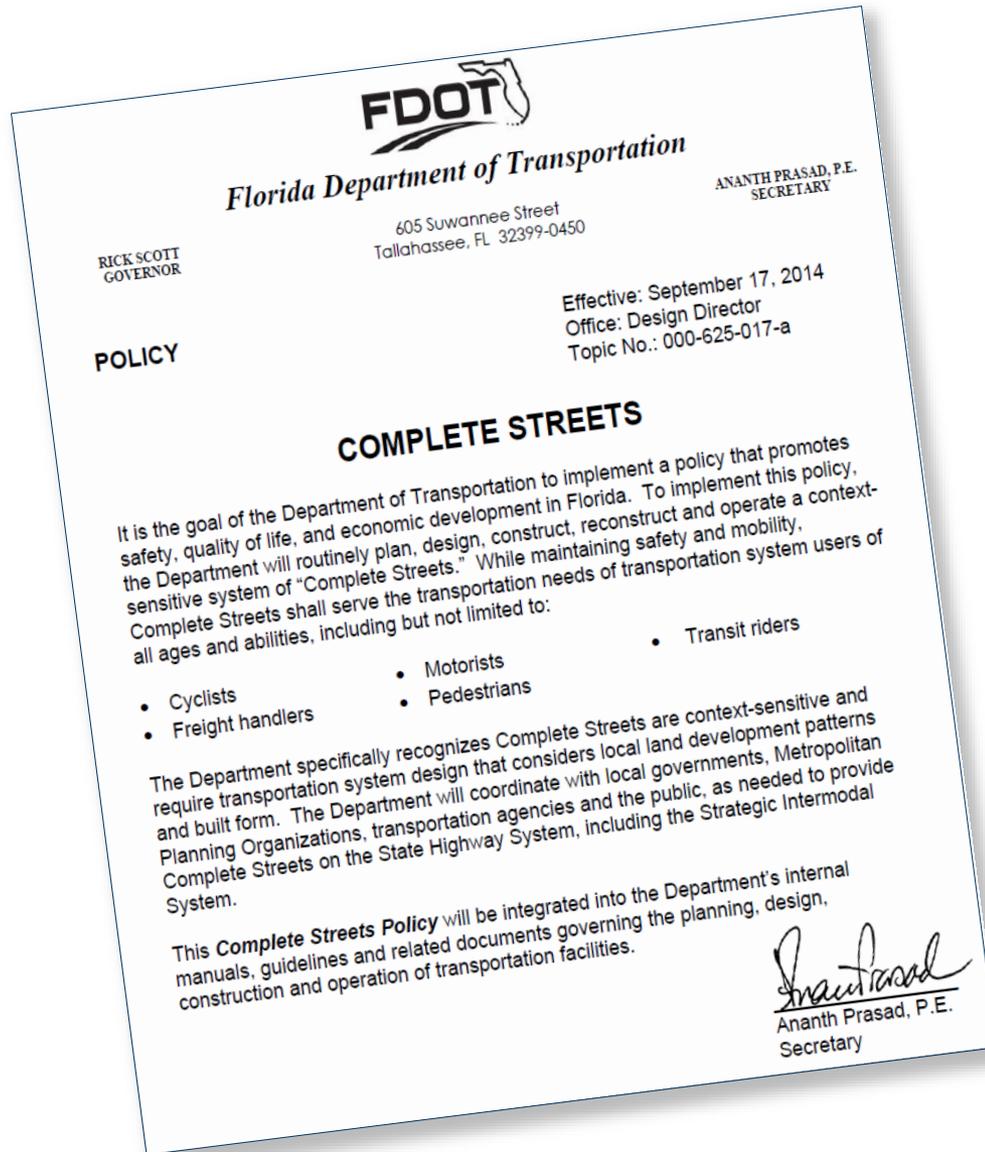




# Complete Streets: What you can already be doing

DeWayne Carver, AICP  
FDOT Roadway Design Office

# Complete Streets Policy



# COMPLETE STREETS IMPLEMENTATION PLAN

M2D2: Multimodal Development and Delivery

December 2015



The Florida Department of Transportation and Smart Growth America



- Prepared by Smart Growth America working with FDOT
- It's a road map, not a vehicle!
- Provides a “common vision” within the agency
- Requires a multi-disciplinary approach...

