Complete Streets Handbook

The Florida Department of Transportation

4/25/17 EXTERNAL DRAFT

FDOT

Completing FLORIDA'S STREETS

FDOT

Completing FLORIDA'S STREETS

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GLOSSARY

LIST OF ABBREVIATIONS

AADT Annual Average Daily Traffic

AASHTO American Association of State Highway Transportation Officials

AASHTO Green Book AASHTO A Policy on Geometric Design of Highways and Streets

ACE Alternative Corridor Evaluation

BEBR University of Florida Bureau of Economic and Business Research

CNU Congress for the New Urbanism

D Directional distribution factor

ETAT Environmental Technical Advisory Team

ETDM Efficient Transportation Decision Making

FAC Florida Administrative Code

FDM FDOT Design Manual

FDOT Florida Department of Transportation

FHWA Federal Highway Administration

FTP Florida Transportation Plan

GIS Geographic Information System

ITE Institute of Transportation Engineers

LAP Local Agency Program

LEHD U.S. Census Bureaus' Longitudinal Employer-Household Dynamics website

LOS Level of Service

LRTP Long-Range Transportation Plan

MPO Metropolitan Planning Organization

NACTO National Association of City Transportation Officials

NCHRP National Cooperative Highway Research Program

NEPA National Environmental Policy Act of 1969

PD&E Project Development and Environment

PED Preliminary Environmental Determination

PPM Plans Preparation Manual

RCI FDOT Enterprise Application Roadway Characteristics Inventory

RPC Regional Planning Council

RRR Resurfacing, Restoration, and Rehabilitation

SD Special District

SIS Strategic Intermodal System

T The percentage of the AADT volume generated by trucks or commercial vehicles

TAZ Traffic Analysis Zone

TDP Transit Development Plan

TPO Transportation Planning Organization

TSMO Transportation Systems Management and Operations

VMT Vehicle Miles Traveled

DEFINITION OF TERMS

Context Classification System	Comprised of eight context classifications, it broadly identifies the various built environments in Florida, based on existing or future land use characteristics, development patterns, and roadway connectivity of an area. In FDOT projects, the roadway will be assigned a context classification(s). The context classification system is used to determine criteria in the ***FDM***. The eight context classifications and their general descriptions:

C1-Natural	Lands preserved in a natural or wilderness condition, including lands unsuitable for settlement due to natural conditions.
C2-Rural	Sparsely settled lands; may include agricultural land, grassland, woodland, and wetlands.
C2T-Rural Town	Small concentrations of developed areas immediately surrounded by rural and natural areas; includes many historic towns.
C3R-Suburban Residential	Mostly residential uses within large blocks and a disconnected/ sparse roadway network.
C3C-Suburban Commercial	Mostly non-residential uses with large building footprints and large parking lots. Buildings are within large blocks and a disconnected/ sparse roadway network.
C4-Urban General	Mix of uses set within small blocks with a well-connected roadway network. May extend long distances. The roadway network usually connects to residential neighborhoods immediately along the corridor and/or behind the uses fronting the roadway.
C5-Urban Center	Mix of uses set within small blocks with a well-connected roadway network. Typically concentrated around a few blocks and identified as part of the civic or economic center of a community, town, or city.
C6-Urban Core	Areas with the highest densities and building heights and within FDOT classified Large Urbanized Areas (population> 1,000,000). Many are regional centers and destinations. Buildings have mixed uses, are built up to the roadways, and are within a well-connected roadway network.

Control Vehicle	The infrequent vehicle that must be accommodated by allowing encroachment (see Chapter 4).
Design User	The anticipated users of a roadway (including drivers, pedestrians, bicyclists, and freight handlers) that form the basis for each roadway's design (see Chapter 4).
Design Vehicle	The vehicle that must be accommodated without encroachment into opposing traffic lanes (see Chapter 4).
Form-Based Code	Land development regulations that use physical form, rather than separation of uses, as the organizing principle for the code. For more information, visit http://formbasedcodes.org.

Induced Demand	Describes the additional demand for travel when the cost of travel decreases, either in time savings or monetary costs.
K-Factor	The ratio of a design-hour traffic volume to AADT
Large Urbanized Areas	Quality/Level of Service Handbook - areas with population over 1,000,000.
Non-qualifying Project	Projects that do not go through ETDM screening.
Qualifying Project	Roadway project types that qualify for ETDM screening, per the PD&E Manual Section 2.3.1, including additional through lanes that add capacity to an existing road, new or reconstructed arterial highway (e.g., realignment), and bridge replacements.
Rural	FHWA Definition — Encompasses all population, housing, and territory not included within an urban area. Quality/Level of Service Handbook Definition — areas that are not urbanized, urban, or transitioning.
Small Urban Areas	FHWA definition — Designated as population between 5,000 and 49,999, and not within any urbanized area with boundaries to be fixed by responsible State and local officials in cooperation with each other, subject to approval by the Secretary. (Identified as Urban Areas in the Quality/Level of Service Handbook).
Transect	The rural-to-urban transect is a tool utilized by the Congress for New Urbanism and others to describe the characteristics of human settlements. The rural-to-urban Transect is divided into six zones (see Chapter 2).
Transitioning Areas	Quality/Level of Service Handbook Definition - areas generally considered as transitioning into urbanized/urban areas or areas over 5,000 population and not currently in urbanized areas. These areas can also at times be determined as areas within a Metropolitan Planning Area, but not within an urbanized area. These areas are anticipated to reach urban densities in a 20-year horizon.
Urbanized Areas	FHWA and Quality/Level of Service Handbook Definition — Designated as population of 50,000 or more by the U.S. Census Bureau, within boundaries to be fixed by responsible State and local officials in cooperation with each other, subject to approval by the Secretary. Such boundaries shall encompass, at a minimum, the entire urbanized area within a State as designated by the U.S. Census Bureau.

FDOT COMPLETE STREETS POLICY ADOPTED SEPTEMBER 17, 2014

FDOT

Florida Department of Transportation

RICK SCOTT
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

ANANTH PRASAD, P.E.
SECRETARY

POLICY

Effective: September 17, 2014
Office: Design Director
Topic No.: 000-625-017-a

COMPLETE STREETS

It is the goal of the Department of Transportation to implement a policy that promotes safety, quality of life, and economic development in Florida. To implement this policy, the Department will routinely plan, design, construct, reconstruct and operate a context-sensitive system of "Complete Streets." While maintaining safety and mobility, Complete Streets shall serve the transportation needs of transportation system users of all ages and abilities, including but not limited to:

- Cyclists
- Freight handlers
- Motorists
- Pedestrians
- Transit riders

The Department specifically recognizes Complete Streets are context-sensitive and require transportation system design that considers local land development patterns and built form. The Department will coordinate with local governments, Metropolitan Planning Organizations, transportation agencies and the public, as needed to provide Complete Streets on the State Highway System, including the Strategic Intermodal System.

This ***Complete Streets Policy*** will be integrated into the Department's internal manuals, guidelines and related documents governing the planning, design, construction and operation of transportation facilities.

Ananth Prasad, P.E.
Secretary

Executive Summary

CONTEXT-BASED PLANNING AND DESIGN

In 1997, the Federal Highway Administration (FHWA) released guidance encouraging context-based transportation planning and design. Since then, many regional and local transportation planning agencies in Florida and throughout the U.S. have adopted context-based planning and design policies and practices. Context-based planning and design offers a flexible approach using existing tools in creative ways to address multimodal needs in different contexts. A specific context-based approach, called Complete Streets, also considers community needs, trade-offs between those needs, and alternatives to achieve multiple objectives.

In September 2014, the ***Florida Department of Transportation (FDOT)*** adopted the ***Statewide Complete Streets Policy (Topic No. 000-625-017-a)***, (see facing page) joining 22 other state departments of transportation that have made a commitment to planning, designing, and operating their transportation systems for all users. Implementation of the Complete Streets Policy is an FDOT department-wide priority to provide FLEXIBILITY in the planning and design of projects on state roads, to put the right street in the right place.

WHAT IS FDOT'S APPROACH TO COMPLETE STREETS?

The FDOT Complete Streets policy captures three core concepts in its approach to Complete Streets:

- Complete Streets serve the transportation needs of transportation system users of all ages and abilities, including pedestrians, bicyclists, transit riders, motorists, and freight handlers.
- Complete Streets are context sensitive, and the approach provides transportation system design that considers local land development patterns.
- A transportation system based on Complete Streets principles can help to promote safety, quality of life, and economic development.

The FDOT Complete Streets approach builds on flexibility and innovation to ensure that all state roadways are developed based on their context classification, as determined by FDOT to the maximum extent feasible.

With a Complete Streets approach, every non-limited-access state roadway project, including those on the Strategic Intermodal System (SIS), is uniquely planned and designed to serve the context of that roadway and the safety, comfort, and mobility of all users. In a high-speed rural context, where higher truck traffic is anticipated and walking and bicycling are infrequent, wider travel lanes with paved shoulders or a shared use path may be appropriate. In urban contexts, where high volumes of pedestrians, bicyclists, and transit users are expected or desired, a roadway could include features such as wide sidewalks, bicycle facilities, transit stops, and frequent, safe pedestrian crossing opportunities. Limited-access highways and interstates may incorporate elements of context-based design where they connect to the non-limited-access system, but this handbook is not intended for use on the limited-access system itself.

Most roadway projects are funded by strategically matching federal, state, and local funding sources to specific elements of the project. FDOT's Complete Streets approach to the planning and design of state roadway projects uses existing funding sources, and these funding practices will not change.

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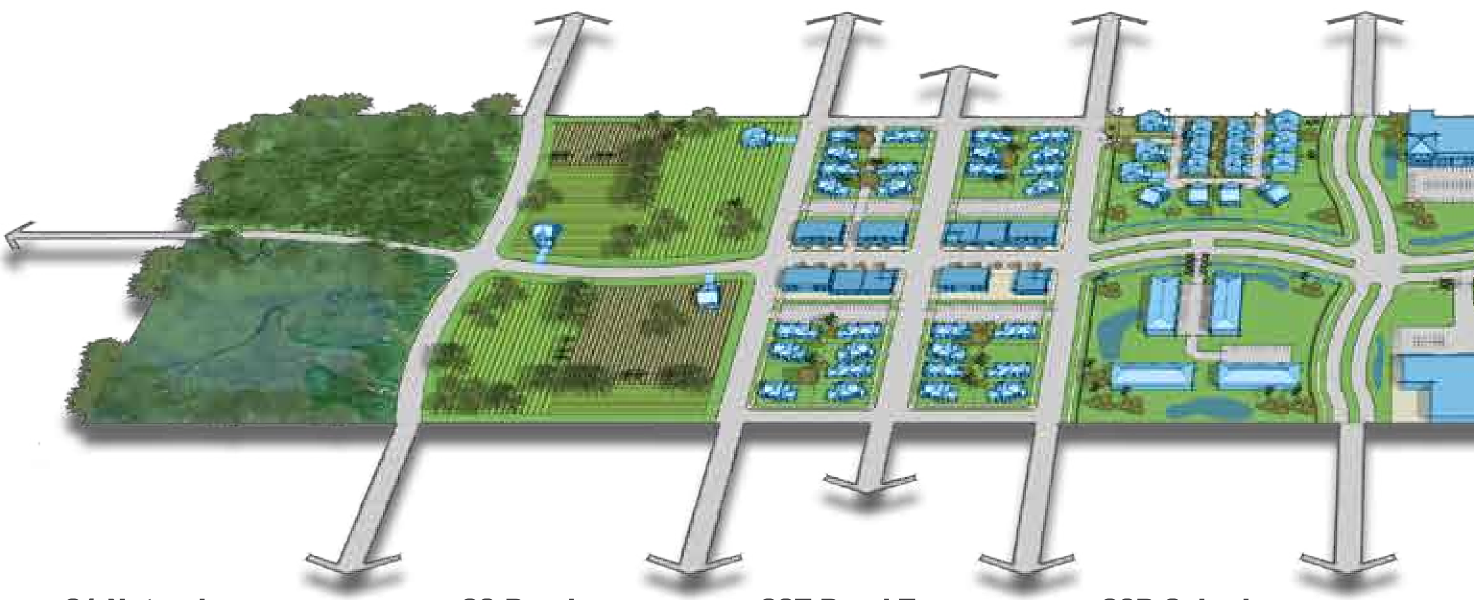
FIGURE ES-1 FDOT'S APPROACH TO COMPLETE STREETS

FDOT's Complete Streets approach provides flexibility and innovation in the design of state roadways to improve safety and mobility.

The Complete Streets **Approach** applies to **Roads Other Than Interstates and Limited-Access Facilities**

Pedestrians and businesses **THRIVE** where **sidewalks** have been **designed at an appropriate scale**, with **sufficient lighting, shade**, and **street-level activity**[1]

Complete Streets **Provide Choices** and help reduce the amount **Households Spend** on transportation



C1-Natural
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C3R-Suburban Residential
Mostly residential uses within large blocks and a disconnected or sparse roadway network.

1 National Association of City Transportation Officials, Urban Street Design Guide (2013).
2 Smart Growth America. Complete Streets Promote Good Health (2012).
3 Smart Growth America, Complete Streets Stimulate the Local Economy (2012).
4 AASHTO Guide to the Design of Pedestrian Facilities (2004).

Complete Streets

Promote Connectivity

by offering customers **access to an interconnected network** of pedestrian, bicycle, transit, and roadway facilities

Complete Streets spur

Private Investment & Enhance Economic Prosperity[3]

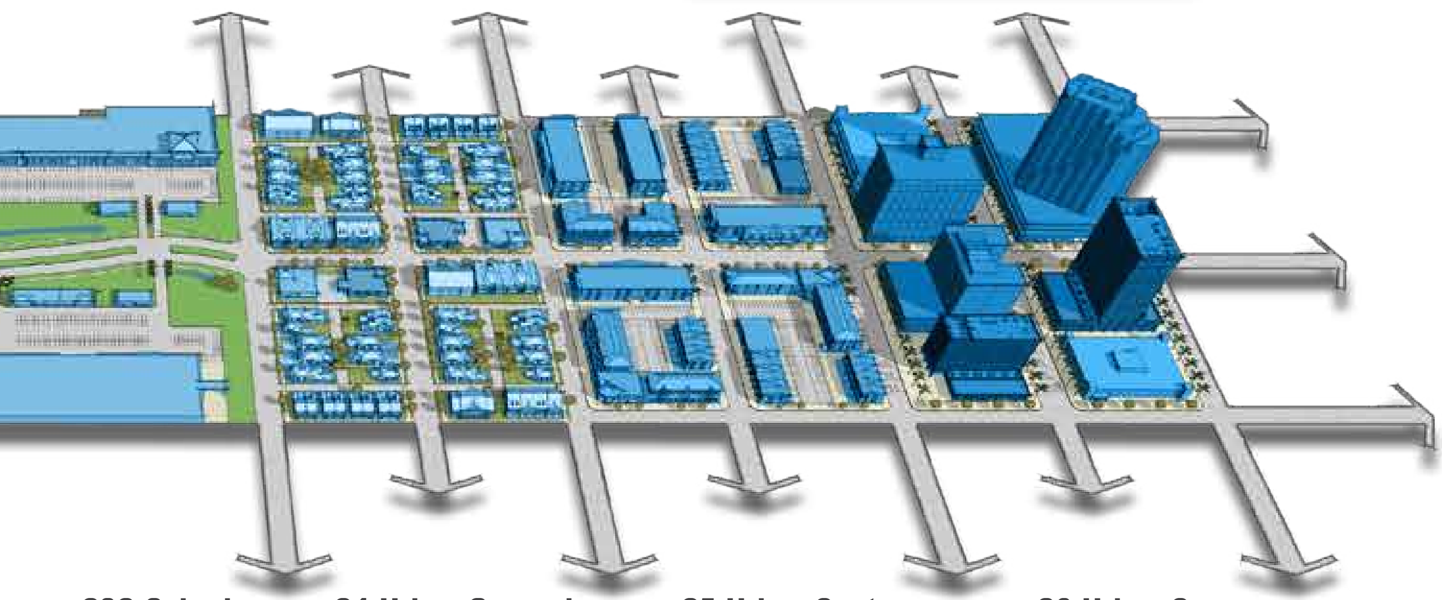
Complete Streets provide opportunities for

Increased Physical Activity & Improved Community Health

by incorporating features that promote regular walking, bicycling, and transit use[2]

Context appropriate vehicle speeds

Reduce the chance of **Pedestrian Fatalities**[4]



C3C-Suburban Commercial
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COMPLETE STREETS PRINCIPLES AND THE FLORIDA TRANSPORTATION PLAN

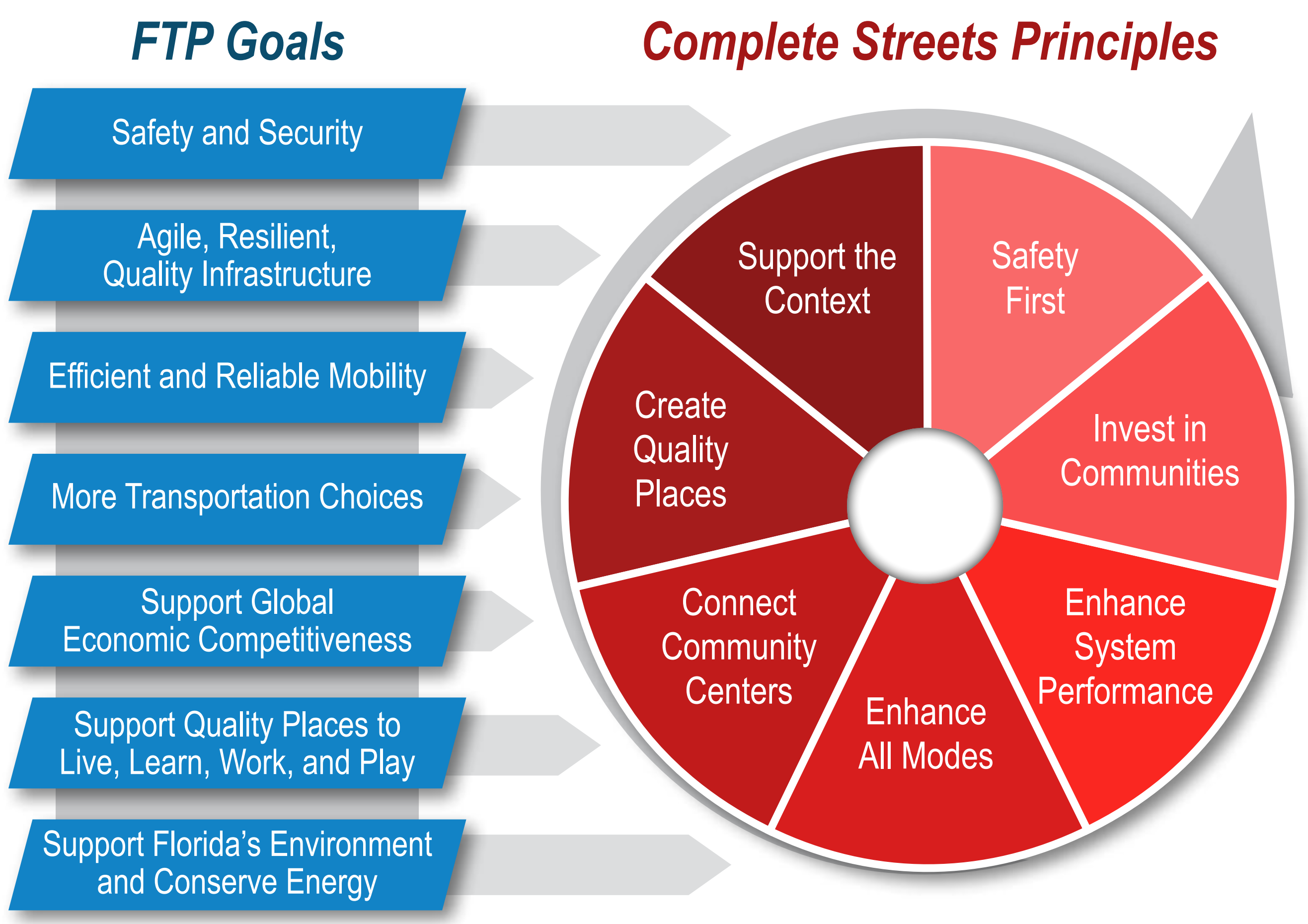
The ***Florida Transportation Plan (FTP)*** is the statewide long-range transportation plan guiding Florida's transportation future. FDOT's Complete Streets approach exemplifies the goals of the ***FTP*** regarding innovation and flexibility in design and collaboration and coordination with partners to create better transportation solutions. The Complete Streets approach uses existing tools in creative ways to address multimodal needs in different contexts, calling for a holistic consideration of community needs, trade-offs between needs, and alternatives to achieve multiple objectives. FDOT's Complete Streets principles align with the FTP's goals as shown in Figure ES-2, and serve to guide the implementation of FDOT's Complete Streets Policy.

COMPLETE STREETS PRINCIPLES

Safety First

Safety for all users is FDOT's top priority and a goal of the ***FTP***. Roadways with context-appropriate speeds can result in reduced fatalities and serious injuries in locations with higher levels of pedestrian and bicycle activity. The Complete Streets approach considers the mobility, convenience, accessibility, and safety of all road users, and places an emphasis on the most vulnerable users of a given roadway.

FIGURE ES-2 LINKING THE FLORIDA TRANSPORTATION PLAN AND COMPLETE STREETS PRINCIPLES



Invest in Existing and Emerging Communities

The ***FTP*** goal of agile, resilient, and quality infrastructure focuses on investing resources wisely. The Complete Streets approach helps to match roadways with the needs of urban areas as well as emerging growth centers, investing in the right road for the right location. The approach calls for design flexibility to develop roadway projects that consider local character and vision, the role and characteristics of the roadway within the transportation system, and the roadway's physical characteristics.

Enhance System Performance

Efficient and reliable mobility is a goal of the ***FTP***. The Complete Streets approach matches, based on context, the roles of each roadway with customized solutions that consider local access and regional and interregional mobility for people and freight. A Complete Streets approach relies on a complete network of transportation facilities made up of unique streets, each supporting the role and function it has within the system. A complete network enhances efficiency and reliability for all modes by providing direct and multiple route choices, improving access to all modes, and reducing trip lengths.

Enhance All Modes

Increasing transportation choice is a goal of the ***FTP***, reflecting the desire of residents, visitors, and businesses to have mobility options based on travel preferences, need, convenience, cost, or time. A Complete Streets approach provides opportunities to expand mobility options by considering all users and all modes during roadway planning and design. This is important for short-distance and local trips, where walking, bicycling, and transit are most desired.

Connect Community Centers

Transportation solutions that support Florida's economic competitiveness are a goal of the ***FTP***. A Complete Streets approach connects communities and supports Florida's existing economic centers, employment centers, and visitor destinations by striving to provide the highest level of multimodal infrastructure in these core areas.

Create Quality Places

Creating quality places to live, learn, work and play is a goal of the ***FTP***. A Complete Streets approach helps to align transportation decisions with land use, resulting in quality places offering transportation choices where transportation investments support a community's economic competitiveness and quality of life.

Support the Context

Transportation solutions that support the environment and conserve energy is a goal of the ***FTP***. A Complete Streets approach uses design flexibility to develop roadways that consider the local character and vision, which often reflect a desire for a future in which a community manages land more efficiently, preserves environmental resources and natural countryside, and create distinctive places in which to live in both rural and urban settings.

WHAT IS IN THIS HANDBOOK?

This handbook provides:

- An explanation of FDOT's Complete Streets approach and principles for state roads
- Guidelines for FDOT's collaboration with local and regional partners
- Definitions of context classifications used for state roads
- Guidelines for applying a Complete Streets approach to state projects
- Guidelines for roadway design considerations

FDOT will coordinate with partner agencies when implementing this Complete Streets approach.

Chapter 1 describes FDOT's role in determining context classification, identifying associated transportation elements to incorporate in a project based on the context classification, and coordinating with local and regional partners to implement and fund projects. Chapter 1 also highlights the role partners play and how FDOT depends on their involvement and contributions. Local governments are responsible for community visions, land use decisions, and local and regional transportation network connectivity, all of which influence the choice of multimodal solutions. Local governments, regional planning councils, and Metropolitan or Transportation Planning Organizations (MPOs/TPOs) are responsible for regional and community visions, including transportation goals. Other partners, such as transit agencies and private developers, provide targeted expertise and information about their services and plans.

Chapter 2 describes the context classifications FDOT will use for project planning and design of state projects, including projects on the SIS. Figure ES-1 presents the eight context classifications and provides short descriptions. Chapter 2 also describes the primary and secondary measures used to determine context classification.

Chapter 3 details how the Complete Streets approach is incorporated in existing FDOT processes and when the context classification is determined. FDOT will have the final determination of the context classification for state roadways. FDOT context classifications are assigned at the earliest stage possible, typically during project scoping. Information to determine context classification will be obtained using multiple sources and tools, such as through partner coordination for the desired future context, and field reviews and aerial photography for existing development patterns. Chapter 3 also explains how the Complete Streets approach integrates with existing processes, such as long-range transportation plan projects that use Efficient Transportation Decision Making (ETDM) screening and RRR – Resurfacing, Restoration, and Rehabilitation projects.

Chapter 4 explains design considerations in applying FDOT's Complete Streets approach. The FDOT context classification and transportation characteristics, such as the road's functional class, will be used together when applying Complete Streets planning or design considerations. After looking at the community's current environment and future vision to determine the context classification, FDOT staff will assign a context classification and choose transportation elements that fit within the parameters of that classification. The details are presented in the ***FDOT Design Manual (FDM)*** updates.

NEXT STEPS

Adopting the Complete Streets policy was only the beginning. FDOT has already taken bold steps towards making the Complete Streets implementation a priority. The ***FDOT Complete Streets Implementation Plan*** (December 2015) provides the framework for necessary changes to fully align with the Complete Streets philosophy. In particular, the Implementation Plan calls for:

- Integrating a context-based approach into project planning and design
- Revising standards, manuals, and policies
- Updating decision-making processes
- Modifying approaches for measuring performance

FDOT has begun revising its standards, policies, and guidance documents to align with this Complete Streets approach. These include:

- FDOT Design Manual (FDM), replacing the current Plans Preparation Manual (PPM)
- Efficient Transportation Decision Making Manual
- Project Development and Environment Manual
- Project Traffic Forecasting Handbook
- Level of Service Standards, Policies, and Procedures
- Strategic Intermodal System Highway Component Standards and Criteria
- Traffic Engineering Manual
- Quality/LOS Handbook

The ***FDM*** will be effective January 1, 2018. See Chapter 3 for details.

Partnership and Agency Collaboration

FDOT is committed to supporting the needs of all users as part of incorporating a Complete Streets approach in every phase of project development — planning, design, construction, operations, and maintenance. A system of Complete Streets cannot be built entirely within the state roadway system and solely within FDOT's right of way. Local and regional decisions have a strong influence on the state's decisions, and FDOT will seek to strengthen collaboration and partnerships with local governments, regional agencies, MPOs/TPOs, transportation agencies, and the public to further Complete Streets principles.

The ***Florida Transportation Plan (FTP)*** recognizes the importance of collaborating across sectors, jurisdictions, modes, and disciplines to create the desired transportation system for Florida. Regions and communities have different needs and expectations, and the flexibility of FDOT's Complete Streets approach is key to supporting each area's unique character and vision. For state roads, achieving the state's goals and the community's goals requires a balancing of priorities, constraints, and opportunities. Working together allows multiple agencies to achieve individual objectives while effectively and efficiently achieving shared and related goals to deliver a safe and quality transportation system to the public.

THE ROLE OF COMMUNITY VISIONS

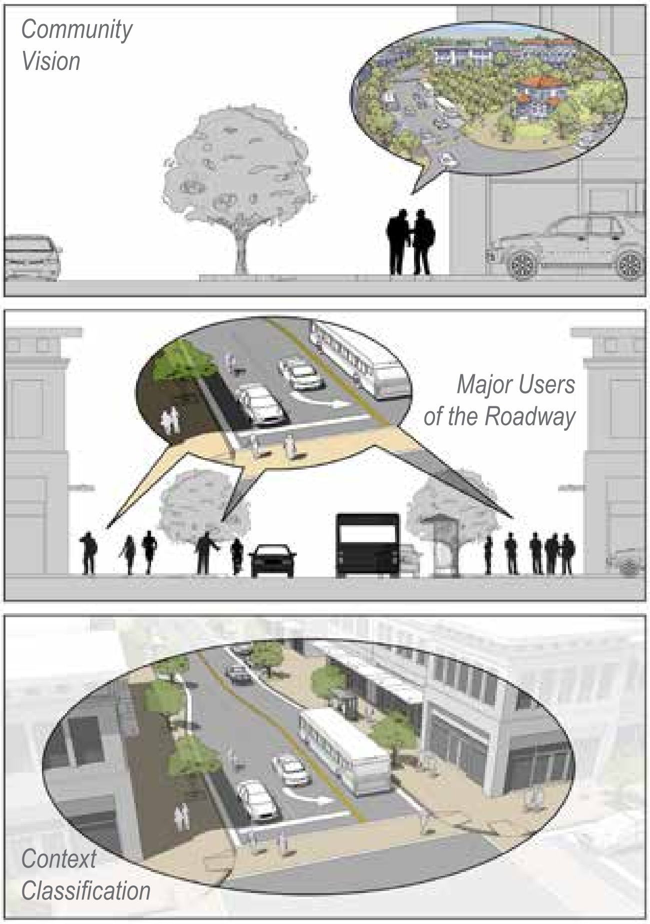
To support quality places, the FTP calls for transportation systems to reflect regional and community visions. These visions are important to FDOT and other partners in setting the framework for transportation decision making. FDOT relies upon partners to develop and actively communicate their visions and goals to provide clear direction, not only to FDOT but to public and private partners engaged in community development. Visions also provide the basis for the land development regulations and policies used to implement community goals. Local and regional visions can take many forms, such as standalone vision documents, comprehensive plans, neighborhood or sub area plans, including community redevelopment areas, or land development regulations.

FDOT's approach to Complete Streets is context-sensitive, and FDOT will support local partners by building projects that help support local and regional visions to the maximum extent feasible. Where context-based design has not previously been envisioned, FDOT will collaborate with partners and rely upon existing development patterns and plans to determine the context classification. If the future vision of an area for a proposed transportation project is intended to be different from the existing, clear and documented direction from the local or regional government on that vision is imperative. (See Figure 1-1.)

