



**AESTHETIC GUIDANCE AND ACTION PLAN FOR
TRANSPORTATION PROJECTS IN
MIAMI-DADE COUNTY**



Aesthetic Guidance and Action Plan for Transportation Projects in Miami-Dade County

Submitted to:
Miami Dade Metropolitan Planning Organization

Submitted by:
HNTB

In conjunction with:
Donal Simpson FAIA, AICP
Media Relations Group, LLC

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Because infrastructure is more than utility, these projects must also be instrumental in creating a sense of place; they are the cultural systems that connect communities together.

Creative problem solving through innovative collaborations can help create places of magic that nurture our culture, manifesting the image of the city.

Projects must seek a design continuity that relates to and harmonizes with the built and natural landscape.

Preservation of the environment, preservation of the heritage of Miami-Dade County and humanization of the transportation system should be seen as major goals of the design team.

- Mission Statement of TARC

ACKNOWLEDGMENTS

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STUDY ADVISORY COMMITTEE

- Rolando Jiménez Jr., (MDPWD)
- Paul S. Moss, Jr., (FDOT)
- Isabel Padron, (MDT)
- Lynda Westin, (SFRTA)
- Richard Johnson, (MDX)
- Brandi Reddick, (MD Cultural Affairs)
- Maria Nardi, (MDPRD)
- Sunil Harman, (MDAD)
- Alissa Escobar, (Port of Miami)
- Leandro J. Oña, (MDPWD)
- Bann Williams, (MDPWD)
- Felix Pereira, (Port of Miami)
- Juan Toledo, (MDX)
- Shailendra Singh, (MDP&Z)
- Carlos Jose, (MDAD)
- Ernesto Polo, (MDT)

TRANSPORTATION AESTHETICS REVIEW COMMITTEE (TARC) MEMBERS

- Jason D. Greene, CPFIM, CICA
- Juan A. Crespi, AIA, LEED® AP
- Cheryl Polite-Eaford, LCSW
- Trenton C. Baughn, RA, AICP, LEED® AP
- Megan McLaughlin, AICP
- Luis O. Revuelta, AIA
- Steve Pinna
- Alex A. David, AICP
- James M. Kanter, PE, LEED® AP,
- Victor H. Nieves, LEED® AP
- Jackie D. Genard
- Jonathan Martinez
- Javier A. Lopez, Esq.

CONSULTANTS

- HNTB
- Donal Simpson
- Media Relations Group, LLC

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1.

Introduction



The Miami-Dade Metropolitan Planning Organization (Miami-Dade MPO), with the assistance of an appointed Advisory Committee and the Transportation Aesthetics Review Committee (TARC), and the support of HNTB Corporation, undertook to develop guidance and an action plan to assist transportation agencies and their consultants to incorporate aesthetics, urban design, multimodal and livability considerations into their projects; and to describe the wide range of possibilities for aesthetic alternatives to standard design involving elements of pedestrian-friendly, livable communities design including: typical urban corridor sections, lighting, signage, landscaping, pavement treatments, etc.



Meridian Avenue Bridge

Presentations were made for both Committees on transportation aesthetics and livability in three areas:

- A review of national and international state-of-the-art of transportation aesthetics and livability,
- An overview of aesthetic design principles for transportation elements, and
- An analysis of manuals, guidelines and practices currently in use by local transportation agencies.

The documents forming the basis for the guidance and action plan included:

- Miami-Dade MPO and Miami-Dade Department of Planning and Zoning
 - Typical Roadway Section and Zoned Right-of-Way Study
- Miami-Dade County Community Image Advisory Board
 - Aesthetics Master Plan
 - Street Tree Master Plan
- Miami-Dade County
 - 2015 - 2025 Comprehensive Development Master Plan
 - Landscape Manual
 - Urban Design Manual
 - Public Works Manual
- Miami-Dade Expressway Authority (MDX)
 - Enhancements Manual
- Miami-Dade Transit
 - Transit Development Plan (Transit 10 Year Plan)

- Florida Department of Transportation (FDOT)
 - Plans Preparation Manual (PPM)
 - Project Development and Environment Manual (PD&E Manual)
- Miami International Airport
 - Office of Capital Improvements
- Port of Miami
 - 2035 Master Plan Update
- Miami Downtown Development Authority
 - 2025 Downtown Miami Master Plan

The review of these guides and standards revealed that, with some supplementing of the guides with current practices from around the country, Miami-Dade County has an extensive resource of excellent, current guides for incorporating aesthetics and livability standards into transportation projects. The greatest need was to provide a cohesive coordination of the guidance and to make it accessible to the agencies and the professional design community so that aesthetics are an inherent part of the planning, design and engineering process. Therefore, the primary emphasis of the aesthetics guidance is on “A Guide to the Guides.”

The action plan emphasizes achieving a high standard of transportation aesthetics in Miami-Dade County by identifying needs and opportunities for incorporating aesthetic, urban design, multimodal and livability considerations through transportation projects of all types throughout the County. The action plan helps to identify the strategic project opportunities for input during long range planning, agency planning, preliminary engineering, final design and construction, as well as opportunities for partnering and for ongoing operations and maintenance.

Challenges for incorporating aesthetics into transportation projects in Miami-Dade County have included: acknowledgement of the importance of design excellence in lasting civic projects, incorporation of aesthetics into the procurement process, and sustained funding commitments.

This Aesthetic Guidance and Action Plan is intended to address these challenges.



Tree Lined Pedestrian Path - Miami, FL

2.

Basis for the Aesthetic Guidance and Action Plan



Both the Miami-Dade Metropolitan Planning Organization (MPO) Board and the Miami-Dade County Board of County Commissioners have established policies promoting the improved aesthetics of transportation projects in Miami-Dade County. The MPO Board did this through establishment of the Transportation Aesthetics Review Committee (TARC), and the Miami-Dade County Board of County Commissioners through establishment of the Community Image Advisory Board (CIAB). Municipalities over 50,000 population and other transportation agencies in Miami-Dade County participate in this process as members of the MPO.

TRANSPORTATION AESTHETICS REVIEW COMMITTEE

In 1993 the Governing Board of the Miami Urbanized Area Metropolitan Planning Organization (MPO) created the Transportation Aesthetics Review Committee (TARC), to ensure that high visibility transportation projects are reviewed for their aesthetic impact on the community, and to advise them on aesthetic aspects of transportation projects. This was accomplished by a series of MPO Board Resolutions. TARC is unique for MPOs since few if any other MPOs in the country have established a formal aesthetics review process. Because of this, TARC has been recognized as a Noteworthy Practice by the Federal Highway Administration and Federal Transit Administration during their certification reviews of the Miami-Dade MPO.

The membership of TARC is a Citizen’s Committee comprised of Design Professionals and others. One member each may be appointed by each MPO Board Member.

Upon its establishment, TARC designated its Mission Statement, and within a year after that its Design Mission Statement and its guiding design principles.

The Governing Board of the Miami Urbanized Area Metropolitan Planning Organization (MPO) created the Transportation Aesthetic Review Committee (TARC) to ensure that high visibility transportation projects are reviewed for their aesthetic impact on the community before contracts are finalized. To accomplish this mission the Governing Board has directed that the Transportation Aesthetic Review Committee be a permanent committee included as part of the MPO review process and advise the Governing Board regarding aesthetic aspects of transportation projects.



MDX interchange, Miami



Sunset Drive in South Miami

The TARC's Design Mission Statement is as follows:

Because infrastructure is more than utility, these projects must also be instrumental in creating a sense of place; they are the cultural systems that connect communities together. Creative problem solving through innovative collaborations can help create places of magic that nurture our culture, manifesting the image of the city. Projects must seek a design continuity that relates to and harmonizes with the built and natural landscape. Preservation of the environment, preservation of the heritage of Miami-Dade County and humanization of the transportation system should be seen as major goals of the design team.

Major infrastructure projects offer the opportunity to shape landscape and cities. The challenge is to create memorable images that transform the commonplace to the extraordinary by applying unconventional approaches to design solutions that broaden the palette of traditional responses to infrastructure form and function. A value added approach to transportation and infrastructure projects is the objective which in turn creates places whose value to the community increases over time.

A collaborative process which involves the thinking of artists, landscape architects, historians, urban designers as well as engineers and architects in a team approach can enlarge, enhance and enlighten the design process. Artists should push the standard parameters of materials and site becoming a catalyst for creativity and innovative problem solving; landscape architects should interpret their task as an opportunity to treat vegetation in the sub-tropics not as accessory but as an intrinsic part of the overall design recognizing the environmental and climatic uniqueness of South Florida; historians should interpret the built and cultural heritage in a sympathetic and genuine design response which does not simply mimic existing structures but which instead carries its own design integrity.

Major infrastructure projects offer a singular, unique opportunity to shape (re-shape) and interpret large areas of our community; they offer the convenience of efficient transportation, they should also offer the opportunity to dream in concrete, draw in steel and paint in stucco to make a statement about who we are, and what we are in a positive way that says to residents and visitors we are like no other place.



Palmetto Metrorail Station



MDX Sign Structure



La Gorce Island Bridge, Miami Beach

The Guiding Principles are taken from the Design Mission Statement:

- Make transportation projects friendly to commuters and community
- Create a sense of place
- Push standard parameters of materials and site
- Set new standards of design excellence
- Manifest the image of the city
- Utilize a collaborative, multidisciplinary approach.



Opa-Locka, FL

TARC's premises are that:

- Aesthetics should be integral to the entire project design
- Form follows function
- Aesthetics need to be considered early and throughout project
- Incorporating Aesthetics does not have to cost more
- Ordinary materials can be used creatively
- Good design is good business



NW 2nd Ave Miami River Bridge

Challenges for incorporating aesthetics into transportation projects in Miami-Dade County have included:

- Acknowledgement of importance of design excellence in lasting Civic Projects
- Incorporation of Aesthetics into Procurement Process
- Sustained Funding Commitment



Douglas Road Pedestrian Overpass

This Aesthetic Guidance and Action Plan is intended to address these challenges.

TARC previously has identified bridges and high visibility projects and projects over \$500,000 as those that should be reviewed by TARC. As of 2011, that amount is projects over \$2 million for general projects and remains at \$500,000 for smaller high visibility projects.



Miami-Dade Government Center Public Space - Miami-Dade County

COMMUNITY IMAGE ADVISORY BOARD

The Community Image Advisory Board (CIAB) was established by the Miami-Dade County Board of County Commissioners in 2001 to protect and enhance the experience of visitors to Miami-Dade County, charging them with the ambitious task of enhancing the county-wide roadways and environment, thereby improving the community’s image in order to continue to attract visitors to Miami-Dade County.

The CIAB’s mission is to develop partnerships, principles, and projects that support the sustainable beautification and greening of the Miami-Dade community through scenic vistas, tree lined streets, lush landscaping in high-traffic areas and popular destinations, and livable neighborhoods that reflect a world class image of Miami -Dade County as a sub-tropical paradise.

RATIONALE

1. People want to live in and visit beautiful places.
2. The physical appearance of a city has long been considered a sign of its socioeconomic health and prosperity.

“Aesthetics: an artistically beautiful or pleasing appearance; guiding principle(s) in matters of artistic beauty and taste.”



Port of Miami bridge



Miami River Bridges

NEEDS ASSESSMENT

The cultivation of community aesthetics has been particularly important to Miami-Dade County given the area’s economic reliance on tourism.

As the community matures and diversifies, aesthetics become equally important to the health of other economic sectors and to the overall quality of life of residents.

The maintenance of community aesthetics is essential to the continued health and growth of Miami-Dade County's vibrant economy as well as to the daily quality of life of its 2.4 million residents.

While the importance of aesthetics has been very clearly recognized and many steps have been taken to improve the physical appearance of the County, it is also acknowledged that numerous aesthetic challenges remain to be addressed. These include:

- Litter,
- Poor or low-quality landscaping,
- The lack of adequate tree canopy,
- Bleak roadways and parking lots with little space for trees or plants,
- Poorly designed public facilities and spaces, and
- Insufficient public art.

If left unaddressed, these aesthetic shortcomings could have a negative effect on tourism, economic development, and the quality of life of residents, including potentially their health.



Meridian Avenue Bridge, Miami Beach



MDX Landscaping on SR 874

RESOLUTION

Recognizing these factors and challenges, the Miami-Dade County Board of County Commissioners, through the passage of Ordinance 01-164, created the Community Image Advisory Board (CIAB) and tasked it with improving and maintaining the County's visual appearance. More specifically, in 2006, The County Commission directed the CIAB to:

“...develop a County Aesthetics Master Plan that addresses landscaping and landscape maintenance of all public roadways and County facilities...”

In pursuing the Aesthetics Vision and the County Commission's directive, the CIAB commissioned the development of a County-wide Aesthetics Master Plan that would improve the County's physical appearance and natural beauty by establishing design guidelines and standards for County Corridors, Gateways, and Facilities.

CIAB'S AESTHETIC MASTER PLAN (AMP) IMPLEMENTATION

The CIAB Aesthetics Master Plan is intended for use by Miami-Dade County staff and consultants and those designing and authorizing gateways, corridors and facilities that fall under County jurisdiction. Design Recommendations for the Architectural, Hardscape and Landscape Elements of Gateways, Corridors and Facilities are provided with source references to appropriate governing documents.

A typical user should access the section relevant to the project being designed, review the Design Recommendations, refer to the source documents and incorporate the appropriate standards into the design of the project.

It is anticipated that the CIAB Plan will eventually become the basis for the inclusion of Aesthetics components for Miami-Dade Comprehensive Master Plan Elements. Further, the Plan will be a useful tool for Miami-Dade County Departments in developing Department specific plans and related business plans, performance evaluation criteria, annual budgets, policies and regulations, and related administrative and regulatory mechanisms and materials.

3.

Existing Guides and Manuals



Miami-Dade County has an extensive resource of excellent, current guides for incorporating aesthetics and livability standards into transportation projects. These guides form the basis for the Aesthetics Guidance and Action Plan for Transportation Projects in Miami-Dade County, supplemented as necessary to cover a broad spectrum of design elements.

A brief synopsis of each guide is provided in this section, emphasizing its relevance to transportation aesthetics. Designers will gain more by consulting the full document, but links are provided to relevant sections for ease of use when addressing each individual design element.



Downtown Miami at Night - Miami, FL

MIAMI-DADE COUNTY MPO AND MIAMI-DADE DEPARTMENT OF PLANNING AND ZONING - TYPICAL ROADWAY SECTION AND ZONED RIGHT-OF-WAY STUDY

The Miami-Dade County *Typical Roadway Section and Zoned Right-of-Way Update Study* is an important component of the County's vision of providing a comprehensive multimodal transportation network that is sensitive to the needs of the users for all modes of transportation, while also meeting the long-term transportation demands of the County. It is currently aspirational in nature as it has not yet been adopted, leaving the Public Works Manual in effect.



**Typical Roadway Section and Zoned Right-of-Way Study
cover**

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.
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.

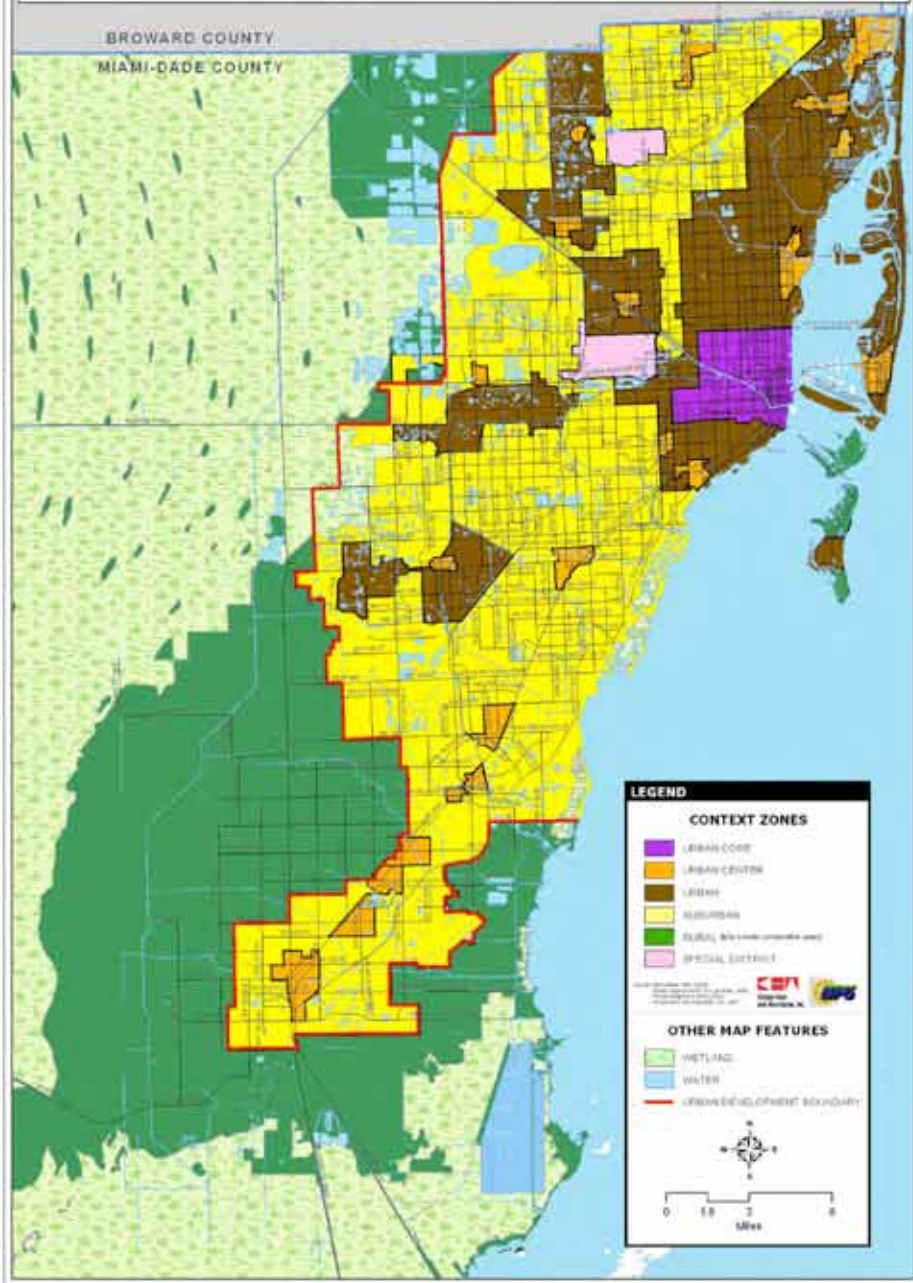
PROPOSED CONTEXT ZONES

The Study utilizes context zones to identify areas with distinct characteristics based upon the land use and location within the County. This Study follows the New Urbanism nomenclature of context zones which include: Rural, Suburban, Urban, Urban Center and Urban Core. The urban area is further divided into distinct contexts zones ranging from lower to higher density and intensity of development.



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

Proposed Context Zone Map



Proposed Context Zone Map from Typical Roadway Section and Zoned Right-of-Way Study

PROPOSED ROADWAY TYPES

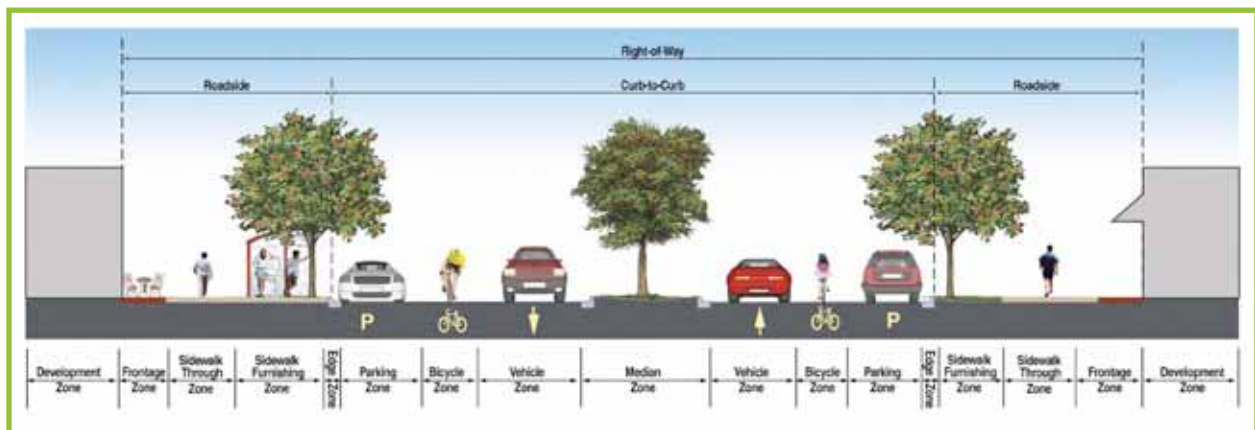
A new roadway classification is proposed based on context sensitive design principles.