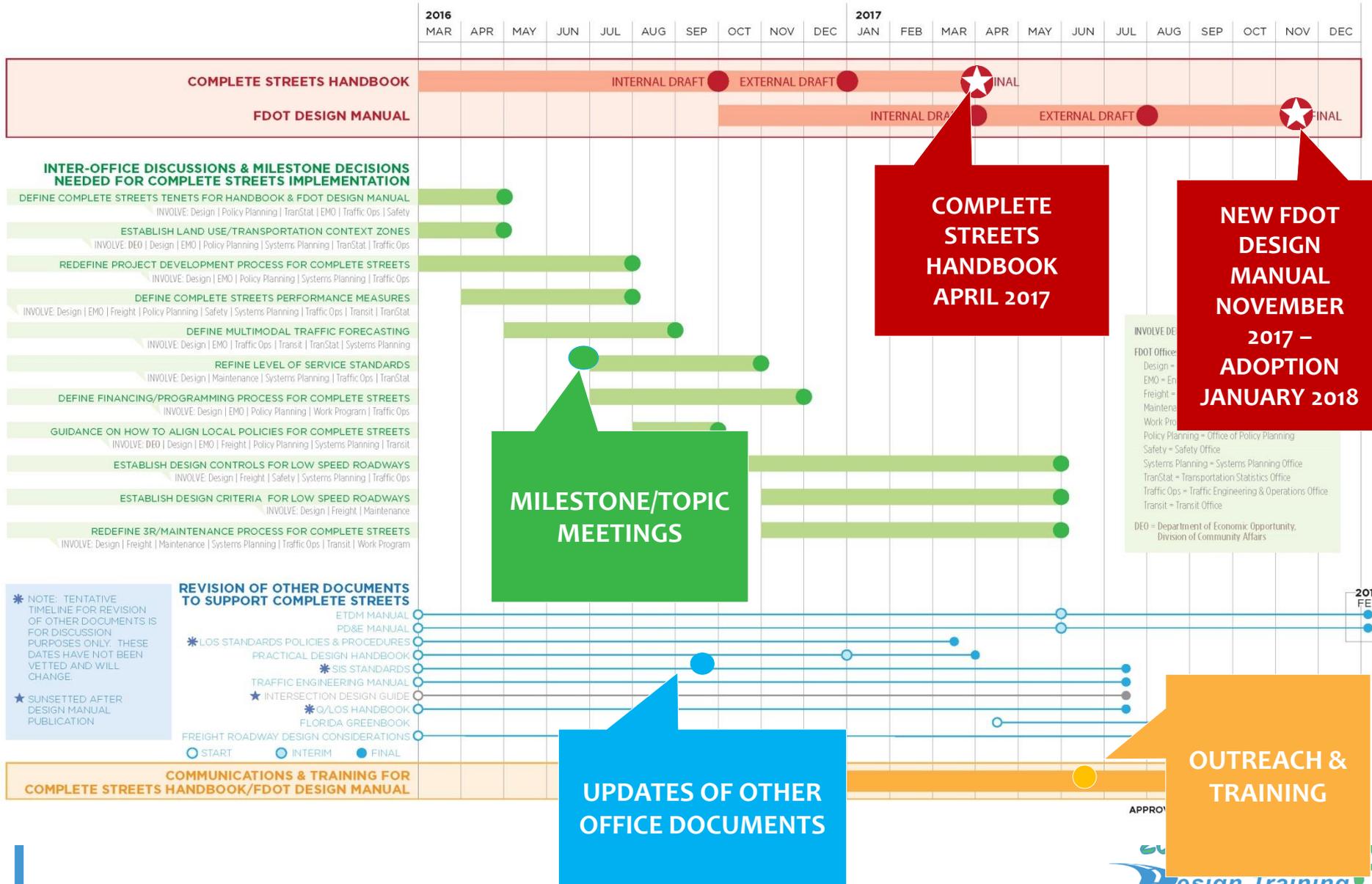


Smart Growth America  
Making Neighborhoods Great Together





# DECISION FRAMEWORK & TIMELINE FOR COMPLETE STREETS IMPLEMENTATION



**MILESTONE/TOPIC MEETINGS**

**COMPLETE STREETS HANDBOOK APRIL 2017**

**NEW FDOT DESIGN MANUAL NOVEMBER 2017 – ADOPTION JANUARY 2018**

INVOLVE DE  
FDOT Office  
Design =  
EMO = En  
Freight =  
Maintena  
Work Pro  
Policy Planning = Office of Policy Planning  
Safety = Safety Office  
Systems Planning = Systems Planning Office  
TranStat = Transportation Statistics Office  
Traffic Ops = Traffic Engineering & Operations Office  
Transit = Transit Office  
DEO = Department of Economic Opportunity, Division of Community Affairs

\* NOTE: TENTATIVE TIMELINE FOR REVISION OF OTHER DOCUMENTS IS FOR DISCUSSION PURPOSES ONLY. THESE DATES HAVE NOT BEEN VETTED AND WILL CHANGE.  
★ SUNSETTED AFTER DESIGN MANUAL PUBLICATION



# FDOT Draft Land Use Context Zones

Context Zones	Context Classification	Description
Rural	C1	Natural
	C2	Rural
 Rural Town	C2T	Rural Town
 Suburban	C3R	Suburban Residential
	C3C	Suburban Commercial
Urban	C4	General Urban Residential
	C5	Urban Center
 Urban Core	C6	Urban Core

# New FDOT Design Manual

- Incorporates Context-based Design Criteria
- Organized as a three part web-based Manual
  - **Part 1 – Processes**
  - **Part 2 – Criteria**
  - **Part 3 – Plans Production**
- 3 new chapters, 7 major chapter re-writes, minor revisions to numerous other chapters
- Structured and formatted as a web-based document
- Posted November 2017 for January 2018 implementation

# Why wait?

- “Complete Streets” will standardize many options we already have
- We can already create “context based design” using existing guidance
- PPM Chapter 21
  - Transportation Design for Livable Communities (TDLC)
  - Melanie Weaver Carr
  - Billy Hattaway
- Some Districts do this routinely

Is someone you know having a Complete Streets “Veruka Salt” moment?



From “Willy Wonka and the Chocolate Factory”

# What can we already do?



Rural TDLC treatments



Medians & Midblocks

Parking

Bulb-outs

Google earth

A1A in Stuart, FL