HOW LAND USE SUPPORTS COMPLETE STREETS

The transportation system and development pattern (such as land use, development density and intensity, building design, and site layout) are inextricably linked, and both have an effect on travel choices and mobility. A robust, connected network provides options for the movement of people and goods and also is the foundation for safe and comfortable multimodal travel for pedestrians, bicyclists, and transit riders. Thoughtful application of context-based planning and design considers all modes of transportation and customizes projects appropriately. For example, in a more urban environment, emphasizing multimodal elements in the roadway may be important to match the diverse level of activity. In suburban and rural areas, vehicular travel remains important, and

FIGURE 1-1 HOW COMMUNITY VISIONS CAN INFORM CONTEXT CLASSIFICATION, USERS, AND ROADWAY DESIGN



Community visions can help inform who the major users are and what the context classification of the roadway is.
Source: Adapted from FDOT District 5 Multimodal Corridors Planning Guidebook

balancing needs is more nuanced.

For the transportation components, local and regional governments (counties, municipalities, military, etc.) take the lead in implementing projects on their facilities. FDOT is responsible for projects on the State Highway System and is available to offer technical assistance and expertise to its partners. Land use decisions are made by local governments, and FDOT will collaborate with these partners when applying the Complete Streets approach for projects. For projects serving multiple jurisdictions, this can include coordinating with multiple jurisdictions to determine the context classifications. Appendix A presents additional information on land use tools to support safe and comfortable multimodal travel.

PROJECT DEVELOPMENT PROCESS

Throughout the project development process, local and regional partners will influence FDOT's Complete Streets approach to planning, design, and implementation of projects on state roads. Many of FDOT's processes will function as they currently do, with an additional emphasis on coordination and engagement with partners to achieve mutual benefits. Most importantly, FDOT planners and designers are able to support the local community context through flexibility in the placement and types of components (such as bike lanes or on-street parking) considered for a project.

The transportation planning process begins with long-range plans such as those created by FDOT for the Strategic Intermodal System (SIS) and by MPOs/TPOs for their planning areas. Local Government Comprehensive Plans, developed pursuant to ***Chapter 163, Florida Statutes***, also provide system-level information about the desired long-term transportation network and community development. These plans identify at a high level the needs for certain types of projects or projects in specific locations while at the same time articulating policies that promote the system-wide use of context-based design.

A next step of the project's development is to perform a Project Development and Environment (PD&E) study, if applicable, to evaluate design concepts and alternatives that address the purpose and need for the project. Balancing mobility needs and community needs is an integral part of alternatives consideration, and coordination with environmental resource agencies, local governments, and the public is critical in the process. After selecting a preferred alternative, the project moves to the design phase, where additional coordination with local governments, partners and public continues, as appropriate.

FDOT will apply the Complete Streets approach to maintenance and operational projects; however, opportunities for significant enhancements to these types of projects are constrained because of the purpose of these projects. Coordination and collaboration becomes more integrated and complex when applying the Complete Streets approach to projects later in the development process, because of more defined project schedules. The best opportunities in these cases are for resurfacing, restoration, and rehabilitation (RRR) projects. FDOT will coordinate early with local partners to identify feasible enhancements within the constraints of the project. More information regarding this process can be found Chapter 3 of this Handbook.

A key factor in the Complete Streets approach is blending and merging of projects and concepts to create the desired long-term solution. FDOT will fund the construction and maintenance of aspects of transportation projects that are necessary to comply with adopted FDOT design criteria contained in the FDM. If local governments or other partners would like to include features that go beyond what is required by FDOT design criteria, funding for the construction and maintenance of those additional components will be the responsibility of the local government or local partner, as defined in a local maintenance agreement. Current elements being maintained by local governments or other partners as part of local maintenance agreements (e.g. traffic signals on state roadways) will continue to be maintained per the agreements in place.

FDOT'S ROLE

The FDOT context classification for state projects will be determined as early as possible in the planning, design, and maintenance cycle. The process for project development is detailed in Chapter 3 of this Handbook, but summarized here as it relates to local government interaction. For state projects, the project manager (or designee, such as a scoping team member, growth management liaison, or MPO/TPO liaison) is responsible for coordinating with affected local and regional governments and agencies during the determination of the context classification. This information may eventually be stored in an integrated roadway asset identification system, such as the FDOT Enterprise Application Roadway Characteristics Inventory (RCI), the straightline diagram, and the typical section data sheet. Measures used to determine the context classification are based on existing development patterns and may include future visions of the community. Collaboration with the local and regional agencies and governments associated with a project is the key for successful projects. In an ideal situation, a future vision for an area or corridor will be documented and approved by the community's governing body, such as in its comprehensive plan and land development codes. Community redevelopment area master plans or sector plans are other possible examples. FDOT will have the final determination of the context classifications to be used for state transportation projects (i.e., for roads on the State Highway System, including the SIS). Interstates and freeways are high-volume transportation facilities that are independent of the surrounding land uses, and are considered "complete," but context classification will be needed at locations where these facilities connect to the non-limited-access system.

To address projects identified as part of the MPO/TPO long-range planning process, districts may identify the context classification of state projects during the Efficient Transportation Decision Making (ETDM) screening and collaborate with affected local governments as part of Long-Range Transportation Plan (LRTP) preparation, or may follow other processes as described in Chapter 3. Each FDOT district has flexibility in its process for documenting context classifications that could vary within the district due to local and regional agency preferences. For example, instead of working on a project-by-project basis, a district could decide to proactively determine the context classification for all state facilities, or all state facilities in a specific area (e.g., an urbanized area). Or, a district could coordinate with a MPO/TPO to recommend context classifications for LRTP state projects.

After determining a project's context classification, or potentially multiple context classifications for a longer corridor, FDOT will choose transportation criteria that fit within the parameters of the classification(s). The FDOT context classification and transportation characteristics, such as the road's functional class and network connectivity, will be used together for planning and design. This task is easiest for new roads with right of way to incorporate all appropriate transportation elements. For existing roads, with limited rights of way, the ability to include transportation elements may require a balancing of needs and constraints. Based on its processes and procedures, FDOT will coordinate with partners to evaluate options. Each FDOT district will decide how best to incorporate a Complete Streets planning and design approach in its processes. For example, some districts have scoping teams and tools to identify and tag projects for increased community collaboration and flexibility early.

The SIS is composed of facilities of statewide and regional significance with the objective of supporting interregional connectivity, intermodal connectivity, and economic development. To local communities, a SIS facility can serve as a corridor connecting communities or may be a main street for a town. Multiple partners working collaboratively to find solutions is key to the Complete Streets approach, whether for a SIS facility or state or local road. For example, some districts have worked with communities to shift SIS corridors to avoid main street areas and have designated alternate SIS routes or connectors to support interregional travel and local needs simultaneously.

FDOT will continue to use the same funding categories (federal, state, and local funds) with the Complete Streets planning and design approach. Context classification allows FDOT greater flexibility in designs and helps to match roads to their locations. FDOT will plan more carefully for what treatments are wanted, and where, and can help identify appropriate funding. Although no new funding is available for Complete Streets, existing sources will be tapped in more specific ways, by understanding place better than before. This also means FDOT will continue to rely on local partners to provide features that go beyond FDOT design criteria (e.g., decorative lighting or patterned facilities).

FDOT can collaborate with a community to identify a road's context classification at any time and communities are encouraged to reach out to their district to coordinate with FDOT before projects are identified. This is particularly the case if a community is interested in changing the character of a street over time or is considering requesting a lane elimination or "road diet" on a state road, where additional studies and steps are warranted. Each district will address community collaboration based on partner engagement preferences. For some of the more urban districts, a Complete Streets coordinator may be designated. Other districts may rely on MPO/TPO liaisons or SIS or growth management coordinators.

THE ROLES OF PARTNERS

A Complete Streets approach to planning and design allows for flexibility in projects, which means that collaboration and partnering is required to meet and balance the transportation needs of the community, the region, and the State. It is important to ensure that state roadways maintain vital regional and statewide mobility goals, especially for SIS facilities. When planning and designing state projects, FDOT will rely on partners within the affected jurisdiction(s) who have local and regional expertise.

METROPOLITAN PLANNING ORGANIZATIONS

The transportation planning process requires MPOs/TPOs, with the involvement of state and local governments and stakeholders, to create an LRTP. The LRTP provides guidance on the MPO's/TPO's vision for the planning area's transportation system. For example, MPOs/TPOs have identified transit networks and systems of bicycle, sidewalk, and trail networks. Identifying projects, prioritizing them, allocating funding, and tracking performance measures also influence FDOT's Complete Streets approach for state projects. As part of the LRTP process, MPOs/TPOs are encouraged to work with FDOT districts to identify context classifications for projects, and identify and allocate funding to address FDOT and local Complete Streets needs.

A MPO/TPO is available to work with constituent communities to clarify and define regional and community visions that will be used during context classification determination. Also, communities may desire infrastructure for state roads that go beyond FDOT design criteria, and MPOs/TPOs are in a position to assist local governments in identifying those items and allocating and aligning other funding.

LOCAL GOVERNMENTS

Local governments are responsible for land use and transportation planning to create supportive infrastructure and development patterns that match community goals and visions. Clear policies delineated in a community's comprehensive plan to retain current development patterns, such as in historical or rural towns, or promote changes in development patterns, such as in urbanizing areas, provide direction to private and public partners in land development, infrastructure, and provision of services. FDOT will look to local governments when determining context classification as part of a state project. Comprehensive plans, subarea plans, and land development regulations, such as zoning or form-based codes, are some of the documents that will be reviewed to determine future visions and the land use-related items in determining context classification. The existing development pattern, determined through aerial/asset mapping or site visits, for example, will be used to evaluate current transportation network connectivity for the project and surrounding areas. It also will be used to evaluate current site plan oriented criteria, such as building and parking placement, and development intensity. The private sector is responsible for site development in accordance with local policies and codes and approval from the local government. For example, land use and development decisions to mix uses or locate buildings close to the road support easier pedestrian and bicyclist access. The specifics of how context classification is determined are covered in Chapters 2 and 3 of this Handbook.

After determining the context classification, FDOT identifies the elements that are appropriate for the context and assesses design and implementation options. If infrastructure for state roads that go beyond FDOT design criteria, such as decorative lighting or landscaping, patterned pavements, or street furniture and wayfinding is desired, local communities must coordinate with FDOT to align local resources and projects with the state project. Each district has flexibility in how the coordination of projects is handled. For example, districts have performed construction with the local government assuming maintenance responsibilities, particularly for the enhancements. Other districts have relied on the Local Agency Program (LAP) to allow the local government to implement the combined, broader project.

As part of the decision-making process to identify the elements to include in a state project, FDOT will evaluate the surrounding and connecting transportation network. Finding flexible and innovative solutions can mean looking at other roads/networks to support state and community goals. Local and regional roads are the responsibility of county and municipal governments, and others. Creating a roadway network with appropriate design elements also provides multiple travel options for all modes, assists with pedestrian and bicycling routing, shortens trip distances, and reduces the need to widen intersections and roadways. Regional and local road designs, such as inhibiting through access or limiting lanes, can increase the reliance on state roads for mobility for some road users.

TRANSIT AGENCIES

Transit agencies — at the city, county, and regional levels — play a significant role in providing transportation choices for all users. Transit agencies develop short-term Transit Development Plan (TDPs) and may develop longer-term plans that identify the investments needed in transit within their service areas. As part of project planning, FDOT districts will coordinate with local transit agencies to determine the proper role for transit along a roadway. This determination also requires coordination with local governments given their role in defining and regulating the desired land development. FDOT's ***Accessing Transit Guidebook*** includes planning and design recommendations for transit-supportive communities.

OTHER PARTNERS

Other agencies and entities may engage with FDOT as part of state project planning and design. Regional Planning Councils may prepare regional or community visions and transportation long-range plans, and support local government comprehensive planning and development regulations. Advocacy and community groups may raise items to be addressed by FDOT or local governments. Other public stakeholders also are involved through existing FDOT and other agencies processes and procedures.

Table 1-1 provides a representative overview of the roles of various partners in FDOT's Completes Streets approach.

TABLE 1-1 STAKEHOLDER ROLES IN FDOT'S COMPLETE STREETS APPROACH

	Project Planning	Context Classification	Identification of Project Elements	Selection of Project Elements	Project Funding
FDOT	• Plans state projects • Coordinates with partners	• Determines context classification • Coordinates with partners, as needed based on type of project	• Uses FDM and other guidance to define potential project elements based on context classification and transportation characteristics • Studies concepts, alternatives, and feasibility	• Considers benefits and costs of project elements • Determines feasible project elements • Coordinates with partners, as needed based on type of project	• Matches funding to project elements, within existing budget parameters • Coordinates with partners for project funding
MPOs/ TPOs	• Initiates project requests to FDOT via LRTP and other studies • Performs and participates in planning and studies	• Establishes transportation vision through long-range plans • Considers project context classifications during LRTP development	• Defines project in LRTP • Coordinates with partners, as needed	• Collaborates with FDOT and partners on companion projects	• Establishes project funding during LRTP and Transportation Improvement Program (TIP/STIP) • Considers multimodal elements in project planning • Coordinates with FDOT and other partners
Local Governments	• Initiates project request to FDOT, as needed • Participates in planning processes and studies	• Establishes community vision through comprehensive and other plans • Sets local land use policies and land development regulations	• Identifies companion projects for additional elements, e.g., lighting, landscape, street furniture • Coordinates with partners, as needed	• Supplements project elements provided by FDOT with companion projects, as needed	• Provides local funding for elements not funded by FDOT, as needed • Enters into maintenance agreements with FDOT for additional enhancements, as needed • Coordinates with FDOT and other partners
Other Partners (such as private businesses, developers, transportation operators, law enforcement, or advocacy groups)	• Participates in planning processes and studies	• Participates in development of community and regional visions • Establish transit plans • Performs land development and economic development projects	• Identifies companion projects for additional elements, e.g., transit stops	• Supplements project elements provided by FDOT with companion projects, as needed	• Coordinates with FDOT and other partners

Context-Based Complete Streets

FDOT will routinely plan, design, construct, and maintain state roadways in harmony with the surrounding land use characteristics and the intended uses of the roadway. To this end, a context classification system comprising eight context classifications has been adopted. The context classification of a roadway, together with its transportation characteristics, will provide information about who the users are along the roadway, the regional and local travel demand of the roadway, and the challenges and opportunities of each roadway user (see Figure 2-1). The context classification and transportation characteristics of a roadway will determine key design criteria for all non-limited-access state roadways.

This chapter describes the measures to be used to determine the context classification of a roadway. See Chapter 3 of this Handbook for a discussion of how context classification is incorporated into the existing FDOT project development process.

FIGURE 2-1 CONTEXT CLASSIFICATION AND TRANSPORTATION CHARACTERISTICS

CONTEXT CLASSIFICATION

The context classification system broadly identifies the various built environments existing in Florida, as illustrated in Figure 2-2. State roadways will extend through a variety of context classifications. Figure 2-2 should not be taken literally to imply all roadways will have every context classification or that context classifications occur in the sequence shown. FDOT's context classification system describes the general characteristics of the land use, development patterns, and roadway connectivity along a roadway, providing cues as to the types of uses and user groups that will likely utilize the roadway. The context classification of a roadway will inform FDOT's planning, PD&E, design, construction, and maintenance approaches to ensure that state roadways are supportive of safe and comfortable travel for their anticipated users. Identifying the context classification is a preliminary step in planning and design, as different context classifications will have different design criteria and standards.

The use of context classifications to determine criteria for roadway design elements is consistent with national best practices and direction, including the National Cooperative Highway Research Program

FIGURE 2-2 FDOT CONTEXT CLASSIFICATIONS

C1-Natural
Lands preserved in a natural or wilderness condition, including lands unsuitable for settlement due to natural conditions.

C2-Rural
Sparsely settled lands; may include agricultural land, grassland, woodland, and wetlands.

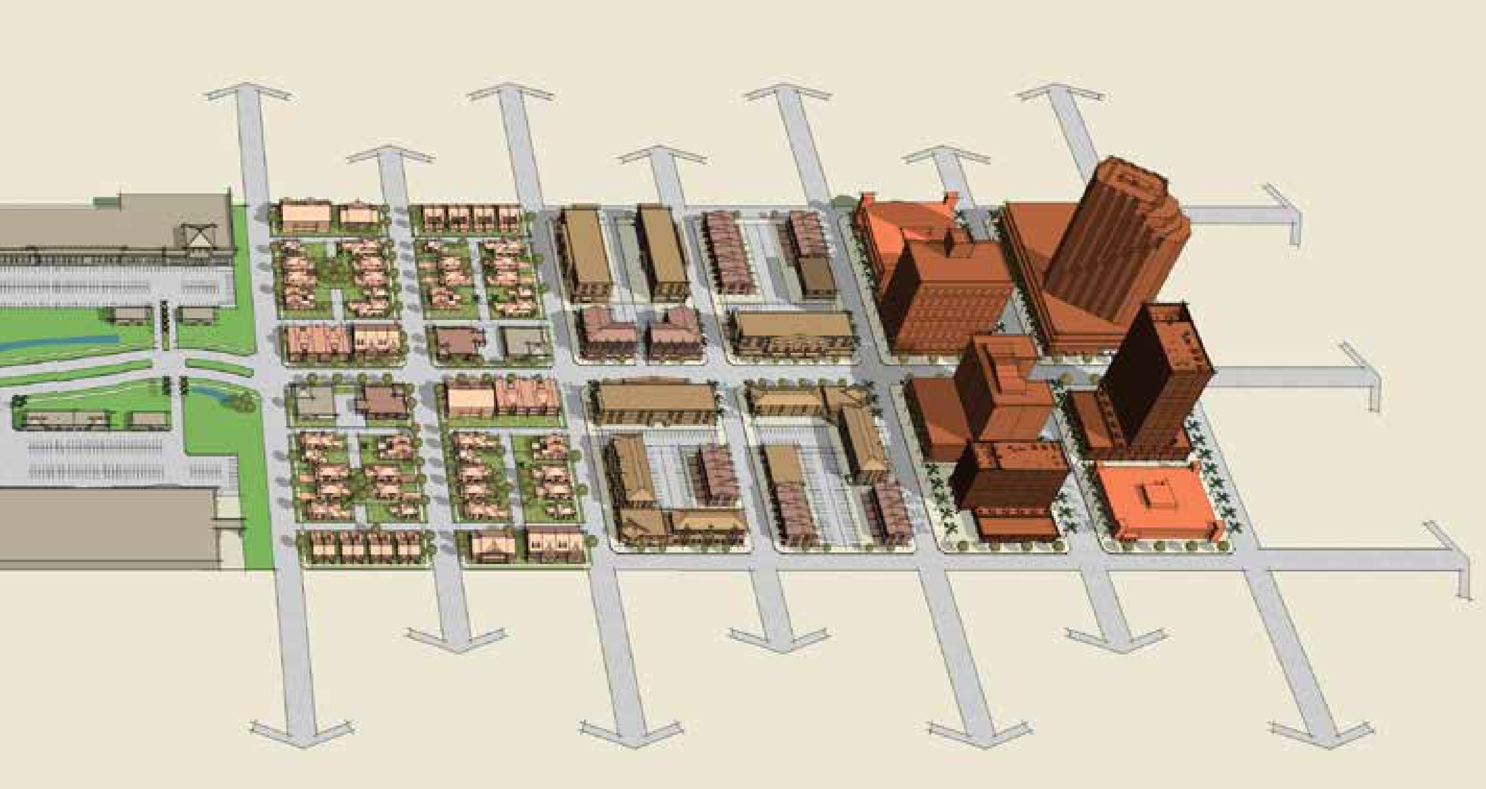
C2T-Rural Town
Small concentrations of developed areas immediately surrounded by rural and natural areas; includes many historic towns.

C3R-Suburban Residential
Mostly residential uses within large blocks and a disconnected or sparse roadway network.

(NCHRP) that informs Federal Highway Administration (FHWA) and American Association of State Highway Transportation Officials (AASHTO) guidance. Ongoing research under ***NCHRP 15-52: Developing a Context-Sensitive Functional Classification System for more Flexibility in Highway Design*** is proposing a similar context-based approach to design that incorporates context, user needs, and transportation functions into the design process. This research was born out of a need to better define contexts beyond urban and rural classifications, and to incorporate multimodal needs into the existing functional classification system.

This chapter outlines the steps to determine a roadway's context classification. Measures used to determine the context classification are presented, and a process to define the context classification is outlined for:

- All projects on existing roadways and for projects that propose new roadways and are in the PD&E or design phases
- Projects evaluating new roadways in the planning and ETDM screening phases



C3C-Suburban Commercial
Mostly non-residential uses with large building footprints and large parking lots within large blocks and a disconnected or sparse roadway network.

C4-Urban General
Mix of uses set within small blocks with a well-connected roadway network. May extend long distances. The roadway network usually connects to residential neighborhoods immediately along the corridor or behind the uses fronting the roadway.

C5-Urban Center
Mix of uses set within small blocks with a well-connected roadway network. Typically concentrated around a few blocks and identified as part of a civic or economic center of a community, town, or city.

C6-Urban Core
Areas with the highest densities and building heights, and within FDOT classified Large Urbanized Areas (population >1,000,000). Many are regional centers and destinations. Buildings have mixed uses, are built up to the roadway, and are within a well-connected roadway network.

CONTEXT CLASSIFICATION MATRIX

Table 2-1 Context Classification Matrix presents a framework to determine the context classifications along state roadways. This Context Classification Matrix outlines (1) distinguishing characteristics, (2) primary measures, and (3) secondary measures.

The distinguishing characteristics give a broad description of the land use types and street patterns found within each context classification. The primary and secondary measures provide more detailed assessments of the existing or future conditions along the roadway. These measures can be evaluated through a combination of a field visit, internet-based

TABLE 2-1 CONTEXT CLASSIFICATION MATRIX

		Primary Measures		
		Land Use	Building Height	Building Placement
Context Classification	Distinguishing Characteristics	Description	Floor Levels	Description
C1-Natural	Lands preserved in a natural or wilderness condition, including lands unsuitable for settlement due to natural conditions.	Conservation Land, Open Space, or Park	N/A	N/A
C2-Rural	Sparsely settled lands; may include agricultural land, grassland, woodland, and wetlands.	Agricultural or Single-Family Residential	1 to 2	Detached buildings with no consistent pattern of setbacks
C2T-Rural Town	Small concentrations of developed areas immediately surrounded by rural and natural areas; includes many historic towns.	Retail, Office, Single-Family or Multi-Family Residential, Institutional, or Industrial	1 to 2	Both detached and attached buildings with no, shallow (<10'), or medium (10' to 24') front setbacks
C3R-Suburban Residential	Mostly residential uses within large blocks and a disconnected or sparse roadway network.	Single-Family or Multi-Family Residential	1 to 2, with some 3	Detached buildings with medium to large (>10') front setbacks
C3C-Suburban Commercial	Mostly non-residential uses with large building footprints and large parking lots within large blocks and a disconnected or sparse roadway network.	Retail, Office, Multi-Family Residential, Institutional, or Industrial	1 (retail uses) and 1 to 4 (office uses)	Detached buildings with medium to large (>10') setbacks on all sides
C4-Urban General	Mix of uses set within small blocks with a well-connected roadway network. May extend long distances. The roadway network usually connects to residential neighborhoods immediately along the corridor or behind the uses fronting the roadway.	Single-Family or Multi-Family Residential, Institutional, Neighborhood Scale Retail, or Office	1 to 3, with some taller buildings	Both detached and attached buildings with no, shallow (<10'), or medium (10' to 24') front setbacks
C5-Urban Center	Mix of uses set within small blocks with a well-connected roadway network. Typically concentrated around a few blocks and identified as part of a civic or economic center of a community, town, or city.	Retail, Office, Single-Family or Multi-Family Residential, Institutional, or Light Industrial	1 to 5, with some taller buildings	Both detached and attached buildings with no, shallow (<10'), or medium (10' to 24') front setbacks
C6-Urban Core	Areas with the highest densities and building heights, and within FDOT classified Large Urbanized Areas (population >1,000,000). Many are regional centers and destinations. Buildings have mixed uses, are built up to the roadway, and are within a well-connected roadway network.	Retail, Office, Institutional, or Multi-Family Residential	>4, with some shorter buildings	Mostly attached buildings with no or shallow (<10') front setbacks

The thresholds presented in Table 2-1 are based on the following sources, with modifications made based on Florida case studies:
1) *2008 Smart Transportation Guidebook: Planning and Designing Highways and Streets that Support Sustainable and Livable Communities*, New Jersey Department of Transportation and Pennsylvania Department of Transportation;

aerial and street view imagery, map analysis, review of future land use or existing zoning information, and discussions with local governments. The Context Classification Matrix presents the primary and secondary measures thresholds for the eight context classifications.

Appendix B illustrates the eight FDOT context classifications through case studies. These case studies present examples of real-world values for the primary and secondary measures that determine a roadway's context classification.

		Roadway Connectivity			Secondary Measures			
Fronting Uses	Location of Off-street Parking	Intersection Density	Block Perimeters	Block Length	Allowed Residential Density	Allowed Office/ Retail Density	Population Density	Employment Density
Yes/No	Description	Intersections/ Square Mile	Feet	Feet	Dwelling Units/ Acre	Floor-Area Ratio (FAR)	Persons/Acre	Jobs/Acre
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
No	N/A	N/A	N/A	N/A	<1	N/A	<2	N/A
Yes	Mostly on side or rear; occasionally in front	>100	<3,000	<500	>4	>0.25	N/A	>2
No	Mostly in front; occasionally in rear or side	<100	N/A	N/A	1 to 8	N/A	N/A	N/A
No	Mostly in front; occasionally in rear, or side	<100	>3,000	>660	N/A	<0.75	N/A	N/A
Yes	Mostly on side or rear; occasionally in front	>100	<3,000	<500	>4	N/A	>5	>5
Yes	Mostly on side or rear; occasionally in front, or in shared off-site parking facilities	>100	<2,500	<500	>8	>0.75	>10	>20
Yes	Side or rear; often in shared off-site garage parking	>100	<2,500	<660	>16	>2	>20	>45

2) *2012 Florida TOD Guidebook*, Florida Department of Transportation;
3) *2009 SmartCode Version 9.2.*, Duany, Andres, Sandy Sorien, and William Wright; and
4) *2010 Designing Walkable Urban Thoroughfares: A Context Sensitive Approach*, Institute of Transportation Engineers and Congress for the New Urbanism.

DETERMINING CONTEXT CLASSIFICATION

The distinguishing characteristics and primary and secondary measures provide analytical measurements to evaluate land use characteristics, development patterns, and roadway connectivity and to determine context classification. The data available to quantify existing and future contexts will vary depending on the specificity of the roadway alignments being considered. Many projects conducted by FDOT occur along existing corridors where a single alignment is being considered. The range of alternatives for new roadways also narrows to a single alignment alternative as projects proceed from planning, through PD&E and design. In planning and ETDM screening for existing roadways, and PD&E and design for new roadways, it is possible to analyze both the existing and future conditions to determine context classification of a roadway. For projects involving new roadways in planning and ETDM screening, multiple alternative alignments may be considered over larger areas. For these latter type of projects, a broader understanding of the context classification will be used to inform the planning process and development of alternatives.

To be able to utilize the context-based criteria in the ***FDM***, all projects must be informed by their roadway context classification. The context classification will be developed or confirmed at the beginning of each project phase, including planning, PD&E, and design. Each district can assign staff who will oversee the determination of context classification. It is recommended that an interdisciplinary team within each district help determine the context classification. For projects where FDOT currently coordinates with local governments, FDOT will coordinate with those local governments to determine context classification (see Chapter 3 for more information). The final determination of context classification will be made by FDOT. For smaller projects, such as traffic operations push-button projects, the context classification may be determined without additional local coordination (see Chapter 3 for more information). Refer to the ***Public Involvement Handbook***, ***FDM***, ***PD&E Manual***, and ***Project Management Handbook*** for guidance on local government coordination.

Existing Roadways and Proposed New Roadways in PD&E or Design Phases

Steps for determining the context classification for all projects on existing roadways, and for projects that propose new roadways and are in the PD&E or design phases include:

1. Identify Major Changes in Context

Utilize the distinguishing characteristics based on the Context Classification Matrix to determine if multiple context classifications are necessary due to significant changes in the type or intensity of uses located along the roadway. A context classification segment may be as short as two blocks or, where there is no defined block structure, a quarter-mile in length.

2. Evaluate the Primary Measures

A roadway segment must meet a majority of the primary measures defined for a context classification in order to be assigned that context classification. Table 2-2 describes the primary measures, methodology, and data sources associated with each measure. For the primary measures, two measurement areas — the block and the parcel — are used, as explained in Figures 2-3 and 2-4. The measurement areas used for each measure are identified in Table 2-2. Figure 2-5 through Figure 2-9 provide guidance for evaluating some of the primary measures.

For RRR, Safety, and Traffic Operations projects, each segment identified in step 1 can be evaluated using the primary measures based on existing conditions or future context. Qualifying projects in all phases for existing roadways will be evaluated using the future context of the primary measures. The future context should be clearly documented in a well-defined, community-supported and implementation-focused plan or in policies such as the land use element of the local comprehensive plan, zoning overlays, form-based codes, community redevelopment plans, or permitted development plans.

Qualifying Projects:
Roadway project types that qualify for ETDM screening, per the ***ETDM Manual*** Section 2.3.1 include:

- Additional through lanes which add capacity to an existing road
- A new roadway, freeway or expressway
- A highway which provides new access to an area
- A new or reconstructed arterial highway (e.g., realignment)
- A new circumferential or belt highway that bypasses a community
- Addition of interchanges or major interchange modifications to a completed freeway or expressway (based on coordination with FHWA)
- A new bridge which provides new access to an area, bridge replacements

Non-qualifying Projects:
Projects that do not go through ETDM screening.

An example of a high volume roadway that balances the needs of freight traffic, transit, and pedestrians and bicyclists of varying abilities.
Location: US 98, Polk County, FL
Source: KAI

The future desired conditions should be consistently documented across all appropriate local policies and should be well-understood and accepted by local stakeholders. In short, the future conditions should be those that are predictable and that will occur over an anticipated timeframe rather than visionary plans or broad goals and ideas that do not have a clear timeline for actual implementation. Use of a form-based code is one indicator that significant community discussion occurred on a future vision, and that future development is more likely to result based on the adopted form-based code.

