Florida Greenbook

Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways

Advisory Committee Meeting Agenda

Tuesday, April 11, 2023
8:00 AM – 5:00 PM

Florida's Turnpike Enterprise
Turkey Lake Service Plaza
Milepost 263, Bldg. #5315, Ocoee, Florida 34761
Meeting Room: Auditorium A

8:00 AM	Welcome	*Derwood Sheppard*
8:15 AM	Sunshine Law and Rulemaking Timeline	*Ashley Peacock*
8:45 AM	Introductions and Membership Changes	*Advisory Committee*
9:15 AM	FDOT Complete Streets & Context Classification • Overview and Discussion • Practical Exercise	*DeWayne Carver & Tiffany Gehrke*
10:15 AM	**Break**	**15 Min**
10:30 AM	Context Classification • Panama City Case Study	*Rick Hall*
11:00 AM	Florida Greenbook Collaboration Workshop	*Advisory Committee*
11:30 AM	**Lunch** Lunch will not be provided, and attendees will be on their own.	**75 Min**
12:45 PM	Florida Greenbook Alignment Workshop	*Advisory Committee*
2:15 PM	**Break**	**15 Min**
2:30 PM	AASHTO Greenbook • National Direction, Overview and Discussion	*DeWayne Carver*
3:30 PM	Overview • File Structure and Process • 2023 Florida Greenbook Publication Update • Subcommittee Sign-up	*Jacqui Morris*
4:30 PM	Meeting Debrief • General Discussion • Public Comment	*Jacqui Morris*

Advisory Committee Meeting Minutes

Tuesday, April 11, 2023
8:00 AM – 5:00 PM

Florida's Turnpike Enterprise
Turkey Lake Service Plaza
Milepost 263, Bldg. #5315, Ocoee, Florida 34761
Meeting Room: Auditorium A

Attendees:
D1: Kevin Ingle, Shane Parker, Andy Tilton, Nikesh Patel
D2: Kathryn Thomas, Kenneth Dudley (virtual), Gene Howerton, Ramon Gavarrete
D3: Adam Scurlock (virtual), Rick Hall, Chance Powell (virtual), Keith Bryant
D4: John Olson, Robert Behar, Richard Szpyrka, Richard Tornese
D5: Jeffrey Cicerello, Gail Woods, Ghulam Qadir, Deborah Snyder
D6: Karina Fuentes, Andres Garganta, Miguel Soria, Juvenal Santana
D7: Allan Urbonas, Richard Diaz, D.Todd Crosby, Calvin Hardie
Committee Staff: Derwood Sheppard, Jacqui Morris, DeWayne Carver
Associate Members: Billy Hattaway
FACERS: Benjamin Bartlett
FDOT Technical Advisors: Benjamin Gerrell, Tiffany Gehrke, Keith Krieger, Ashley Peacock
In-Person Guest: Ryan Bell, Alissa Torres, Panos Kontses
Virtual Guest: Juan Calderon, Jennifer Musselman, Paul Webb, Molly DeVivero, Martine Fils-Aime, Burak Konuk

Topic:	*Presenter*

1. Welcome — *Derwood Sheppard*

Derwood Sheppard welcomed the committee and the public to the 2023 Florida Greenbook Committee meeting and introduced himself as the new State Roadway Design Engineer and Chair of the Florida Greenbook Committee.

Jacqui Morris discussed the agenda and meeting logistics including the facility emergency exits and important facility locations.

2. Sunshine Law and Rulemaking Timeline — *Ashley Peacock*

A presentation and discussion on the Sunshine Law and Rulemaking timeline was provided by the FDOT Office of General Counsel.

Sunshine Law Requirements were discussed:

- All communications must take place in meetings; meetings must be "open and accessible"; the public must be provided points of access; cannot discriminate or restrict public access; must provide reasonable notice; meeting minutes are required; nothing can be "off the record."
- Additional information about the legal briefing, itself, can be found on ***Appendix A.***

The steps of the Administrative Rulemaking process were discussed:

- Notice of Development of Rulemaking; Notice of Proposed Rule (with comment period); Notice of Change / Withdrawal; File for Adoption (rule takes effect 20 days later). Additional information can be found on ***Slide 7.***

3. Introductions and Membership Changes *Advisory Committee*

Committee members introduced themselves by District.