Within the rural context three roadway types have been proposed: Highway, Drive and 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 and Street

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 and Industrial Street - Wide

The Study includes typical section recommendations for each of the proposed roadway types. Each typical section in turn is divided into zones which describe the use of each component of the section including among others, the sidewalk furnishing zone, the parking zone, and the vehicle zone (lanes).



Example of Roadway Section from Typical Roadway Section and Zoned Right-of-Way Study

ROADSIDE GUIDELINES

The roadside is the area between the face of the curb to the edge of the right-of-way and is comprised of three zones: the frontage zone, the sidewalk and the edge zone. 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. 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 the Proposed Context Zones and Proposed Roadway Types.



Examples of roadside treatments from Typical Roadway Section and Zoned Right-of-Way Study

ZONED RIGHT-OF-WAY

The second component of the Miami-Dade County Typical Roadway Section and Zoned Right-of-Way Study is the recommendation of modifications to the Miami-Dade Zoning Code.

The recommended changes to the zoned right-of-ways 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 section and design guidelines. The preferred right-of-ways should be utilized for new developments or along corridors that are incrementally changing.

COMMUNITY IMAGE ADVISORY BOARD – MIAMI-DADE COUNTY AESTHETICS MASTER PLAN FOR MIAMI-DADE COUNTY GATEWAYS, CORRIDORS AND FACILITIES

MASTER PLAN

The CIAB Aesthetics Master Plan specifically addresses the design and appearance of three categories of physical elements within the County:

1. Gateways into the County or from one sub-area to another;
1. Major physical Corridors that channel vehicular, pedestrian, and boat traffic into and within the County, linking cities and neighborhoods to each other and to the surrounding region; and
2. County Facilities, including buildings, major transit destinations and parks.



Cover of CIAB Aesthetic Master Plan

GATEWAYS

Both Vehicular and Pedestrian Gateways identify entrance points into the County and key destinations within the County.



Port of Miami Entrance

CORRIDORS

Corridors are the major physical routes that channel vehicular, pedestrian and boat traffic into and within Miami-Dade County, linking cities and neighborhoods to each other and to the surrounding region.



Washington Ave. - Miami Beach, FL

FACILITIES

A Facility is broadly defined as a building or place that provides a specific service or is used by a particular industry or government entity. Miami-Dade County facilities generally fall into three categories: Civic, Operations and Gateway.

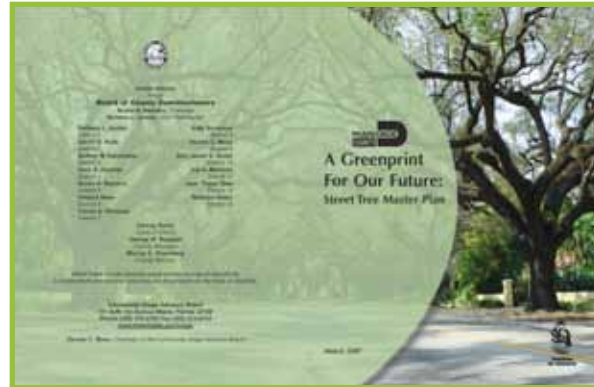
A Civic Facility is defined as a County-owned or operated building, park, or other similar physical place that is regularly accessed by the public or County employees. An Operations Facility can be defined as a County-owned or operated building, open space, yard or other similar site that primarily fulfills an operations or maintenance support function. A Gateway Facility is often referred to as a publicly-oriented facility that is highly visible and used by both County residents and visitors.



Arsht Center, Miami

**COMMUNITY IMAGE ADVISORY BOARD -
A GREENPRINT FOR OUR FUTURE: MIAMI-DADE COUNTY STREET TREE MASTER PLAN**

The mission of the Miami-Dade County Street Tree Master Plan, as stated in the document, is to provide the framework to design and implement street tree plantings that complement the purpose and intent of the Landscape and Tree Ordinances and to be used as minimum standards in order to enhance the County tree canopy to a minimum of 30 percent coverage, countywide by 2020.



Street Tree Master Plan cover

Goals of the Street Tree Master Plan

The Street Tree Master Plan provides an extensive guide for Recommended Street Tree Species

Recommended Street Tree Species * Appendix A-1

Common Name	Scientific Name	Height Range	Tree Size	Tree Type	Growth Rate	Blooming Season	Special Needs/ Comments
Allspice	<i>Pimenta dioica</i>	15' - 30'	Medium	Shade	Slow	N/A	Leaves are leathery, aromatic and quite attractive. Has whitish gray bark peels in thin sheets. The leaves and fruit smell like a combination of cloves, black pepper, nutmeg, and cinnamon, hence the common name. Small white flowers. Wind tolerant.
Bahama Lysiloma	<i>Lysiloma sabicu</i>	20' - 30'	Medium	Shade	Slow	N/A	Slow growing shade tree with small leaves and reddish new growth. Can be invasive, so do not plant next to a natural area
Bald Cypress	<i>Taxodium distichum</i>	30' - 60'	Large	Native	Moderate	N/A	Thrives in wet sites. Native deciduous tree. Loses all its leaves in winter. Wind tolerant.
Bitterbush	<i>Picramnia pentandra</i>	12' - 18'	Small	Native	Moderate	N/A	Can be planted adjacent to power lines.
Black Ironwood	<i>Krugiodendron ferreum</i>	20' - 30'	Small	Native	Slow	N/A	Wind tolerant.
Black torch	<i>Enthalis fruticosa</i>	10' - 20'	Small	Native	Fast	N/A	Can be planted adjacent to power lines.
Blolly	<i>Guapira discolor</i>	25' - 35'	Medium	Native	Moderate	N/A	Hardy shade tree. Needs minimal care. Very salt tolerant.



MIAMI-DADE COUNTY - 2015 – 2025 COMPREHENSIVE DEVELOPMENT MASTER PLAN

The Comprehensive Development Master Plan (CDMP) expresses the County's general objectives and policies addressing where and how it intends development or conservation of land and natural resources to occur during the next ten to twenty years, and the delivery of County services to accomplish the Plan's objectives.

The CDMP establishes the broad parameters for government to do detailed land use planning and zoning activities, functional planning and programming of infrastructure and services. As such, it is a framework for use by other programs to be developed to support its long-range planning goals. For each of the master plan elements, there are goals, objectives and policies, measures to be monitored and maps of planned future facilities.

COMPREHENSIVE DEVELOPMENT MASTER PLAN (CDMP) - ADOPTED COMPONENTS

The Plan establishes a growth policy that encourages development:

1. At a rate commensurate with projected population and economic growth.
2. In a contiguous pattern centered around a network of high-intensity urban centers well-connected by multi-modal intra-urban transportation facilities.
3. In locations which optimize efficiency in public service delivery and conservation of valuable natural resources.

The countywide land use plan broadly defines land use categories, with the smallest distinguishable area of the Land Use map set at 5 acres. The Land Use portion of the plan includes a Map for 2015-2025 which visually shows recommended land uses by major categories, each of which is interpreted locally through zoning designations (which are not part of the map). The CDMP also establishes an Urban Development Boundary (UDB). Components of the CDMP which are adopted as County Policy by the Miami-Dade County Board of County Commissioners are contained in the "Adopted Components - Comprehensive Development Master Plan" book.

ADOPTED 2015 AND 2025 LAND USE PLAN MAP

The Land Use Plan (LUP) map generally reflects municipal land use policies adopted in comprehensive plans. However, with limited exceptions enumerated in the Statement of Legislative Intent, this plan does not supersede local land use authority of incorporated municipal governments.

The Adopted 2015 and 2025 Land Use Plan Map provides an underlying basis for the Proposed Context Zone Map in the Miami-Dade County MPO [Typical Roadway Section and Zoned Right-Of-Way Study](#).

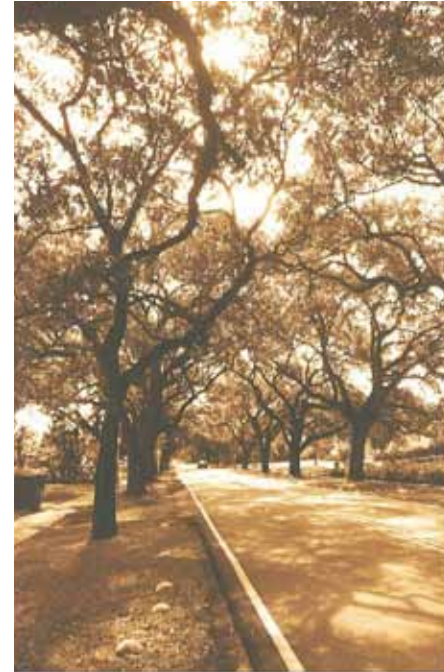
SMALL AREA PLANS

The Comprehensive Plan also incorporates many [Small Area Plans and Charrettes](#) which often directly address issues of transportation aesthetics and community compatibility.

MIAMI-DADE COUNTY - LANDSCAPE MANUAL

The basic objective of the Landscape Code (Chapter 18A) of the zoning ordinance and the Landscape Manual are:

To use xeriscape principles to reduce water consumption, to expand the use of native species and to protect existing native habitats, to promote energy conservation through the use of landscape and the use of landscape design as an integral part of the site and architectural design of our community.

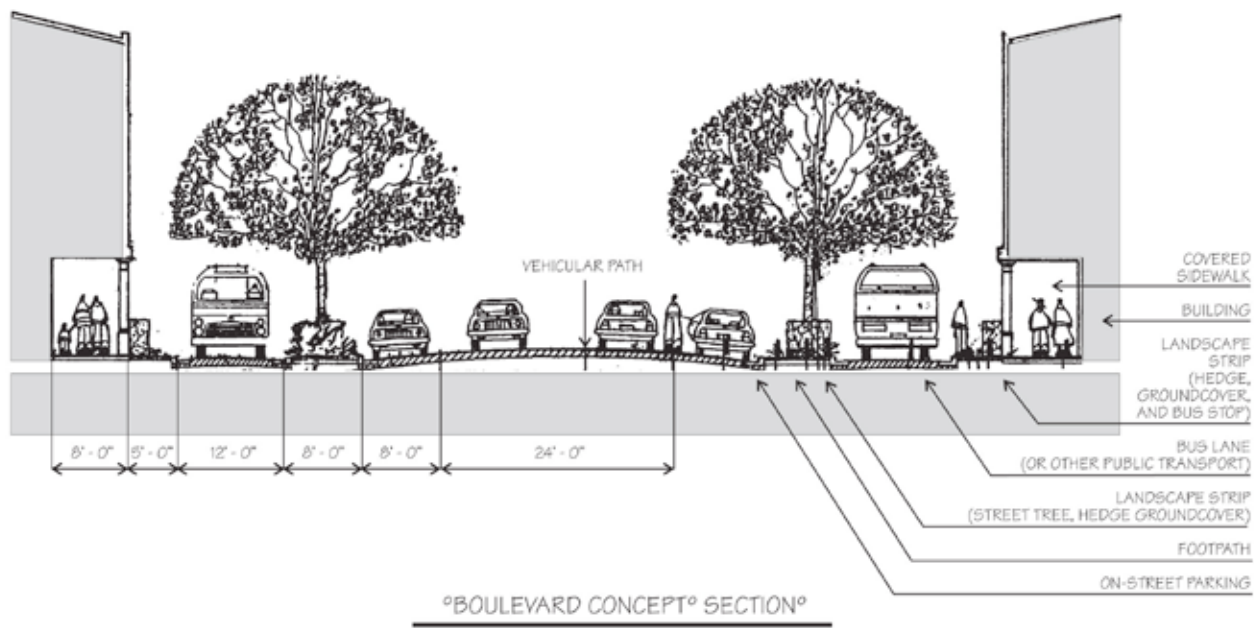


THE LANDSCAPE MANUAL

Landscape Manual cover

The Landscape Manual includes examples of Landscape Code Requirements, Parking Lot Landscape, View Triangles, Buffers, Xeriscape, Irrigation, Energy Conservation, and Tree Sizes.

It also includes road sections and plans that demonstrate innovative approaches to Trees in the Road Corridor, extensive Landscape Details, and Pruning specifications.



Example of section from Landscape Manual

MIAMI-DADE COUNTY - [URBAN DESIGN MANUAL](#)

The purpose of the manual is to illustrate the basic urban design principles which can significantly improve the quality of physical development in unincorporated Miami-Dade County. The manual provides criteria to be used by designers, developers, County staff, and Community Councils, all of whom are responsible for aspects of physical development in the County.



URBAN DESIGN MANUAL

Cover of Urban Design Manual

The manual illustrates various urban design concepts that contribute to a cohesive, functional urban development pattern. The goal is the systematic integration of site plans that establish connectivity at the pedestrian and vehicular level through the use of consistent urban design principles. The plans depicted in the manual illustrate techniques that can be used to address specific site planning situations.

The urban design principles illustrated and described in the manual identify ways to implement the urban form guidelines and other policies of the Miami-Dade County Comprehensive Development Master Plan (CDMP) pertaining to community land use, housing patterns, and design. A long-term objective of the County is to progressively revise the Miami -Dade County Code of Ordinances to incorporate the guidelines illustrated in the manual. The site plan review process provided in the [Zoning Code](#) provides an immediate opportunity to employ many of the principles recommended and illustrated in the manual.

The Manual includes suggested [Street Sections](#) and [Blocks](#) that directly relate to transportation projects by reinforcing and/or supplementing the MPO's and MDDP&Z's Typical Road Section and Zoned Rights-of-Way Study.



Residential street from Urban Design Manual

MIAMI-DADE COUNTY - PUBLIC WORKS MANUAL

The Public Works Manual (Manual) sets forth the minimum requirements governing public and private construction work which is under the jurisdiction of the Public Works Department. Features such as sidewalks and wide curb lanes contribute to the development of a multimodal system, while raised median and swale areas address the aesthetics in transportation projects. The standard road details depict requirements for various types of construction which are to be construed as minimum and may be exceeded. Enhanced elements such as wider sidewalks, decorative lighting, and lush landscape may be included as right-of-way conditions permit.

Under the County Code, the Public Works Department with the cooperation of the Department of Planning and Zoning, establish and enforce minimum standards for the approval of platting or replatting of any land in the County.

The Public Works Manual promulgates, establishes and enforces minimum standards for public works construction. These standards shall be applicable within the unincorporated area and all incorporated areas. Variances from these standards may be granted by the Public Works Department Director where such variance will not nullify the intent and purpose of the standards to provide uniform construction requirements for the protection and safety of the general public.

It is the intent of the Public Works Manual to inform those persons concerned with the construction of Public Works facilities of the general requirements necessary to insure that such work is performed and controlled in the best interest of the public. All work performed under contract with Miami-Dade County shall comply with contract or permit documents for the particular project. All other public works construction shall comply with the requirements set forth in the Public Works Manual, the approved construction plans, and with the applicable codes regulations, and ordinances of Miami-Dade County.

All work performed under contract with Public Works Department for public right-of-way improvements includes, but is not limited to, the following standard references which become part of the project requirements:

- The applicable portions of the FLORIDA DEPARTMENT OF TRANSPORTATION'S Standard Specifications for Road and Bridge Construction
- The applicable portions of the FLORIDA BUILDING CODE,
- FLORIDA DEPARTMENT OF TRANSPORTATION'S DESIGN STANDARDS for Design, Construction, Maintenance and Utility Operations on the State Highway System, Public Sidewalk Curb Ramps, Index 304
- MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS (Commonly known as the "Florida Greenbook")
- The Manual on Uniform Traffic Control Devices, or MUTCD

- TRAFFIC CONTROL EQUIPMENT SPECIFICATIONS AND STANDARDS (TCESS) FOR THE METRO TRAFFIC CONTROL SYSTEM MIAMI-DADE COUNTY which govern the installation or construction of all traffic signalization, signing and pavement marking on this project.
- TECHNICAL SPECIFICATIONS FOR PROGRAMMABLE VISIBILITY (PV) LED SIGNAL MODULES AND 12-INCH EXPANDED VIEW LIGHT EMITTING DIODE (LED) TRAFFIC SIGNAL MODULES” for additional specifications and requirements in the installation of LED modules

In addition to the above, and when landscape is part of the project scope, the landscape plans will be coordinated with any DERM permit requirements and with the Public Works arborist.

Standard sheets and/or typical sections of the Public Works Manual have been updated from time to time with the most recent update in 2003. At this time the Public Works Department is performing a comprehensive review of the Public Works Manual that will eventually render some sections of the manual being substituted with FDOT standards. Also, additional typical sections will be added as the Zoning Code is revised to require additional right-of-way from developers.

The Miami-Dade County MPO’s and Miami-Dade Department of Planning and Zoning’s [*Typical Roadway Section and Zoned Right-of-Way Study*](#) serves as a aspirational guide for updating the manual.

MIAMI DADE EXPRESSWAY AUTHORITY - ENHANCEMENTS MANUAL

The Board of the Miami-Dade Expressway Authority (MDX), an agency of the State of Florida, adopted a policy that focuses on developing roadway enhancements as an integral part of all infrastructure projects undertaken by MDX. Enhancements were defined in this policy as right-of-way beautification, noise mitigation, landscape improvements, large scale sculptural works, novel architectural approaches, greenways, bike paths and roadside parks.



MDX Enhancements Manual cover

The first phase of the implementation of the policy included the development of this Enhancements Manual to provide guidelines for the design of landscape improvements and hardscape elements of new infrastructure projects. The intent of the manual is to provide the basis for cost effective design enhancements that create a unified image for the roadways of Miami-Dade Expressway Authority while adhering to established Florida Department of Transportation roadway standards.

The second phase of the implementation of the policy includes the development of Landscape-Hardscape Schematic Designs by a team of landscape architects, planners, architects and engineers during the conceptual or preliminary design phase of all new infrastructure projects. During this phase all elements of the Miami-Dade Expressway Authority enhancements policy are inventoried and analyzed resulting in the final [Landscape-Hardscape Schematics, Concept Report and Aesthetic Design Criteria](#) for each infrastructure project.

These three documents reference the specific hardscape and landscape guidelines that are part of the Enhancements Manual. The intent is that the manual continue to evolve and respond to the needs of each new infrastructure project of the Miami-Dade Expressway Authority.



MDX landscaped median



MDX Overhead Signage Structure

MIAMI-DADE TRANSIT – [TRANSIT 10 YEAR PLAN](#)

The fiscal year (FY) 2010 – 2019 Transit Development Plan (TDP) Major Update is a strategic development and operational guide for public transportation used by Miami-Dade Transit (MDT) for the next 10 year planning horizon. The TDP includes an update of existing services, demographic and travel characteristics overview, a summary of local transit policies within the region, the development of proposed transit enhancements, and the preparation of a 10 year implementation plan that provides guidance for future MDT planning.

MDT’s evaluation of the Land Use and Transportation elements of the Miami-Dade County Comprehensive Development Master Plan (CDMP) was performed as part of the TDP Major Update situation appraisal. This review was performed to determine whether policies of these CDMP elements were supportive or hindered the provision of MDT transit services.

