this section provides detailed descriptions of each of the proposed roadway types recommended for Miami-Dade County along with the recommended typical sections and design guidelines. As mentioned earlier, the Study uses the concept of context zones and roadway types to determine the appropriate typical section for a roadway. The context zones include – rural, suburban, urban, urban center, and urban core. Detailed descriptions of these context zones are provided in Section 2.

The nomenclature for the proposed roadway types are based on the various context zones (see Section 2 for detailed descriptions). Within the rural context zone, the proposed roadway types include:

- Highway
- Drive
- Road

Within the other context zones (suburban, urban, urban center, and urban core) the roadway types include:

- High-Speed Boulevard
- Low-Speed Boulevard
- Avenue
- Street

The "street" designation is further divided into the following types:

- Street – General
- Main – Street
- Street – Neighborhood
    - Low-Density Residential
    - Medium-Density Residential
    - High-Density Residential
    - Commercial – Narrow
    - Commercial – Wide
    - Industrial – Narrow
    - Industrial – Wide

Pages 25 through 54 describe the characteristics of each roadway type along with the recommended typical sections and design guidelines. The following is a sample scenario of the application of the roadway type and recommendations.

The Miami-Dade County 2030 Long Range Transportation Plan has a planned improvement for widening SW 107th Avenue from SW 8th Street to Flagler Street from a four-lane to a six-lane arterial. This scenario illustrates the process of developing a cross section using the steps outlined on page 21.

Step 1a: Identify the context zone for the proposed roadway using the context zone map on page 15 and descriptions on pages 9-14. In this example, the proposed roadway is located within the urban context zone.

Step 1b: The Miami-Dade County Future Land Use Map indicates that the majority of the land uses along the roadway segment are residential. Therefore, the appropriate context zone is urban adjacent to predominantly residential land use.

Step 2: Based on the descriptions of the proposed roadway types (pages 16 – 17) and the relationship between functional classification and roadway types (page 18), the proposed roadway is initially classified as a low-speed boulevard.

Step 3: Refer to page 29 of Section 3 for a more detailed description of a low-speed boulevard. Page 30 contains recommendations for a six-lane, low-speed boulevard within an urban residential context zone.

Step 4: Page 32 contains recommendations for the required, optional, and incompatible design elements within the typical section. Depending on the available ROW, the design elements are selected or eliminated from the cross section.

Step 5: Section 4 provides detailed recommendations for the roadside. Refer to page 56 and 57 for the various elements within the roadside and their design criteria.

Step 6: Refine the roadway cross section based on site-specific requirements.

It is essential that these guidelines are not used as a substitute for the exercise of sound engineering judgment. The designer should have an understanding of all guidelines contained in this Study before selecting design parameters for the subject roadway.

The following pages present detailed descriptions of each of the proposed roadway types along with the recommended typical sections and design elements. During the development of the Study, SAC members expressed concerns about right-of-way limitations within urban centers that physically or legally prevent additional right-of-way acquisition. Therefore, the Study recommends typical sections for constrained roadways, with the best possible accommodations for all modes. It should be noted however, that these standards apply only to physically constrained roadways and not to other roadways.

HIGH-SPEED BOULEVARD

High-speed boulevards are the most automobile oriented of all the proposed roadway types. Their primary function is to facilitate higher speeds (40 to 45 mph) and longer distance trips. High-speed boulevards typically have four to eight lanes with very limited access. High-speed boulevards are closest to the AASHTO's definition of principle arterials.

These boulevards are primarily divided roadways that typically occur within the suburban context zones, and sometimes within the urban context zones. High-speed boulevards are best suited for areas with land uses that are more auto-oriented. These roadways are most common in large industrial and office parks, airports, regional malls, and other large developments. These roadways may carry significant truck traffic depending on the adjacent land uses.

High-speed boulevards may also serve as regional transit corridors. High-speed boulevards primarily emphasize traffic movement, while also accommodating other modes including pedestrians, bicyclists, and transit. High-speed boulevards may accommodate pedestrians with sidewalks or separated paths. Pedestrian accommodations may include signalized pedestrian crossings at cross-streets which may be widely spaced. Bicycles may be accommodated with bike lanes or on bike paths separated from the roadway.

High-speed boulevards are generally access managed with appropriate treatments for intersecting roadways, driveway access, and turning lanes. The landscaping or buffer treatments along high-speed boulevards should provide adequate separation between the vehicle zone and the pedestrian zone, as well as between the right-of-way and adjacent development.

The modal priority for high-speed boulevards is automobiles while also accommodating pedestrians and cyclists as safely as possible. High-speed boulevards that are located along land uses with high pedestrian volumes sometimes have frontage roads to enhance safety and comfort for pedestrians and bicyclists. For boulevards with high volumes of traffic, on-street parking, sidewalks, and bike lanes are recommended along the frontage roads, if adequate right-of-way is available. A high-speed boulevard with frontage roads has not been illustrated in this Study.

The typical section of a high-speed boulevard is applicable for roadways with a posted speed of 35 to 45 mph (design speed of 40 to 50 mph) with curb and gutter. A high-speed boulevard is limited to application within the suburban and urban context zones only. A high-speed boulevard does not apply within the rural, urban center, and urban core context zones. For any roadway within the urban and suburban context with a posted speed greater than 45 mph, the Study recommends using the typical section of a "Highway" (pages 51 and 52) under the rural context. The highway provides for swales on either side of the roadway.

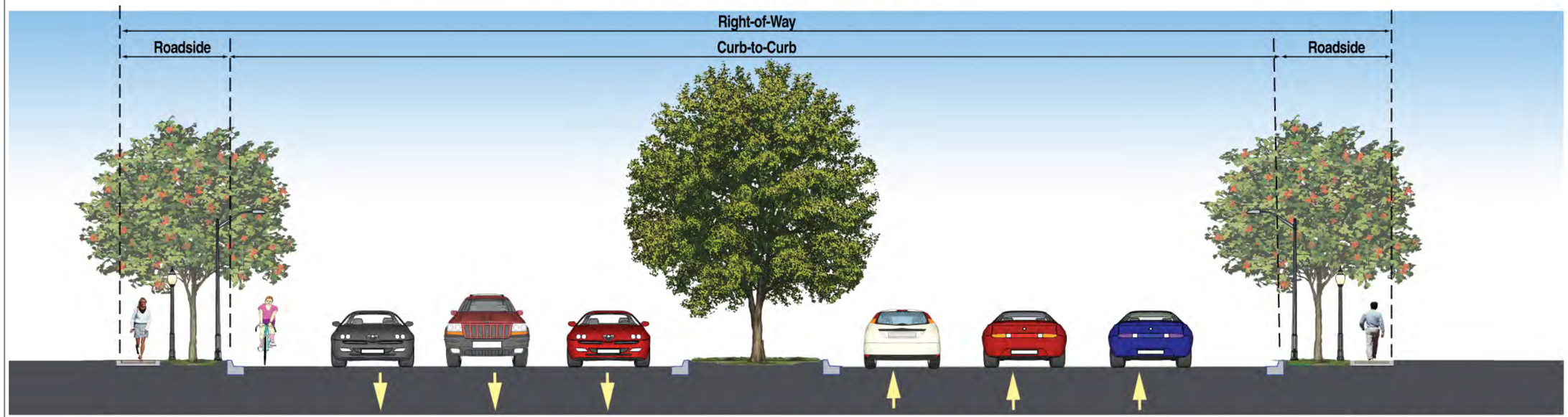
The usage of the term "Boulevard" is generally limited to urban areas with curb and gutter as the preferred drainage treatment. The typical section recommended for high-speed boulevards are represented with curb and gutter. To represent a boulevard with a swale will dilute the concept of a boulevard. According to the Florida Green Book, the use of curb and gutter is safely allowed up to a posted speed of 45 mph (design speed of 50 mph). Since the focus of the Study is on providing multimodal roadway typical sections with a focus on urban centers and to stress the importance of walkable communities, it is referred to as a high-speed boulevard. As mentioned earlier, if a roadway within the suburban and urban context is proposed with swale treatment, refer to the typical section for "Highway."

The typical section recommended for high-speed boulevards does not vary by the context zone. The following pages illustrate the typical sections for a six-lane and a four-lane high-speed boulevard followed by a description of the required, optional, and incompatible design elements. Required elements refer to the design elements that are integral to the design of the referenced roadway type. Optional elements refer to the design elements that are encouraged to be included in the typical section, but can be removed if adequate right-of-way is not available. Incompatible elements refer to the design elements that should not be included in the design of the referenced roadway type. The minimum dimensions for physically constrained roadways are also provided.

HIGH-SPEED BOULEVARD

MODAL PRIORITY: AUTOMOBILES

Six-Lane Divided



Sidewalk	Furnishing	Bike*	Lane	Lane	Lane	Median	Lane	Lane	Lane	Bike*	Furnishing	Sidewalk	Curb to Curb	ROW
5'-6'	8'	5'-6'	12'	11'-12'	11'-12'	16'-18'	11'-12'	11'-12'	12'	5'-6'	8'	5'-6'	97'-105'	123'-133'

* Bike lane width does not include gutter
Curb to Curb denotes front of curb to front of curb.

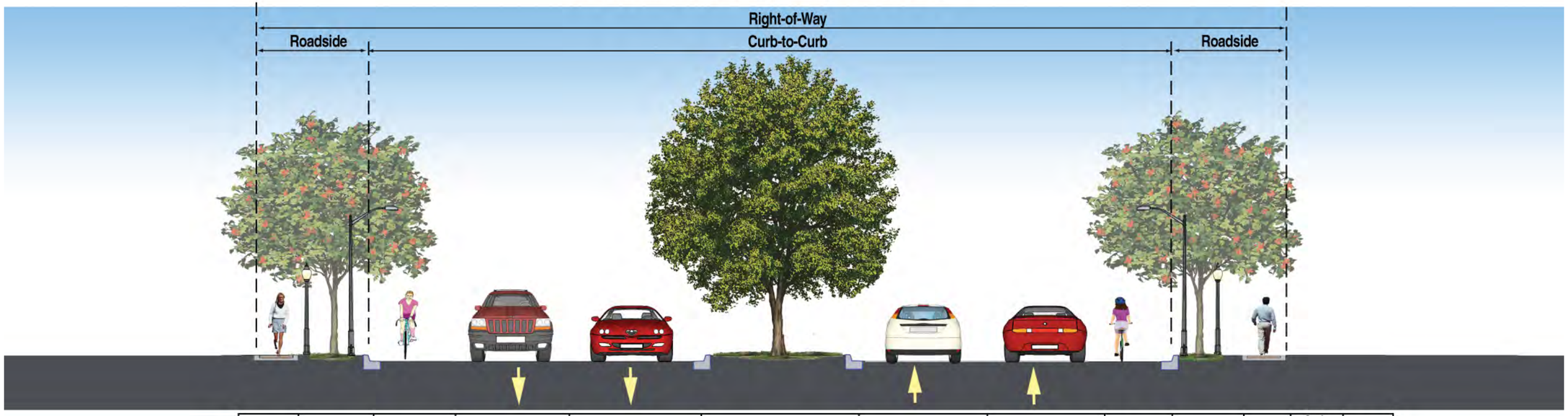
Constrained ROW

5'	6'		11'	11'	11'	10'	11'	11'	11'		6'	5'	79'	101'

Requried Optional

NOT TO SCALE

Four-Lane Divided



Sidewalk	Furnishing	Bike*	Lane	Lane	Median	Lane	Lane	Bike*	Furnishing	Sidewalk	Curb to Curb	ROW
5'-6'	8'	5'-6"*	12'	11'-12'	16'-18'	11'-12'	12'	5'-6"*	8'	5'-6'	75'-81'	101'-109'

* Bike lane width does not include gutter
Curb to Curb denotes front of curb to front of curb.

Constrained ROW

5'	6'		11'	11'	10'	11'	11'		6'	5'	57'	79'

Required Optional

NOT TO SCALE

HIGH-SPEED BOULEVARD

Required Elements

Number of Lanes
Generally two to three lanes in each direction (four to six lanes total). In some cases they can be up to four lanes in each direction (eight lanes total), if determined through transportation demand analysis.

Lane Width
Typically, 11 feet to 12 feet wide lanes. Generally, 12 feet is recommended due to the higher speeds along the roadway, but in constrained conditions 11 feet is acceptable. Outer lanes can be up to 13 feet if it is a heavily used transit route.

Posted Speed
Generally 35 – 45 mph. In some cases the speed limit can be up to a maximum of 50 mph; however, additional design considerations apply in accordance with the Florida Greenbook.

Median
A 16 feet to 18 feet wide median should be provided on high-speed boulevards. At least a 15.5 feet wide median is preferred, to allow for a minimum of four feet for a pedestrian refuge at intersections. Under constrained conditions, a minimum of 10 feet can be used.

Median Planting
Median should be landscaped with trees as recommended in the Miami-Dade County Street Tree Master Plan.

Sidewalk Furnishings
In cases where sidewalks are placed adjacent to the vehicle zone, they must be separated by a continuous planting strip of at least eight feet in width to provide a buffer between traffic and pedestrians. Under constrained conditions, a minimum of five feet can be used.

Optional Elements

Bike Lane
Bike lanes can be provided along high-speed boulevards when necessary for network connectivity or where indicated on the Bicycle Master Plan. When provided, it should be a minimum of five feet wide (not including curb and gutter) and preferably six feet wide if right-of-way is available.

Curb and Gutter
Either curb and gutter or drainage swales are allowable. When swales are provided, refer to the typical section for highways on page 51-52.

Sidewalks
Sidewalks should be placed in a separated parallel facility along with bicycle facilities. Sidewalks should be at least five feet wide, preferably six feet.

Incompatible Elements

On-Street Parking
On-street parking is not appropriate on high-speed boulevards due to higher traffic volumes and speeds. When the adjacent land uses are predominantly retail, on-street parking can be provided along frontage roads.

LOW-SPEED BOULEVARD

Low-speed boulevards are divided thoroughfares intended to accommodate higher volumes of vehicles for primarily regional trips and occasionally local trips. Low-speed boulevards are found generally in walkable suburban and urban environments. The typical travel speed along low-speed boulevards is 35 mph or less.

Low-speed boulevards are typically four lanes, but can be up to six lanes. They provide limited access to land and may also serve as high ridership transit corridors. Low-speed boulevards are closest to the AASHTO's definition of arterials. Various access management techniques are used to manage access and maintain traffic flow. Access along low-speed boulevards should be managed through measures including medians, appropriate treatments for intersecting roadways, driveway access, and turning lanes.

The modal priority on low-speed boulevards is auto-oriented, while also safely accommodating pedestrians and bicyclists. Low-speed boulevards generally are found in predominantly mixed use areas with higher density urban and suburban environments; in some cases, they are also found in residential areas in urban and suburban environments.

Low-speed boulevards typically have a wide landscaped median providing separation for traffic flow and pedestrian refuge at crossings. Appropriate landscaping along the median and on the roadside is encouraged to increase the walkability of the roadway.

The typical section recommended for a low-speed boulevard varies by the context zone. Suburban and urban context zones contain aggregated areas of residential and commercial developments in the form of neighborhoods and retail areas. As such, the typical sections for suburban and urban context zones are further divided into two categories – predominantly residential and predominantly commercial. The primary differences between the residential and the commercial typical sections are:

- On-street parking is optional along residential sections, but is strongly recommended on commercial sections.
- Residential sections have continuous planting strips between the road and the sidewalk and the commercial sections have continuous pavement from the road to the sidewalk with tree grates or tree wells as furnishings.

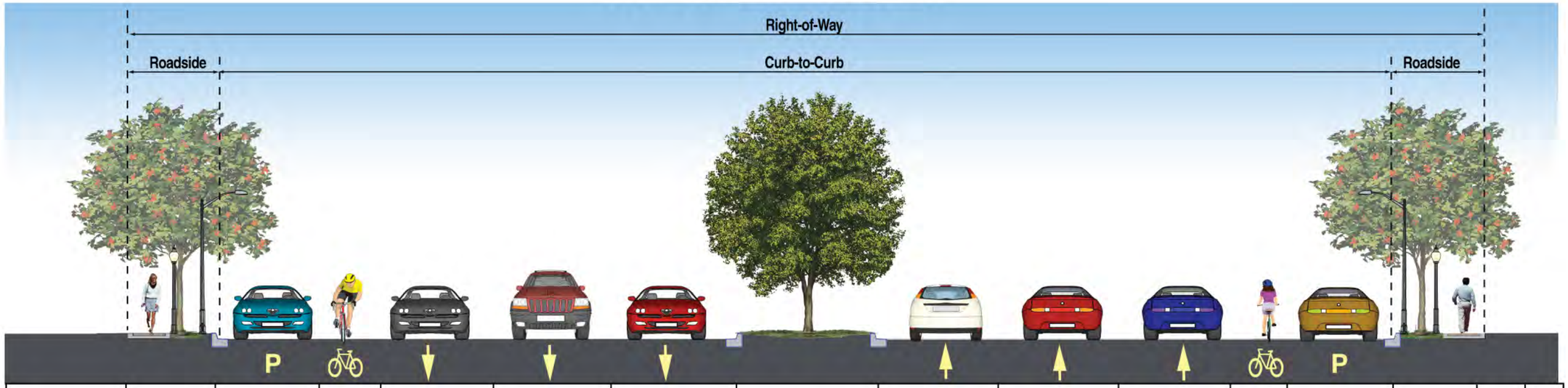
Urban centers and urban core typically contain predominantly mixed uses. Only one typical section is recommended for these two context zones, which closely resembles the typical sections for the predominantly commercial urban and suburban typical sections except the roadside is much wider within the urban center and urban core. The roadside elements and dimensions are illustrated in detail in Section 4.

The following pages illustrate the typical sections for a six-lane and four-lane low-speed boulevard followed by a description of the required, optional, and incompatible design elements. Required elements refer to the design elements that are integral to the design of the referenced roadway type. Optional elements refer to the design elements that are recommended in the typical section, but can be excluded if adequate right-of-way is not available. Incompatible elements refer to the design elements that should not be included in the design of the referenced roadway type. The minimum dimensions for physically constrained roadways are also provided.

LOW-SPEED BOULEVARD

MODAL PRIORITY: AUTOMOBILES

Six-Lane Divided



	Road Side	Parking	Bike	Lane	Lane	Lane	Median	Lane	Lane	Lane	Bike	Parking	Road Side	Curb to Curb	ROW
Suburban-Commercial	16'	7'*-8'	5'-6'	11'-12'	11'-12'	11'-12'	15.5'-22'	11'-12'	11'-12'	11'-12'	5'-6'	7'*-8'	16'	106'-122'	138'-154'
Suburban-Residential	14.5'	7'* optional	4'-6"**	10'-11'	10'-11'	10'-11'	15.5'-22'	10'-11'	10'-11'	10'-11	4'-6"**	7'* optional	14.5'	84'-107'	113'-143'
Urban-Commercial	19'	7'*-8'	5'-6'	11'-12'	11'-12'	11'-12'	15.5'-22'	11'-12'	11'-12'	11'-12'	5'-6'	7'*-8'	19'	106'-122'	144'-160'
Urban-Residential	16.5'	7'* optional	4'-6"**	10'-11'	10'-11'	10'-11'	15.5'-22'	10'-11'	10'-11'	10'-11'	4'-6"**	7'* optional	16.5'	84'-107'	117'-147'
Urban Center/Core	21.5'	7'*-8'	5'-6'	11'	11'	11'	15.5'-22'	11'	11'	11'	5'-6'	7'*-8'	21.5'	106'-116'	149'-159'

* Minimum 7' assumes use of 1.5' gutter pan

** 5' required when adjacent to on-street parking or between right turn lane and through lane

Curb to curb denotes front of curb to front of curb

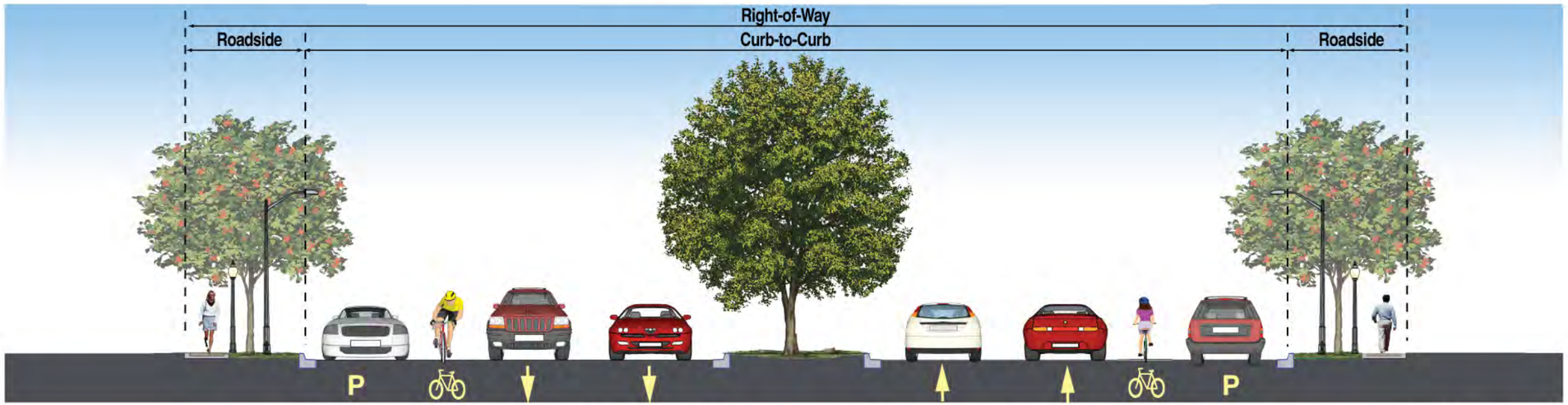
Constrained ROW

9'			10'-11'	10'-11'	10'-11'	10'	10'-11'	10'-11'	10'-11'			9'	73'-79'	91'-97'

Required Optional

NOT TO SCALE

Four-Lane Divided



	Road Side	Parking	Bike	Lane	Lane	Median	Lane	Lane	Bike	Parking	Road Side	Curb to Curb	ROW
Suburban - Commercial	16'	7'*-8'	5'-6'	11'-12'	11'-12'	15.5'-22'	11'-12'	11'-12'	5'-6'	7'*-8'	16'	84'-98'	116'-130'
Suburban - Residential	14.5'	7'* Optional	4'-6"**	10'-11'	10'-11'	15.5'-22'	10'-11'	10'-11'	4'-6"**	7'* Optional	14.5'	64'-92'	93'-121'
Urban - Commercial	19'	7'*-8'	5'-6'	11'-12'	11'-12'	15.5'-22'	11'-12'	11'-12'	5'-6'	7'*-8'	19'	84'-98'	122'-136'
Urban - Residential	16.5'	7'* Optional	4'-6"**	10'-11'	10'-11'	15.5'-22'	10'-11'	10'-11'	4'-6"**	7'* Optional	16.5'	64'-92'	97'-125'
Urban Center/Core	21.5'	7'*-8'	5'-6"**	11'	11'	15.5'-22'	11'	11'	5'-6"**	7'*-8'	21.5'	84'-94'	127'-137'

* Minimum 7' assumes use of 1.5' gutter pan

** 5' required when adjacent to on-street parking or between right turn lane and through lane

Curb to curb denotes front of curb to front of curb

Constrained ROW

9'			10'-11'	10'-11'	10'	10'-11'	10'-11'			9'	53'-57'	71'-75'

Required Optional

NOT TO SCALE

LOW-SPEED BOULEVARD

Priority – Required Elements

Number of Lanes
Generally two lanes in each direction (four lanes total), but sometimes may be up to three lanes (six lanes total).

Lane Width
Typically, 11-foot to 12-foot-wide lanes for predominantly commercial sections and 10 feet to 11 feet for predominantly residential sections. In constrained conditions and under the "livable communities" designation, the Florida Greenbook allows for up to 10-foot-wide lanes. Outer lanes can be up to 13 feet wide if it is a heavily used transit route.

Posted Speed
Typically, 35 mph or less. If on-street parking is not provided, then the posted speed can be up to a maximum of 40 mph. The design speed can be 5 – 10 mph above the posted speed.

Median
15.5 feet to 22 feet wide. At least a 15.5-foot-wide median is preferred to allow for a minimum of four feet of pedestrian refuge at intersections. Under constrained conditions, the median can be as narrow as ten feet wide; however, additional design considerations apply in accordance with the Florida Greenbook.

Median Planting
Medians should be landscaped with trees as recommended in the Miami-Dade County Street Tree Master Plan.

Bike Lane
Bike lanes are desirable along low-speed boulevards to allow less skilled bicyclists to safely operate. Bike lanes are specifically recommended on roadways that are on the County's bicycle network or where necessary to provide continuity for bike routes. When provided, the lane should be a minimum of four feet wide (not including curb and gutter) in residential areas and five feet wide in commercial areas (preferably five feet if right-of-way is available).

Sidewalks
Pedestrian activity is encouraged along low-speed boulevards due to the lower speeds on the roadways and the multimodal priority. Sidewalk widths vary depending on the context zones and are described in detail in Section 4.

Sidewalk Furnishings
In predominantly residential areas, sidewalks are separated from the vehicle zone through a continuous planting strip with appropriate connections from the curb to the sidewalk. In predominantly commercial areas, the sidewalks are separated from the vehicle zone through sidewalk furnishings including tree grates/tree wells.

On-street Parking
On-street parking is allowed on low-speed boulevards due to the lower speeds along the roadway. On-street parking is optional in predominantly residential areas and is strongly desirable in predominantly commercial areas due to the increased pedestrian activity.

Curb and Gutter
Generally curb and gutter is preferred within urban locations but drainage swales are allowable in some suburban areas. A minimum of a two-foot-wide curb and gutter should be used on the outside lane, but 1.5 feet wide is permitted on inside, median lanes.

Optional Elements

Curb Extensions
Curb extensions are often recommended at mid-block pedestrian crossings. It provides for reduced pedestrian crossing distances and increased visibility while also providing increased opportunities for landscaping and street furniture. The curb extensions are typically the same width as that of the parking lane.

Incompatible Elements

Shoulder
Curb and gutter is the preferred roadway edge treatment for boulevards.

AVENUES

Avenues are the most common of all street types. Avenues are generally low-to-medium speed thoroughfares, generally shorter in length than boulevards. Avenues accommodate trips of moderate lengths for city-wide or regional travel. Avenues have higher access to abutting properties than boulevards and generally have speeds of 25 to 35 mph. Avenues are never more than two lanes in each direction (four lanes total); however, sometimes they may be two lanes in each direction with a center two-way turn lane (five lanes total). Providing access to adjacent lands is a very important function for avenues.

It should be noted that the proposed street type nomenclature of "avenue" is not related to the current roadway naming convention in Miami-Dade County. In Miami-Dade County, north-south roadways are referred to as "streets" and east-west roadways as "avenues."

The majority of roadways within Miami-Dade County can be classified as avenues. Avenues are designed to provide a balance of all transportation modes with high quality pedestrian access, high quality bicycle accommodations, high quality transit, while also carrying a significant amount of traffic. They provide a great balance for all modes of transportation unlike boulevards with a higher priority for automobiles. Avenues serve as primary pedestrian and bicycle routes and may serve as local transit routes.

An avenue can be either an undivided street or a divided street featuring a raised landscaped median, and usually provide on-street parking. The lower speeds on avenues provide for mobility for automobiles while providing for safe on-street parking. The lower speed limits along avenues also allow for safe and comfortable movement for pedestrian and bicycle activity along these streets.

Avenues can serve as important transit routes since they are heavily traveled pedestrian corridors. The location of transit stops and transit amenities needs to be carefully planned along avenues to provide pedestrian accessibility and comfort.

The typical section recommended for an avenue varies by the context zone within which it is located. Suburban and urban context zones contain aggregated areas of residential and commercial developments in the form of neighborhoods and retail areas. The typical sections for suburban and the urban context zones are further divided into two categories — predominantly residential and predominantly commercial. The primary differences between the residential and the commercial typical sections are:

- On-street parking is optional along residential sections, but is strongly recommended on commercial sections.
- Residential sections have continuous planting strips between the road and the sidewalk and the commercial sections have continuous pavement from the road to the sidewalk with tree grates or tree wells as furnishings.

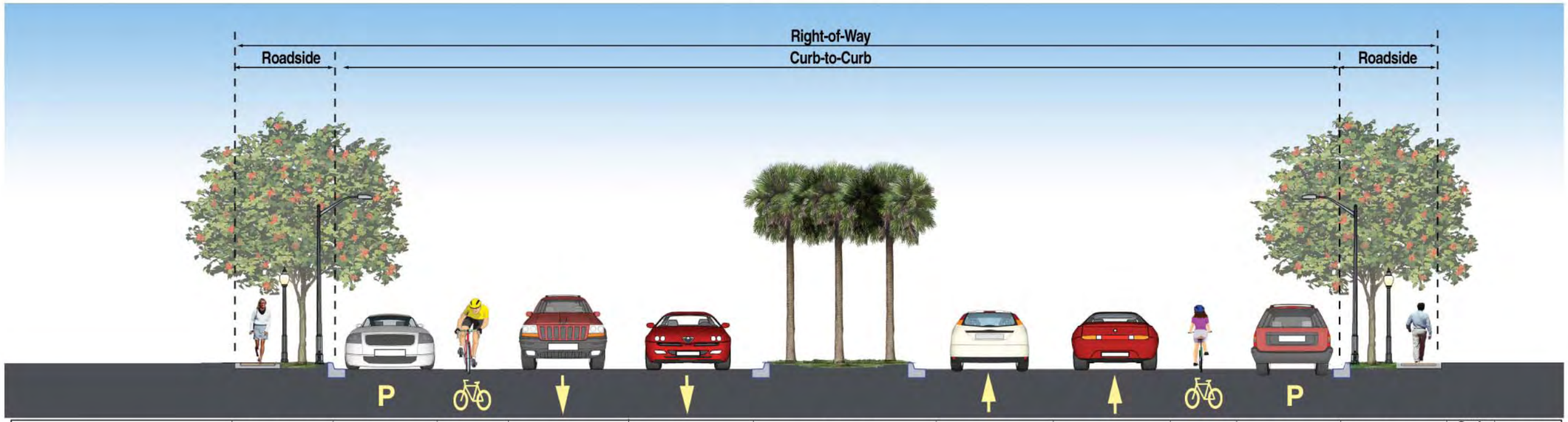
Urban centers and urban core typically contain predominantly mixed uses. Only one typical section is recommended for these two context zones, which closely resembles the typical sections for the predominantly commercial urban and suburban typical sections except the roadside is much wider within the urban center and urban core. The roadside elements and dimensions are illustrated in detail in Section 4.

The following pages illustrate the typical sections for the following roadways:

- Four-Lane Avenue
- Four-Lane Avenue with a Center Turn Lane
- Two-Lane Avenue
- Two-Lane Avenue with a Center Turn Lane

The typical section illustrations are followed by a description of the required, optional, and incompatible design elements. Required elements refer to the design elements that are integral to the design of the referenced roadway type. Optional elements refer to the design elements that are recommended in the typical section, but can be excluded if adequate right-of-way is not available. Incompatible elements refer to the design elements that should not be included in the design of the referenced roadway type. The minimum dimensions for physically constrained roadways are also provided.

Four-Lane



	Road Side	Parking	Bike[2]	Lane	Lane	Median[1]	Lane	Lane	Bike[2]	Parking	Road Side	Curb to Curb	ROW
Suburban - Commercial	15'	7'*-8'	5'-6'	10'-11'	10'-11'	15.5' Optional	10'-11'	10'-11'	5'-6'	7'-8'	15'	64'-88'	94'-118'
Suburban - Residential	12.5'	7'* optional	4'-6"**	10'-11'	10'-11'	15.5' Optional	10'-11'	10'-11'	4'-6"**	7'* optional	12.5'	48'-86'	73'-111'
Urban - Commercial	16'	7'*-8'	5'-6'	10'-11'	10'-11'	15.5' Optional	10'-11'	10'-11'	5'-6'	7'*-8'	16'	64'-88'	96'-120'
Urban - Residential	12.5'	7'* optional	4'-6"**	10'-11'	10'-11'	15.5' Optional	10'-11'	10'-11'	4'-6"**	7'* optional	12.5'	48'-86'	73'-111'
Urban Center/Core	19.5'	7'*-8'	5'-6'	10'-11'	10'-11'	15.5' Optional	10'-11'	10'-11'	5'-6'	7'*-8'	19.5'	64'-88'	103'-127'

* Minimum 7' assumes use of 1.5' gutter pan

** 5' required when adjacent to on-street parking or between right turn lane and through lane

Curb to curb denotes front of curb to front of curb

1 For urban & suburban residential, with a median and no on-street parking the minimum pavement on either side of median should be 16'.