Angle parking

Colored Pavement

# PPM Chapter 21



- Transportation Design for Livable Communities
- Urban and Rural “contexts”
- Incorporates local input
- Emphasis on early scoping
- Alternative design criteria incl. design speed
- Opens the door to new options

# Purpose

- Principles in 21.1 very similar to Complete Streets material
  1. Safety of pedestrians, bicyclists, motorists and public transit users.
  2. Balancing community values and mobility needs.
  3. Efficient use of energy resources.
  4. Protection of the natural and manmade environment.
  5. Coordinated land use and transportation planning.
  6. Local and state economic development goals.
  7. Complementing and enhancing existing Department standards, systems and processes.

# Public Engagement/Early Scoping

- “TDLC features are to be considered when they are desired, appropriate and feasible.”
- “... contingent upon involvement of the local stakeholders in the planning and project development processes.”
- “... essential that all stakeholders are included from the initial planning phase of the project through design, construction and maintenance.”
- “... assess ... willingness of the community or stakeholder to accept all of the ramifications of TDLC, including funding allocations and maintenance agreements...”

# Process

- Team approach, may include (but not limited to)
  - Planning
  - Traffic Operations
  - EMO
  - Roadway Design
  - ROW
  - Public Transportation
  - Safety
  - MPOs
  - Local government
  - Advocates/Citizen groups

# Where, how and who?

- Determine Urban or Rural “context”
- New or RRR
- Requires DDE approval to substitute Chapter 21 criteria
- Requires documentation of desired features
  - Standalone
  - Or placed in design documentation

# The TDLC planning/design system

- Starts with type of “technique” for more liveability
  - Corridor-wide approaches (Table 21-A)
  - Reduce speed or volume (Table 21-B)
  - Encourage multimodal travel (Table 21-C)
  - Increase Network connectivity (Table 21-D)
- Applied based on class of roadway
  - FIHS/SIS limited/controlled access
  - SHS Urban
  - SHS Rural
  - Non-SHS