3. Evaluate the Secondary Measures

In most cases, especially for RRR, safety, and traffic operations projects, primary measures are sufficient to understand and determine a roadway's context classification. Secondary measures can be used to further understand the context when there is no clear consensus on the context classification based on the primary measures. Secondary measures are also useful in cases where local municipalities have adopted a future vision for a place that is not consistent with the existing context classification. Table 2-3 describes the secondary measures and the methodology and data sources associated with each measure.

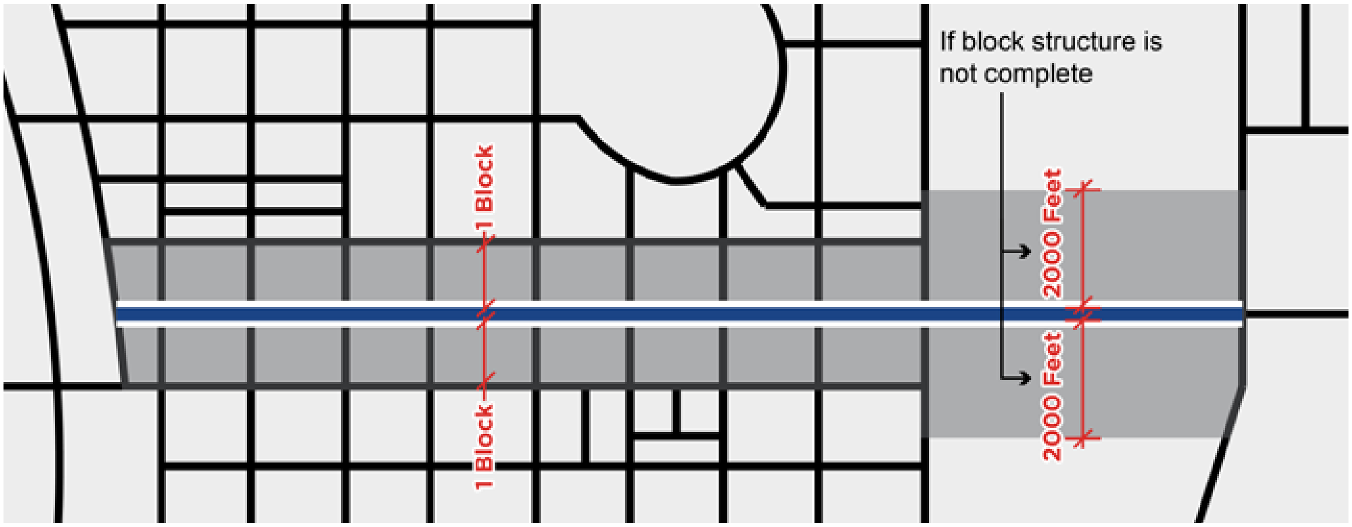
The secondary measures quantify the intensity of development. A roadway segment needs to meet only one of the two criteria, either population density or employment density, to be classified within a context classification. Zoning may show that the local municipality intends for the area to be developed into a more intense development form in the future, and therefore does not meet the existing population and employment densities, but will meet them in the future.

TABLE 2-2 PRIMARY MEASURES TO DEFINE CONTEXT CLASSIFICATION

Measure	Description	Methodology	Measurement Area*	Data Source**
Land Use	Land use mix for more than 50% of the fronting uses	Record based on existing or future adopted land uses.	Fronting parcels on either side of the roadway	Field review, GIS files, existing or future land use maps
Building Height	The range in height of the buildings for more than 50% of the properties	Record based on existing buildings or future permitted building height requirements based on land development regulations.	Fronting parcels on either side of the roadway	Field review, internet-based aerial and street view imagery, or land development regulations
Building Placement	Location of buildings in terms of setbacks for more than 50% of the parcels	Measure the distance from the building to the property line or future required building placement based on land development regulations (see Figure 2-5).	Fronting parcels on either side of the roadway	Field review, internet-based aerial and street view imagery, building footprint and parcel GIS files, or land development regulations
Fronting Uses	Buildings that have front doors that can be accessed from the sidewalks along a pedestrian path for more than 50% of the parcels	Record the percent of buildings that provide fronting uses or site design and lot layout requirements in land development regulations that require fronting uses (See Figure 2-6).	Fronting parcels on either side of the roadway	Field review or internet-based aerial and street view imagery, or land development regulations
Location of Off-street Parking	Location of parking in relation to the building: between the building and the roadway (in front); on the side of the building; or behind the building	Record location of off-street parking for majority of parcels or parking requirements based on land development regulations (see Figure 2-7).	Fronting parcels on either side of the roadway	Field review or internet-based aerial and street view imagery, or land development regulations
Roadway Connectivity: Intersection Density	Number of intersections per square mile	Calculate by dividing the total number of intersections by the area of the blocks along both sides of the street, excluding natural features and public parks; consider future roadway connectivity if an approved or permitted development plan is in place (see Figure 2-8).	The block on either side of the roadway; if the roadway and block structure is not complete, the evaluation area should extend 2000' on either side of the roadway	Street centerline GIS files or physical map, internet-based maps, plans showing programmed roadway projects, and permitted development plans
Roadway Connectivity: Block Perimeter	Average perimeter of the blocks adjacent to the roadway on either side	Measure the block perimeter for the blocks adjacent to the roadway on either side and take the average; consider future roadway connectivity if an approved - permitted development plan is in place (see Figure 2-9).	The block on either side of the roadway; if the roadway and block structure are not complete, the evaluation area should extend 2000' on either side of the roadway	Street centerline GIS files or physical map, internet-based maps, plans showing programmed roadway projects, and permitted development plans
Roadway Connectivity: Block Length	Average distance between intersections	Measure the distance along the roadway between intersections with a public roadway, on either side, and take the average; consider future roadway connectivity if an approved or permitted development plan is in place (see Figure 2-9).	Roadway	Street centerline GIS files or physical map, internet-based maps, plans showing programmed roadway projects, and permitted development plans

** The measurement area applies to each context classification segment. Evaluate each measure for each context classification segment. Where characteristics differ for each side of the street, use the characteristics for the side that would yield the higher context classification.*
*** Land use, zoning, streets, and other GIS data and maps are available from local government agencies, FDOT Efficient Transportation Decision Making (ETDM) Database, and regional agencies.*

FIGURE 2-3 MEASUREMENT AREA: THE BLOCK ON EITHER SIDE OF THE ROADWAY



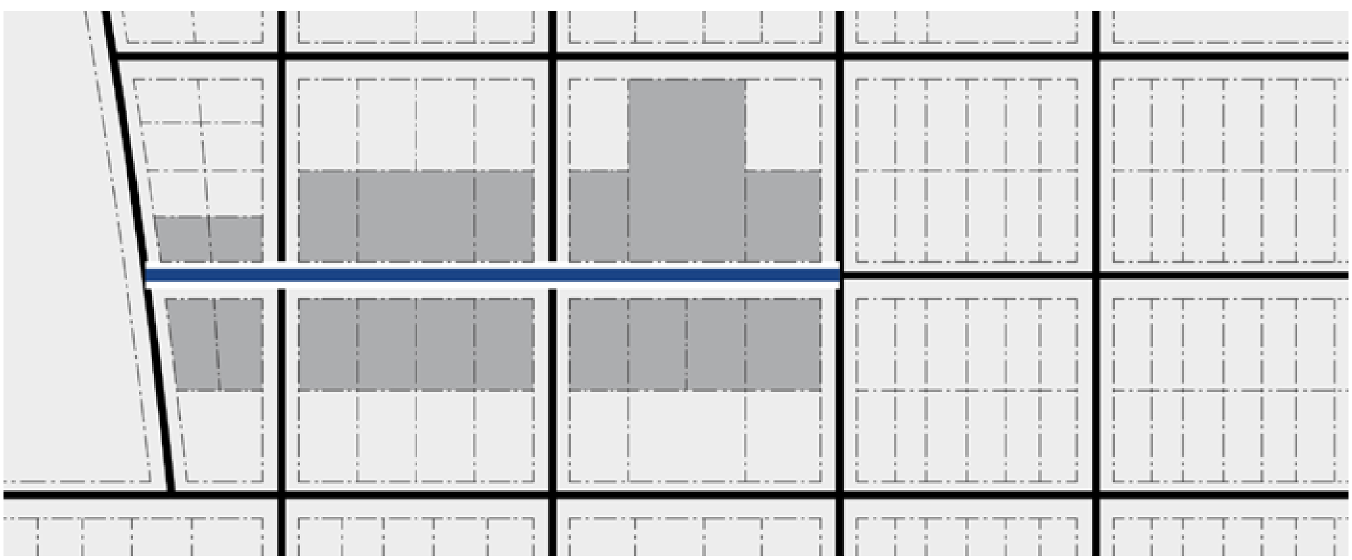
Measurement area = one block on either side of project roadway or 2000 feet, if block structure is not complete. A block is defined as the smallest area that is surrounded by public roadways on all sides.

Roadway centerline

Project roadway

One block on either side of project roadway

FIGURE 2-4 MEASUREMENT AREA: FRONTING PARCELS ON EITHER SIDE OF THE ROADWAY



Measurement area = fronting parcels on either sides of the project roadway.

Roadway centerline

Project roadway

One parcel on either side of project roadway

4/25/17 EXTERNAL DRAFT

FIGURE 2-5 BUILDING PLACEMENT

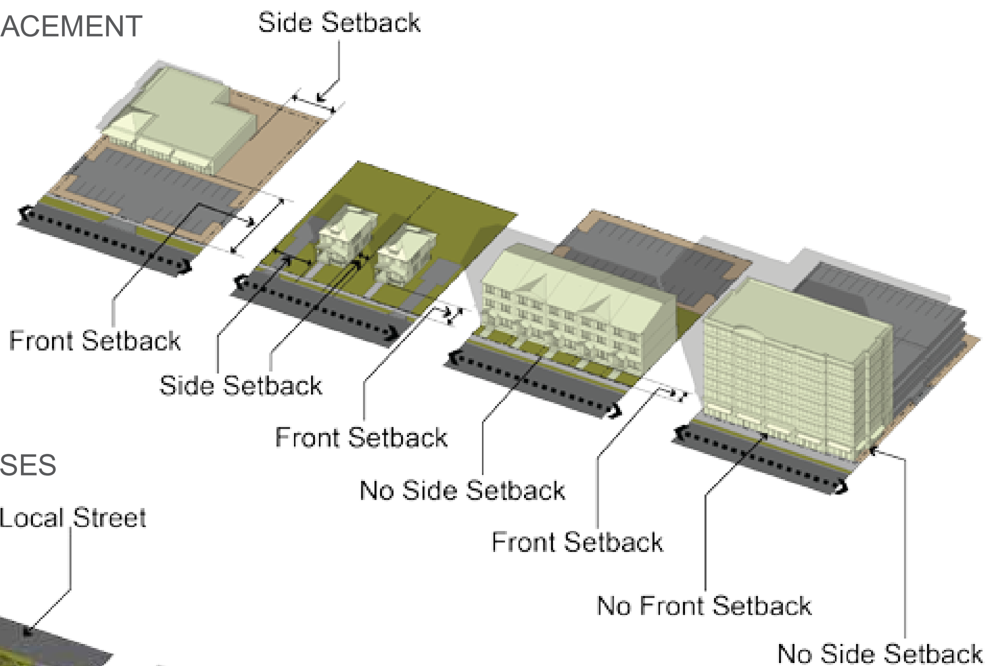


FIGURE 2-6 FRONTING USES

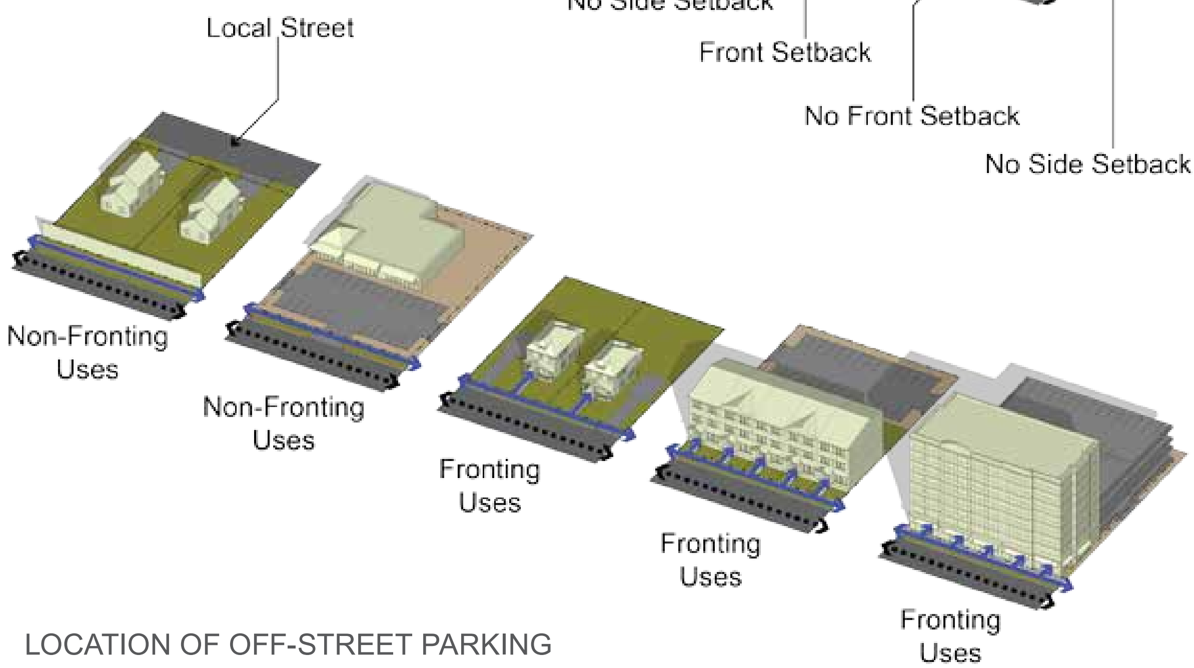


FIGURE 2-7 LOCATION OF OFF-STREET PARKING

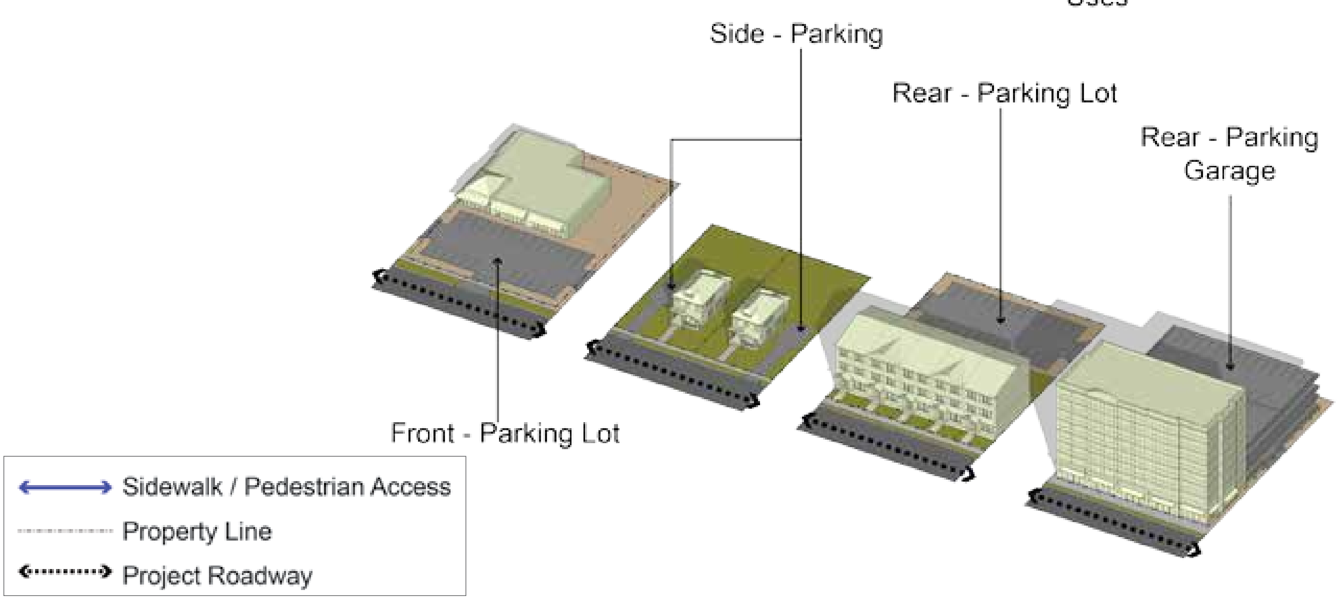
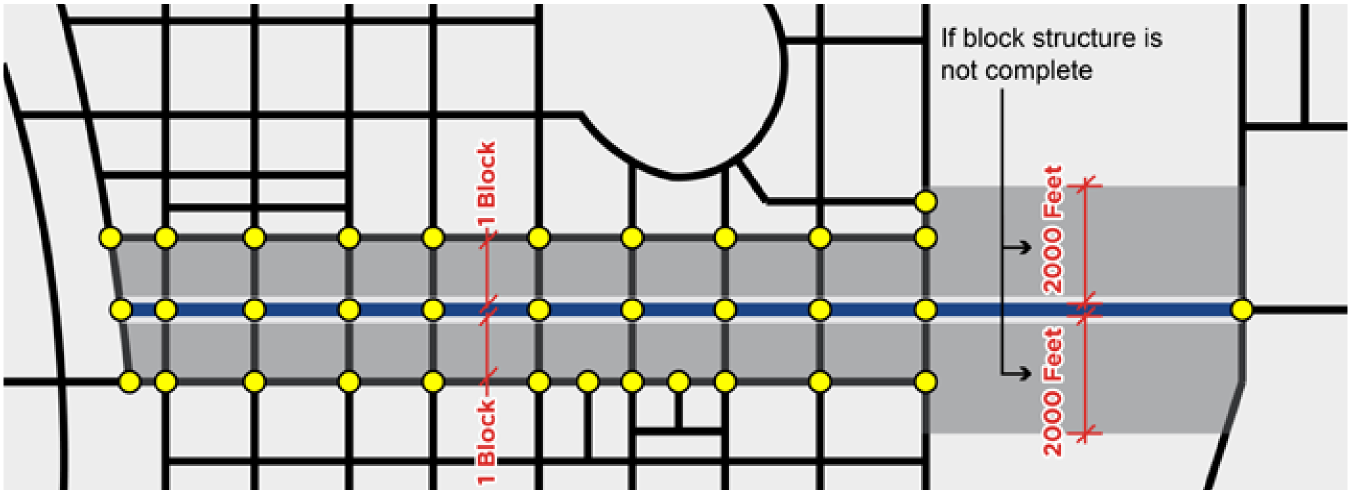


FIGURE 2-8 INTERSECTION DENSITY

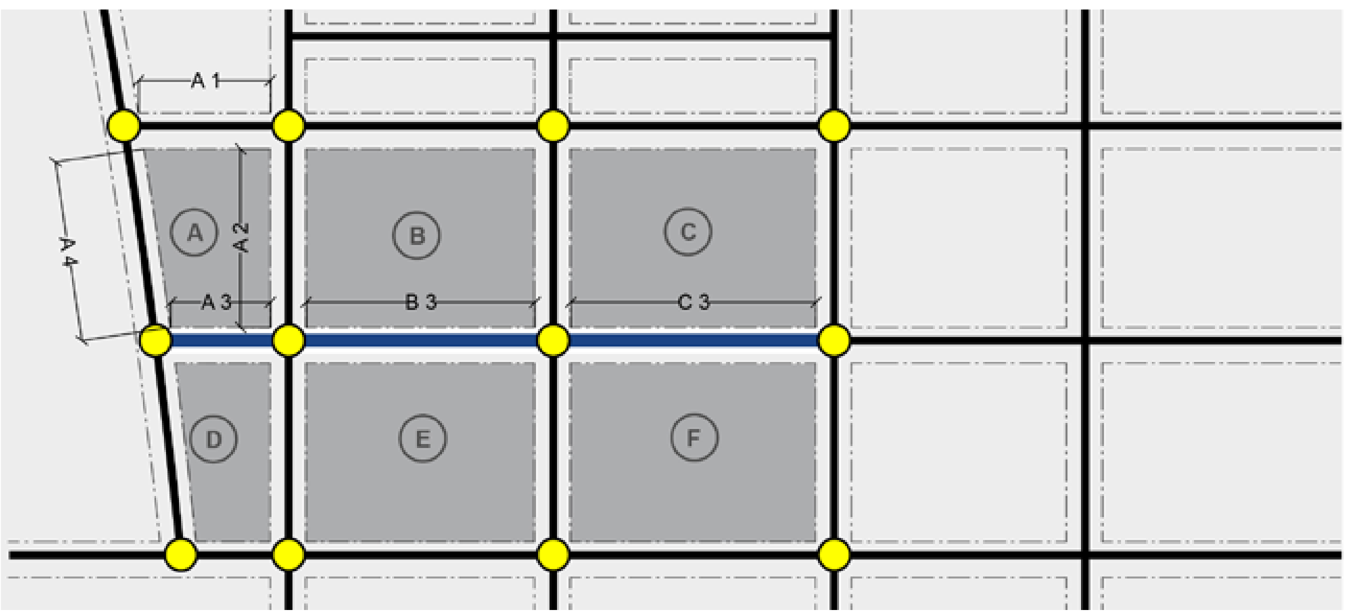


$$\textbf{\textit{Intersection Density}} = \frac{\text{Number of Intersections}}{\text{Total Area* of Blocks Along Both Sides of the Project Roadway}}$$

** If the block structure is not complete, the area will extend 2,000 feet from the right of way line of the project roadway.*

- *Roadway centerline*
- *Project roadway*
- *One block on either side of project roadway*
- *Intersection*

FIGURE 2-9 BLOCK PERIMETER AND BLOCK LENGTH



$$\textbf{\textit{Perimeter of Block A}} = A1 + A2 + A3 + A4$$

$$\textbf{\textit{Average Perimeter of Blocks A to F}} = \frac{\sum_{A}^{F} \text{Perimeter of Each Block}}{\text{Total Number of Blocks}}$$

$$\textbf{\textit{Average Block Length along the Roadway}} = \frac{A3 + B3 + C3}{\text{Total Number of Intersections Along the Roadway} - 1}$$

- *Roadway centerline*
- *Project roadway*
- *One block on either side of project roadway*
- *Intersection*

TABLE 2-3 SECONDARY MEASURES TO DEFINE THE CONTEXT CLASSIFICATION

Measure	Description	Methodology	Measurement Area	Data Source
Allowed Residential Density	Maximum allowed residential density by adopted zoning	Identify which zoning district the context classification segment is within, and record maximum allowed residential density for that particular zoning district by dwelling units per acre.	Parcels along either side of the roadway	Zoning code, land development regulations
Allowed Office/ Retail Density	Maximum allowed office or retail density in terms of Floor Area Ratio (FAR), or the ratio of the total building floor area to the size of the property on which it is built	Identify which zoning district the context classification segment is within, and record allowed commercial density for that particular zoning district. In some jurisdictions, allowed commercial density might be stated based on specific regulations limiting building height and minimum setbacks. Jurisdictions also regulate minimum parcel size allowed in each zoning district. Maximum allowable FAR for an area can be calculated using site design and height standards (see Appendix C for more details).	Parcels along either side of the roadway	Zoning code, land development regulations
Population Density (existing)	Population per acre based on the census block group	Download census information at the block group level. Divide the population of the census block group by the area of the block group. This area should exclude large natural features and public parks. If the roadway segment is the boundary between two block groups, average the population density of the block groups on either side of the roadway. If the roadway runs through multiple block groups, calculate the population density by the weighted average of roadway within each block group.	Census block group(s) that encompasses the roadway	US Census Bureau decennial data
Population Density (future)	Projected population per acre based on the regional travel demand model traffic analysis zone (TAZ)	Divide the population of the TAZ by the area of the TAZ. If the roadway segment is the boundary between two TAZs, average the population density of the TAZs on either side of the roadway. If the roadway runs through multiple TAZs, calculate the population density by the weighted average of roadway within each TAZ. Use 20-year forecast number from the regional travel demand model. If a regional travel demand model is not available, use University of Florida Bureau of Economic Research (BEBR) population projections.	TAZ(s) that encompasses the roadway. If TAZ population density is not available, use smallest geographic area available from BEBR projections.	Regional travel demand model from MPO, BEBR
Employment Density (existing)	Total number of jobs per acre	Use GIS to map the number of jobs within the blocks adjacent to the roadway utilizing the U.S. Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) website. Sum the number of jobs within the blocks along either side of the roadway, and divide by the area of the blocks. This area should exclude large natural features and public parks. Blocks can be imported as a shapefile or can be manually drawn on the census website.	One block area adjacent to either side of the roadway. If the block structure is not complete, the evaluation area should extend 500 feet from the property line along the roadway.	U.S. Census Bureau LEHD website
Employment Density (future)	Total number of jobs per acre	Divide the number of jobs of the TAZ by the area of the TAZ. If the roadway is the boundary between two TAZs, average the employment density of the TAZs on either side of the roadway. If the roadway runs through multiple TAZs, calculate the employment density by the weighted average of roadway within each TAZ. Use 20-year forecast number from the regional travel demand model. If a regional travel demand model is not available, use BEBR employment projections.	TAZ(s) that encompasses the roadway. If TAZ employment density is not available, use smallest geographic area available from BEBR projections.	Regional travel demand model from MPO, BEBR

Proposed New Roadways in Planning or ETDM Screening

During planning and ETDM screening for new roadway alignments, a broad understanding of the context classification will be used to inform the planning process. For example, area-wide studies such as the Future Corridors studies would use more general criteria to determine the context classification as compared to a corridor study on an existing roadway for the purposes of defining a concept to be advanced into PD&E or design.

For new roadways in planning and ETDM screening that include multiple alternative alignments, future land use conditions should be used to determine the context classification. The steps for determining the context classification for new roadways in planning or ETDM screening include:

1. Identify Major Changes in Context

Utilize the distinguishing characteristics to determine if multiple context classifications are necessary based on the Context Classification Matrix due to significant changes in the type or intensity of future land uses located along the roadway. The segment lengths should be based on the change in land use or other distinguishing features. Segment lengths can vary, and may be as short as two blocks or, where this is no defined block structure, longer than a mile.

2. Evaluate the Future Land Use

Evaluate the land use along the roadway based on the future land use element of the adopted local comprehensive plan using the land use description provided in Table 2-1.

3. Evaluate the Secondary Measures

Table 2-3 describes the secondary measures, and the methodology and data sources associated with each measure. Future population and employment densities can be quantified based on the data in the regional travel demand model. If no regional model is available, utilize BEBR estimates for future population and employment projections. A context classification segment only needs to meet one of the two criteria, either population density or employment density, to be classified within a context classification.

For the C3C-Suburban Commercial and C3R-Suburban Residential Context Classifications, population and employment densities vary widely throughout the State. Use the allowed residential and office/retail densities, the distinguishing characteristics, and the future land use listed in the Context Classification Matrix to determine if a roadway is within the C3C-Suburban Commercial or CR3- Suburban Residential Context Classification.

Bridges and Tunnels

The context classification of a bridge or tunnel should be based on the higher context classification of the segments on either end of the bridge or tunnel.

Special Districts

Special Districts (SD) are areas that, due to their unique characteristics and function, do not adhere to standard measures identified in the Context Classification Matrix. Examples of SDs include military bases, university campuses, airports, seaports, rail yards, theme parks and tourist districts, sports complexes, hospitals, and freight distribution centers. Due to their size, function, or configuration, SDs will attract a unique mix of users and create unique travel patterns. Planning and engineering judgment must be used to understand users and travel patterns and to determine the appropriate design controls and criteria for streets serving an SD on a case-by-case basis. If an FDOT district believes that an area does not fit within a context classification and an SD designation is required, the district should coordinate that with the State Complete Streets Program Manager.

DOCUMENTING CONTEXT CLASSIFICATION

Context classification will be determined on a project-by-project basis, and will be developed or confirmed at the beginning of each project phase, including planning, PD&E, and design. The districts will be responsible for collecting the context classification information for each project. This information may eventually be stored in an integrated roadway asset identification system, such as the FDOT Enterprise Application RCI, as well as the straightline diagram and the typical section data sheet.

RELATIONSHIP BETWEEN CONTEXT CLASSIFICATIONS AND CNU/SMARTCODE™ TRANSECT SYSTEM

The SmartCode™ is a form-based land development code that incorporates Smart Growth and New Urbanist principles. It is a unified development ordinance, addressing development at all scales of design, from regional planning to building signage. It is based on rural-to-urban transects, rather than separated-use zoning.

FDOT's context classifications generally align with the SmartCode™, with some critical distinctions. The SmartCode™ was developed to describe and codify desired future visions of development form by local jurisdictions. The key implementation tool for form-based codes is a regulating plan that clearly identifies different transect zones that would guide how future land use development should occur. In contrast, FDOT's context classifications are descriptive, rather than visionary, and therefore include all land areas and types found within the State of Florida, with less local specificity.

The general relationship between the zones used by the transect system and FDOT's context classification is outlined in Table 2-4.

TABLE 2-4 RELATIONSHIP BETWEEN FDOT CONTEXT CLASSIFICATIONS AND THE SMARTCODE™ TRANSECT SYSTEM

FDOT Context Classification	SmartCode™ Transect Zone	Description of SmartCode™ Transect Zone
C1 – Natural	T1- Natural Zone	Lands approximating wilderness conditions
C2 – Rural	T2-Rural Zone	Sparsely settled lands in open or cultivated states
C2T – Rural Town		No corresponding transect zone; may sometimes be coded as a small T5 or T4 hamlet or village
C3R – Suburban Residential **C3C – Suburban Commercial**	Coded as Conventional Suburban Development (CSD)	The SmartCode™ does not provide for this type of development pattern
FDOT Context Classification does not address this SmartCode™ Transect Zone	T3-Sub-urban Zone	Lower density, primarily single-family residential with very limited non-residential uses, in a limited dispersion and directly within walking distance of a higher transect. Transect Zone T3 will be considered C4-Urban General
C4 – Urban General	T4-General Urban Zone	Mixed use but primarily residential urban fabric in a variety of housing types and densities
C5 – Urban Center	T5- Urban Center Zone	Higher density mixed use buildings that accommodate retail, offices, rowhouses, and apartments
C6 – Urban Core	T6- Urban Core Zone	Highest density and height, with the greatest variety of uses, and civic buildings of regional importance; some T6 areas may belong to FDOT C5 because of FDOT population requirement
SD – Special District	Special Districts	Areas that, by their intrinsic size, function, or configuration, cannot conform to the requirements of any transect zone or combination of zones

TRANSPORTATION CHARACTERISTICS

The transportation characteristics define the role of a particular non-limited-access roadway in the transportation system, including the type of access the roadway provides, the types of trips served, and the users served. The transportation characteristics take into consideration regional travel patterns, freight movement, and SIS designation. Together with context classification, they can provide information about who the users are along the roadway, the regional and local travel demand of the roadway, and the challenges and opportunities of each roadway user.