2 For avenues that are collectors with target speed of 30 mph or less, bike lanes can be substituted with wide outer lanes of 14'-15'

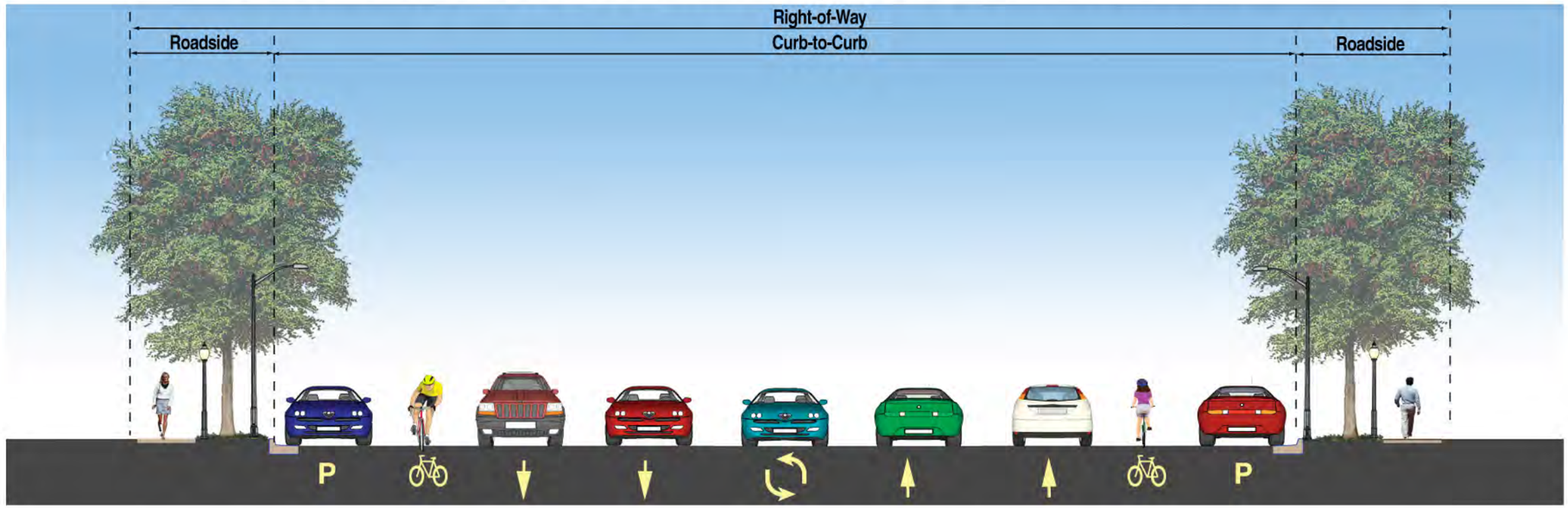
Constrained ROW

9'			10'-11'	10'-11'		10'-11'	10'-11'			9'	43'-47'	61'-65'

Required Optional

NOT TO SCALE

Four-Lane with Two-Way Center Turn Lane



	Road Side	Parking	Bike[1]	Lane	Lane	Center Lane	Lane	Lane	Bike[1]	Parking	Road Side	Curb to Curb	ROW
Suburban - Commercial	14'	7'*- 8'	5'-6'	10'-11'	10'-11'	10'-11'	10'-11'	10'-11'	5'-6'	7'*- 8'	14'	74'-82'	102'-110'
Suburban - Residential	10.5'	7'* optional	4'**-6'	10'-11'	10'-11'	10'-11'	10'-11'	10'-11'	4'**-6'	7'* optional	10.5'	58'-81'	79'-102'
Urban - Commercial	14'	7'*- 8'	5'-6'	10'-11'	10'-11'	10'-11'	10'-11'	10'-11'	5'-6'	7'*- 8'	14'	74'-82'	102'-110'
Urban - Residential	10.5'	7'* optional	4'**-6'	10'-11'	10'-11'	10'-11'	10'-11'	10'-11'	4'**-6'	7'* optional	10.5'	58'-81'	79'-102'
Urban Center/Core	16'	7'*- 8'	5'-6'	10'-11'	10'-11'	10'-11'	10'-11'	10'-11'	5'-6'	7'*- 8'	16'	74'-82'	106'-114'

* Minimum 7' assumes use of 1.5' gutter pan

** 5' required when adjacent to on-street parking or between right turn lane and through lane

Curb to curb denotes front of curb to front of curb

[1] For avenues that are collectors with target speed of 30 mph or less, bike lanes can be substituted with wide outer lanes of 14-15'

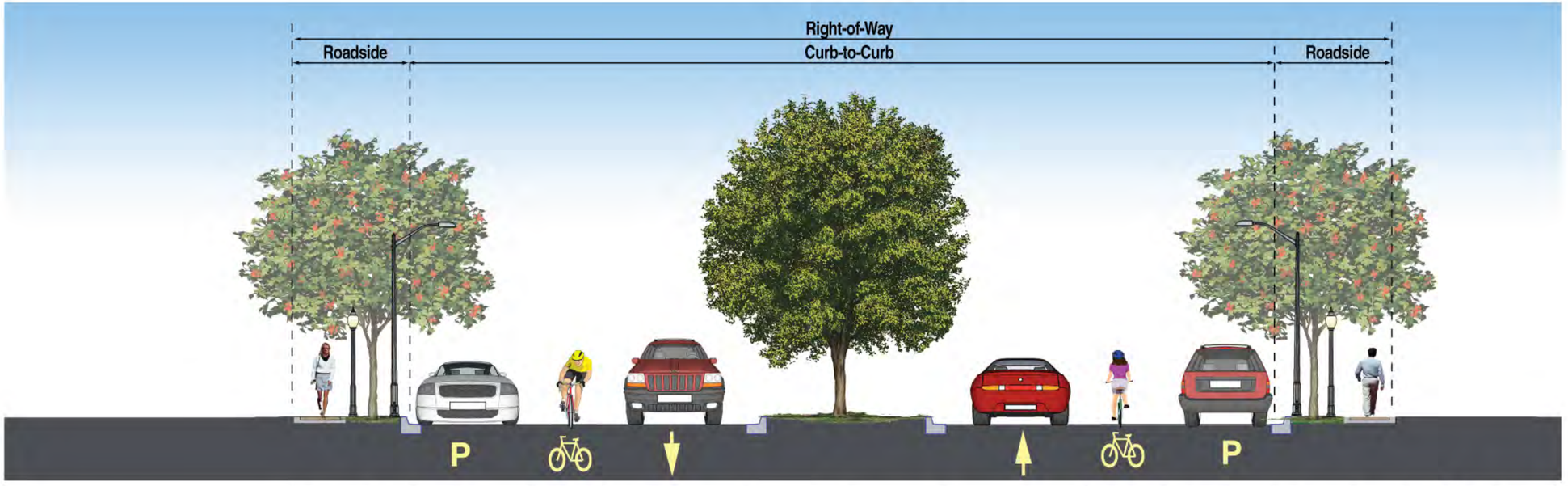
Constrained ROW

9'			10'-11'	10'-11'	10-11'	10'-11'	10'-11'			9'	53'-58'	71'-76'

Required Optional

NOT TO SCALE

Two-Lane



	Road Side	Parking	Bike[1]	Lane	Median	Lane	Bike[1]	Parking	Road Side	Curb to Curb	ROW
Suburban - Commercial	15'	7'*-8'	5'-6'	10'-11'	10'-15.5' optional	10'-11'	5'-6'	7'*-8'	15'	44'-66'	74'-96'
Suburban - Residential	12.5'	7'* optional	4'-6"**	10'-11'	10'-15.5' optional	10'-11'	4'-6"**	7'* optional	12.5'	28'-64'	53'-89'
Urban - Commercial	16'	7'*-8'	5'-6'	10'-11'	10'-15.5' optional	10'-11'	5'-6'	7'*-8'	16'	44'-66'	76'-98'
Urban - Residential	12.5'	7'* optional	4'-6"**	10'-11'	10'-15.5' optional	10'-11'	4'-6"**	7'* optional	12.5'	28'-64'	53'-89'
Urban Center/Core	19.5'	7'*-8'	5'-6'	10'-11'	10'-15.5' optional	10'-11'	5'-6'	7'*-8'	19.5'	44'-66'	83'-105'

* Minimum 7' assumes use of 1.5' gutter pan

** 5' required when adjacent to on-street parking or between right turn lane and through lane

Curb to curb denotes front of curb to front of curb

[1] Bike lane may be optional if it does not exist on bike route plan. If no on-street parking is provided, the outer lanes can be 14' to accomodate bike lane in the travel lane

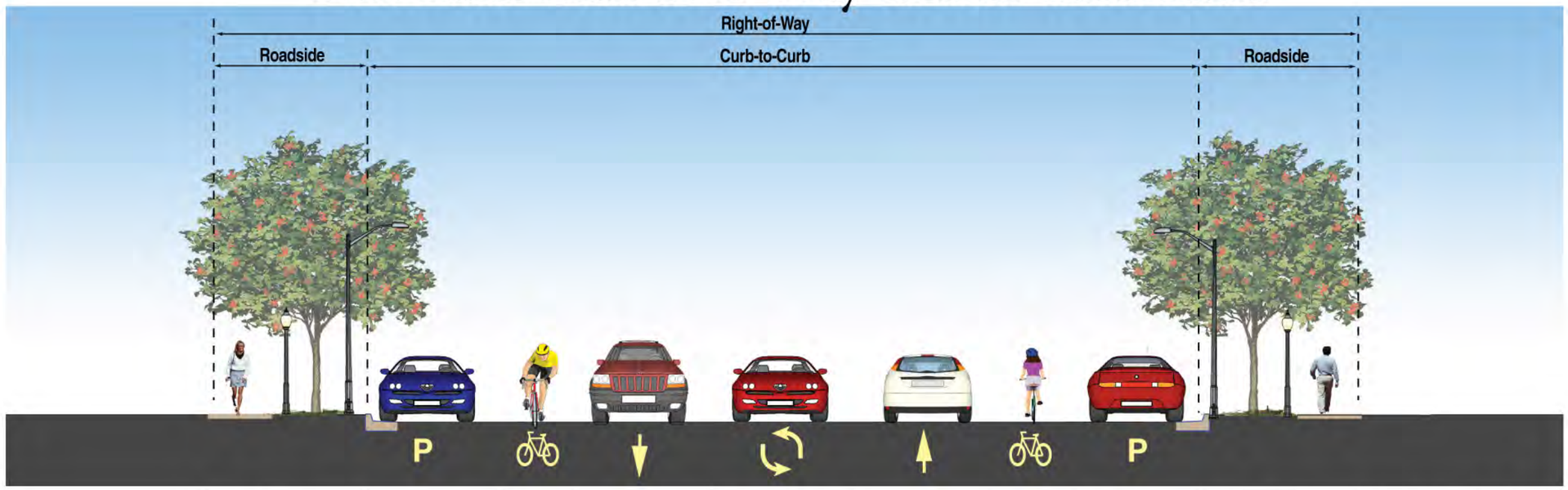
Constrained ROW

9'			11'-12'		11'-12'			9'	22'-24'	40'-42'

Required Optional

NOT TO SCALE

Two-Lane with Two-Way Center Turn Lane



	Road Side	Parking	Bike[1]	Lane	Center Turn Lane	Lane	Bike[1]	Parking	Road Side	Curb to Curb	ROW
Suburban - Commercial	15'	7'*-8'	5'-6'	10'-11'	10'	10'-11'	5'-6'	7'*-8'	15'	54'-60'	84'-90'
Suburban - Residential	11.5'	7'* Optional	4'-6"**	10'-11'	10'	10'-11'	4'-6"**	7'* Optional	11.5'	38'-58'	61'-81'
Urban - Commercial	16'	7'*-8'	5'-6'	10'-11'	10'	10'-11'	5'-6'	7'*-8'	16'	54'-60'	86'-92'
Urban - Residential	11.5'	7'* Optional	4'-6"**	10'-11'	10'	10'-11'	4'-6"**	7'* Optional	11.5'	38'-58'	61'-81'
Urban Center/Core	16'	7'*-8'	5'-6'	10'-11'	10'	10'-11'	5'-6'	7'*-8'	16'	54'-60'	86'-92'

* Minimum 7' assumes use of 1.5' gutter pan

** 5' required when adjacent to on-street parking or between right turn lane and through lane

Curb to curb denotes front of curb to front of curb

[1] Bike lane may be optional if it does not exist on bike route plan. If no on-street parking is provided, the outer lanes can be 14' to accomodate bike lane in the travel lane.

Constrained ROW

9'			10'-11'	10'	10'-11'			9'	33'-35'	51'-53'

Required Optional

NOT TO SCALE

Required – Priority Elements

Number of Lanes
Two lanes in each direction with a two-way center turn lane (five lanes total) and two lanes in each direction (four lanes total) for avenues that are either minor arterials or collectors. One lane in each direction with a two-way center turn lane (three lanes total) and one lane in each direction (two lanes total) for avenues that are collectors.

Lane Width
Eleven-foot-wide lanes are ideal, but 10-foot-wide lanes are acceptable. Outer lanes can be up to14 feet to accommodate the bicyclist in the outer travel lane, where on-street is not provided.

Posted Speed
Typically, 25 – 35 mph. The design speed can be 5 – 10 mph above posted speed.

Sidewalks
Pedestrian activity is highly encouraged along avenues due to the lower speeds on the roadways and the focus on balancing all modes of transportation. Sidewalk widths vary depending on the context zones and are described in detail in Section 4.

Sidewalk Furnishings
In predominantly residential areas, sidewalks are separated from the vehicle zone through a continuous planting strip with appropriate connections from the curb to the sidewalk. In predominantly commercial areas, the sidewalks are separated from the vehicle zone through sidewalk furnishings including tree grates/tree wells.

Curb and Gutter
Generally curb and gutter is preferred within urban locations, but drainage swales are allowable in some suburban areas. A minimum of a two-foot-wide curb and gutter should be used on the outside lane, but 1.5 feet is allowable on inside, median lanes.

On-street Parking
On-street parking is desirable on avenues that are located in predominantly commercial areas due to the increased retail use. On-street parking is optional in predominantly residential areas.

Optional Elements

Median
Medians are optional along avenues. Where provided, the median can be a width of 10 feet to 15.5 feet wide. A 15.5-foot-wide median in preferred to allow for a minimum of a four-foot-wide pedestrian refuge at intersections. Under constrained conditions, the median can be as narrow as six feet wide; however, additional design considerations apply in accordance with the Florida Greenbook.

Median Planting
Medians should be landscaped with trees as recommended in the Miami-Dade County Street Tree Master Plan and in accordance with sight distance requirements.

Bike Lane
Bike lanes are desirable along avenues to allow less skilled bicyclists to safely operate at higher speeds. They are specifically recommended on roadways that are on the County's bicycle network or where necessary to provide continuity for bike routes. When provided, the lane should be a minimum of four feet wide (not including curb and gutter) in residential areas and five feet wide in commercial areas (preferably five feet wide if ROW permits).

Incompatible Elements

Shoulder
Curb and gutter are preferred for avenues.

STREETS

Streets are the most pedestrian-oriented and access oriented streets. Streets can either be collector streets or local streets. It should be noted that the proposed nomenclature of "street" is not related to the current roadway naming convention in Miami-Dade County. In Miami-Dade County, north-south roadways are referred to as "streets" and east-west roadways as "avenues."

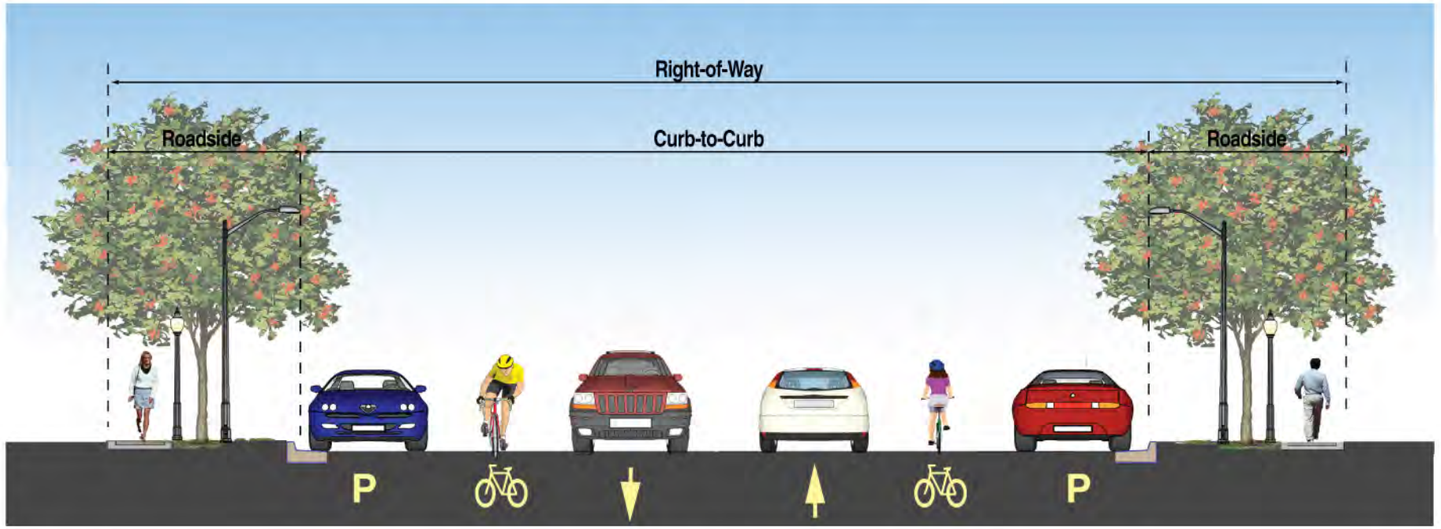
Streets are never more than one lane in each direction (two lanes total). The main function of a street is to provide access to adjacent properties. Streets also provide connections between neighborhoods, as well as from neighborhoods and business parks to regional roadways. Streets are the most common roadway type within Miami-Dade County in terms of total miles.

Streets, as presented in this section, are classified as follows based on the adjacent land uses along the street:

- Street – General
- Main Street
- Residential Street
- Commercial Street
- Industrial Street

The following pages illustrate the typical section for each of the streets followed by a description of the required, optional, and incompatible design elements. Required elements refer to the design elements that are integral to the design of the referenced roadway type. Optional elements refer to the design elements that are recommended in the typical section, but can be excluded if adequate right-of-way is not available. Incompatible elements refer to the design elements that should not be included in the design of the referenced roadway type. The minimum dimensions for physically constrained roadways are also provided.

Two-Lane Undivided



	Road Side	Parking	Bike[1]	Lane	Lane	Bike[1]	Parking	Road Side	Curb to Curb	ROW
Suburban - Commercial	14'	7'*-8'	5'-6'	10'-11'	10'-11'	5'-6'	7'*-8'	14'	44'-50'	72'-78'
Suburban - Residential	10.5'	7'* optional	4'-6'**	10'-11'	10'-11'	4'-6'**	7'* optional	10.5'	28'-48'	49'-69'
Urban - Commercial	14	7'*-8'	5'-6'	10'-11'	10'-11'	5'-6'	7'*-8'	14'	44'-50'	72'-78'
Urban - Residential	10.5'	7'* optional	4'-6'**	10'-11'	10'-11'	4'-6'**	7'* optional	10.5'	28'-48'	49'-69'
Urban Central/Core	16'	7'*-8'	5'-6'	10'-11'	10'-11'	5'-6'	7'*-8'	16'	44'-50'	76'-82'

* Minimum 7' assumes use of 1.5' gutter pan

** 5' required when adjacent to on-street parking or between right turn lane and through lane

Curb to curb denotes front of curb to front of curb

[1] Bike lane may be optional if it does not exist on bike route plan. If no on-street parking is provided, the outer lanes can be 14' to accomodate bike lane in the travel lane

Constrained ROW

9'			10'-11'	10'-11'			9'	23'-25'	41'-43'

Required Optional

NOT TO SCALE

MAIN STREET

Main Streets provide access to destinations for social, retail, and civic activity in town centers. Traditionally, main streets are found in the downtown areas of Miami-Dade County. New Main streets are now commonly developed within urban centers and urban cores. The new main streets typically occur in large, mixed use developments serving as centers for busy retail and institutional activities. Main streets are predominantly pedestrian-oriented with vehicular mobility serving as a secondary function. Main streets generally occur within urban centers and the County's urban core.

The developments along main streets are predominantly retail on the ground level with optional residential or retail on the upper levels. The buildings along main streets are oriented towards and situated in close proximity to the street. The building frontage on a main street typically abuts the sidewalk.

The modal priority on main streets is oriented to pedestrians providing the highest level of comfort to the walking mode. The Main Street typically contains one lane in each direction (two lanes total) with on-street parking that serves the heavy retail activity on the ground level. Main streets are generally narrow in width to provide a shorter distance for pedestrian crossings. The posted speeds are generally 25 mph or less to provide safety and comfort for pedestrian movement.

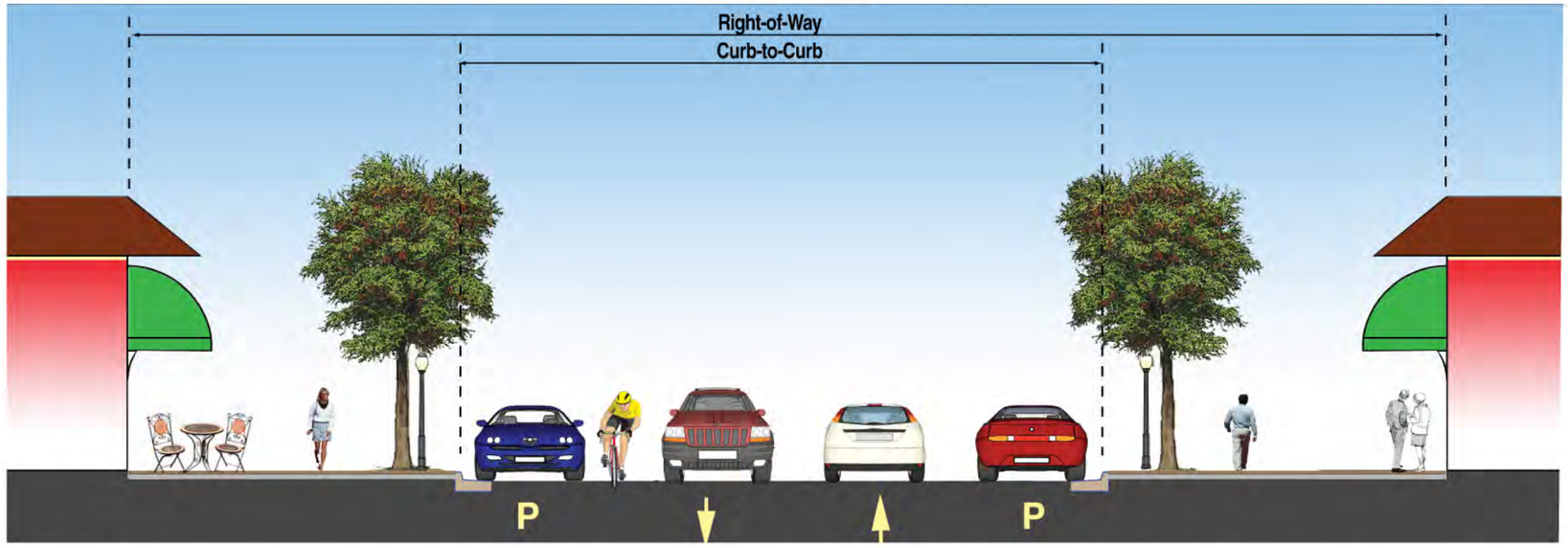
The pedestrian zone is the most important element of a main street and must be carefully designed. Due to the high pedestrian volumes and increased civic activity along a main street, the pedestrian zone should be clearly marked and identifiable by all modes of transportation. Pedestrian features include wide sidewalks and several pedestrian amenities in the furnishings zone. Sidewalks along a main street are typically eight to 10 feet of clear unobstructed space. Sidewalk amenities include pedestrian scaled lighting, signage, furniture, public art, street trees, transit shelters, and trash receptacles.

Main streets have shorter block lengths of approximately 400 feet to 600 feet to provide for short walking experiences and frequent pedestrian crossings. Access along main streets should be carefully planned; vehicular access is ideally provided on the rear side of buildings.

Main Streets are anticipated within the urban centers and the urban core. The typical section recommended for a Main Street does not vary by context zone. Since Main Streets have predominantly retail uses adjacent to the street, on-street parking is required. Additionally, the roadside dimension is the widest on a Main Street compared to other roadway types.

The following pages illustrate the typical section for a Main Street followed by a description of the required, optional, and incompatible design elements. Required elements refer to the design elements that are integral to the design of the referenced roadway type. Optional elements refer to the design elements that are recommended in the typical section, but can be excluded if adequate right-of-way is not available. Incompatible elements refer to the design elements that should not be included in the design of the referenced roadway type. The minimum dimensions for physically constrained roadways are also provided.

Two-Lane



Frontage	Sidewalk	Furnishing	Parking	Lane	Lane	Parking	Furnishing	Sidewalk	Frontage	Curb to Curb	ROW
2.5'	10'	8'	8'	14'*	14'*	8'	8'	10'	2.5'	44'	85'

*When 8' parking lane is provided, bicycles can be accommodated in the 14' travel lane
Curb to curb denotes front of curb to front of curb

Constrained ROW

2'	5'	5'	8'	12'*	12'*	8'*	5'	5'	2'	40'	64'

Required Optional *Bicycles will not be accommodated in a constrained roadway section

NOT TO SCALE

Required – Priority Elements

Number of Lanes
One lane in each direction (two lanes total). Occasionally a third center turn lane may be provided where the block lengths are short (400 to 600 feet). Where block lengths are longer, a third lane may still be provided; however, it should be intermittently broken with landscaping or other features.

Lane Width
Should ideally provide at least 14 feet of width for lanes adjacent to on-street parking to allow for adequate space for opening car doors and to provide adequate width to accommodate bicycles, transit, and commercial vehicles. Even in constrained conditions, lanes adjacent to parking should not be less than 12 feet in width. A lane width of 10 feet is acceptable for the center turn lane.

Posted Speed
Set at 25 mph. The design speed can be 5 – 10 mph above posted speed.

Sidewalk Zone
Sidewalks are the most crucial design element along a main street due to the increased focus on pedestrian activity. Sidewalks are recommended to be at least 10 feet of clear unobstructed width to allow two couples to pass comfortably. Under constrained conditions, the sidewalks should be a minimum of five feet wide.

Sidewalk Furnishings
Furnishings and amenities in the sidewalk zone enhance the pedestrian environment of the main street. This zone should be a minimum of eight feet wide (not including the sidewalk). The furnishing zone along a main street consists of continuous pavement from the curb to the building frontage with tree grates or tree wells at even intervals. Even under constrained conditions, the sidewalk furnishing zone should be a minimum of five to six feet wide. Sidewalk amenities include pedestrian scaled lighting, signage, furniture, public art, street trees, transit shelters, and trash receptacles.

On-street Parking
On-street parking is desirable along main streets to support the intense retail activities at the ground level. Additionally, it provides a buffer between vehicles and pedestrians along the sidewalk. The width of the parking lane should be at least eight feet wide, including the gutter pan.

Curb and Gutter
Typical sections should always include curb and gutter.

Optional Elements

Bike Lane
Main Street provides for a wide travel lane of 14 feet to accommodate bicyclists. Significant volumes of bicyclists are neither expected nor encouraged on a Main Street. The U.S. Department of Transportation's (USDOT) *Selecting Roadway Design Treatments to Accommodate Bicycles* recommends using wide outside lanes to accommodate bicyclist on lower speed roads unless designated bicycle lanes are warranted to complete the bicycle network. Designated bicycle lanes for the advanced bicyclist should be accommodated outside of the downtown areas and away from Main Streets. However, if the Main Street is a part of the bicycle network, designated bicycle lanes of 4 to 5 feet are allowed.

The provision of a designated bicycle lane will increase the perceived width of the roadway thus creating conditions for the motorist to drive at higher speeds, thereby making it unpleasant for pedestrians and retailers. It is best not to provide a bicycle lane in the heart of what is a pedestrian-oriented roadway, and instead have bicyclists share the travel lane with slower-moving cars.

Median
Medians are generally not recommended on main streets since they increase the pedestrian crossing distance. They may be allowable under certain circumstances for aesthetic purposes, pedestrian safety, or to provide intermittent breaks in the center turn lane.

Median Planting
Medians should be landscaped with trees as recommended in the Miami-Dade County Street Tree Master Plan and in accordance with sight distance requirements.

Curb Extensions
Curb extensions are often recommended at mid-block pedestrian crossings. They reduce pedestrian crossing distances and increase visibility while also providing increased opportunities for landscaping and street furniture. The curb extensions are typically the same width as the parking lane.

Incompatible Elements

Planting Strips
Planting strips are generally incompatible on a main street because they reduce the usable space that could otherwise be used for pedestrian amenities. It is beneficial to provide continuous access from on-street parking to sidewalks.

Driveways
Driveways should not be provided on a main street since they increase the opportunity of conflict between pedestrians and motor vehicles. Parking access should be provided on the rear side of the buildings.

STREET – RESIDENTIAL

Residential streets provide access to residential neighborhoods within the suburban and urban zones. The land uses along residential streets range from single-family developments to multi-family developments of varying range of densities. The typical sections for residential streets and their associated elements, and their dimensions recommended within the typical sections, are based on residential densities. The following three typical sections are recommended for residential streets:

- Low-Density Residential
- Medium-Density Residential
- High-Density Residential

It is important to note that these typical sections are recommended for neighborhood streets only. Residential streets accommodate relatively low volumes of traffic at lower speeds. They primarily carry neighborhood traffic of shorter trip lengths. The lower speeds along residential streets provide a comfortable and safe walking and bicycling environment. In some parts of Miami-Dade County, especially older parts of the County, residential streets have continuous sidewalks separated from the vehicle zone through wide planting strips with shade trees, providing a pleasant walking experience along these roadways.

The modal priority along residential streets is oriented towards pedestrians and bicyclists. Transit service is not typical along residential streets, but may be available along streets with high residential densities. Vehicular speeds are controlled along residential streets through use of traffic calming measures including speed humps, speed tables, chicanes, medians, and landscaping. However, properly designed residential streets should naturally ensure lower speeds, thus reducing the necessity to provide traffic calming features as an afterthought.

The residential streets standards included in the Study are in accordance with the Institute of Transportation Engineers' (ITE) *Neighborhood Street Design Guidelines*. The Study recommends three different typical sections based on residential densities along these streets – low, medium, and high density. It is important to note that these are local streets only. Different typical sections are provided for boulevards, avenues, and general streets within predominantly residential areas. The low density residential local street is expected to occur only in suburban areas where the residential densities are less than two dwelling units per acre. The medium and high-density local street is anticipated occur within the urban zones. Within the urban core, local streets are not anticipated.

The ITE *Neighborhood Street Design Guidelines* introduces the concept of channels in designing a roadway. The report explains that when a neighborhood street is perceived by the designer as consisting of individual lanes of parked and moving vehicles, then each lane is allocated a fixed width making the street wider than necessary. Instead they recommend assuming sharing of space between potential street users rather than assuming exclusive portions of street space by individual users. The term "channel" refers to the sharing of space on neighborhood streets. For example, along a low-density street with adequate off-street parking, the likelihood of on-street parking is low and the vehicular traffic on the street is also low. Therefore, two channels of moving vehicles, with one also used occasionally by parked vehicles, is sufficient. Most of the time, both channels of moving vehicles will be open. In some instances, there will be intermittent parked vehicles, but the traffic volume is so low that there needs to be single travel channel with yield movement. Similarly, in the medium-density residential neighborhoods, three channels should be sufficient and in high-density residential, four channels are necessary due to more regular parking on both sides of the street. The respective typical sections illustrate the purpose of the channels.

Below are the descriptions of the required, optional, and incompatible design elements for a local residential street. Required elements refer to the design elements that are integral to the design of the referenced roadway type. Optional elements refer to the design elements that are recommended in the typical section, but can be excluded if adequate right-of-way is not available. Incompatible elements refer to the design elements that should not be included in the design of the referenced roadway type.

Required Elements

Number of Lanes
One lane in each direction (two lanes total).

Posted Speed
Less than 25 mph. Design speed should be equal to the posted speed.

Lane Width
Typically 10 feet in width.

On-Street Parking
On-street parking is generally provided along residential streets. Parking is allowable on one side of the road along low density residential streets and on either side along medium and high density residential streets.

Sidewalk Furnishings
Planting strips are essential along residential streets to provide separation between vehicular traffic and pedestrians. Planting strips should be a minimum of seven feet wide. Landscaping on the planting strips should be provided in accordance with the Miami-Dade County Street Tree Master Plan.

Sidewalks
Sidewalks are a crucial component of local residential streets. Sidewalks should be a minimum of five feet in width and should provide unobstructed space for pedestrian movements. For residential densities higher than 15 dwelling units per acre, sidewalks are recommended to be a minimum of eight feet of unobstructed width.

Optional Elements

Bus Stops
Bus stops can be provided on local residential street if it is a designated transit route.

Median
Medians are not generally recommended along residential streets. However, if they are provided, the width of pavement on either side of the median should be a minimum of 16 feet wide including curb and gutter.

Incompatible Elements

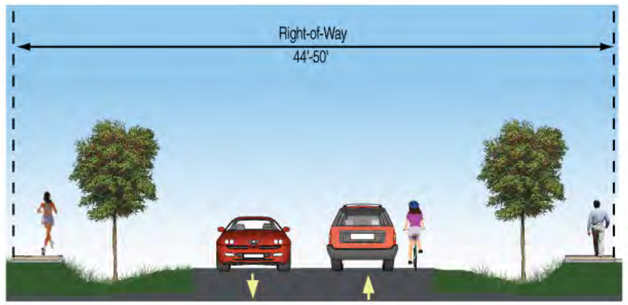
Bicycle Lanes
Bicycle lanes are generally incompatible on local residential streets due to the lower traffic volume and lower speeds. Bicyclists can share the same right-of-way as that of vehicular traffic. Local streets may serve as bicycle routes, but separate bicycle lanes need not be provided.

Shoulder
Shoulders are generally incompatible on a local residential street due to the lower speeds and traffic volumes.

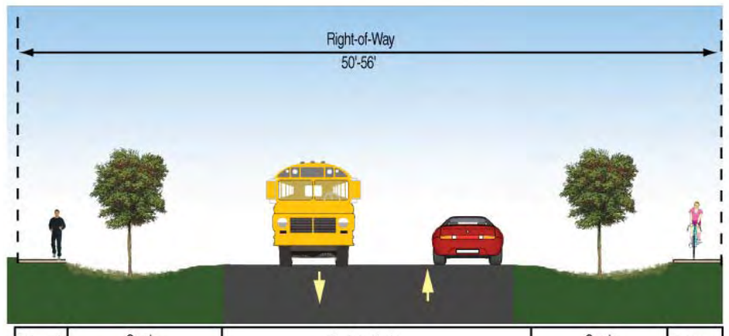
Mid-Block Pedestrian Crossings
Generally incompatible on residential streets due to the shorter width and lower speeds.

STREET – RESIDENTIAL

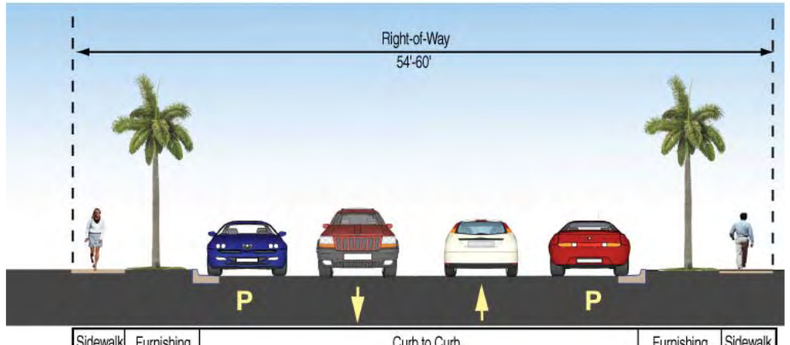
MODAL PRIORITY: MULTIMODAL



Sidewalk	Swale	Curb to Curb	Swale	Sidewalk
5'-6'	varies	20'-22'	Varies	5'-6'



Sidewalk	Swale	Curb to Curb	Swale	Sidewalk
5'-6'	Varies	26'-28'	Varies	5'-6'



Sidewalk	Furnishing	Curb to Curb	Furnishing	Sidewalk
5'-6'	7'-8'	30'-32'	7'-8'	5'-6'

NOT TO SCALE

Low Density Residential Street

- <2.0 du/acre
- Two channels for moving vehicles
- One channel can be occasionally used for on street parking
- Parking permitted on either side
- Yield movement for all moving vehicles
- Under constrained conditions minimum curb to curb or pavementr width = 18' with parking only on one side
- Edge treatment can include swales or curbs
- The lower and higher values in the range represents the minimum and recommended widths respectively

Medium Density Residential Street

- Between 2.1 — 6.0 du/acre
- Three channels for moving vehicles
- Parking permitted on both sides with 12' clear left for travel lane
- Under constrained conditions minimum curb to curb width = 24' with parking on one side only
- Edge treatment can include swales or curbs
- The lower and higher values in the range represents the minimum and recommended widths respectively

Medium Density Residential Street

- Between 2.1 — 6.0 du/acre
- Three channels for moving vehicles
- Parking permitted on both sides with 12' clear left for travel lane
- Under constrained conditions minimum curb to curb width = 24' with parking on one side only
- Edge treatment can include swales or curbs
- The lower and higher values in the range represents the minimum and recommended widths respectively

It is essential that these guidelines for pavement width are not used as a substitute for the exercise of engineering judgment. The designer should have an understanding of all guidelines contained in this Study before selecting element widths for a local street.

STREET – COMMERCIAL

Local commercial streets provide direct access to commercial, office and mixed use sites. Sometimes they serve as lower order streets within business parks. The recommended typical sections for commercial streets, their elements, and their dimensions are based on floor area ratios. There are two typical sections that are recommended for commercial streets as follows:

- Narrow Commercial Streets
- Wide Commercial Streets

Commercial streets carry relatively low traffic volumes at lower speeds. The modal priority along local commercial streets is oriented towards commercial vehicles while also accommodating pedestrians safely.

The narrow typical section for a local commercial street does not provide for on-street parking while the wider typical section provides for on-street parking on both sides. The narrow typical sections will apply to commercial areas with low intensities where truck loading, unloading and parking may already be provided on site. In those areas, provision of continuous on-street parking on either side may not be necessary. In areas with high intensity commercial uses, the wide typical sections are recommended to be used.

The following paragraphs provide the description of the required, optional, and incompatible design elements for a local residential street. Required elements refer to the design elements that are integral to the design of the referenced roadway type. Optional elements refer to the design elements that are recommended in the typical section, but can be excluded if adequate right-of-way is not available. Incompatible elements refer to the design elements that should not be included in the design of the referenced roadway type.

Required Elements

Number of Lanes
One lane in each direction (two lanes total).

Posted Speed
25 mph.

Lane Width
Typically is recommended to accommodate trucks.

On-Street Parking
On-street parking is provided along either side of the road on a wide commercial typical section. The on-street parking lane is a width of nine feet including a 1.5 feet gutter pan.

Sidewalk Furnishings
Sidewalk furnishings provide separation between vehicular traffic and pedestrians and can consist of planting strips or pavement with tree grates or tree wells. Planting strips should be a minimum of seven feet wide. Landscaping on the planting strips should be provided in accordance with the Miami-Dade County Street Tree Master Plan.

Sidewalks
Sidewalks are a crucial component of local commercial streets. Sidewalks should be a minimum of five feet in width and should provided unobstructed space for pedestrian movement. In higher density mixed use projects, sidewalks can be wider than five feet.

Optional Elements

Median
Medians are not generally recommended along local commercial streets. However, if they are provided, the width of pavement on either side of the median should be a minimum of 16 feet wide including curb and gutter.

Bus Stops
Bus stops can be provided on a local commercial street if it is a designated transit route.

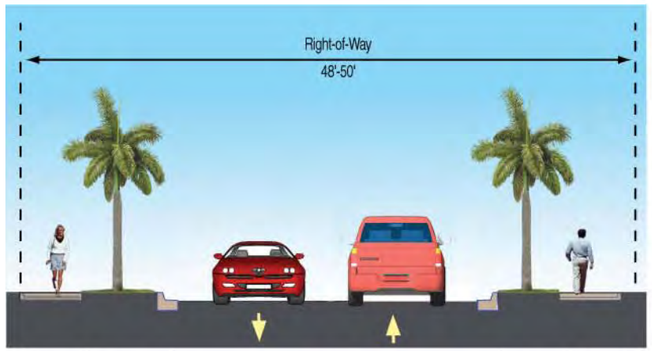
Bicycle Lanes
Bicycle lanes are generally optional on local commercial streets due to the lower traffic volume and lower speeds. Bicyclists can share the same right-of-way as that of vehicular traffic.

Incompatible Elements

Shoulder
Shoulders are generally incompatible on a local commercial street due to the lower speeds and traffic volumes.