New members were announced as follows:

- New Committee Members:
  - Ramon Gavarrete, P.E, Public Works Director – Alachua County Board of County Commissioners (D2)
  - Chance Powell, P.E., Traffic Operations Engineer – Walton County Board of County Commissioners (D3)
  - D. Todd Crosby, P.E., Traffic Operations Engineer – Walton County Board of County Commissioners (D7)
  - Calvin Hardie, P.E., Chief Design Engineer – City of Tampa (D7)
- New Associate Member:
  - Billy Hattaway, P.E., Principal – Fehr & Peers
- New FDOT Committee Staff:
  - Michael Shepard, P.E., Director, Office of Design
  - DeWayne Carver, Criteria Publications Manager
- Florida Greenbook Chair
  - Derwood Sheppard, P.E., State Roadway Design Engineer
- Florida Greenbook Coordinator
  - Jacqui Morris, CPM, Criteria Publications Coordinator

Additional information can be found on ***Slides 8 - 17.***

4. FDOT Complete Streets & Context Classification *DeWayne Carver & Tiffany Gehrke*

A presentation on FDOT Complete Streets & Context Classification was provided. Tiffany Gehrke the FDOT State Complete Streets Coordinator, discussed context classifications and complete streets, concepts. Complete streets and context based design involve "putting the right street in the right place."

The FDOT Context Classification Guide is a valuable resource for what complete streets look like from the FDOT perspective for criteria calibrated to Florida.

Images of various roadway sections were shown to demonstrate the intention of context-based design. Depending on surrounding conditions, each scenario accommodated all anticipated modes of transportation, but often in different ways based on the context.

The process to determine context classification was explained and discussed along with examples for each scenario.

A question was asked about replacing/reconstructing roadway corridors that were destroyed by the hurricane and about forecasting the future context classification. It was suggested that context classification should be determined by the local community. It was clarified this would be the case for non-state roads. The roadway should accommodate the surrounding or projected land use.

Additional information can be found on ***Slides 18 – 65.***

Resources requested at the meeting are provided below:
https://www.alerttodayflorida.com/
https://www.fdot.gov/safety/programs/pedestrian-and-bicycle-safety
http://flcompletestreets.com/

Attendees took a 15-minute break.

5. Context Classification - Panama City Case Study *Rick Hall, P.E.*

Rick Hall suggested publications on context sensitive planning and design:"Unplanning" by Charles Siegel; "Fighting Traffic" (1900 – 1940); Flexibility of Highway Design – FHWA

Discussed how land use gets figured out first and how Robert Davis avoided the suburban pattern when designing Seaside.

Rick led a review and discussion on how the 2018 AASHTO Greenbook added context classifications.

Rick provided a sketch/map of the roadway network in Panama City, showing both functional and context classifications, including a "Street Design Matrix", which prioritized design elements:

Speed; lane width; sidewalks; street trees/planting zone; pavement edge/drainage type; sidewalks separated from roadways; parking/shade trees; tree grates for sidewalks; The function of the roadway is not just long distance trips.

An overview and example was shown of tree wells. A question was asked about mass transit considerations. There is not much existing transit in Panama City, but now that they will have "walkability" to and from transit stops. Rick explained that in the Panama City design, a 15-ft radius was considered suitable for transit buses, by encroaching on the opposite lane. However, buses would not be expected to make frequent turns straight in C4 and C5 areas. Delivery design vehicles can make it around the corners. The friction occurs when the radius is large, and vehicles go faster than they should. When there is conflict between automotive and truck traffic, we should decide in favor of automotive, or lose the walkability and pedestrians.

A question was asked about underground utilities. Various designs were discussed such as soil cells, root barriers, and curb bulb-outs. Curb extensions are typically used on one-way streets. Rick recommended against use of bulb-outs for a two-lane crossing a two-lane.
Speed is the most important parameter in walkability. Rick stated that one-way street traffic is always faster than two-way; therefore, one-way streets should be avoided.

Rick provided a discourse on the history of design based on the AASHTO Greenbook. He explained that before the Greenbook, AASHTO had the Redbook and the Bluebook, for urban and rural roadways. In those days, engineers and designers were encouraged to exceed minimums, using wider lanes, larger corner radii, etc. Designing below the maximum values, Rick said, was reserved for “constrained conditions.” So, when we are designing today, designers should consider a “constrained facility” approach in C3, C4, and C5. Compact design will restrain drivers from excess speeds. The land development pattern is important to the success of the road project.

Additional information can be found on ***Slides 67 – 95.***

6. Florida Greenbook Collaboration Workshop *Advisory Committee*

Jacqui Morris initiated the collaboration portion of the workshop by presenting the “rules” of brainstorming” and asking each member to write down thoughts on current things/processes that are working well, and others that could be improved. The sticky-notes were collected and attached to the presentation boards for grouping and discussion. Additional information can be found on ***Slide 97.***

Some common themes that emerged were focused on chapter specific needs, context classification, education, formatting and alignment, general comments, meetings, resilience and rulemaking.