FUNCTIONAL CLASSIFICATION

Functional classification defines the role a particular roadway plays in serving the flow of vehicular traffic through the network. Roadways are assigned to one of several possible functional classifications within a hierarchy, according to the character of travel service each roadway provides (see Table 2-5).[1]

The ***AASHTO A Policy on Geometric Design of Highways and Streets, 5th Edition (2011)*** presents a discussion of highway functional classifications. ***Florida Statutes, Title XXVI, Chapters 334, 335,*** and ***336,*** give similar definitions, and establish classifications for roadway design in Florida.

Complete Streets continue to recognize functional classification but also consider the context classification of the street as part of the total picture. For example, the relationship between functional classification and access needs may be less consistent in more urban context classifications where roadways serve a wider variety of purposes beyond moving motor vehicle traffic. In evolving suburban areas, retail and commercial business tend to locate along arterial roadways, requiring access and creating demands for short-distance and local trips that include vehicular trips as well as walking and bicycling trips. Transit service is also often located along arterial roadways, due to retail and commercial uses generating high demands for transit trips and the efficiency of providing higher levels of transit service along these roadways. At the same time, many state roadways travel through large and small (often historic) town centers that require multimodal mobility and access in order to thrive. Therefore, the context classification provides an important layer of information that complements functional classification in determining the transportation demand characteristics along a roadway, including typical users, trip length, and vehicular travel speeds.

TABLE 2-5 ROADWAY FUNCTIONAL CLASSIFICATION AND ROLE IN THE TRANSPORTATION SYSTEM

Roadway Classification	Role in the Transportation System
Principal Arterial	Serves a large percentage of travel between cities and other activity centers, especially when minimizing travel time and distance is important.
Minor Arterial	Provides service for trips of moderate length, serves geographic areas that are smaller than their higher arterial counterparts, and offers connectivity to the higher arterial system.
Collector	Collects traffic from local streets and connects them with arterials; more access to adjacent properties compared to arterials.
Local	Any road not defined as an arterial or a collector; primarily provides access to land with little or no through movement.

** This Handbook does not address limited-access facilities.*

For non-limited-access roadways, the ***FDM*** provides design criteria and standards based on both context classification and functional classification.

1 Federal Highway Administration, "Highway Functional Classification Concepts, Criteria and Procedures."

CONTEXT CLASSIFICATION AND STREET USERS

The context classification informs planners and engineers of the types of users and the intensity of use expected along the roadway. For example, in the C6-Urban Core Context Classification, there will be a higher number of pedestrians, bicyclists, and transit users than in a C2-Rural Context Classification. Therefore, reduced speeds, signal spacing, crossing distances, lane widths, and other design elements such as bicycle facilities, on-street parking, and wide sidewalks should be provided to increase the safety and comfort of bicyclists, pedestrians, and transit users. For the C2-Rural Context Classification, vehicles and freight are primary users; however, bicyclists and pedestrians are accommodated with bike lanes, paved shoulders, or sidepaths. A state roadway in C2-Rural Context Classification is expected to have higher speeds, wider lanes, and lower levels of traffic delay.

When determining the roadway typical section to be used, give appropriate consideration for all users of the roadway. Include required elements associated with the context classification of the roadway. The ***FDM*** contains criteria to be used for each context classification.

HOW TO IDENTIFY ROADWAY-SPECIFIC TRANSPORTATION TRAVEL DEMANDS

While context classification and functional classification can provide general guidelines for the type and activity level of different users, additional information can assist in obtaining a more thorough understanding of the needs of all the intended users. The anticipated users of a roadway and the travel patterns of those users should be determined well before the design phase of a project, and are best explored during the planning and design scoping phase.

The ***Traffic Forecasting Handbook*** documents data collection efforts to understand vehicular travel patterns. Table 2-6 provides a menu of data sources that could be useful in identifying different needs for different users. Not all of the data presented in Table 2-6 will be required for all projects. The data collected for a project should be tailored to the scale, purpose, and needs of a project.

Depending on the scale, purpose, and needs of the project, the following are some examples of questions that could augment the analysis to better understand transportation travel demand and needs for all users:

- **Land Uses:** What pedestrian, bicycle, or transit generators are located along the roadway? Are there large shopping destinations? Large employers? Public facilities? Are there visitor destinations? How might existing land use patterns change based on approved or planned development? Is there a redevelopment plan for the area? What land use changes are planned or anticipated to occur?
- **Vehicular Trip Types:** What percentage of the vehicular trips are local? What is the average trip length? Is the roadway part of the SIS?
- **Travel Patterns:** Are there unique travel patterns or modes served by the corridor? Will new or emerging transportation services or technologies influence trip-making characteristics (e.g., rideshares, scooters, interregional bus service, bikeshare)?
- **Safety Data:** How many and what types of crashes are occurring along the roadway?
- **Types of Pedestrians:** Are there generators or attractors that would suggest that younger or older pedestrians, or other special user groups, will be using the roadway (e.g., schools, parks, elderly care facilities, assisted living centers)?
- **Types of Bicyclists:** Is the roadway a critical link for the local or regional bicycle network? Does the roadway connect to or cross trails or bicycle facilities? Are bicyclists using the roadway to access shopping, employment, or recreational destinations?
- **Transit:** What type of transit service exists or is planned for the area? Where are transit stops located? Can pedestrians reach these stops from either side of the street without significant diversion of their trip? Are transit stops accessible using the network of existing bicycle and pedestrian facilities?
- **Freight:** What is the percentage and volume of heavy trucks using the roadway? Are there destinations that require regular access by heavy trucks or other large vehicles? Is the roadway part of a designated freight corridor? Where does loading and unloading occur along the roadway?

- **Demographics:** Based on census data, are there areas of high transit, pedestrian, or bicyclist demand? These include areas overrepresented, when compared to the general population, by elderly or low-income residents, or households without access to automobiles.

The anticipated users of a roadway and the travel patterns of those users should inform the purpose and needs of a project.
Location: Fletcher Avenue, Tampa, FL
Source: FDOT

TABLE 2-6 EXAMPLES OF POTENTIAL DATA TO DETERMINE USER NEEDS BY MODE

Mode	Data	
Pedestrian	• Location of signalized pedestrian crossings • Location of marked or signed pedestrian crossings • Posted and operating speeds • Vehicular traffic volumes • Existing sidewalk characteristics (location, width, pavement condition, obstacles or pinch points) • Intersection ramps and alignment/Americans with Disabilities Act (ADA) compliance • Utilities location	• Existing landscape buffer and shade trees • Pedestrian counts • Crash data • Lighting levels • Existing and future land use, building form and site layout, development scale and pattern • Existing and future pedestrian generators (e.g. schools, parks)
Bicyclist	• Local and regional bicycle network • Posted and operating speeds • Vehicular traffic volumes • Number of vehicular travel lanes • Location of bicycle parking • Bicycle user type (see Chapter 4) • Bicyclist counts	• Crash data • Location of destinations • Lighting levels • Pavement condition • Existing and future land use, building form and site layout, development scale and pattern
Car	• Design Traffic (Existing and projected Average Annual Daily Traffic (AADT), K-factor (K), directional distribution (D), and traffic growth projections) • Trip lengths; origin/destination patterns • Turning movement counts • Posted and operating speeds • Signal timing	• Location of parking • Crash data • Lighting levels • Pavement condition • Existing and future land use, building form and site layout, development scale and pattern
Transit	• Existing and future transit routes and stops • Transit service headways • Location and infrastructure at transit stops • Sidewalk connection to transit stops • ADA compliant transit stops • Existing and projected ridership (route or stop level)	• Existing and future transit generators and attractors • Type of transit technology • Trip lengths, origin/destination patterns
Freight	• Designated truck routes • Truck volumes • Vehicle classification counts	• Existing and future location of industrial land uses or other generators of freight trips • Freight loading areas/truck parking

STRATEGIC INTERMODAL SYSTEM AND CONTEXT CLASSIFICATION

The SIS was established in 2003 to enhance Florida's economic competitiveness by focusing state resources on the transportation facilities most critical for statewide and interregional travel. The three SIS objectives identified in the ***SIS Policy Plan*** are:

- **Interregional Connectivity:** Ensure the efficiency and reliability of multimodal transportation connectivity between Florida's economic regions and between Florida and other states and nations.
- **Intermodal Connectivity:** Expand transportation choices and integrate modes for interregional trips.
- **Economic Development:** Provide transportation systems to support Florida as a global hub for trade, tourism, talent, innovation, business, and investment.

The SIS includes the State's largest and most significant commercial service and general aviation airports, spaceports, public seaports, intermodal freight terminals including intermodal logistics centers, interregional passenger terminals, urban fixed guideway transit corridors, rail corridors, waterways, military access facilities, and highways. The SIS includes three types of facilities: hubs, corridors, and connectors.

SIS Highway corridors and connectors traverse varying context classifications. Given the purpose and intent of the SIS, the requirements of a particular context classification may not always align with the function of the SIS highway. In the case of interstates and limited-access facilities, the function of the roadway is considered complete. For all others, there is a need to balance the safety and comfort of users who live and work along the SIS facility with interregional and interstate freight and people trips through the area. This is consistent with the intent of the ***SIS Policy Plan***, which specifically calls for the need to improve coordination with regional and local transportation and land use decisions by:

- Better reflecting the context of the human and natural environment;
- Balancing the need for efficient and reliable interregional travel with support for regional and community visions;
- Developing multimodal corridor plans that coordinate SIS investments with regional and local investments; and
- Leveraging and strengthening funding programs for regional and local mobility needs such as the Transportation Regional Incentive Program, Small County Outreach Program, and Small County Road Assistance Program.

This balance could mean that other throughput options to the SIS facility (e.g., a bypass or express lanes) are studied and considered if redesigning the currently designated roadway is needed to conform to the context classification. The ***SIS Policy Plan*** outlines that SIS improvements should consider the context, needs, and values of the communities serviced by the SIS, which may include flexibility in design and operational standards. Most importantly, communication with all parties involved is key to determining the best solution to realize the intent of both the SIS and a Complete Streets approach within a community.

The ***FDM*** provides design standards for facilities on the SIS. Appendix D presents proposed design speed ranges for SIS facilities. Roadways located on the SIS require coordination with the District SIS Coordinator during the determination of the facility's context classification.

Accommodations of freight vehicles is an important part of Complete Streets.
Location: Estero Boulevard, Fort Myers Beach, FL
Source: Rick Hall

ENVIRONMENTAL CHARACTERISTICS

Environmental characteristics, including the social, cultural, natural, and physical aspects of an area, play a role in the planning, design, and maintenance of transportation projects. FDOT is focused on responsible stewardship of Florida's environmental resources. The FDOT Mission states that FDOT will provide a safe transportation system that "enhances economic prosperity and preserves the quality of our environment and communities." Aligning with this mission, FDOT considers the social, cultural, natural, and physical impacts of its investments throughout the planning and design process.

Transportation projects that utilize Federal transportation dollars (or that require a Federal environmental permit such as wetlands or water quality) are subject to review under the ***National Environmental Policy Act of 1969 (NEPA)***. FDOT developed the PD&E process to address how NEPA is evaluated for Federally funded transportation projects in Florida, including the identification and assessment of environmental characteristics for all projects. Public involvement and agency coordination is part of the PD&E process. Chapter 3 of this Handbook discusses how the ETDM and PD&E processes will incorporate the Complete Streets approach. Detailed information on FDOT procedures for environmental review can be found in the following documents:

- PD&E Manual
- ETDM Manual
- Public Involvement Handbook
- Sociocultural Effects Evaluation Process
- Cultural Resource Management Handbook

CONTEXT CLASSIFICATION RELATIONSHIP WITH EXISTING HANDBOOKS AND PROCESSES

The FDOT Complete Streets context-based design approach is compatible with and supported by national guidance documents. The following section describes the relationship between FDOT context classification and contexts defined in existing FDOT and national manuals and handbooks.

AASHTO A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS

AASHTO recognizes that different places have different characteristics with regard to density and type of land use, density of street and highway networks, nature of travel patterns, and the ways in which these elements are related. ***AASHTO A Policy on Geometric Design of Highways and Streets*** provides design standards based on urban and rural areas, as defined by the FHWA. FHWA identifies urban areas as those places, within boundaries set by the responsible state and local officials, having a population of 5,000 or more. Urban areas are comprised of:

- **Urbanized Areas**, designated as population of 50,000 or more by the U.S. Census Bureau.
- **Small Urban Areas**, designated as population between 5,000 and 49,999, and not within any urbanized area.

Rural encompasses all population, housing, and territory not included within an urban area.

For the purpose of funding considerations and other processes and procedures, FDOT will continue to define urban and rural areas following the FHWA criteria. For design criteria and standards for non-limited-access roadways, FDOT utilizes context classification in the ***FDM***. There is no direct relationship between context classification and FHWA's definition of urban and rural. In general, C4-Urban General, C5-Urban Center, and C6-Urban Core will be located in the FHWA urban areas. C1-Natural and C2-Rural will be primarily located in the FHWA rural areas. C2T-Rural Town, C3C-Suburban Commercial, and C3R-Suburban Residential may be found in FHWA-urban or rural areas.

QUALITY/LEVEL OF SERVICE HANDBOOK

The ***FDOT Quality/Level of Service Handbook (Q/LOS)*** and its accompanying software are intended to be used by engineers, planners, and decision makers in the development and review of street users' quality/level of service and capacity at generalized and conceptual planning levels. The ***Q/LOS Handbook*** recognizes that motorists have different thresholds for acceptable delay in rural versus urban areas. Four broad area-type groupings are used in ***Q/LOS Handbook*** and accompanying software:

- **Urbanized Areas** — Areas that meet FHWA's definition of Urbanized Areas. These consist of a densely settled core of census tracts and census blocks that meet minimum population density requirements, along with adjacent densely settled surrounding census blocks that together encompass a population of at least 50,000 people. The ***Q/LOS Handbook*** further identifies areas with population over 1,000,000 as **Large Urbanized Areas**.
- **Urban Areas** — Areas with a population between 5,000 and 49,999 (mostly used to distinguish developed areas that are not urbanized).
- **Transitioning Areas** — Areas generally considered as transitioning into urbanized/urban areas or areas over 5,000 population and not currently in urbanized areas. These areas can also at times be determined as areas within a Metropolitan Planning Area, but not within an urbanized area. These areas are anticipated to reach urban densities in a 20-year horizon.
- **Rural Areas** — Areas that are not urbanized, urban, or transitioning. Rural areas are further classified as rural developed areas and cities or developed areas with less than 5,000 population; and rural undeveloped areas in which there is no or minimal population or development.

A direct, one-to-one relationship does not exist between the classification system used in the ***Q/LOS Handbook*** and the context classifications, but generally C1-Natural, C2-Rural, and C2T-Rural Town areas will be identified as rural areas or transitioning areas, while C4-Urban General, C5-Urban Center, and C6-Urban Core will be identified as urban. C3C-Suburban Commercial and C3R-Suburban Residential can fall into any of the Q/LOS categories.

Future editions of the ***Q/LOS Handbook*** will be revised to be consistent with the FDOT context classification.

ROADWAY CHARACTERISTICS INVENTORY

The RCI is a database of information related to the roadway environment maintained by FDOT. The database includes information on a roadway's features and characteristics. Feature 124-Urban Classification, Feature 125-Adjacent Land Classification, Feature 145-LOS Input Data, and Feature 481-Highway Maintenance Classification describe land use contexts in different ways.

These categories are not related to the context classification system detailed in this chapter. FDOT is considering recording context classification information in RCI at the time when state roadways are evaluated through FDOT projects. If this occurs, RCI information may be a starting point for future projects in evaluating a roadway's context classification.

For more information on the RCI, refer to the ***RCI Features and Characteristics Handbook***.

ACCESS MANAGEMENT CLASSIFICATION

Access management classification reflects the desired access management standards to be followed for each state roadway. These are standards for restrictive medians, median opening separation, and driveway separation. The ranges are from 00-07 and 99. Class 01 reflects the highest amount of access management control (freeways), and Class 07 the lowest. Class 07 is usually found on suburban built-out roadways. Class 99 refers to a special corridor access management plan. Refer to ***Florida Administrative Code (FAC), Rule Chapter 14-97.003, Access Management Classification System and Standards*** for more information on access management classification.

No direct correlation can be made between access management classification and context classification. It can be generally stated that higher intensities of use, including C2T-Rural Town, C4-Urban General, C5-Urban Center, and C6-Urban Core, as well as roadways with established land use patterns, may require less restrictive access management. In these context classifications, frequent intersections, smaller blocks, and a higher degree of connectivity and access support the multimodal needs of the area. Beyond the context classification, the role of the roadway in the transportation system and safety considerations must also be taken into account to determine access management needs.

The Systems Planning Office is currently studying the relationship between existing access management practices and the implementation of Complete Streets. The Systems Planning Office is reviewing general recommendations to bring the access management classifications documented in ***Administrative Rule 14-97*** into a closer relationship with the FDOT context classifications. This process will take some time, as it will require an administrative rule change and review of multiple sections by FDOT, the public, and other stakeholders (such as the roadside development industry) before it can be finalized.

03 Process for Implementing Complete Streets

Complete Streets are not a specific type of project, but rather are an approach to ensuring that projects are pursued based on their contexts. This means that a Complete Streets approach will be implemented consistently for all non-limited-access projects — from capital projects qualifying for ETDM screening to RRR, traffic operations, and safety projects. The successful implementation of Complete Streets requires the identification of a roadway's context classification early in the project development process. Context classification also informs all phases of a project: planning, PD&E, design, construction, and maintenance.

Chapter 2 provides the Context Classification Matrix (see Table 2-1) and outlines the methodology for using it. This chapter details how the context classification will be determined for different types of FDOT projects. Transportation planning related to Complete Streets occurs at the regional level and at the project level. Regional transportation planning is typically conducted by MPOs/TPOs, whereas project level transportation planning can be performed by the FDOT, MPOs/TPOs, or local governments. Local governments are responsible for the land use planning decisions that are intrinsically linked to transportation planning decisions.

REGIONAL TRANSPORTATION PLANNING AND COMPLETE STREETS

Regional transportation planning includes the development of LRTPs by MPOs/TPOs where an outcome is the identification of a series of transportation needs across a region. Traditionally, the LRTP process focuses on the deficiencies of the system in relation to automobile and freight mobility as defined by a regional travel demand model. In a Complete Streets approach, the needs of all users, including non-motorized users and transit users are incorporated into the identification of potential problems to be addressed. Many MPOs/TPOs and FDOT districts are already beginning to use this latter approach.[1]

LRTP needs are often defined in terms of specific solutions such as adding more lanes to an existing roadway or building a new roadway. A successful Complete Streets approach would involve more planning and analysis to determine the actual needs of all users based on a roadway's context classifications, prior to programming a solution for that roadway. This planning analysis is best addressed as part of project-level planning.

LRTP processes are often structured to outline capital projects (e.g. new roadways, new transit service, or widening of roadways), but do not always explore maintenance and smaller scale projects (e.g. resurfacing, maintenance, safety, or intersection improvements). However, many MPOs/TPOs have started to include maintenance and Transportation Systems Management and Operations (TSMO) projects on their Priority Lists. Including these latter set of projects in MPO Priority Lists ensures that the right type of funding is identified early in the project development process to support transportation improvement that addresses the roadway's context and users.

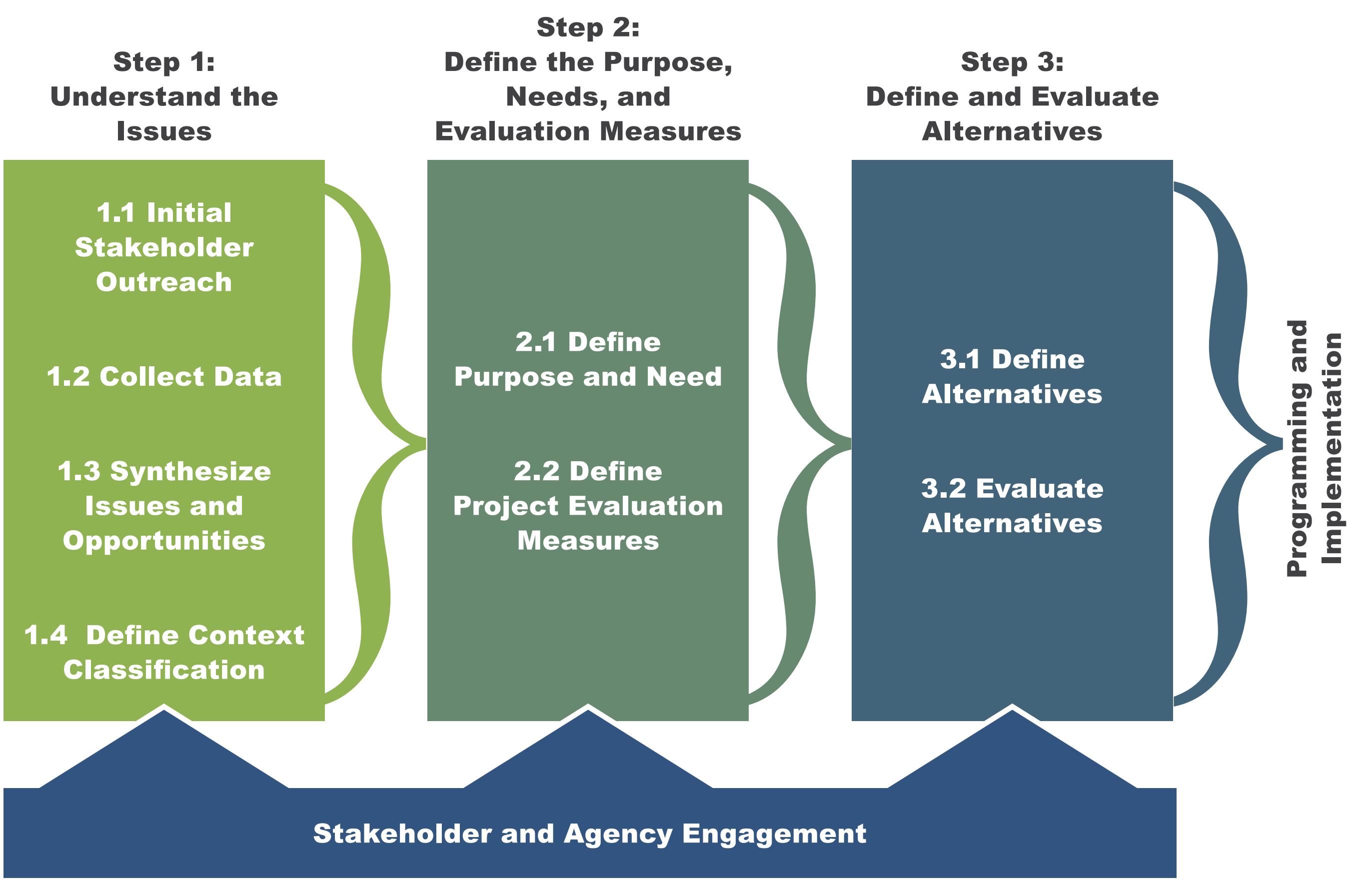
1 For example, FDOT District 5 is using multimodal transportation and land use screening criteria to identify potential corridor planning studies. These planning studies are meant to better define the transportation opportunities and challenges of all users of a roadway.

PROJECT PLANNING AND COMPLETE STREETS

Project-level transportation planning is conducted to understand the needs of the anticipated users of a roadway and to explore the full range of potential solutions to address those needs. This level of planning typically occurs prior to the PD&E phase and offers an early opportunity to incorporate Complete Streets principles and to establish the framework for a Complete Streets approach for the life of the project. The key steps in project planning are illustrated in Figure 3-1, and include:

1. **Understand the Issues.** This includes collecting and analyzing data, and gathering input from stakeholders to better understand the issues for each user. The context classification will be defined in this step.
2. **Define the Purpose, Needs, and Evaluation Measures.** Informed by the findings in Step 1, this step defines the overall purpose of the transportation investment and the specific needs of the roadway for each of the intended users of the roadway. Project evaluation measures should also be developed that will be used to determine how well different potential alternative solutions meet the needs of all users.
3. **Define and Evaluate Alternatives.** Based on the needs for each user, this step defines a range of alternatives. These alternatives should be analyzed to compare how well each one meets the needs of all intended users.

FIGURE 3-1 COMPLETE STREETS PLANNING APPROACH



Source: Adapted from FDOT District 5 Multimodal Corridor Planning Guidebook

PROJECT EVALUATION MEASURES

Project evaluation measures allow project teams to evaluate alternatives based on the purpose and needs of a project and the roadway's context classification(s). Currently, FDOT utilizes vehicular LOS and safety measures for roadway and area studies. Some projects go beyond these LOS measures and safety, and evaluate accessibility and comfort for all users. Multimodal project evaluation measures can be applied to all projects, including planning studies, new construction, reconstruction, RRR projects, traffic operations, and safety projects.

Project evaluation measures should be tailored to understand each alternative's ability to respond to the project's documented purpose and needs. The extent and type of evaluation may vary depending on the time and resources available — RRR projects, for instance, will have a shorter timeframe than a planning study or new construction project. Judgment should be used in determining the appropriate level of evaluation. Table 3-1 provides a menu of potential project evaluation measures based on Complete Streets best practices. This list is not intended to be exhaustive or prescriptive. The list draws from industry best practices, including the latest guidance and research from FHWA, such as the ***FHWA Guidebook for Developing Pedestrian and Bicycle Performance Measures***. Evaluation measures should relate to a project's purpose, needs, and objectives. An example is shown in Table 3-2.

In addition to the evaluation measures listed in Table 3-1, other project measures could be applied over the length of a roadway or at an area-wide level. Some of these include:

- Person throughput (i.e. the total capacity for a roadway based on vehicular, transit, bicycle, and pedestrian throughput)
- Network completeness (i.e. the continuity of sidewalk and bicycle facilities)
- Street connectivity
- Person-miles traveled
- Access to jobs, housing, retail, civic facilities, and recreational facilities
- Mode split

The evaluation measures above and those presented in Table 3-1 focus on transportation-related elements. Projects may also require detailed evaluation of potential impacts and benefits related to environmental, socio-cultural, economic, and human elements as described in the ***PD&E Manual***. Refer to the ***PD&E Manual*** for details on those evaluation measures.

TABLE 3-1 EXAMPLES OF POTENTIAL PROJECT-LEVEL EVALUATION MEASURES BY MODE

Vehicular

- Vehicular LOS (refer to the ***Q/LOS Handbook***)
- Volume-to-capacity ratio
- Estimated potential crash reduction utilizing crash modification factors (CMFs)
- Travel-time reliability
- Peak and off-peak travel time between key origins and destinations
- Project cost and cost effectiveness

Freight

- Travel-time reliability
- Ability to serve freight origins and destinations
- Peak and off-peak travel time
- Project cost and cost effectiveness

Transit

- Transit LOS (refer to the ***Q/LOS Handbook***)
- Number of ADA-compliant transit stops
- Travel time
- Travel time reliability
- Percent of population within the study area that are within 1/2 mile network distance from a transit stop
- Project cost and cost effectiveness
- Weekday span of service

Bicycle

- Bicycle LOS (refer to the ***Q/LOS Handbook***)
- Bicycle Level of Stress analysis
- Percent of roadway served by an exclusive bicycle facility
- Estimated potential crash reduction utilizing CMFs
- Percent of roadway with bicycle facilities meeting current standards for roadway context
- Bicycle delay at intersections
- Travel time
- Project cost and cost effectiveness

Pedestrian

- Pedestrian LOS (refer to the ***Q/LOS Handbook***)
- Pedestrian Level of Stress analysis
- Percent of sidewalk coverage/ linear feet of sidewalk
- Average or range of distances between marked pedestrian crossings
- Percent of ADA-compliant pedestrian crossings
- Average or range of pedestrian delay at intersections
- Presence of pedestrian refuge islands
- Sidewalk continuity along the roadway and throughout the surrounding network
- Presence of shade
- Adequate pedestrian-level street lighting
- Estimated potential reduction in crashes utilizing CMFs
- Travel time
- Project cost and cost effectiveness

TABLE 3-2 EXAMPLES OF HOW PROJECT EVALUATION MEASURES CAN BE LINKED TO PROJECT PURPOSE AND NEEDS

Purpose	Needs	Objectives	Evaluation Measures
Serve anticipated future travel demand	An additional 10,000 vehicular trips are projected along the roadway in 20 years	Increase capacity for regional trips	Peak-hour travel times from point A to point B
Provide safe travel options along roadway	Number and percent of rear-end crashes in the last 5 years is higher than statewide averages of similar facilities	Decrease rear-end crashes	Potential reduction in rear-end crashes
	Number of fatal and serious injury crashes in the last 5 years is higher than statewide averages of similar facilities	Decrease the severity of automobile crashes	Potential for reducing the severity of crashes
	Number of fatal and serious injury pedestrian crashes in the last 5 years is higher than statewide averages of similar facilities	Decrease number and severity of pedestrian crashes	Linear feet of roadway with adequate levels of pedestrian lighting
Provide multimodal mobility options that support local economic development goals	10 percent of households in the study area do not have access to an automobile	Increase mobility through walking and bicycling	Percentage of roadway with sidewalks and bicycle facilities meeting current standards for context classification
		Increase ease of transit use	Number of ADA-compliant transit stops
			Percent of population reached within 0.25 miles of improved transit stops
	A new activity center along a major state roadway will introduce an additional 3,000 new daily vehicular trips	Maintain vehicular mobility	Overall street connectivity
			Intersection LOS
			Travel-time reliability
Support freight access to businesses	Retail and restaurants along the corridor require daily deliveries	Allow efficient local area delivery	Presence of loading and unloading zones near businesses

Local Vision and Economic Development Goals

Beyond the project evaluation measures identified in Table 3-1, investments should be aligned with local and regional land use and economic development plans and visions to the maximum extent feasible. Developing a roadway design that is consistent with the context classification will help ensure that investments support the local vision. Additionally, the planning process should seek the input of stakeholders, weigh alternatives against a broader community vision, and work to obtain stakeholder buy-in.