STREET – COMMERCIAL

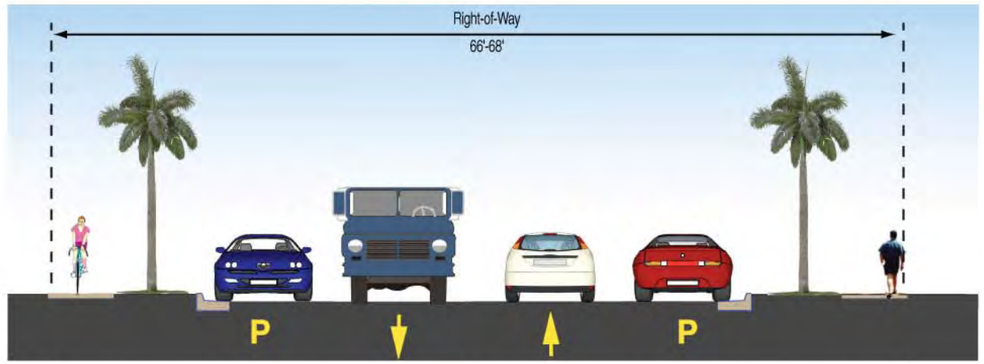
MODAL PRIORITY: MULTIMODAL



Sidewalk	Furnishing	Curb to Curb	Furnishing	Sidewalk
5'-6'	7'	24'	7'	5'-6'

Commercial Street - Narrow

- Two 12' travel lanes with no on-street parking
- 2' minimum curb and gutter



Sidewalk	Furnishing	Parking	Lane	Lane	Parking	Furnishing	Sidewalk
5'-6'	7'	9'	12'	12'	9'	7'	5'-6'

Commercial Street - Wide

- Two 12' travel lanes
- Two 8' on-street parking lanes (including 1.5 gutter pan)
- If median is provided there should be a minimum of 16' of pavement on either side of median

It is essential that these guidelines for pavement width are not used as a substitute for the exercise of engineering judgment. The designer should have an understanding of all guidelines contained in this Study before selecting a elements widths for a local street.

NOT TO SCALE

STREET – INDUSTRIAL

Local industrial streets provide direct access to predominantly industrial uses and distribution facilities. Sometimes they serve as lower order streets within industrial parks. The modal priority along industrial streets is oriented towards accommodating large volumes of trucks and heavy vehicles while also accommodating other modes. The design elements along industrial streets and their dimensions are designed to accommodate the size and maneuverability requirements of large trucks. Industrial streets are generally wider than residential and commercial streets and require larger curb radii due to the large number of commercial vehicles.

The following two typical sections are recommended for industrial streets:

- Narrow Industrial Streets
- Wide Industrial Streets

The narrow typical section for a local industrial street provides for on-street parking on one side only while the wider typical section provides for on-street parking on both sides. The narrow typical sections will apply to industrial areas with low intensities where truck loading, unloading and parking may already be provided on site. In those areas, provision of continuous on-street parking on either side may not be necessary. In areas with high intensity industrial uses, the wide typical sections are recommended to be used.

The following paragraphs provide the description of the required, optional, and incompatible design elements for a local residential street. Required elements refer to the design elements that are integral to the design of the referenced roadway type. Optional elements refer to the design elements that are recommended in the typical section, but can be excluded if adequate right-of-way is not available. Incompatible elements refer to the design elements that should not be included in the design of the referenced roadway type.

Required Elements

Number of Lanes
One lane in each direction (two lanes total).

Posted Speed
25 mph.

Lane Width
Typically, 12 feet of width for narrow streets and up to 14 feet for wide streets to accommodate large trucks.

On-Street Parking
On-street parking is generally provided to allow for truck parking when necessary. Parking is provided on one side of the roadway on the narrow typical section and on both sides of the roadway on a wide industrial typical section. The on-street parking lane is a width of eight feet including a 1.5-foot wide gutter pan.

Sidewalks
Even though pedestrian traffic may not be as high on an industrial street, pedestrians must still be accommodated. Sidewalks should be a minimum of five feet in width and should provided unobstructed space for pedestrian movement.

Optional Elements

Sidewalk Furnishings
Sidewalk furnishings provide separation between vehicular traffic and pedestrians and can consist of planting strips or pavement with tree grates or tree wells. However, they are an optional element along industrial streets. When provided, planting strips should be a minimum of seven feet wide. Landscaping on the planting strips should be provided in accordance with the Miami-Dade County Street Tree Master Plan.

Bus Stops
Bus stops can be provided on a local industrial street if it is a designated transit route.

Bicycle Lanes
Bicycle lanes are generally optional on local industrial streets. Bicyclists can share the same right-of-way as that of vehicular traffic.

Incompatible Elements

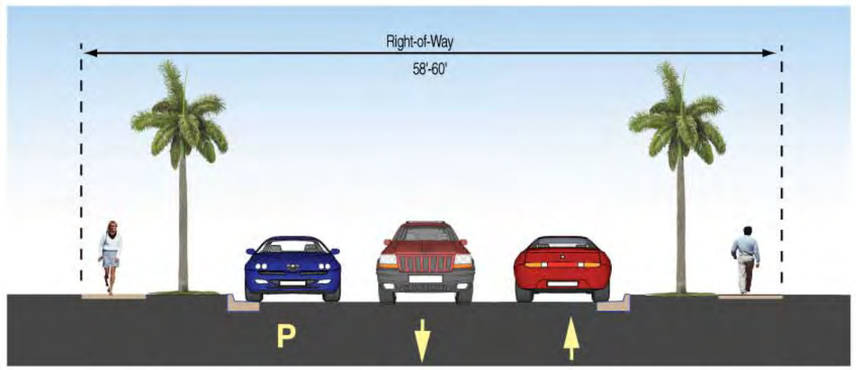
Median
Medians are not appropriate on local industrial streets due the demands on space by large vehicles.

Shoulder
Shoulders are generally incompatible on a local industrial street due to the lower speeds and traffic volumes.

Mid-Block Pedestrian Crossings
Generally incompatible on local industrial streets.

STREET – INDUSTRIAL

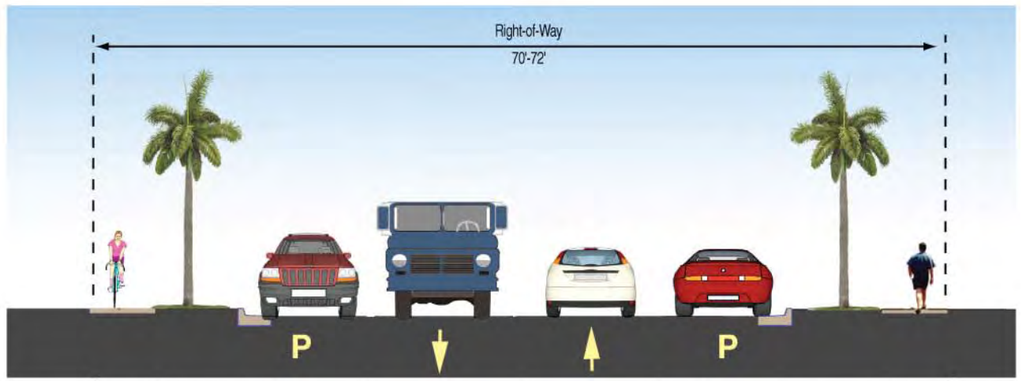
MODAL PRIORITY: COMMERCIAL VEHICLES



Sidewalk	Furnishing	Curb to Curb	Furnishing	Sidewalk
5'-6'	7'	34'	7'	5'-6'

Industrial Street - Narrow

- Two 13' travel lanes with 8' parking allowed on one side only
- 8' parking lane width (including 1.5' gutter pan)



Sidewalk	Furnishing	Parking	Lane	Lane	Parking	Furnishing	Sidewalk
5'-6'	7'	9'	14'	14'	9'	7'	5'-6'

Industrial Street - Wide

- Two 14' travel lanes with parking on either side
- 8' parking lane width (including 1.5' gutter pan)
- If median is provided there should be a minimum of 16' of pavement on either side of median

It is essential that these guidelines for pavement width are not used as a substitute for the exercise of engineering judgment. The designer should have an understanding of all guidelines contained in this Study before selecting a elements widths for a local street.

NOT TO SCALE

HIGHWAY, DRIVE AND ROAD

The three roadway types proposed within the rural context include highway, road, and drive. In its relationship with the traditional functional classification, a highway can be a primary arterial or a minor arterial. A drive can be a minor arterial or a collector. A road can be a collector street or a local street.

A highway is a long-distance, speed movement thoroughfare traversing the countryside. It carries primarily regional trips between countrysides or from the countryside to urban areas. Highways are relatively free of intersections and driveways and hence do not maintain access management controls. The modal priority on a highway is predominantly towards automobiles and pedestrian accommodations can be very little to none. Some highways serve as scenic routes and hence may accommodate bicycle and pedestrian facilities on separated but adjacent defined space.

A drive is a roadway carrying relatively moderate traffic volume and average travel speed. It collects regional trips from the highways and distributes to local roads.

A road is a small scale, slow movement, local thoroughfare providing access to adjacent land uses (predominantly low density buildings). A road may serve low-density residential clusters located within the rural community.

The following paragraphs provide the description of the required, optional, and incompatible design elements for a local residential street. Required elements refer to the design elements that are integral to the design of the referenced roadway type. Optional elements refer to the design elements that are recommended in the typical section, but can be excluded if adequate right-of-way is not available. Incompatible elements refer to the design elements that should not be included in the design of the referenced roadway type.

Required Elements

Number of Lanes
Generally two lanes in each direction (four lanes total) along highways and one lane in each direction (two lanes total) along drives and roads.

Lane Width
Typically, 12-foot-wide lanes for highways and drives due to higher speeds and 11 foot to 12-foot-wide roads.

Posted Speed:
Generally, 45 – 50 mph along highways, 35 – 45 mph along drives, and 25 – 35 mph along roads.

Median
Medians are recommended along highways and drives and not on roads. However, some drive may also have medians. The width of a median along a highway ranges between 22 feet to 50 feet depending upon the available right-of-way.

Median Planting
Median should be landscaped with trees as recommended in the Miami-Dade County Street Tree Master Plan.

Shoulder
Shoulders are recommended along highways and drives due to the higher speeds; they are optional on roads due to the lower speeds. The shoulder serves several essential functions including providing support to the edge of the traveled portion of the roadway, providing a safety area for drivers to regain control of vehicles if forced to leave the road surface, and draining water from the road surface to the swale. Shoulders can accommodate bicyclists.

Swales
Drainage swales are the preferred edge treatment along highways, drives and roads.

Optional Elements

Bike Lane
Bicyclists can be accommodated on the shoulders along highways and drives. However, separate bicycle paths or multiuse paths may be provided as a parallel facility to the roadway.

Other optional elements include planting strips, lighting, and shade trees.

Incompatible Elements

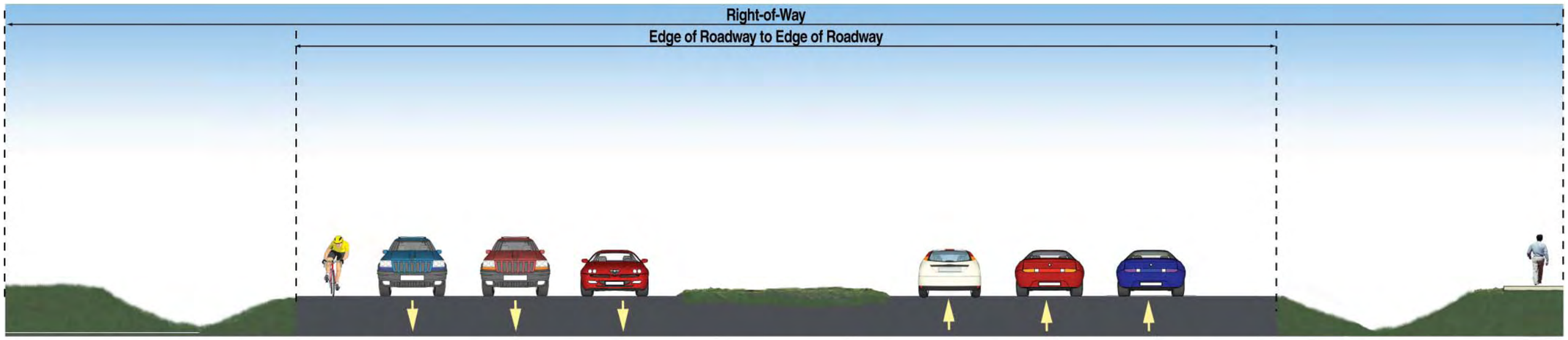
Sidewalks
Sidewalks adjacent to the vehicle travelway should not be provided along highways and drives due to the higher speeds. They may be provided on roads if required. Pedestrians can be accommodated on separate multi-use paths along with bicyclists on a parallel facility.

On-street Parking
On-street parking is not appropriate on highways, drives, and roads due to the low densities in the rural context.

Curb and Gutter
Curb and gutter should not be provided on roadways within the rural context.

The following pages illustrate the typical sections for highways, drives, and roads.

Six-Lane

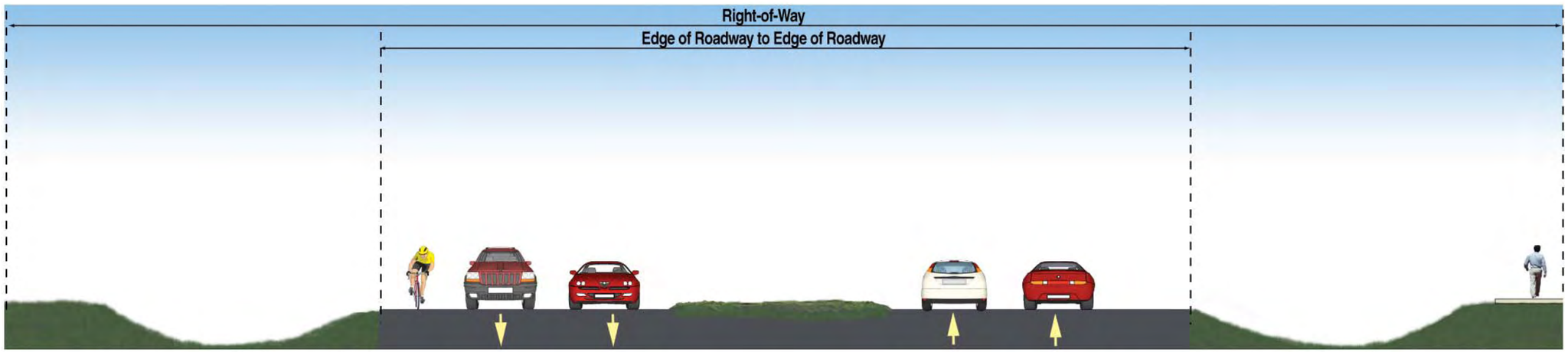


Swale	Shoulder	Lane	Lane	Lane	Median	Lane	Lane	Lane	Shoulder	Swale	ROW	Edge to Edge[1]
Varies	6'-10'	12'	12'	12'	22' and above	12'	12'	12'	6'-10'	Varies	Varies	106'-114'

[1] Refers to edge of roadway to edge of roadway

NOT TO SCALE

Four-Lane

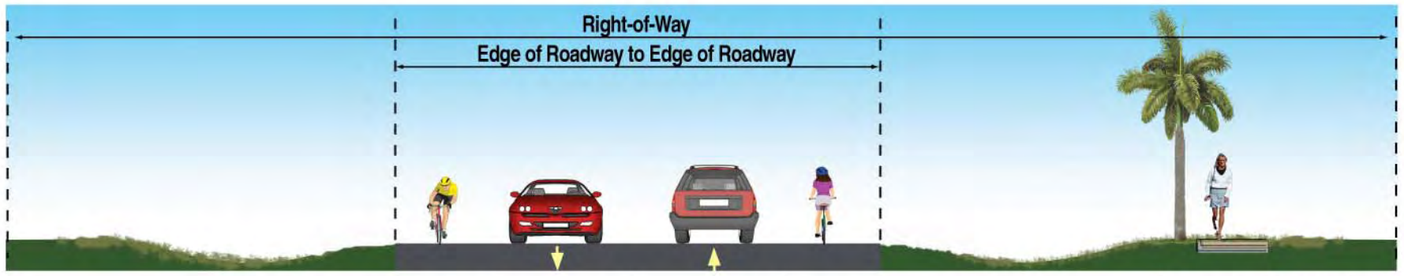


Swale	Shoulder	Lane	Lane	Median	Lane	Lane	Shoulder	Swale	Edge to Edge[1]	ROW
Varies	6'-10'	12'	12'	22' and above	12'	12'	6'-10'	Varies	82'-90'	Varies

[1] Refers to edge of roadway to edge of roadway

NOT TO SCALE

Two-Lane

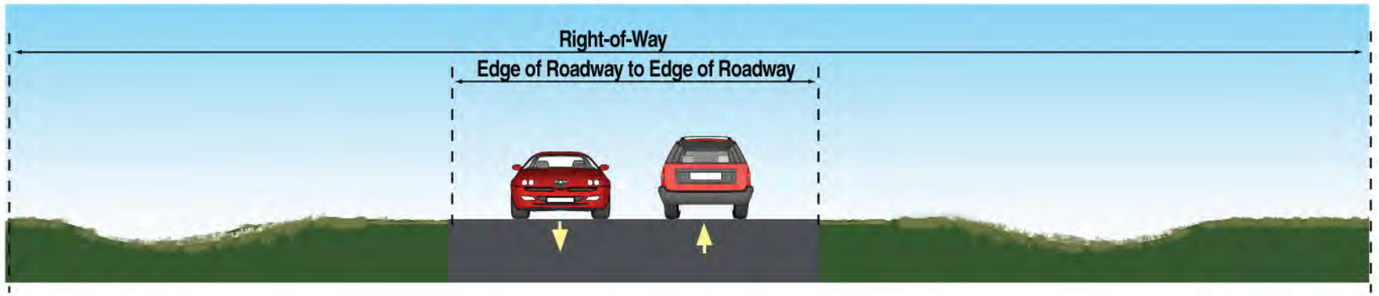


Swale	Shoulder	Lane	Lane	Shoulder	Swale	Multi-use Path	Edge to Edge[1]	ROW
Varies	6'	11' - 12'	11' - 12'	6'	Varies	10'	34'-36'	Varies

[1] Refers to edge of roadway to edge of roadway

NOT TO SCALE

Two-Lane



Swale	Lane	Lane	Swale	Edge to Edge[1]	ROW
Varies	11-12'	11-12'	Varies	22'-24'	Varies

[1] Refers to edge of roadway to edge of roadway

NOT TO SCALE

SECTION 4
ROADSIDE GUIDELINES

The roadside is the portion of the right-of-way that accommodates the business and social activities of the roadway. It is the area between the face of the curb to the edge of the right-of-way. In commercial areas, it extends from the face of the curb to the face of the buildings or storefronts. In residential areas, it extends from the face of the curb to the edge of private property (fences, walls, lawns, porches, etc.)

A well-designed roadside is crucial to the roadway's function as a civic place. Most streets that are considered great streets have well designed roadsides that accommodate the activities of the street. This section provides principles and guidance for the design of roadside and the specific elements that comprise the roadside. It addresses how the design of the roadside varies with change in context. The guidance in this section is used in conjunction with the guidance in Section 3.

The roadside consists of the following four distinct functional zones:

Edge Zone
This is the area between the face of the curb and the furnishing zone. This is a required area of clearance between parked vehicles and appurtenances or landscaping.

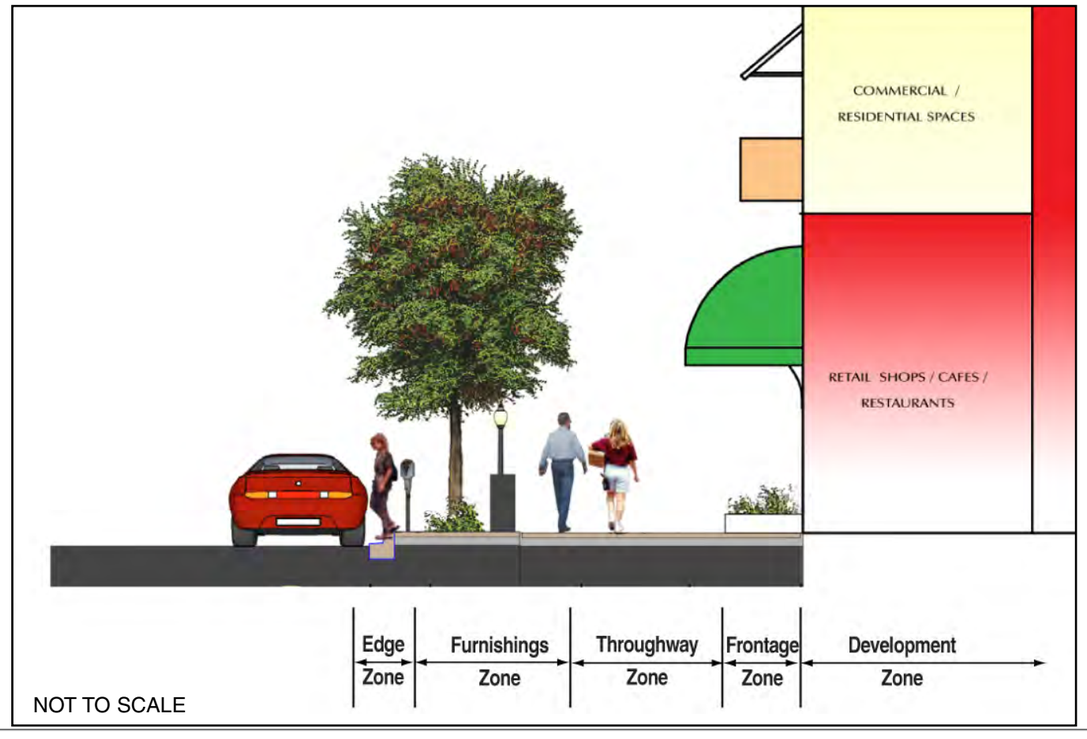
Sidewalk Furnishing Zone
This area of the roadside provides a buffer between pedestrians and vehicular traffic. In residential areas, the furnishing zone includes a continuous planting strip along the sidewalks with shade trees providing comfort to the pedestrian environment. In commercial areas, the furnishing zone consists of continuous pavement between the curb and the building line with tree grates/wells, street furniture, street lighting, public signage, transit stops, utilities, etc. In the graphic illustrated on the previous page, the right side illustrates a residential area with planting strips and the left side refers to a commercial area with continuous pavement.

Sidewalk Through Zone
This is the unobstructed pedestrian area on the roadside that provides for through movement of pedestrians. This zone must remain free and clear of obstacles and amenities to enable free movement of pedestrians.

Frontage Zone
Frontage zone is the area of the right-of-way immediately adjacent to the property line defined by a building facade, landscaping, fence, or screened parking area. Generally, pedestrians do not feel comfortable moving at a full pace immediately adjacent to a building facade or wall; hence the effective width of the throughway (sidewalk through) zone is limited by the tendency for pedestrians to shy away from the sidewalk next to the property line. This width at the edge of the private property line is the frontage zone, sometimes called the "shy zone". The recommended width of the frontage zone ranges between 0 to 2.5 feet depending on the context zone and the roadway type. In residential areas along lawn and ground cover, the frontage zone may be 0 feet; along low walls, fences and hedges, the frontage zone may be one foot; along facades and tall walls it may be 1.5 feet; and along heavy retail corridors, it may be up to 2.5 feet. National research and standards suggest that a frontage zone or a shy zone is important to provide a buffer between pedestrians on the sidewalk and the property line (window shoppers in retail areas and fences in residential areas).

The graphic below illustrates the four zones using an example of a roadside in a commercial area.The elements within a roadside can contain a variety of elements including pedestrian furniture, cafes, seating area, transit stops, trees, public art, plazas, pedestrian lighting, etc.

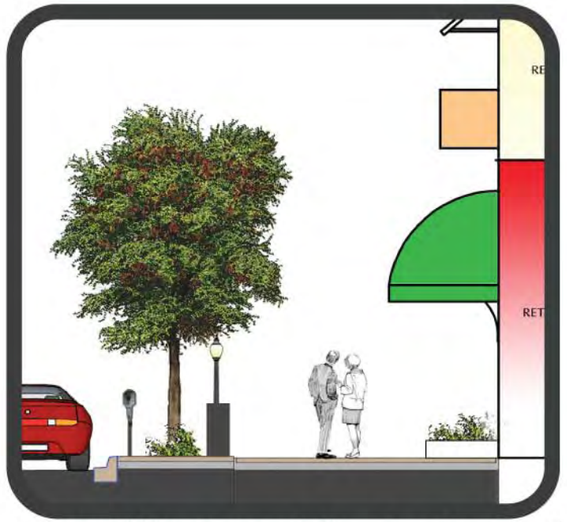
A majority of the typical sections provided in Section 3, with the exception of high-speed boulevards, main streets, and local streets represent the total dimension of the roadside. This section provides detailed dimensions and guidelines of the various elements within the roadside. Roadside design is especially important along low speed boulevards, avenues and streets since these roadways provide high priority for pedestrians. The following graphics provide some visual examples of roadsides within the various context zones to give the reader an understanding of roadside design. They also provide recommended dimensions for the various components of the roadside along boulevards, avenues and streets.



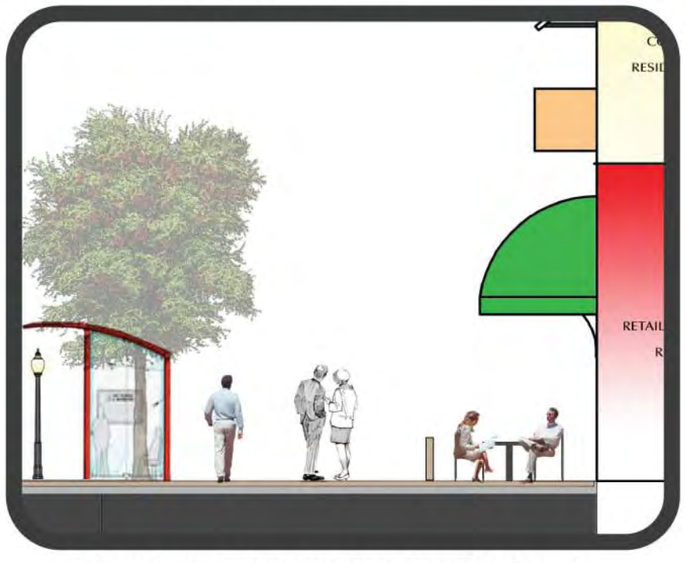
ROADSIDE – BOULEVARD

High Speed Boulevard

Suburban/Urban Residential Low-Speed Boulevard



Suburban/Urban Commercial Low-Speed Boulevard



Urban Center/Urban Core Low-Speed Boulevard

NOT TO SCALE

BOULEVARD

Context/Landuse Zone	Roadside				Recommended Total Roadside (per side)[3]
	Edge[1]	Furnishings[2]	Sidewalk	Frontage	
Suburban					
Low Speed Residential Boulevard	0.5'	8' P.S.	6'	0'	14.5'
Low Speed Commercial Boulevard	1.5'	7' T.W	6'	1.5'	16'
High Speed Boulevard	-	8' P.S.	5' - 6'	0	13' - 14'
Urban					
Low Speed Residential Boulevard	0.5'	8' P.S.	8'	0'	16.5'
Low Speed Commercial Boulevard	1.5'	7' T.W	8'	2.5'	19'
High Speed Boulevard	-	8' P.S.	5' - 6'	-	13' - 14'
Urban Center/Core					
Low Speed Commercial Boulevard	1.5'	7' T.W	10'	3'	21.5'

Notes:

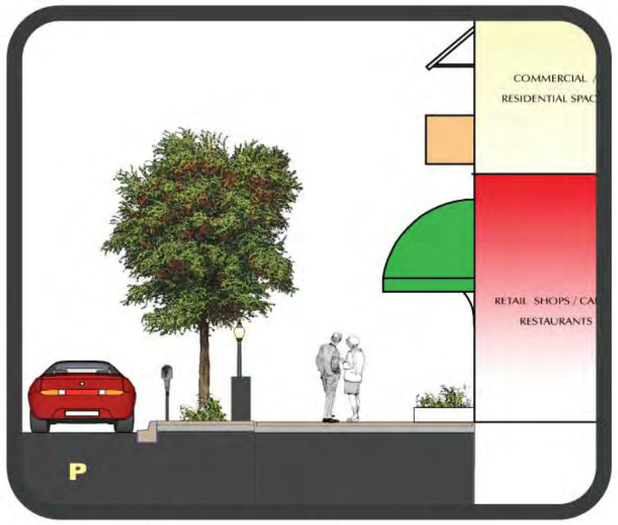
[1] When angle parking is provided, the edge of roadway is recommended to be 2.5 feet wide.

[2] Planting strips are recommended along residential and high speed commercial roads, and tree wells (or grates) are recommended along commercial roads.

[3] When roadways are constrained, it is recommend that a minimum of 9 feet be provided along residential roadways and 12 feet be provided along commercial roadways to include the desired roadside amenities.

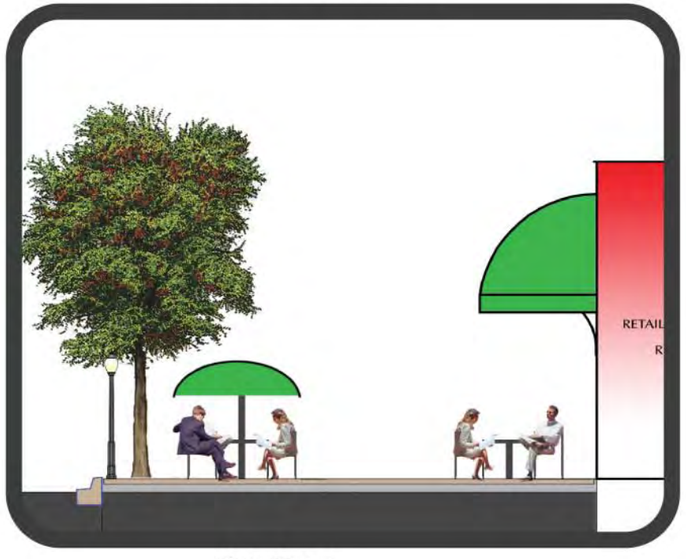
ROADSIDE – AVENUE & STREET

Suburban/Urban Residential



Suburban/Urban Commercial

Industrial Street



Main Street

AVENUE

Context/Landuse Zone	Roadside				Recommended Total Roadside (per side)[3]
	Edge[1]	Furnishings[2]	Sidewalk	Frontage	
Suburban					
Residential	0.5'	8' P.S.	6'	0'	12.5'
Commercial	1.5'	6' T.W.	6'	2.5'	15'
Urban					
Residential	0.5'	8' P.S.	6'	0'	12.5'
Commercial	1.5'	6' T.W.	6'	2.5'	16'
Urban Center/Core					
Mixed Use	1.5'	6' T.W.	9'	3'	19.5'

STREET-GENERAL

Context/Landuse Zone	Roadside				Recommended Total Roadside (per side)[3]
	Edge[1]	Furnishings[2]	Sidewalk	Frontage	
Suburban					
Residential	0.5'	5' P.S	6'	0'	10.5'
Commercial	1.5'	6' T.W	6'	1.5'	14'
Urban					
Residential	0.5'	5' P.S	6'	0'	10.5'
Commercial	1.5'	6' T.W	6'	2.5'	14'
Urban Center/Core					
Mixed Use	1.5'	6' T.W	6'	2.5'	16'

Notes:

[1] When angle parking is provided, the edge of roadway is recommended to be 2.5 feet wide.

[2] Planting strips (P.S.) are recommended along residential and high speed commercial roads, and tree wells (T.W.) are recommended along commercial roads.

[3] When roadways are constrained, it is recommend that a minimum of 9 feet be provided along residential roadways and 12 feet be provided along commercial roadways to include the desired roadside amenities.

NOT TO SCALE

SECTION 5
ZONED RIGHT-OF-WAYS

SECTION 5: ZONED RIGHT-OF-WAY UPDATE

The second component of the *Miami-Dade County Typical Roadway Section and Zoned Right-of-Way Study* is the recommendation of modifications to Section 33-133 of the Miami-Dade Code of Ordinances. This component consists of a review of the Miami-Dade MPO 2030 Long Range Transportation Plan (LRTP) to identify roadway improvements in the long-term and to identify whether adequate right-of-way is available to implement the improvements based upon the proposed typical sections and design guidelines within this Study.

The following graphic and the table represent all the roadway improvements contained within the MPO's LRTP. Each improvement is identified by a unique identification number and is labeled on the graphic. The table provides the description of the improvements. The improvements are presented in the order of priority groupings based on relative need and funding availability contained in the LRTP. The priority numbers correspond to the following implementation time frames:

- Priority I – Projects are scheduled to be funded by 2009
- Priority II – Projects are planned to be funded between 2010 and 2015
- Priority III – Projects are planned to be funded between 2016 and 2020
- Priority IV – Projects are planned to be funded between 2021 and 2030
- Priority IV Unfunded – Projects that have been identified as needed, but revenues are not available

This information has been utilized to develop a draft ordinance to amend Section 33-133 of the Code of Ordinances.