The Land Use Element and Transportation Element of the CDMP represent a very positive policy and design direction that benefits the provision of MDT transit services. The Land Use Element represents a complete array of planning strategies and techniques for creating a symbiotic relationship between land development and MDT transit services.



Metromover station, Miami

In general, the Land Use Element of the CDMP is supportive of transit. This portion of the CDMP has 12 broad objectives, each with several supporting policies. The objectives and policies recognize the importance of multi-modal transportation and the role that land use and urban design play to support transit services. In particular, Objective LU-7 states that “Miami-Dade County shall require all new development and redevelopment in existing and planned transit corridors and urban centers to be planned and designed to promote transit-oriented development (TOD), and transit use, which mixes residential, retail, office, open space and public uses in a pedestrian friendly environment that promotes the use of rapid transit services.”



Metrorail Station at the Miami Intermodal Center

The CDMP Land Use Element includes a narrative discussion about the importance of good pedestrian environments, increased density with good urban design, allowing neighborhood commercial development to occur in residential areas, and allowing mixed-use development, and includes policies on creating an aesthetically pleasing and dynamic built environment.



Miami-Dade Transit bus shelter

MIAMI-DADE TRANSIT – TRANSIT DEVELOPMENT PLAN

The Florida Department of Transportation (FDOT) has established guidelines stating that a Transit Development Plan (TDP) annual update contain the following information and content:

- Past year’s accomplishments compared to the original implementation program;
- Analysis of any discrepancies between the plan and its implementation for the past year and steps that will be taken to attain original goals and objectives;
- Any revisions to the implementation program for the coming year (FY 2010);
- Revised implementation program for the 2009 TDP;
- Added recommendations for the new tenth year (FY 2020) of the updated plan;
- A revised financial plan; and,
- A revised list of projects or services needed to meet the goals and objectives, including projects for which funding may not have been identified.

The [draft FY 2011 to FY 2020 Transit Development Plan Update](#) includes a number of goals and objectives related to transportation aesthetics and livability, including:

Include provisions for non-motorized modes in new projects and in reconstructions: Provisions that support non-motorized modes of transportation are included land use and transportation elements of the Miami-Dade County CDMP. Future capital improvements shall also seek to integrate non-motorized infrastructure upon the implementation of new transit services.

Implement projects that support economic development and redevelopment areas: A number of corridors in the county were identified by Miami-Dade County as potential redevelopment areas based on their older development and infrastructure. As Table 4-9 shows, MDT provides service on multiple routes to most of these corridors.

Apply transportation and land use planning techniques, such as transit oriented development (TOD), that support intermodal connections and coordination: Policy initiatives do exist within the CDMP Land Use element and Transportation Element related to development and population density.

Promote transit service projects that support urban infill and densification: MDT operates transit service primarily within the urban infill area with the exception of various areas throughout the county that are not fully developed.

Infrastructure Renewal Program: project commitments are based on an Infrastructure Renewal Program (IRP) evaluation and prioritization process as performed by MDT. The IRP process results in the identification, evaluation, prioritization, and programming of capital improvement projects. Project commitments are based on the Infrastructure Renewal Program (IRP) evaluation and prioritization process.

MIAMI-DADE TRANSIT – TRANSIT DEVELOPMENT PLAN

Miami-Dade Transit has architectural design criteria for the station area. These guidelines were adopted in October 2008 and are called Rapid Transit System Extensions Compendium of Design Criteria. Station area design criteria could be found under Volume II.

SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY – STATION DESIGN GUIDELINES

The [South Florida Regional Transportation Authority](#) (SFRTA) has developed draft Station Design Guidelines, which are undergoing major update and so are subject to considerable change. When completed, these Guidelines will provide additional Guidance on the design of transit facilities.

The SFRTA guidelines are intended to establish a design direction for TRI-RAIL stations – functional, safe, attractive, and well maintained stations are of primary importance to the enhancement of customer satisfaction.

The SFRTA guidelines include general appearance and construction criteria for stations. While the establishment of a consistent, system wide service identifies a goal of the agency, the guidelines recognize the diversity of the design of various stations and the communities they serve by allowing designers controlled flexibility in the application of the criteria within. The Station Design Guidelines are applicable to both expansion/rehabilitation of existing station, and construction of new stations.

SFRTA/TRI-Rail acknowledges that their guidelines represent sort of an ideal, and may be applied differently at particular stations or areas within stations. The Station Design Guidelines are a living document, which will evolve over time with SFRTA/TRI-RAIL.

The purpose of the SFRTA Station Design Guidelines is to establish fundamental criteria for the design and construction of TRI-RAIL stations and support facilities, including architectural and structural design, mechanical and electrical requirements, site planning and development, and landscaping. Sustainability or “Green Design” is incorporated into all aspects of design of the stations.

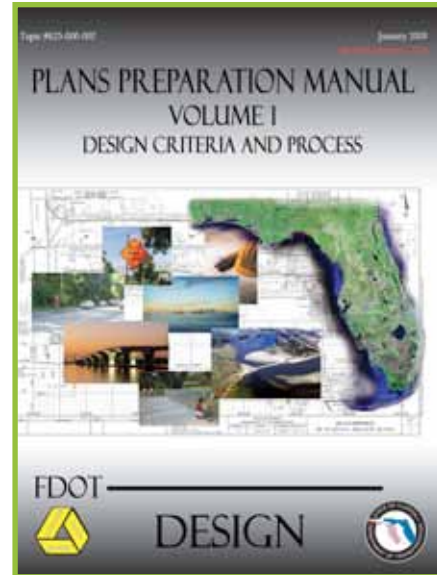


Tri-Rail stations, Miami-Dade and Broward Counties

FLORIDA DEPARTMENT OF TRANSPORTATION - PROJECT PLANS MANUAL (PPM)

Florida Department of Transportation's (FDOT) Project Plans Manual/PD&E Manual addresses aesthetics in FDOT rights-of-way in several places.

[Chapter 1, Design Controls](#), includes FDOT Policies on Transportation Design for Livable Communities and Context Sensitive Solutions in Design.



FDOT Plans Preparation Manual cover

Chapter 1.7: Transportation Design for Livable Communities (TDLC)

1.7.1 Policy Statement

Designs should consider the incorporation of TDLC features on the State Highway System when such features are desired, appropriate and feasible. The incorporation of such features is a shared responsibility between the Department and local government. Design criteria for TDLC projects are in Chapter 21 of this volume

1.7.2 Aesthetics

Highways are built first and foremost for functional purposes, but the designer should be sensitive to how the highway will be perceived by the users. Designing aesthetic treatments is more than just providing for landscape plantings. The roadway should blend into the landscape.

Aesthetics and roadway design considerations and methods are discussed in the Project Development and Environment Manual (Topic No. 650-000-001), Part 2, Chapter 15.

Chapter 1.11: Context Sensitive Solutions in Design

In order to plan, design, construct, maintain and operate the State Transportation System, "Context Sensitive Solutions" should be considered in all projects, not only TDLC projects.

This design philosophy seeks transportation solutions that improve mobility and safety while complementing and enhancing community values and objectives. Context sensitive solutions are reached through joint effort involving all stakeholders.

Chapter 9: Landscape

Chapter 9 of the FDOT Project Plans Manual addresses criteria for landscape design in FDOT rights-of-way. Landscape plans should be designed to complement and enhance the natural and manmade environment. This may include irrigation systems and site amenities such as street furniture and specialty pavement, tree grates, walls, planters, fountains, fences, and lights.



I-95 entrance ramp, Miami

FDOT refers to additional information regarding landscape plans that may be found in:

1. www.MyFloridaBeautiful.com
2. Highway Beautification Policy # 000-650-011
<http://www.dot.state.fl.us/emo/beauty/Policy.pdf>
3. Rule Chapter 14-40, Florida Administrative Code, Highway Beautification and Landscape Management. <https://www.flrules.org/gateway/chapterhome.asp?chapter=14-40>
4. Florida Highway Landscape Guide. <http://www.dot.state.fl.us/emo/beauty/landscap.pdf>
5. Highway Landscape, Beautification, and Plan Review Procedure (Topic No. 650-050-001). <http://www2.dot.state.fl.us/proceduraldocuments/procedures/proceduresbynumber.asp?index=6>
6. Identification & Biology of Non-Native Plants in Florida's Natural Areas, Langeland and Burks, 1998, University of Florida. http://www.fleppc.org/ID_book.htm
7. Waterwise Florida Landscapes, 2001, Florida's Water Management Districts. http://www.sfwmd.gov/portal/page/portal/xrepository/sfwmd_repository_pdf/ww7_waterwise_glossary_backcov.pdf
8. Transit Cooperative Research Program Report 19 - Guidelines for the Location and Design of Bus Stops (for additional guidance in areas where transit is present). http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_19-a.pdf
9. Florida's Best Native Plants; 200 Readily Available species, Gil Nelson, 2003, University Press of Florida
10. Florida Power and Light - Right Tree for Right Place:
http://www.fpl.com/residential/trees/right_tree_right_place.shtml

11. FDOT Voluntary Code of Conduct regarding Invasive exotic plants
<http://www.centerforplantconservation.org/invasives/codesN.html>
12. Florida Accessibility Code for Building Construction http://publicecodes.citation.com/st/fl/st/b200v04/st_fl_st_b200v04_11_section.htm?bu2=undefined
13. FDOT Utility Accommodation Manual <http://www2.dot.state.fl.us/proceduraldocuments/procedures/bin/710020001/710020001.pdf>
14. FDOT Drainage Manual
<http://www.dot.state.fl.us/rddesign/dr/Manualsandhandbooks.shtm>

Florida's Highway Beautification Programs

- [Highway Landscape Projects](#)
- [Florida Highway Beautification Council Grants](#)
- [Florida Highway Beautification News](#)
- [For Landscape Architects](#)
- [For Landscape Contractors...Procurement Office Vendor Guide](#)
- [Prequalified Contractor Search](#)
- [Vegetation Management at Outdoor Advertising Signs](#)
- [Wildflower Program](#)
- [Traffic Control Signs and Smoke](#)
- [Transportation Enhancement Program](#)

Highway Beautification Program Documents

- [FDOT Highway Beautification Policy](#)
- [FDOT Context Sensitive Solutions Policy](#)
- [Prescribed Burn PowerPoint US 319](#)
- [Highway Landscape Architecture & Outdoor Advertising Laws & Rules](#)
- [FDOT Voluntary Codes of Conduct to Minimize the Spread of Invasive Plants](#)

Highway Beautification Applications and Forms

- [Application for Vegetation Management at Outdoor Advertising Sign](#)
- [Permit for Landscaping on State Road Right of Way](#)
- [Highway Beautification Council Grant Application](#)
- [Transportation Enhancement Application](#)

Highway Beautification Links

- [American National Standards Institute Citizens for Scenic Florida](#)
- [Florida Chapter American Society of Landscape Architects](#)
- [Florida Chapter International Society of Arboricultural](#)
- [Florida Federation of Garden Clubs](#)
- [Florida Outdoor Advertising Association](#)

FLORIDA DEPARTMENT OF TRANSPORTATION – PD&E MANUAL (PD&E)

The purpose of the Project Development and Environment (PD&E) Manual is to provide project analysts and project managers with sufficient information so that projects can be developed which comply with all Federal and State laws and be uniform in their quality and exactness. It will be used by the Department to act as the standard measurement for quality assurance in project development.

This Manual contains two volumes (Parts 1 and 2) which describe in detail the process by which transportation projects are developed by the Department. It is the intent of this Manual to aid project analysts and project managers in understanding all aspects of the project development process and its requirements including technical areas in engineering and environmental documentation as well as public involvement.

Chapter 15 of the PD&E Manual addresses [Visual Impacts/Aesthetics](#). It is here that the FDOT discusses explicit FHWA, Florida Statutes, and FDOT policy and requirements for consideration of “compatibility with the surrounding natural and man-made environment” and the emphasis on quality design and visual quality of highways.”

As with FHWA and the Florida Legislature, it is the intent of the Department to incorporate aesthetic design, art and architecture in roadway and bridge design. The Department adopted an Environmental Policy to assure design solutions are compatible with the surrounding environment and community desires while preserving natural vegetation and the human environment. The results of this design effort is to provide the road user and community road viewer with a transportation system that is pleasing to the senses, assimilates the visual qualities of a community’s visual resources into its design, and makes the highway system compatible with the community-at-large.

To design a facility which meets the aesthetic needs and desires of a community, the District must coordinate with the community, state, federal, regional and local agencies, and private interest groups, to ensure that full consideration is given to designing a facility which meets the aesthetic needs and desires of the community.

Visual impacts affect communities from two perspectives: 1) the view from the road and 2) the view of the road. The view from the road is from the user’s perspective and leaves a lasting impression of the community, area or region on the visitor as well as residents. The view of the road by the resident contributes to the feeling of community value and pride. Visual impacts of an area are ascertained by defining the visual environment, identifying key views, analyzing the resources and community responses, depicting the project appearance, assessing the visual impacts, and then developing mitigation measures.

While the PD&E Manual addresses all aspects of complying with the National Environmental Policy Act (NEPA) other sections of the PD&E Manual specifically related to aesthetics and community livability include:

- Archaeological and Historical Resources:
<http://www.dot.state.fl.us/emo/pubs/pdeman/pt2ch12.pdf>
- Pedestrian and Bicycle Facilities:
<http://www.dot.state.fl.us/emo/pubs/pdeman/pt2ch14.pdf>
- Scenic Highways: <http://www.dot.state.fl.us/emo/pubs/pdeman/pt2ch29.pdf>

MIAMI INTERNATIONAL AIRPORT

The Miami-Dade Aviation Department (MDAD) does not have an Airport Master Plan that addresses aesthetics. Aesthetics with form following functions usually becomes a consideration in the selection of the design professional(s) and is expressed within regulatory design standards which govern safety and the project's design guidelines, particularly development (capital) and maintenance (O&M) cost feasibility.

The County's [Office of Capital Improvements](#) (OCI) facilitates, monitors, standardizes and expedites County capital construction projects, guiding projects from planning and design through contracting and construction.



MIA Mover people mover system, Miami International Airport



South Terminal, Miami International Airport

PORT OF MIAMI

The [Port of Miami 2035 Master Plan update](#) addresses how the Port should develop over the next 25 years. The purpose of the plan is to guide future projects based on market analysis and capacity based need. The POM 2035 Master Plan is a planning tool used to update the [Port of Miami Master Plan Sub-element](#) of the County's Comprehensive Development Master Plan (CDMP).

The 2035 Master Plan, which concentrates more on market analysis for future growth, is an update to the 2020 Master Plan which set nominal design criteria in its aesthetic guidelines for site improvements at the Port. Upon completion of the 2035 Master Plan, the Port will undertake the analysis of the existing aesthetic guidelines and update these to current needs.

By incorporating a market analysis for both cruise and cargo and a financial analysis of capital infrastructure, this master plan helps the Port better understand the direction in which it needs to guide the Port. Cruise passenger projections take the Port from 4.15 million passengers to 5.9 million in 2035. And our cargo projections run from 847,509 TEUs in 2010 to 1.8 - 3.2 million in 2035. Increasing Port business ultimately increases the County's economy.

Projects presented in the 2035 Master Plan include a phased implementation plan allowing for development depending on additional changes in the global market. There are three main components to the Port's future progress: Cargo, Cruise and Commercial, with an overarching theme of sustainability.

The 2035 Master Plan continues to push the envelope and takes the Port into the future with projects that will help increase both cargo and passenger throughput by adding services, upgrading infrastructure, enhancing efficiency and increasing berthing capacity. The Master Plan outlines three major transportation projects: (1) the need for a tunnel connecting Port traffic directly to the Interstate system; (2) dredging the South Channel to -50'/-52' in order for post-panamax ships to berth at the Port and; (3) reconnecting Rail service with the construction of upgraded rail tracks and an intermodal yard. The development of these projects is currently underway and their completion should coincide with the completion of the Panama Canal expansion in 2014.



Port of Miami from Biscayne Bay



Cruise ships at Port of Miami

MIAMI DOWNTOWN DEVELOPMENT AUTHORITY – [2025 DOWNTOWN MIAMI MASTER PLAN](#)

The Miami Downtown Development Authority's (Miami DDA) board of directors voted unanimously to approve the 2025 Downtown Miami Master Plan, a 15-year roadmap for enhancing the livability and quality of life in Downtown Miami. The plan is to serve as a benchmark for encouraging investment by both the public and private sectors, with the goal of transforming Miami's urban core into the "Epicenter of the Americas."

The approved Master Plan combines new land use and planning guidelines, as well as outlines a number of proposed projects, some of which are already underway. The final plan is the culmination of existing studies, as well as a series of Miami DDA Board workshops, public forums, and stakeholder meetings designed to gain a better understanding of existing conditions and gather the best and most sustainable ideas for revitalizing Downtown Miami.

The Master Plan outlines five core goals for Downtown Miami (bounded at the South end by SE 15th Rd. and on the North by NE 22nd St.; on the West by I-95 and on the East by Biscayne Bay):

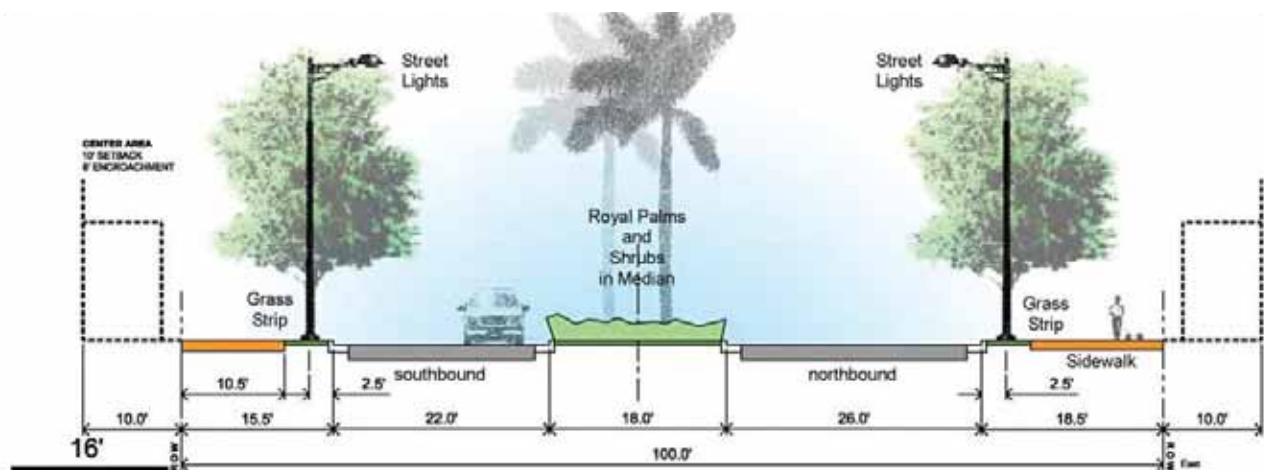
- Enhance Downtown Miami’s standing as the business and cultural epicenter of the Americas
- Leverage the City’s beautiful and iconic tropical waterfront
- Elevate Downtown’s grand boulevards to prominence
- Create great streets and community spaces throughout the district
- Promote transit and regional connectivity

Elevating Miami’s Grand Boulevards to prominence included several goals related to transportation aesthetics:

- Elevate Brickell Avenue to Iconic Status
- Create Grand Promenade Along Biscayne Boulevard
- Create Freedom Plaza at the Nexus Between the Freedom Tower, American Airlines Arena and Port of Miami
- Promote Public Art & Landmarks Along Biscayne Boulevard and Brickell Avenue
- Activate Biscayne Boulevard and Brickell Avenue with Ground Floor/Outdoor Dining and Retail
- Provide a Visitor-Friendly Trolley Linking Major Origin and Destination Points



Proposed elevation of Brickell Avenue to Iconic Status



Proposed cross-section for Biscayne Boulevard from 2025 Downtown Miami Master Plan

4.

Aesthetic Guidance



Miami-Dade County has a unique aesthetic, derived from its multi-cultural and semi-tropical setting. Designers have thrived in this environment, creating architecture, landscapes and art that have achieved national recognition.