Why didn't I ask  
FDOT to use Chapter  
21 on my 3R job?

or Techniques



	UNCONTROLLED ACCESS	CONTROLLED ACCESS	SHS URBAN	SHS RURAL	NON-SHS
Improved location, oversized or redundant directional signs	A	A	M	M	M
Use of route markings/ signing for historical and cultural resources	M	A	A	A	A
Increased use of variable message signing	A	A	M	M	M
Landscaping	M	M	M	M	M
Sidewalks or wider sidewalks	NA	M	A	M	M
Street furniture	NA	M	M	M	M
Bicycle lanes	NA	M	M	M	M
Shared Use Paths	NA	M	M	M	M
Conversion to/from one-way street pairs	NA	M	M	NA	M
Alternative paving materials	NA	NA	M	NA	M
Pedestrian signals, midblock crossings, median refuge areas	NA	M	A	M	M
Parking modifications or restoration	NA	NA	M	M	M
Safety and personal security amenities	M	M	M	M	M
Street mall	NA	NA	NA	NA	M

- A "Appropriate"--Techniques which should be included on all TDLC projects unless there are compelling reasons not to do so.
- M "May be Appropriate"--Techniques which should be employed, but must be evaluated relative to context of the particular project.
- NA "Not Appropriate"--Techniques which need not be considered for TDLC projects.

**Exhibit 21-A Corridor Techniques**

TECHNIQUE	SIS		SHS URBAN	SHS RURAL	NON- SHS
	LIMITED ACCESS	CONTROLLED ACCESS			
Improved location, oversized or redundant directional signs	A	A	M	M	M
Use of route markings/ signing for historical and cultural resources	M	A	A	A	A
Increased use of variable message signing	A	A	M	M	M
Landscaping	M	M	M	M	M
Sidewalks or wider sidewalks	NA	M	A	M	M
Street furniture	NA	M	M	M	M
Bicycle lanes	NA	M	M	M	M
Shared Use Paths	NA	M	M	M	M
Conversion to/from one-way street pairs	NA	M	M	NA	M
Alternative paving materials	NA	NA	M	NA	M
Pedestrian signals, midblock crossings, median refuge areas	NA	M	A	M	M
Parking modifications or restoration	NA	NA	M	M	M
Safety and personal security amenities	M	M	M	M	M
Street mall	NA	NA	NA	NA	M

A "Appropriate"--Techniques which should be included on all TDLC projects unless there are compelling reasons not to do so.

M "May be Appropriate"--Techniques which should be employed, but must be evaluated relative to context of the particular project.

NA "Not Appropriate"--Techniques which need not be considered for TDLC projects.

- Linear features
- Corridor-wide
- Part of a larger system or program?

**Exhibit 21-B Techniques To Reduce Speed Or Traffic Volume**

TECHNIQUE	SIS		SHS URBAN	SHS RURAL	NON-SHS
	LIMITED ACCESS	CONTROLLED ACCESS			
Lower speed limits	NA	NA	NA	NA	N
Increase use of stop or multi-way stop signs	NA	NA	NA	NA	N
Speed humps/tables	NA	NA	NA	NA	M
On-street parking to serve as buffer between travel lanes and pedestrian areas	NA	NA	M	M	M
Curb bulb-outs at ends of blocks	NA	NA	M	M	M
Traffic "chokers" oriented to slowing traffic	NA	NA	NA	NA	M
"Compact" intersections	NA	A	A	A	A
Traffic roundabouts to facilitate intersection movement	NA	M	M	M	M
Curvilinear alignment (with redesign, chicanes, winding paths, etc.)	NA	NA	M	NA	M
Street closing or route relocation	NA	NA	M	NA	M

A "Appropriate" --Techniques which should be included on all TDLC projects unless there are compelling reasons not to do so.

M "May be Appropriate"--Techniques which should be employed, but must be evaluated relative to context of the particular project.

NA "Not Appropriate"--Techniques which need not be considered for TDLC projects.