Miami-Dade County Roadway Typical Sections
and Zoned Right-of-Way Update Study
Long Range Transportation Plan Roadway Capacity Improvements

Link ID	Roadway Segment	From	To	LRTP Project Description
1	NE 12 AVE	NE 151 ST	NE 167 ST	WIDEN TO 3 LANES
2	NE 15 AVE	NE 159 ST	MIAMI GARDENS DR	WIDEN TO 4 LANES
3	SW 27 AVE	US 1	BAYSHORE DRIVE	WIDEN FROM 2 TO 3 LANES
4	GRAND AVE	SW 37 AVE	SW 32 AVE	CONSTRUCT 2 LANES WITH LEFT TURN LANES (4 TO 2)
5	SW 97 AVE	SW 56 ST	SW 72 ST	2 TO 3 LANES
6	SR 860	320 METERS WEST OF NW 27AVE.	SR 91 / TURNPIKE	ADD LANES AND REHABILITATE PAVEMENT (4 TO 6)
7	NW 14 ST	NW 10 AVE	I-95	WIDEN TO 3 LANES AND RESURFACE
8	NW 37 AVE	NW NORTH RIVER DRIVE	NW 79 ST	WIDEN 2 TO 5 LANES
9	SR 823 / NW 57 AVE	W 49 ST / 103 ST	NW 138 St.	4 TO 6 LANES
10	NW 72 AVE	NW 74 ST	OKEECHOBEE RD	2 TO 4 LANES AND BRIDGE
11	W 24 AVE	W 52 ST	W 76 ST	2 TO 5 LANES
12	NW 25 ST	NW 87 AVE	SR 826 / NW 77 AVE	ADD LANES AND RECONSTRUCT (ADD 1 TO EXISTING 5 LANES)
13	NW 122 ST	OKEECHOBEE RD.	NW 87 AVE	WIDEN 2 TO 5 LANES
14	NW 138 ST	NW 107 AVE	NW 97 AVE	WIDEN TO 2 TO 5 LANES
15	NW 107 AVE	OKEECHOBEE RD	NW 138 ST	2 TO 5 LANES
16	NW 62 AVE	NW 105 ST	NW 138 ST	2 TO 3 LANES
17	NW 97 AVE	NW 41	25 ST	WIDEN FROM 2 TO 4 LANES
18	NW 127 AVE	NW 12 ST	SW 8 ST	WIDEN TO 4 LANES
19	US 1 SOUTH	CARD SOUND RD	MONROE CO. LINE (N OF JEWFISH CK)	IMPROVE EXISTING 2 LANES - ADD WIDE SHOULDERS
20	SW 184 ST	SW 137 AVE	SW 127 AVE	2 TO 4 LANES
21	SW 117 AVE	SW 184 St.	SW 152 ST	2 TO 4 LANES
22	SW 87 AVE	SW 168 ST	SW 216 ST	2 TO 4 LANES
23	SW 320 ST	SW 187 AVE	US-1/S DIXIE	WIDEN TO 3 LANES
24	SW 312 ST	SW 152 AVE	SW 137 AVE	WIDEN 2 TO 4 LANES
25	SW 312 ST (PHASE 2)	SW 187 AVE	SW 177 AVE	WIDEN TO 5 LANES
26	SW 328 ST	US-1	SW 162 AVE	WIDEN TO 4 LANES
27	SW 328 ST	SW 162 AVE	SW 152 AVE	WIDEN TO 4 LANES
28	SW 56 ST	SW 158 AVE	SW 152 AVE	2 TO 4 LANES
29	SW 136 ST	SW 157 AVE	FL TURNPIKE (SR 874)	WIDENING FROM 2 TO 4 LANES
30	SW 157 AVE	SW 184 ST	152 ST	2 TO 4 LANES
31	SW 120 ST	SW 137 AVE	SW 117 AVE	4 TO 6 LANES
32	SW 127 AVE	SW 120 ST	SW 88 ST	WIDEN TO 5 LANES
33	SW 26 ST	SW 149 AVE	SW 147 AVE	2 TO 4 LANES
34	SW 137 AVE	SW 8 ST	SW 26 ST	4 TO 6 LANES
35	SW 97 AVE	SW 40 ST	SW 56 ST	2 TO 3 LANES
36	SW 42 ST	SW 149 AVE	SW 150 AVE	2 TO 4 LANES
37	SW 42 ST	SW 157 AVE	SW 162 AVE	2 TO 4 LANES
38	KENDALL DR	SW 162 AVE	SW 157 AVE	WIDEN TO 6 LANES
39	KENDALL DR	SW 157 AVE	SW 150 AVE	WIDEN TO 6 LANES
40	SW 82 AVE	SW 42	48 ST	2 LANES
41	NE 8 ST / BAYSHORE DR	BISCAYNE BLVD	PORT BLVD	NEW 4 LANES AND BAYWALK
42	NW 74 ST	HEFT	NW 87 AVE	NEW 2 LANES
43	NW 74 ST	NW 87 Ave.	NW 84 AVE	NEW 4 LANES
44	NW 74 ST	HEFT	NW 82 AVE	NEW 3-LANE (ULTIMATELY HALF OF PROJECT 382:WIDEN TO 6 LANES)
45	W 137 AVE	SW 8 ST	NW 12 ST	NEW CONSTRUCTION: 6 LANES
46	NW 127 AVE	NW 12 ST	NW 25 ST	NEW 4 LANE ROAD
47	NW 137 AVE	NW 12 ST	NW 17 ST	NEW 4 LANE ROAD
48	NW 17 ST	NW 127 AVE	NW 137 AVE	NEW 4 LANE ROAD
49	NW 122 AVE	NW 25 ST	NW 41 ST	NEW 2 LANE ROAD
50	NW 25 ST	NW 127 AVE	NW 117 AVE	NEW 4 LANE DIVIDED ARTERIAL
51	SW 56 ST	SW 158 AVE	SW 167 AVE	NEW 2 LANE
52	SW 160 ST	SW 147 AVE	SW 137 AVE	NEW 4 LANES
53	SW 42 ST	SW 157 AVE	SW 167 AVE	NEW 2 LANE
54	SW 142 AVE	SW 42 ST.	SW 8 ST	NEW 2 LANES
55	MIAMI GARDENS DR	NE 6 AVE	US-1	4 TO 6 LANES
56	NW 74 ST	SR 826	HEFT	WIDEN TO 6 LANES
57	NW 87 AVE	NW 36 ST	NW 58 ST	4 TO 6 LANES
58	SW 107 AVE	SW 8 ST	FLAGLER ST	4 TO 6 LANES
59	KROME AVE	US 1	SW 296 ST	TRUCK BY-PASS / WIDEN 2 TO 4 LANES
60	KROME AVE / SW 177TH AVE**	SW 136 ST	SW 8 ST	ADD 2 LANES TO 2 LANE ROADWAY
61	SW 117 AVE	SW 40 ST	SW 8 ST	WIDEN 2 TO 4 LANES
62	SW 72 ST	SW 117 AVE	SW 157 AVE	4 TO 6 LANES
63	SW 88 ST / KENDALL DR**	SW 177 AVE	SW 167 AVE	4 TO 6 LANES
64	NW 82 AVE	NW 8 ST	NW 12 ST	NEW 4 LANE
65	SW 167 AVE	SW 56 ST	SW 88 ST	NEW 2 LANE
66	NW 107 AVE	NW 41 ST	NW 25 ST	4 TO 6 LANES
67	NW 87 AVE	NW 58 ST	OKEECHOBEE RD	WIDEN TO 6 LANES
68	NW 97 AVE	NW 58 ST	NW 74 ST	2 TO 4 LANES
69	W 60 ST.	W 4 AVE.	W 12 AVE.	2 TO 3 LANES
70	SW 107 AVE	QUAIL ROOST DRIVE	SW 160 ST	WIDEN 2 TO 4 LANES
71	SW 147 AVE	SW 184 ST	SW 152 ST	ADD 2 LANES AND RESURFACE
72	SW 152 ST	HEFT	US 1	4 TO 6 LANES
73	SW 152 ST	SW 147 AVE	SW 157 AVE	2 TO 4 LANES
74	SW 184 ST	SW 157 AVE	SW 147 AVE	2 TO 4 LANES
75	SW 200 ST	US-1	QUAIL ROOST DR	2 TO 4 LANES
76	SW 24 ST	SW 107 AVE	SW 87 AVE	WIDEN 4 TO 6 LANES
77	NW 77 ST.	NW 79 AVE.	MILAM DAIRY	NEW 4 LANES
78	SW 157 AVE	SW 184 ST	SW 216 ST	NEW 2 LANE
79	SW 104 ST	SW 160 AVE	SW 167 AVE	NEW 4 LANE
80	SW 127 AVE	SW 120 ST	SW 144 ST	NEW 4 LANE
81	SW 157 AVE**	SW 8 ST	SW 42 ST	NEW 4 LANE
82	SW 167 AVE	SW 40 ST	SW 56 ST	NEW 2 LANE
83	MIAMI GARDENS DRIVE	I-75	NW 57 AVE	4 TO 6 LANES
84	NW 72 AVE / W 16 AVE	NW 122 ST / W 68 ST	NW 138 ST / W 84 ST	WIDEN 2 TO 3 LANES
85	WEST 68 ST	WEST 21 COURT	WEST 19 COURT	ADD LANE ON SOUTH SIDE
86	WEST 76 ST	WEST 36 AVE	WEST 20 AVE	WIDEN 2 TO 5 LANES
87	SW 152 AVE	US-1	SW 312 ST	2 TO 4 LANES
88	SW 312 ST	NW 14 AVE - SW 176 AVE	SW 197 AVE - HEFT	WIDEN TO 6 LANES
89	SW 320 ST	SW 187 AVE - S DIXIE HWY	SW 197 AVE -SW 142 AVE	WIDEN TO 4 LANES
90	SW 120 ST**	SW 137 AVE	SW 147 AVE	4 TO 6 LANES
91	SW 24 ST	SW 117 AVE	SW 107 AVE	WIDEN 4 TO 6 LANES
92	SW 80TH ST	SW 72 AV	US 1 / S DIXIE	WIDEN 2 TO 5 LANES
93	SW 104 ST	SW 167 AVE	SW 177 AVE	NEW 2 LANE
94	SW 26 ST	SW 147 AVE	SW 157 AVE	NEW 4 LANE
95	NW 47 AVE	MIAMI GARDENS DR	M-D/BROWARD COUNTY LINE	2 TO 4 LANES
96	WEST DIXIE HWY	NE 119 ST	NE 163 ST	4 TO 6 LANES
97	SW 88 ST / KENDALL DR	SW 162 AVE	SW 167 AVE	4 TO 6 LANES
98	SW 147 AVE	SW 8 ST	SW 26 ST	ADD 2 LANES TO 2 LANE ROADWAY
99	NW 107 AVE	NW 106 ST	NW 41 ST	NEW 4 LANE
100	NW 97 AVE	NW 74 ST	NW 90 ST	NEW 4 LANE
101	NW 87 AVE	NW 183 ST	COUNTY LINE	NEW 2-4 LANE
102	NW 107 AVE	NW 138 ST	NW 170 ST	NEW 2 LANE
103	NW 154 ST	NW 87 AVE	NW 107 AVE	NEW 2 LANE
104	NW 97 AVE	NW 138 ST	NW 183 ST	2 LANE
105	NW 90 ST	NW 107 AVE	NW 87 AVE	NEW 2 LANE
106	SW 40 ST	SW 157 AVE	SW 167 AVE	NEW 2-LANE

Miami-Dade County Roadway Typical Sections
and Zoned Right-of-Way Update Study
Long Range Transportation Plan Roadway Capacity Improvements
Biscayne Bay
Legend
The Everglades and Coastal Wetlands
Biscayne Bay
Transportation Network
LRTP Roadway
Other Roads
30
LRTP Roadway Identification Number
0 1.25 2.5 5 7.5 10 Miles
N
S
E
W
Note: Roadway Capacity Improvements identified from the Miami-Dade County 2030 Long Range Transportation Plan.
Data Sources: Florida Department of Transportation, 2006; Florida Geographic Data Library; Kimley-Horn and Associates, Inc., 2007.

ZONED RIGHT-OF-WAY UPDATE

The recommended changes to the zoned right-of-ways, found in Section 33-133 of the Miami-Dade Code of Ordinances, include additions and modifications to the road segments, along with adjustments to the right-of-way dimensions. The recommended changes to the right-of-way dimensions provide a right-of-way range and a preferred right-of-way. The preferred right-of-way dimensions are provided to establish future right-of-ways based upon the proposed typical sections and design guidelines. The preferred right-of-ways should be utilized for new developments or along corridors that are incrementally changing.

The right-of-way range and the preferred right-of-ways were calculated based on the right-of-way recommendations from Section 3. A context zone was assigned to each of the LRTP improvements based on the context zone map provided in Section 2. A roadway type designation was also assigned to each of the LRTP improvements based on their traffic characteristics and context zone. The graphics on the following two pages illustrate the context zones and the roadway types of the LRTP improvements. Once these two were identified, the appropriate ROW range recommended in Section 3 was applied to identify the necessary right-of-way to implement the capacity improvement. For example, if an improvement was identified to be an "avenue" in an "urban" context zone, and the future land use was predominantly commercial in the County's future land use map, then the recommended ROW for an Urban Predominantly Commercial Avenue is indicated as the proposed ROW range. The maximum value of the range is provided in the "preferred ROW" column.

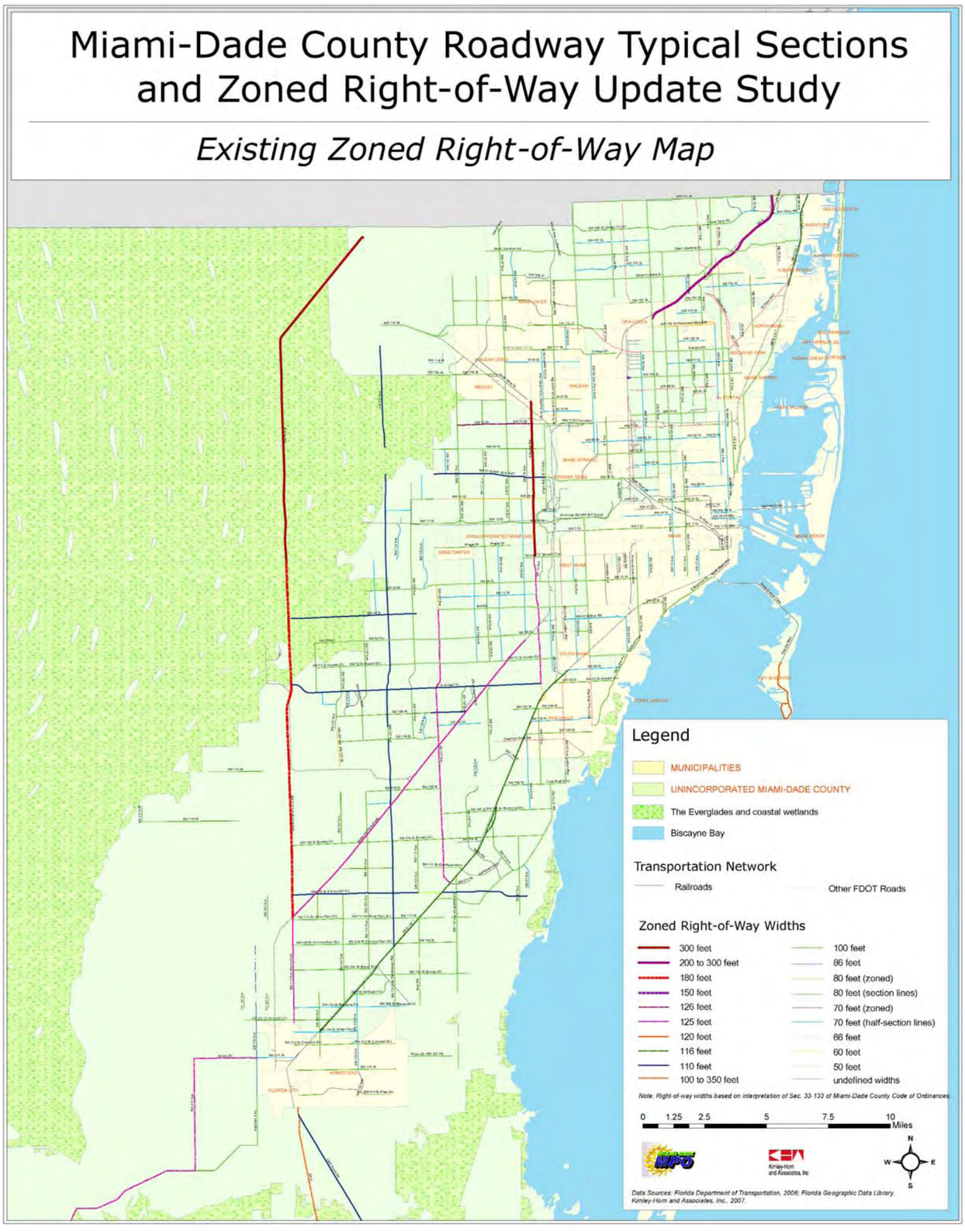
Once the preferred ROWs were identified, each improvement was assigned one of the following priority levels or was adequate.

- "Acceptable – No Change": When the zoned ROW is more than what is recommended by the proposed typical sections.
- "High": Roadways without an adopted zoned ROW or a zoned ROW considerably lower than the minimum recommendation of the proposed ROW.
- "Medium": Roadways with a zoned ROW near the low end of the recommended range.
- "Low": Roadways with current zoned ROW within the recommended range.

The graphics in the following pages are arranged in the order listed below.

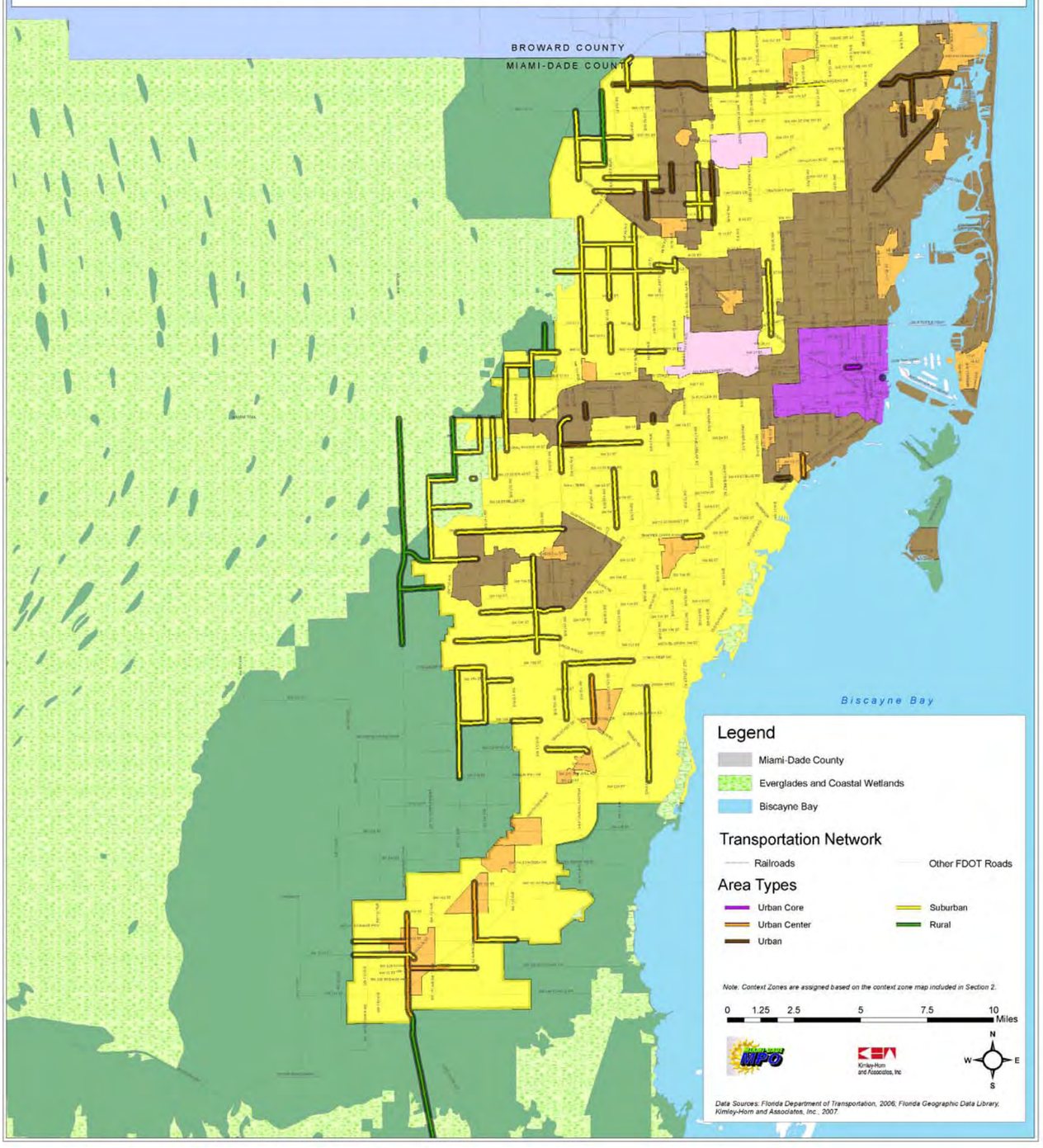
1. Existing Zoned Right-of-Way–Map
2. LRTP Improvements by Context Zone–Map
3. LRTP Improvements by Roadway Type–Map
4. Proposed Zoned Right-of-Way for LRTP Improvements–Map
5. Proposed Zoned Right-of-Way for LRTP Improvements–Table

The revised Section 33-133 of the Miami-Dade Code of Ordinances is provided as Appendix C.


Miami-Dade County Roadway Typical Sections and Zoned Right-of-Way Update Study
Existing Zoned Right-of-Way Map
Legend
MUNICIPALITIES
UNINCORPORATED MIAMI-DADE COUNTY
The Everglades and coastal wetlands
Biscayne Bay
Transportation Network
Railroads
Other FDOT Roads
Zoned Right-of-Way Widths
300 feet
200 to 300 feet
180 feet
150 feet
126 feet
125 feet
120 feet
116 feet
110 feet
100 to 350 feet
100 feet
86 feet
80 feet (zoned)
80 feet (section lines)
70 feet (zoned)
70 feet (half-section lines)
66 feet
60 feet
50 feet
undefined widths
Note: Right-of-way widths based on interpretation of Sec. 33-133 of Miami-Dade County Code of Ordinances.
0 1.25 2.5 5 7.5 10 Miles
N
W
E
S
Kimley-Horn and Associates, Inc
Data Sources: Florida Department of Transportation, 2006; Florida Geographic Data Library, Kimley-Horn and Associates, Inc., 2007.

Miami-Dade County Roadway Typical Sections and Zoned Right-of-Way Update Study

LRTP Improvements by Context Zone Types



Miami-Dade County Roadway Typical Sections
and Zoned Right-of-Way Update Study
LRTP Improvements by Roadway Type
BROWARD COUNTY
MIAMI-DADE COUNTY
Biscayne Bay
Legend
Miami-Dade County
Everglades and Coastal Wetlands
Biscayne Bay
Transportation Network
Railroads
Other FDOT Roads
Roadway Types
High Speed Boulevard
Low Speed Boulevard
Avenue
Street
Highway
Drive
Road
Note: Roadway Types were assigned to LRTP improvements based on descriptions in Section 3.
0 1.25 2.5 5 7.5 10 Miles
N
E
W
S
Kimley-Horn and Associates, Inc.
Data Sources: Florida Department of Transportation, 2006; Florida Geographic Data Library; Kimley-Horn and Associates, Inc., 2007.

Miami-Dade County Roadway Typical Sections
and Zoned Right-of-Way Update Study
Proposed Zoned Right-of-Way Map
BROWARD COUNTY
MIAMI-DADE COUNTY
Legend
Miami-Dade County
Everglades and Coastal Wetlands
Biscayne Bay
Transportation Network
Railroads
Other FDOT Roads
Proposed Zoned Right-of-Way Widths
Less than 50'
Less than 80'
Less than 100'
Less than 120'
Less than 140'
Less than 160'
Less than 180'
100' - 350'
Note: Preferred right-of-way widths are calculated based on the recommended typical sections.
0 1.25 2.5 5 7.5 10 Miles
N
W E
S
Data Sources: Florida Department of Transportation, 2006; Florida Geographic Data Library; Kimley-Horn and Associates, Inc., 2007

Miami-Dade County Roadway Typical Sections and Zoned Right-of-Way Update Study
Long Range Transportation Plan Roadway Improvements

Link ID	Roadway			LRTP Project		Context Zone	Roadway Type	Right-of-Way				Priority for Acquisition
	Segment	From	To	Project Description	LRTP Priority			Existing	Zoned*	Preferred	Study Range	
1	NE 12 AVE	NE 151 ST	NE 167 ST	WIDEN TO 3 LANES	I	U	A	60 - 85	NA	92	61 - 92	High
2	NE 15 AVE	NE 159 ST	MIAMI GARDENS DR	WIDEN TO 4 LANES	I	U	A	65 - 80	NA	120	73 - 120	High
3	SW 27 AVE	US 1	BAYSHORE DRIVE	WIDEN FROM 2 TO 3 LANES	I	UC	A	50 - 100	**80**	92	86 - 92	High
4	GRAND AVE	SW 37 AVE	SW 32 AVE	CONSTRUCT 2 LANES WITH LEFT TURN LANES (4 TO 2)	I	U	A	NA	NA	92	61 - 92	High
5	SW 97 AVE	SW 56 ST	SW 72 ST	2 TO 3 LANES	I	S	A	70 - 80	**80**	92	61 - 92	Medium
6	SR 860	320 METERS WEST OF NW 27AVE.	SR 91 / TURNPIKE	ADD LANES AND REHABILITATE PAVEMENT (4 TO 6)	I	S	HSB	100 - 135	100	133	123 - 133	High
7	NW 14 ST	NW 10 AVE	I-95	WIDEN TO 3 LANES AND RESURFACE	I	CORE	A	NA	**70**	92	86 - 92	High
8	NW 37 AVE	NW NORTH RIVER DRIVE	NW 79 ST	WIDEN 2 TO 5 LANES	I	S	A	60 - 70	**70**	110	79 - 110	High
9	SR 823 / NW 57 AVE	W 49 ST / 103 ST	NW 138 St.	4 TO 6 LANES	I	U	HSB	100	70	133	123 - 133	High
10	NW 72 AVE	NW 74 ST	OKEECHOBEE RD	2 TO 4 LANES AND BRIDGE	I	S	A	70	NA	120	73 - 120	High
11	W 24 AVE	W 52 ST	W 76 ST	2 TO 5 LANES	I	U	A	55 - 115	NA	110	79 - 110	High
12	NW 25 ST	NW 87 AVE	SR 826 / NW 77 AVE	ADD LANES AND RECONSTRUCT (ADD 1 TO EXISTING 5 LANES)	I	S	LSB	80	80	154	113 - 154	High
13	NW 122 ST	OKEECHOBEE RD.	NW 87 AVE	WIDEN 2 TO 5 LANES	I	S	A	NA	NA	110	79 - 110	High
14	NW 138 ST	NW 107 AVE	NW 97 AVE	WIDEN TO 2 TO 5 LANES	I	S	A	165	100	110	79 - 110	Low
15	NW 107 AVE	OKEECHOBEE RD	NW 138 ST	2 TO 5 LANES	I	S	A	80	NA	110	79 - 110	High
16	NW 62 AVE	NW 105 ST	NW 138 ST	2 TO 3 LANES	I	S	A	70	**70**	92	61 - 92	Medium
17	NW 97 AVE	NW 41 ST	NW 25 ST	WIDEN FROM 2 TO 4 LANES	I	S	A	80	**80**	120	73 - 120	Medium
18	NW 127 AVE	NW 12 ST	SW 8 ST	WIDEN TO 4 LANES	I	S	HSB	100	**80**	109	101 - 109	High
19	US 1 SOUTH	CARD SOUND RD	MONROE CO. LINE (N OF JEWFISH CK)	IMPROVE EXISTING 2 LANES - ADD WIDE SHOULDERS	I	R	H	150	100 - 350	100 - 350	83 - 91	--
20	SW 184 ST	SW 137 AVE	SW 127 AVE	2 TO 4 LANES	I	S	A	70 - 80	**80**	120	73 - 120	Medium
21	SW 117 AVE	SW 184 St.	SW 152 ST	2 TO 4 LANES	I	S	A	70 - 125	125	125	73 - 120	--
22	SW 87 AVE	SW 168 ST	SW 216 ST	2 TO 4 LANES	I	S	A	70 - 90	**80**	120	73 - 120	Medium
23	SW 320 ST	SW 187 AVE	US-1/S DIXIE	WIDEN TO 3 LANES	I	S	A	70	**70**	90	61 - 92	Low
24	SW 312 ST	SW 152 AVE	SW 137 AVE	WIDEN 2 TO 4 LANES	I	S	HSB	60 - 70	**80**	109	101 - 109	High
25	SW 312 ST (PHASE 2)	SW 187 AVE	SW 177 AVE	WIDEN TO 5 LANES	I	UC	A	60 - 70	NA	114	106 - 114	High
26	SW 328 ST	US-1	SW 162 AVE	WIDEN TO 4 LANES	I	UC	A	70 - 80	**80**	127	103 - 127	High
27	SW 328 ST	SW 162 AVE	SW 152 AVE	WIDEN TO 4 LANES	I	S	A	130	**80**	120	73 - 120	Medium
28	SW 56 ST	SW 158 AVE	SW 152 AVE	2 TO 4 LANES	I	S	A	100	100	120	73 - 120	Low
29	SW 136 ST	SW 157 AVE	FL TURNPIKE (SR 874)	WIDENING FROM 2 TO 4 LANES	I	S	A	80	NA	120	73 - 120	High
30	SW 157 AVE	SW 184 ST	SW 152 ST	2 TO 4 LANES	I	S	A	65- 80	**80**	120	73 - 120	Low
31	SW 120 ST	SW 137 AVE	SW 117 AVE	4 TO 6 LANES	I	S	HSB	70 - 80	**80**	133	123 - 133	High
32	SW 127 AVE	SW 120 ST	SW 88 ST	WIDEN TO 5 LANES	I	S	A	70 - 100	**80**	110	79 - 110	Medium
33	SW 26 ST	SW 149 AVE	SW 147 AVE	2 TO 4 LANES	I	S	HSB	90 - 100	NA	109	101 - 109	High
34	SW 137 AVE	SW 8 ST	SW 26 ST	4 TO 6 LANES	I	S	HSB	70	110	133	123 - 133	High
35	SW 97 AVE	SW 40 ST	SW 56 ST	2 TO 3 LANES	I	S	A	70	**80**	92	61 - 92	Low
36	SW 42 ST	SW 149 AVE	SW 150 AVE	2 TO 4 LANES	I	S	HSB	NA	110	110	101 - 109	--
37	SW 42 ST	SW 157 AVE	SW 162 AVE	2 TO 4 LANES	I	S	HSB	80 - 100	110	110	101 - 109	--
38	KENDALL DR	SW 162 AVE	SW 157 AVE	WIDEN TO 6 LANES	I	S	HSB	110	110	133	123 - 133	High
39	KENDALL DR	SW 157 AVE	SW 150 AVE	WIDEN TO 6 LANES	I	S	HSB	110	110	133	123 - 133	High
40	SW 82 AVE	SW 42	SW 48 ST	2 LANES	I	S	S	50 - 70	**70**	78	49 - 78	Low
41	NE 8 ST / BAYSHORE DR	BISCAYNE BLVD	PORT BLVD	NEW 4 LANES AND BAYWALK	I	CORE	A	NA	NA	127	103 - 127	High
42	NW 74 ST	HEFT	NW 87 AVE	NEW 2 LANES	I	S	A	50	126	126	53 - 96	--
43	NW 74 ST	NW 87 Ave.	NW 84 AVE	NEW 4 LANES	I	S	HSB	50	126	126	101 - 109	--
44	NW 74 ST	HEFT	NW 82 AVE	NEW 3-LANE (ULTIMATELY HALF OF PROJECT 382:WIDEN TO 6 LANES)	I	S	A	50	126	126	61 - 92	--
45	W 137 AVE	SW 8 ST	NW 12 ST	NEW CONSTRUCTION: 6 LANES	I	S	HSB	70	110	133	123 - 133	High
46	NW 127 AVE	NW 12 ST	NW 25 ST	NEW 4 LANE ROAD	I	S	HSB	80	**80**	109	101 - 109	High
47	NW 137 AVE	NW 12 ST	NW 17 ST	NEW 4 LANE ROAD	I	S	HSB	70	110	110	101 - 109	--
48	NW 17 ST	NW 127 AVE	NW 137 AVE	NEW 4 LANE ROAD	I	S	A	70	**70**	120	73 - 120	High
49	NW 122 AVE	NW 25 ST	NW 41 ST	NEW 2 LANE ROAD	I	R	R	NA	**70**	70	47 - 49	--
50	NW 25 ST	NW 127 AVE	NW 117 AVE	NEW 4 LANE DIVIDED ARTERIAL	I	S	LSB	130	**80**	130	93 - 130	High
51	SW 56 ST	SW 158 AVE	SW 167 AVE	NEW 2 LANE	I	S	S	80	**80**	80	49 - 78	--
52	SW 160 ST	SW 147 AVE	SW 137 AVE	NEW 4 LANES	I	S	HSB	70 - 80	**70**	109	101 - 109	High
53	SW 42 ST	SW 157 AVE	SW 167 AVE	NEW 2 LANE	I	S	S	80 - 100	110	110	49 - 78	--

Notes:

--	When the zoned ROW is more than what is recommended by the proposed typical sections. No changes to zoned ROW.
High Priority	Roadways without an adopted zoned ROW or a zoned ROW considerably lower than the minimum recommendation of the proposed ROW.
Medium Priority	Roadways with a zoned ROW near the low end of the recommended range.
Low Priority	Roadways with current zoned ROW within the recommended range.

* Roadway segments listed as NA are not currently included in Section 33-133 Zoned Right-of-ways of the Code of Ordinances.
Bold text in "zoned" assumes zoned right-of-way for section line and half-section line roads in Sec. 33-133 (C) of the Code of Ordinances.
For Highway, Drive and Road the Study recommends dimensions from edge of pavement to edge of pavement. Hence a swale width of 12.5 feet is assumed on either side of the pavement to identity required ROW.
Note: The zoned ROW may not corresond to the actual ROW under the jurisdiction of the County, FDOT, or local municipalities. Confirmation of the existing ROW will be required to verify the priority levels for future acquisition.

Context Zone		Roadway Type	
R	Rural	HSB	High-speed Boulevard
S	Suburban	LSB	Low-speed Boulevard
U	Urban	A	Avenue
UC	Urban Center	S	Street
CORE	Urban Core	H	Highway
		D	Drive
		R	Road

Miami-Dade County Roadway Typical Sections and Zoned Right-of-Way Update Study
Long Range Transportation Plan Roadway Improvements

Link ID	Roadway			LRTP Project		Context Zone	Roadway Type	Right-of-Way				Priority for Acquisition
	Segment	From	To	Project Description	LRTP Priority			Existing	Zoned*	Preferred	Study Range	
54	SW 142 AVE	SW 42 ST.	SW 8 ST	NEW 2 LANES	I	S	S	70	**70**	78	49 - 78	
55	MIAMI GARDENS DR	NE 6 AVE	US-1	4 TO 6 LANES	II	U	HSB	70 - 140	**70**	133	123 - 133	High
56	NW 74 ST	SR 826	HEFT	WIDEN TO 6 LANES	II	S	HSB	50	126	126	123 - 133	--
57	NW 87 AVE	NW 36 ST	NW 58 ST	4 TO 6 LANES	II	S	HSB	70 - 80	**80**	133	123 - 133	High
58	SW 107 AVE	SW 8 ST	FLAGLER ST	4 TO 6 LANES	II	U	LSB	70 - 80	NA	160	117 - 160	High
59	KROME AVE	US 1	SW 296 ST	TRUCK BY-PASS / WIDEN 2 TO 4 LANES	II	UC	HSB	116 - 150	NA	109	101 - 109	High
60	KROME AVE / SW 177TH AVE**	SW 136 ST	SW 8 ST	ADD 2 LANES TO 2 LANE ROADWAY	II	R	H	100 - 150	180	180	107 - 115	--
61	SW 117 AVE	SW 40 ST	SW 8 ST	WIDEN 2 TO 4 LANES	II	S	A	NA	80	120	73 - 120	Low
62	SW 72 ST	SW 117 AVE	SW 157 AVE	4 TO 6 LANES	II	S	HSB	100	100	133	123 - 133	High
63	SW 88 ST / KENDALL DR**	SW 177 AVE	SW 167 AVE	4 TO 6 LANES	II	R	H	110	116	139	131 - 139	High
64	NW 82 AVE	NW 8 ST	NW 12 ST	NEW 4 LANE	II	U	HSB	70 - 100	**70**	109	101 - 109	High
65	SW 167 AVE	SW 56 ST	SW 88 ST	NEW 2 LANE	II	S	A	80	**80**	96	53 - 96	Low
66	NW 107 AVE	NW 41 ST	NW 25 ST	4 TO 6 LANES	III	S	HSB	80 - 100	**80**	133	123 - 133	High
67	NW 87 AVE	NW 58 ST	OKEECHOBEE RD	WIDEN TO 6 LANES	III	S	HSB	75 - 100	**80**	133	123 - 133	High
68	NW 97 AVE	NW 58 ST	NW 74 ST	2 TO 4 LANES	III	S	A	90 - 95	NA	120	73 - 120	High
69	W 60 ST.	W 4 AVE.	W 12 AVE.	2 TO 3 LANES	III	S	A	70	**70**	92	61 - 92	Low
70	SW 107 AVE	QUAIL ROOST DRIVE	SW 160 ST	WIDEN 2 TO 4 LANES	III	UC	A	70 - 80	**80**	127	103 - 127	High
71	SW 147 AVE	SW 184 ST	SW 152 ST	ADD 2 LANES AND RESURFACE	III	S	A	80	**80**	120	73 - 120	Medium
72	SW 152 ST	HEFT	US 1	4 TO 6 LANES	III	S	HSB	70 - 130	NA	133	123 - 133	High
73	SW 152 ST	SW 147 AVE	SW 157 AVE	2 TO 4 LANES	III	S	HSB	90 - 110	NA	109	101 - 109	High
74	SW 184 ST	SW 157 AVE	SW 147 AVE	2 TO 4 LANES	III	S	HSB	70 - 80	**80**	109	101 - 109	High
75	SW 200 ST	US-1	QUAIL ROOST DR	2 TO 4 LANES	III	S	A	70 - 80	**80**	120	73 - 120	Low
76	SW 24 ST	SW 107 AVE	SW 87 AVE	WIDEN 4 TO 6 LANES	III	S	HSB	100	100	133	123 - 133	High
77	NW 77 ST.	NW 79 AVE.	MILAM DAIRY	NEW 4 LANES	III	S	HSB	50	NA	109	101 - 109	High
78	SW 157 AVE	SW 184 ST	SW 216 ST	NEW 2 LANE	III	S	A	NA	NA	96	53 - 96	High
79	SW 104 ST	SW 160 AVE	SW 167 AVE	NEW 4 LANE	III	R	H	100	NA	109	101 - 109	High
80	SW 127 AVE	SW 120 ST	SW 144 ST	NEW 4 LANE	III	S	HSB	NA	NA	115	107 - 115	High
81	SW 157 AVE**	SW 8 ST	SW 42 ST	NEW 4 LANE	III	R	H	80	NA	115	107 - 115	High
82	SW 167 AVE	SW 40 ST	SW 56 ST	NEW 2 LANE	III	S	A	80	NA	96	53 - 96	High
83	MIAMI GARDENS DRIVE	I-75	NW 57 AVE	4 TO 6 LANES	IV	U	HSB	100	100	133	123 - 133	High
84	NW 72 AVE / W 16 AVE	NW 122 ST / W 68 ST	NW 138 ST / W 84 ST	WIDEN 2 TO 3 LANES	IV	U	A	70	NA	92	61 - 92	High
85	WEST 68 ST	WEST 21 COURT	WEST 19 COURT	ADD LANE ON SOUTH SIDE	IV	U	A	70 - 90	**80**	110	79 - 110	Medium
86	WEST 76 ST	WEST 36 AVE	WEST 20 AVE	WIDEN 2 TO 5 LANES	IV	S	A	NA	NA	110	79 - 110	High
87	SW 152 AVE	US-1	SW 312 ST	2 TO 4 LANES	IV	UC	A	70	**70**	127	103 - 127	High
88	SW 312 ST	NW 14 AVE - SW 176 AVE	SW 197 AVE - HEFT	WIDEN TO 6 LANES	IV	S	HSB	70	NA	133	123 - 133	High
89	SW 320 ST	SW 187 AVE - S DIXIE HWY	SW 197 AVE -SW 142 AVE	WIDEN TO 4 LANES	IV	S	A	70 - 125	70-125	90-125	73 - 120	Low
90	SW 120 ST**	SW 137 AVE	SW 147 AVE	4 TO 6 LANES	IV	S	HSB	70	**80**	133	123 - 133	High
91	SW 24 ST	SW 117 AVE	SW 107 AVE	WIDEN 4 TO 6 LANES	IV	U	HSB	125 - 130	100	133	123 - 133	High
92	SW 80TH ST	SW 72 AV	US 1 / S DIXIE	WIDEN 2 TO 5 LANES	IV	S	A	50	NA	110	79 - 110	High
93	SW 104 ST	SW 167 AVE	SW 177 AVE	NEW 2 LANE	IV	R	D	NA	NA	61	59 - 61	High
94	SW 26 ST	SW 147 AVE	SW 157 AVE	NEW 4 LANE	IV	S	HSB	90 - 100	NA	109	101 - 109	High
95	NW 47 AVE	MIAMI GARDENS DR	M-D/BROWARD COUNTY LINE	2 TO 4 LANES	IV_unf	S	HSB	70 - 80	NA	109	101 - 109	High
96	WEST DIXIE HWY	NE 119 ST	NE 163 ST	4 TO 6 LANES	IV_unf	U	LSB	63 - 70	70	160	117 - 160	High
97	SW 88 ST / KENDALL DR	SW 162 AVE	SW 167 AVE	4 TO 6 LANES	DC	S	HSB	110	110	133	123 - 133	High
98	SW 147 AVE	SW 8 ST	SW 26 ST	ADD 2 LANES TO 2 LANE ROADWAY	DC	S	HSB	80	NA	109	101 - 109	High
99	NW 107 AVE	NW 106 ST	NW 41 ST	NEW 4 LANE	DC	S	HSB	75 - 80	**80**	109	101 - 109	High
100	NW 97 AVE	NW 74 ST	NW 90 ST	NEW 4 LANE	DC	S	A	75 - 80	**80**	120	73 - 120	Medium
101	NW 87 AVE	NW 183 ST	COUNTY LINE	NEW 2-4 LANE	DC	S	A	80	**80**	120	73 - 120	Medium
102	NW 107 AVE	NW 138 ST	NW 170 ST	NEW 2 LANE	DC	S	S	70	**80**	80	49 - 78	--
103	NW 154 ST	NW 87 AVE	NW 107 AVE	NEW 2 LANE	DC	S	A	95	**80**	96	53 - 96	Low
104	NW 97 AVE	NW 138 ST	NW 183 ST	2 LANE	DC	R	R	70	**80**	80	47 - 49	--
105	NW 90 ST	NW 107 AVE	NW 87 AVE	NEW 2 LANE	DC	S	A	70 - 80	**80**	96	53 - 96	Low
106	SW 40 ST	SW 157 AVE	SW 167 AVE	NEW 2-LANE	DC	R	R	25	NA	49	47 - 49	High

Notes:

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Context Zone		Roadway Type	
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S	Suburban	LSB	Low-speed Boulevard
U	Urban	A	Avenue
UC	Urban Center	S	Street
CORE	Urban Core	H	Highway
		D	Drive
		R	Road

Conclusion

This Study presents a set of ideas, concepts, and design elements for typical sections which are intended for designing roadways that provide the best possible accommodation for all users. Many roadways in the County are physically and/or financially constrained, we realize that not all roadways can be designed to provide the best possible accommodations for all modes of transportation. Hence this Study also provides a list of priority and optional design elements. The priority design elements are those elements that are strongly recommended to be included in a roadway section; the optional design elements represent those elements that are beneficial to include, if adequate right-of-way is available. Recommendations for constrained conditions for physically or financially constrained roadways are also provided in the Study.