A complete list of the Committee's brainstorming ideas can be found on ***Appendix B.***

Attendees took a 75-minute lunch and took a group photo.

7. Florida Greenbook Alignment Workshop *Advisory Committee*

Based upon discussion during the Collaboration Workshop, much of the Alignment Workshop discussion related to continuing to incorporate complete streets and context-based design philosophies in the Greenbook. AASHTO is moving in the same direction in the AASHTO Greenbook as well. Complete streets design concepts overlap into several Greenbook Chapters, especially Chapter 1 - Planning and Land Development, Chapter 8 - Pedestrian Facilities, Chapter 9 - Bicycle Facilities, Chapter 16 – Residential Street Design, and Chapter 19 -Traditional Neighborhood Development.

The committee has continued efforts to incorporate Chapter 19 - Traditional Neighborhood Development into other Chapters. Once the design criteria are appropriately distributed, the Chapter will be sunsetted.

The committee had previously discussed adding complete streets to Chapter 1 - Planning and Land Development, or as a replacement for Chapter 19.

One member expressed concerns on their projects which intersect FDOT roadways - unless they "exempt" the FDOT intersection, they require their entire project to meet FDM.

Some projects/roads have different municipalities on each side, while some extend through several roadway segments. Consistency is an important consideration. How to transition between differing design standards. Context classification is about how to adapt to what is going on "outside" the road right-of-way. It is more about the surrounding conditions. Do not want the street controlling/defining the land use. Land use defines the street network, and designers should not ignore development patterns. Supports the engineer in doing the right thing. Need to educate the boards of the municipalities. Would like to see context based typical sections.

The committee members developed a challenge question using the workshop collaboration tools: **How might we align the Florida Greenbook with context classification and the Traditional Neighborhood Development?**

Committee members brainstormed opportunities and various methods of accomplishing their goal. The committee decided to form a new subcommittee to solve this challenge.

Thirty-seven individual ideas were collected and can be found on ***Appendix C***.

Attendees took a 15-minute break.

8. AASHTO Greenbook *DeWayne Carver*

DeWayne Carver presented slides and ideas that had been provided by Paul Hiers, formerly the FDOT Criteria Administrator and also author of the first release of the FDOT Design Manual. Paul is on several national committees that are incorporating context classification into AASHTO and national guidance, but was unable to attend the Greenbook Committee meeting himself. DeWayne presented Paul's notes and ideas that had been prepared for the Greenbook Committee.

Context classification has gone nationwide. The FDOT has eight (8) classifications, while AASHTO has the AASHTO Five; Rural, Rural Town, Suburban, Urban, and Urban Core. However, FDOT's 8 classifications are based on the "AASHTO Five" and can be readily collapsed from 8 to 5, if needed to match new AASHTO criteria or guidance.

DeWayne provided an overview of the AASHTO context classifications and the intended use. He explained FDOT is comfortable with the AASHTO Five, which is now Six, with the addition of "Industrial". Florida would consider "Industrial" as a "Special District".

DeWayne said there was an NCHRP report now (NCHRP 1022) on how to determine classification. We would like to supplement the FDOT Context Classification Guide with information from the NCHRP study Discussions are still ongoing for how the next AASHTO Greenbook will be organized. This will provide local governments with guidance on how to use context classification.

Additional information can be found on ***Slides 99 - 109.***

9. Overview *Jacqui Morris*

Committee members and subcommittee members will now be able to utilize a dedicated Microsoft Teams channel to collaborate and work more efficiently.

A new On-Line Meeting Request Form is available for requesting and scheduling meetings https://forms.office.com/g/F0RvxDYdFr

The online committee nominations process was discussed. The District 1 Consultant Committee seat will be announced soon as Andy is retiring.

- Andy Tilton, PE., Water Resource Director - Johnson Engineering, Inc

For the FDOT Design Manual, a new FDM Intake Form is available, streamlining and tracking potential changes.

The new 2023 Florida Greenbook is in QC Review. The next step will be final publishing for the Draft Document on the website. FDOT Legal has signed off on Chapter 18 and 19.

Committee members were asked to validate their information and sign-up for the sub-committees that they wish to participate in.

The FDOT Roadway Design Office can assist with marketing materials. We have developed promotional videos (such as “texting distractions”). Discussed the statewide ground-in rumble strip initiative.

The committee discussed prior outstanding issues: border width not addressed in the Greenbook; Greenbook K-value for crest vertical curves not consistent with the FDM; bridge cross slope not addressed in Greenbook Chapter 16.