- Address specific issues
- Speed
- Volume

A

M

NA

**Exhibit 21-C Techniques to Encourage Multimodal Travel**

TECHNIQUE	SIS		SHS URBAN	SHS RURAL	NON- SHS
	LIMITED ACCESS	CONTROLLED ACCESS			
Sidewalks	NA	M	A	M	M
Pedestrian friendly intersection design	NA	M	A	M	M
Midblock pedestrian crossings	NA	M	M	M	M
Illuminated pedestrian crossings	NA	M	M	M	M
Bicycle lanes/paved shoulders	NA	M	A	A	M
Independent Shared Use Path	NA	M	M	M	M
Bicycle friendly design and parking	NA	M	A	A	A
Transit system amenities	NA	M	A	M	M
Transit user amenities	NA	M	A	M	M
Exclusive transit lanes	M	M	M	M	M
Linking modal facilities	A	A	A	A	A
Lower speed limits	NA	NA	NA	NA	NA
Removal of street parking	NA	NA	M	M	M

- A "Appropriate"--Techniques which should be included on all TDLC projects unless there are compelling reasons not to do so.
- M "May be Appropriate" --Techniques which should be employed, but must be evaluated relative to context of the particular project.
- NA "Not Appropriate" --Techniques which need not be considered for TDLC projects.

- Policy-oriented
- Design-based
- Is there a plan?

Exh

Exhibit

**Exhibit 21-D Network Techniques**

- Longer-term planning
- Legislative issues?
- Traffic Operations

TECHNIQUE	SIS		SHS URBAN	SHS RURAL	NON-SHS
	LIMITED ACCESS	CONTROLLED ACCESS			
Design the street network with multiple connections and relatively direct routes	NA	NA	A	M	M
Space through-streets no more than a half mile apart.	NA	NA	A	M	M
Use traffic calming measures	NA	M	M	M	M
Limit local speed to 20 mph	NA	NA	NA	NA	M
Limit lanes	M	M	M	M	M
Align streets to give buildings energy-efficient orientations	NA	NA	M	NA	M
Avoid using traffic signals wherever possible. Space them for good traffic progression	NA	M	M	M	M
Incorporate pedestrian and bicyclist design features	NA	A	A	A	A
Incorporate transit-oriented design	M	A	A	A	A
Design attractive greenway corridors	A	A	A	A	A
Design attractive storm water facilities	A	A	A	A	A

- A "Appropriate"--Techniques which should be included on all TDLC projects unless there are compelling reasons not to do so.
- M "May be Appropriate"--Techniques which should be employed, but must be evaluated relative to context of the particular project.
- NA "Not Appropriate"--Techniques which need not be considered for TDLC projects.

# What does Chapter 21 allow?

- Design Speed
  - Chapter 1.9 has special speed for TDLC applications
- Number of lanes
  - New lane elimination guidance supersedes
- Lane Widths
  - Guidance for going narrower than 11' in urban
- Horizontal alignment
  - Can be used for speed management
  - Chapter 2 shows how



**Table 1.9.1 Design Speed  
State Highway System - Non-SIS Facilities**

Facility		Design Speed (mph)
Freeways	Rural	70
	Urban	50 - 70
Arterials	Rural	55 - 70
	Urban	40 - 60
Collectors	Rural	55 - 65
	Urban	35 - 50
TDLC		30 - 40

Table 4.2.3 Continued Lateral Offset Criteria

Design Element	Urban Curb or Curb and Gutter Design Speed ≤ 45 mph			All Other	
	New Construction	RRR	TDLC		
Traffic <sup>(1)</sup> Control Signs	Single and Multi-Column	Locate in accordance with <i>Design Standards</i> . Use breakaway supports whether inside or outside the clear zone			
	Overhead Sign Supports	Outside Clear Zone			
Aboveground <sup>(2)</sup> Fixed Utilities (AFUs)	New AFUs Other than mid-span poles	≥ 4 feet from face of curb and as close to R/W as practical	1.5 feet from face of curb and as close to R/W as practical	Outside Clear Zone, and as close to R/W as practical	
	New AFUs <sup>(3)</sup> Mid-span poles at intersecting roadways	≥ 4 feet from face of curb		Outside Clear Zone, and as close to R/W as practical	
	Existing AFUs	Relocate as close to the R/W as practical and no closer than the below offsets:			
Trees	Where the diameter is or is expected to be > 4 inches measured 6 inches above the ground	4 feet from face of curb	1.5 feet <sup>(4)</sup> from face of curb	1.5 feet from face of curb	Outside <sup>(4)</sup> Clear Zone
		4 feet from face of curb	1.5 feet <sup>(5)</sup> from face of curb	4 feet from face of curb (1.5 feet under constrained conditions)	Outside Clear Zone