The standards recommended for the various roadway types are not intended to be rigid. They were designed to be interpreted based on sound planning and engineering judgment, by utilizing the suggested combination of design elements presented. There can be several variants of the typical sections in this Study, depending on the design elements that are included in each typical section. The appropriate combination needs to be decided by the roadway designer based on the surrounding area in which the roadway is located and the goals of the specific project. A range of design standards are also provided for the various design elements of a typical section, in order to provide flexibility to the designer.

This Study is neither intended to replace the Public Works Manual nor function as a strict set of standards, but rather as a framework to guide future roadway improvement projects within the County. It is suggested that the roadway designer understand the concepts presented in this Study and uses it to develop typical sections specific to the community needs, within the framework presented.

The zoned right-of-way recommendations will help the County preserve and secure right-of-ways for future improvements. A draft ordinance is provided in this Study to amend the Miami-Dade County Code of Ordinances Section 33-133 to incorporate the recommendations.

Next Steps

This Study should serve as one of the first steps to memorialize the County's vision of a comprehensive, multimodal transportation system. The next steps should include presenting the proposed zoned right-of-way ordinance to the Planning Board and County Commission for adoption, along with updating the Public Works Manual to include the typical sections within the Study. It will also be useful for right-of-way identification, presentation, and acquisition for the County to create a database of the existing right-of-way dimensions in GIS to track opportunities and changes. Finally, the County should also establish typical drawings for intersections that include existing cross sections and proposed typical sections, as well as, develop typical drawings for transitions between the different street types.

BEST PRACTICES SUMMARY

APPENDIX A TABLE OF CONTENTS

INTRODUCTION

Several communities across the nation are adopting a shift in philosophy with regard to roadway planning and design from an auto-oriented approach to a complete street planning approach. A "complete street" is one that provides mobility, convenience and safety for all users of the roadway including pedestrians, bicyclists, transit users and motorists. The complete street planning approach ensures that the entire right-of-way is designed and operated to enable safe access for all users. This paradigm shift can be attributed to the awareness that the purpose of streets is not just to move cars, but to enhance the livability and urban environment of communities. A quote from Allan Jacobs' famous book, "Great Streets" defines a great street as:

"A great street should be the most desirable place to be, to spend time, to live, to play, to work, at the same time that it markedly contributes to what a city should be."- Allan B. Jacobs

Miami-Dade County has continued to experience significant growth in population, especially in the urban areas. Consequently, the demand for transportation infrastructure and services has increased considerably. The County's Comprehensive Development Master Plan (CDMP) has designated several major urban areas as "urban centers" which are dense, compact, mixed-use areas with a high quality pedestrian environment. The CDMP requires the urban centers to offer convenient alternatives to travel by automobile and to be designed primarily for people and secondarily for automobiles and other motorized modes.

Over the years, the Miami-Dade County Board of County Commissioners has adopted several policies supporting the development of a multimodal roadway system that is sensitive to the needs of all users. In its broadest interpretation, multimodalism refers to a holistic view of transportation consisting of an interconnected multimodal transportation network where the trips on the roadway are distributed among different modes. Miami-Dade County has a well connected roadway system consisting of a grid pattern of arterials, collectors, and local streets. The grid system provides alternative travel paths for individual trip pairs, and an easily defined functional hierarchy centered on section and half-section line roadways.

Despite the efficiency of the grid system, traffic volumes in Miami-Dade County have exceeded the carrying capacity of many roadways due to continued growth and population increase. To implement the County's vision to establish an efficient multimodal system, the modal split of transit, bicycling and walking needs to increase significantly. In order for people to use these modes safely, roadways that currently cater to automobile users need to be modified to accommodate bicyclists, pedestrians, and transit. Currently, the Public Works Manual contains street standards that are representative of suburban conditions and does not address design standards for dense mixed use urban corridors supportive of a multimodal transportation system. The objective of this study is to update the street standards in the Public Works Manual to provide for street sections that are inclusive of users of all modes of travel.

To aid in the development of the update, it is important to build upon the successes of other communities where careful consideration of roadway users and successful stakeholder involvement have resulted in planning efforts that provide new solutions to roadway design. The project team has reviewed a number of transportation planning documents from jurisdictions across the United States that have adopted multimodal street design standards. The following eight documents represent a cross section of transportation planning efforts that will be referenced during the upcoming Miami-Dade County Typical Roadway Section Update:

1. Alachua County, FL, Corridor Design Manual (2002): This manual provides design guidelines for six roadway types within seven land use classifications along with the required and optional design elements for each roadway type.
2. Arlington County, VA, Master Transportation Plan – Streets Element (2006): The MTP re-examines streets in a comprehensive way to provide a master plan to safely accommodate multiple surface transportation modes.
3. City of Charlotte, NC, Urban Street Design Guidelines (2005): Charlotte's transportation plan provides an extensive breakdown of typical cross sections and desired streetscape elements in a comprehensive typology that overlaps their street functional classifications.
4. City of Dallas, TX, Forward Dallas! Thoroughfare Plan (draft, 2005): The current update to the Dallas Thoroughfare Plan integrates context design into the planning and design process for the City's streets and roadways. The plan provides standards for various land use based street types within the context of the existing functional classification.
5. City of Denver, CO, Blueprint Denver Land Use and Transportation Plan (2002): The transportation component of Denver's blueprint plan presents transportation modes and initiatives as tools to the successful development of the city and its neighborhoods. The plan overlays existing functional classification on roadway types within its land use context.
6. City of Portland, OR, Transportation System Plan 2004 Technical Update (2004): The technical update refined the street design typology that had been developed in the region's transportation plan. The plan provides various classifications for roadway, transit, truck, bicycle, and pedestrian infrastructure.
7. City of San Diego, CA, Street Design Manual (2002): The manual provides information and guidelines for the design of a public right-of-way that recognizes the many and varied purposes that a street serves. The City's manual provides design guidelines for roadway design, pedestrian design, traffic calming, street lighting, parkway configurations, and design standards.
8. City of Sarasota, FL, Downtown Master Plan 2020 (2001): The master plan provides a consolidated plan for downtown Sarasota to help guide and implement various planning initiatives that preceded this document. Although the master plan was developed as primarily a land planning document, it provided design standards and recommendation for roadways within the downtown and new functional classifications for thoroughfare types.

1 ALACHUA COUNTY

Title of Manual: Alachua County Corridor Design Manual
Jurisdiction: Alachua County, FL.
Prepared by: Alachua County
Publication Date: June 2002

PURPOSE:

The intent of the design manual is to serve as a tool for citizens, developers and, public officials while participating in the development of streets within Alachua County. In addition, the manual will serve as a resource for influencing updates to the County's current land development regulations and land development approval process.

PRODUCT:

The manual is organized into three sections: 1) policy and design principles – an overview of transportation concepts and the interaction between transportation investments, land use decision, and community building, 2) design guidelines – provides guidelines and recommended corridor designs that are linked to land use contexts served by the corridor, and 3) design process – outlines a process intended to refine the Corridor Design Guidelines to support the local context, community character, and future vision for the County, at specific sites.

The design guidelines are provided for six corridor types:

1. ***Arterials*** – provide mobility, facilitate regional commerce, provide controlled access, serve as premium transit corridor, and facilitate pedestrian/bicycle activity with facilities in separate, defined space
2. ***Collector***s – reinforce the character of a district, provide access, facilitate pedestrian/bicycle activity with facilities in a separate, defined space, and support neighborhood/district commerce
3. ***Farm To Market Roads*** – provide mobility, scenic views, safe vehicular and bicycle travel and serve as recreational pathways
4. ***Main Street*** – serve as focal point for a community, facilitate commerce, form part of the public realm, and reinforce the local identity
5. ***Neighborhood Street*** – focus on safety, provide access to adjacent uses, function as part of the public space, and support recreational activities/extension of front yards
6. ***Bicycle and Pedestrian Trails*** – provide mobility, access to adjacent uses, serve as recreational pathways, and serve a specific user group

The land use classifications that are used to provide context to each of the above corridor types includes:

- ***Urban Activity Center*** – compact multi-purpose, mixed use centers that include commercial, residential, civic buildings, and open space
- ***Industrial*** – includes a range of industrial activities such as fabrication, manufacturing, transportation warehousing, and distribution of goods
- ***Village Center*** – neighborhood scale, compact, mixed use areas
- ***Neighborhood Center*** – consist of community facilities, integrated into neighborhoods
- ***Neighborhoods*** – include a range of areas that balance the range of human needs
- ***Rural Cluster*** – small settlements located outside of urban areas
- ***Rural Agricultural*** – includes uses that grow crops, grazing lands, and orchards

DESIGN STANDARDS:

Roadway Types	Applicable Land Uses	ROW Width (ft)	Curb-to-Curb Width (ft)	Sidewalk Width (ft)	Speed (mph)
Arterial					
4-Lane w/ center turn lane and median	Urban Activity Center	80-130	55-68	8-12	35-45
4-Lane w/ center turn lane	Industrial	50-130	64-70	N/A	45-55
2-Lane undivided	Rural Cluster	50-70	20-24	N/A	30-35
4-Lane divided	Rural Agricultural	100-140	74-114	N/A	45-60
Collector					
2-Lane w/ options of bike lane, on-street parking, median	Urban Activity Center	40-80	28-56	5+	30-35
2-Lane w/ options of sidewalk (or multi-use trail), and bike lanes	Rural Agricultural Industrial	50-80	28-50	5-8	30-35
2-Lane w/ sidewalk bike lanes, and options of median, and on-street parking	Rural Cluster	50-80	28-46	5-8	30-35
2-Lane w/ options of bike lane, on-street parking, median	Urban Activity Center	40-80	28-56	5+	30-35
Main Street					
2-Lane w/ on-street parking and options of bike lane and median	Urban Activity Center, Village Center, Rural Cluster	56-82	27-62	8-15	25-30
Neighborhood Streets					
2-Lane w/ on-street parking	Urban Activity Center, Village Center	54-70	32	5-8	25
2-Lane w/ on-street parking	Neighborhood, Neighborhood Center	36-58	16-24	5-8	20
2-Lane w/ on-street parking	Rural Cluster	36-58	16-24	5-8	20
2-Lane	Rural Agricultural	34-40	16-24	5-6	20
Farm-To-Market					
2-Lane	Rural Agricultural	60-100	20-24	N/A	45-50

INNOVATIVE IDEAS:

The manual provides a five-step process to develop and implement corridor master plans using the corridor design guidelines that are provided. A general description of the process follows:

- ***Step One*** – define the study area, form a corridor advisory group, define study goals, and organize the public involvement process;
- ***Step Two*** – determine the future land use context based on land use definitions provided above;
- ***Step Three*** – establish a vision for the corridor, identify opportunities, and create design sketches,
- ***Step Four*** – provide design guidelines based on manual, develop alternatives to present as options, hold public meetings, and refine alternatives; and
- ***Step Five*** – create an action plan to implement the corridor master plan defining short- and long-term implementation strategies.

2 ARLINGTON COUNTY

TITLE OF MANUAL: Arlington County Master Transportation Plan (Streets Element)
JURISDICTION: Arlington County, VA
PREPARED BY: Arlington County Planning Department
PUBLICATION DATE: JUNE 2006

PURPOSE:

The 2006 Master Transportation Plan (MTP) is an update of the County's 1986 Master Transportation Plan and provides a framework for addressing and managing these often conflicting street uses. The MTP re-examines streets in a comprehensive way to provide a master plan to safely accommodate multiple surface transportation modes.

PRODUCT:

A paradigm shift from the conventional idea of moving traffic on streets to developing complete streets was the highlight of the MTP. The plan replaces the existing functional classification of controlled access, other principal arterial, minor arterial, neighborhood principal street and neighborhood minor street with street typologies that are reflective of the land use context and the multimodal functions of the streets. Arlington's street typologies include:

- ***Urban Center Retail*** is an arterial street segment that serves a dense commercial area and is fronted by predominantly high-intensity, ground-level retail and consumer services, and is highly-oriented to pedestrian, bicycle and transit access.
- ***Urban Center Mixed-Use*** is an arterial street segment that serves a dense mixed-use area that is fronted by a variety of commercial, institutional, government and/or residential uses, and emphasizes pedestrian, transit and bicycle travel.
- ***Commercial Primary*** is an arterial street segment that serves a low or medium density commercial area that may also be less oriented to retail services and more service or industrial in nature. It emphasizes transit, and motor vehicle travel, including commercial vehicle movement.
- ***Medium-High Density Residential*** is an arterial street segment that serves a primarily residential neighborhood with medium to high densities, such as high rise or multi-story garden apartments, condos, or coops. It emphasizes pedestrian, transit, bicycle travel, and motor vehicle access.
- ***Low Density Residential*** is an arterial street that serves and traverses a low density, primarily single-family home residential neighborhood, and is fronted by residential, park, or institutional property. It emphasizes bicycle and pedestrian travel, local motor vehicle travel, and transit access.
- ***Regional Connector*** is an arterial street with a combination of a free-flow ramp and signalized points of access. It primarily provides mobility through Arlington for regional motor vehicle, truck, and commuter bus traffic, as well as access to major destinations within Arlington. Bicycle and pedestrian access is secondary, but not optional and should emphasize frequent safe bicycle and pedestrian access across the facility.
- ***The Urban Center Local Street*** is a non-arterial street segment located in a medium or high-density residential, commercial, or mixed-use area. These secondary streets, typically called side streets, may include ground level retail, but do not have the same level of pedestrian and vehicular activity as primary streets. In some locations, these streets provide service, utility, and emergency vehicles access to alleys, loading docks, and building service areas for loading and unloading goods, recyclables, and refuse. Access to the street system from off-street or garage parking may also be located on Urban Center Local Streets.
- ***Neighborhood Principal Streets*** occur in lower-density areas and provide access for fronting properties and links to adjacent streets. Neighborhood Principal Streets have no more than two travel lanes and can vary from 28 to 36 feet in width. Like Urban Center Local Streets, they provide a way to travel to and from home, connections to local resources, and a shared space in the neighborhood for walking, biking, talking with neighbors, and conducting everyday activities.
- ***Neighborhood Minor Streets*** occur in low and medium density residential areas. These streets are very similar to Neighborhood Principals in form and function. The distinctive feature of these streets is their nearly exclusive orientation to providing access to residences. Since residential streets typically have low traffic volumes with infrequent travel by large vehicles, all users other than pedestrians can be accommodated within a relatively narrow travelway. On-street parking is usually provided and sidewalks are needed along at least one side of the street.

DESIGN STANDARDS:

The Elements of Arlington Street Typology

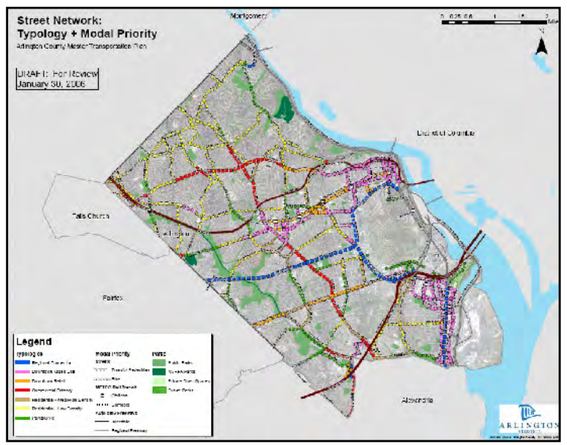
	Travel lanes	Median priority	Target Speed	Transit service	Bike accommodations	Restrict/Limit driveway access	On-street parking priority	Pedestrian way
Arterials								
Urban Center Retail (medium to high density)	2-4	None	20-25	Frequent	Bike lane/ shared lane	Yes	High	10-16 ft sidewalk 6 ft furniture zone or tree pits
Urban Mixed Use (medium to high density)	2 (one-way) 4 (two-way)	None/ low	25-30	Frequent	Bike lane/ shared lane	Yes	High	10-12 ft sidewalk 6 ft furniture zone or tree pits
Commercial (low to medium density)	4 + turning	Med	30	Frequent	Bike lane	No	Low	6-8 ft sidewalk 6 ft green strip
Residential (medium to high density)	2-4	High	25-30	Moderate	Bike lane	No	High	6-8 ft sidewalk 5-6 ft green strip w/breaks
Residential (low density)	2-4	None/ med	25-30	Limited	Bike lane/ shared lane	No	Med	5-6 ft sidewalk 4-6 ft green strip
Regional Connector	4-6	High	35-45	Limited	Dedicated shared use path	Yes	None	6 ft sidewalk or 10 ft shared use path 8+ ft green strip
Non-arterials								
Urban Center Local (medium to high density)	2	Low	25	Limited - None	Bike lane/ shared lane	No	High	6-8 ft sidewalk 4-6 ft green strip
Neighborhood (low density)	2	Low/ none	20 -25	Limited-None	Shared lane	No	Med	5-6 ft sidewalk 4 ft green strip
Alley/Service	1-1/2 (yield)	None	10	None	Shared lane	No	Low	None/5 ft sidewalk limited landscaping
Transitway	2	Low/ none	Varies	Frequent	shared use paths	Yes	None	10-12 ft shared use paths on each side 6 ft green strip

Local Streets Design Criteria

Arlington County Road Designation	Street Design Criteria												
	Max. Design speed (mph)	Traffic flow	Total # of lanes	Paved width (ft; face of curb to face of curb)	Lane width (ft)	Parking lane width (ft)	Bike lane width (ft)	Planted median width (ft)	Planting strip width (ft)	Sidewalk width (ft)		Curb	Right-of-way minimum recommended width (ft)
										Residential	Commercial		
Urban Center Local Streets	25	2-way	2	28 - 30 (Parking on one side) 34 - 36 (Parking on both sides)	10 - 11	7 - 8	N/A	N/A	4 – 6	4 - 6	4 - 6	Yes	47 - 59 (Parking on one side) 55 - 65 (Parking on both sides)
Neighborhood Principal Streets	25	2-way	2	28 - 30 (Parking on one side) 34 - 36 (Parking on both sides)	10	7 - 8	N/A	N/A	4	4 - 5	See above	Yes	46 - 50 (Parking on one side) 51 - 55 (Parking on both sides)
Neighborhood Minor Streets	25	2-way	Shared lane	20 (no parking)	10	N/A	N/A	N/A	4	4	N/A	Yes	37
	25	2-way	Shared lane	21 - 26 (parking one side)	14 (shared)	7	N/A	N/A	4	4	N/A	Yes	38 - 43 Varies with paved width of street
	25	2-way	Shared lane	28 - 32 (parking both sides)	14 (shared)	7	N/A	N/A	4	4	N/A	Yes	45 - 49 Varies with paved width of street

INNOVATIVE IDEAS:

Arlington MTP sets modal priorities for all major roadways within the County. The plan assigns a particular travel mode that will be given priority on a particular roadway.



TITLE OF MANUAL: Urban Street Design Guidelines (Draft for Public Review)
JURISDICTION: Charlotte, NC
PREPARED BY: Charlotte Department of Transportation
PUBLICATION DATE: APRIL 2005

PURPOSE:

The intent of the guidelines is to help the City accommodate growth by supporting a variety of City policies and planning documents. The City's goal is to focus on more compact growth, expanded travel choices, and integration of mixed use development. The guidelines are intended to work as overlays to existing street classifications, which have typically indicated only the traffic function of the street. A roadway labeled thoroughfare from a functional standpoint, could be labeled as an Avenue depending on the anticipated use and the surrounding land uses. The guidelines address the challenges regarding the overlay approach in context to the traditional thoroughfare planning process, which is still employed by the NCDOT. Therefore, in their most recent Comprehensive Transportation Plan (CTP), they have proposed a new set of roadway classifications to better reflect multi-modal and context-based designs. The Urban Street Design Guidelines work in tandem with the CTP.

PROCESS:

The City held stakeholder interviews early in the development of the guidelines resulting in a list of the most and least favorite streets. A key finding from the interviews was that the older streets (pre-automobile dominance) where considered the "most favorite," which included abundant tree canopy and pedestrian facilities. In addition, follow-up internet based surveys were provided to almost 1,000 people to identify the most/least favorable streets.

PRODUCT:

The final document was a draft provided for public review and included roadway design guidelines that integrated land use and transportation. The following five street types where chosen to classify streets within Charlotte:

1. ***Main Streets*** – most pedestrian/civic oriented
2. ***Avenues*** – provide access to/from residential and commercial areas
3. ***Boulevards*** – move large numbers of vehicles from one part of the city to another
4. ***Parkways*** – most automobile oriented, favoring the automobile mode over all others
5. ***Local Streets*** – provide direct access to residential, industrial, or commercial districts

The document was divided into six chapters: Chapter 1: Introduction to Redefining Charlotte's Streets, Chapter 2: Designing Streets for Multiple Users, Chapter 3: Applying the Guidelines, Chapter 4: Segments, Chapter 5: Intersections, and Chapter 6: Glossary.

DESIGN STANDARDS:

Roadway Types	ROW Width (ft)	Curb-to-Curb Width (ft)	Speed (mph)	Sidewalk width (ft)	Applicable Land Uses	Block Length (ft)
Main Streets						
▪ 2 Lane w/ on-street parking , (and center turn lane)	91+	41+	25	7+ per side	Institutional, Retail, Office, Public Gathering Places, and upper story residential	400
Avenues						
▪ 2 Lane w/ on-street parking, bike lanes (and center turn lane or median)	51+	41+	25-35	3+ per side	Single-family, multi-family, Institutional, Commercial, Office, Mixed-use	600
Boulevards						
▪ 4 Lane w/ bike lanes (and center turn lane or median)	84+	72+	35-40	6+ per side	Variety of land uses similar to Avenues, except setback from roadway	1,000+
Parkways						
▪ 4-6 Lane w/ center turn lane or median)	117+	77+	45-50	5+ per side	Automobile oriented uses set back away from Parkway	2,640+
Local Residential Streets						
▪ 2 Way w/ on-street parking (widths-narrow, medium, wide)	46, 53, 63+	17, 26, 34+	25 and below	5+ per side	Residential	400-600
Local Office/Commercial Streets						
▪ 2 Way w/ on-street parking (widths-narrow, medium, wide)	51, 69+	24, 40+	25	6+ per side	Office/Commercial/Mixed use	400-600
Local Industrial Streets						
▪ 2 Way w/ on-street parking	61+	34+	25	5+ per side	Industrial	1,000

INNOVATIVE IDEAS:

- As part of the process to identify the most and least desirable streets, the developers of the manual conducted internet surveys with approximately 1,000 people to obtain a large sample of what stakeholders perceived as good and bad streets.
- Each typical roadway section was broken down into what were described as zones to help further evaluate the necessary design requirements. The different zones included the development zone (private property), pedestrian zone (public space), green zone (transition space between the parking space), parking zone (on-street parking area), and mixed vehicle zone (roadway).

TITLE OF MANUAL: Forward Dallas! Comprehensive Plan (Transportation Element)
JURISDICTION: Dallas, TX
PREPARED BY: City of Dallas Planning Department
PUBLICATION DATE: 2005

PURPOSE:

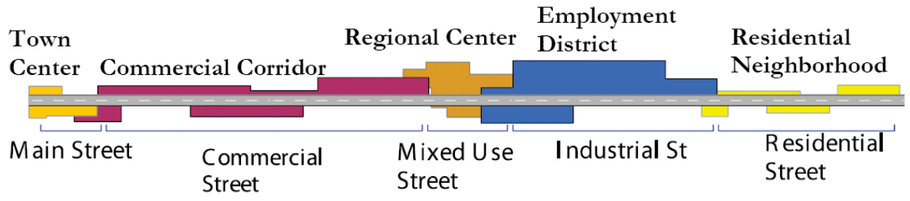
The City of Dallas' old method for thoroughfare planning placed an emphasis on the need to move regional traffic and did not efficiently balance the goals of transportation mobility and land use planning. Dallas took a policy decision to design streets in a manner that complements the surrounding environment and balances the needs of pedestrians, bicyclists, motorists and transit users. Dallas adopted a new paradigm of street design that involves a holistic approach that at its core embraces the adjacent land use while simultaneously providing mobility for the automobile.

PROCESS:

The planning process was a collaborative interdisciplinary process involving several stakeholders. The planning team obtained input from citizens through public workshops conducted throughout the plan development process. Citizen input along with an evaluation of the City's street design policies resulted in the creation of a new street typology that reflects the mobility requirements and the land use context of streets. The approach integrates context sensitive design principles into the thoroughfare planning process

PRODUCT:

The new thoroughfare plan contains a new subset of designations to supplement the functional classifications for the city's streets. The goal is to create a connection between land use and transportation in Dallas and this is achieved by matching the new set of context-based street typologies with the existing functional classification of arterials, collectors and local streets. The context-based street typologies were developed by using the various land use categories within the community.



The street typologies developed for the study include – Downtown Street, Mixed Use Street, Transit Street, Main Street, Industrial Street, Commercial Street and Residential Street. Typical sections were developed for each of these street types within the context of the existing functional classification.

DESIGN STANDARDS:

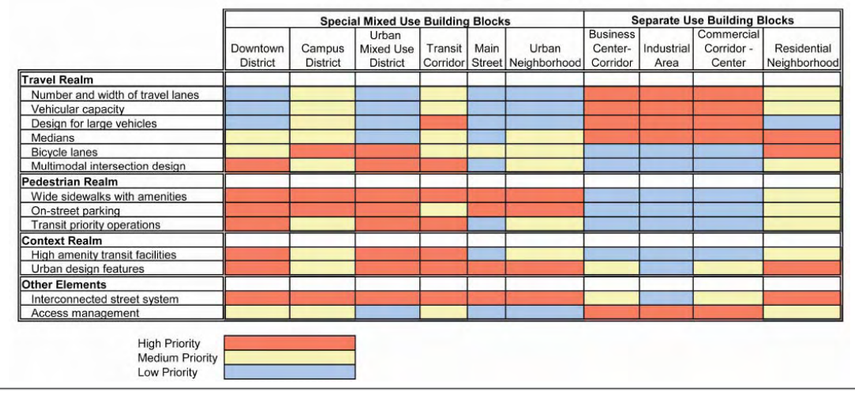
Functional Classification	Description	ROW Width (ft)	Curb-to-Curb Width (ft)	Speed (MPH)
Principal Arterial (Six Lanes, Divided)	6 Lanes w/ sidewalk, landscaping and center turn lane or median	104’-120’	81’-98’	35-45
Principal/Minor Arterial (Four Lanes, Divided)	4 Lanes w/ on-street parking, sidewalk, landscaping and center turn lane or median	80’-112’	60’-81’	35-45
Principal/Minor Arterial (Four Lanes, Undivided)	4 Lanes w/ on-street parking, sidewalk, and landscaping	60’-92’	44’-62’	35-45
Collector Street (Four Lanes, Divided)	4 Lanes w/ on-street parking, sidewalk, landscaping and center turn lane or median	80’-100’	59’-69’	25-35
Collector Street (Four Lanes, Undivided)	4 Lanes w/ on-street parking, sidewalk, and landscaping	60’-90’	42’-64’	25-35
Collector Street (Two Lanes, Undivided)	2 Lanes w/ on-street parking, sidewalk, and landscaping	50’-84’	36’-60’	25-35
Local Street (Two Lanes, Divided)	2 Lanes w/ on-street parking, sidewalk, landscaping and center turn lane or median	50’-70’	38’-51’	20-25
Local Street (Two Lanes, Undivided)	2 Lanes w/ on-street parking, sidewalk, and landscaping	50’-58’	32’-36’	20-25
Couplet Street (Four Lanes, One-way)	4 Lanes w/ on-street parking, sidewalk, and landscaping	60’-90’	44’-52’	35-45
Couplet Street (Three Lanes, One-way)	3 Lanes w/ on-street parking, sidewalk, and landscaping	50’-80’	33’-40’	35-45
Couplet Street (Two Lanes, One-way)	2 Lanes w/ on-street parking, sidewalk, and landscaping	50’-56’	24’-36’	35-45

INNOVATIVE IDEAS:

The Forward Dallas! Plan identifies four “realms” within the street corridor. The plan recommends design elements for each of the street types. The four realms and two overlap zones that together comprise the thoroughfare and its surroundings are listed as:

- ***Context Realm***: Properties and activities adjacent to the public right-of-way with surroundings (buildings, landscaping, open spaces, transit stations and parking) are included in the context realm.
- ***Pedestrian Realm***: Public right-of-way from curb to the front property line of adjoining parcels typically including planting area, sidewalk, street furnishings zone, and retail frontage as well as bus shelters, waiting areas, and bicycle parking.
- ***Travelway Realm***: Public right-of-way from curb to curb including parking lanes, roadways, medians, transit stops and loading/unloading zones.
- ***Intersection Realm***: Public right-of-way and a portion of abutting private property that together form a frame including the intersection at its center.
- ***Context/Pedestrian Overlap***: Ground floor building frontage, any overhanging elements (arcades, awnings, etc), and walkways on private property adjoining the thoroughfare are all part of the overlap between the private development in the context realm and the public space of the pedestrian realm.
- ***Pedestrian/Travelway Overlap***: The areas are those within the travelway where pedestrians are common, such as parking lanes, crosswalks, and transit stops.

Within these realms, a priority matrix is also provided describing elements to be used in these realms to maximize the use of the public ROW. The matrix also identifies elements that should be emphasized in the context zone outside of the public ROW.



TITLE OF MANUAL: Blueprint Denver – An Integrated Land Use and Transportation Plan
JURISDICTION: Denver, CO
PREPARED BY: Denver Planning Board
PUBLICATION DATE: 2002

PURPOSE:

"Blueprint Denver" was the first step in a process of realizing the City's 2000 Comprehensive Plan and 2020 Vision Plan, calling for cooperative and conjunctive planning efforts for transportation and land use. The plan encourages and promotes more efficient use of transportation systems and expanded transportation choices to help channel new growth into targeted development areas and to provide service without disturbing the established and stable areas of the City.

PROCESS:

The effort to develop "Blueprint Denver" was headed by a 46-member Land Use and Transportation Advisory Committee (LUTAC) that provided numerous outlets for public input – 19 open houses and eight hands-on workshops held in various neighborhoods across the city – as well as opportunities for comments through newsletters and websites. The plan was developed over a period of 20 months. Ideas solicited during the comment period and at the meetings were reviewed, tested, and in many cases incorporated in the Plan by the LUTAC.

PRODUCT:

Through its first integrated transportation and land use plan, Denver retains its historical functional classification system of arterials, collectors, and local streets but overlays these classifications with "street types" based on adjacent land use. The retention of historic functional classification is based on the broad purpose of the street such as the need to primarily move vehicles or primarily provide land access.

Table 2 – Relationships between Denver Multi-Modal Street Types and Functional Class Categories

FUNCTIONAL CLASS	STREET TYPE				
	Residential Street	Main Street	Mixed-Use Street	Commercial Street	Industrial Street
Arterial	•	•	•	•	
Collector	•	•	•		•
Local	•	•	•		•
Downtown Access			•		

Downtown Access Streets have been added as an addition to the street function designation due to its uniqueness. The overlaying of land use based street types is based on the premise that regardless of the street's function (e.g., arterial or collector), it must serve the level of activity of the adjacent land use with appropriate design elements and varying modal emphasis. The following street types are used in the Denver Plan.

- ***Residential Streets*** can be local or arterial streets which provide a balance of multimodal mobility with land use or collectors and emphasizes walking, bicycling, and land use over mobility. Generally consist of two to four travel lanes, but place a higher priority on pedestrian and bicycle friendliness than on auto mobility.
- ***Main Streets*** serve medium intensity retail and mixed land uses including neighborhood centers. The streets are designed to promote walking, bicycling, and transit within an attractive landscaped corridor. Main Streets generally consist of two to four travel lanes. On-street parking is usually provided with curb extensions, street trees, and wide sidewalks to accommodate street furniture and outdoor cafes.
- ***Mixed-Use Streets*** are located in high-intensity mixed-use commercial, retail, and residential areas with substantial pedestrian activity. These streets typically consist of two to four travel lanes with landscaped medians and trees to be more attractive for pedestrians and bicyclists. Frequently provide on-street parking and wide sidewalks.
- ***Commercial Streets*** are designed to balance traffic mobility with land access. These streets typically provide four to six lanes divided by a landscaped median.
- ***Industrial Streets*** are designed to accommodate significant volumes of large vehicles such as trucks, trailers, and other delivery vehicles. The streets typically consist of two to four wide travel lanes.
- ***Landmark Streets*** have a particular significance in the city's history because of their influence on the unique physical character of the city. Each has its own unique character and design, generally two to four lanes in each direction with wide tree lawns along each side and wide attractively landscaped medians.
- ***One-way Couplets*** exist as pairs of one-way streets that function as a single higher capacity street. The streets typically consist of two to four lanes and emphasize mobility over land access.

The street interface is divided into three components – ***travelway area*** needed to move vehicles; the ***pedestrian area*** needed to move people and transition people between vehicles and land uses or from one land use to another; and the ***land use and urban design area*** where land uses meet the street.

The Denver Plan specifies the characteristics of each of the above-mentioned street types along with recommendations for the first and second priority design elements and traffic management features for each of the street types.

STREET TYPE DESIGN ELEMENTS:

Street Type	Initial Priority Design Elements	Secondary Priority Design Elements	Traffic Management Features
Residential Streets	▪ Sidewalks ▪ Tree lawns ▪ On-street parking ▪ Bicycle lanes ▪ Alleys & rear-facing garages	▪ Number & width of travel lanes ▪ Landscaped medians	▪ Medians ▪ On-street parking ▪ Street trees ▪ Narrower travel lanes ▪ Traffic circles & roundabouts ▪ Reduced pedestrian crossing distances at intersections using curb extensions, traffic islands, etc., ▪ Diverters
Main Streets	▪ Wide sidewalks with transit access and pedestrian plazas ▪ Well-marked pedestrian crosswalks and signals ▪ Bicycle facilities ▪ Curb extensions ▪ Tree lawns/amenity zones ▪ On-street parking	▪ Number & width of travel lanes ▪ Landscaped medians	▪ Narrower travel lanes ▪ Alternative paving material ▪ Tree planters in parking lane ▪ On-street parking ▪ Reduced pedestrian crossing distances at intersections using curb extensions, traffic islands, etc., ▪ Raised intersections ▪ High-visibility crosswalks
Mixed-Use Streets	▪ Wide sidewalks with transit access ▪ Well-marked pedestrian crosswalks and signals ▪ Bicycle lanes ▪ Bicycle facilities ▪ Tree lawns ▪ On-street parking	▪ Number & width of travel lanes ▪ Landscaped medians	▪ Landscaped medians ▪ On-street parking ▪ Street trees ▪ Narrower travel lanes ▪ Traffic circles & roundabouts ▪ Reduced pedestrian crossing distances at intersections using curb extensions, traffic islands, etc.,
Commercial Streets	▪ Number & width of travel lanes ▪ Medians ▪ Pedestrian facilities ▪ Transit accommodations ▪ Limited driveways and other access points	▪ Bicycle facilities ▪ Tree lawns ▪ Two-way center left-turn lanes ▪ On-street parking	▪ Medians ▪ Consolidated driveways ▪ Synchronization of traffic signals ▪ On-street parking ▪ Narrower travel lanes ▪ Reduced pedestrian crossing distances at intersections using curb extensions, traffic islands, etc.,
Industrial Streets	▪ Wider travel lanes ▪ Sidewalks ▪ Wider turning radius at intersection	▪ Medians ▪ Bicycle lanes ▪ On-street parking ▪ Number of lanes ▪ Tree lawns	▪ Parking restrictions ▪ Wider turning radius at intersections & access points ▪ Acceleration & deceleration lanes

INNOVATIVE IDEAS:

The plan looks at the relationship between land use and transportation, and advocates that land use and transportation decisions be made in conjunction with each other. The Denver Plan presents land use and transportation components as tools for creating the type of development envisioned for Denver's future. In the context of transportation, the tools are transit systems, pedestrian facilities, bicycle facilities, parking, travel demand management, and transportation systems management. By implementing funding and construction of these types of facilities and operational tools, the goal of making more of Denver's street multimodal corridors and making alternative modes of transportation more attractive, efficient, and safe is enhanced. The Denver Blueprint Plan provides an overarching guidance that will help direct planning efforts of citizens, city staff, developers, and local officials at the individual project level.