This guidance seeks to provide a flexible source of inspiration for designers working in the Miami-Dade County transportation environment, using the several excellent guide and manuals that already exist. Toward that end, it suggests a process for achieving a high standard of aesthetics in transportation design, identifies resources available to assist in contextual aesthetic design, and provides examples that hopefully will inspire and challenge designers.

The focus of this guidance for design of facilities is on their interface with the public realm, especially their relationship to gateways and corridors.

Defining the Context

The public realm interface of transportation infrastructure is comprised of many parts, including the roadway, the roadside, transit systems, land uses along the road or transit, and views to areas away from the project. The context extends beyond the right-of-way, encompassing other government jurisdictions and private property owners in addition to transportation agencies. This holistic perspective of the transportation project and its environs emphasizes planning and designing in concert with the land and the constructed environment. It also aligns with National Environmental Policy Act (NEPA) requirements to consider effects on the broad environment in order to integrate transportation projects into their physical settings.

Understanding physical context as comprising both the natural and built landscape expands the designer's ability to address the settings that transportation projects fit into. The transportation infrastructure is only one element in that environment, and it must fit integrally with all the other parts. In creating complete transportation environments, designers aim to satisfy mobility and safety needs in a manner that not only fits with the many components of a given context, but also enhances that context.

The combination of the transportation project and its physical settings in Miami-Dade County provides the foundation for achieving a high standard of context sensitive aesthetic design. All of the transportation project types have some common overarching principles to guide planning, design, operations, and maintenance. All of them are comprised of myriad elements, but not all elements are found in all of the project types and settings.

LAND USE AND URBAN DESIGN CONTEXT

The MPO's and MDDP&Z's [Typical Roadway Section and Zoned Right-of-Way Study](#) utilizes context zones to identify areas with distinct characteristics based upon the land use and location within the County. That Study generally follows the New Urbanism nomenclature of context zones which include:

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



Rural to Urban Core context zones from Typical Section and Zoned Right-of-Way Study

- [Urban Core](#)

There is only one identified urban core within Miami-Dade County: the Downtown Miami Central Business District. This area features the most dense/intense development in Miami-Dade County, containing the County's largest concentration of high-rise buildings and employment.



Downtown Miami urban core

- [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. A major goal for development within an urban center is to create a distinctive sense of place through proper planning and design.



Downtown Coconut Grove, Florida

- [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 include low to high density residential, retail trade, business, professional and financial services, restaurants, and cultural and entertainment uses.



Bal Harbour Boulevard, Bal Harbour, Florida

- [Suburban](#)

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 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.



137th Avenue, Miami, Florida

- [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 dispersed residential developments at low to very low densities.



Krome Avenue, Miami-Dade County

The Typical Roadway Section and Zoned Right-of-Way Study also identifies two additional districts which more fully define Miami-Dade County:

- **Special District**

The Special Districts are areas that are predominantly industrial, with little if any residential or commercial land uses that would be found in the other context zones.



Industrial park, Miami-Dade County

- **Wetland and Natural Forest Community**

Miami-Dade County includes extensive wetland and upland areas, which could also be characterized as “remote”. This context zone is comprised of extensive natural areas with few, if any, built features and little, if any, development.



US Rt. 1, Miami-Dade County

TRANSPORTATION CONTEXT

The CIAB Aesthetics Master Plan specifically addresses the design and appearance of three physical transportation contexts within the County:

1. Gateways into the County or from one sub-area to another;
2. Major physical Corridors that channel vehicular, pedestrian, and boat traffic into and within the County, linking cities and neighborhoods to each other and to the surrounding region; and
3. Publicly owned or operated Facilities, including buildings, major transit destinations and parks.

- Community Gateways

Both Vehicular and Pedestrian Gateways identify entrance points into the County and key destinations within the County. Gateways are intended to enhance travelers' experience as they enter Miami-Dade County from the surrounding areas by offering scenic views and appealing architectural elements. Gateways into retail areas, public greenways and park systems may also take advantage of scenic views and incorporate local artwork and vegetation to provide texture and interest. Successful Gateways use architecture, materials and views to cultivate a sense of identity and an atmosphere of welcome.

- Vehicular Gateways

Vehicular Gateways are those that are traversed primarily by vehicles. Vehicular Gateways typically occur at the intersection of major roadways or at the point where a roadway crosses a man-made or artificial boundary. A principal consideration in designing a successful Vehicular Gateway is that it must be designed at a large enough scale to be viewed and experienced by people in vehicles moving at relatively high speed.



Entrance to Port of Miami



MDX Signage Structure

- Pedestrian Gateways

Pedestrian Gateways typically occur at the beginning or end of a major pedestrian route or at the point the route crosses a natural or man-made boundary. Since pedestrian routes often follow roadways, a gateway may need to be carefully designed to target both pedestrian and vehicular users.



North Shore Open Space Park, Miami



Pedestrian Bridge over US-1 at Douglas Road

- Waterway Gateways

Waterway Gateways occur at key interfaces between the community and Biscayne Bay or the Atlantic Ocean. The CIAB Aesthetics Master Plan identifies them as being located at Elliot Key, the Miami River, Government Cut, Haulover Cut and Florida’s Intracoastal Waterway.



Tianjin Haihe River - North China (from CIAB Aesthetics Master Plan)

- Corridors

Corridors are the major physical routes that channel vehicular, transit, pedestrian and boat traffic into and within Miami-Dade County, linking cities and neighborhoods to each other and to the surrounding region. The views and general experience of those traversing the County’s corridors define, to a great extent, the overall image of the County, consequentially affecting residents’ quality of life, the tourist experience, the economic development climate and other important factors. Given the importance of maintaining a high aesthetic quality of corridors in the County, careful attention must be paid to their overall design and form as well as to the specific design of architectural, hardscape, and landscape elements.

- Gateway Corridors

Gateway Corridors serve as gateways to communities, the City and the County. They benefit the region by serving the portion of the population that utilizes Gateway Corridors for everyday commutes, as well as visitors to the County. The underlying design of such corridors needs to address multiple types of uses and users. As the corridors reach beyond individual communities, their design treatment should address characteristics of each area affected and be responsive in creating a joining component.



Expressway Exit Landscape - Miami, FL

- [Arterial Corridors](#)

Arterial Corridors are the County’s larger multilane, higher speed roadways connecting various communities to each other. They tend to be somewhat separated from the underlying urban fabric and at times may feature limited access points, overpasses and ramps, retaining walls and a modified cloverleaf style of intersections. Given that so much of Miami-Dade County is heavily urbanized, the view from Arterial Corridors should be enhanced by screening views with greenbelts and buffer planting.



Miami Beach, FL

- [Collector/Local Road Corridors](#)

Collectors and Local Roads are used to connect cities and neighborhoods, and views from these roadways have a significant impact on how Miami-Dade County is perceived. The aesthetics within these transportation corridors are critical in defining visual standards for the region. Corridors are shaped by a variety of different components including landscape, structures and hardscape, County-wide signage and other items that affect visual quality within the corridor.



PAC Typical Lighting Fixture - Miami, Florida

- [Pedestrian Corridors](#)

Pedestrian Corridors carry pedestrian traffic within and between cities, districts and neighborhoods. Pedestrian Corridors are encountered at a slower, more intimate level and require a more detail-oriented design response.



Develop Sitting Opportunities



Developed Multi-Purpose Trail - Atlanta, GA

- [Waterway Corridors](#)

and private realms, and include iconic elements such as bridges and gateways connected to roadways. Waterways can be used and enjoyed by local residents and tourists alike. They provide views that often differ strikingly from land-based views. In developed urban areas, Waterway Corridors may be lined with decorative seawalls, parallel pathways and sidewalks that incorporate planter areas and tree wells. In less developed areas, a more natural edge lined with a variety of native plants creates a pleasing appearance and contributes to water quality.



Improve Hardscape on Water's Edge



Multi-Functional Water Canal - Celebration, FL

- [Facilities](#)

A Facility is broadly defined as a building or place that provides a specific service or is used by a particular industry or government entity. Miami-Dade County facilities generally fall into three

categories: Civic, Operations and Gateway.

A Civic Facility is defined as a publicly-owned or operated building, park, or other similar physical place that is regularly accessed by the public or employees. An Operations Facility can be defined as a publicly-owned or operated building, open space, yard or other similar site that primarily fulfills an operations or maintenance support function. A Gateway Facility is often referred to as a publicly-oriented facility that is highly visible and used by both residents and visitors.

The design of these Facilities offers Miami-Dade County a momentous opportunity to create an aesthetically pleasing and successful public realm.

- [Gateway Facilities](#)

Gateway Facilities are highly visible and well-used spaces such as transit stations, airports, Port of Miami, etc. Not only are Gateway Facilities community landmarks, but they are also functional necessities for motorists, transit patrons and pedestrians. They are points of interconnection, arrival and departure between international, national and local. These facilities commonly serve as both physical gates (or thresholds) and as point-of-protocol exchanges. Gateway Facilities also act as points of congregation, connecting individuals to the surrounding communities and beyond.



Port of Miami Terminal - Miami, FL

- [Civic Facilities](#)

Miami-Dade County Civic Facilities, such as buildings, parks, transit stations, auditoriums, classrooms, sports fields, or other similar physical places or buildings that are regularly accessed by the public typically have high visibility and are required to be accessible both physically and visually for motorists and pedestrians alike. These types of facilities are considered community landmarks, and can serve a wayfinding function and define the character of the community in which they are located. Civic Facilities offer a great opportunity to create a pleasing visual experience and to reinforce the community's shared identity.



Deering Estate Environmental Center - Miami, FL

- [Operations Facilities](#)

Operations Facilities in Miami-Dade County, such as maintenance facilities, landfills, provide maintenance and support functions for other County facilities, activities or programs. These facilities typically serve utilitarian activities and are often visually undesirable. A principal consideration in the design of an Operations Facility is that it is located and sited for easy accessibility to its users, yet is aesthetically unobtrusive to the public. Landscape features can play a key role in screening undesirable views or activities. Alternatively, some Operations Facilities may have an element that can be creatively highlighted and integrated into the community design fabric.



Operation Center / Maintenance Facility, Miami, FL

Elements Resources

This section discusses the many elements of transportation aesthetic design in detail, including the variations appropriate for different settings and transportation project types. The way that the elements are combined within the overarching principles determines what will make up a complete physical transportation environment.

Numerous forms, materials, structures, and plants make up the transportation landscape. Each offers innumerable variations for designers, with new technologies, research, and innovations adding to the possibilities each year. This guide cannot possibly address every element or situation that a designer might encounter. However, a number of elements are found in most transportation projects, regardless of scale or context, and some principles will be helpful as a starting point.

Aesthetic goals are most successfully achieved when they are integral to design solutions, rather than added ornament. This chapter addresses approaches to designing transportation facilities and their interface with the public realm to meet functional requirements of the overall context, to be constructible within acceptable practices, to maintain or enhance environmental health, to meet stakeholder objectives, and to be attractive.

The focus of this section is on materials and features that tend to be more sensitive to landscape context and the use of design flexibility. Emphasizing the integration of the transportation infrastructure into the overall interface with the public realm, the section organizes thirty-five elements into six sections: Roadway, Roadway Structures, Roadside, Roadside Structures, and Transit Systems while recognizing that a holistic approach also must consider the fifth section: Outside the Right-of-Way. Some elements fall into more than one of these categories.

The elements resources are drawn from the existing guides and manuals, supplemented by additional material developed for this guidance. As shown in the following matrix:

- Sixteen of the thirty-five elements are thoroughly covered through existing guides.
- Existing guides and manuals provide some guidance for three of the element: Pavement and Toll Structures. Some supplementing for these elements is provided by this guidance.
- Current guides and manuals provide only minimal guidance for ten of the elements: Transit, Medians, Guardrails, Access Management, Outdoor Advertising, and Park-and-Ride. More supplemental material is provided for these elements by this guidance.
- Six of the elements are not addressed by the current guides and manuals: Wildlife Crossings, Scenic Overlooks, Utilities, and Scenic Byways. New guidance is provided here.

All supplemental guidance is found in [Appendix A: Supplemental Elements Resources](#).

		TARC	MDMPO	CIAB	MDC	MDX	MDT	FDOT	MIA	Port	DMDA
		Design Mission Statement									
		Design Principles									
		Typical Roadway Section and Zoned ROW Study									
		Aesthetic Master Plan									
		Street Tree Master Plan									
		2015 - 2025 Comprehensive Development Master Plan									
		Landscape Manual									
		Urban Design Manual									
		Public Works Manual									
		Enhancements Manual									
		Miami-Dade Transit									
		Plans Preparation Manual (PPM)									
		Project Development and Environmental Manual									
		Miami International Airport									
		Port of Miami 2035 Master Plan									
		2025 Downtown Miami Master Plan									
Roadway	Transit										
	Bicycles										
	Pedestrians										
	Pavement										
	Geometrics										
Roadway Structures	Public Art										
	Toll Structures										
	Signs										
	Lighting										
	Guardrails										
	Wildlife Crossings										
	Medians										
	Retaining Walls										
Bridges											
Roadside	Scenic Overlooks										
	Vegetation										
	Grading and Drainage										
Roadside Structures	Community Gateways										
	Utilities										
	Street Furnishings										
	Fences and Gates										
	Noise Abatement										
Transit Systems	Joint Development										
	Transit Oriented Development										
	Bus Rapid Transit										
	Building Location for Transit Users										
	Bus Transit Stops and Terminals										
	Bus Transit Circulation										
Outside the ROW	Metrorail Stations and Overhead Structures										
	Park and Ride										
	Outdoor Advertising										
	Scenic Byways										
	View from/to the Road										
	Access Management										
	Land Use										

- Current guides provide thorough guidance
- Current guides provides some guidance, supplemental guidance is provided
- Current guides provide minimal guidance, supplemental guidance is provided
- No current guidance, new guidance is provided
- These elements are not addressed in the respective manuals

ROADWAY ELEMENTS

- Geometrics

Geometrics, the three-dimensional form of a roadway, are a major determinant of how well a given road fits into its context. Guidance for cross section selection for Automobile Priority, Multimodal Priority, and Pedestrian Priority streets is provided by the [MPO's Typical Roadway Section and Zoned ROW Study](#). The [Miami-Dade County Landscape Manual](#) provides useful guidance on cross-section dimensions for trees in the right-of-way. The [2025 Downtown Miami Master Plan](#) provides desirable street cross sections for Brickell Avenue in downtown Miami.



Proposed Biscayne Boulevard, downtown Miami

- Pavement

Design considerations need not be limited to pavement longevity and practical benefits. Designers can also consider how pavement affects aesthetics, environment, human factors, and quality of life. The selection of pavement type and surface treatment influences driver behavior, both during high-speed driving on freeways, and at slower speeds, on city streets. For example, transitions between pavement materials can be used to slow traffic and cue pedestrian movement. The [CIAB Aesthetics Master Plan](#) provides a minimal amount of guidance on pavement materials for Gateways. The [MDX Enhancements Manual](#) provides guidance for pavement materials for ground under bridges, but some of these materials may be appropriate for lower volume streets. Additional guidance on [pavement](#) is provided in the Elements Appendix.



Examples of aesthetic pavements from CIAB Aesthetic Master Plan

- Pedestrians

All roadway projects except those that must prohibit pedestrians completely, like limited access highways, should proceed with the assumption that people want to walk in the area, and will do so more often if facilities are designed to be more pedestrian friendly. Based on pedestrian network planning, which considers links between homes, schools, libraries, retail centers, transit, recreation, and other destinations, some roads will be more pedestrian friendly than others, but all roads are better if they offer pedestrian facilities for walkers, joggers and users of wheelchairs, strollers and other assistive devices. The CIAB Aesthetics Master Plan has extensive guidance for pedestrian facilities for all [Gateways](#) and [Corridors](#). The [MDC Landscape Manual](#) provides guidance for cross-sectional dimensions of sidewalk zones to allow space for street tree planting. The [MPO Typical Roadway Section and Zoned ROW Study](#) includes sidewalk zones, dimensions, and locations for typical Boulevard, Avenue and Street conditions.



Clearly Separate Pedestrian and Vehicular Traffic - Orlando, FL

- Bicycles

Continuing concerns about the environment, human health, resource depletion, transportation safety and traffic congestion all underscore the importance of bicycling and other non-motorized transportation modes. As federal transportation legislation since 1991 suggests, every transportation improvement project - new roadways, reconstruction, capacity improvement and transit - can be seen as an opportunity to improve bicyclist safety, convenience and connectivity. With this in mind, all roads open to bicycling may be seen as an opportunity to provide for safer, more convenient bicyclists' transportation needs. As a practical matter, it is desirable for bicyclists to have their mobility needs provided for, except where bicyclists are specifically prohibited. The CIAB Aesthetics Master Plan provides guidance for [Trails/Bikeways for Arterial Corridors](#), [Collector/Local Road Corridors](#), [Waterway Corridors](#), [Pedestrian Corridors](#), and [Civic Facilities](#). The [MPO Typical Roadway Section and Zoned Right-of-Way Study](#) provides recommendations for bicycle lane locations and dimensions on all of their street types. [The Miami-Dade County Parks and Open Space System Master Plan](#) proposes an interconnected network of greenways, trails and water trails throughout the County. The [MPO's Bicycle Facilities Plan](#) identifies bicycle facility needs based on quantitative analysis; identifies candidate projects to address



Kunshan, China

bicycle facility needs; prioritizes bicycle facility projects; and develops a Minimum Revenue Plan based on projected funding.

- Transit

Transit systems generally fall into one of two categories: buses and fixed guideway systems. Fixed guideway refers to systems that operate on rails or other inflexible guidance systems, and include streetcars, light rail, heavy (or third) rail, commuter rail, monorail, and intercity rail. Buses refer to self-propelled, rubber-tired manually steered vehicles. Bus Rapid Transit (BRT) can operate either in normal traffic lanes or in a designated transit lane. Miami-Dade Transit has their own standards and directives for design and operations, including the manner in which transit vehicles will interface with street traffic. The Florida Department of Transportation has developed the [FDOT Transit Facilities Guidelines](#) to facilitate transit operations on and off the roadway system. Additional information on transit guidance is provided under [Transit System Elements](#). Miami-Dade County may also have water oriented transit in the future.



LYNX bus shelter, Orlando, Florida

ROADWAY STRUCTURE ELEMENTS

- Bridges

Because of their large size and high visibility—above travel ways, across water bodies, seen from many different perspectives—bridges command attention like few other elements in the landscape. A tour of most large cities will reveal a range of bridges, from the forgettable to the strikingly beautiful, and probably some memorably unattractive ones, too. They can be utilitarian hulks or engineered sculptures. The CIAB Aesthetics Master Plan includes aesthetic guidance for bridges in [Vehicular Gateways](#), [Pedestrian Gateways](#), [Gateway Corridors](#), [Arterial Corridors](#), and [Waterway Corridors](#). The [MDX Enhancements Manual](#) has aesthetic guidance for freeway bridges.



Creation of Iconic Bridges - Winnipeg Manitoba, Canada

- Retaining walls

Retaining walls are used to accommodate grade changes where space constraints would result in overly steep slopes, to reduce the need for right-of-way acquisition, and to minimize disruption of adjacent landscape features. Since they often result in less grading and shallower slopes, retaining walls can be helpful in preventing erosion. When they are needed, retaining walls offer excellent opportunity for aesthetic enhancement, especially in terms of surface treatment, and can be a significant element in transportation design. The CIAB offers some excellent guidance and examples of aesthetic designs for retaining walls in [Vehicular Gateways](#), [Pedestrian Gateways](#), [Gateway Corridors](#), [Arterial Corridors](#), [Collector/Local Road Corridors](#), [Waterway Corridors](#), [Pedestrian Corridors](#), [Civic Facilities](#), [Operations Facilities](#), and [Gateway Facilities](#). The MDX Enhancements Manual includes their standard for a relatively low cost treatment of mechanically stabilized earth (MSE) [retaining walls](#).