Balancing Competing Needs

The context classification informs the types of users and the intensity of uses within each context classification. For almost every project, the needs of users can be addressed in multiple ways. The alternatives developed to respond to those needs should explore a variety of methods and means for meeting them.

Sometimes, due to limited right of way, difficult choices may have to be made for how to serve different users along a roadway. For example, in a higher intensity area such as a C5-Urban Center or C6-Urban Core, local business owners might like to prioritize on-street parking over a dedicated bicycle facility. One way to address such a case would be to look beyond the roadway and consider the larger network in the development of alternatives. The FDOT Complete Streets policy is founded on the concept of a complete network. Where it is not possible to provide similarly high-quality facilities for all modes along all FDOT roadways, it may be necessary to rely upon parallel networks to provide additional travel options.

The network approach requires close coordination between FDOT and local communities. In the example of prioritizing on-street parking over a dedicated bicycle facility, analysis should be informed by local vision, availability of parallel routes, and the local partner's willingness to invest in and maintain parallel facilities. A decision could also be informed by technical analysis of bicycling trip origins and destinations, the need for bicycling connectivity, safety data, and user input. In many cases, there may not be one clear-cut alternative that equally serves users at the same level of service. Selecting a well-vetted set of evaluation measures that relate to the project purpose and needs will frame a discussion and decision-making process and provide information to help FDOT, the public, and local officials understand the trade-offs among the alternatives. Potential measures to evaluate the trade-offs in this example might include:

- Understanding the trade-offs between impacts on safety versus convenience of users (e.g., asking motorists to park and walk an extra block to access destinations, versus asking bicyclists to ride in mixed traffic);
- Economic impact (understanding the potential economic development impact of convenient on-street parking spaces versus a bicycle facility adjacent to businesses); and
- How each alternative supports other defined project needs.

Figures 3-2 and 3-3 illustrate examples of how trade-offs among alternatives can be communicated to decision makers and stakeholders.

Additional guidance for defining the project purpose and needs, and developing and evaluating alternatives that accommodate each user, will be incorporated in the ***PD&E Manual***. The guidance will also be

FIGURE 3-2 EXAMPLE OF HOW TO COMMUNICATE RESULTS OF EVALUATING ALTERNATIVES FOR EACH MODE

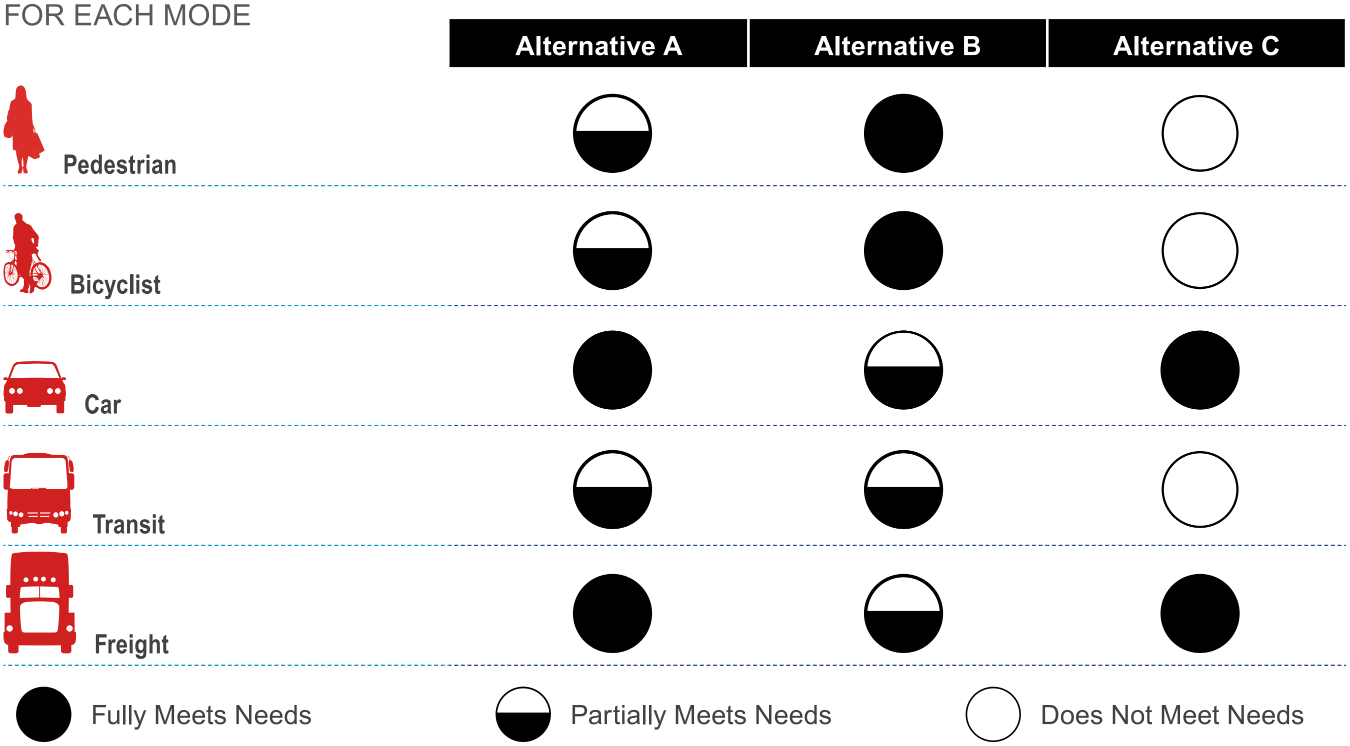
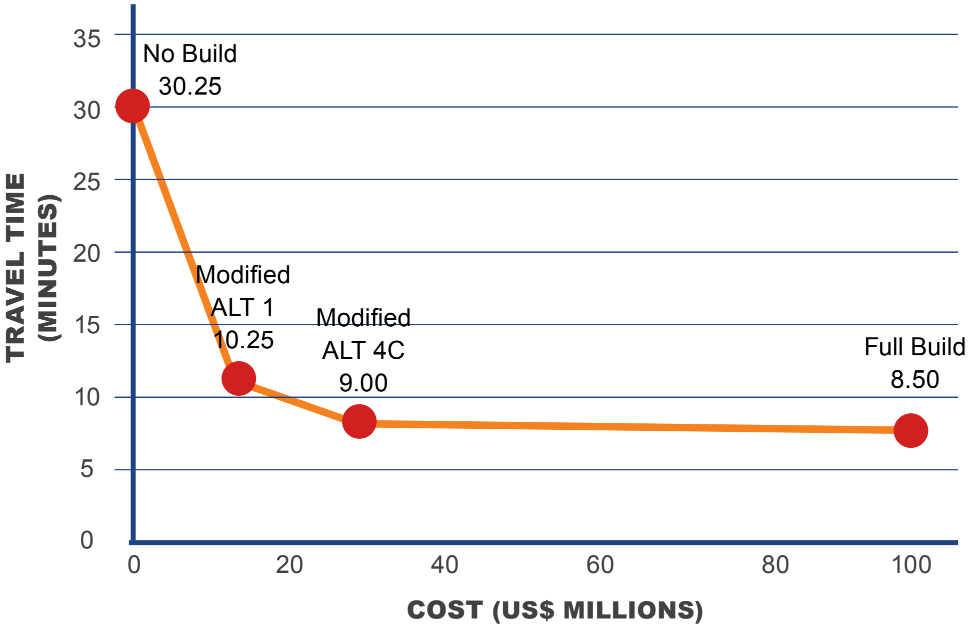


FIGURE 3-3 EXAMPLE OF ILLUSTRATING TRADE-OFFS BETWEEN ALTERNATIVES



Source: Marshalls Creek Study, PennDOT Smart Transportation Case Study

included in the FDOT Alternative Corridor Evaluation (ACE) process which is performed prior to the PD&E phase (see Part 1, Chapter 4, of the PD&E Manual). FDOT uses the ACE process to identify, evaluate, and eliminate alternative corridors on certain types of projects that qualify for ETDM screening prior to the PD&E phase (see Chapter 2 for definition of qualifying and non-qualifying projects).

FDOT District 5 has developed guidance on best practices that can be used during the planning phase of a project. This guidance, the ***Multimodal Corridor Planning Guidebook***, provides some best practices and examples of defining the problem, purpose and needs, and developing alternatives that consider the perspectives of all users.

DEFINING CONTEXT CLASSIFICATION IN THE FDOT PROCESS

The context classification of a roadway provides guidance on the anticipated users of the roadway. Understanding the needs of all users at these early phases assures that the project scope of work will define all necessary improvements and that the budget is adequate for design, right of way, and construction. The context classification and users will inform key design elements, such as the design speeds, lane widths, and types of pedestrian, bicycle, transit, and freight facilities to be included in the design concept.

All FDOT projects on non-limited-access roadways require the evaluation and documentation of context classification early in the life of a project. The context classification will be defined or confirmed at the beginning of each project phase, including planning, PD&E, and design. For RRR projects, which have a more compressed timeframe, the steps to identify context classification may need to be taken ahead of time (where possible) or abbreviated. Context classification evaluation is incorporated as follows:

- For Non-Qualifying Projects: During the work program development cycle and prior to the development of the design scope of work; and
- For Qualifying Projects: During the ETDM screening.

NON-QUALIFYING PROJECTS

For projects not going through ETDM screening, Figure 3-4 outlines the potential steps needed to determine the context classification prior to developing the scope of work for the design phase. This process is not intended to be prescriptive, but rather outlines the key actions needed to define the context classification so that such actions can be incorporated into existing scoping processes. It is imperative that the context classification and corresponding users of the roadway are determined prior to defining the scope of work and developing the concept(s) to be designed. Each district can assign staff who will oversee the determination of context classification. Multiple groups within each district should be involved in determining the context classification (such as Design, Program Management, Intermodal Systems Development, Planning, and other relevant technical experts, as needed). On projects where FDOT currently coordinates with local governments, FDOT will coordinate with local governments to determine context classification. The final determination of context classification will be made by FDOT. Refer to the ***Public Involvement Handbook***, ***FDM***, ***PD&E Manual***, and ***Project Management Handbook*** for guidance on local government coordination.

RRR projects will be designed and implemented consistently with the context classification evaluation defined in this Handbook and the design criteria outlined in the ***FDM***. Any design elements required by the ***FDM*** criteria that are not typically provided through funding sources for resurfacing activities should be supplemented with additional Federal, State, or local funds. FDOT project managers should coordinate with the Work Program staff in their district to assemble a funding package to meet specific project needs. Additional guidance regarding the eligibility of these funds can be found in the ***Work Program Instructions***.

The general steps to determine the context classification and the scope of work for non-qualifying projects are shown in Figure 3-4 and described as follows:

STEP 1: Identify the candidate project.

STEP 2: Collect and assess data, including SIS designation if applicable, to understand the existing conditions and inform the context classification. The data requirements and methods for determining the context classification are described in detail in Chapter 2 of this Handbook.

STEP 3: Identify a preliminary context classification along with a list of the intended user needs of the roadway.

STEP 4: Engage local governments (for projects that currently involve local governments) and other FDOT technical experts and conduct field reviews, discuss the context classification, and develop preliminary concept(s). It may be beneficial to document context classification discussions through a formal agreement. Appendix E presents a draft sample local agreement, to be used and edited at the discretion of the district.

STEP 5: Confirm and document the context classification and share draft concept(s) and preliminary budget estimates with local governments, when appropriate.

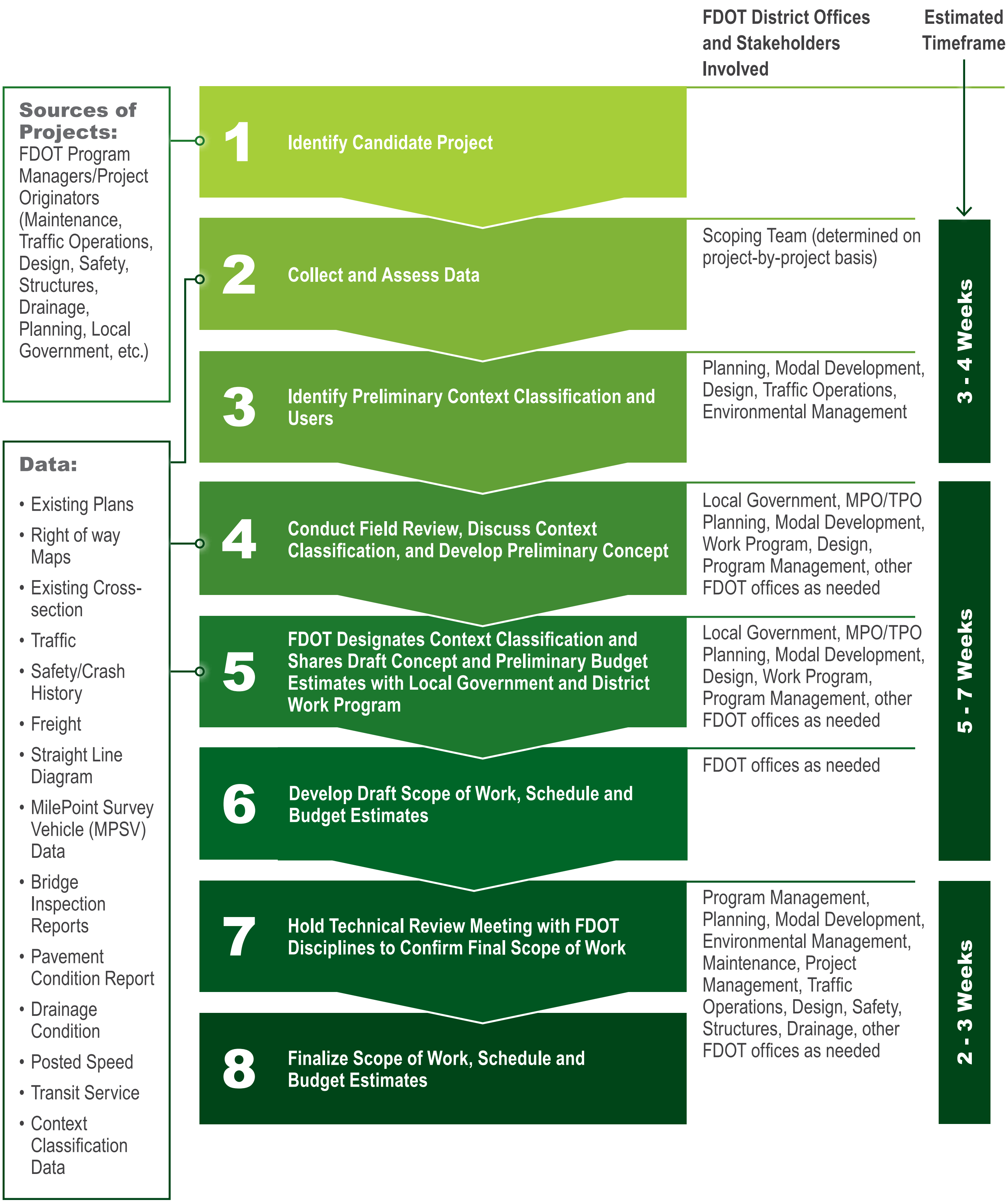
STEP 6: Develop the draft scope of work, schedule, and budget estimates for the draft concept(s). If the proposed project involves work beyond what is required by the design criteria in the ***FDM***, initiate agreements with local governments.

STEP 7: Hold internal technical review meetings with FDOT district staff to confirm the final scope of work.

STEP 8: Finalize the scope of work and develop the schedule and budget estimates for the design phase. If local agreements are needed per Step 6, these are then finalized.

Multimodal elements can be incorporated through improvements as part of RRR projects, such as re-striping to narrower vehicle lanes to accommodate buffered bike lanes.
Location: SR A1A, Fort Lauderdale, FL
Source: FDOT

FIGURE 3-4 EXAMPLES OF STEPS TO DEFINE THE CONTEXT CLASSIFICATION AND SCOPE OF WORK FOR NON-QUALIFYING PROJECTS



Multimodal elements of projects should be addressed on all state roadways based on the context classification of the roadway, including RRR, traffic operations, and safety projects. The primary purpose of this process is to facilitate an understanding of the context classification and users before a concept, scope of work, and budget are determined. The general steps shown in Figure 3-4 show a comprehensive evaluation, but smaller projects such as push-button traffic operations may not require an extensive data collection effort or local government engagement.

When multimodal features are required to be built or expanded to meet FDOT criteria, the funding source for those elements must be identified as part of the scoping process. Identifying multimodal elements and potential additional funding needs early in the scoping process will enable funding types and budgets to be assigned appropriately to complement the RRR funding for each project.

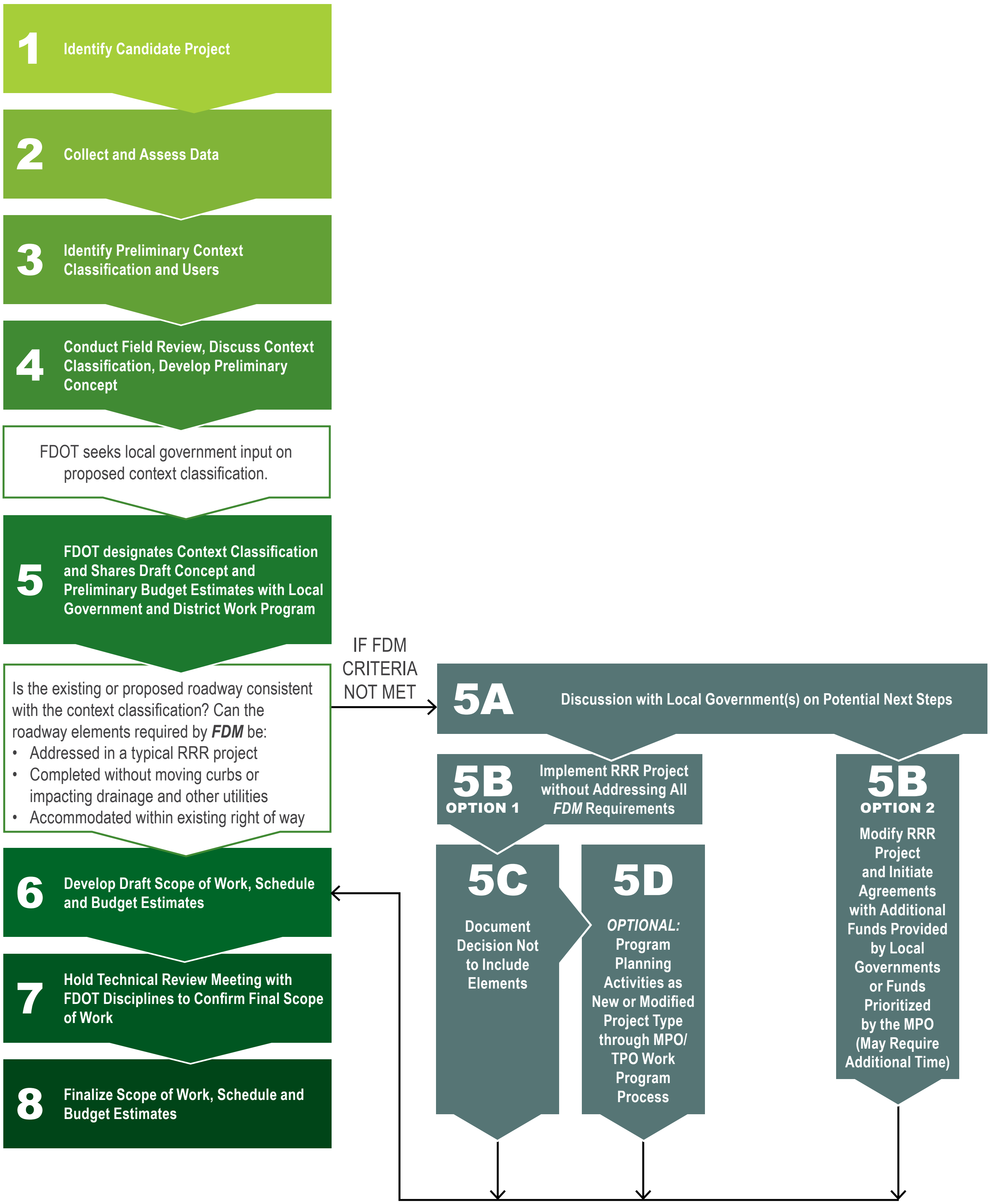
FDOT anticipates that some RRR projects will take place on roadways that are either misaligned with the context classification, or where FDOT and local governments do not agree on the context classification. For example, if an RRR project in a C5-Urban Center Context Classification requires that pedestrian or bicycle facilities be provided based on ***FDM*** criteria and there is no space to accommodate them within the existing curb line or right of way, then discussions within FDOT and with local partners may be needed to determine how each of the roadway users can be accommodated. During the discussion, it will be determined if the RRR project should continue and the timing of the RRR in relationship to potential planning activities (refer to Figure 3-5). The following are two likely scenarios that may occur as a result. Other scenarios are conceivable, but these are anticipated to be the most likely:

- FDOT and the partners may agree that the RRR project will proceed within the existing constraints, and separate planning activities might occur to determine how to incorporate the ***FDM***-required elements as a separate project. The level of planning effort will vary on a project-by-project basis. If all elements required in the ***FDM*** cannot be implemented immediately due to significant right of way limitations or impact to utilities, FDOT district staff will provide documentation through the design variation and exception process.
- FDOT and the partners may agree that the RRR project can incorporate the necessary ***FDM*** criteria, and that the RRR project will either be implemented within the original work program schedule or implemented later than the original intended work program timeframe. This decision will be coordinated with District Work Program staff.

If additional guidance or suggestions are desired, the district may contact the State Complete Streets Program Manager for assistance.

Coordination with local partners can inform context classification and help the project team better understand all the users and needs of a roadway.
Location: Clematis Street, West Palm Beach, FL
Source: FDOT

FIGURE 3-5 POTENTIAL APPROACH FOR RRR PROJECTS WHEN ELEMENTS OTHER THAN RESURFACING ARE REQUIRED FOR THE ROADWAY TO MEET ***FDM*** DESIGN STANDARDS



QUALIFYING PROJECTS SCREENED THROUGH ETDM SCREENING

Projects identified by MPOs and TPOs for inclusion in LRTPs are usually screened through FDOT's ETDM screening process. Examples of such qualifying projects might include additional through lanes which add capacity to an existing road (see Chapter 2 for definition of qualifying projects). The ETDM screening process provides agencies and other stakeholders with the opportunity for early input and consideration of the environment in transportation planning. The ETDM screening process is composed of the Planning Screen and the Programming Screen. The Planning Screen best occurs when considering projects for inclusion or prioritization within a Cost Feasible LRTP. The Programming Screen supports development of the ***FDOT Five-Year Work Program*** (see the ***ETDM Manual*** for details describing the ETDM screening process).

The ETDM Planning Screen and Programming Screen assist in identifying potential environmental constraints and are used to establish and communicate the project context. The ETDM screening contains the Preliminary Environmental Determination (PED) which summarizes the FDOT understanding of environmental issues on the project. The Environmental Technical Advisory Team (ETAT) and other stakeholders participating in the ETDM screening review the PED and provide comments to FDOT.

ETDM Planning Screen and Context Classification

The EDTM Planning Screen occurs prior to and as input into the LRTP/Cost Feasible Plan. The Planning Screen is conducted by either the FDOT District Environmental Management Office or the MPO/TPO, depending on the roadway type and resource constraints of the MPO/TPO.

The preliminary context classification will be identified in the PED and provided for review and comment to the ETAT (State and Federal agencies and tribes) and local governments for review. The results of this screening, including comments received during the screening, are documented in the Planning Screening Summary Report. Figure 3-6 illustrates the steps in the ETDM Planning Screen, including the step at which the context classification could be determined.

ETDM Programming Screen and Context Classification

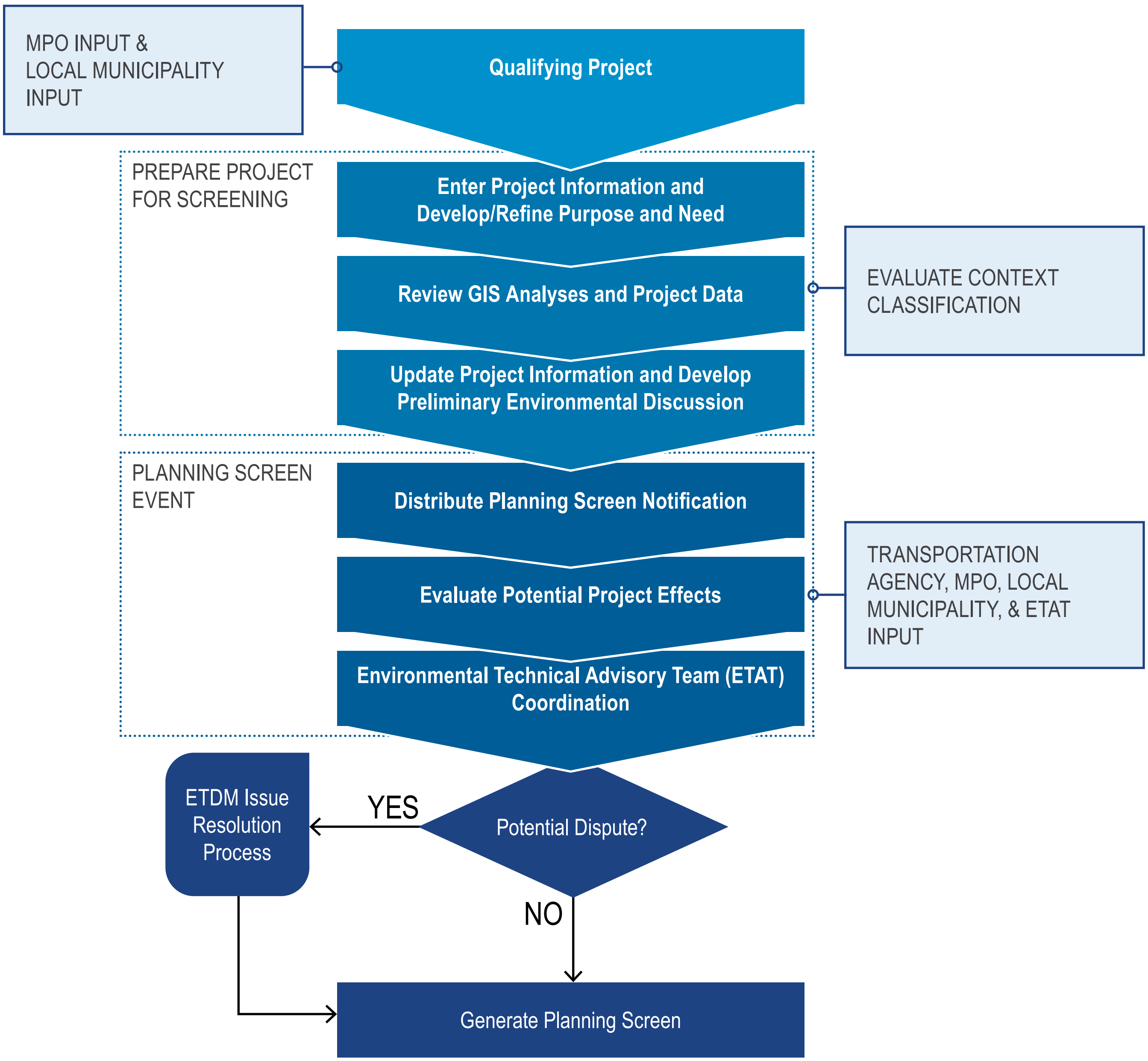
The ETDM Programming Screen is completed prior to a PD&E Study. The context classification will be identified or updated during this screening. As with the Planning Screen, the context classification will be documented as part of the PED and reviewed by the ETAT, with results incorporated into a report (the Programming Screening Summary Report). Chapter 4 of the ***ETDM Manual*** provides more details on the Programming Screen. Figure 3-7 illustrates the point at which the context classification will be reviewed and updated as part of the ETDM Programming Screen.

PD&E and Context Classification

The use of the context classification continues during the PD&E process. The context classification for the project will be stated in the project description. The context classification determined during ETDM screening may be refined following coordination with local governments or if additional land use data becomes available during the PD&E study. Criteria used to determine the context classification will be documented into the existing land use and future land use. The context classification and the intended users will be documented in the Preliminary Engineering Report or other related engineering documentations.