DESIGN STANDARDS:

Roadway Types	Description	ROW Width (ft)	Curb-to-Curb Width (ft)
Residential Arterial	4 Lanes w/ on-street parking, sidewalk, tree lawn (and center turn lane or median)	112’	78’
Residential Collector	2 Lanes w/ on-street parking, sidewalk, tree lawn	64’	36’
Residential Local	2 Lanes w/ on-street parking, sidewalk, tree lawn	60’	30’
Main Street & Mixed Use Arterial	4 Lanes w/ on-street parking, sidewalk, tree lawn (no median)	92’	60’
Main Street & Mixed Use Collector & Local	2 Lanes w/ on-street parking, sidewalk, tree lawn	64’	36’
Mixed Use Downtown Access	3 Lanes w/ on-street parking, sidewalk, tree lawn	80’	48’
Commercial Arterial	4 Lanes w/ sidewalk, tree lawn (and center turn lane or median)	110’	68’
Industrial Collector	2 Lanes w/ on-street parking, sidewalk, landscaping	72’	44’
Industrial Local	2 Lanes w/ on-street parking, sidewalk, landscaping	64’	36’

PORTLAND

TITLE OF MANUAL: City of Portland Transportation System Plan
JURISDICTION: Portland, OR
PREPARED BY: : City of Portland Planning Department
PUBLICATION DATE: 2004 Technical Update

PURPOSE:

Portland has for many years been exemplary in modern planning practices, not excluding transportation. With a population of 531,600 in the city itself and nearly 2 million in the region, the City of Portland started the process of developing its first comprehensive transportation plan in 1995, a process that was completed in 2000. The 2004 update revamped several elements of the plan, including additions to its street design classification system.

PRODUCT:

In addition to traffic functional classifications, the Portland plan develops classification based on transit, bicycle facilities, pedestrian facilities, freight movement, and emergency response routes. While each of these classification layers the Portland street system with multimodal designations, the city's street design classifications play a significant role in how they affect a roadway's design criteria and elements. The classifications are based partly on adjacent land use and vary in their modal priorities.

A regional corridor, for example, balances all modes of travel but places a slightly higher emphasis on auto travel in industrial and commercial corridors. In contrast, a community main street prioritizes pedestrian orientation in retail and residential districts. Each street classification prioritizes its design elements/components to ensure the street is designed to its emphasis in constrained right-of-way conditions. Portland's street design classifications include:

- ***Urban Throughways*** connect major activity centers within the metropolitan region. Intersections are completely grade-separated intersections, and there is no bicycle or pedestrian access. Buildings are not oriented to the freeway.
- ***Urban Highways*** connect major activity centers in the region. Highways may have a mix of grade-separated and at-grade intersections. Land access is restricted with few buildings facing the roadway. On-street parking is prohibited, but highways may include bike lanes and sidewalks with a landscape buffer.
- ***Regional Main Streets*** serve the multimodal travel needs of the region's most intensely developed activity centers. Regional Boulevards consist of four or more vehicle travel lanes, a balanced multimodal function, and a broad right-of-way. They may include on-street parking, bicycle lanes, narrower travel lanes, more intensive land use oriented to the street, wide sidewalks, and a landscaped median.
- ***Community Main Streets*** serve the multimodal travel needs of the region's most intensely developed activity centers. Community Boulevards exist primarily in regional and town centers, station communities, and as some main streets. These boulevards consist of four or fewer vehicle travel lanes, a balanced multimodal function, landscaped medians, on-street parking, narrower travel lanes, more intensive land use oriented to the street, and wide sidewalks.
- ***Regional Corridors*** serve the multimodal travel needs of corridors, inner and outer residential neighborhoods, and some main streets. Regional Streets consist of four or more vehicle lanes, a balanced multimodal function, broad right-of-way, limited on-street parking, wider travel lanes, corridor land uses set back from the street, sidewalks with pedestrian buffering, and a raised landscaped median.
- ***Community Corridors*** serve the multimodal travel needs of corridors, inner and outer residential neighborhoods, and some main streets. Community Streets consist of two or fewer lanes, a balanced multimodal function, narrower right-of-way, on-street parking, and residential neighborhood or corridor land uses set back from the street. These streets are located within low-density inner and outer residential neighborhoods to more densely developed commercial corridors and main streets where buildings are oriented toward the street at major intersections and transit stops.
- ***Urban Roads*** serve low-density industrial and employment areas as primary freight routes. Urban Roads carry significant vehicle traffic while providing for some transit, bicycle, and pedestrian travel.
- ***Greenscape Streets*** are designated as arterials where natural or informal landscapes are prevalent along the length of the street. The classification encourages for the preservation of the natural features and any viewscapes.
- ***Local Streets*** represent all other streets not classified and designed to suit their surroundings and multimodal traffic.
- ***Multimodal Intersections*** are those crossroads where special attention needs to be paid to pedestrians, cyclists, or transit users through geometric and traffic control designs.

These designations, when consider in conjunction with the street's traffic, transit, pedestrian, and freight classifications, offer a truly complete detail of the objectives for the streets in the Portland system.

INNOVATIVE IDEAS:

Portland's mode-specific classification systems extend beyond most communities designations for truck and non-motorized traffic, and aid the city in determining the appropriateness of improvements, adjacent land development proposals, and funding priorities.

- Traffic Classifications
  - Regional Trafficways
  - Major City Traffic Streets
  - Traffic Access Streets
  - District Collectors
  - Neighborhood Collectors
  - Local Service Traffic Streets
- Transit Classifications
  - Regional Transitways
  - Major Transit Priority Streets
  - Transit Access Streets
  - Community Transit Streets
  - Local Service Transit Streets
  - Transit Stations

7 SAN DIEGO

TITLE OF MANUAL: The City of San Diego Street Design Manual
JURISDICTION: San Diego, CA
PREPARED BY: : The City of San Diego Street Design Manual Advisory Committee and the City of San Diego Planning Department
PUBLICATION DATE: NOVEMBER 2002

PURPOSE:

The purpose of the manual "is to provide information and guidance for the design of the public right-of-way that recognizes the many and varied purposes that a street services." It is also intended to assist in the implementation of the City's planning, policy, and regulatory documents. The manual is for illustrative and planning purposes only (i.e. not construction plans).

PRODUCT:

The City's manual is divided into six sections: Roadway Design, Pedestrian Design, Traffic Calming, Street Lighting, Parkway Configurations, and Design Standards. The manual is configured such that all six parts are used concurrently to design street sections. Each element of the manual contains a pictorial and verbal description based on the intended use, including the geometric requirements for each. Roadways are separated into two broad categories, urban and suburban. Each street classification within the manual contains parkway configurations and traffic calming devices that have been deemed suitable for the type of street being considered. The manual also serves as a complement to the City's Transit Oriented Development Design Guidelines (a separate document). The following table summarizes design parameters for each of the roadway types defined in the manual and includes the parkway options for each.

INNOVATIVE IDEAS:

- The manual has been designed to provide multiple design options depending on the roadway type and land use being considered. Each roadway type contains a graphic to illustrate the appropriate design elements, including appropriate parkway options and traffic calming treatments, making the presentation of the guidelines easy to follow and understand.
- The manual provides multiple parkway options for each roadway type that focus on the pedestrian realm, which is dependent on the roadway type and land use. Each parkway option contains a pictorial representation of the essential elements.

DESIGN STANDARDS:

Roadway Types	ROW Width (ft)*	Curb-to-Curb Width (ft)*	Design ADT /Speed	Min Curve Radius	Applicable Land Uses	Parkway Options
Alleys						
Standard	20		N/A	N/A	N/A	N/A
Residential						
Cul-de-sac	54	34	200	100	Residential, Open Space	U1, U3, U4(a), U2
Low Volume	50	30	700	100	Residential, Open Space, School, Church, or Public Building	U1, U3, U4(a), U2
Local Street	52	32	1,500	100	Residential, Open Space, School, Church, or Public Building	U1, U3, U4(a), U2
Commercial						
Local Street	60	40-44-52 (parking options)	2,000	290	Commercial, Open Space, School, Church, or Public Building	U2, U5(a,b), U6(a,b)
Industrial						
Local Street	64	44	2,000	290	Industrial	U2, U3, U4(a)
Collector						
Two Lane Sub-Collector	54	44	2,000 /30mph	450	Residential, Commercial, Open Space, School, Church, or Public Building	U2, U3, U4(a), U5(a,b), U6(a,b)
Two Lane Collector	60-70 w/bike lane	36-46 w/bike lane	6,500 /30mph	450	Residential, Commercial, Open Space, School, Church, or Public Building	U3, U4(a), U5(a,b), U6(a,b)
Two Lane Collector w/ Two Way Left-turn	78	54	13,000 /35mph	380-610	Residential, Commercial, Open Space, School, Church, or Public Building, Urban Village, Pedestrian-Oriented Retail	U3, U4(a), U5(a,b), U6(a,b)
Two Lane Industrial Collector	80	60	6,500 /30mph	300-430	Industrial	U2, U3, U4(a)
Four Lane Collector w/ Two Way Left-turn	110-122	82	25,000 /35mph	380-610	Residential, Commercial, Open Space, School, Church, or Public Building, Urban Village, Pedestrian-Oriented Retail	U4(a), U5(a,b), U6(a,b)
Major Streets						
Four Lane *Urban* Major	118-130	90	35,000 /45mph	660-1,090	Residential, Commercial, Open Space, School, Church, or Public Building	U4(a), U5(a,b), U6(a,b)
Four Lane Major	120	76	35,000 /50mph	880-1,850	Residential, Commercial, Open Space, School, Church, or Public Building, Industrial	U4(b)
Six Lane *Urban* Major	140-152	112	45,000 /45mph	660-1,090	Residential, Commercial, Open Space, School, Church, or Public Building, Industrial	U4(a), U5(a,b), U6(a,b)
Four Lane Primary Arterial	142	98	55,000 /55mph	880-1,850	Residential, Commercial, Open Space, School, Church, or	U4(b)
Rural Roads						
Rural Local Road	60	24	1,500 /30mph	300-430	Residential, Agriculture, Open Space	R1, R2(a,b)
Rural Collector Road	80-96	24	7,500 /55mph	970-1,850	Residential, Agriculture, Open Space	R3, R4

Width has provisions to be either increased or decreased depending on the length of the block and or if there is a single access point.

8 SARASOTA

TITLE OF MANUAL: City of Sarasota Downtown Master Plan 2020
JURISDICTION: Sarasota, FL.
PREPARED BY: Duany Plater-Zyberk & Company
PUBLICATION DATE: JANUARY 2001

PURPOSE:

The intent of the master plan was to provide a consolidated and more precise plan for downtown Sarasota to help guide and implement various planning initiatives that preceded this document. The study originated with the City's need to update its Community Redevelopment Area (also known as the Downtown Sarasota Master Plan for Tomorrow).

PROCESS:

The master plan was developed using a design charrette with the public to build upon previous planning initiatives and to identify new issues that had emerged. The design charrette took place over eight days and facilitated participation by all stakeholders.

PRODUCT:

The final document was a 20-year plan that provided guidance, identified specific projects, and made recommendations for implementation. Although the master plan was developed as primarily a land planning document, it provided design standards and recommendations for roadways within the downtown. The following functional thoroughfare types are used to describe streets within Sarasota:

- ***Boulevards (BV)*** – free movement thoroughfare traversing urbanized areas with on-street parking, sidewalks, and parkways
- ***Avenues (AV)*** – free movement thoroughfare connecting civic locations within urbanized areas
- ***Streets (ST)*** – slow moving thoroughfares suitable for residential and commercial areas with raised curbs, sidewalks, street trees, and on-street parking
- ***Commercial Streets (CS)*** – slow moving thoroughfares suitable for Center and Core Zones providing frontage to higher mixed use buildings
- ***Alleys (AL)*** – narrow access way in the rear of more urban buildings
- ***Lane (LA)*** – a vehicular access way located in the rear of rural lots, providing access to parking
- ***Path (PT)*** – a pedestrian way connecting with sidewalk networks
- ***Passage (PS)*** – a pedestrian connector between buildings

In addition to the functional thoroughfare types described above, roadways were also classified as "A" or "B" streets in an attempt to define a system of walkable streets. "A" streets have a pedestrian emphasis and "B" streets have an automobile emphasis.

DESIGN STANDARDS:

Street Type	Design Speed	Right-of-Way Width	Pavement Width	Traffic Flow	On-Street Parking	Driveway Sight Distance	CurbType/ Radius (per Sect D., 8., d)	Sidewalk Width / Placement	Bikeway Type
Lane (LA-20-8)	15 mph	20 ft.	8 ft.	One Way	None	None	Swale /15 ft.	None	Route
Alley (AL-20-20)	20 mph	20 ft.	20 ft.	Two Ways	None	5 ft.	None /15 ft.	None	Route
Residential Street (ST-20-20)	20 mph	20 ft.	20 ft.	Two Ways	None	5 ft.	None /15 ft.	None	Route
Residential Street (ST-40-24)	15 mph	40 ft.	24 ft.	Two Ways	One side	5 ft.	"F" Type /15 ft.	6 ft. /both sides	Route
Residential Street (ST-50-24-a)	15 mph	50 ft.	24 ft.	Two Ways	Both sides, alternating	5 ft.	"F" Type /15 ft.	6 ft. /both sides	Route or path
Residential Street (ST-50-24-b)	20 mph	50 ft.	24 ft.	Two Ways	One side	5 ft.	"F" Type /15 ft.	6 ft. /both sides	Route or path
Residential Street (ST-50-27)	30 mph	50 ft. min.	27 ft.	Two Ways	One side	10 ft.	"F" Type /15 ft.	5 ft. /both sides	Route
Residential Street (ST-60-34)	30 mph	58 ft. min.	34 ft.	Two Ways	Both sides	10 ft.	"F" Type /15 ft.	6 ft. /both sides	Route
Commercial Street (CS-60-42)	20 mph	60 ft.	42 ft.	Two Ways	One side	10 ft.	"F" Type /15 ft.	6 ft. /both sides	Route
Commercial Street (CS-80-40)	20 mph	80 ft.	40 ft.	Two Ways	Both sides	10 ft.	"F" Type /15 ft.	12 ft. /both sides	Route
Commercial Street (CS-80-56)	20 mph	80 ft.	56 ft.	Two Ways	Both sides	10 ft.	"F" Type /15 ft.	12 ft. /both sides	Route
Commercial Street (CS-80-60)	35 mph	80 ft.	60 ft.	Two Ways & 4 Lanes	Both sides	20 ft.	"F" Type /15 ft.	10 ft. /both sides	Lane/4 ft.
Commercial Avenue (AV-68-34)	30 mph	68 ft. min.	17 ft. and 17 ft.	One Way Each Side	Each side	20 ft.	"F" Type /15 ft.	12 ft. /both sides	Route or 4 ft. lane
Commercial Boulevard (BV-84-58)	20 mph	84 ft.	18 ft. and 18 ft.	One Way Each Side	Each side	10 ft.	"F" Type /15 ft.	6 ft. /both sides	Route or 4 ft. lane
Commercial Boulevard (BV-110-60)	35 mph	110 ft.	30 ft. and 30 ft.	One Way Each Side & 4 Lanes	Each side	20 ft.	"F" Type /15 ft.	12 ft. /both sides	Route or 4 ft. lane

Source: City of Sarasota – Engineering Design Criteria Manual (March 2002)

INNOVATIVE IDEAS:

The study recommends broadening the traditional method used to determine level of service to reflect the available transportation service provided by all modes of transportation based on the new road configurations. The study offers two additional roadway classifications for streets, which are referred to as "A" and "B" streets such that the roadways are evaluated on their walkability rather than their automobile level of service classification. "A" streets have a pedestrian emphasis and are evaluated based on their walkability rather than an automobile level of service, while "B" streets have an automobile emphasis. As a result, the design requirements along "A" streets become extremely important as these streets must encourage and facilitate the use of alternative modes of transportation.

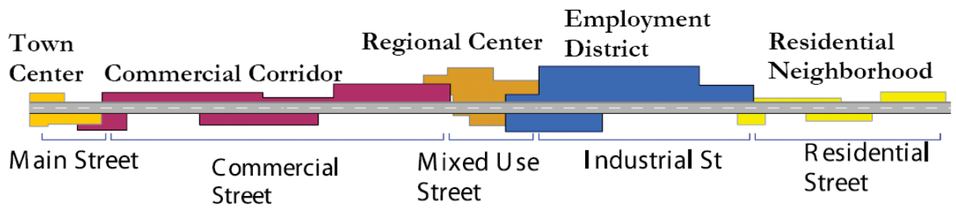
SUMMARY OF BEST PRACTICES

The project team reviewed multimodal street design standards and best management practices that have been successfully implemented in other jurisdictions throughout the country. The eight studies reviewed provide a snapshot of two counties and six cities that have refined and reclassified their street and thoroughfare networks. The documents range from public works manuals to comprehensive plans to transportation master plans. The Dallas and Portland studies included the transportation element of their respective comprehensive plans. These studies contained detailed street typologies and design characteristics of each. Alachua County, Arlington County, Charlotte, Denver and Sarasota were transportation studies that contain street typologies and their respective design guidelines. The recommendations from these studies were later incorporated into their public works manuals. The San Diego study was their public works manual that contains detailed typical sections and design elements for each roadway type. The common themes of the studies are presented in the following paragraphs.

Roadway Classification:
Alachua County, Arlington County, Dallas, Denver and San Diego maintained the conventional functional classifications of arterials, collectors and local streets for their roadway types with some additions/modifications based on the urban, suburban and rural characteristics of their jurisdictions. Charlotte and Sarasota adopted traditional roadway nomenclature of boulevards, avenues, streets, and alleys while defining their relationship with the conventional functional classifications. Portland developed new roadway types that are different from the conventional and the traditional nomenclature. Their roadway types are based on the mobility and land access functions of roadways within the city.

Land Use Classification:
All of the studies were based on the premise that street decisions and land use decisions should be mutually reinforcing to create effective synergy between streets and land uses. The roadway types that were developed were then overlaid on the land use classifications to determine the characteristics and design elements of the roadways. Charlotte, Dallas, Denver, and San Diego developed their land use types based on the various land use categories from their comprehensive plans such as residential, commercial, industrial, etc. Alachua and Arlington counties used land use classifications that were based on broader development zones versus individual land uses. Some examples include urban activity centers, village centers, neighborhood centers, urban center retail, urban center mixed-use, etc. Portland and Sarasota's classifications were not strictly land use, but land use based street types. For example, the classification of community main streets in Portland makes certain assumptions about the intrinsic land use character and the roadway character. For example, the classification of pedestrian oriented street makes the assumption that certain streets are required to be friendlier to pedestrians based on the land use character of the roadway. The table on page 31 illustrates the land use classifications included in each of the eight studies.

Street Typology:
Each of the eight jurisdictions developed their street typologies based on the land use context through which the roadway segment passes. The underlying philosophy of each of these studies is that the same roadway when passing though different land uses should take on different characteristics based on the adjacent land use. For example, a roadway segment that passes through a town center should be different from another segment that passes through an industrial district even though they are segments of the same roadway. This concept is illustrated with the following diagram in the Dallas plan where a roadway passing through various land use zones varies in character based on the quality of the zone.



Design Elements:
Design elements are one of the most important considerations of street design. The selection of design elements depends on the users of a roadway. For example, the design elements favored by pedestrians include street furniture, landscaping, textures walking surface, etc., while those favored by transit users include accessible bus stops, bus shelters, transit priority lanes, etc. Alachua County, Charlotte, Denver, and San Diego provide a list of design elements that are recommended and optional for each of the street types.

While these planning efforts were happening around the Country, the Institute of Transportation Engineers and Congress for New Urbanism were working on developing context-sensitive street design standards for urban thoroughfares. A design guidebook titled Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities has been drafted and is currently in the adoption process. Context Sensitive Solutions (CSS) is a collaborative, multidisciplinary, and holistic approach to transportation planning that results in the development of transportation projects that serve all users and are compatible with the surroundings and environment. It is a set of innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values along with transportation safety, maintenance and performance goals. The guidebook offers guidance on selecting appropriate thoroughfare types and corresponding design parameters and criteria for selecting of design elements for various land use contexts. The CSS process places a huge emphasis on pedestrian oriented planning and design within urban areas.

The study deviates from the conventional functional classification of arterials, collectors, and local roads and adopts the more traditional thoroughfare types of boulevards, avenues, and streets. The guidebook provides design characteristics for each of these thoroughfare types along with recommended roadway design elements. This guidebook will be very valuable while developing street sections for Miami-Dade County, especially within the urban centers.

Functional Classification	Thoroughfare Types						
	Freeway/expressway/ Parkway	Rural Highway	Boulevard	Avenue	Street	Rural Road	Alley/rear Lane
Principal Arterial				■			
Minor Arterial		■	■	■	■		
Collector				■	■	■	
Local					■	■	■

Alachua County, FL	Arlington County, VA	City of Charlotte, NC	City of Dallas, TX	City/County of Denver, CO	City of Portland, OR	City of San Diego, CA	City of Sarasota, FL
Roadway Classification:	*Roadway Classification:*	*Roadway Classification:*	*Roadway Classification:*	*Roadway Classification:*	*Roadway Classification:*	*Roadway Classification:*	*Roadway Classification:*
▪ Arterials ▪ Collectors ▪ Farm-To-Market Roads ▪ Main Street ▪ Neighborhood Street ▪ Bicycle and Pedestrian Trails	▪ Arterials ▪ Non-arterials ▪ Principal Streets ▪ Minor Streets ▪ Local Streets	▪ Boulevards ▪ Main Streets ▪ Avenues ▪ Parkways ▪ Local Streets	▪ Principal Arterial ▪ Principal/Minor Arterial ▪ Collector Street ▪ Local Street ▪ Couplet Street	▪ Arterial ▪ Collector ▪ Local Streets ▪ Main Street	▪ Regional Trafficways ▪ Major City Traffic Streets ▪ Traffic Access Streets ▪ District Collectors ▪ Neighborhood Collectors ▪ Local Service ▪ Traffic Streets	▪ Primary Arterial ▪ Urban Major ▪ Collector ▪ Rural Collector Road ▪ Rural Local Road ▪ Local Streets ▪ Low Volume ▪ Cul-de-sac	▪ Boulevards ▪ Avenues ▪ Residential Streets ▪ Commercial Streets ▪ Alleys ▪ Lane
Land Use Classifications:	*Land Use Classifications:*	*Land Use Classifications:*	*Land Use Classifications:*	*Land Use Classifications:*	*Land Use Classifications:*	*Land Use Classifications:*	*Land Use Classifications:*
▪ Urban Activity Center ▪ Industrial ▪ Village Center ▪ Neighborhood Center ▪ Neighborhoods ▪ Rural Cluster ▪ Rural Agricultural	▪ Urban Center Retail ▪ Urban Center Mixed-Use ▪ Commercial Primary ▪ Medium-High Density Residential ▪ Low Density Residential ▪ Regional Connector ▪ Urban Center Local Street ▪ Neighborhood Principal Streets ▪ Neighborhood Minor Streets	▪ Residential ▪ Institutional ▪ Commercial ▪ Office ▪ Mixed-use ▪ Public Gathering Places	▪ Residential Street ▪ Commercial Street ▪ Industrial Street ▪ Downtown Street ▪ Mixed Use Street ▪ Transit Street ▪ Main Street	▪ Residential Streets ▪ Main Streets ▪ Mixed-Use Streets ▪ Commercial Streets ▪ Industrial Streets ▪ Landmark Streets ▪ One-way Couplets	▪ Urban Throughways ▪ Urban Highways ▪ Regional Main ▪ Community Main Streets ▪ Regional Corridors ▪ Community Corridors ▪ Urban Roads ▪ Greenscape Streets ▪ Local Streets	▪ Residential ▪ Commercial ▪ Open Space ▪ School ▪ Church ▪ Public Building ▪ Urban Village ▪ Pedestrian-Oriented Retail ▪ Industrial ▪ Agriculture	▪ Pedestrian Oriented “A” Streets ▪ Automobile Oriented “B” Streets

APPLICABILITY TO MIAMI-DADE COUNTY

With an understanding of the street design efforts from across the country and the ongoing planning efforts within Miami-Dade County, the County has the opportunity to embrace new design philosophies that integrate both transportation planning/engineering and land use planning principles to develop street designs that accommodate all users of a roadway. By creating a context for both design criteria and land use interaction for streets, cities like Charlotte and Denver have developed a process in which street improvement projects must consider how people move and interact within the street space and not just how vehicles travel between points in the network. Redesigning Miami-Dade's streets with the combined philosophies of multimodalism and context-sensitive design can lead to streets:

- that function well within the context of adjacent land uses;
- that serve multiple functions;
- that serve users of all modes of transportation;
- that support a high mobility index, not just high level-of-service for vehicles;
- that are walkable and livable; and
- that are complete in their form and function.

One of the major tasks in developing street sections for Miami-Dade County will include identification of roadway types that are reflective of the land use patterns and the appropriate roadway elements for each roadway type. Miami-Dade County currently uses the roadway classification system of arterials, collectors and local roads. Continuing the current functional classifications provides consistency with current transportation planning efforts and standard operating procedures related to funding issues. By additionally overlaying a context-based set of street typologies, Miami-Dade County will be able to program the street improvements in a fashion that will allow them to prioritize design elements in relation to adjacent land uses and their functional classes.

Recommended Planning Approach:

The Charlotte plan recommends a six-step planning approach to roadway design for primarily planning and designing major streets. According to the six-step approach, the classification and ultimate design of any street should reflect both the existing and anticipated future land use contexts. The transportation assessment should consider both the existing and anticipated future conditions of the transportation network adjacent to or affecting the street to be designed. Once the land use and transportation contexts are clearly defined and understood from an area-wide perspective, the design team should identify any deficiencies that need to be addressed by the new or modified street. The information from the previous steps is used to define objectives for the street project, which will form the basis for the street classification and design. This is followed by recommending the appropriate street typology and the initial cross section based on the previous steps. If the initial preferred cross-section can be applied, then it becomes the recommended cross-section. In many cases, though, the initial cross-section will need to be refined to better address the land use and transportation objectives, given the constraints identified in Step 5. In that case, these multiple alternatives should be presented to the stakeholders and the final recommended cross-section identified. This six-step approach is also applicable to Miami-Dade County while selecting street typologies and their respective cross sections.

Anticipated Product:

The update of the Miami-Dade County Typical Street Section will focus on developing and refining a street design typology as well the different typical sections for each street type. In addition, the recommended and optional design elements will be prescribed for each of the street types. A planning approach for designing a new roadway or modifying an existing one will also be developed in tandem with the typical street sections.

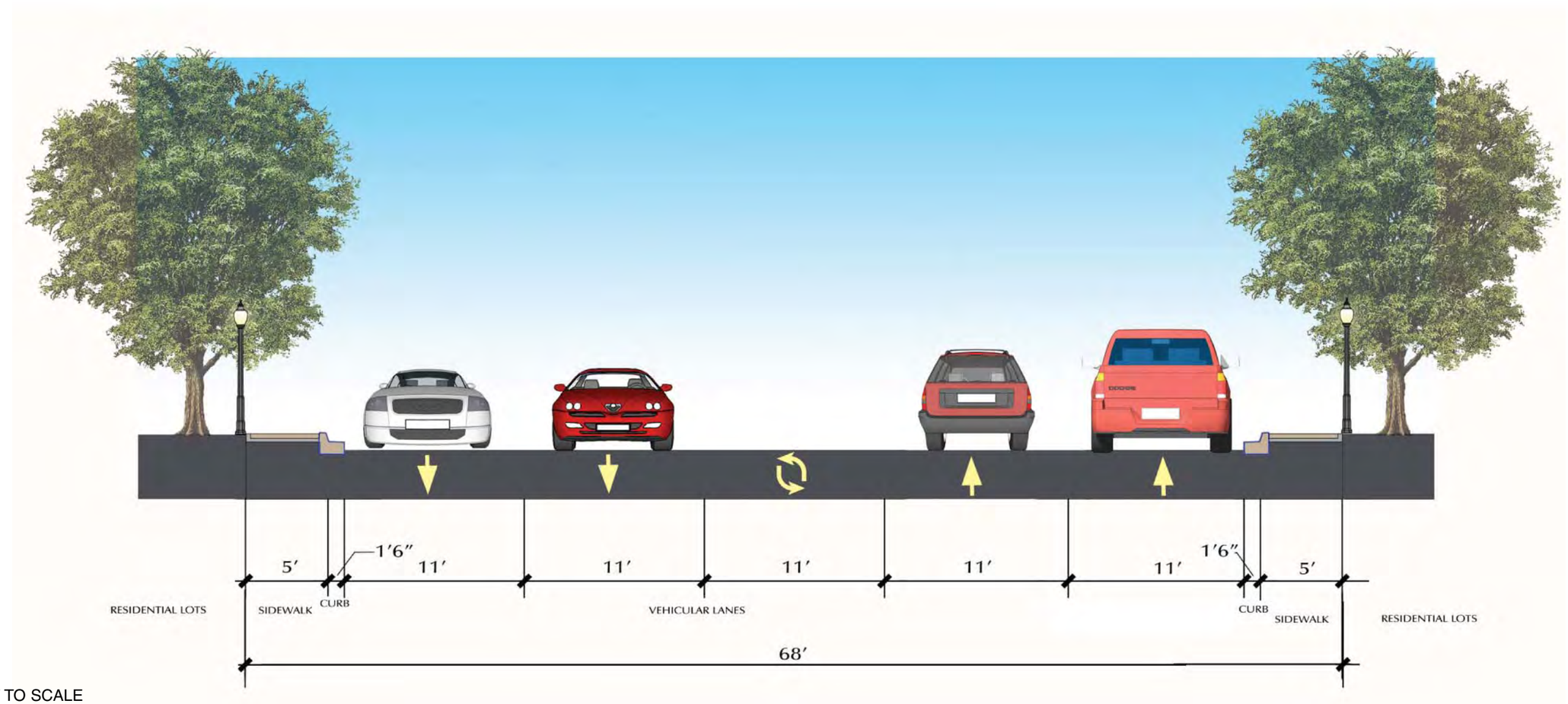
EXISTING CROSS SECTIONS

EXISTING TYPICALS

NORTH MIAMI AVE.
(from 79th St. North to Memorial Hwy. / Griffing Blvd.)

Zoned ROW = 100'

Comments:
1. Sidewalks too close to vehicle lanes.
2. No provisions for bicycling
3. Physical obstructions in the sidewalk.



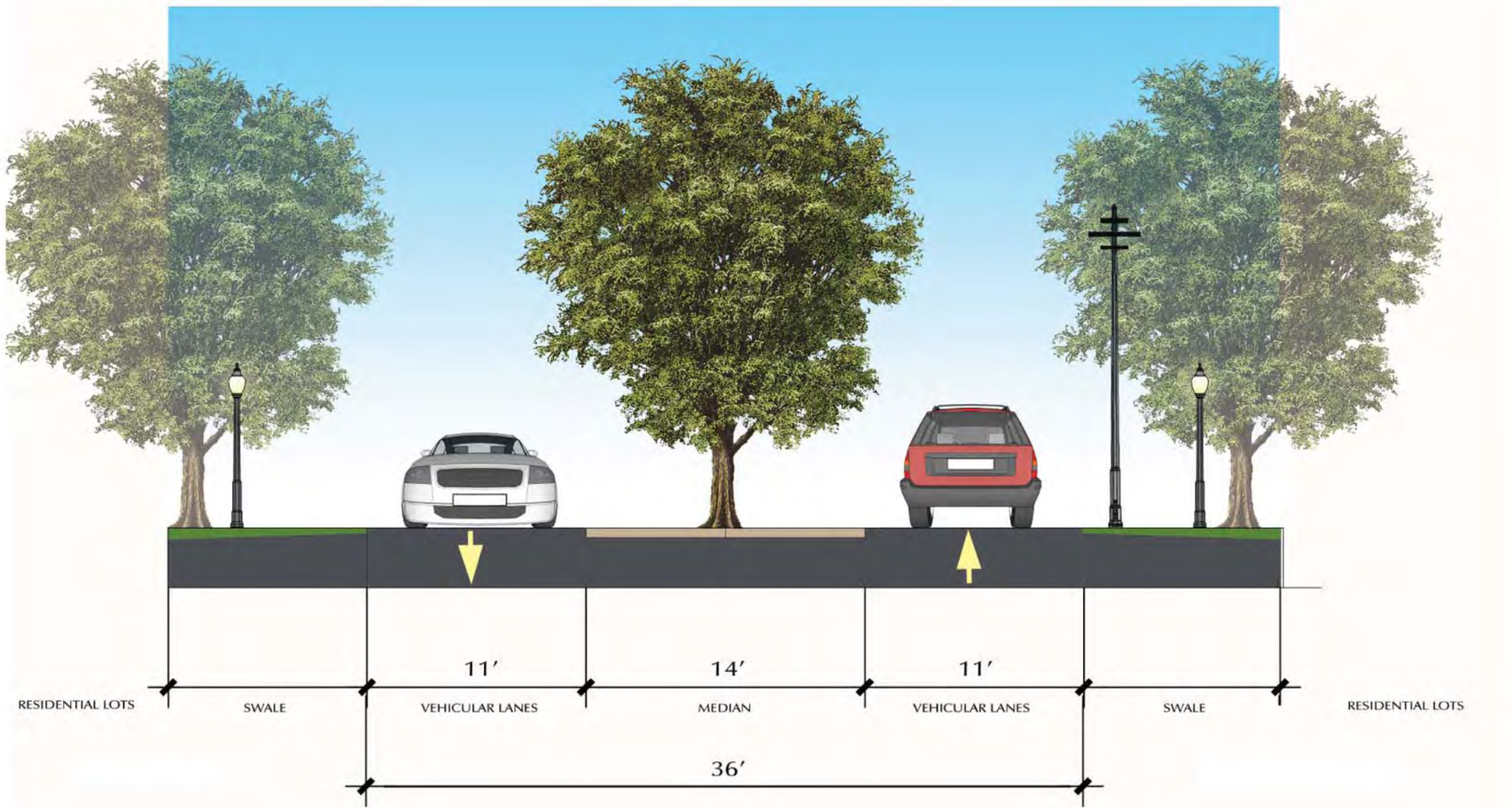
NOT TO SCALE

EXISTING TYPICALS

NE 2ND AVE / GRIFFING BLVD. / MEMORIAL HWY. NW 2 AVE.
(from NE 6 Ave. North to Golden Glades Dr.)

Zoned ROW = 70'

Comments:
1. Excellent shade/landscaping.
2. No sidewalks.



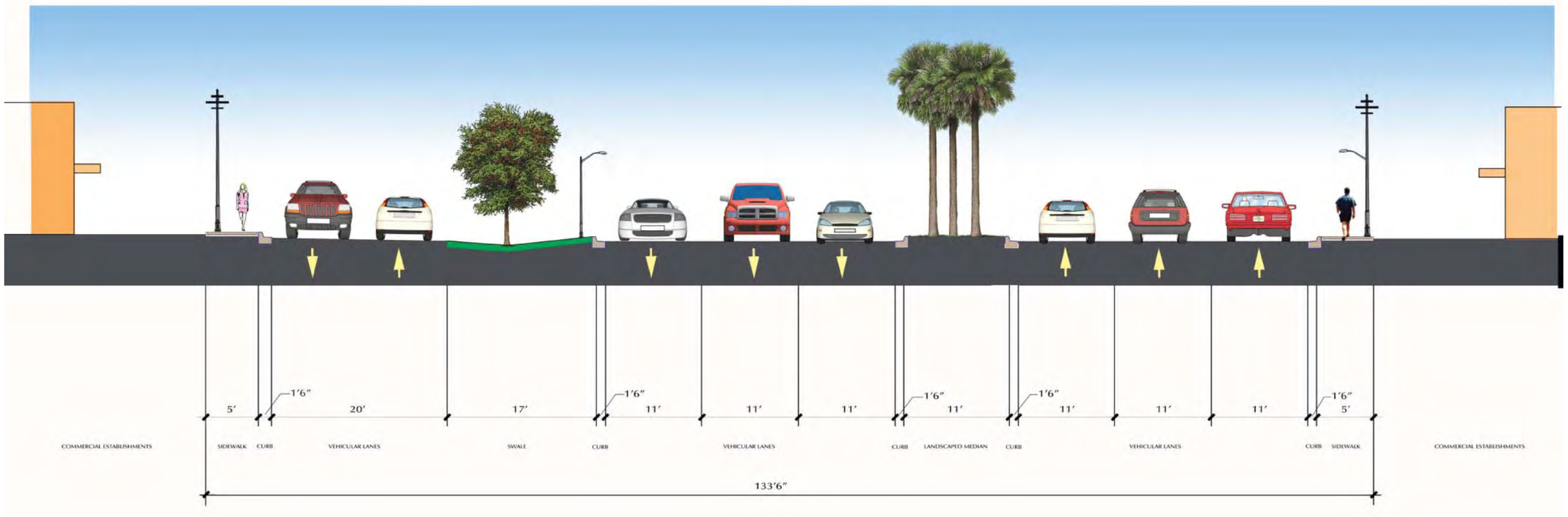
NOT TO SCALE

EXISTING TYPICALS

STATE ROAD 7
(from Golden Glades Dr. North to Canal)

Zoned ROW = 100'

Comments:
1. No buffer between pedestrians and vehicle lanes.
2. Parallel access lane.
3. Inadequate landscaping on median.