North Central Expressway, Dallas, Texas

- Medians

A median is primarily a tool for separating oncoming traffic. It essentially creates two one-way roads, and relegates crossing opposing traffic to openings in the median, usually at intersections and interchanges. Depending on the width, they offer opportunities for landscape, hardscape, monuments and even seating and art. Medians may be used throughout a corridor, or at special junctures where adjoining land use or pedestrian and traffic activity warrants. Since medians are in the center of the road on the driver's side, they tend to



Collins Avenue, Sunny Isles, Florida

be a dominant visual element of a road. Medians are a very important and dominant element in Miami-Dade County roadways. The [MDC Landscape Manual](#) includes recommended dimensions for locating medians in streets at appropriate widths for street tree and other landscape plantings. Additional guidance on [medians](#) is provided in the Elements Appendix.

- **Wildlife Crossings**

Wildlife populations exhibit several traits that can render them particularly vulnerable to habitat fragmentation and highway impacts such as direct and indirect losses of habitat, habitat fragmentation, population fragmentation, and increased mortality of wildlife and humans. An important benefit of fencing and wildlife crossings is a reduction in animal-vehicle collisions with large animals. Some communities include provisions

for wildlife crossings in urban or suburban areas where wildlife is present. In Miami-Dade County, they may be most likely to be included in the Wetland context zone. The Elements Appendix includes information on design of [wildlife crossings](#).



Stream and wildlife crossing, Henderson, Nevada

- **Guardrails and Barriers**

While guardrails are first and foremost safety devices, they should also be selected and designed with an eye to aesthetics and compatibility with other corridor elements. Guidance for aesthetic treatment of [guardrails](#) is included in the Elements Appendix. The CIAB Aesthetics Master Plan addresses barriers in [Vehicular Gateways](#), [Pedestrian Gateways](#), and [Gateway Corridors](#), as well as Terrorist Attack Safety Barriers in [Civic Facilities](#).



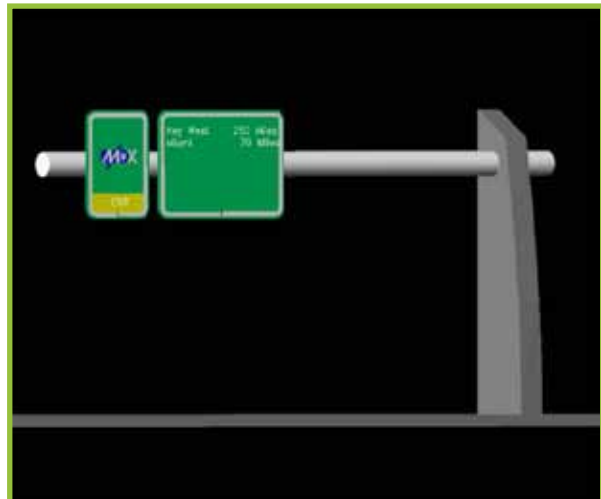
Meridian Avenue Bridge

- **Lighting**
Lighting offers many opportunities to enhance corridors, for safety, security and aesthetics. Lighting fixtures and supports can have architectural qualities that reinforce the overall corridor aesthetic in the daytime. The placement and quality of lighting can add a nighttime aesthetic to the corridor. The CIAB Aesthetics Master Plan addresses lighting in [Vehicular Gateways](#), [Pedestrian Gateways](#), [Gateway Corridors](#), [Arterial Corridors](#), [Collector/Local Road Corridors](#), [Waterway Corridors](#), [Pedestrian Corridors](#), [Civic Facilities](#), [Operations Facilities](#), and [Gateway Facilities](#).



One Miami Riverwalk - Miami, Florida

- **Signs**
Roadway signage falls into five categories: regulatory, warning, directional, public informational, and display. Most of the signage is guided by the Manual on Uniform Traffic Control Devices (MUTCD). In addition to promoting safety, efficiency, and orderly movement of vehicles, pedestrians, and bicyclists, signs may contribute to or detract from the visual quality of the landscape. When signs are poorly designed or placed, their function suffers, and so does the quality of the roadway environment. The CIAB Aesthetics Master Plan includes guidance for signs in [Vehicular Gateways](#), [Pedestrian Gateways](#), [Gateway Corridors](#), [Arterial Corridors](#), [Collector/Local Road Corridors](#), [Waterway Corridors](#), [Pedestrian Corridors](#), [Civic Facilities](#), [Operations Facilities](#), and [Gateway Facilities](#). The [MDX Enhancements Manual](#) has standards for excellent overhead and other freeway sign structures.



Cantilever Signage Structure from MDX Enhancements Manual

- Toll Structures

Toll roads in Miami-Dade County are operated either by the Miami-Dade Expressway Authority or Florida’s Turnpike. The MDX Enhancements Manual [structure guidelines](#) provide aesthetic guidance for electronic toll collection structures on their system. The unique toll structure pictured here was developed before electronic tolling was widely used. MDX engaged an Architecture/Engineering/Planning firm which designed this unique structure, dubbed “the Wing,” which also serves as a gateway the airport. The Elements Appendix includes examples of [toll structures](#) from other areas.



SR 836 Toll Plaza, Miami, Florida

- Public Art

Roadsides are the most public of landscapes, visible to more people than anywhere else. Public art can add vitality, character, and unique identity to roadway corridors. In addition to contributing visual appeal to structures and surfaces such as bridge railings and walls, public art can: provide welcoming landmarks, highlight precincts and distinguish gateways to surrounding neighborhoods and commercial areas, mark neighborhood bridge crossings or light rail transit stations or identify neighborhoods behind freeway noise walls. The CIAB Aesthetics Master Plan provides guidance for public art in [Vehicular Gateways](#), [Pedestrian Gateways](#), [Gateway Corridors](#), [Arterial Corridors](#), [Collector/Local Road Corridors](#), [Waterway Corridors](#), [Pedestrian Corridors](#), [Civic Facilities](#), [Operations Facilities](#), and [Gateway Facilities](#). [Miami-Dade Art in Public Places](#) promotes collaboration and creative art projects that improve the visual quality of public spaces.



Dropped Bowl with Scatter Slices and Peels - Miami, FL



Rockne Krebs: The Miami Line, 1984, Neon; installed on Metrorail bridge over Miami River

ROADSIDE ELEMENTS

- Grading and Drainage

Grading and drainage is a technical skill and an art. Related to roadway geometrics, it can be used well beyond the realm of alignments, profiles, and cross-sections. Grading can be used for other functional purposes, as well as to create bold aesthetic statements. With the high water table and relatively flat topography common in Miami-Dade County, and the frequent need for retention water bodies, grading and drainage is a critical part of transportation design that also offers unique opportunities for aesthetic treatments. The CIAB Aesthetics Master Plan includes guidance for grading and drainage, as well as water conservation, in [Vehicular Gateways](#), [Pedestrian Gateways](#), [Gateway Corridors](#), [Waterway Corridors](#), [Civic Facilities](#), [Operations Facilities](#), and [Gateway Facilities](#).



Typical Retention Pond as an Amenity in Florida

- Vegetation

Plants are much more than decoration along the roadway; they are an integral part of the appearance, ecology, and function of a transportation corridor. Plants, both existing and new, can help make a road a legitimate place in itself rather than just a way to get somewhere. Vegetation helps establish regional and local identity, and communicate the natural and cultural history of a place. Miami-Dade County has a rich sub-tropical plant palette, so it is not surprising that there are extensive sources for plants in the transportation environment. The CIAB Aesthetics



Rockridge Park - Miami, FL

Master Plan it includes guidance on irrigation and water conservation as well as recommended plants in [Vehicular Gateways](#), [Pedestrian Gateways](#), [Gateway Corridors](#), [Arterial Corridors](#), [Collector/Local Road Corridors](#), [Waterway Corridors](#), [Pedestrian Corridors](#), [Civic Facilities](#), [Operations Facilities](#), and [Gateway Facilities](#). The [MDC Street Tree Master Plan](#) also provides an extensive palette of recommended street trees. The MDC Landscape Manual includes recommendations for [planting details](#) as well as specific recommendations for [street cross section dimensions](#) to allow for planting in the right-of-way. The MDX Enhancements Manual includes another extensive suggested [landscape design guidelines](#).

- Scenic Overlooks

Scenic overlooks are located on routes, bridges or causeways that offer attractive short- or long-range views, usually of natural landscapes but sometimes of attractive city or town views. Miami-Dade County offers many opportunities to provide [scenic overlooks](#) on its streets and boulevards. Examples and suggestions are provided in the Elements Appendix.



Venetian Causeway

ROADSIDE STRUCTURE ELEMENTS

- Noise Abatement

There are three primary means of reducing traffic noise: treat the source, treat the receptor (generally, the neighborhood or building that receives the noise), and place an effective barrier between the source and the receptor. Designers should be aware of the benefits of speed reduction, noise-reducing pavement textures, and methods to decrease the perception of noise by strategic plantings. Guidance provided by the [CIAB Aesthetics Master Plan](#) and the MDX Enhancements Manual focuses on physical measures, including aesthetic treatments of [wall surfaces](#).



MDX noise wall, Miami, Florida

- Fences and Gates

The primary function of fencing in transportation projects is to prevent hazardous intrusion of vehicles, people, and animals onto roadways. On bridges, vandal barriers above and beyond railings prevent objects from being dropped onto roadways and are required in certain settings. A variety of barriers may accomplish these purposes—fences, walls, and combinations of structures and grade changes—each with different benefits and costs. On roads where fencing is not required, roadside fencing is normally the responsibility of the adjacent property owners. The CIAB Aesthetics Master Plan provides aesthetic guidance for fences and gates in [Vehicular Gateways](#), [Pedestrian Gateways](#), [Gateway Corridors](#), [Arterial Corridors](#), [Collector/Local Road Corridors](#), [Waterway Corridors](#), [Pedestrian Corridors](#), [Civic Facilities](#), [Operations Facilities](#), and [Gateway Facilities](#). The MDX Enhancements Manual provides examples of a range of [fencing](#), from coated chain link to plant supporting structures, as well as suggestions for interweaving fences with plantings along linear rights-of-way.



Greenscreen garden fence/wall from MDX Enhancements Manual

- **Street Furnishings**

Furnishings serve a number of functions. They offer comfort and utility for pedestrians and other users, distinguish neighborhoods and special districts, and promote a sense of place. When properly designed and placed, furnishings such as benches, trash receptacles, bike racks, planters, and artwork can increase pedestrian activity and encourage bicycle use, contributing to an area’s social and economic vitality. Bollards and security barriers designed to be visually compatible with other site furnishings contribute to a complete corridor aesthetic.



San Pedro, CA

The CIAB Aesthetics Master Plan includes guidance for street furnishings in [Vehicular Gateways](#), [Pedestrian Gateways](#), [Gateway Corridors](#), [Arterial Corridors](#), [Collector/Local Road Corridors](#), [Waterway Corridors](#), [Pedestrian Corridors](#), [Civic Facilities](#), [Operations Facilities](#), and [Gateway Facilities](#).

- **Utilities**

Utilities, whether underground, on the surface, or overhead, need to be considered as part of the roadway experience. Typically this means that the designer must find ways to avoid or minimize their visual impacts to roadway users, as well as to neighbors in the corridor. Guidance for incorporating [utilities](#) into the roadway environment with consideration of aesthetics is provided in the Elements Appendix.

- **Community Gateways**

Gateways into the region, into corridors and along corridors are a very important part of the CIAB Aesthetics Master Plan to develop community identity throughout Miami-Dade County. The Aesthetics Master Plan addresses [Gateways](#), [Gateway Corridors](#) and [Gateway Facilities](#), and each of their roles in establishing community gateways.



Friendship Fountain Plaza - Jacksonville, FL

TRANSIT SYSTEM ELEMENTS

- Transit Stations

The aesthetic design of transit facilities plays an integral role in building transit ridership and ensuring customer satisfaction. An increasing number of transit agencies have used comprehensive design to change the way they provide service to their customers, to improve their public image, and even to redefine their purpose. These transit agencies have shown that investing in design features to build ridership can be a cost-effective strategy. Miami-Dade Transit's [Station Design Criteria](#) establishes their standards for transit station design. South Florida Regional Transportation Authority's draft [Station Design Guidelines](#), when completed, will offer further inspiration for design of transit stations. The Elements Appendix includes a recommendation for updating Miami-Dade Transit's [Metrorail stations and elevated guideways](#).



Miami-Dade Transit Central Station at Miami Intermodal Center

- Park and Ride

Transit facilities and specifically park-and-ride lots are people places. By integrating art into the park-and-ride facility and by utilizing sound concepts of landscape and architectural design, the park-and-ride lot can become a focal point for the surrounding community. The Elements Appendix provides guidance for [park and ride](#) aesthetics.



Opa Locka Tri Rail Station Park and Ride

- **Bus Transit Circulation**
The location of transit stops on streets greatly influences the efficiency and attractiveness of bus service, as well as the efficiency of traffic on the streets and the convenience and safety of pedestrian crossings. The Elements Appendix provides guidance for [bus transit circulation](#).



Bus Shelter along South Dade Busway

- **Bus Transit Stops and Terminals**
The transit stop may be the first image passengers have of the transit system. These facilities will also be an important piece of the urban, commercial, and neighborhood environments. The style of mobility stations should be indicative of the land use; and orient the rider within the community. The CIAB Aesthetics Master Plan provides guidance for bus and pedestrian shelters in [Vehicular Gateways](#), [Pedestrian Gateways](#), [Gateway Corridors](#), [Arterial Corridors](#), [Collector/Local Road Corridors](#), [Waterway Corridors](#), [Civic Facilities](#), and [Gateway Facilities](#). The Florida Department of Transportation (FDOT) District 4 has [Transit Facilities Guidelines](#) for suggestions on design of bus stop facilities. The Elements Appendix has additional guidelines for [bus transit stops and terminals](#).



Riverwalk bus shelter, San Antonio, Texas

- **Building Location for Transit Users**
Building location is one of the most powerful tools that community planners use to create pedestrian atmosphere. Proper location of buildings reduces walking distance, the single most controllable obstacle to riding transit, and helps create an environment capable of being served by a balanced transportation system. The Elements Appendix provides guidance on [building location for transit users](#).



Bus Shelter Rendering at Miami Intermodal Center

- Bus Rapid Transit

Bus Rapid Transit (BRT) combines the best features of rail with the flexibility and cost advantages of roadway transit. It is becoming more popular in the US as a less expensive alternative to light rail. The Elements Appendix provides more information and guidance on [BRT](#).



South-Dade Busway

- Transit Oriented Development

Transit Stations provide one of the most exciting opportunities for Public Spaces in Miami-Dade County. Transit-Oriented Development (TOD) is focused on the creation of compact, walkable communities centered on a well-designed transportation station. The Elements Appendix provides guidance on [transit oriented development](#).



Dadeland Metrorail Station

- Joint Development

Businesses recognized the advantages of locating at a Metrorail joint development site. Also, in order to promote joint development, the Miami-Dade Board of County Commissioners adopted an ordinance entitled “Fixed-Guideway Rapid Transit System - Development Zone.” The Commission also adopted a joint-use policy and provided a general policy framework for the implementation of joint-development projects. Further information and guidance on [joint development](#) is provided in the Elements Appendix.



Dadeland North Joint Development Project with MDT

- Land Use

Land use and transportation are intimately linked. All the people and goods moving on the country's transportation infrastructure start from somewhere and are going somewhere. Those "somewheres" represent land uses, whether residential, retail, industrial, recreational, or any other use. Land uses are the



Mixed-use center fronting on an arterial road, from the MDC Urban Design Manual

origins and the destinations that feed the transportation network. Conversely, transportation is the linkage that enables people and goods to move from one land use to another. Integrating transportation and land use planning can be challenging, but it offers many benefits to both transportation agencies and local governments. Miami-Dade County's land use planning addresses this integration in a number of ways. The Comprehensive Development Master Plan includes [small area plans and corridor plans](#) that provide for land use and urban design standards in specific areas. The [MPO's Typical Roadway Section and Zoned ROW Study](#) recommends land use zoning along specific corridors throughout the County. The [Urban Design Manual](#) provides excellent guidance on creating public space through the balance of streets and urban development, as well as guidance on commercial and residential street cross sections that provide a strong sense of space along the street. The [Landscape Manual](#) provides guidance on providing buffers between streets and adjoining land uses.

- Access Management

Access management allows vehicles and pedestrians to reach properties near the roadway while preserving the safe and efficient flow of traffic. It is the systematic control of the location, spacing, design, and operation of traffic signals, local street locations, and driveway connections to a roadway. Access management contributes to the overall aesthetic of a transportation corridor by minimizing curb cuts and providing more space for landscape or identity features. The Elements Appendix provides some direction for [access management](#).



Brickell Avenue, Miami

- **View of the Road/ View from the Road**

Visual impacts are seen both in the “view from the road” and the “view of the road”. Americans have repeatedly ranked pleasure driving on scenic roads as one of their favorite activities. Researchers have also shown that the view from the road is the basis for much of what we know about our everyday environment and for our mental image of the city. Consideration of the view of the road is also important, since there may be many “eyes per mile” along the right-of-way of a corridor. Projects should be carefully planned to ensure that pleasing vistas for land uses and users along the corridor are also considered. The [MDC Urban Design Manual](#) emphasizes the relationship between building placement and the street for achieving desirable views and spatial relationships between the street and land uses. The [CIAB Aesthetics Master Plan](#) overall emphasizes the desirability of aesthetically pleasing views of the road and from the road.



View of an Arterial Street, from the MDC Urban Design Manual



View of the Coral Gables, FL fountain from within a traffic circle, from the MDC Urban Design Manual

- **Scenic Byways**

Forty-eight states and the District of Columbia have scenic byways programs to recognize outstanding roadways as part of the National Scenic Byways Program. Most states have scenic byway or scenic roadway design guidelines that apply to their designated scenic byways. Communities typically seek out the scenic byway designation by submitting a nomination application to their state department of transportation. This locally-based approach encourages communities to work closely with local and state agencies such as their state department of transportation, tourism office, and department of natural resources to preserve and promote unique local beauty and distinctive



Rickenbacker Causeway, Miami, Florida

community character. Besides integrating a transportation project into an existing designated scenic road, a new designation could provide opportunities to partner for additional funding or maintenance. The [Elements Appendix](#) provides information on the Florida Scenic Highways Program and its potential applicability to Miami-Dade County as a means of achieving a high degree of aesthetic design.

- **Outdoor Advertising**

Billboards and other outdoor advertising are controversial topics. Because most advertising is not permitted within public rights-of-way, except on a temporary basis, it most often falls under local land use regulations. However, the Federal Highway Beautification Act of 1965 established a national policy on the erection and maintenance of outdoor advertising signs. The Elements Appendix has further discussion of [outdoor advertising](#) along corridors. Florida DOT has specific [regulations](#) limiting screening of billboards by landscape plantings.



Miami Beach identity monument sign

- **Park and Ride**

Park and ride facilities are transit considerations, and are discussed [previously](#), but generally occur outside of the right-of-way. Guidance is provided in the [Elements Appendix](#).

5.

Action Plan: Achieving a High Standard of Transportation Aesthetics in Miami-Dade County



AGENCIES ROLES AND RESPONSIBILITIES

It is understood that each transportation project has a lead agency responsible for project implementation. It will be the responsibility of the lead agency to become familiar with the TARC requirements and review process and self identify projects that will meet the TARC review criteria. The MPO staff will assure that during the TIP planning process, where all transportation agency stakeholders are involved, an information item is presented regarding the TARC review process, the thresholds for review, and that final projects for TARC review are agreed upon. A tentative schedule for TARC project review will be drafted by the lead agency and coordinated with MPO staff based on when projects reach the early conceptual design phase.