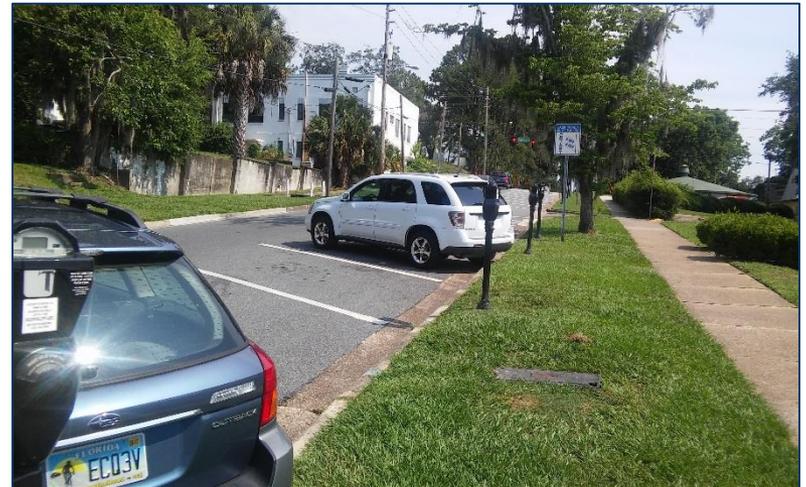
(1) When location within sidewalk is necessary, provide a minimum 4 feet unobstructed sidewalk (not including width of curb).  
 (2) Aboveground Fixed Utilities are objects owned by a public or private utility agency that are more than 4 inches above the grade and are not accepted by FDOT as crashworthy (such as strain poles, down guys, telephone load pedestals, temporary supports, etc.)  
 (3) Mid-span poles are new poles being installed as part of and within the alignment of an existing pole line.  
 (4) Existing AFUs are not to be relocated for RRR Projects unless they are adjacent to added or widened lanes or have been hit 3 times in 5 years.  
 (5) Requirements provided for Existing trees. Meet New Construction requirements for New Plantings.

- Medians
  - Specific guidance for refuge islands
- Lateral offset
  - Key is design speed
  - Table 4.2.3
  - As low as 1.5' from face-of-curb
- Landscaping
  - Local maintenance
  - See Chapter 9



- Parking

- Angle
- Reverse angle
- Parallel



# Local Roads - Florida Greenbook

Topic # 625-000-015  
Manual of Uniform Minimum Standards  
for Design, Construction and Maintenance  
for Streets and Highways

May - 2013 |

## CHAPTER 19

### TRADITIONAL NEIGHBORHOOD DEVELOPMENT

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Hollywood Blvd,  
Hollywood FL

# Ch 19 Guidance for lower design speeds...

May - 2013 |

Topic # 625-000-015  
Manual of Uniform Minimum Standards  
for Design, Construction and Maintenance  
for Streets and Highways

## E DESIGN ELEMENTS

The criteria provided in this chapter shall require the approval of the maintaining authority's designated Professional Engineer representative with project oversight or general compliance responsibilities. Approval may be given based upon a roadway segment or specific area.

The criteria provided in this chapter are generally in agreement with AASHTO guidelines with a special emphasis on urban, low-speed environments. Design elements within TND projects not meeting the requirements of this chapter are subject to the requirements for Design Exceptions found in Chapter 14 of this manual.