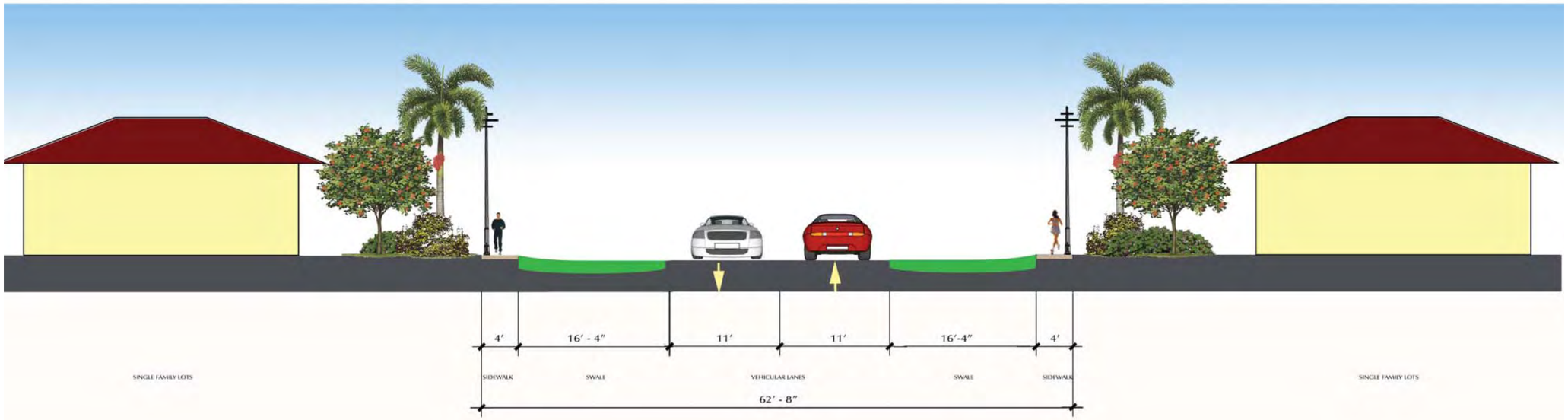
NOT TO SCALE

EXISTING TYPICALS

NW 7TH AVE.
(from Golden Glades Dr. extended North to County Line)

Zoned ROW = 70'

Comments:
1. Sidewalks too close to edge of the right-of-way line.
2. Physical obstacles in the sidewalk.
3. Landscaping unkempt.



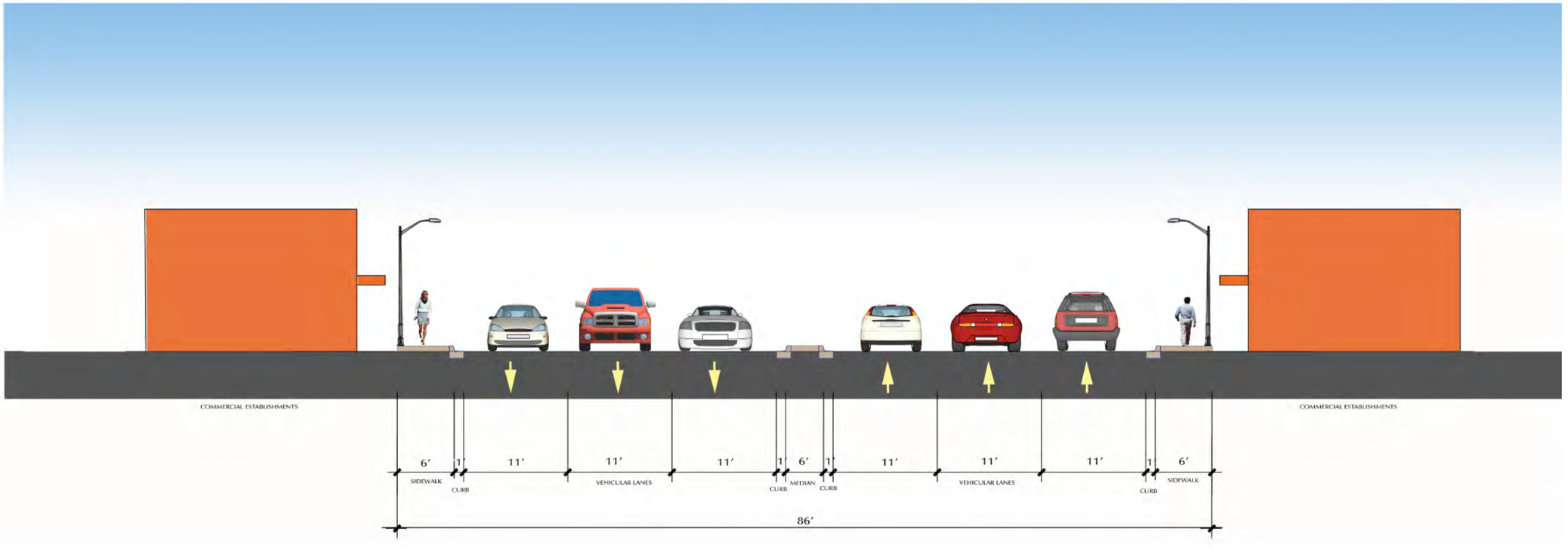
NOT TO SCALE

EXISTING TYPICALS

Bad Streets

WEST SIDE OF NW 27TH AVE.
(from 36TH ST., SOUTH TO CENTER LINE OF 20TH ST.)

Comments:
1. Sidewalks too close to vehicle lanes.
2. Lack of pedestrian amenities.

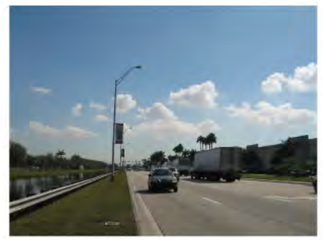


NOT TO SCALE

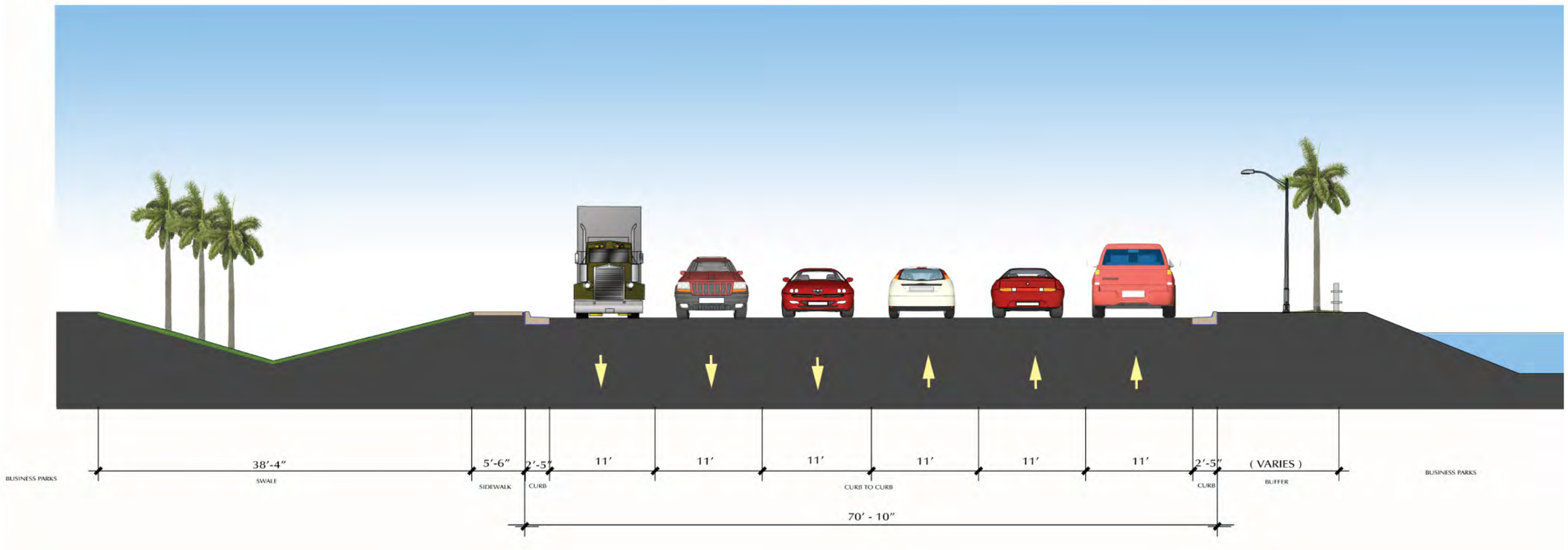
EXISTING TYPICALS

Bad Streets

NW 25TH ST
(from NW 72 AVE. TO NW 107 AVE.)



Comments:
1. Sidewalks too close to vehicle lanes.
2. No bicycling accomodations.



NOT TO SCALE

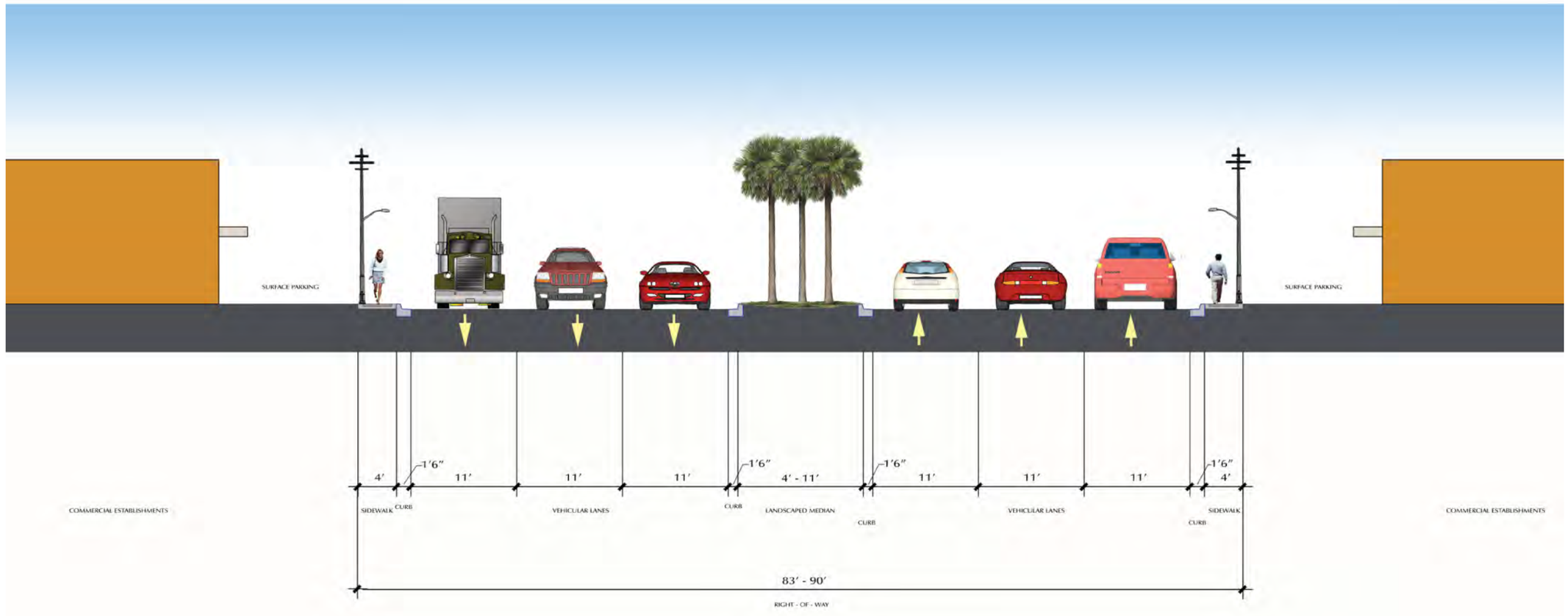
EXISTING TYPICALS

Bad Streets

STATE ROAD 7
(between County Line & NW 199th St.)

Zoned ROW = 100'

Comments:
1. Sidewalks too close to vehicle lanes.
2. No bicycling accomodations.
3. No transit provisions.



NOT TO SCALE

EXISTING TYPICALS

Good Streets

MIRACLE MILE
(East of LeJune Road)

Comments:

1. Provision of on-street parking and sidewalk furnishings to buffer pedestrians.
2. Pleasant landscaping along median.
3. Lower speeds.
4. Building facades well articulated.

NOT TO SCALE

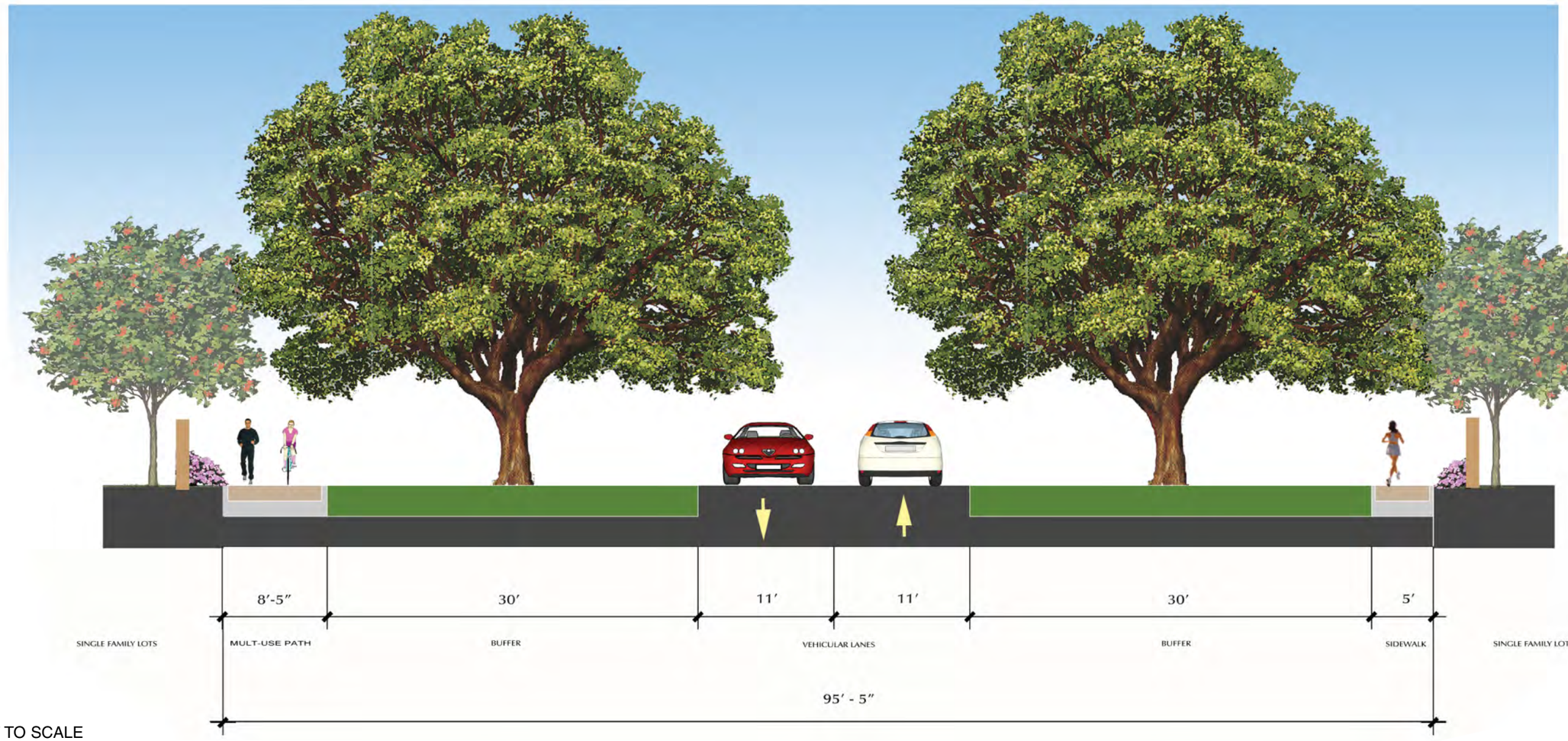
EXISTING TYPICALS

Good Streets

OLD CUTLER ROAD
(North of SW 80th St.)

Zoned ROW = 100'

Comments:
1. Excellent shade/landscaping.
2. Multi-use paths accomodate pedestrians and bicyclists.
3. Scenic experience.



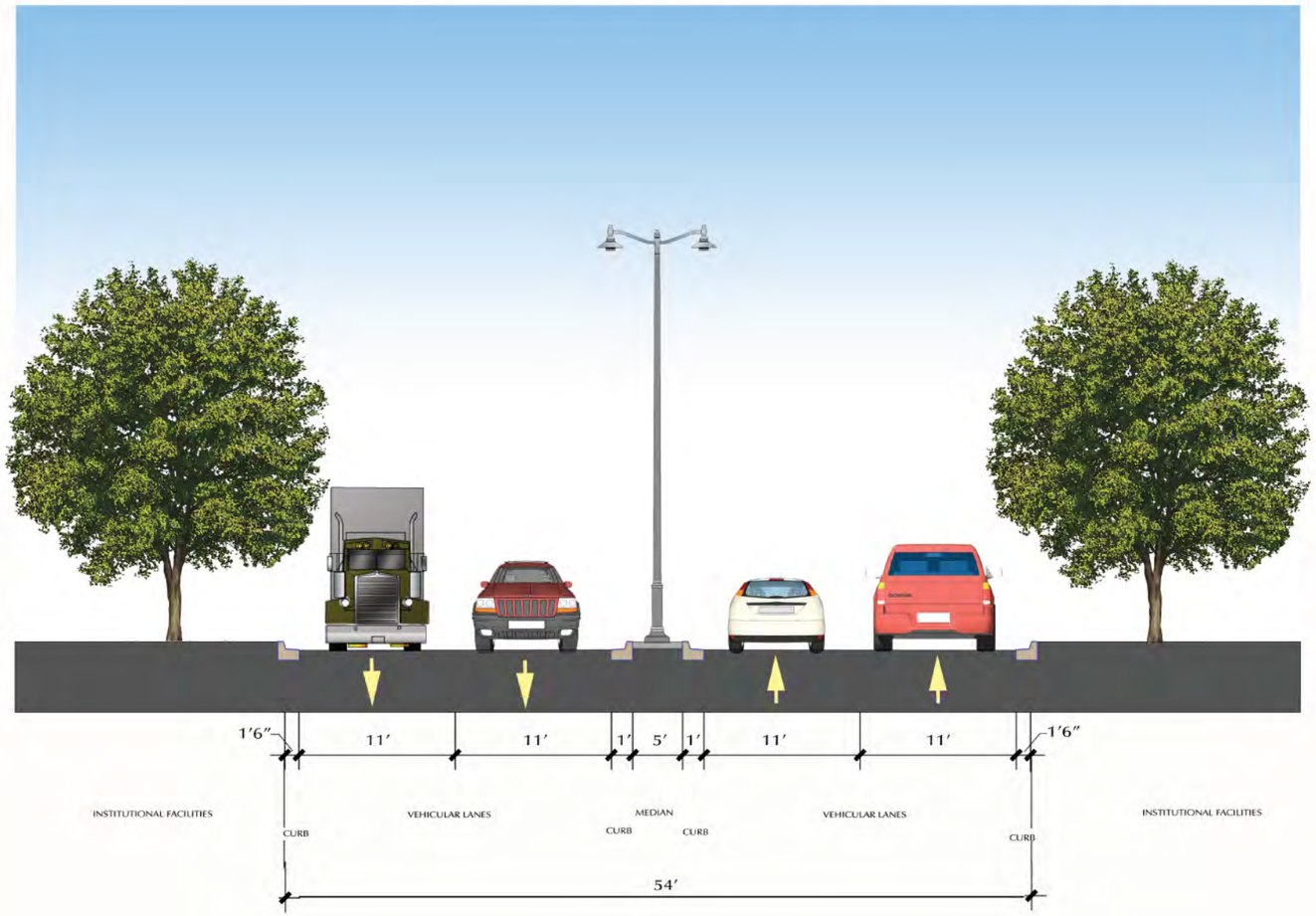
NOT TO SCALE

EXISTING TYPICALS

Bad Streets

NW 119TH ST. / GRATIGNY PARKWAY
(East of NW 32nd Ave.)

Comments:
1. No sidewalks.
2. No bicycle accomodations.



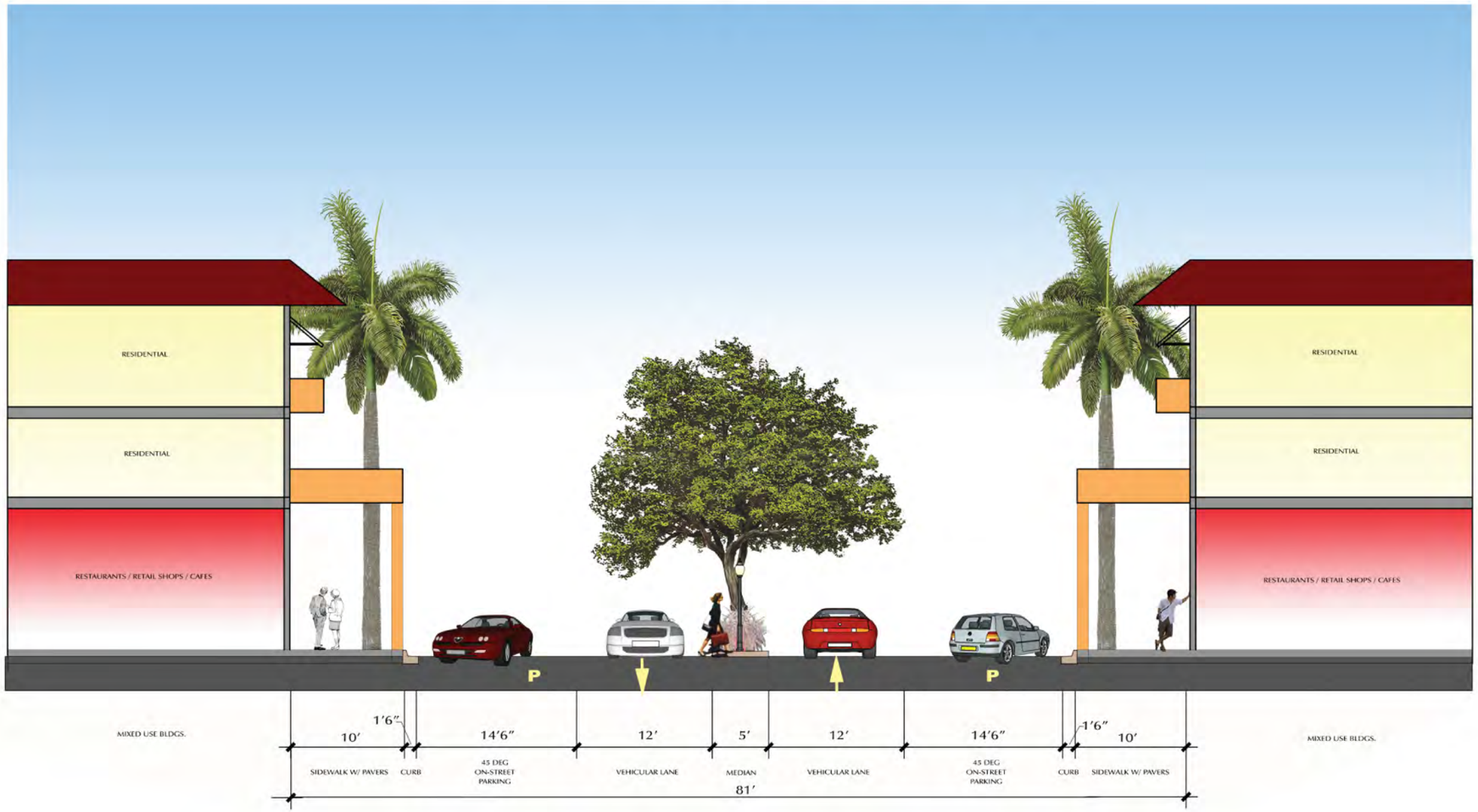
NOT TO SCALE

EXISTING TYPICALS

Streets

MAIN STREET, DOWNTOWN MIAMI LAKES
(West of on-street parking)

Comments:
1. On-street parking provides buffer for pedestrians.
2. Building facade and pedestrian amenities compliments the street.



NOT TO SCALE

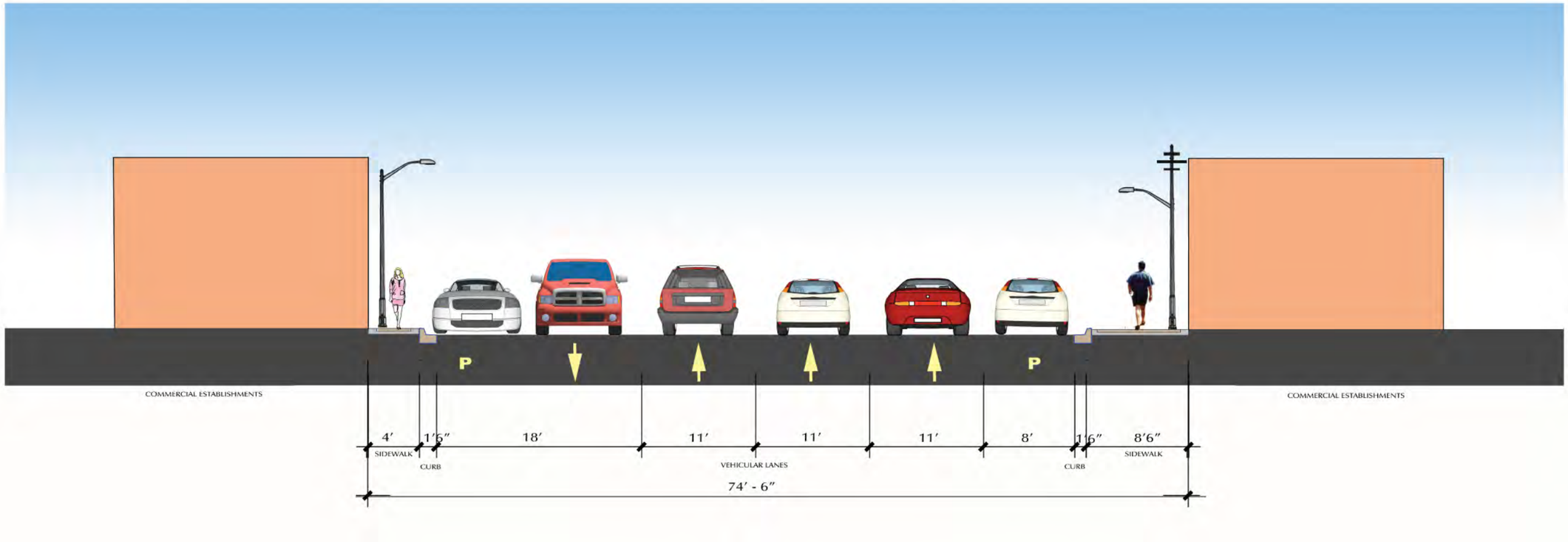
EXISTING TYPICALS

Bad Streets

79TH ST
(East of N-S Expressway)

Comments:

1. Sidewalks too close to vehicular lanes.
2. Poorly maintained sidewalk sidewalk surface with obstacles to pedestrian movement.
3. Poor street lighting.



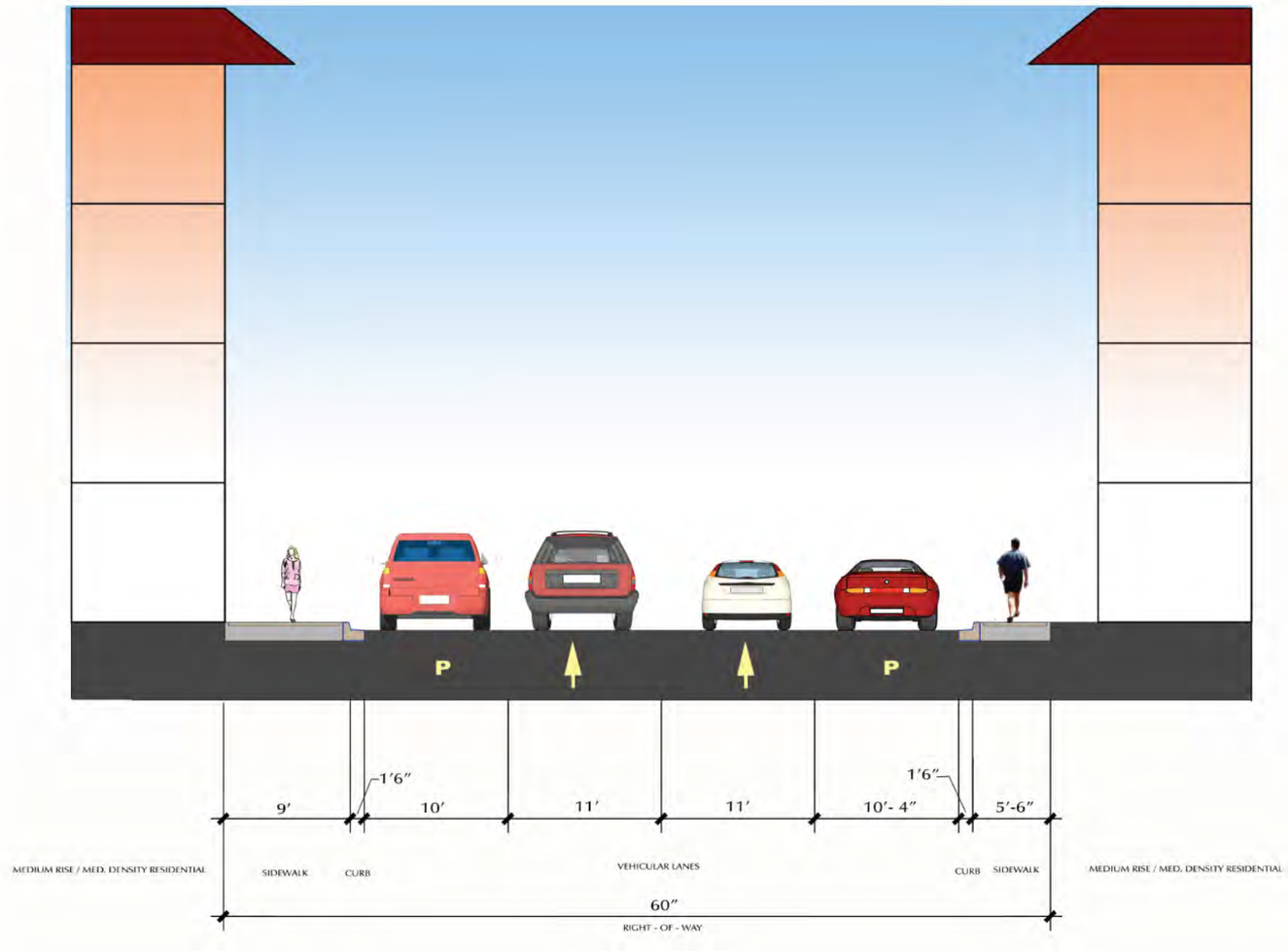
NOT TO SCALE

EXISTING TYPICALS

Bad Streets

81st ST
(East of N-S Expressway)

Comments:
1. Sidewalks too close to vehicular lanes.
2. On-street parking serves as buffer to pedestrians.



NOT TO SCALE

SECTION 33-133 PROPOSED ZONED RIGHT-OF-WAY ORDINANCE

Approved _____ Mayor
Veto _____
Override _____

Agenda Item No. _____

ORDINANCE NO. _____

ORDINANCE PERTAINING TO ZONING; AMENDING SECTION 33-133 OF THE CODE OF MIAMI-DADE COUNTY, FLORIDA PERTAINING TO RIGHT-OF-WAY PLAN AND MINIMUM WIDTH OF STREETS AND WAYS; PROVIDING SEVERABILITY, INCLUSION IN THE CODE AND AN EFFECTIVE DATE.

WHEREAS, the roadway network in Miami-Dade County is comprised of a hierarchical grid system of streets comprised primarily of half-section and section line roadways. To preserve the roadway network and its associated right-of-ways, Miami-Dade County adopted the "Right-of-way plan and minimum width of streets and ways", or also known as the zoned right-of-way. The adopted zoned right-of-ways were initially put in place in the 1950s and have been incrementally amended to date; and

WHEREAS, the County's planning direction is shifting toward a focus on pedestrian-oriented urban centers with an emphasis on multimodal transportation. The current zoned right-of-ways do not fully represent the spatial demands of multimodal transportation facilities; and

WHEREAS, the proposed zoned right-of-ways are based on the recommendations from the Miami-Dade County Roadway Typical Section and Zoned Right of Way Update Study. The Study incorporates the concept of context zones and land uses overlaid on roadway types to identify the appropriate roadway designation for streets within the County and the corresponding zoned rights-of-way.

BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA:

Section 1. Section 33-133 of the Code of Miami-Dade County, Florida is hereby amended as follows[1]:

Sec. 33-133. Right-of-way plan and minimum width of streets and ways.

The minimum right-of-way widths for streets, roads and public ways for the unincorporated area of the County shall be as follows:

		Preferred
(A) NORTH AND SOUTH HIGHWAYS (Avenues).		
North-South East Highways (Avenues).		*Feet*
(1)	North Miami Avenue from 79 St. North to Memorial Hwy. (Griffing Blvd.) (unincorporated areas)	*100~~5~~*
	From State Road #9 to Miami-Dade County North Line	*~~70~~105*
(2)	North Miami Avenue from Memorial Hwy. (Griffing Blvd.) to State Road. #9 (unincorporated areas)	*100~~5~~*
(3)	NE 2 Ave. from North limits of Miami Shores North to State Rd. #9 (unincorporated areas)	*~~70~~105*
(4)	W. Dixie Hwy. from NE 2 Ave. to 174 St. (unincorporated area), except— See No. 5 below	*~~70~~160*
(5)	W. Dixie Hwy. from NE 119 St. to NE 121 St.	*~~70~~160*
(6)	W. Dixie Hwy. from NE 174 St. North to County Line (unincorporated areas)	*~~66~~160*
(7)	NE 6 Ave. North limits of Miami Shores North to Griffing Blvd.	*~~70~~105*
(8)	NE 2 Ave. (Griffing Blvd.) (Memorial Hwy. NW 2 Ave.) from NE 6 Ave. North to Golden Glades Dr	*~~70~~105*
(9)	(a) State Rd. #5 from NE 36 St. to South limits of North Miami Beach (unincorporated areas)	*100~~5~~*
	(b) State Rd. #5 from North limits of North Miami Beach to North County Line(unincorporated areas)	*116*
	(c) State Rd. #5 from South limits of South Miami, South to Tennessee Rd. (unincorporated areas)	*116*
(10)	State Rd. #5 from South limits of Florida City to South County Line	*100 to 350*

[1] Words stricken through and/or [[double bracketed]] shall be deleted. Words underscored and/or >>double arrowed<< constitute the amendment proposed. Remaining provisions are now in effect and remain unchanged.

(See State Dept. of Transportation r/w Map Project #5239-5240)

(11) State Rd. #5 from Tennessee Rd. in Sec. 8-57-39 South to the North limits of Homestead — *116*

(12) Ingraham Hwy. (State Rd. #27) from Longview Rd. to Cape Sable — *125*

(13) Ingraham Hwy. (SW 217 Ave.) from Mowry Dr. South to State Rd. #27 — *125*

(14) Longview Dr. from Mowry Dr. South to State Rd. #27 — *125*

(15) Old Cutler Rd. through U.S. Dept. of Agriculture property in Sec. 24-55-40 to Chapman Field at Mitchell Dr. and Old Cutler Rd. (Ingraham Hwy.) from Coral Reef Dr. South to Silver Palm Dr — *100*

(16) Card Sound Road from U.S. #1 (in Sec. 30, Twp. 57S, Rge. 39E going Se/ly to the Monroe County Line (being the East line of Sec. 13, Twp. 59S, Rge. 39E). Said right-of-way traversing the following Sections: 30 and 31, Twp. 575, Rge. 39E; 5, 6, 8, 16, 17, 21, 22, 27, 34 and 35, Twp. 58S, Rge. 39E; 2, 11, 12 and 13, Twp. 59S, Rge. 39E). Said right-of-way to be measured 55' each side from the centerline of existing pavement — *110*

(17) State Rd. M A Bakers Haulover North to County Line — *100*

(18) Rickenbacker Causeway Rd. from South end of Crandon Park South to Cape Florida Lighthouse — *120*

(19) Bayshore Dr. (Biscayne Key) from Cape Florida Lighthouse North to waterway and then East to North and South Highway — *100*

(20) Reserved*

*Editor's note: Ord. No. 65-27, § 1, enacted April 20, 1965, repealed item (20). The number has been reserved to maintain continuity.