Agreement with MPO on projects subject to TARC review

TARC was established by the Miami-Dade MPO Governing Board to ensure that high visibility transportation projects are reviewed for their aesthetic impact on the community, and to advise the MPO on aesthetic aspects of transportation projects. During the Transportation Improvement Program (TIP) planning phase, the MPO staff will educate agency stakeholders about the requirements for the two step TARC review process and provide copies of any required checklists developed for project reviews. The following criteria are established to ensure appropriate projects are selected for TARC's review:

- A “high visibility” transportation project, or
- A transportation project with a total cost of \$2 million or greater.

This will result in a base list of projects for TARC review from which projects that are expected to have little or no aesthetic potential in a practical sense, or no potential aesthetic impacts, can be eliminated. Examples of such projects could include most of the simple resurfacing, maintenance, and operational projects*.

* = agencies will mutually agree on which projects get reviewed.

Partnering for funding and maintenance

At an early stage of project planning, as soon as an agreement is reached on whether the project is subject to TARC review, the lead agency should meet with other agencies involved to agree on funding amounts to be contributed by each agency, as well as, who will be responsible for maintenance of the aesthetic elements and landscape, and to identify any potential additional funding or maintenance partners, such as business associations, homeowner associations, municipalities etc. By identifying additional partners, the budget for aesthetics and landscape can possibly be expanded to a level that will help achieve a high standard of aesthetic design.

Include aesthetics as an inherent part of the planning, design and engineering process

In order to include aesthetics as an inherent part of the planning, design, and engineering process, appropriate professions should be identified and be made part of the design team. Involvement of these professionals – architects, landscape architects, public artists, urban planners, and graphic designers – early and throughout the project will ensure that transportation facilities are designed to human scale and to respect the landscape. One way to integrate these professionals in the design process is by requiring aesthetics as an integral component of the RFP/RFQ process. Such requirements should be included in the scope of the project and should become part of the selection scoring process. Sample RFP/RFQ scope language for inclusion of aesthetic design in proposals is included in Appendix B. Scoring of aesthetics should be identified as part of the overall score that will be used to select winning teams, and could range from 5% to 50% of the selection criteria, depending on the perceived importance of aesthetics to the project. For example, a simple resurfacing project might only score 5% for aesthetics, to address interface issues with neighborhoods, crosswalks, etc., while a high profile bridge in a very visible part of Miami-Dade County might score as high as 50% for aesthetics. This weight could also be established during meetings of the project partners and the MPO staff.

EDUCATE DESIGNERS, CONSULTANTS, BOARD MEMBERS, AND VARIOUS AGENCIES STAFF ABOUT THE DESIGN PROCESS

Create communications tools to clearly present existing resources

Creation of a process for Achieving a High Standard of Transportation Aesthetics in Miami-Dade County is a great first step to ensure buy-in from various stakeholders and agencies, but the awareness of the process is the critical step that becomes a vehicle to implement the ideas in real project situations. Educating designers, consultants, board members, agencies and the community about the design process is critical for its usefulness and implementation. The MPO can raise awareness about the design process by creating communication tools that will clearly present the Aesthetic Guidance and Action Plan. Such communication tools should include a brochure/handout and an interactive web site. These tools will assist agencies, stakeholders, consultants and designers to navigate through the sea of information relevant to their work quickly.

Organize regular education sessions on transportation aesthetics

The MPO can also create awareness about transportation aesthetics by organizing regular education sessions on the Aesthetic Guidance and Action Plan. Local and regional engineering summits, professional conferences, and training workshops specifically designed to present the Aesthetic Guidance and Action Plan will disseminate this regional knowledge and highlight the importance of aesthetics in transportation for community building. Engineers, designers, and stakeholders should be made aware of the programs and plans that are in place to address aesthetic quality of transportation infrastructure. Local examples can be used to raise awareness and promote healthy competition among designers.

PLANNING AND DESIGN PROCESS: TWO-PHASE TARC REVIEW PROCESS

Setting clear expectations for designers and reviewers is the key for identifying challenges and understanding tradeoffs. To address these issues, a two phased review process will increase the clarity and effectiveness of TARC reviews.

First Phase

The first phase will require the designers to define the land use and urban design context, define the transportation context, work with the community to identify their aspirations and identify aesthetic requirements, and then meet with the TARC for the first review, which will emphasize constructive input and discuss potential design solutions. The first TARC review is anticipated to occur during the preliminary engineering process where 30% design plans are developed.

- **Define the land use and urban design context:**
Transportation infrastructure is the seam of any community. If designed properly it can stitch the surrounding land uses and built form into a coherent fabric. In order to be effective it is important to understand the land use and urban design context of the area within which the transportation corridor or facility is located. The ultimate design of the transportation facility should reflect the existing and future land use context, and in order for the project to be successful it is important to understand the existing and future land use context from the broadest, area wide perspective down to the fine grain of immediately adjacent land uses. The [Land Use and Urban Design Context](#) section of the Aesthetic Guidance will assist planners and designers in establishing the land use context of their project.
- **Define the transportation context:**
Understanding physical context as comprising both the natural landscape and built environment expands the designer's ability to address the settings that transportation facilities fit into. The transportation facility is only one element in that environment, and it must fit integrally with all the other parts. In creating complete transportation environments, designers should aim to satisfy mobility and safety needs in a manner that not only fits with the many components of a given context, but also enhances that context. The [Transportation Context](#) section of the Aesthetic Guidance will assist planners and designers in establishing the transportation context of their project.
- **Describe the aspirations and identify the aesthetic approach:**
Once the land use and urban design context and transportation context have been established, a cross-section needs to be developed. The MPO's and MDDP&Z [Typical Cross Section and Zoned Right-of-Way Study](#) provides guidance for developing a context-based cross-section.

For aesthetic considerations it is essential to clarify where views of the transportation facility and views from the transportation facility are important. The Elements section of the Aesthetic Guidance can provide assistance in establishing the relative importance of the [View of the Road/View from the Road](#). Aspirations of the community will be very important to address at this stage, as well, based on community involvement and outreach efforts by the design team.

In preparation for the first TARC review, the project's planners and designers should develop a statement describing the process and results of establishing the context and aesthetic requirements. (The aesthetic requirements are those standards and requirements relevant to the project found in the reference documents, both in descriptions of the land

use, design and transportation contexts as well as in the Elements section and Appendix.) A case must be presented for the aesthetic aspirations of the project and identifying the aesthetic approach that will be taken in its design. TARC has established submittal requirements, which should be observed by following and submitting the checklist. This checklist is located in Appendix C.

- **First TARC review:**

The first phase will conclude with the first meeting with TARC where all the steps and proposed aesthetic criteria described above will be discussed. The designers and agencies responsible for the project will define the land use and urban design context, define the transportation context, and describe the aspirations and aesthetic requirements. All projects, in their presentation to the reviewing agency, shall address the following principles:

- Set a new standard of design excellence.
- Create a sense of place.
- Manifest the image of the locale.
- Create public places whose value to the community increases over time.
- Provide a source of community pride.
- Make transportation projects friendly to commuters and communities.
- Using good design and art, improve the appearance and safety of a facility, give vibrancy to public spaces, and make patrons feel welcome.
- Utilize a true collaborative process in a team approach where artists, landscape architects, planners, historians, urban designers, local community representatives as well as architects and engineers can enlarge, enhance and enlighten the design process.
- Humanize transportation projects.
- Create projects which have an artistic vision and are practical, dynamic, and playful.
- Push standard parameters of materials and site.
- Seek design continuity which relates to and harmonizes with built and natural landscapes.
- Treat vegetation in the subtropics as an intrinsic part of the overall design, not as an accessory.
- Interpret the built and cultural heritage in a sympathetic and genuine design response (without simply mimicking).

For a detailed description and illustrations of TARC Principles please see Chapter 2 of this report. The outcome of the first TARC review should be the agreement between TARC, the project designers and the responsible agency on the aesthetic expectations that will be addressed in the design of the project.

Second Phase

The second TARC Review process is anticipated to occur later in preliminary engineering but before conceptual design is finalized.

- **Select Aesthetic Treatments**

Using the appropriate sections of the [Elements](#) and additional elements mentioned in the appendix section of the Aesthetic Guidance, the designers should determine how to incorporate the aesthetic design that will meet the aesthetic expectations agreed upon in the first TARC review, while keeping in mind that for structures, the entire form itself can be simple, sculptural, elegant and embody aesthetic design.

- **Describe Tradeoffs**

Aesthetic qualities of any transportation project are shaped by a number of variables that are often not under the control of one group or agency. These variables will prompt tradeoffs that need to be discussed with TARC. Such tradeoffs could take many forms – site or other context constraints, budget limitations, functional limitations, safety limitations, and maintenance limitations. However, such tradeoffs and the way they can be satisfactorily resolved should be openly discussed in the second phase of the review process.

- **Recommend Aesthetic Improvements**

Working as an integrated interdisciplinary team, the project planning and design team should undertake the design of the project with aesthetics as an integral part of the design.

- **Second TARC review**

The second TARC review will present the overall proposed project, with emphasis on the contextual aesthetic design of the project, based on the agreed upon aesthetic goals from the first review, for TARC's approval.

- o **Submittal requirements:**

- TARC has established submittal requirements, which should be observed by following and submitting the checklist. This [checklist is located in Appendix C](#).

- o **TARC approval or request for aesthetic design improvement**

- The design team will meet with TARC to review the submitted documents and discuss the aesthetic qualities of the design. TARC will either approve the proposed aesthetic qualities of the project or request aesthetic design modification. If TARC requests aesthetic design improvement, they will make every effort to clarify the shortcomings in the proposed design and identify areas that need improvement or revision.

- o **Re-submittal and additional review if necessary**

- The design team will re-submit the required design documents. At a regular meeting, the TARC will review the submittal with the design team and may approve the revised design, or may request additional review.

6.

Appendix A: Supplemental Elements Guidance



PAVEMENT

Designers should consider how pavement affects aesthetics, human factors, and quality of life. The selection of pavement type and surface treatment influences driver behavior, both during high-speed driving on freeways, and at slower speeds, on city streets. For example, transitions between pavement materials can be used to slow traffic and cue pedestrian movement. Brick and concrete unit pavers are often set into the pavement at intersections, providing color and textural changes that delineate pedestrian routes and special districts. Colored or stamped and pigmented concrete is another specialized material that can be used to highlight crosswalks, median strips, sidewalks, and road edges. Colored, stamped asphalt is also an effective means of marking pedestrian crossings, road humps and other pavement elements. The stamping can simulate brick, stone or other patterns in asphalt, and the asphalt can be impregnated with integral or applied color. These are generally long lasting, but colors can tend to wear through in heavier traffic conditions.

The texture of the pavement itself is important for a variety of reasons. Pavement's surface characteristics affect its ability to retain its shape and dimensions, to drain, and to retain adequate skid resistance. Special concrete surface textures, such as tining, diamond grooving or grinding, and exposed aggregate not only provide traction but have a dampening effect on tire noise, which is particularly desirable in urban areas where the roadway must be a good neighbor. Smaller aggregate sizes, air volume of 20 percent, and more elastic materials all contribute to noise reduction.

Pavement design can have positive environmental impacts in the areas near the roadway. Porous (also called permeable or pervious) paving can significantly reduce stormwater runoff. Since less runoff reduces the need for retention or detention ponds, more land can be conserved or restored. There is a difference between porous pavement where the pavement material itself (concrete or asphalt) is porous and allows water to permeate through it and porous pavement systems such as concrete blocks that are placed on aggregate filter beds to allow water to infiltrate around them.



Wall Street, Asheville, NC



Biscayne Boulevard, Miami, FL

Source:
Draft AASHTO Guide for Transportation Landscape and Environmental Design

MEDIANS

There are two basic types of medians—depressed or raised—with a wide range of subtypes. The subtypes are based on width (from narrow to wide) and landscape character (artificial or natural). A depressed median accepts runoff from a roadway. It may include inside shoulders and a swale. Since it tends to be relatively wide, depressed medians are more often used in suburban, exurban or rural settings where right-of-way is more readily available and affordable. Raised medians are frequently used where signs and lights are located and storm drainage is underground. Raised medians at least six feet wide allow adequate space for landscape planting, pedestrian refuge, signs and lights.

On some roads, extremely wide medians have been used to lessen the effect of the roadway on the landscape. In this case, the median becomes part of a linear park, a destination in and of itself.

Raising a median more than 24 inches above the roadway elevation may discourage pedestrians from crossing mid-block, and instead direct them to designated locations, such as intersections, with median curb cuts and appropriate pavement markings. Medians can support vegetation if they are wide enough to receive adequate rainfall and water is directed to the plants, or if the median is irrigated. AASHTO’s Roadside Design Guide offers further guidance on clearances, especially in Chapter 10: “Urban and Restricted Conditions.”

Maintenance of median landscaping is an important consideration. For medians less than six feet wide, paving is usually practical, and can provide an adequate pedestrian refuge if located at a safe pedestrian crossing.



Bal Harbour Boulevard, Bal Harbour, FL



Brickell Avenue, Miami, FL

Source:
Draft AASHTO Guide for Transportation Landscape and Environmental Design

WILDLIFE CROSSINGS

Transportation facilities in the Wetland setting should evaluate the need for wildlife crossings and wildlife habitat protection measures, following the process and design suggestions provided by Florida Habitat.org. More specific information can be found at: <http://www.floridahabitat.org/wildlife-manual/transportation>



I-75 (Alligator Alley) in Collier County, Florida



SunCoast Parkway in Pasco and Hernando Counties, Florida



Florida SR 29, Collier County, FL



Florida SR 46 between the Wekiva River State Park and Seminole State Forest

GUARDRAILS

While guardrails are first and foremost safety devices, they should also be selected and designed with an eye to aesthetics and compatibility with other corridor elements.

The ubiquitous metal W-beam guardrail is often dented, bent, or thrown out of alignment by minor impacts which are an aesthetic issue. To create a more unified appearance, weathering steel beams have been used in rustic locations and beams have been painted in urban settings. Another approach to enhancing the appearance of W-beam guardrails is the planting of large shrubs alongside the guardrail or between a pair of guardrails.

Coordinating the aesthetic appearance of concrete guardrail with other elements, particularly how they begin and end, is critical. Concrete barriers tend to obstruct the views of motorists. Railings with vertically slotted openings have been developed in a variety of configurations. Colorado and Minnesota, attach a horizontal metal railing above a shorter concrete barrier. To allow views of scenery. A “low profile” barrier is used in some jurisdictions to safely accommodate plantings in narrow medians.

Stone is typically reserved for low-volume, low speed roads. The surface must be carefully controlled, however, since typically no more than 3/8 in. relief is allowed. Recent advancements in technology allow texture to be applied even to slip-formed concrete barriers.

The steel-backed wood guardrail is composed of wood posts and one or more wood beams. The posts are stout and the beams short (about 10 ft) and thick (4 inches by 12 inches or more). By adding a large steel plate behind a thick wooden plank, a crash-worthy rustic guardrail can be produced.



Meridian Avenue Bridge



Dual concrete guardrails used as a planting bed, North Central Expressway, Dallas, TX



Planting hides metal guardrail, I-80, California

The standard for crash testing of guardrails is [NCHRP Report 350: Recommended Procedures for the Safety Performance Evaluation of Highway Features](#), which includes successfully tested aesthetic guardrails.

TOLL STRUCTURES

Architecturally attractive toll structures are part of marketing toll roads to users.



MDX electronic toll gantry, Miami, FL



Orange County Toll Roads toll booths, California

Sources:
MDX Enhancements Manual; Draft AASHTO Guide for
Transportation Landscape and Environmental Design

SCENIC OVERLOOKS

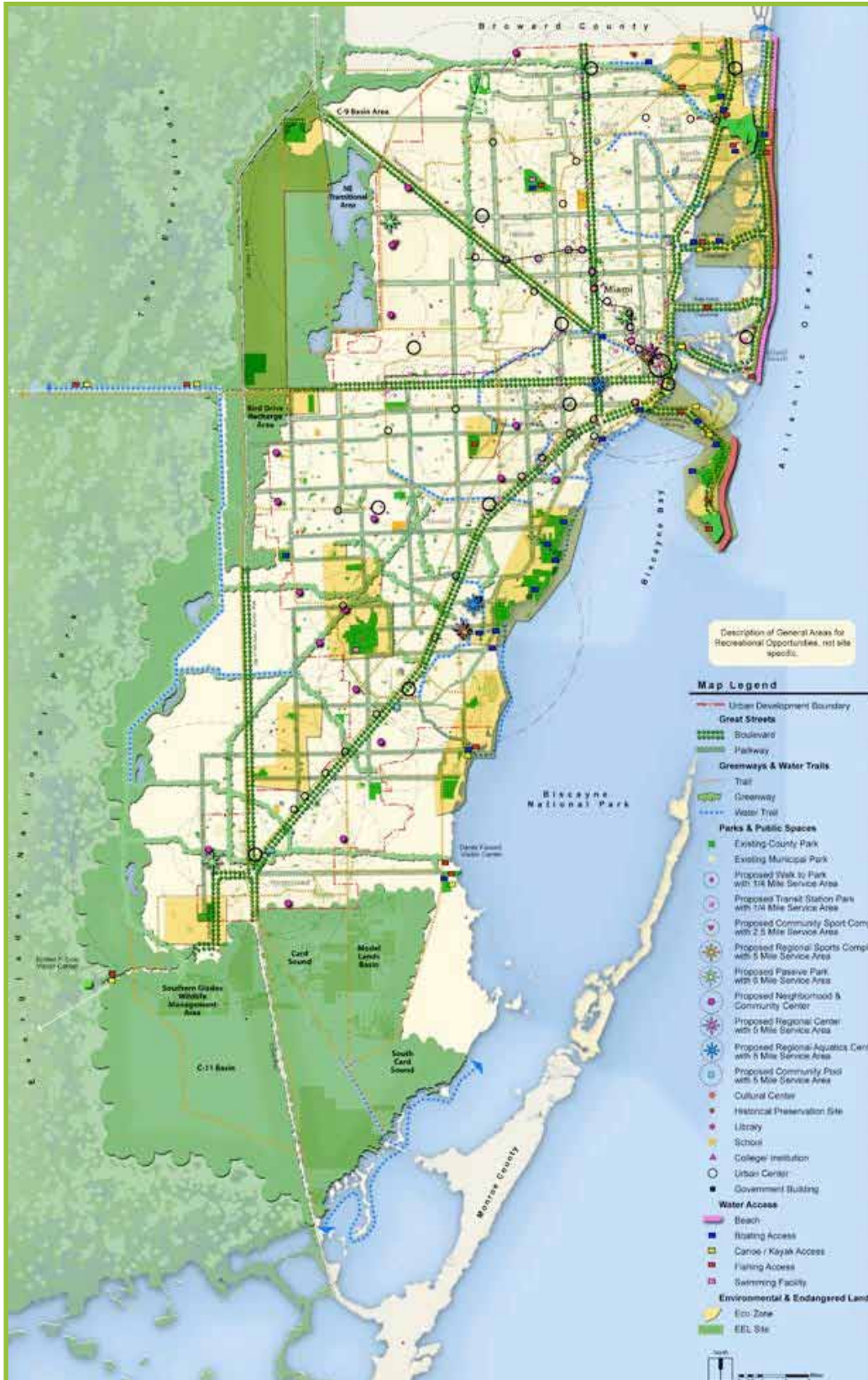
Scenic overlooks are located on routes that offer attractive short- or long-range views, usually of natural landscapes but sometimes of attractive city or town views. Their design principles are similar to those of rest areas, but generally they have far fewer facilities to be accommodated by site and landscape design. In addition to major arterials and freeways, scenic overlooks might occur on any roadway corridor type. The key to applying these principles to scenic overlooks is to emphasize the view, and reinforce the visitor's experience by fitting the materials and landscape comfortably into the site, incorporating native materials and interpretive signs as much as possible.

Some causeways in Miami-Dade County offer especially good opportunities to create overlooks as described. When new bridges and pedestrian and bicycle access are built, over-hangs with benches should be considered as part of the design.