Lighting was discussed briefly. Locals, residents, and Dark Sky groups tend to prefer “warmer” LED lighting that has lower correlated color temperature (CCT). Low CCT “warm” light has a more amber color and has less vivid white with less blue content. For on-system roads, the FDOT Design Manual (FDM) now has a CCT by context classification policy that results in warmer light in the majority of locations. There is an opportunity to add a similar CCT policy to the Greenbook. It was suggested that the LED CCT range currently mentioned in Greenbook is outdated and should be lowered to 3200K Min. instead of 4000K Min.

Additional information can be found on ***Slide 114.***

10. Meeting Debrief *Jacqui Morris*

The meeting was opened for public comment. No comments received.

Derwood Sheppard thanked the group for their continued service on the Greenbook Committee.

Meeting Adjourned.

Appendix A

FLORIDA'S GOVERNMENT-IN-THE SUNSHINE LAW

1. THE LAW

Florida's Sunshine Law is found in **Article I, Section 24, Florida Constitution** and **Chapter 286, Florida Statutes (F.S.)**, and applies to state agencies. The Sunshine Law is to be liberally construed; its exemptions are to be narrowly construed. Two or more people who are tasked with making a decision or recommendation constitute a "Board or Commission" under the Sunshine Law and are subject to its provisions. **Section 286.011(1), F.S.**, states:

> All meetings of any board or commission of any state agency . . . at which official acts are to be taken are declared to be public meetings open to the public at all times, and no resolution, rule, or formal action shall be considered binding except as taken or made at such meeting.

Members may discuss such board or commission business matters only at a public meeting. The use of third persons or other means to evade the Sunshine Law is prohibited. The Sunshine Law does not generally apply to individual decision makers, fact finding, or general staff meetings.

2. BASIC PUBLIC MEETING REQUIREMENTS

A. Open, Accessible, Non-Discriminatory, Technology.

1) Pursuant to **Section 286.26, F.S.**, public meetings must be open to the public, made accessible to individuals with physical handicaps and held at locations that are accessible to such persons.
2) Pursuant to **Section 286.011(6), F.S.**, public meetings are prohibited from being held at any location that discriminates on the basis of sex, race, age, creed, color, origin, or economic status, or operates in a manner as to unreasonably restrict public access.
3) Public meetings may include the use of teleconference, video, webinar, or other technology, but the public must be provided points of access. See **Rule Chapter 28-109, F.A.C.**, regarding conducting proceedings by communications media technology.

B. Reasonable Notice.

Pursuant to **Section 286.011(1), F.S.**, reasonable notice of public meetings must be provided. A minimum of 24 hours is considered reasonable notice. Pursuant to **Section 286.0105, F.S.**, notices of meetings must advise the public that a record of the meeting is required for an appeal of any decision made at the meeting, and that the person who wants to appeal a decision may need to ensure that a verbatim record of the meeting is made.
Public meeting notices are published on the Department's website. Meetings subject to **Chapter 120, F.S.**, the Administrative Procedures Act, must also be published in the Florida Administrative Weekly. Generally, an agenda is advisable, but generally not required.

C. Minutes.

Pursuant to **Section 286.011(2), F.S.**, minutes of public meetings must be taken, promptly recorded, and available for public inspection. The minutes may be posted or provided upon request. Recordings or transcripts are not required, but persons attending are permitted to record or videotape the meeting.

3. EXEMPTIONS

There are a limited number of exemptions to public meetings requirements under **Section 286.0113, F.S.**:

A. Meetings in which all or part of a security system plan would be revealed.

B. Procurements under **Section 287.057, F.S.**, in which there are negotiations with a vendor or there are oral questions and answers of a vendor. As required by **Section 286.0113(2), F.S.**, a complete recording of the negotiations or oral presentations must be made and no portion may be off the record. The recordings will be exempt from the public records requirement of **Section 286.0113(2), F.S.**, until a notice of decision or intended decision is provided or 30 days after the bids, proposals, or final replies are opened.

4. CONSEQUENCES OF SUNSHINE LAW VIOLATIONS

There are a number of consequences for failure to comply with the Sunshine Law:

A. Noncriminal penalties. A violation constitutes a noncriminal infraction and violators are subject to the imposition of a fine not to exceed $500. **Section 286.011(3)(a), F.S.**

B. Criminal penalties. A knowing violation, occurring either within or outside the state, is a second-degree misdemeanor, punishable under **Section 775.082, F.S.,** or **section 775.083, F.S.**, which provides for up to 60 days in jail or a fine of $500. **Sections 286.011(3)(b) and (c), F.S.**

C. Attorney's fees. In an action to enforce the Sunshine Law or to invalidate actions taken in violation of the Sunshine Law, attorney's fees will be assessed against the agency and may be assessed against individual members of the board or commission, including attorney's fees on appeal. Anyone filing such an action found to have done so in bad faith may also be assessed with attorney's fees. **Section 286.011(4) and (5), F.S.**

D. Injunctions. Circuit courts have jurisdiction to issue injunctions to enforce the Sunshine Law. **Section 286.011(2), F.S.**

E. Action Void. Actions taken at a meeting where the Sunshine Law was violated are void. **Section 286.011(1), F.S.** Only a full open hearing, meeting, or workshop can cure a Sunshine Law violation; a perfunctory ratification of actions taken will not suffice.