### E.1 Design Controls

#### E.1.a Design Speed

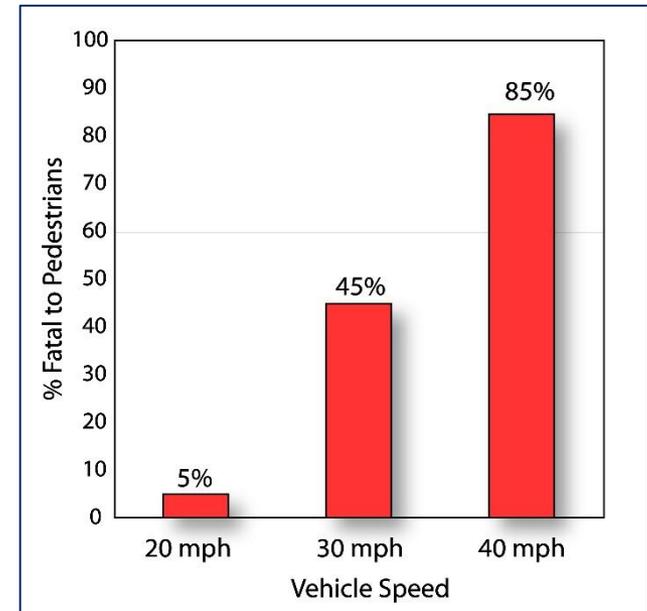
The application of design speed for TND communities is philosophically different than for conventional transportation and CSD communities. Traditionally, the approach for setting design speed was to use as high a design speed as practical.

In contrast to this approach, the goal for TND communities is to establish a design speed that creates a safer and more comfortable environment for pedestrians and bicyclists, and is appropriate for the surrounding context.

**Design speeds of 20 to 35 mph are desirable for TND streets.** Alleys and narrow roadways intended to function as shared spaces may have design speeds as low as 10 mph.

#### E.1.b Movement Types

Movement types are used to describe the expected driver experience on a design speed for pedestrian safety and They are also



# Where does Ch. 19 apply?

## B APPLICATION

A project or community plan may be considered a TND when at least the first seven of the following principles are included:

1. Has a compact, pedestrian-oriented scale that can be traversed in a five to ten-minute walk from center to edge.
2. Is designed with low speed, low volume, interconnected streets with short block lengths, 150 to 500 feet, and cul-de-sacs only where no alternatives exist. Cul-de-sacs, if necessary, should have walkway and bicycle connections to other sidewalks and streets to provide connectivity within and to adjacent neighborhoods.
3. Orients buildings at the back of sidewalk, or close to the street with off-street parking located to the side or back of buildings, as not to interfere with pedestrian activity.
4. Has building designs that emphasize higher intensities, narrow street frontages, connectivity of sidewalks and paths, and transit stops to promote pedestrian activity and accessibility.
5. Incorporates a continuous bike and pedestrian network with wider sidewalks in commercial, civic, and core areas, but at a minimum has sidewalks at least five feet wide on both sides of the street. Accommodates pedestrians with short street crossings, which may include mid-block crossings, bulb-outs, raised crosswalks, specialty pavers, or pavement markings.
6. Uses on-street parking adjacent to the sidewalk to calm traffic, and offers diverse parking options, but planned so that it does not obstruct access to transit stops.
7. Varies residential densities, lot sizes, and housing types, while maintaining an average net density of at least eight dwelling units per acre, and higher density in the center.
8. Integrates at least ten percent of the developed area for nonresidential and civic uses, as well as open spaces.
9. Has only the minimum right of way necessary for the street, median, planting strips, sidewalks, utilities, and maintenance that are appropriate to the adjacent land uses and building types.
10. Locates arterial highways, major collector roads, and other high-volume corridors at the edge of the TND and not through the TND.

The design criteria in this chapter shall only be applicable within the area defined as TND.

Office Of Roadway Design  
Tallahassee, FL



# TRADITIONAL NEIGHBORHOOD DEVELOPMENT HANDBOOK

STATE OF FLORIDA  
DEPARTMENT OF  
TRANSPORTATION



2011

# Tips and Tricks

- A good scope makes life much easier
  - Think vertically at initial scoping
  - Engage all stake holders at the very beginning
  - Break down the “cylinders of excellence”
- Look at what’s already in place
  - We actually have ample design guidance out there
  - What’s lacking is political will and intent
  - Good scoping helps
- The Vision Thing
  - The Vision sets the direction
  - Have a good plan in place

# Questions?



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