Grand Boulevard, Kansas City, MO: Scenic overlook to Brushy Creek

The [Miami-Dade County Parks and Open Space Master Plan](#) offers many opportunities for creating scenic overlooks throughout the County.



Recommended scenic overlooks, from Miami-Dade County Parks and Open Space Master Plan

UTILITIES

Utilities, whether underground, on the surface, or overhead, need to be considered as part of the roadway experience. Typically this means that the designer must find ways to avoid or minimize their visual impacts to roadway users, as well as to neighbors in the corridor. Pipelines, even those that are buried, can considerably alter the visual character of the corridor because they typically require removal of woody vegetation growing over the pipe to a rather wide standard (10 to 20 ft), in a rather straight line, and usually a uniform distance from the edge of the pavement. Such uniformly cleared swathes of vegetation, if seen by travelers or neighbors, may appear discordant with naturalized vegetation in rural areas and with orderly plantings in urban locations.

Overhead utilities influence the visual quality of the corridor by obstructing views with their monotonous repetition of poles and wires. Frequently, woody vegetation is removed to construct a maintenance road directly underneath the utilities, further affecting visual quality. Burying overhead utilities, typically electric and telecommunications lines, generally improves visual quality and often reduces maintenance costs. If utilities cannot be buried (and even buried lines have above-ground utility boxes), designers can improve visual quality by placing utilities on a separate alignment or screening them with landforms and vegetation.

Hiding buried utilities in rural areas is best accomplished by varying the width of the corridor cleared for construction and maintenance, blending a wavering swath cut through the landscape for utility routing with an undulating edge of existing herbaceous plant material in the existing landscape.

In urban areas, utilities can be placed in a specially designated utility corridor adjacent to the edge of the traveled way, behind the curb or shoulder or even in the shoulder or behind buildings. This allows easy maintenance and avoids impacting traffic if the utility needs repair. Designers can also improve visual quality by using decorative utility posts and bundling of the different utility company wires.



Anaheim Resorts Boulevards, Anaheim, CA, before and after undergrounding utilities and changing to monument signs

Source:
Draft AASHTO Guide for Transportation Landscape and Environmental Design

ACCESS MANAGEMENT

Access management allows vehicles and pedestrians to reach properties near the roadway while preserving the safe and efficient flow of traffic. It is the systematic control of the location, spacing, design, and operation of traffic signals, local street locations, and driveway connections to a roadway.

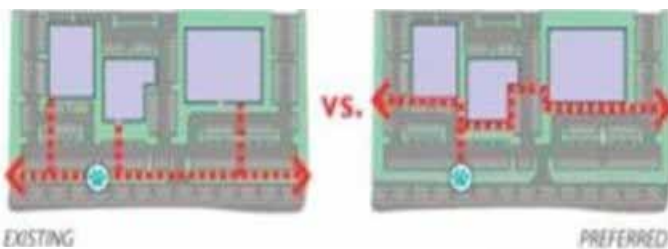
Cross and joint access provides internal circulation between adjacent parcels and consolidates access to serve two or more properties instead of just one, allowing vehicles to circulate between adjacent businesses without having to re-enter the road. This allows intensive development of a corridor while maintaining traffic operations and safe and convenient access to businesses.

Planting at the margin of the roadway and in the median of divided roadways not only makes for a more attractive corridor, but helps provide visual notification of driveways and median openings by distinguishing the openings from the roadside environment.

Wide non-traversable medians separate opposing through traffic and provide shelter for vehicles making left turns. They also provide refuge for pedestrians and bicyclists.

Access management is primarily a land use and traffic management issue requiring land use controls and incentives keyed to the development policies of the community and the capabilities of the transportation system. The challenge is not merely how to provide and locate driveways, but how to transform roadside environments into attractive, accessible, economically viable areas.

The [Transportation Research Board's Access Management Manual](#) summarizes the state-of-the-art on access management.



Link adjacent land uses



Use planting to distinguish median openings and pedestrian crossings and refuges

Sources:
LYNX Central Florida Mobility Design Manual; Draft AASHTO Guide for Transportation Landscape and Environmental Design

SCENIC BYWAYS

The [Florida Scenic Highways Program](#) is a grass-roots effort to heighten awareness of the State's historical and intrinsic resources – cultural, recreational, natural, archeological, historical and scenic – which collectively, enhance the overall traveling experience. Program participation provides benefits to the community, such as resource preservation, enhancement and protection. Miami-Dade County has numerous corridors that could benefit from Scenic Highway designation.

Anyone with an interest in their community can participate in this voluntary program, including citizens, civic groups, businesses and governments. As with any grass-roots effort, organization is key. Therefore, interested parties must form a Corridor Advocacy Group to help foster community support, form strong partnerships and develop the necessary documentation.

There are numerous benefits to program participation:

- Showcases and protects natural resources
- Helps establish community vision
- Enhances the travel experience (for tourists, as well as residents)
- Improves quality of life
- Increases community pride and recognition
- Promotes tourism and economic development
- Encourages community partnering
- Tells Florida's story, while providing education and an appreciation of history

Designation as a Scenic Highway or Byway may help add funding and/or maintenance partners for a project. The [National Scenic Byways Program](#) also provides information on Scenic Highways of national importance.



Broward County A1A Scenic Highway



Bradenton Beach Scenic Highway



Courtney Campbell Scenic Highway, Hillsborough and Pinellas Counties



**Tamiami Trail Scenic Byway,
Sarasota County**



**Ormond Scenic Loop and
Trail National Scenic Byway,
Volusia County**



Florida's Keys Overseas Heritage Trail

Source:
Florida's Scenic Highway Program

OUTDOOR ADVERTISING

Billboards and other outdoor advertising are controversial topics. Because most advertising is not permitted within public rights-of-way, except on a temporary basis, it most often falls under local land use regulations. However, the Federal Highway Beautification Act of 1965 established a national policy on the erection and maintenance of outdoor advertising signs.

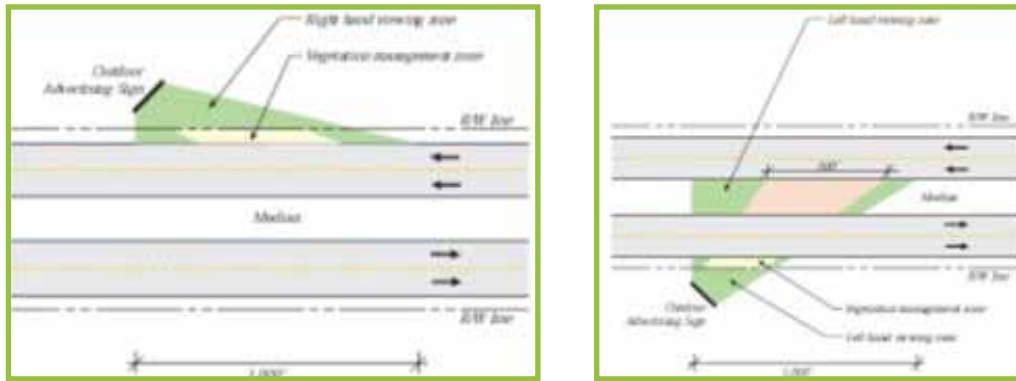
Florida Department of Transportation's [Vegetation Management Zone \(VMZ\) policy](#) provides guidance for plantings near permitted billboards and outdoor advertising signs:

When billboard view zones are within the limits of a highway landscape project, the landscape architect is responsible for documenting the location of the billboards and their respective vegetation management zones. Landscape plans, including maintenance plans..., must represent a proposed landscape that will not screen any legally permitted sign face.

The screening prohibition applies to:

- Outdoor advertising signs (billboard sign faces) permitted by the Florida Department of Transportation. The screening prohibition does not apply to “On-premise” advertising signs....
- The primary travel lanes of the highway. Views of the sign from other locations may be screened depending upon the permit specifications.
- The vegetation management zone (VMZ). The VMZ is an area along the roadside, within the public right of way, beyond the mowing limits. Its boundary can be determined by measuring a maximum five hundred cumulative or continuous linear feet located within the first one thousand linear feet from the sign measured along the edge of the travel lane nearest the sign. For some signs, viewed across the median (cross readers), part of the VMZ may be within the highway median.
- The sign face. Sign structural supports may be screened.

OUTDOOR ADVERTISING (CONTINUED)



Right hand and left hand management zone diagrams, adapted from Florida DOT

Architecturally designed monument signs are a more attractive form of outdoor advertising and information. On-premise signs offer a substantial opportunity to affect the overall aesthetics of a complete corridor. Monument signs identifying businesses have been successfully used in a range of urban and suburban applications and a wide palette of high-quality elements are available for many types of sign installations.



WestShore Plaza, Tampa, Florida



Coca-Cola corporate monument sign



Largo Public Library, Largo, Florida

Source:
Draft AASHTO Guide for Transportation Landscape and
Environmental Design

METRORAIL STATIONS AND OVERHEAD STRUCTURES

Miami-Dade Transit's Metrorail stations were architecturally distinguished for the period in which they were built. However, they and their surrounding areas could benefit from enhancements. As recommended by the CIAB Aesthetics Master Plan, they should be treated as gateways into their neighborhoods. Since this needs to be addressed on a system-wide basis, an architectural master plan that would become part of Miami-Dade Transit's Standards and Directives is recommended. It would be particularly beneficial to approach the plan on a context-sensitive basis, so that the station enhancements would complement their surroundings while still expressing a system-wide identity.



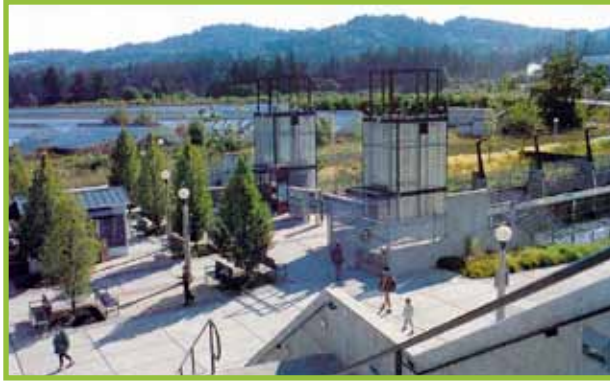
Existing TriRail station and 79th Street Metrorail Guideway

Miami-Dade Transit has an ongoing [MDT Station Beautification Project \(March 2008\)](#), a joint partnership between: Miami-Dade Transit, the University of Miami Medical School, the Jackson Health System and the City of Miami. The program includes painting, lighting, landscaping, public art, directional signage, infrastructure signage and maintenance, as well as music performances and adopt-a-station partnerships. Another partnership between MDT and CIAB has already resulted in upgraded landscaping and painting of Metro mover and Metrorail Stations.



Historic Overtown/Lyric Theatre Station, Miami, FL

Many other transit systems that have emphasized a high standard of station aesthetic design include Washington Metro, Dallas Area Rapid Transit, and Portland Metro.



Portland – Sunset Station Plaza, Portland, Oregon



Dallas Area Rapid Transit – Cedars Station, Dallas, Texas



Washington Metro - Metro Center station, Washington, DC

PARK AND RIDE

Transit facilities and specifically park-and-ride lots are people places. By integrating art into the park-and-ride facility and by utilizing sound concepts of landscape and architectural design, the park-and-ride lot can become a focal point for the surrounding community. The [AASHTO Guide for Park and Ride Facilities](#) provides decision makers and planning/design professionals with a concept library of unique architectural and artistic designs.

Planting in park-and-ride facilities is desirable for aesthetic as well as ecological and personal comfort reasons and should consist of plantings that will be compatible with the operation of the facility.

Planting can provide an effective means for establishing pedestrian paths and walking patterns within the site. In parking zones, sufficient setback must be provided for all plants so the front or rear overhangs of cars does not injure or kill them.

Extreme care should be exercised in placing shrubbery or other plants near the entrances and exits

so that sight distances are not restricted and plants will not grow into a major sight restriction in future years. Earth forms such as berms, mounds, and swales are a good design tool to provide for low-cost screening, delineation, visual interest, and drainage. Plants should also be selected in harmony with lighting requirements so that safety and security of users are not compromised by creation of shadows and dark areas.

Careful selection of aesthetic “hardscape,” such as pedestrian routes, waiting areas, etc., will both enhance the aesthetic quality of park-and-ride facilities and make them more user-friendly. High quality graphic design of signage throughout the park-and-ride facility will aid in orientation of users as well as enhancing their aesthetic quality.



Landscape screening and pedestrian scale lighting at a park-and-ride facility, Charlotte, NC



Landscaped park-and-ride lot, Miami, FL

Source:
Draft AASHTO Guide for Transportation Landscape and Environmental Design

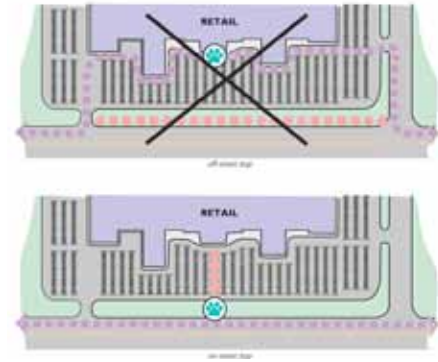
BUS TRANSIT CIRCULATION

Locate Transit Stops On Streets. The location of transit stops on streets greatly influences the efficiency and attractiveness of bus service. Transit stops should be located to increase running speed and reduce needless route diversions. Transit stop location should not require buses to “backtrack” or provide indirect service. Transit stops should be located on the street (where possible) so as to eliminate significant diversions that decrease running speed, such as getting delayed in the peak period congestion of parking areas.

Service off the street often requires bus vehicles to make left hand turns to a proposed transit stop. These turns are difficult and time-consuming. Unnecessary left hand turns often delay buses and add operation costs.

This “bulb-out” alerts drivers that they are sharing the roadway with pedestrians while shortening the walking distance for pedestrians crossing the street.

Bus “pull-outs” are used to facilitate traffic flow when buses need extended dwell time at bus stops for transfers and scheduling.



Example of transit stop connectivity



LYNX bus shelter, Orlando, FL



Bulb-out in downtown Sanford, FL

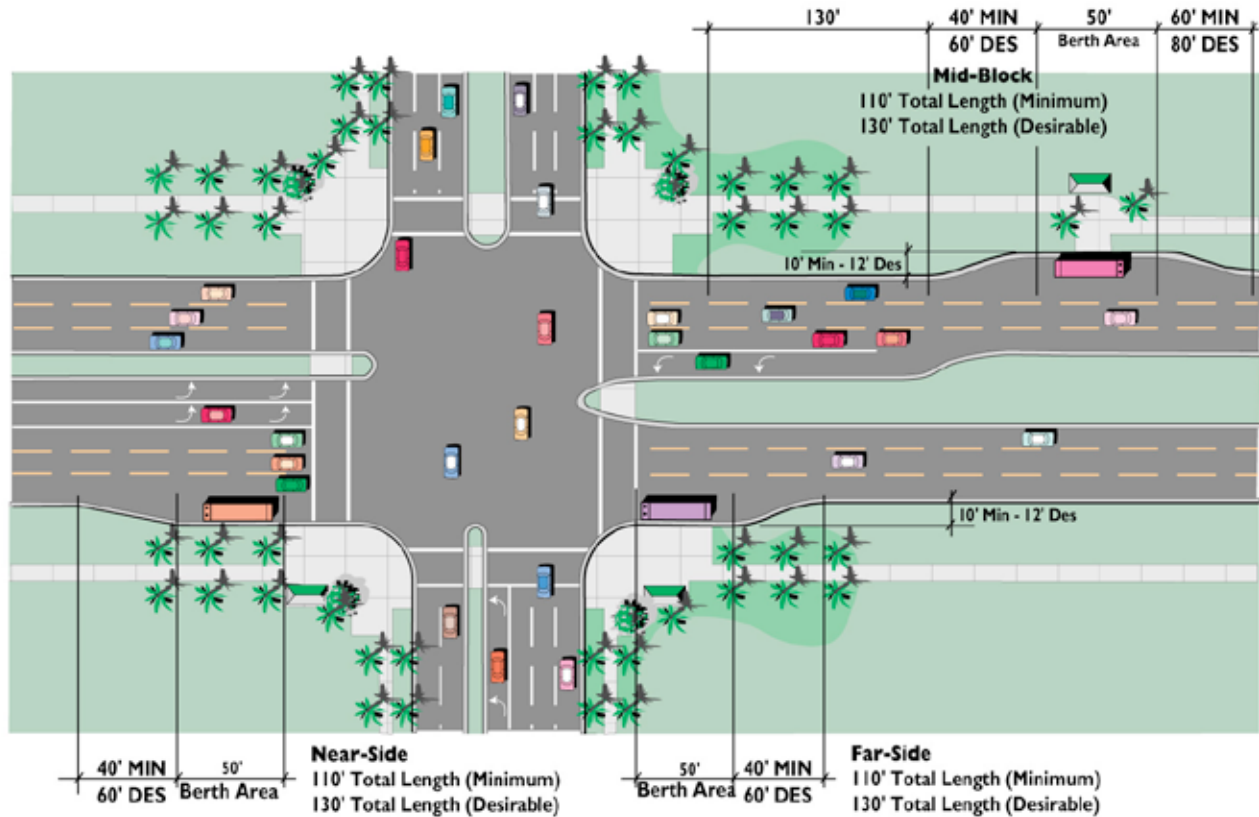


Bus pull-out, Orlando, FL

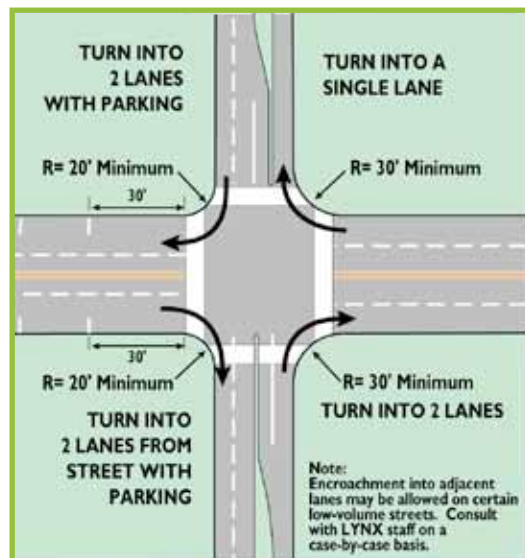
Source:
Central Florida Mobility Design Manual

BUS TRANSIT CIRCULATION (CONTINUED)

Bus turnouts are used to facilitate traffic flow when buses need extended layover time for transfers and scheduling. Add 50 feet for each additional bus expected to use the stop at the same time. While turnouts are advantageous to traffic circulation, turnouts make it difficult for buses to reenter traffic.



Suggested intersection layout for bus pull-outs



Suggested intersection design for bus turns

Source:
Central Florida Mobility Design Manual

BUS TRANSIT STOPS AND TERMINALS

Design transit architecture to be noticed. The transit stop may be the first image passengers have of the transit system. These facilities will also be an important piece of the urban, commercial, and neighborhood environments. The style of mobility stations should be indicative of the land use; and orient the rider within the community.

The intensity of the land use should dictate the extent of the stations' bold qualities. The architecture of transit facilities should be easily recognizable as gateways into the mobility system. This will provide the riders, and potential future riders, the confidence and security of a well-defined, identifiable system.



LYNX bus transfer center, Orlando, FL

Successful transit stop design directly influences a transit system's ability to be successful in providing an important alternative travel mode in a balanced transportation system. Good community planning integrates effective layout and design concepts into the development of transit stops and terminals to increase the operating efficiency and attractiveness of bus service.



LYNX bus transfer center, Orlando, FL

Source:
Central Florida Mobility Design Manual

BUS TRANSIT STOPS AND TERMINALS (CONTINUED)

Provide Transit Service and Route Information For Riders. All transit stations should be identified with the system logo and corresponding route numbers. The system telephone number should also be included for people seeking other transit information. For sheltered stations, route maps and schedules, community information, and activity centers should be clearly presented where possible. defined, identifiable system.