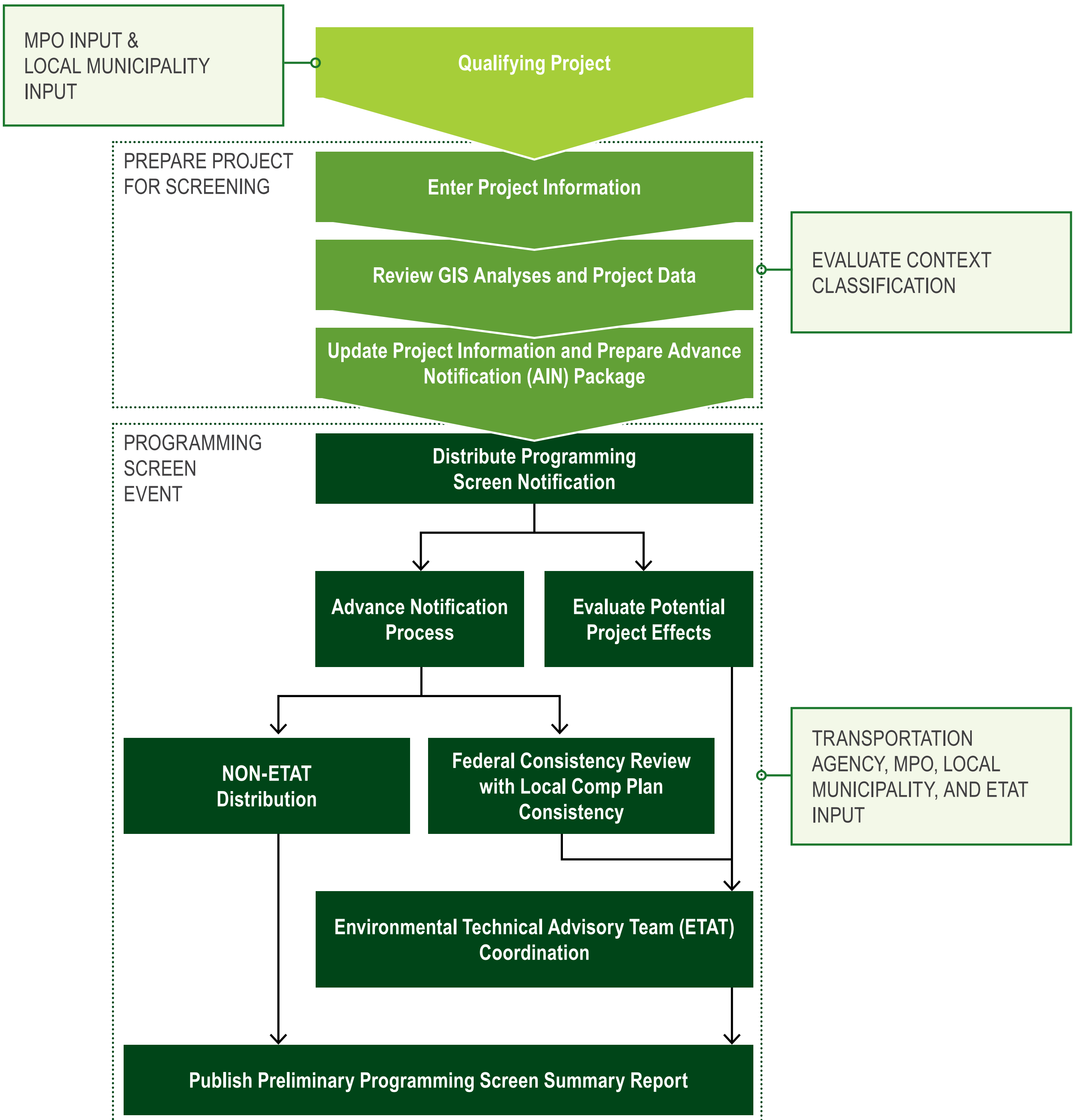
Public engagement in PD&E supports the application of context-based Complete Streets approach.
Source: KAI

FIGURE 3-6 ETDM PLANNING SCREEN AND CONTEXT CLASSIFICATION



Source: Adapted from the FDOT PD&E Manual

FIGURE 3-7 ETDM PROGRAMMING SCREEN AND CONTEXT CLASSIFICATION



Source: Adapted from the FDOT PD&E Manual

IMPLEMENTATION

The determination of a roadway's context classification is required in order to utilize the criteria in the ***FDM***. The context-based criteria in the ***FDM*** will be required on projects that have not begun design by January 1, 2018, and may be applied to active design projects at the discretion of the district. For PD&E projects, implementation of context classification and the ***FDM*** is required for projects that have the Public Hearing scheduled in April 2018 or later. The 2017 ***Plans Preparation Manual (PPM)*** will apply through the completion of the PD&E studies for projects that have the Public Hearing scheduled prior to April 2018. Criteria contained in the ***FDM*** may also be applied earlier at the discretion of the district.

FUNDING AND MAINTENANCE

There is no separate FDOT funding category or FDOT funding source specifically for Complete Streets. Projects that require modifications to comply with criteria associated with the context classification will be funded through the funding programs currently available to Federal, State, and local roadways, as appropriate. The existing MPO funding process will remain the same.

FDOT will fund the maintenance of aspects of transportation projects that are necessary to comply with adopted FDOT design criteria contained in the ***FDM***. If local governments or other partners would like to include features that go beyond what is required by FDOT design criteria, funding for the construction and maintenance of those additional components will be the responsibility of the local government or local partner, as defined in a local maintenance agreement. Current elements being maintained by local governments or other partners as part of local maintenance agreements (e.g. traffic signals on state roadways) will continue to be maintained per the agreements in place.

04

Design Considerations for Complete Streets

FDOT's Complete Streets approach calls for selecting design controls to reflect the roadway context and intended outcomes, and then applying appropriate design criteria based on these design controls. This chapter discusses:

- Context-based design controls and how they influence multimodal travel; and
- Effects of the transportation network on roadway design.

This Handbook is not intended to be a design manual; rather, it offers guidelines for a successful design approach. Refer to the ***FDM*** for the latest context-based design criteria. FDOT also has a number of handbooks and guidance documents that provide information on tools for implementing Complete Streets. A list of guidance documents is included in Appendix F.

Consider the range of users in roadway design.
Location: Commonway Road, Orlando, FL
Source: KAI

CONTEXT-BASED DESIGN CONTROLS

For implementation of context-based planning and design, the ***FDM*** and other FDOT manuals will provide a range of design controls based on FDOT's context classification and functional classification. The key context-based design controls are:

- Design users
- Design vehicle
- Design speed
- Traffic characteristics

These design controls are described in this Handbook and discussed in detail in the ***FDM*** and other manuals.

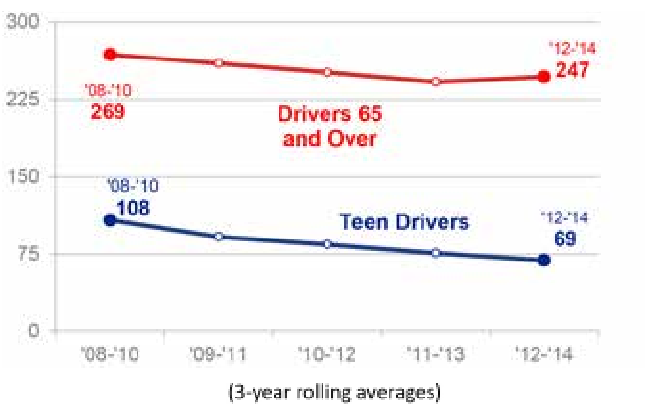
DESIGN USERS

Design users are those anticipated users of a roadway (including drivers, pedestrians, bicyclists, and freight handlers) that form the basis for each roadway's design. Roadway users' varying skills and characteristics introduce a variety of human factors that can influence users' driving, walking, and bicycling capabilities. Design users should be taken into consideration when determining design details such as sidewalk widths, type of bicycle facility, design speed, signal timing and spacing, location of pedestrian crossings, number of vehicular travel lanes, intersection width, and lighting.

Driver

Driver performance informs roadway design. Designers should pay attention to roadway elements that can influence the safety of at-risk drivers, particularly in areas with higher concentrations of these at-risk populations. FDOT has identified teen drivers (age 15 to 19) and aging drivers (age 65 and up) as at-risk drivers. The 2010 census reports that these age groups make up almost one-quarter of Florida's population. Fatalities involving teen drivers and aging drivers have historically accounted for approximately one-quarter of all Florida traffic fatalities (see Figure 4-1).[1] As compared to other drivers, older drivers tend to process information more slowly, and have slower reaction time, deteriorated vision and hearing, and limited depth perception.[2] For additional information, refer to the FHWA publications ***Highway Design Handbook for Older Drivers and Pedestrians*** and ***Guidelines and Recommendations to Accommodate Older Drivers and Pedestrians***.

FIGURE 4-1 FATALITIES IN FLORIDA INVOLVING AT-RISK DRIVERS



Source: FDOT 2015 Performance Report

Pedestrian

Pedestrians are among the most vulnerable roadway users. In 2014, pedestrians made up 24 percent of Florida's transportation fatalities (see Figure 4-2).[3] Pedestrian characteristics that serve as design controls include walking speed, walkway capacity, and the needs of persons with disabilities. The 2010 census reports that 19 percent of the population in the United States had a disability in 2010.[4] Age plays an important role in how pedestrians use a facility, as older adults are the most vulnerable pedestrians.[5]

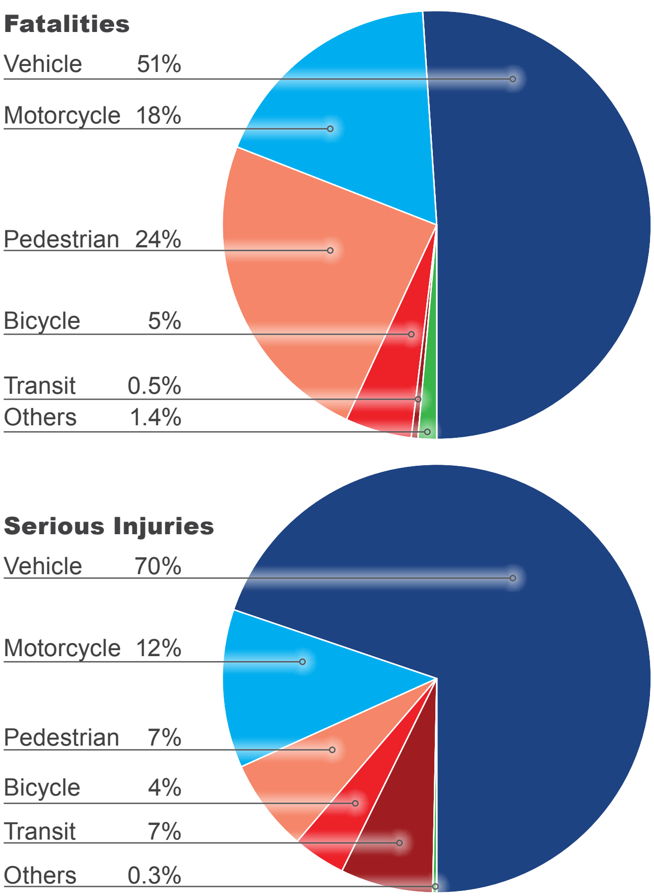
The Complete Streets approach considers the pedestrian design user to represent people with a range of abilities, including the elderly, children, and persons with disabilities. This is especially true in context classifications where a higher level of pedestrian activity is expected. People with varying abilities require a continuously paved level surface on both sides of the roadway, a network that allows multiple and direct routes to destinations, short crossing distances, and protection from the weather. Several design elements have been found to assist elderly pedestrians, including simple designs, accommodation for slower walking speeds, and adequate median refuge islands at wide intersections. For additional information, refer to the FHWA publications ***Highway Design Handbook for Older Drivers and Pedestrians*** and ***Guidelines and Recommendations to Accommodate Older Drivers and Pedestrians***.

Consider people with a range of abilities.
Location: West Central Avenue, Lake Wales, FL

1 Florida Department of Transportation, 2015 Performance Report, 2015, p. 1-10, http://www.dot.state.fl.us/planning/performance/2015/2015PerformanceReport.pdf.
2 American Association of State Highways and Transportation Officials, A Policy on Geometric Design of Highways and Streets, 6th Edition, 2011, pp. 2-43.

3 Florida Department of Transportation, 2015 Performance Report, (2015), p. 1-6.
4 United States Census Bureau, "Nearly 1 in 5 People Have a Disability in the U.S., Census Bureau Reports," July 25, 2012, https://www.census.gov/newsroom/releases/archives/miscellaneous/cb12-134.html.
5 "Aging Road User," accessed September 22, 2016, http://www.safeandmobileseniors.org/AgingRoadUser.htm#Bicyclists.

FIGURE 4-2 FLORIDA TRANSPORTATION FATALITIES AND SERIOUS INJURIES BY MODE, 2014



Source: FDOT 2015 Performance Report

The needs of bicyclists vary by age, experience, and trip purpose. Location: US 17/92, Orlando, FL (right), SR A1A, Deerfield Beach, FL (top left), and Alton Road, Miami Beach, FL (bottom left)

Bicyclist

Bicyclists pose different safety and geometric considerations and must also be considered in roadway design. Bicyclist characteristics vary by skill level, age, experience, preferences and trip purpose. Bicycling trip purposes are broadly categorized into utilitarian trips and recreational trips:

- Utilitarian trips are non-discretionary trips needed as part of a person's daily activity, such as commuting to work or shopping.
- Recreational trips include trips for exercise or social interaction. Experienced riders or those who travel regularly, and casual riders or infrequent users all make recreational trips.

Data on trip purpose and experience level provide some information on bicyclist characteristics and preferences. Long distance and experienced adult riders tend to:

- Be more comfortable riding with vehicles on streets. Some will prefer to ride in mixed traffic on lower speed streets, while others will prefer dedicated bicycle facilities
- Ride at speeds up to 25 mph on level ground[6]

Casual, infrequent, and younger riders tend to:

- Prefer a physical separation from vehicular traffic
- Ride on the sidewalk
- Achieve travel speeds of around 8 to 12 mph
- Bicycle shorter distances

The bicyclist design user should reflect the long distance and experienced rider in all context classifications, and the casual and younger rider where possible. The need to accommodate casual and younger riders might be indicated by:

- Origins and destinations that generate bicycle trips along or in close proximity to a roadway, such as schools, parks, high-density residential housing, shopping centers, and transit stops
- Roadways within well-connected street networks

6 American Association of State Highways and Transportation Officials, Guide for the Development of Bicycle Facilities Fourth Edition, 2012, p. 15.

- Roadways that connect to local or regional dedicated bicycle facilities
- Data showing that bicyclists are currently riding on the sidewalk
- Public input

AASHTO's ***Guide for the Planning, Design and Operation of Pedestrian Facilities*** (2004) and ***Guide for the Development of Bicycle Facilities*** (2012) expand significantly on the ***AASHTO A Policy on Geometric Design of Highways and Streets*** (***AASHTO Green Book***), presenting factors, criteria, and design controls. See the ***FDM*** for FDOT criteria related to bicycle and pedestrian facilities.

The roadway design must take the design vehicle into consideration.

DESIGN VEHICLE

FDOT is developing new guidance for freight roadway design that will address selection of the design vehicle based on context and users. Currently, the selection of a design vehicle is controlled by FDOT rules and regulations that reflect the largest vehicle that may be assumed to use the roadway (WB-62FL). The design vehicle must be accommodated on all state roadways. In areas where the context classification suggests a demand for multimodal travel, the turning template of a smaller vehicle may be more appropriate for turning movements at intersections where cross streets will not be expected to have significant levels of truck traffic.

Assuming a WB-62FL design vehicle for all movements at all intersections can result in suboptimal intersection designs for pedestrians (see Figure 4-3). Because WB-62FL turning movements are infrequent in urban contexts and at intersections with local or collector streets, designs that accommodate a WB-62FL design vehicle without encroachment for all turning movements may result in more pavement and longer pedestrian crossing distances than are necessary for most turning maneuvers. Larger turning radii are difficult to achieve in the constrained conditions that exist in many of the most urban contexts. Such designs also result in higher speeds for turning vehicles of all sizes. Additional pavement increases the capital cost and right of way costs of an improvement, particularly where urban development densities contribute to high property values.

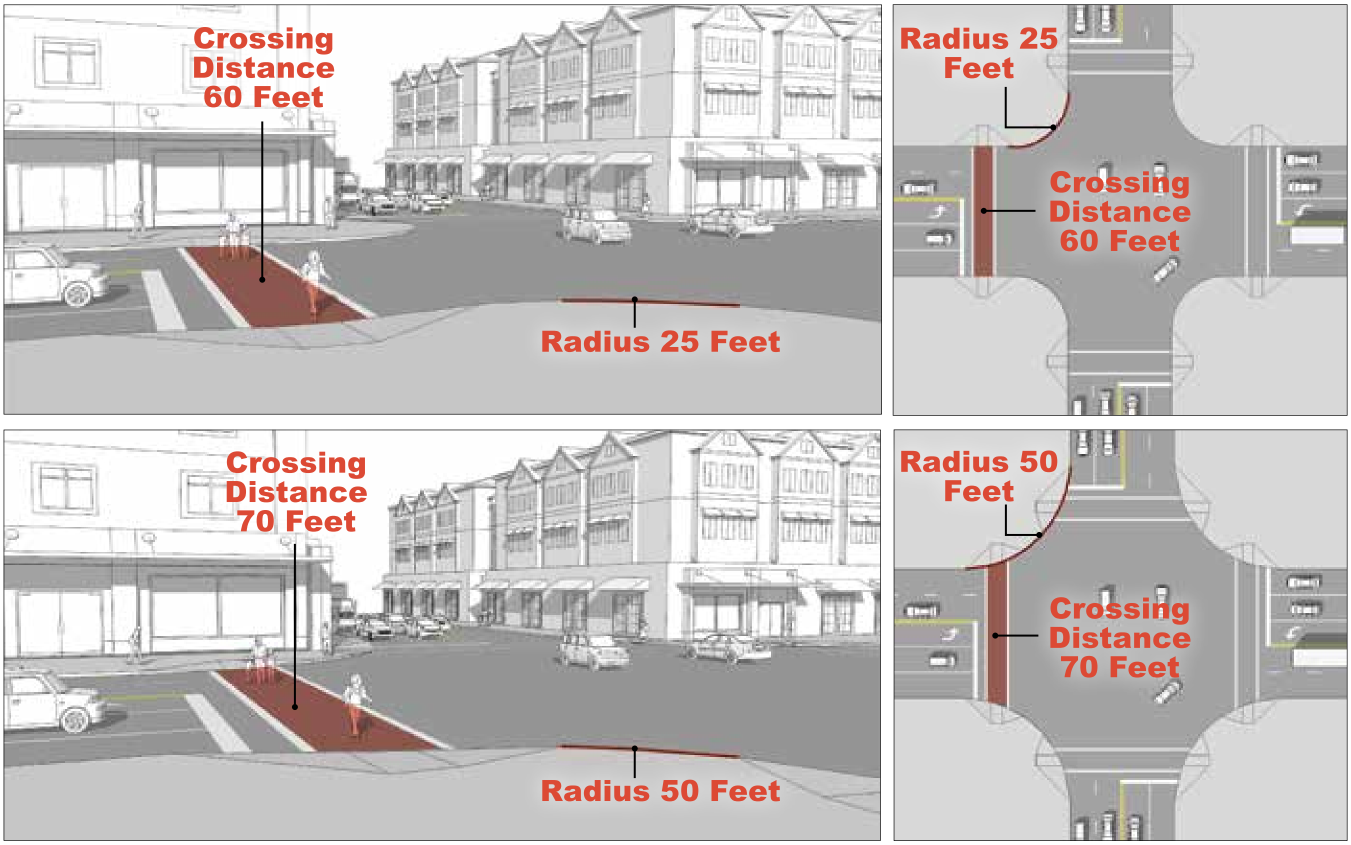
The consideration of a smaller design vehicle for turning movements between designated freight roadways and other roadways can help balance goods movement with access for and comfort of other users. Recommended by the National Association of City Transportation Officials (NACTO), the Institute of Transportation Engineers (ITE), and the CNU, this approach introduces the concept of both a design vehicle and a control vehicle in designing roadways. The control vehicle is the largest vehicle that can be expected to make use of the roadway. In this approach, the current WB-62FL design vehicle is termed a "control vehicle." A smaller vehicle, such as a transit vehicle expected to make frequent turns, is considered the design vehicle. The design of an intersection should consider the turning movements of both the design vehicle and the control vehicle:

- The design vehicle is the vehicle that must be accommodated without encroachment into opposing traffic lanes.
- The control vehicle is the infrequent vehicle that must be accommodated by allowing:
  - Encroachment into opposing lanes if no raised median is present (see Figure 4-4).
  - Minor encroachment into the street side area if no critical infrastructure (traffic signal, poles, etc.) is present.[7] This type of encroachment should take into consideration the visibility and safety of non-motorized users.

Further information on the use of the control vehicle will be provided in the upcoming FDOT freight roadway design guidance.

7 Florida Department of Transportation District 7, Freight Roadway Design Considerations, 2015.

FIGURE 4-3 RELATIONSHIP BETWEEN CURB RADII AND PEDESTRIAN CROSSING DISTANCE



Curb radii has significant influence on the pedestrian crossing distance at intersections. Top and bottom illustrations compare the crossing distances between an intersection with 50 feet and 25 feet curb radius.

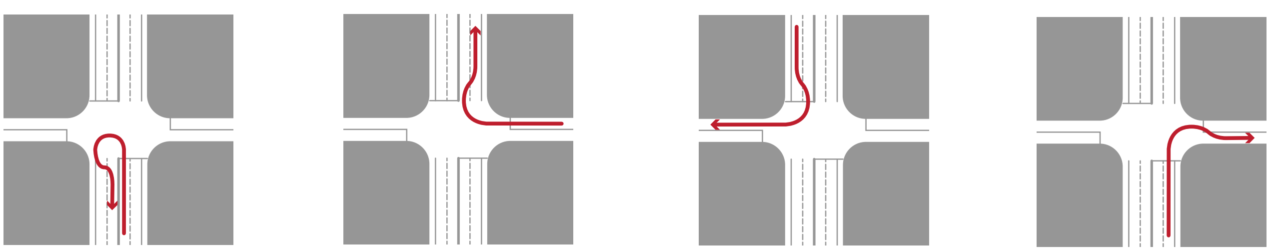
FIGURE 4-4 TYPE OF ENCROACHMENT INTO OPPOSING AND ADJACENT LANES THAT CAN OCCUR FOR CONTROL VEHICLE

A. Encroachment into bicycle lanes or diamond (transit/HOV) lanes

B. Encroachment into multiple receiving lanes on destination leg

C. Encroachment from multiple sending lanes from departure leg

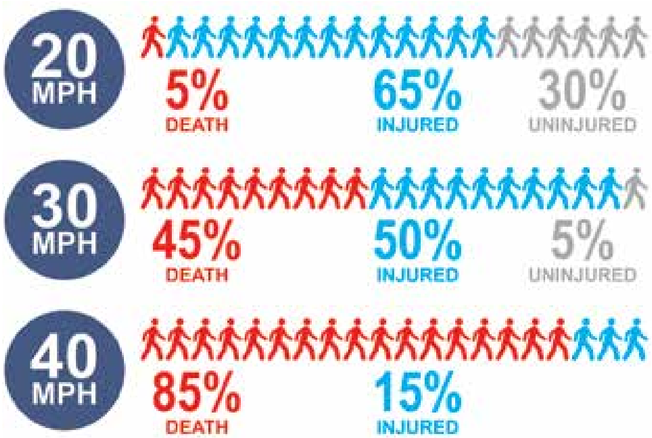
D. Encroachment into opposing traffic when lanes are clear



DESIGN SPEED

Research confirms that lower vehicular speeds are safer, and that lowering speed limits can decrease both crash frequency and severity (see Figure 4-5).[8] However, speeds cannot be reduced simply by changing posted speed limits. Roadway geometric and cross-sectional elements, in combination with the context, establish a driving environment in which drivers choose speeds that feel reasonable and comfortable.[9]

FIGURE 4-5 VEHICULAR IMPACT SPEEDS AND PEDESTRIAN RISK OF FATALITY AND SERIOUS INJURY



Lower vehicular speeds can decrease both pedestrian crash severity and fatality rates.
Source: "Killing Speed and Saving Lives - The Government's Strategy for Tackling the Problems of Excess Speed on our Roads." London: Department of Transport, November 1992.

Appendix D presents proposed design speed ranges for all arterial and collector state roadways by context classifications. More details on the design speeds and other design controls based on context classification are presented in the ***FDM***. Design criteria, as well as application of engineering judgment, will assist in selecting the appropriate design speed for a roadway. Questions that should be asked to determine appropriate design speed include:

- **Average trip length:** How far is the average vehicular trip along the roadway? What percent of the vehicular trips are coming from and going to destinations along the roadway, and how many trips travel through the roadway? Answers to these questions will help identify the balance of local access versus regional mobility along a roadway.
- **Signal spacing:** What is the average signal spacing along the roadway? How much of the vehicle delay occurs at the signal?
- **Access management:** What is the access management classification?
- **Special user groups:** Is there a special user group along the roadway (e.g. school children, visually impaired, senior population)?
- **Roadway function within the transportation system:** Is the roadway part of the SIS? Is it a designated freight route?
- **Land use/built environment:** Do buildings have shallow setbacks from the roadway and do entrances front the street?

The next release of the ***Speed Zone of Highways, Roads, and Streets in Florida (Topic number 750-010-002)*** will introduce a new speed concept called target speed. The concept of target speed is to identify a desired operating speed and develop design strategies and elements that help reinforce the operating speeds to be consistent with the posted or proposed speed limits (which may also be the design speed). A target speed should be consistent with the level of multimodal activity generated by adjacent land uses, to provide mobility and safety for all users. Target speed is influenced by elements of roadway design that are governed by design speed, as well as the form and function of the adjacent uses beyond the right of way.

For lower speed roadways, those with design speed 45 mph or less, it is desirable for the posted speed, the operating speed, and the design speed to be identical.

8 Federal Highway Administration, "Design Speed," last modified on October 15, 2014, http://safety.fhwa.dot.gov/geometric/pubs/mitigationstrategies/chapter3/3_designspeed.cfm.
9 Federal Highway Administration, "Design Speed," last modified on October 15, 2014, http://safety.fhwa.dot.gov/geometric/pubs/mitigationstrategies/chapter3/3_designspeed.cfm.

The following are roadway elements that could be used to influence operating speed.[10] Some of these elements are not currently utilized on FDOT roadways, but can be considered on lower speed roadways depending on the context classification and transportation characteristics of the roadway. See the ***FDM*** for criteria related to roadway elements:

- Horizontal deflection (strategic use of roundabouts, splitter islands, location of on-street parking)
- Vertical deflections (such as raised intersections)
- Lane width
- Use of physical measures, such as curb extensions and medians, to narrow the traveled way
- Smaller curb-return radii at intersections and elimination or reconfiguration of high-speed channelized right turns
- Enclosure of a roadway formed by the proximity of a wall of buildings or other vertical built elements
- On-street parking to create side friction
- Proper use of speed limit, warning, and advisory signs, along with other appropriate devices to gradually transition speeds when approaching and traveling through a low-speed environment
- Street trees and other landscape treatments
- Striping of edge lines, bicycle lanes, or parking lanes
- Intersection spacing
- Setting signal timing to moderate progressive speeds from intersection to intersection

Additional information on the use of target speed and design elements to reinforce target speed will be provided in the next edition of the ***Traffic Engineering Manual***.

On-street parking creates side friction.
Location: Centre Street, Fernandina Beach, FL
Source: FDOT

Roundabouts provide horizontal deflections.
Location: First Coast Highway, Amelia City, FL
Source: FDOT

Narrower travel lanes help manage speed and provide for wider bike lanes.
Location: Capital Circle NE, Tallahassee, FL
Source: FDOT

10 Kay Fitzpatrick et al., NCHRP Report 504: Design Speed, Operating Speed, and Posted Speed Practices, Transportation Research Board, 2003, http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_504.pdf.

TRAFFIC CHARACTERISTICS

Vehicular traffic volumes and composition of traffic directly influence the selection of geometric design features, including number of lanes, lane widths, alignments, and grades. Design traffic defines the traffic volumes forecasted for the design year of a project, and has historically been the basis for determining the number of vehicular travel lanes (through and turning). Decisions related to design traffic often directly impact the comfort, safety, and convenience of other roadway users and the roadway's ability to successfully support the land uses along it. Consider the following elements to incorporate a context-based Complete Streets approach in roadway design.

Determining the Appropriate Design Year

The design year of a roadway project reflects the projected life of a the planned improvement. The design year is used to estimate future traffic demand and the volume expected along a roadway, and should account for anticipated future land use development. The ***FDOT Project Traffic Forecasting Handbook*** states that the design year is usually 20 years from the opening year (or the year of the targeted project completion), but may consider a shorter duration for minor safety and operational improvements.

The ***AASHTO Green Book*** states that estimating traffic volumes for a 20-year design period may not be appropriate for many rehabilitation projects. Due to the uncertainties of predicting traffic, rehabilitation projects may be developed on the basis of a shorter design period (5 to 10 years). The ***AASHTO Green Book*** further emphasizes that the design year decision is greatly influenced by fiscal realities, where limited resources require a balance between short-term and long-term investments.

Induced Travel of Excess Roadway Capacity[11]

Induced travel is often characterized as *"If you build it, they will come."* Induced travel describes the additional demand for travel when the cost of travel decreases, either in time savings or monetary costs. In locations where a variety of transportation options exist, congestion is often self-regulating, such that, when a roadway is congested, users will either choose a different route, travel during a different time of day, choose a different mode, or decide to not make the trip. When the capacity of a roadway is increased, travelers may switch to that roadway to take advantage of the decreased congestion and travel time.

Induced travel has been shown to result in increased Vehicle Miles Traveled (VMT) on the highway system. The overall user benefit per traveler decreases with increased VMT and the resulting increase in congestion. In addition, increased VMT due to new or longer trips can result in increased air and noise pollution. Lastly, building roadways with excess capacity often results in unintended consequences, such as faster vehicle operating speeds and longer pedestrian crossing distances. The impacts of allocating more capacity than is immediately needed for a roadway should be considered in evaluating the overall impacts and benefits of a roadway capacity project.

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11 Robert Cervero, "Are Induced Travel Studies Inducing Bad Investments?," University of California Transportation Center, 2003.

Gilles Duranton and Matthew A. Turner, "The Fundamental Law of Highway Congestion: Evidence from the US," American Economic Review, 2011.

Kent M. Hymel, Kenneth A. Small and Kurt Van Dender, "Induced Demand And Rebound Effects In Road Transport," Transportation Research Part B: Methodological 44, no. 10 (2010): 1220-1241.

Todd Litman, "Generated Traffic and Induced Travel: Implications for Transport Planning," ITE Journal 71, no. 4 (April 2001): 38-47.

LEVEL OF SERVICE

LOS is a quantified stratification used to describe the quality of travel on an A to F scale with LOS A representing the best operation conditions from the traveler's perspective and LOS F the worst. LOS standards have historically been developed and used to describe vehicular LOS, and are used to identify and prioritize transportation needs. Once a LOS threshold is adopted as a policy by a jurisdiction, roadways are designed, operated, and maintained to meet that LOS. Therefore, LOS standards have a varying and significant impact in the type, quantity, and quality of services provided for various modes along a roadway. The following are general principles related to how LOS standards can support Complete Streets.

Vehicular Level of Service

Vehicular LOS standards were intended to be used as a long-term planning tool, applied on a roadway corridor level but not at the intersection or segment level. The ***FDM*** discusses this understanding of LOS. FDOT's currently adopted vehicular LOS standards for state roadways (***Topic No.: 000-525-006-b***) states that LOS for state roadways during peak travel hours are LOS D in urbanized areas and LOS C outside urbanized areas. Many local agencies in Florida have adopted a similar standard for local roadways. FDOT is considering revisions to the LOS Policy to provide LOS targets instead of LOS standards to provide more flexibility in the application of this planning tool.