(21) Seaboard Throughway from Galloway Road to Krome Avenue — *125*

On portions of Sections 28, 32 and 33 in Township 54 South, Range 40 East, Sections 5, 7, 8 and 18 in Township 55 South, Range 40 East, Sections 13, 23, 24, 26, 27, 33 and 34 in Township 55 South, Range 39 East, and Sections 4, 5, 7, 8, and 18 in Township 56 South, Range 39 East, bounded on the northwesterly side of the Seaboard Airline Railway southeasterly right-of-way line and on the southeasterly side by a line parallel to the Seaboard Airline Railway southeasterly right-of-way line, and one hundred twenty-five (125) feet southeasterly there

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from as measured on a perpendicular from the southeasterly Seaboard Airline Railway right-of-way line.

(22) NE 12 Ave from NE 151 St to NE 167 St — *92*

(23) NE 15 Ave from NE 159 St to Miami Gardens Drive — *120*

North-South East Highways (Avenues).

~~(22)~~(24) State Rd. No. 7 Golden Glades Dr. north to County Line — *100*

~~(23)~~(25) NW 7th Ave. (State Rd. No. 7) from NW 79th St. to south limits of North Miami and from north limits of North Miami to Golden Glades Dr. Cloverleaf — *100*

~~(24)~~(26) NW 7th Ave. from Golden Glades Dr. extended north to County Line — ~~*70*~~*105*

~~(25)~~(27) State Hwy. No. 9 from 27th Ave. north to north County Line (See State Dept. of Transportation r/w Project No. 8724-203) — *200 to 300*

~~(26)~~(28) NW 12th Ave.--Extension from NW 71st St. north to south limits of North Miami and north limits of North Miami to Opa Locka Blvd — *100*

~~(27)~~(29) NW 17th Ave.-From NW 71st St., north to Opa Locka Blvd — *100*

~~(28)~~(30) NW 22nd Ave.-From NW 38th St., north to Miami-Dade County north line — *100*

~~(29)~~(31) NW 27th Ave.-From NW 36th St. to Miami-Dade County north line — *100*

~~(30)~~(32) West side of NW 27th Ave.—From 36th St., south to center line of 20th St. — ~~*50*~~*100*

~~(31)~~(33) (a) NW 37th Ave.--From NW 20th St. to County Line (unincorporated area) — ~~*70*~~*105*

(b) NW 37th Ave. - From NW North River Dr. to NW 79th St. — *110*

~~(32)~~(34) (a) NW 47th Ave. (Bougainvillea Ave.—)--From Gratigny Road to Opa Locka Blvd — ~~*70*~~*105*

(b) NW 47th Ave. from Miami Gardens Dr. to Miami-Dade/ Broward County Line — *109*

~~(33)~~(35) Le Jeune Road from the north Miami-Dade County Line to the north boundary of the City of Opa Locka (NW 151st Street) — *100*

Le Jeune Road from NW 36th Street to NW 20th Street — *100*

Le Jeune Road from Tamiami Trail to 75 feet south of SW — ~~*70*~~*105*

[1] Words stricken through and/or [[double bracketed]] shall be deleted. Words underscored and/or >>double arrowed<< constitute the amendment proposed. Remaining provisions are now in effect and remain unchanged.

	16th Terrace (unincorporated)	
~~(34)~~(36)	(a) Red Rd. (State Rd. No. 819) from NW 138th Street~~SW 74th Street~~, north to NW 183rd Street (unincorporated areas)	*100*
	Said 100-foot right-of-way to be measured equidistant from the section lines except in that portion from NW 183rd Street to the North County Line where the right-of-way shall be established as follows:	
	East 100 feet of the west 130 feet of Section 6, Township 52 South, Range 41 East; east 100 feet of the west 130 feet of the south 1256 feet of Section 31, Township 51 South, Range 41 East; the east 100 feet of west 145 feet of Section 31, Township 51 South, Range 41 East, less the south 1265 feet thereof.	
	(b) Red Rd. (State Rd. No. 819) from NW 103rd Street, north to NW 138th Street (unincorporated areas)	*133*
	(c) Red Rd. (State Rd. No. 819) from SW 74th Street, north to NW 103rd Street (unincorporated areas)	*100*
~~(34.1)~~	(d) Red Rd. (State Rd. No. 819) from Old Cutler Road north to SW 74th Street (unincorporated areas)	~~70~~*105*
~~(34.2)~~	(e) SW 62nd Ave. from Coral Way (SW 24th St.) south to SW 30th St. (unincorporated areas)	~~50~~*105*
~~(35)~~(37)	Ludlam Road from International Airport South to State Rd. No. 5 (unincorporated areas)	~~70~~*105*
~~(36)~~(38)	Ludlam Road from Mitchell Road south to Coral Reef Dr.	*100*
~~(37)~~(39)	(a) Ludlam Road from Mitchell Road north to 160 feet south of North Kendall Drive~~.~~	~~70~~*105*
	(b) Ludlam Road from 160 feet south of North Kendall Drive to 150 feet north of SW 85th Street. .	~~80~~125
	The 80 feet to be measured 40 feet on each side of the following centerline: Beginning at a point on the W line of northwest quarter of Section 1-55-40, said point being 200 feet S of the NW corner of said Section 1 and being the point of curvature of a circular curve; thence run northerly and northeasterly along the arc of a circular curve to the	

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	right, said curve being tangent to the West line of the northwest quarter of said Section 1 and having a radius of 818.51 feet through a central angle of 54 degrees 01 minutes 53 seconds for an arc distance of 771.88 feet to the point of tangency; thence run northeasterly along a line tangent to the last-described curve for a distance of 100 feet to the point of curvature of a circular curve to the left; thence run northeasterly and northerly along the arc of said circular curve to the left having a radius of 818.51 feet through a central angle of 53 degrees 48 minutes 33 seconds for an arc distance of 768.70 feet to the point of tangency with the E line of the southeast quarter of Section 35-54-40, said point of tangency being 1178.54 feet N of the SE corner of said Section 35 and being the end of the center line herein described ...	~~80~~*125*
	(c) Ludlum Road from 150 feet north of SW 85th Street to State Road No. 5 (US No. 1)	~~70~~*105*
~~(38)~~(40)	(a) Milam Road (NW 72nd Avenue) from Tamiami Canal (Miami city limits) to NW 74th Street (Town of Medley limits) (Ord. No. 63-37, § 1, 9-10-63)	*100*
	(b) Milam Road (NW 72nd Avenue) from NW 74th St. to Okeechobee Road	*120*
	(c) Milam Road (NW 72nd Avenue) from NW 122nd St./W 68th St. to NW 122nd St./W 68th St.	*92*
~~(39)~~(41)	Palmetto Rd. from NW 90th St. to Tamiami Trail	*300*
~~(40)~~(42)	Palmetto Rd. (From Tamiami Trail south to Coral Way (SW 25th St.) 125 feet all on west side of Canal)	*125*
~~(41)~~(43)	Palmetto Rd. (From Coral Way south to Bird Rd. 62 112 feet on the west side of section line, 62112 feet on east side of section line)	*125*
~~(42)~~(44)	Palmetto Road from Bird Rd. south to Kendall Road-35 feet on the west side of the section line and 90 feet on the east side of the section line From Kendall Road to SW 98th Street, 40 feet on either side of the following described center line: Beginning at the NW corner of the northwest quarter of	*125*

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	Section 2-55-40; thence, run South along the West line of said northwest quarter of Section 2 for 2250 feet; thence deflecting 12 degrees 20 minutes to the left run southeasterly along a straight line for 1050 feet more or less to the point of intersection with the S line of the northwest quarter, northwest quarter, southwest quarter, of Section 2, said point being the end of the center line herein described	~~80~~*125*
(~~42~~44a)	NW 112 Avenue from NW 106th Street to NW 122 Street, Miami-Dade County, Florida, provided continuation of the existing use, or substantially similar future use, of the lands abutting the right-of-way on the effective date of this ordinance (June 28, 2002). Right-of-way plan and minimum width requirements for this half-section line roadway shall revert to 70 feet after a change in use or a determination by the Director that the current use has been abandoned	
~~(43)~~(45)	(a) W. 117th Avenue from NW corner of Section 30-52-40 south to NW corner of Section 7-54-40	
	(b) SW 117th Avenue from NW corner of Section 18-54-40 south to SW corner of Section 18-54-40; this portion of SW 117 Avenue extends from ~~Coral Way(SW 24 St.)~~ SW 8th Street to Bird Drive (SW 40 St.) and more particularly described as the east 80 feet of the West 134 feet of Section 18-54-40	~~80~~*125*
	(c) SW 117th Avenue from SW corner of Section 18-54-40 south to State Road No. 5	*125*
~~(44)~~(46)	Burr Road (127 Ave.)-US No. 1 to Homestead Army Airbase	*100*
~~(45)~~(47)	South Allapattah Road (State Road #909) from North Canal Drive north to State Road #5	*100*
~~(46)~~(48)	(a) NW 137 Avenue from State Road #25 (Okeechobee Road) to Flagler Street	*110*
	(b) SW 137 Avenue (Lindgren Road) from Flagler Street to State Road #5 (US #1)	*110*
~~(46.1)~~(48.1)	SW 157 Avenue from theoretical SW 112 Street to SW 120 Street	~~80~~*125*

[1] Words stricken through and/or [[double bracketed]] shall be deleted. Words underscored and/or >>double arrowed<< constitute the amendment proposed. Remaining provisions are now in effect and remain unchanged.

Said 80-foot right-of-way shall be measured westward of the westerly line of the 140 foot wide Black Creek Canal (C-1W) right-of-way as constructed in the SE 114 of Section 8, Township 55 South, Range 39 East and shall transition Northerly through said SE 1/4 of said Section 8 to meet the existing alignment for SW 157th Avenue at theoretical SW 112th Street, on the north side of said Black Creek Canal (C-1W). Said transition shall meet with the approval of the Directors of the Departments of Planning and Zoning and Public Works.

~~80~~*125*

~~(46.2)~~ (48.1) SW 157 Avenue from SW 120 Street to SW 136 Street

Said 80-foot right-of-way shall be measured westward of the westerly line of the 150 foot wide Black Creek Canal (C-1 W) right-of-way as constructed across Section 17, Township 55 South, Range 39 East.

~~(47)~~(49)	Krome Avenue from north limits of Homestead north to intersection of Krome Avenue and SAL right-of-way	*125*
~~(48)~~(50)	(a) Krome Avenue	*180*

Krome Avenue (177 Avenue) [180-foot right-of-way]: The east 180 feet of Sections 12, 13, 24, 25 and 36 in Township 54 South, Range 38 East; the east 90 feet of the south 114 of Section 1, Township 55 South, Range 38 East; the east 90 feet of Sections 12, 13, 24, 25 and 36 in Township 55 South, Range 38 East; the east 90 feet of Sections 1 and 12 in Township 56 South, Range 38 East; the east 90 feet of that portion of Section 13 in Township 56 South, Range 38 East, lying north of Seaboard Coastline Railroad; the west 90 feet of the south 114 of Section 6, Township 55 South, Range 39 East; the west 90 feet of Sections 7, 18, 19, 30 and 31, Township 55 South, Range 39 East; the west 90 feet of Sections 6 and 7, Township 56 South, Range 39 East; the west 90 feet of that portion of Section 18, Township 56 South, Range 39 East lying north of Seaboard Coastline Railroad; less that portion lying within the right-of-way as shown on the State of Florida right-of-way map for Krome Avenue as recorded in Plat Book 83 at page 22 of the Public Records of Miami-Dade County, Florida.

[1] Words stricken through and/or [[double bracketed]] shall be deleted. Words underscored and/or >>double arrowed<< constitute the amendment proposed. Remaining provisions are now in effect and remain unchanged.

	(b) Krome Avenue	*300*
	Krome Avenue (177 Avenue) [300-foot right-of-way]: The 300-foot right-of-way as shown on the State of Florida right-of-way map for Krome Avenue as recorded in Plat Book 83 at page 22 of the Public Records of Miami-Dade County, Flori~~da~~l.	
	(c) Krome Ave. from US 1 to SW 296th St.	*109*
~~(49)~~(51)	SW 192 Avenue (Tower Road) from Coconut Palm Drive (SW 248 Street) to Palm Drive (SW 344 Street)	~~86~~*125*
	The east 43 feet of the west 112 of each of the following sections: Sections 26 and 35 of Township 56 South, Range 38 East; Sections 2, 11, 14 and 23 of Township 57 South, Range 38 East; and the west 43 feet of the east 112 of each of the following sections; Sections 26 and 35 of Township 56 South, Range 38 East; Sections 2, 11, 14 and 23 of Township 57 South, Range 38 East.	
(52)	SW 27th Ave. from US No. 1 to Bayshore Dr.	*92*
(53)	(a) SW 97th Ave. from SW 40th St. to SW 56 St.	*92*
	(b) SW 97th Ave. from SW 56th St. to SW 72 St.	*92*
	(c) NW 97th Ave. from NW 41st St. to NW 25th St.	*120*
	(d) NW 97th Ave. from NW 58th St. to NW 90th St.	*120*
	(e) NW 97th Ave. from NW 138th St. to NW 183rd St.	*80*
(54)	W 24th Ave. from W 52nd St. W 76th St.	*110*
(55)	(a) NW 107th Ave. from Okeechobee Rd. to NW 138th St.	*110*
	(b) NW 107th Ave. from NW 138th St. to NW 170th St.	*80*
	(c) NW 107th Ave. from NW 41st St. to NW 106th St.	*109*
	(d) NW 107th Ave. from NW 25th St. to NW 41st St.	*133*
(56)	NW 62nd Ave. from NW 105th St. to NW 138th St.	*92*
(57)	NW 127th Ave. from SW 8th St. to NW 25th St.	*109*
(58)	SW 87th Ave. from SW 168th St. to SW 216th St.	*120*
(59)	(a) SW 157th Ave. from SW 184th St. to SW 152nd St.	*120*

[1] Words stricken through and/or [[double bracketed]] shall be deleted. Words underscored and/or >>double arrowed<< constitute the amendment proposed. Remaining provisions are now in effect and remain unchanged.

	(b) SW 157th Ave. from SW 184th St. to SW 216th St.	*96*
	(c) SW 157th Ave. from SW 8th St. to SW 42nd St.	*115*
(60)	(a) SW 127th Ave. from SW 120th St. to SW 88th St.	*115*
	(b) SW 127th Ave. from SW 120th St. to SW 144th St.	*109*
(61)	(a) NW 137th Ave. from SW 26th St. to NW 12th St.	*133*
	(b) NW 137th Ave. from NW 12th St. to NW 17th St.	*110*
(62)	(a) SW 82nd Ave. from SW 42nd St. to SW 48th St.	*78*
	(b) NW 82nd Ave. from NW 8th St. to NW 12th St.	*109*
(63)	NW 122nd Ave. from NW 25th St. to NW 41st St.	*70*
(64)	SW 142nd Ave. from SW 42nd St. to SW 8th St.	*78*
(65)	(a) NW 87th Ave. from NW 36th St. to Okeechobee Rd.	*133*
	(b) NW 87th Ave. from NW 183rd St. to Miami-Dade County Line	*120*
(66)	(a) SW 107th Ave. from SW 8th St. to Flagler St.	*160*
	(b) SW 107th Ave. from Quail Roost Dr. to SW 160th St.	*127*
(67)	SW 167th Ave. from SW 40th St. to SW 88th St.	*96*
(68)	(a) SW 147th Ave. from SW 8th St. to SW 26th St.	*109*
	(b) SW 147th Ave. from SW 152nd St. to SW 184th St.	*120*
(69)	SW 152nd Ave. from US 1 to SW 312th St.	*127*
	(B) EAST AND WEST STREETS	
	East-West North Streets	
(1)	West Flagler Street from Snapper Creek Canal Road to west limits of Miami.	*100*
(2)	(a) NW 25 Street from NW 72 Avenue to NW ~~108~~7 Avenue	~~80~~*154*
	The centerline of this 80-foot official right-of-way shall be located along the south line of the north 40 feet of the northwest 114 of Section 35, Township 53 South, Range 40 East for the portion between NW 72 Avenue and the Palmetto Bypass. The centerline of this 80-foot official right-of-way shall be located along the south line of the north 100 feet of Sections 32, 33 and 34, Township 53 South, Range 40 East, for that portion between Palmetto Bypass and NW 107 Avenue.	
	(b) NW 25 Street from NW 87 Avenue to NW 117 Avenue	*70*

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The centerline of this 70 foot official right-of-way shall be located along the south line of the north 95 feet of Section 31, Township 53 South, Range 40 East, for the portion between NW 107 Avenue and NW 117 Avenue.

(c) NW 25 Street from NW 117 Avenue to NW 127 Avenue *130*

(3) NW 36 Street from 37 Avenue west to Milam Road *100*

(4) NW 36 Street Extension and NW 41 Street, from NW 117 Avenue to NW 79 Avenue *110*

The centerline of this 110-foot official right-of-way shall be as follows: Begin at the northwest corner of Section 30, Township 53 South, Range 40 East; thence run north 89° 52' 01" east along the north line of the northwest 114 of Section 30 for 2631.75 feet to the northeast corner of the northwest 114 of Section 30; thence run north 89° 52' 11" east along the north line of the northeast 114 of Section 30 for 2639.41 feet to the northeast corner of Section 30; thence run north 89° 58' 49" east along the north line of the northwest 114 of Section 29, Township 53 South, Range 40 East for 2633.66 feet to the northeast corner of the NW 114 of Sec. 29; thence run North 89° 59' 39" East along the North line of the NE 114 of Sec. 29 for 2640.70' to the NE corner of Sec. 29; thence run North 89° 51' 57" East along the North line of the NW 114 of Sec. 28, Twp. 53S, Rge. 40E for 2640.10' to the NE corner of the NW 114 of Sec. 28; then run North 89° 51' 07" East along the North line of the NE 114 of Sec. 28 for 966.04' to the point of curvature of a circular curve to the right; thence run southeasterly along the arc of said circular curve to the right having a radius of 1909.86' through a central angle of 30° 30' 51" for an arc distance of 1017.14'; then run South 59° 38' 02" East along a line which is tangent to the previously described curve for 264.83' to the point of curvature of a circular curve to the left; thence run southeasterly along the arc of said circular curve to the left having a radius of 1909.86' through a central angle of 30° 00' 00" for an arc distance of 1000' to the point of tangency with the South line of Tract 31 in Sec. 27, Twp. 53S, Rge. 40E,

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Florida Fruit Land Company Subdivision #1 (Plat Book 2, Pge. 17); thence run South 89° 38' 02" East along the South line of Tracts 31 and 18 in Sec. 27 of said plat, Florida Fruit Land Company Subdivision #1 for 2187.32' to the point of intersection with the East line of the NW 114 of Sec. 27; thence run South 89° 38' 43" East along the South line of Tract 15 of Sec. 27, Florida Fruit Land Company Subdivision #1, for 378.35' to the point of curvature of a circular curve to the right; thence run southeasterly along the arc of said circular curve to the right having a radius of 1145.92' through a central angle of 15° 33' 37" for an arc distance of 311.21'; then run South 74° 05' 06" East along a line which is tangent to the previously described curve for 335.06' to the point of curvature of a circular curve to the left; thence run southeasterly along the arc of said circular curve to the left having a radius of 1145.92' through a central angle of 16° 14' 59" for an arc distance of 325' to the point of intersection with the East line of the NW 114, NE 114 of Sec. 27 and the end of the herein described center line, said point of intersection being 832.18'Southerly of the NE corner of the NW 114, NE 114 of Sec. 27 as measured along the East line of the NW 114, NE 1/4 of Sec. 27; said center line being further described and shown on a right-of-way map recorded in Plat Book 81 at Page 24 of the Public Records of Miami-Dade County, Florida.

(5) NW 54 St. from West limits of Miami to Okeechobee Rd *100*

(6) NW 71 St. ~~*70*~~*105*

(7) ~~(6.1)~~ NW 74 Street from Palmetto Expressway (State Road No. 826) to ~~NW 107th Avenue~~HEFT *126*

~~(7)~~(8) NW 79 St. (State Rd. #828) from West limits of Miami to East limits of Hialeah *100*

~~(8)~~(9) NW 91 St. from NW 7 Ave. to NW 12 Ave ~~*70*~~*105*

~~(9)~~(10) NW 95 St. from West limits of Miami Shores to NW 37 Avenue (unincorporated areas). ~~*70*~~*105*

~~(10)~~(11) NW 103 St. from Federal Hwy. #1 to East limits of Hialeah, except as noted below *100*

Note: NW 103 St. from NW 36 Ct. to NW 37 Ave *150*

(12) ~~(10a)~~ NW 114 Street from NW 107th Avenue to NW 117 Avenue (Homestead

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Extension of the Florida Turnpike), Miami-Dade County, Florida, provided continuation of the existing use, or substantially similar future use, of the lands abutting the right-of-way on the effective date of this ordinance (June 28, 2002). Right-of-way plan and minimum width requirements for this half section line roadway shall revert to 70 feet after a change in use or a determination by the Director that the current use has been abandoned

~~(11)~~(13)	(a) Gratigny Rd. (NW and NE 119 St.) from NW 27 Ave. East to West Dixie Highway	*~~100~~105*
	(b) Gratigny Rd. West of NW of NW 27 Ave.	*~~70~~105*
~~(12)~~(14)	NW 135 St. from West limits of Opa Locka West continuing into Atlantic Rd. as far as Okeechobee Rd	*100*
~~(13)~~(15)	Opa Locka Blvd. from the East limits of Opa Locka East through Nichols Sub. Swinging South to 135 St. at NW 2 Ave.	*~~80~~125*
~~(14)~~(16)	NW 138 St. (All South of Section lines). (135 St. jogs to 139 Street West of Red Road)	*~~100~~110*
~~(15)~~(17)	Golden Glades Dr. (Sunny Isles Rd. - State Rd. #826) from State Rd. A1A West to Okeechobee Rd. (unincorporated areas)	*100*

Except from St. Rd. A1A to US #1, the same width as established on State Dept. of Transportation r/w Project #5155, State Rd. #826 as shown in Plat Book 38, Page 73, PB 44, Page 3, and as shown of Bella Vista Sub., 2nd Rev. Plat, Plat Book 50, Page 76.

~~(16)~~(18)	(a) Miami Gardens Rd. US #1 to ~~Red Rd. (NW 57 Ave.)~~ NE 6th Ave.	*~~100~~133*
	(b) Miami Gardens Rd. (NW 186 St.) from NE 6th Ave. to SR 91/Florida'Turnpike	*100*
	(c) Miami Gardens Rd. (NW 186 St.) from SR 91/Florida's Turnpike to NW 27 Ave.	*133*
	(d) Miami Gardens Rd. (NW 186 St.) from NW 27 Ave. to Red Rd. (NW 57 Ave.)	*100*
	(~~b~~e) Miami Gardens Rd. (NW 186 St.) from Red Rd. (NW 57 Ave.) to ~~St. Rd. #25 (Okeechobee Rd.)~~I-75	*133*
	(f) Miami Gardens Rd. (NW 186 St.) from I-75 to St. Rd. #25 (Okeechobee Rd.)	*100*
~~(17)~~(19)	Ives Dairy Rd. between St. Rd. #9 to NE 14 Ave.	*~~70~~105*

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~~(18)~~(20)	Miami-Dade County north line (215 St.) ...	*100*
(21)	NW 14th St. from NW 10th Ave. to I-95	*92*
~~(18)~~(22)	(a) NW 122nd St./W 68th St. from Okeechobee Rd. to NW 87th Ave.	*110*
	(b) NW 122nd St./W 68th St. from W 21st Ct. to W 19th Ct.	*110*
(23)	NE 8th St./Bayshore Dr. from Biscayne Blvd. to Port Blvd.	*127*
(24)	NW 17th St. from NW 127th Ave. to NW 137th Ave.	*120*
(25)	W 60th St. from W 4th Ave. to W 12th Ave.	*92*
(26)	NW 77th St. from NW 79th Ave. to Milam Dairy Rd	*109*
(27)	W 76th St. from W 36th Ave. to W 20th Ave.	*110*
(28)	NW 154th St. from NW 87th Ave. to NW 107th Ave.	*96*
(29)	NW 90th St. from NW 87th Ave. to NW 107th Ave.	*96*

East-West South Streets.

~~(19)~~(30)	Tamiami Trail (SW 8 St.) from the center line from Ludlam Road (SW 67 Ave.) to the center line of SW 74 Ave.	*100*

And from SW 74 Ave. to Palmetto Road (SW 77 Ave.) as previously dedicated and indicated on the amended plat of Miami Gateway Sub. (PB 28, Pg. 6), except as modified by acquisition of right-of-way for Palmetto Bypass, as shown on Florida D.O.T. right-of-way map recorded in PB 68, Pg. 7, and from Palmetto Road (SW 77 Ave.) to SW 82 Ave. as follows: All that part of the northwest quarter of the northeast quarter of Section 10, Township 54 South, Range 40 East, which lies north of a line that is 125 feet south of and parallel to the base line survey as shown on the Florida State Department of Transportation right-of-way map recorded in PB 72, Pg. 85 of the Public Records of Miami-Dade County, Florida, and west of SW 82 Ave. to the County line as the same is shown on the Florida State Department of Transportation right-of-way map on file with the Miami-Dade County Public Works Department known as Section 8711, Project 669C and Section 8712, Project 669B.

~~(20)~~(31)	(a) Coral Way (SW 24 St.) from Red Road (SW 57 Ave.) to Snapper Creek Canal	*100*
	(b) Coral Way (SW 24 St.) from SW 87 Ave. to SW 117 Ave	*133*

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_____(~~cb~~) Coral Way (SW 24 St.) from SW 117 Ave. to SW 157 Ave		*100*

Said right-of-way to be measured as follows: That portion of Sections 9 through 16 inclusive, Township 54 South, Range 39 East lying within a uniform strip of land 100 feet wide, 50 feet on each side of as measured at right angles and radially to the following described center line: Begin at the SW corner of Section 7-54-40; thence run westerly along a line parallel to the south line of Section 12-54-39 for a distance of 1144.53 feet to the point of curvature of a circular curve to the left; thence run southwesterly along the arc of said circular curve to the left having a radius of 1145.92 feet through a central angle of 40 degrees 43 minutes 44 seconds for an arc distance of 814.58 feet to a point of tangency; thence run south 49 degrees 16 minutes 16 seconds west along a line tangent to the last described curve for a distance 200 feet to the point of curvature of a circular curve to the right; thence run southwesterly along the arc of said circular curve to the right having a radius of 1145.92 feet through a central angle of 40 degrees 43 minutes 44 seconds for an arc distance of 814.58 feet to a point of tangency on the south line of Section 12-54-39, said point being 150 feet west of the SE comer of the southwest quarter of Section 12-54-39; thence run westerly along the south line of the southwest quarter of said Section 12 to the SW corner of said Section 12; thence run westerly along the south line of said Section 11 to the SW corner of said Section 11; thence run westerly along the south line of said Section 10 to the SW corner of said Section 10; thence run westerly along the south line of said Section 9 to the SW corner of said Section 9, said SW corner of said Section 9 being the end of the herein described center line.

~~(21)~~(32)	(a) Bird Drive (SW 40 St.) from State Road No. 5 (unincorporated areas) to Snapper Creek Canal	*100*
_____	(b) Bird Drive (SW 42 St.) from a point 125 feet West of the center line of SW 125 Avenue to SW 177 Ave	*110*

Said 110 feet to be measured as follows: The south 110 feet of the west

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660.58 feet of Section 13 and the south 110 feet of Sections 14 through 18 inclusive, all in Township 54 South, Range 39 East.

~~(22)~~(33)	(a) Miller Drive (SW 56 St.) from State Road No. 5 to Snapper Creek Canal (unincorporated areas)	*100*
_____	b) Miller Drive (SW 56 St.) from SW 117 Avenue to SW 15~~72~~ Avenue	*100*
_____	c) Miller Drive (SW 56 St.) from SW 152 Avenue to SW 158 Avenue	*120*
_____	d) Miller Drive (SW 56 St.) from SW 158 Avenue to SW 167 Avenue	*80*

Said right-of-way to be measured as follows: A uniform strip of land 100 feet in width, lying 50 feet on each side of the following described center line: Begin at the NW corner of Section 30-54-40; thence run south 89 degrees 42 minutes 15 seconds west along the westerly extension of the north line of said Section 30 for a distance of 150 feet to the point of curvature of a circular curve to the right; thence run westerly along the arc of said circular curve to the right having a radius of 954.93 feet through a central angle of 23 degrees 11 minutes 13 seconds for an arc distance of 386.45 feet to the point of tangency with a line; thence run north 67 degrees 06 minutes 32 seconds west along the line that is tangent to the last-described curve for a distance of 200 feet to the point of curvature of a circular curve to the left; thence run westerly along the arc of said circular curve to the left having a radius of 954.93 feet through a central angle of 22 degrees 53 minutes 14 seconds for an arc distance of381.45 feet to the point of tangency with the north line of Section 25-54-39; thence run westerly along the north line of Sections 25, 26, 27 and 28 all in Township 54 South, Range 39 East to the NW corner of said Section 28 and the end of the hereinafter described center line.

~~(23)~~(34)	(a) Sunset Drive (SW 72 St.) from Old Cutler Road (unincorporated areas) to Snapper Creek Canal Road	*100*

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	(b) Sunset Drive (SW 72 St.) from SW 118 Avenue to SW 157 Ave	~~100~~*133*
~~(24)~~(35)	SW 104 Street from the SAL Railroad to SW 117 Ave	*110*
~~(25)~~(36)	(a) North Kendall Dr. (SW 88 St.) from Palmetto Bypass (S.R. 826) to SW 150th~~Krome~~ Ave. ~~(SW 117 Ave.)~~	*110*
	(b) North Kendall Dr. (SW 88 St.) from SW 150th Ave. to SW 167th Ave.	*133*
	(c) North Kendall Dr. (SW 88 St.) from SW 167th Ave. to SW 177th Ave.	*139*
~~(26)~~(37)	Chapman Field Dr....	~~70~~*105*
~~(27)~~(38)	Mitchell Dr. from Chapman Field west to Ludlam Rd	*100*
~~(28)~~(39)	Coral Reef Drive (SW 152 Street) from Ludlam Road to west Old Cutler Road	*100*
	(a.1) Hainlin Mill Drive (SW 216 St.) from Biscayne Bay bulkhead line to SW 177 Ave., except as noted below:	*110*
	Note: SW 216 Street from State Road No. 5 (US No. 1) To SW 127 Avenue	*60*
	(b) Coral Reef Drive (SW 152 St.) from Krome (177) Ave. to US No. 1	*110*
~~(29)~~(40)	Silver Palm Dr. from Old Cutler Rd. west to State Road No. 5	*100*
~~(30)~~(41)	Moody Drive from SW 107 Avenue to US No. 1 ...	*100*
~~(31)~~(42)	Mowry Drive from east limits of Homestead to South Allapattah Drive	*100*
~~(32)~~(43)	Mowry Drive from west limits of Homestead to Longview Road	*125*
~~(33)~~(44)	Mowry Drive from Longview Road west to Ingraham Highway	*125*
(45)	Mowry Drive from Ingraham Highway to Dixie Hwy	*120*
~~(34)~~(46)	Biscayne Drive from U.S. No. I west to Krome Avenue	*100*
(47)	Grand Ave from SW 37th Ave. to SW 32nd Ave.	*92*
~~(34)~~(48)	(a) SW 184th St. from SW 137th Ave. to SW 127th Ave.	*120*
	(b) SW 184th St. from SW 157th Ave. to SW 147th Ave.	*109*
(49)	SW 320th St. from SW 187th Ave. to US 1/S. Dixie	*90-125*
(50)	(a) SW 312nd St. from SW 152nd Ave. to SW 137th Ave.	*109*
	(b) SW 312nd St. from SW 187th Ave. to SW 177th Ave.	*114*

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	(c) SW 312nd St. from SW 176th Ave. to SW 197th Ave.	*133*
(51)	(a) SW 328th St. from US 1 to SW 162nd Ave.	*127*
	(b) SW 328th St. from SW 162nd Ave. to SW 152nd Ave.	*120*
(52)	SW 136th St. from SW 157th Ave. to Florida Turnpike	*120*
(53)	SW 120th St. from SW 117th Ave. to SW 147th Ave.	*133*
(54)	SW 26th St. from SW 147th Ave. to SW 157th Ave.	*109*
(55)	SW 160th St. from SW 147th Ave. to SW 137th Ave.	*109*
~~(34)~~(56)	(a) SW 152nd St. from US 1 to HEFT	*133*
	(b) SW 152nd St. from SW 147th Ave. to SW 157th Ave.	*109*
(57)	SW 200th St. from US 1 to Quail Roost Dr.	*120*
~~(34)~~(58)	(a) SW 104th St. from SW 160th Ave. to SW 167th Ave.	*109*
	(b) SW 104th St. from SW 167th Ave. to SW 177th Ave.	*61*
(59)	SW 80th St from SW 72nd Ave. US 1/ S Dixie Hwy.	*110*
(60)	SW 40th St from SW 157th Ave. to SW 167th Ave.	*49*

(C) Except as may provided in Sections 33-133(A) and (B) hereof, on all section lines, one hundred and twenty five (125) ~~eighty (80)~~ feet shall be the minimum right-of-way width, and on all other half-section (also known as quarter-section) lines, one hundred and five (105) ~~seventy (70)~~ feet shall be the minimum official right-of-way width. The provisions of this subsection shall not apply to those properties described in Section 33B-13(a) herein with the exceptions of S.W. 136 Street from S.W. 187 Avenue to S.W. 209 Avenue; S.W. 168 Street from Levee L-31 N to S.W. 237 Avenue; S.W. 237 Avenue from S.W. 168 Street to S.W. 160 Street; Ingraham Highway (formerly S.R. 27); and that portion of N.W. 87 Avenue from N.W. 197 Terrace north to the north County line. Furthermore the provisions of this subsection shall not apply to that portion of S.W. 122 Avenue which lies within the S.E. 114 of the S.W. 114 of Section 36, Township 54, Range 39; nor shall the provisions of this subsection apply to that portion of the South 40 feet of N.W. 106 Street which lies between N.W. 112 Avenue and N.W. 117 Avenue or that portion of N.W. 122 Avenue south of N.W. 25 Street to theoretical N.W.

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21 Terrace; nor shall the provisions of this subsection apply to that portion of S.W. 102 Avenue which lies between Black Creek Canal and SW 232 Street; nor to the portion of Red Road (57 Avenue), north of Old Cutler Road to S.W. 74 Street (unincorporated area).

(D) On all interior subdivision streets, fifty (50) feet shall be the official minimum right-of-way width, except as further modified by Chapter 28 of this Code. The provisions of this subsection shall not apply to those properties described in Section 33B-13(a) herein with the exception of S.W. 136 Street from S.W. 187 Avenue to S.W. 209 Avenue; S.W. 168 Street from Levee L-31 N to S.W. 237 Avenue; S.W. 237 Avenue from S.W. 168 Street to S.W. 160 Street; and Ingraham Highway (formerly S.R. 27). Furthermore, the provisions of this subsection shall not apply to that portion of S.W. 123 Avenue which lies within the South 314 of the S.E. 114 of the S.W. 114 of Section 36-54-39, or to that portion of S.W. 124 Avenue which lies within the North 5.00 feet of the South 314 of the S.E. 114 of the S.W. 114 of Section 36, Township 54, Range 39.

(E) All five-acre fractional lines shall be deemed interior subdivision streets unless otherwise provided in this chapter, or unless waived by the Director and the Director of the Public Works Department. The provisions of this subsection shall not apply to those properties described in Section 33B-13(a) herein with the exception of S.W. 136 Street from S.W. 187 Avenue to S.W. 209 Avenue; S.W. 168 Street from Levee L-31 N to S.W. 237 Avenue; S.W. 237 Avenue from S.W. 168 Street to S.W. 160 Street; and Ingraham Highway (formerly S.R. 27).

(F) On all alleys, twenty (20) feet shall be the official minimum width. The center line of all streets, roads and highways shall be approved and (or established by the Director of Public Works; in all cases where the right-of-

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way does not follow a fractional line, the location of the right-of-way shall be determined by the Director of Public Works.

Section 2. If any section, subsection, sentence, clause or provision of this ordinance is held invalid, the remainder of this ordinance shall not be affected by such invalidity.

Section 3. It is the intention of the Board of County Commissioners, and it is hereby ordained that the provisions of this ordinance, including any sunset provision, shall become and be made part of the Code of Miami-Dade County, Florida. The sections of this ordinance may be re-numbered or re-lettered to accomplish such intention, and the word "ordinance" may be changed to "section," "article," or other appropriate word.

Section 4. This ordinance shall become effective ten (10) days after the date of enactment unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board.

Section 5. This ordinance does not sunset.

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Kimley-Horn and Associates, Inc.