LYNX bus transfer center, Orlando, FL



LYNX bus transfer center, Orlando, FL

Provide amenities for pedestrians. Passenger comfort and convenience is critical to the success of a transit stop. Comfortable waiting areas should be designed to provide the appropriate level of amenities for each stop type. The design of all passenger amenities should reflect the bold graphic qualities suitable to the land use location.

Only the higher volume stops will necessitate structures and a higher level of passenger amenities. Of primary concern is the identification of the transit stop and route number. Seating elements are also beneficial, but in Florida the most desired amenity is shelter. The shelter system should provide passenger comfort through a series of structures that can be configured to respond to specific site and program requirements. All stations should be accessible from adjacent development by barrier-free paved walks. Convenience and safety are paramount concerns for transit stations.



LYNX bus transfer center, Orlando, FL



LYNX bus transfer center, Orlando, FL

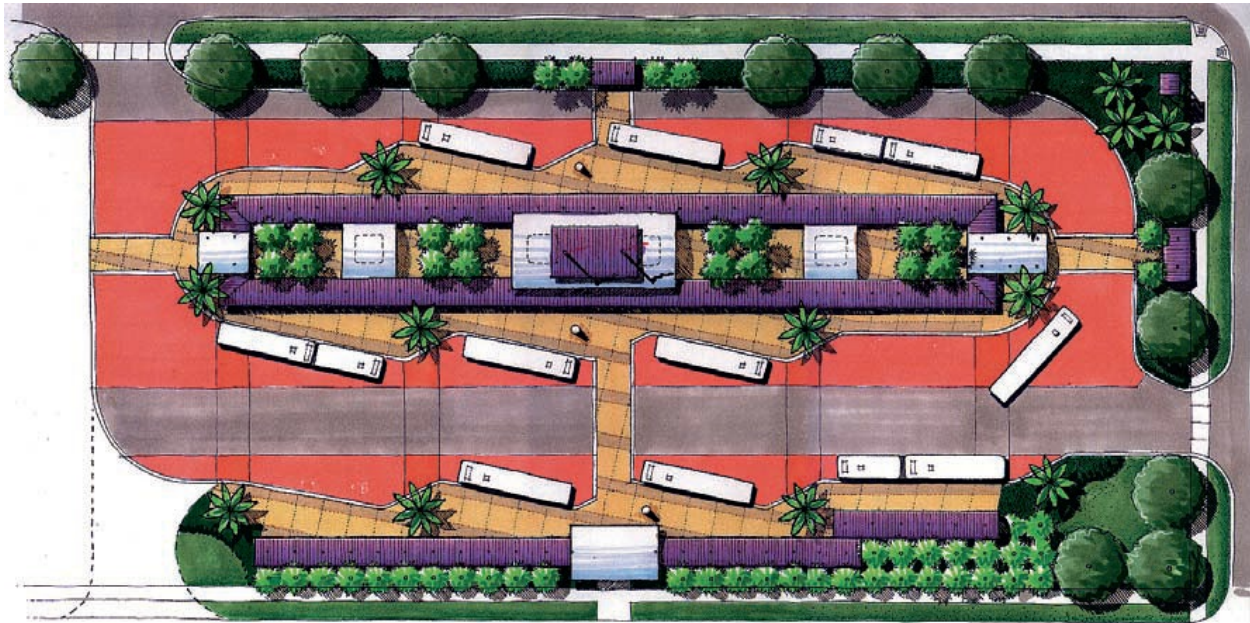


LYNX bus shelter, Orlando, FL

Source:
Central Florida Mobility Design Manual

BUS TRANSIT STOPS AND TERMINALS (CONTINUED)

Transit/Intermodal Centers provide a base for the regional transit network of local circulator service, express routes, and other modes of transportation. These centers operate specifically as easy transfer points between transportation modes and transit. Transit/Intermodal centers focus on service in major activity centers which are themselves the focus of extensive local services. Transit/Intermodal centers will occur in commercial or mixed-use land use types. Neighborhood parks may also be associated with or integral to the transit center.



LYNX intermodal center layout, Orlando, FL

Source:
Central Florida Mobility Design Manual

BUILDING LOCATION FOR TRANSIT USERS

Building location is one of the most powerful tools that community planners use to create pedestrian atmosphere. Proper location of buildings reduces walking distance, the single most controllable obstacle to riding transit, and helps create an environment capable of being served by a balanced transportation system.

Put buildings closer to street. This simple, highly effective measure reduces the walking distance from the transit stop. Parking, unchanged in quantity but rearranged in layout, is as accessible as before, but not as visible. Over time, development forms a continuous street front that restores the pedestrian atmosphere to the street.



Examples of site plans for transit from Central Florida Mobility Design Manual

Put part of building close to street. When adding to strip commercial, bring the building extensions to the street, so that part of the building “fronts” on the street. Rearranged parking continues to be as convenient as before, but less visible.



Source: *Guidelines for Public Transit in Small Communities*, Small Communities Branch, Urban Transit Authority, British Columbia, (Sept. 1980)

Example of site plan for transit from Central Florida Mobility Design Manual

Source:
Central Florida Mobility Design Manual

BUS RAPID TRANSIT

Bus Rapid Transit (BRT) combines the best features of rail with the flexibility and cost advantages of roadway transit. BRT has been successfully implemented in Australia, South America and Europe and is now gaining popularity in North America. For example, new BRT lines have opened in Los Angeles, Boston, and Oregon, and new systems are being planned or built in Cleveland, San Francisco, New York, Houston, Seattle, and many other cities. Miami-Dade county also has a BRT system on US 1 from Dadeland South to Florida City.

BRT is a high quality, high capacity rapid transit system that, in many ways, improves upon traditional rail transit systems. Vehicles travel in exclusive lanes, thus avoiding traffic. Passengers walk to comfortable stations, pay their fare in the station, and board through multiple doors like a train. Service is very frequent and often passengers can choose between express and local routes, an option not available on most train systems.

Exclusive Lanes greatly increase speed and reduce travel time, thus making BRT more competitive with car travel. Unlike rail, transit vehicles can leave the exclusive lane to take passengers directly to their destination. Exclusive lanes also can provide emergency vehicles with congestion-free routes. Exclusive lanes have been built next to highways, in the medians of arterial streets, in abandoned rail corridors, and in tunnels. There are several BRT systems that carry more than 10,000 passengers per hour in the peak direction. Most US light rail systems carry between 1,500 and 3,000 passengers per hour in the peak direction.

Stations come in many shapes and sizes, both on the surface and underground. The best have a number of common features. First, they provide a seamless, sheltered connection to transit vehicles. Vehicle doors line up precisely with the station, enabling fast unloading and boarding. This reduces the time that the vehicle must wait in the station (known as “dwell” time) and makes the overall trip faster and more pleasant. Stations can serve as focal points for economic development.



South-Dade Busway



St. Louis Bus Rapid Transit vehicle

Source:
Breakthrough Technologies Institute

TRANSIT ORIENTED DEVELOPMENT

Transit Stations provide one of the most exciting opportunities for Public Spaces in Miami-Dade County. Transit-Oriented Development (TOD) is focused on the creation of compact, walkable communities centered on a well-designed transportation station. Generally the surrounding communities are higher density and mixed-use to encourage transit ridership and provide a pleasant walking environment. As one gets farther from the station, intensity of land use typically steps down. Ultimately, TODs are intended to promote organized, directed growth along nodes and corridors rather than amorphous sprawl. Miami-Dade county has a growing number of TOD developments.

In a country where riding the train or bus is not ingrained in the culture, a major component of success for TODs is to make alternative transportation attractive. Designing for passenger comfort is essential to encourage people to utilize transit options.

Stations need safe, attractive pedestrian access; comfortable places to wait; ample lighting; and effective information signage that displays fares, transit schedules and other information. They also need to be woven into the fabric of the community through solid connections to other modes of transportation, but also visually connected. Instead of an immense parking lot that discourages people from going to the station, a station park can attract people to the area and also provide a greater feeling of safety and serenity. For a station park or plaza, a 1/4 mile service area, a short walk, is generally accepted.

The [Miami-Dade County Parks and Open Space System Master Plan](#) includes a [Great Public Spaces map](#) that shows the potential for about fifty new public spaces that would serve as the central gathering places. These public spaces would have a potentially smaller service area radius of about one quarter of a mile, and serve local residents' needs for walking, meeting, informal play, and special events.

Transit station parks and transit oriented development can become the heart of revitalized, redeveloped neighborhoods.



TOD example from Miami-Dade County Parks and Open Space System Master Plan



Mockingbird station, Dallas, TX



DART station, Plano, TX

Sources:

The Miami-Dade County Parks and Open Space System Master Plan and Dallas Area Rapid Transit

JOINT DEVELOPMENT

Businesses recognized the advantage of locating at a Metrorail Station joint development site. Additionally, in order to promote joint development, the Miami-Dade County Board of County Commissioners adopted Ordinance # 78-74 (codified as Chapter 33C of the County Code) entitled “Fixed-Guideway Rapid Transit System – Development Zone.”

The Commission also adopted a joint-use policy and provided a general policy framework for the implementation of joint-development projects in the County’s [Comprehensive Development Master Plan](#). During the planning stage for construction of the Metrorail system, the County, in conjunction with various municipalities, conducted a series of studies called Station Area Design and Development (SADD) which inventoried existing uses around station areas and established guidelines for future development.

In December 1982, Miami-Dade Transit (MDT) entered into its first joint development lease at the [Dadeland South Metrorail station](#). The project, known as Datran, consisted of a four-phase mixed-use project which evolved into three class A office buildings (over 550,000 sq. ft. total), a 305-room Marriott Hotel, and a shared-use parking garage containing 1,000 spaces for Metrorail riders.



Dadeland North Joint Development Project with MDT

7.

Appendix B: Sample RFQ/RFP Aesthetics Scope Language



UTAH DEPARTMENT OF TRANSPORTATION - AESTHETICS SCOPE FOR DESIGN-BUILD PROJECTS

AESTHETICS

1. Performance Requirements
 - A. Prepare an initial aesthetics plan based on criteria in this Section;
 - B. Develop a revised plan that integrates landscaping and aesthetic treatments; and
 - C. Design and construct aesthetic treatments that:
 1. Are aesthetically pleasing and fit the neighboring environment,
 2. Are in accordance with the aesthetic commitments that have been made, and
 3. Respond to the coordination with the cities along the alignment.
2. Design and Construction Criteria
 - A. Aesthetic Theme: Propose a Project-wide aesthetic and landscaping theme, then coordinate with and gain approval of the theme from the Department. Coordinate this theme with the local municipalities, and offer them the opportunity to sponsor betterments that complement this theme.
 - B. Structural Elements: The Project structural elements include, but are not limited to; all bridge components, retaining walls, and noise walls. Paving includes colored, stamped permanent pavement in parkstrips, in accordance with the UDOT Standard Drawings.
 - C. Visual Context: Consider the visual context in designing the aesthetic treatment of a structural element. Use aesthetic treatments that employ the use of color and texture, then further express them via pattern reveals, bevels, shadow lines, surface finishes, and geometric form work.
 - D. Scale and Proportion: The quality of views to the structures are influenced by the form of the structural components, the balance between span length and structure depth, avoidance of bulky appearance, and the continuity between bridge supports (both piers and abutments) and the superstructure. The scale and proportion of a bridge are important influences on its aesthetic quality.
 - E. Aesthetic Treatment Elements: When designing the aesthetic treatments, incorporate the following elements:
 1. Integration of the aesthetic treatment with the landscape design;
 2. Continuity of the visual treatments within the limits of each city;
 3. Consistency of graphic art, signage, lighting, and architectural treatments;
 4. Relief, form, and proportion of structures within the Project;
 5. Use of texture and color to define aesthetic treatments;
 6. Views of structural elements from outside the ROW, Intersection, and adjacent land uses;
 7. Safety concerns (in Project design and construction),
 8. Ease of maintenance and repair; and
 9. Deterrence of vandalism and graffiti; and
 10. Incorporate decorative elements to the cut and fill walls and sound walls, such as painting or patterning of the concrete.
 - F. Aesthetic Treatment Factors: When designing the aesthetic treatments, incorporate the following factors:
 1. Accentuating the span length;
 2. Use of parabolic haunches at bents (piers) for continuous girders;
 3. Controlling the apparent structure depth; RFP Contract Documents Page 4M-9 Issued Month, Day, 2008
 4. The interface of approach walls with bridge abutment and deck;
 5. The proportional relationship of deck cantilever to girder depth;
 6. Treating linear elements along a bridge (such as barrier rails, deck edge, and girder face) with color and texture;
 7. Treating light blisters along bridge barrier rails with form, color, and texture;
 8. The shape and treatment of bents (piers) and abutments with form, reveals, color, and texture that relate to other bridge elements and identify the bridge as part of the visual character of the neighborhood or city; and
 9. Treating slope protection between bridge abutment and roadway paving, as it relates to the abutment and bridge structure.

G. Maintenance: Use aesthetic treatments that are low maintenance and include a maintenance agreement from municipalities.

H. Retaining and Noise Walls: For vertical surfaces of both retaining and noise walls, apply aesthetic treatment where the surface is visible to the motorist and the trail user and from the adjacent ROW. For both retaining and noise walls, use a consistent treatment that articulates the design themes established by the bridge aesthetic treatments and landscape design. Use pattern, texture, color, fenestration, reveals, scoring, caps, shadow lines, and other architectural treatments to create visual interest. Design the proposed treatment to be a part of the wall, regardless of the type of wall construction. Treat walls along both sides of the alignment uniformly.

I. Medians and Parkstrips: Apply aesthetic treatment to paving of medians between curbs and parkstrips between the curb and sidewalk. Use aesthetic treatments such as colored concrete or imprinted patterns. Refer to Part 4 -E Landscape for landscaping requirements associated with aesthetics.

J. Stain: Apply a penetrating stain to all retaining walls, noise walls, roadside, and median barriers throughout the Project and to the following bridge elements: exterior girders, parapets, abutments, wingwalls, and intermediate supports. Ensure stain is compatible with the selected sealer.

3. Aesthetic Treatment Maintenance

A. Defects, Flaws, and Vandalism: Note defects, flaws, or damage from vandalism and bring them to the Department's attention.

B. Defect and Flaw Repair: Repair defects and flaws in the aesthetic treatment of structural elements during the construction period and up to the FOA as required per the discussion of nonconforming work in Part 3—Quality Program.

C. Vandalism Damage: Clean up any damage caused by vandalism during the construction period and up to the FOA.

4. Aesthetic Submittals

Aesthetics Plan: After coordinating with the cities and the Department and before submitting any Project Plans, provide an Aesthetics Plan to the Department for approval. The plan will detail all interrelationships between structural components and landscaping (See Part 4 - E (Landscape)), including the colors and textural treatments applied to these elements.

CITY OF PALO ALTO, CALIFORNIA - EL CAMINO REAL MASTER SCHEMATIC DESIGN PLAN

The following sections are excerpts from the overall Request for Proposals for this project:

Project Goals

The following “Primary Goals” are an adaptation of the “overall goal of this project” as stated in Palo Alto’s request for proposal and grant application to Caltrans. The “Other Goals” resulted from input received at the Community Workshops and through the Advisory Group.

Primary Goals

The overall goals of the future design are to change the character of El Camino Real from a highway designed primarily for motor vehicle mobility to:

- A fully multi-modal urban thoroughfare that maintains mobility and improves safety for transit, trucks, and autos, while improving safety and convenience for pedestrians and bicyclists;
- A center of community activity rather than a barrier between activities on either side of the street; and,
- An aesthetically attractive corridor that projects a positive image of Palo Alto.

B. Director’s Policy

In November of 2001, Jeff Morales, Director of the Department of Transportation, published Director’s Policy #22, entitled “Context Sensitive Design Solutions” (for full policy document, see Appendix), applicable to “All employees and others involved in the planning, development, construction maintenance, and operation of State transportation and support facilities.” In summary, the policy emphasizes the importance of solutions that use “innovative and inclusive approaches that integrate and balance community aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals.” It also outlines for all Caltrans employees their share of responsibility in employing the concept of Context Sensitive Design to their work in designing, constructing, maintaining, and operating the State transportation system.

The Director’s Policy is directly applicable to El Camino based on the street’s particular shortcomings as a main street, its location at the heart of several neighborhoods, and the fact that the community has expressed clear goals for improvements of the street. The project can, therefore, serve as an excellent example for the implementation of Context Sensitive Design, as well as the need for its application at all levels of responsibility within the Caltrans organization.

Primary Goals

The overall goals of the future design are to change the character of El Camino Real from a highway designed primarily for motor vehicle mobility to:

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- A center of community activity rather than a barrier between activities on either side of the street; and,
- An aesthetically attractive corridor that projects a positive image of Palo Alto.

Objective: Design the Street to Encourage Motorized Traffic to Drive at Safe Speeds and not Exceed the Speed Limit

Redesign El Camino Real to encourage traffic to drive at safe speeds that do not exceed the speed limit and to allow aesthetic and multimodal improvements to El Camino Real.

Objective: Create a Street and Streetscape that Complement Community Character

Redesign El Camino Real with a character and function that is more directly related to the existing and desired future character and function of the community along it.

Objective: Improve Landscape Quality and Quantity

Increase the amount of land area within the r.o.w. for landscaping, and the number, health, and size of trees and other landscaping along the edges of the street and in the median, to achieve a shaded, tree-lined streetscape.

Objective: Improve Aesthetic Quality of Street Design

Improve the quality and condition of streetscape elements (lighting, benches, bus stops, etc.) and the paving of the roadway and sidewalks. Public art and new landscaping must also contribute to this objective.

8.

Appendix C: TARC Submittal Checklist



Date:

Agency:

Project Name:

Limits:

Current Project Phase:

Signed _____

Project Schedule:
(attached)

Dated _____

Project Type (select one column unless project includes both)			
Structure <input type="checkbox"/>		Street/Corridor <input type="checkbox"/>	
Fact Sheet	<input type="checkbox"/>	Fact Sheet	<input type="checkbox"/>
General Project Schedule	<input type="checkbox"/>	General Project Schedule	<input type="checkbox"/>
Location Map	<input type="checkbox"/>	Location Map	<input type="checkbox"/>
On Aerial	<input type="checkbox"/>	On Aerial	<input type="checkbox"/>
North Arrow	<input type="checkbox"/>	North Arrow	<input type="checkbox"/>
Main Roads Labeled	<input type="checkbox"/>	Main Roads Labeled	<input type="checkbox"/>
Main Features Labeled	<input type="checkbox"/>	Main Features Labeled	<input type="checkbox"/>
Existing Conditions	<input type="checkbox"/>	Existing Conditions	<input type="checkbox"/>
Site Image	<input type="checkbox"/>	Corridor Images, at Intervals	<input type="checkbox"/>
Plan View	<input type="checkbox"/>	Plan View (Typical Sections)	<input type="checkbox"/>
Elevation	<input type="checkbox"/>		<input type="checkbox"/>
Structural Image	<input type="checkbox"/>		
Plan	<input type="checkbox"/>		
Elevation	<input type="checkbox"/>		
Context	<input type="checkbox"/>	Context	<input type="checkbox"/>
Surrounding Land Uses	<input type="checkbox"/>	Land Use types at intervals for each major change in surrounding character	<input type="checkbox"/>
Alternative Concept Images	<input type="checkbox"/>	Alternative Concept Images	<input type="checkbox"/>
Site Plans	<input type="checkbox"/>	Typical Sections	<input type="checkbox"/>
Elevations		Elevations for road features	<input type="checkbox"/>
Major Materials (where applicable)	<input type="checkbox"/>	Major Materials (where applicable)	<input type="checkbox"/>
Selected Final Concept Images (where applicable)	<input type="checkbox"/>	Selected Final Concept Images (where applicable)	<input type="checkbox"/>

These are basic documents requested, if available. Which ones are needed depends on stage of the project. Please contact _____ at the MPO office at _____ or _____@miamidade.gov with any questions.

MIAMI-DADE METROPOLITAN PLANNING ORGANIZATION