Pedestrian, Bicycle, and Transit Level of Service

Measuring the pedestrian experience requires quantifying safety and comfort for the pedestrian, based on pedestrian delay and other roadway attributes. The bicycle experience is generally described by the delay encountered at intersections and the attributes of the bicycle facility itself. Transit LOS is primarily focused on service levels rather than facility characteristics. However, because transit passengers typically must walk or bicycle to and from transit stops on either end of their trip, the quality of the walking experience at the beginning or end of a trip contributes to overall transit LOS.

The FDOT ***Q/LOS Handbook*** includes methodologies to calculate pedestrian, bicycle and transit LOS. As FDOT continues to update its standards and policies, it is exploring the possibility of working with local governments to establish appropriate LOS targets for multimodal mobility. These targets should be responsive to context, roadway function, network design, and user safety.

THE ROADWAY AS PART OF A SYSTEM

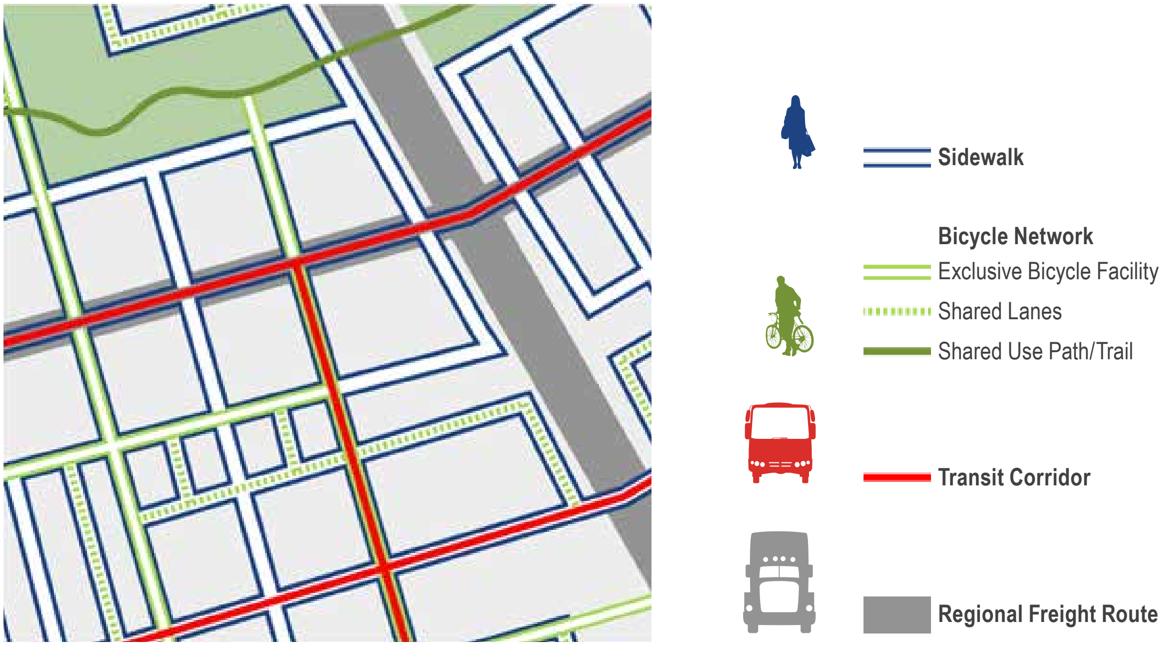
All roadways function as part of a broader transportation system. The safety, function and efficiency of a roadway are influenced by the other elements in the system. Parallel and connecting multimodal systems will influence the type of users and the travel demand on a roadway. The following section addresses how each roadway's ability to support all users is influenced by the transportation network. It also addresses transition zones needed between context classifications.

BUILDING A COMPLETE STREETS NETWORK

The FDOT policy states that the Department "…will routinely plan, design, construct, reconstruct and operate a context-sensitive **system** of Complete Streets." This Handbook furthers these ideas and emphasizes the need to support all users within a context-sensitive system of complete streets, according to each street's existing and desired future context and transportation characteristics. Figure 4-6 illustrates a conceptual idea of a context-sensitive system of complete streets, where each roadway contributes to the system's ability to serve all users.

Well-designed, connected roadway systems make travel more efficient by providing choice not only in modes, but also in routes. A fine-grained system of roadways and crossing opportunities provides more direct paths to destinations, reduces delay, and creates redundancy of path options for all users. Networks allow pedestrians, bicyclists, and transit riders to find direct routes to their destination or their transit stop. A system of connected roadways also disperses vehicular travel along multiple roadways.

FIGURE 4-6 CONTEXT-SENSITIVE SYSTEM OF COMPLETE STREETS



With multiple intersections and roadways sharing the traffic demand, there is less need to construct wider roadways or large intersections that could potentially create barriers to walking and bicycling and increase crash rates and severity for all users. A fine-grained network allows for roadways to complement each other, with some roadways providing better quality of service for high-speed travel, and other parallel roadways providing comfort, safety, and access for bicyclists and pedestrians.

Many roadways in Florida are built in C3C and C3R Suburban Context Classifications, with limited roadway connectivity and land uses dispersed along large areas of land. In these suburban contexts, the arterial roadway network typically supports both local access and regional mobility, concentrating most vehicular trips onto the state arterial roadways. Critical transit service, major employers, and retail services are also often located on these roadways. As investments are made along major arterial roadways, roadway design elements that support walking, bicycling, and transit use should be integrated. New local roadway connections and shared use paths should also be considered to complement and provide a network alternative to the arterial roadway system.

Due to right of way and financial constraints, it may not be possible to provide a similar level of accommodation for all travel modes, even though minimal accommodation appropriate to context classification is expected. In some locations, it may be desirable to rely upon parallel roadways to provide additional travel options for some modes. The system approach requires collaboration between FDOT and local communities, as all partners work together to develop a network of Complete Streets comprising of state and local roadways.

TRANSITION ZONES

A roadway may traverse a variety of context classifications. As the context changes, the design criteria for the roadway will also change. This occurs across all context classifications, but the transition from C1-Natural or C2-Rural Context Classification to a higher classification such as C2T-Rural Town provides a particularly sharp shift in the recommended design speed and design users. For example, the land use surrounding SR 26 through Newberry, Florida transitions from C2-Rural to C2T-Rural Town over the course of a few blocks (see Figure 4-7). This condition requires a transition zone to alert drivers to the change and allow them to adjust their behavior and expectations accordingly. Changes in speed limit as part of transition zones will continue to comply with the requirement of the ***Speed Zone of Highways, Roads, and Streets in Florida (topic number 750-010-002)***.

NCHRP 737: Design Guidance for High-Speed to Low-Speed Transition Zones for Rural Highways defines two distinct sections in a transition zone: the perception-reaction area and the deceleration area (see Figure 4-8). The perception-reaction area is the portion of the transition zone where drivers are made aware of the need to reduce speed. This section has roadway characteristics similar to the rural context, but will include visual cues to alert the driver of an upcoming deceleration. These cues may include:

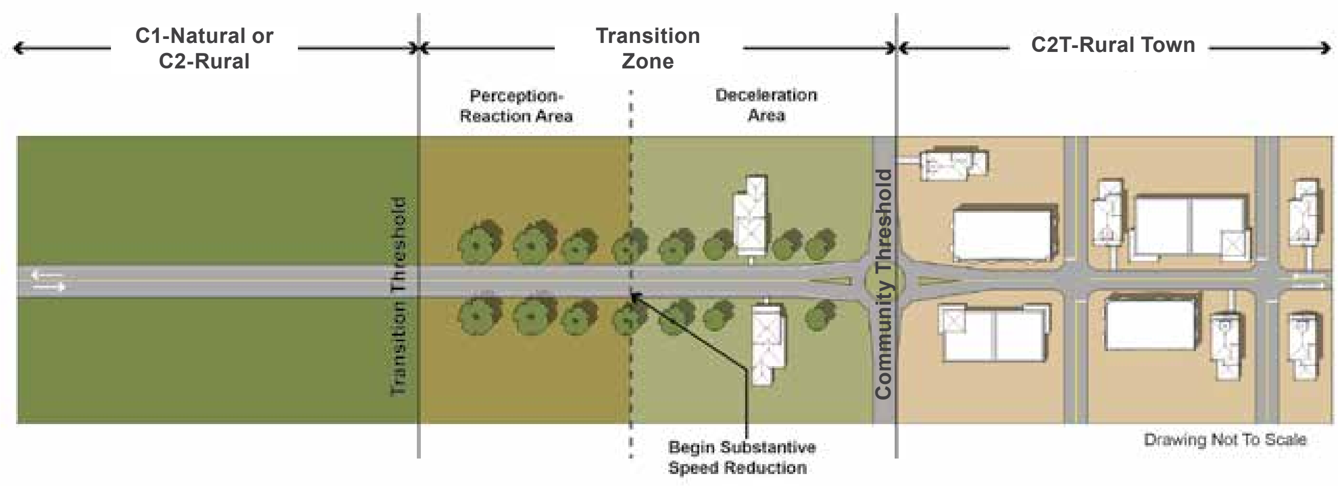
- Signage, including warning signs such as “reduce speed ahead” signs, or gateways signs where appropriate.
- Texture or pavement markings; lane narrowing can be highlighted with the use of a wider outside stripe or rumble strips.
- Curb changes, from flush paved shoulders to curbed roadway.
- Architectural elements such as type, location, and spacing of lighting and landscaping.

FIGURE 4-7 EXAMPLE OF A TRANSITION ZONE (SR 26 THROUGH NEWBERRY, FLORIDA)

Downtown Newberry, FL, C2T-Rural Town
Source: Google Earth

East of Downtown Newberry, FL, C2-Rural
Source: Google Earth

FIGURE 4-8 TRANSITION ZONE FROM C1-NATURAL/C2-RURAL TO C2T-RURAL TOWN CONTEXT CLASSIFICATION



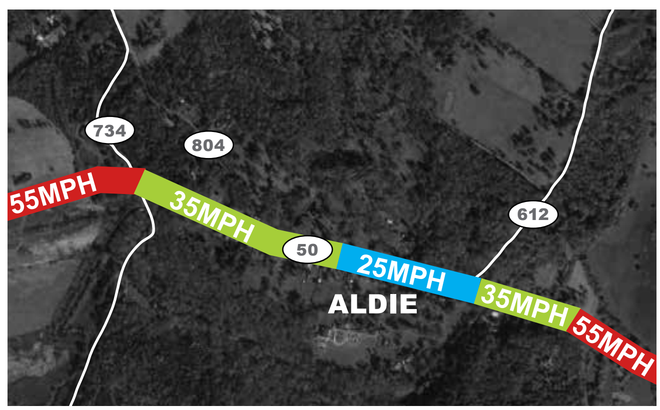
Source: Adapted from NCHRP 737: Design Guidance for High-Speed to Low-Speed Transition Zones for Rural Highways.

The deceleration area is the portion of the transition zone where drivers are expected to decelerate to an operating speed that matches the context of the community being approached. In the deceleration area, there is a noticeable change in roadway characteristics. The length of the deceleration area is a function of design speed, sight distance, and design criteria of the town. Transition from a high-speed to low-speed cross section can be accomplished through a variety of geometrics features, including:

- Horizontal deflection, such as splitter islands, chicanes, or roundabouts
- Lane width narrowing
- Lane elimination
- Transverse pavement markings
- Introduction of curb and gutter
- Street enclosure through vertical landscaping
- Signage or gateway treatments

A combination of elements is more effective for reducing speeds than an individual design element. Figure 4-9 illustrates an example that utilizes horizontal deflection, lane width narrowing, introduction of curb and gutter, and a gateway treatment at the entrance of a rural town.

FIGURE 4-9 EXAMPLE OF A TRANSITION ZONE (SR 50, ENTRANCE TO TOWN OF ALDIE, VIRGINIA)



Transition zones at either side of the Town of Aldie with 35 MPH posted speed limit transitions drivers from 55 MPH posted speed to 25 MPH posted speed. (2016)
Source: Google Earth

Gateway feature, SR 50, Aldie, Virginia (2016)
Source: KAI

UNIQUE DESIGN CONSIDERATIONS

In a large and diverse state such as Florida, there will be locations that do not conform to the context classifications. Or, there may be areas where flexibility beyond the range of criteria contained in the ***FDM*** and a design variation or design exception is required.

DESIGNING FOR SPECIAL DISTRICTS (SD)

Special Districts are areas that, due to their unique characteristics and function, do not adhere to standard measures identified in the Context Classification Matrix (refer to Chapter 2). Examples include military bases, university campuses, airports, seaports, rail yards, theme parks and tourist districts, sports complexes, hospital campuses, and freight distribution centers. These areas are likely to have a unique set of users and needs when compared to the surrounding context classifications. There is no one set of design controls appropriate for all SDs. Project-specific data collection and engineering judgment should inform the selection of design controls for these areas. To select design controls and criteria in the ***FDM***, the project team will select a context classification that best suits the characteristics of the SD. If a district believes that an SD designation is required, the district should coordinate with the State Complete Streets Program Manager.

ADDRESSING DESIGN EXCEPTIONS AND DESIGN VARIATIONS

The ***FDM*** is context-based and provides design flexibility through lower design speeds and the inclusion of criteria for low speed roadways. It is anticipated this flexibility will decrease the need for Design Exceptions and Design Variations; however, there may be areas where right of way, funding constraints, or other considerations require flexibility beyond the range of criteria contained in the ***FDM***. The ***FDM*** includes a chapter that outlines the exception and variation processes. When referring to AASHTO A Policy on Geometric Design of Highways and Streets for evaluation of design exceptions, FDOT will continue to define urban and rural areas following the FHWA criteria.

STRATEGIC INTERMODAL SYSTEM

The design speeds along SIS facilities should be informed by their context classification, but should still preserve the ability for the SIS facilities to allow "for high-speed and high-volume traffic movements within the State" (***Section 163.380110 F.S.***). To follow the Complete Streets approach without compromising the function of the SIS, an alternate facility for SIS designation, if available, should be considered when the context classification does not align with the function of the SIS facility and the proposed design speeds shown in Appendix D. The ***FDM*** provides context-specific design controls and criteria for the SIS.

Appendix A

LAND USE TOOLS TO SUPPORT SAFE AND COMFORTABLE MULTIMODAL TRAVEL

HOW LAND USE CAN SUPPORT COMPLETE STREETS

The transportation system and development pattern (including land use, development density and intensity, building design, building height, building setback, and site layout) are inextricably linked. Each plays a significant role in creating a human-scale environment that invites walking, bicycling, and transit and that supports community economic development. Thoughtful application of context-based design provides for all modes of transportation.

Transportation and land use both have an effect on roadway network connectivity. An extensive, connected network provides route options for goods delivery and vehicular access to land uses, as well as the foundation for safe and comfortable multimodal travel. A fine-grained roadway network with the appropriate design elements also provides multiple pedestrian and bicycling routing, shortens trip distances, and reduces the need to widen intersections and roadways, which may impact ease of walking and bicycling.

Similarly, development form and pattern complete the necessary elements of a multimodal environment. A mix of uses, located where people live, work, shop, and spend leisure time, that are thoughtfully integrated within a building, a parcel, or a few blocks, provides multiple destinations within walking and bicycling distance. Buildings located at the back of sidewalks with active store fronts, such as restaurants and retail, provide a comfortable sense of enclosure, visual interest, passive surveillance, and comfortable access to destinations. Direct, logical, and comfortable connections between destinations encourage walking and bicycling. The best multimodal transportation strategy is the right land use strategy.[1]

A complete street environment requires both transportation and land use strategies.
Source: (top to bottom) FDOT, Rick Hall, KAI

1 Charlotte-Mecklenburg Planning Department, "Centers, Corridors, Wedges Growth Framework", (August 10, 2010).

LOCAL GOVERNMENTS

Complete Streets rely on collaborative investments throughout the transportation network, from private site development, to local roadway network, to regional thoroughfares. Local governments are responsible for land use and transportation planning that supports a context-sensitive system of Complete Streets through supportive infrastructure and development patterns. Local government land use and transportation planning should also work to preserve the capacity of important regional roadways through the creation of a well-connected roadway network that accommodates short-distance and local trips, thus removing these trips from the regional roadways.

FDOT will plan and design transportation projects to be consistent with the existing or proposed land use context of the areas served. However, this process is not a one-sided relationship in which State roadways are constantly expected to respond to land-use-generated travel demands. In a truly integrated land use and transportation planning approach, one that can result in Complete Street systems, potential transportation changes should be anticipated and should help inform decision making related to land uses. Land use decisions should be made to help manage travel needs and support the desired mobility patterns of a community. For example, if a community desires a higher level of transit investment, land use decisions should be made to encourage the intensity and density of transit-supportive development. Figure A-1 illustrates collaborative land use and transportation investments that support Complete Streets.

FIGURE A-1 COLLABORATIVE INVESTMENTS TO SUPPORT A CONTEXT-SENSITIVE SYSTEM OF COMPLETE STREETS

Many state arterials serve as the only alternative for local and regional mobility. The roadway may be over capacity but cannot be widened because of physical, financial, or environmental realities. However, growth is still desired by local governments searching for new tax base. These conditions are requiring FDOT and partner agencies to explore solutions that go beyond widening — solutions that are multimodal and integrate land use planning.

Partnerships with landowners, developers, municipal leaders, and others can help achieve solutions that go beyond the right of way, such as adding and connecting to the local roadway network. The new network can allow new growth but with a different development pattern. This more compact mixture of uses can reduce trip lengths and total number of trips, and would allow for pedestrian, bicycling, and transit to become viable alternatives.

Source: Adapted from PennDOT Smart Transportation Training Materials

Local governments have a number of tools available to support a Complete Streets network. Some of these tools include:

Local Network Connectivity. In new development areas and large-scale redevelopment areas, local governments may recommend a block length of 300 to 800 feet and/or develop internal or external street connectivity ratios or intersection densities that will create a well-connected street network (see Figure A-2).

Investments in Local Multimodal Infrastructure. Local governments can encourage or require property owners and developers to provide infrastructure for all modes, such as sidewalks and crosswalks, bicycle facilities, streetscapes, and bicycle parking, as part of new development and redevelopment. A complete pedestrian network includes direct, convenient, and safe connections from the public sidewalk to the building (see Figure A-3).

FIGURE A-2 EXAMPLE OF LOCAL NETWORK CONNECTIVITY

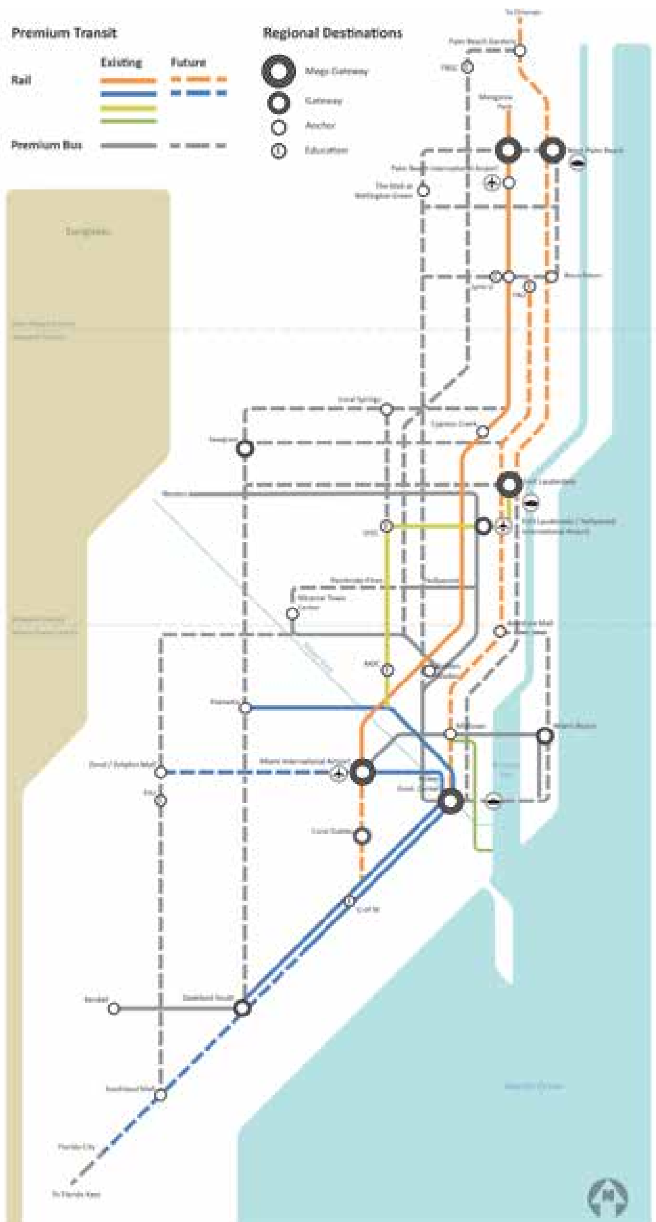
Local governments can build local network connectivity by using regulatory tools such as requiring maximum block lengths or minimum intersection densities.
Source: LEED Neighborhood Development (ND) Reference Guide

FIGURE A-3 EXAMPLE OF INVESTMENTS IN LOCAL MULTIMODAL INFRASTRUCTURE

FDOT District 5 is working with local governments to plan for multimodal connectivity around SunRail commuter rail stations. This plan illustrates how multimodal investments can support transit-oriented development and expand SunRail's ridership area.
Source: FDOT

Multimodal Network Plans. Many local and regional governments prepare multimodal network plans that outline a long-term commitment to provide a well-connected multimodal system (see Figure A-4).

FIGURE A-4 EXAMPLE OF MULTIMODAL NETWORK PLAN



Many regions around the State are incorporating transit and multimodal investments as part of regional long range transportation plans. The example above is from Southeast Florida.
Source: 2040 Southeast Florida Regional Transportation Plan

Zoning. Single-use zoning (Euclidean zoning) codes can lead to a separation of land uses that creates long distances between residents and jobs, services, and recreational activities. One alternative tool is form-based code, which uses physical form, rather than separation of land uses, as the organizing principle.[1] Another option is to introduce more mixed-use districts and development of higher intensity and density activity centers, or arrange land uses in closer proximity, to reduce the overall demand for vehicular trips.

Mixed-use zoning districts allow for arrangement of various land uses within close proximity, thus encouraging travel by various modes.
Source: KAI

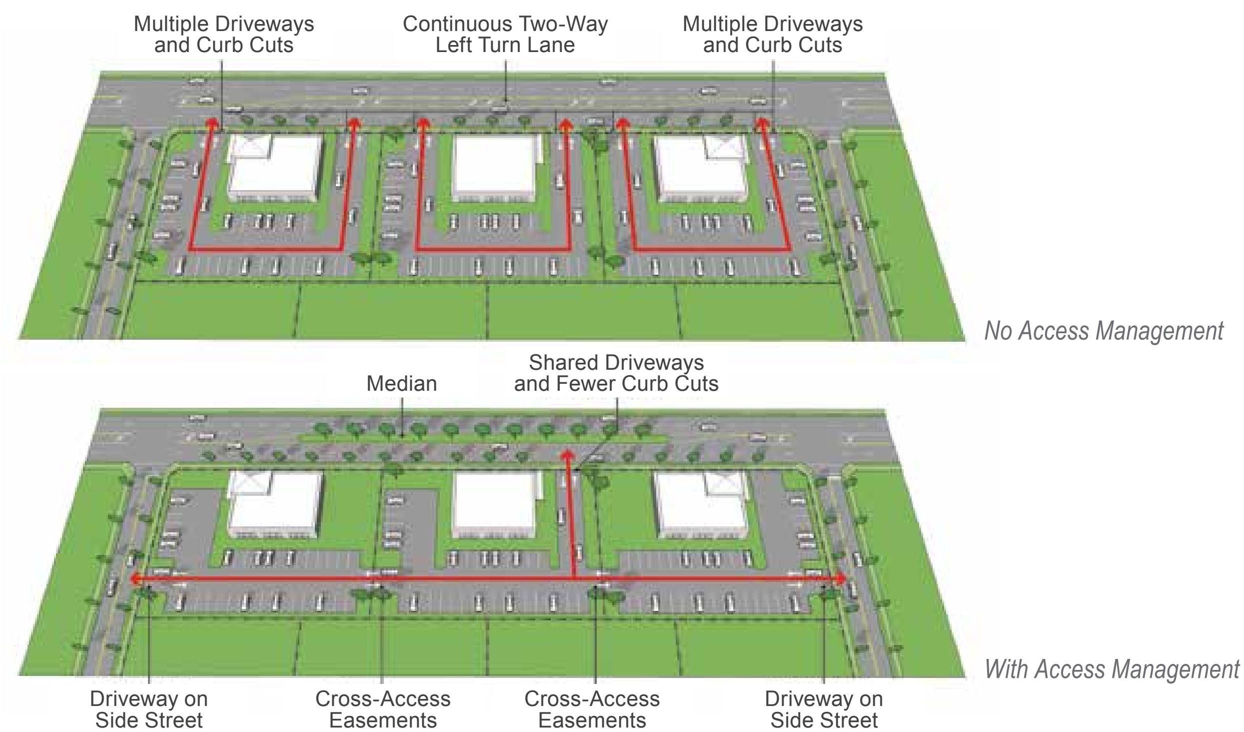
1 Form-Based Codes Institute, http://formbasedcodes.org/

Site Design and Building Placement. Large building setbacks surrounded by parking increase walking distances and create isolated and unwelcoming environments for pedestrians and bicyclists. In areas where local municipalities would like to support multimodal travel, cities should consider building scales, placement, and design that support pedestrian activity. Form-based codes can be used to address site design and building placement requirements.

Land development regulations can require building design, site design, and lot layout to support a pedestrian-friendly street environment.
Source: KAI

Access Management Standards. Where development occurs along State roadways, local governments can use land use policies and regulations to address access management. This can be in the form of requiring multiple roadways to access a development or allowing for cross-access easement and shared driveways between different properties. This not only helps to accommodate improved traffic flow along roadways but also helps to reduce the number of curb cuts along a roadway, improving walking and bicycling conditions. A more connected network of roadways also allows for internal site circulation by multiple modes (see Figure A-5).

FIGURE A-5 CROSS-ACCESS EASEMENTS



Parking Standards. Large surface parking lots are a barrier to connectivity, as these can create longer distances between destinations and contribute to an uncomfortable walking environment. Some local governments are beginning to implement parking maximum requirements instead of parking minimum requirements. Establishing a maximum allowable amount of parking can prevent developers from building excessively large lots, or limit the parking supply in an area based on community priorities. Communities looking to increase tax revenue through redevelopment of parking lots, improve pedestrian safety and comfort downtown, or reduce stormwater runoff and heat island impacts of parking can also consider parking maximums as a way to achieve those goals.[2] Establishing parking maximums, combined with allowing for shared parking across properties and uses, can also support a park-once environment to support multimodal travel.

Parking policies such as allowing for shared use parking can support a park-once environment.
Source: KAI

2 Metropolitan Area Planning Council, "Maximum Parking Allowances," last modified March 8, 2010, http://www.mapc.org/resources/parking-toolkit/strategies-topic/parking-allowances.

Appendix B

CONTEXT CLASSIFICATIONS CASE STUDIES

Context Classification System: Comprised of eight context classifications, it broadly identifies the various built environments in Florida, based on existing or future land use characteristics, development patterns, and roadway connectivity of an area. In FDOT projects, the roadway will be assigned a context classification(s). The context classification system is used to determine criteria in the ***FDM***.

The eight context classifications and their general descriptions are:

C1-Natural	Lands preserved in a natural or wilderness condition, including lands unsuitable for settlement due to natural conditions.
C2-Rural	Sparsely settled lands; may include agricultural land, grassland, woodland, and wetlands.
C2T-Rural Town	Small concentrations of developed areas immediately surrounded by rural and natural areas; includes many historic towns.
C3R-Suburban Residential	Mostly residential uses within large blocks and a disconnected/ sparse roadway network.
C3C-Suburban Commercial	Mostly non-residential uses with large building footprints and large parking lots. Buildings are within large blocks and a disconnected/ sparse roadway network.
C4-Urban General	Mix of uses set within small blocks with a well-connected roadway network. May extend long distances. The roadway network usually connects to residential neighborhoods immediately along the corridor and/or behind the uses fronting the roadway.
C5-Urban Center	Mix of uses set within small blocks with a well-connected roadway network. Typically concentrated around a few blocks and identified as part of the civic or economic center of a community, town, or city.
C6-Urban Core	Areas with the highest densities and building heights and within FDOT classified Large Urbanized Areas (population> 1,000,000). Many are regional centers and destinations. Buildings have mixed uses, are built up to the roadways, and are within a well-connected roadway network.

C1-Natural C2-Rural C2T-Rural Town C3R-Suburban Residential C3C-Suburban Commercial C4-Urban General C5-Urban Center C6-Urban Core

C1-NATURAL: FL 24, CEDAR KEY SCRUB STATE RESERVE, LEVY COUNTY

Primary Measures

Land Use	Building Height	Building Placement	Fronting Uses	Location of Off-street Parking	Roadway Connectivity: Intersection Density	Roadway Connectivity: Block Perimeter	Roadway Connectivity: Block Length
Description	Floor Levels	Description	Yes / No	Description	Intersections/ Sq Mile	Feet	Feet
Open Space				Not developed			

Secondary Measures

Allowed Residential Density	Allowed Office/Retail Density	Population Density	Employment Density
DU/Acre	Floor-Area Ratio (FAR)	Persons/Acre	Jobs/Acre
Not Allowed	Not Allowed	0	0

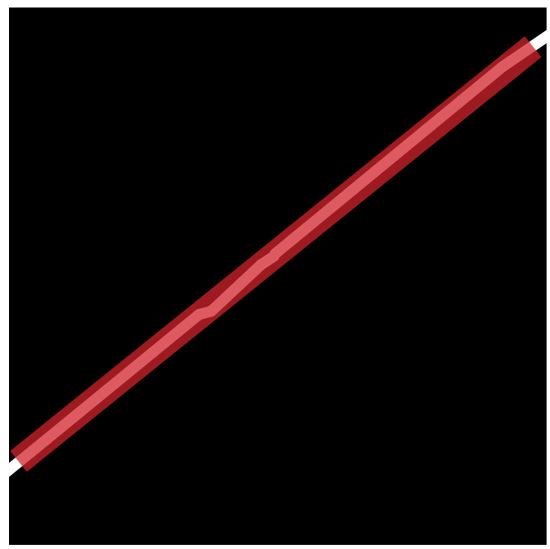
Street View

Bird's Eye View

0 0.5 1 Miles

N

Aerial Satellite Image



Streets and Blocks Network

Open Space

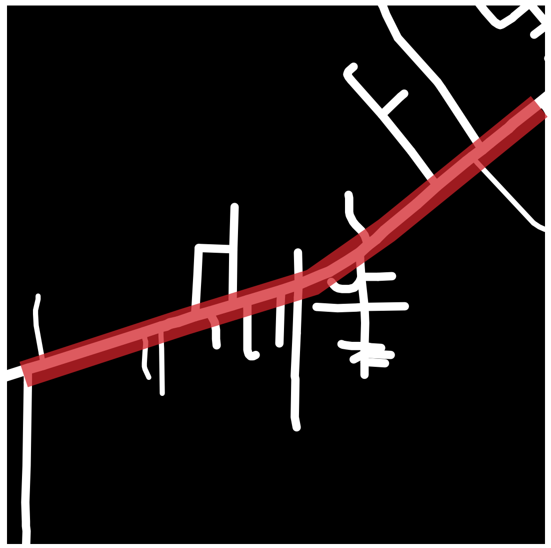
Existing Land Use

C2-RURAL: SR 52, SOUTH OF DADE CITY, PASCO COUNTY

Primary Measures

Land Use	Building Height	Building Placement	Fronting Uses	Location of Off-street Parking	Roadway Connectivity		
					Intersection Density	Block Perimeter	Block Length
Description	Floor Levels	Description	Yes / No	Description	Intersections/ Sq Mile	Feet	Feet
Agricultural, Single-Family Residential, and Retail	1	Detached buildings with no consistent pattern of setbacks	No	No consistent pattern	58	NA	NA

Aerial Satellite Image



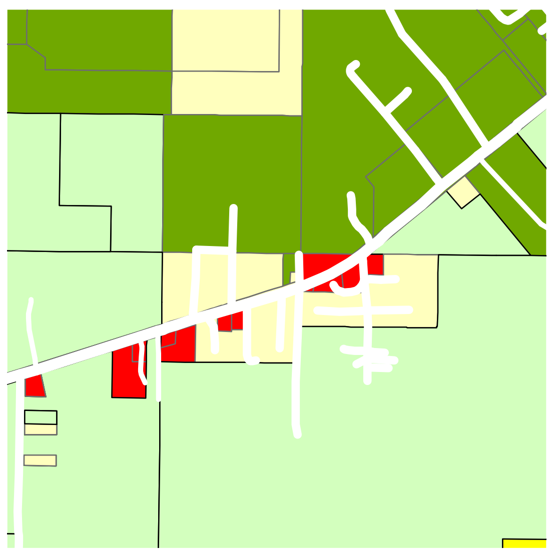
Streets and Blocks Network

Secondary Measures

Allowed Residential Density	Allowed Office/Retail Density	Population Density	Employment Density
DU/Acre	Floor-Area Ratio (FAR)	Persons/Acre	Jobs/Acre
1	NA	1	<1

Street View

Bird's Eye View



Single-Family Residential
Multi-Family Residential
Commercial
Agriculture
Open Space
Vacant

0 0.5 1 Miles

N

Existing Land Use

C2T-RURAL TOWN: MAIN ST, HAVANA, GADSDEN COUNTY

Primary Measures

Land Use	Building Height	Building Placement	Fronting Uses	Location of Off-street Parking	Roadway Connectivity: Intersection Density	Roadway Connectivity: Block Perimeter	Roadway Connectivity: Block Length
Description	Floor Levels	Description	Yes / No	Description	Intersections/ Sq Mile	Feet	Feet
Retail and Commercial	1 - 2	Mostly attached buildings with no setbacks	Yes	Mostly in rear, occasionally on side	325	1,520	330

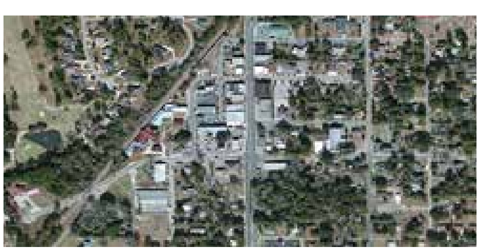

Aerial Satellite Image

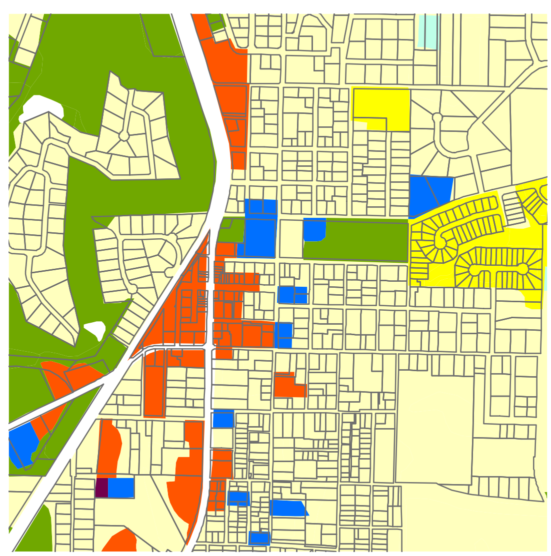
Secondary Measures

Allowed Residential Density	Allowed Office/Retail Density	Population Density	Employment Density
DU/Acre	Floor-Area Ratio (FAR)	Persons/Acre	Jobs/Acre
27	1.2	0.3	4


Streets and Blocks Network


Street View


Bird's Eye View


Future Land Use

Single-Family Residential
Multi-Family Residential
Commercial
Retail
Agriculture
Institutional/Government
Industrial
Open Space
Vacant

Miles
0 0.5 1

N

C3R-SUBURBAN RESIDENTIAL: SR 70, LAKEWOOD RANCH, MANATEE COUNTY

Primary Measures

Land Use	Building Height	Building Placement	Fronting Uses	Location of Off-street Parking	Roadway Connectivity		
					Intersection Density	Block Perimeter	Block Length
Description	Floor Levels	Description	Yes / No	Description	Intersections/ Sq Mile	Feet	Feet
Single-Family Residential and Institutional	1 - 2	Detached buildings with medium (10' to 24') to large (> 24') setbacks on all sides	No	Front	40	6,040	1,140

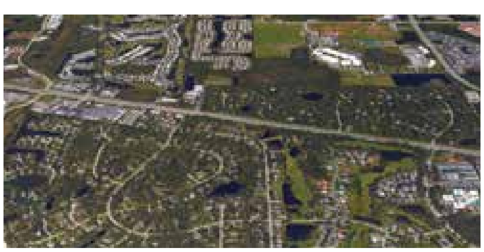
Aerial Satellite Image

Streets and Blocks Network

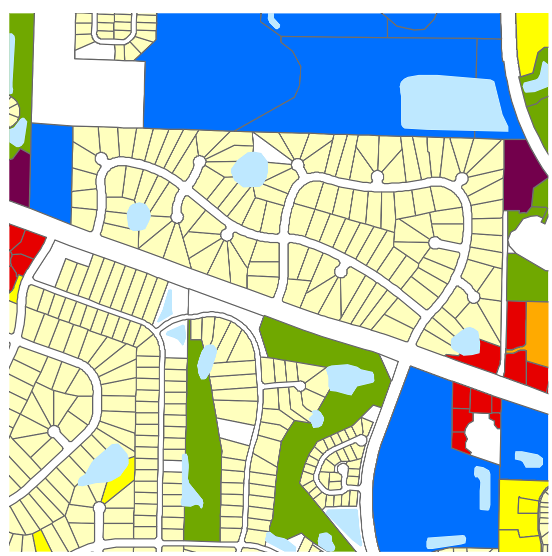
Secondary Measures

Allowed Residential Density	Allowed Office/Retail Density	Population Density	Employment Density
DU/Acre	Floor-Area Ratio (FAR)	Persons/Acre	Jobs/Acre
1	0.23	0.4	0

Street View



Bird's Eye View



Existing Land Use

Single-Family Residential
Multi-Family Residential
Commercial
Retail
Institutional/Government
Open Space
Vacant

0 0.5 1 Miles

N

4/25/17 EXTERNAL DRAFT

C3C-SUBURBAN COMMERCIAL: US 441, BROWARD COUNTY

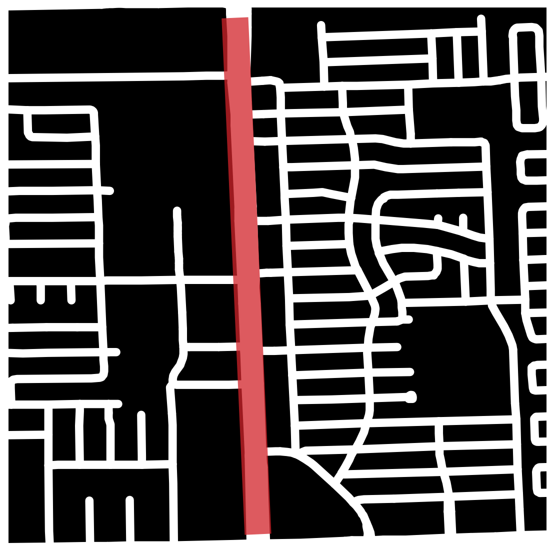
Primary Measures

Land Use	Building Height	Building Placement	Fronting Uses	Location of Off-street Parking	Roadway Connectivity		
					Intersection Density	Block Perimeter	Block Length
Description	Floor Levels	Description	Yes / No	Description	Intersections/ Sq Mile	Feet	Feet
Retail, Commercial, and Light Industrial	1 - 2	Detached buildings with large (> 24') setbacks on all sides	No	Surrounded by parking on all sides	94	3,320	680

Secondary Measures

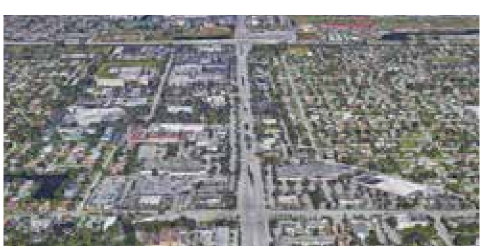
Allowed Residential Density	Allowed Office/Retail Density	Population Density	Employment Density
DU/Acre	Floor-Area Ratio (FAR)	Persons/Acre	Jobs/Acre
Not Applicable	0.7	8.5	7

Aerial Satellite Image

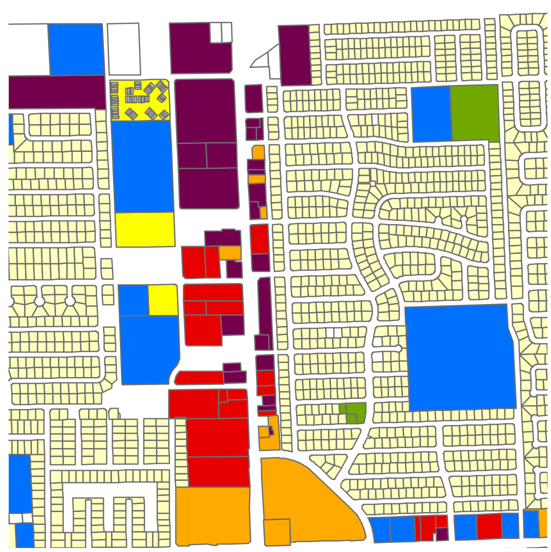


Streets and Blocks Network

Street View



Bird's Eye View



Single-Family Residential
Multi-Family Residential
Commercial
Retail
Institutional/Government
Industrial
Open Space
Vacant

0 0.5 1 Miles

N

Existing Land Use

C4-GENERAL URBAN: DR. MLK JR. BLVD, EAST TAMPA, TAMPA, HILLSBOROUGH COUNTY

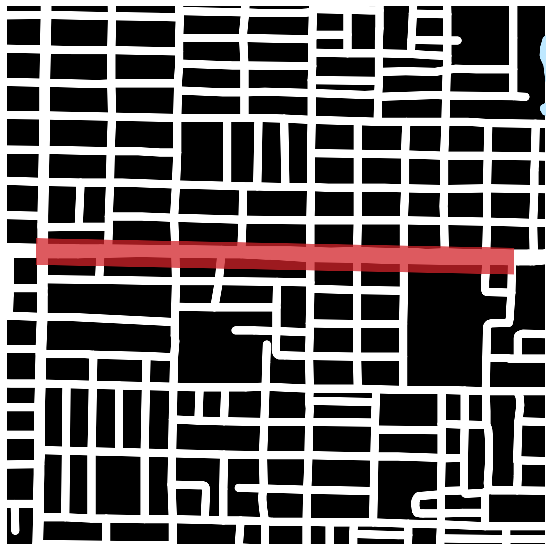
Primary Measures

Land Use	Building Height	Building Placement	Fronting Uses	Location of Off-street Parking	Roadway Connectivity		
					Intersection Density	Block Perimeter	Block Length
Description	Floor Levels	Description	Yes / No	Description	Intersections/ Sq Mile	Feet	Feet
Single-Family and Multi-Family Residential, Neighborhood Scale Retail, and Office	1 - 2	Detached buildings with small (<10') to medium (10' to 24') front and side setbacks	Yes	Mostly in side, occasionally in rear or front	230	1,760	490

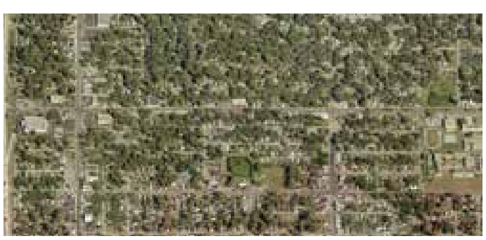
Secondary Measures

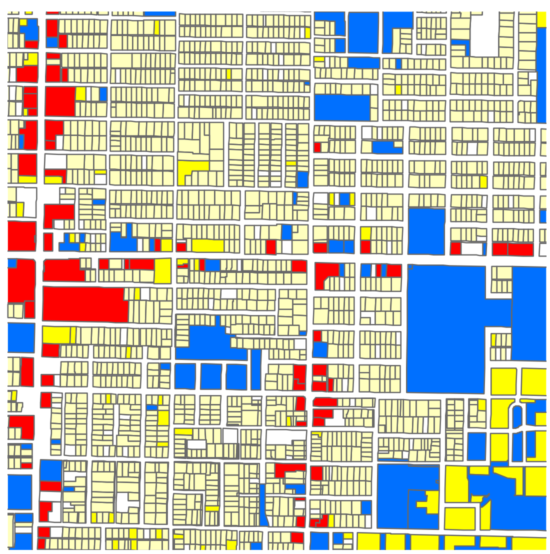
Allowed Residential Density	Allowed Office/Retail Density	Population Density	Employment Density
DU/Acre	Floor-Area Ratio (FAR)	Persons/Acre	Jobs/Acre
12	1.5	8.5	3


Aerial Satellite Image


Streets and Blocks Network


Street View


Bird's Eye View



Existing Land Use

0 0.5 1 Miles

N

C5-URBAN CENTER: MONROE ST, DOWNTOWN TALLAHASSEE, LEON COUNTY

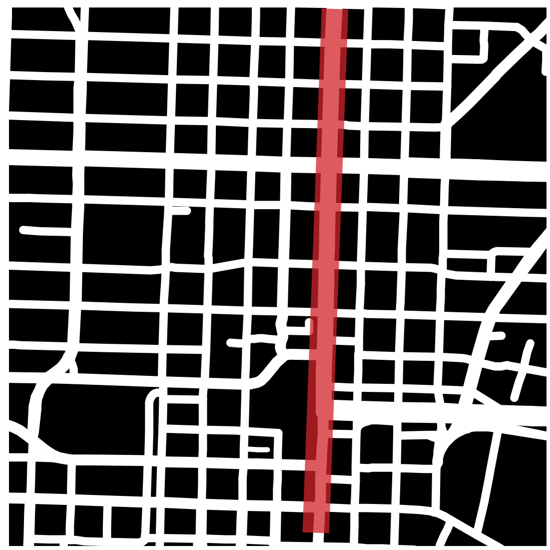
Primary Measures

Land Use	Building Height	Building Placement	Fronting Uses	Location of Off-street Parking	Roadway Connectivity		
					Intersection Density	Block Perimeter	Block Length
Description	Floor Levels	Description	Yes / No	Description	Intersections/ Sq Mile	Feet	Feet
Retail, Office, Institutional, Commercial	1 - 5 with some taller buildings	Mostly attached buildings with no setbacks or with few having shallow setbacks	Yes	Rear and garage	180	1,770	380

Secondary Measures

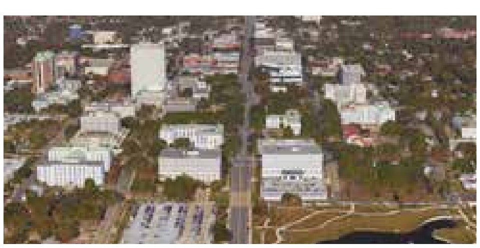
Allowed Residential Density	Allowed Office/Retail Density	Population Density	Employment Density
DU/Acre	Floor-Area Ratio (FAR)	Persons/Acre	Jobs/Acre
150	8	2.4	90

Aerial Satellite Image

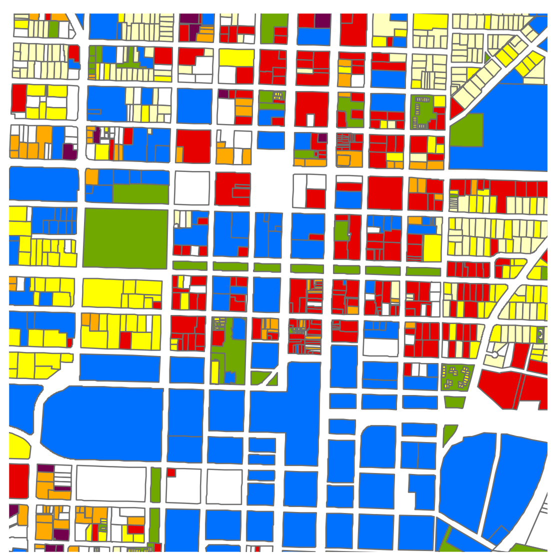


Streets and Blocks Network

Street View



Bird's Eye View



Single-Family Residential
Multi-Family Residential
Commercial
Retail
Institutional/Government
Industrial
Open Space
Vacant

0 0.5 1 Miles

N

Existing Land Use

C6-URBAN CORE: ORANGE AVE, DOWNTOWN ORLANDO, ORANGE COUNTY

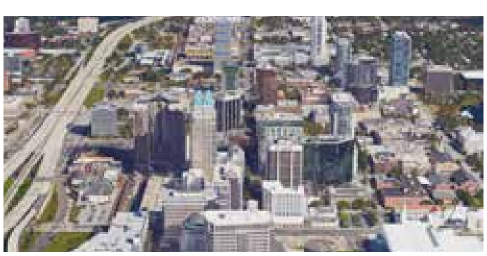
Primary Measures

Land Use	Building Height	Building Placement	Fronting Uses	Location of Off-street Parking	Roadway Connectivity		
					Intersection Density	Block Perimeter	Block Length
Description	Floor Levels	Description	Yes / No	Description	Intersections/ Sq Mile	Feet	Feet
Retail, Office, Institutional, and Multi-Family Residential	> 4 with some shorter buildings	Mostly attached buildings with no setbacks	Yes	Rear and garage	220	1,910	450

Secondary Measures

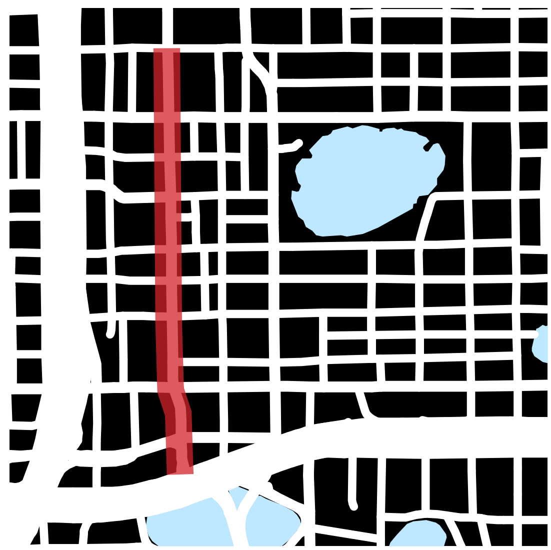
Allowed Residential Density	Allowed Office/Retail Density	Population Density	Employment Density
DU/Acre	Floor-Area Ratio (FAR)	Persons/Acre	Jobs/Acre
200	3	8.5	170

Street View

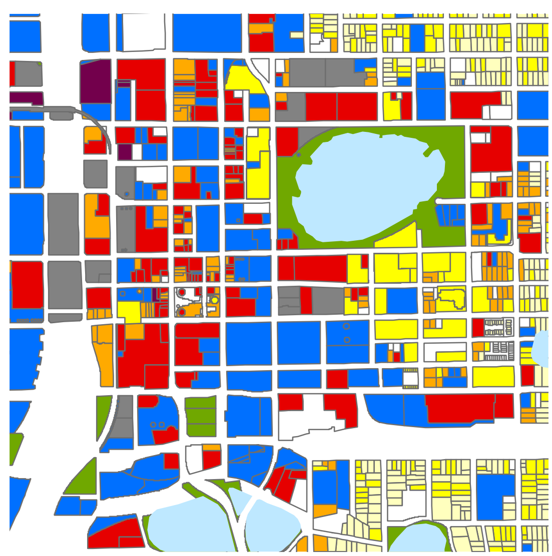


Bird's Eye View

Aerial Satellite Image



Streets and Blocks Network



Existing Land Use

Single-Family Residential
Multi-Family Residential
Commercial
Retail
Institutional/Government
Industrial
Open Space
Vacant

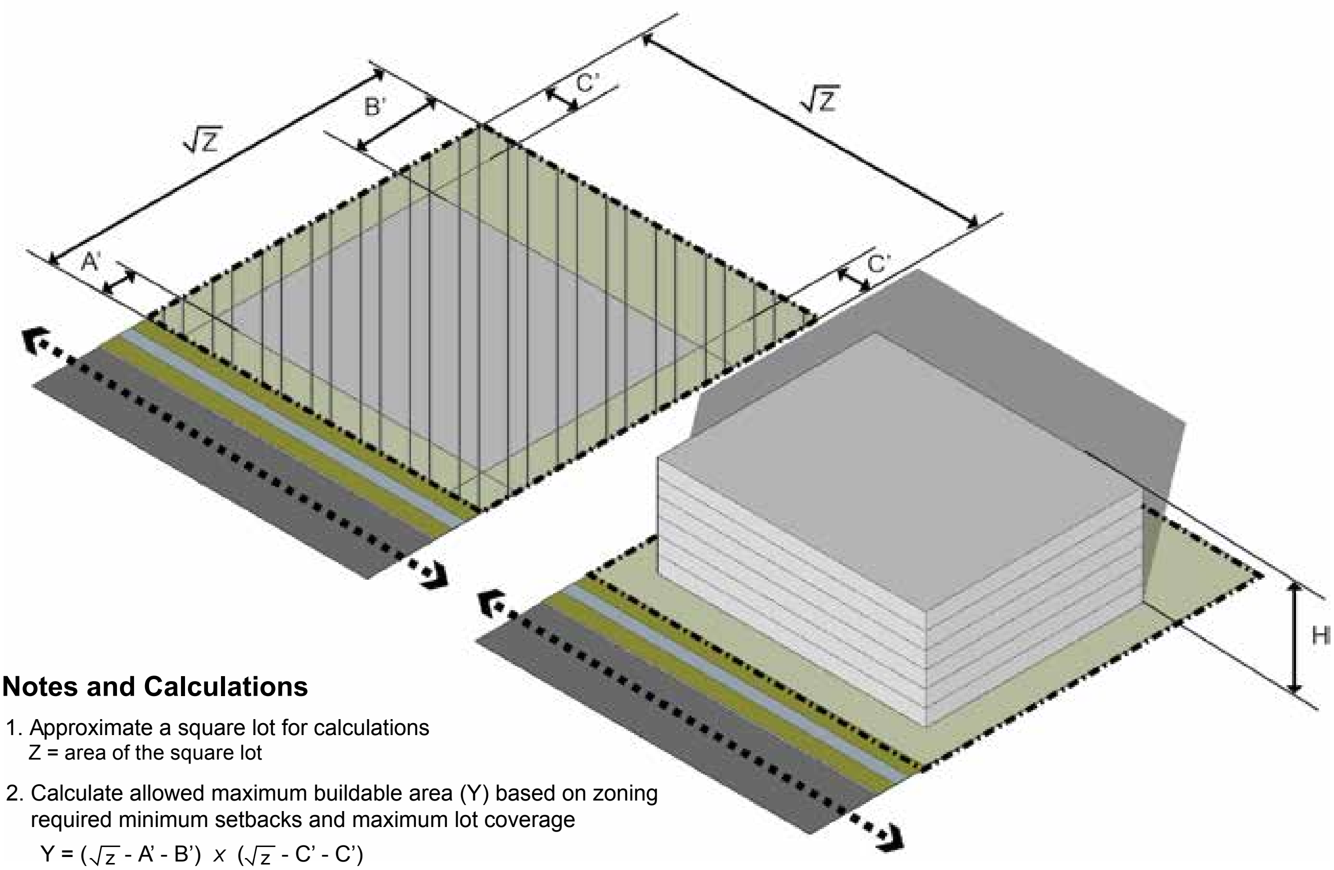
0 0.5 1 Miles

N

Appendix C

HOW TO CALCULATE FLOOR AREA RATIO IF NOT DEFINED IN ZONING CODE

FAR can be calculated using these various site design and height standards. For example, assuming floor height of 10 feet, total number of floors can be calculated based on maximum building height measure. Based on minimum parcel size, and minimum setbacks, maximum floor plate area can be calculated. Multiplying maximum floor plate area by total number of floors will give total building floor area. Finally, dividing total building floor area by minimum parcel size will provide FAR.



Notes and Calculations

1. Approximate a square lot for calculations
   Z = area of the square lot
2. Calculate allowed maximum buildable area (Y) based on zoning required minimum setbacks and maximum lot coverage
   $Y = (\sqrt{Z} - A' - B') \times (\sqrt{Z} - C' - C')$
   or
   Y = (Maximum lot coverage area in (%) allowed by zoning code) $\times$ (Z)
   Use the smaller of the two values as Y
3. Calculate total floor levels based on zoning allowed maximum height (J)
   $$\frac{H}{\text{Height of a floor level*}}$$
   * Assume 12' for commercial land use or 10' for residential land use
4. Calculate Floor Area Ratio (FAR)

$$\textbf{Floor Area Ratio (FAR)} = \frac{\mathbf{Y \times J}}{\mathbf{Z}}$$

Y = Maximum allowed buildable area in square feet

A = Minimum allowed front setback in feet based on zoning code

B = Minimum allowed rear setback in feet based on zoning code

C = Minimum allowed side setback in feet based on zoning code

H = Maximum allowed height allowed by zoning code in feet

Appendix D

PROPOSED *FDM* DESIGN SPEED RANGES BY CONTEXT CLASSIFICATIONS FOR NON-LIMITED-ACCESS FACILITIES

Context Classification	Allowable Design Speed Range for Non-SIS (mph)	Minimum Design Speed for SIS (mph)
C1-Natural	55-70	65
C2-Rural	55-70	65
C2T-Rural Town	25-45	40
C3-Suburban	35-55	50
C4-Urban General	30-45	45
C5-Urban Center	25-35	35
C6-Urban Core	25-30	30

Refer to the ***FDM*** for design criteria and refer to the ***SIS Procedure 525-030-260-b*** for SIS standards.

E

Appendix E

DRAFT SAMPLE CONTEXT CLASSIFICATION LETTER OF AGREEMENT WITH LOCAL GOVERNMENTS

The successful implementation of Complete Streets requires the identification of a roadway's context classification early in the project development process. Context classification informs all phases of a project: planning, PD&E, design, construction, and maintenance. Chapter 2 of the Complete Streets Handbook provides the Context Classification Matrix (see Table 2-1 in the Complete Streets Handbook) and outlines the methodology for using it.

On projects where FDOT currently coordinates with local governments, FDOT will coordinate with local governments to determine context classification; however, the final determination of context classification will be made by FDOT. Refer to the ***Public Involvement Handbook***, ***FDM***, ***PD&E Manual***, and ***Project Management Handbook*** for more guidance on needed local government coordination.

To ensure clarity and consistency throughout the project development process, it may be beneficial to document the agreement reached among FDOT and local partners on the context classification(s) of a roadway. This is most useful early in the project development process (see Figure 3-5 in the Complete Streets Handbook), but can be executed at any point in the life of a project.

The following is a sample Letter of Agreement that can be tailored to the needs of a project.

The following notes apply to the sample Letter of Agreement:

- If there is no FN Number, the associated phrase in the declarations section of the sample Letter of Agreement can be deleted.
- Replace COUNTY and CITY with the full county or city name, wherever they are not previously defined. Note that separate Letter of Agreements with multiple parties may be needed if the project extends through multiple jurisdictions.
- Maps, drawings, and other project information may be appended to the Letter of Agreement as exhibits.

SAMPLE CONTEXT CLASSIFICATION LETTER OF AGREEMENT

Sample Context Classification Letter of Agreement to Come

F

Appendix F

LIST OF HANDBOOKS AND GUIDANCE DOCUMENTS THAT INCLUDE TOOLS FOR IMPLEMENTING COMPLETE STREETS

HANDBOOKS AND MANUALS

- 2014 Traffic Analysis Handbook-A Reference for Planning and Operations
- Accessing Transit: Design Handbook for Florida Bus Passenger Facilities (Version III, 2013)
- Cultural Resource Management Handbook
- Efficient Transportation Decision Making (ETDM) Planning and Programming Manual
- Florida Highway Landscape Guide
- Florida Scenic Highway Program Manual
- Guide for Roadside Vegetation Management
- Historic Highway Bridges of Florida
- Local Agency Program (LAP) Program Manual
- Project Development and Environment (PD&E) Manual
- Public Involvement Handbook
- Quality/Level of Service Handbook
- Manual for Speed Zoning of Highways, Roads & Streets
- Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways (commonly referred to as the “Florida Greenbook”)
- Traffic Engineering Manual

Latest versions of FDOT Handbook and Manuals listed above can be accessed here: http://www.fdot.gov/publications/publications.shtm

GUIDANCE

- Statewide Lane Elimination Guidance Parts 1
- Statewide Lane Elimination Guidance Parts 2
- Sociocultural Effects Guidance
- FDOT Transit-Oriented Development Guidebook
- Typical Sections for Exclusive Transit Running Ways

FDOT

Completing FLORIDA'S STREETS

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