F. Removal from office. **Section 112.52(1), F.S.**

G. Loss of public confidence.

Appendix B

Committee brainstorming session – What is going well? Positives?

The following is a list of brainstorming ideas from the committee. These individual ideas have been grouped into categories below.

- General Greenbook
  - Being kept relevant and updated
  - Book is well organized
  - Chapters connect well
  - Chapters within the Greenbook are now connecting
  - Comprehensive
  - Connections between chapters
  - Converging with FDM
  - Design Guides
  - Easy to follow
  - Easy to follow and use
  - Forward thinking
  - Greenbook covers most all of the design parameters
  - Makes job of engineers easier
  - Moving faster than before adoption
  - Other States look at the Greenbook
  - Program has been re-organized
  - Provide a set of standards for all roads, including off system
  - Sets the standard for local governments
  - Statewide Resources
  - Text Connected to tables and graphics
  - Valuable Design Graphics
  - Valuable Design Tables
- Context Classification
  - Consideration of Land Use/Context
  - Context Classification
  - Context Classification included in discussions for design
  - Context Design
  - Tools are in FDM to support complete streets/speed management
- Communication
  - Ability to meet virtually
  - All comments matter
  - Allowing input from counties and LAP CoP
  - Available Digitally
  - Being kept relevant and updated
  - City/Co. Engineer are protected from crazy ideas that clearly don’t work!
  - Collaboration with team members in working on chapters
  - Collaborative
  - Communications
  - Continued meetings of the minds
  - Coordination
  - Easy to find PDF of it on web
  - Enhanced communication with the locals from FDOT
  - Good feedback and input from different areas of the State and agencies
  - Good group to discuss issues. Great experience

    - Jacqui herding us all
    - Known Committee Roles
    - Locals are active in establishing content of the FL Greenbook
    - Meeting annually in person
    - Organized meetings
    - Regular subcommittee meetings
    - Tells the story, the why behind criteria
    - Transparency
    - Updates
    - Updates available
    - Working together towards common goal
- Chapter Specific
    - Chapter 1 - Planning and Land Development
        - More funding available for safety/complete streets
    - Chapter 3 - Geometric Design
        - Parking Requirement
    - Chapter 6 – Lighting
        - Lighting design standards
    - Chapter 14 - Design Exceptions and Variations
        - Addition of Variation process has been helpful
    - Chapter 15 - Traffic Calming
        - Allows for lower speed Designs
        - Traffic Calming
    - Chapter 18 - Signing and Marking
        - Good language for audible pavement marking
    - Chapter 20 – Drainage
        - Emphasis on Drainage

Committee brainstorming session – Opportunities

The following is a list of brainstorming ideas from the committee. These individual ideas have been grouped into categories below.

- Chapter Specific
  - Chapter 3 - Geometric Design
    - Better guidance on roundabouts or alternative intersections
    - Border width
    - Greenbook K-value for crest vertical curves
  - Chapter 4
    - Clear zone
    - RRR Criteria
  - Chapter 5 - Pavement Design and Construction
    - Consider alternative materials such as previous asphalt and concrete
  - Chapter 8 - Pedestrian Facilities
    - Better guidance with midblock crossings
  - Chapter 9 - Bike Facilities
    - Accommodation for golf cars
    - Accommodation for personal electric vehicles
    - Better bike lane guidelines
    - Criteria for shared paths in urban settings
    - Expand off railroad crossing safety for bikes and pedestrians
    - Need to discuss bike lane protection
    - Paint or artwork on bike lanes and crosswalks
  - Chapter 11 - Work Zone Safety
    - Minimum requirements for temporary traffic control
  - Chapter 12 – Construction
    - Better understanding of construction impacts for local agencies
  - Chapter 14 - Design Expectations and Variations
    - Add an example for a variation and exception that has been approved by local agency to use as an example.
  - Chapter 15 - Traffic Calming
    - Action plans when prevailing 85% speed greater than posted target speed
    - Increased information on speed management
    - Raised crosswalk standards
    - Standards for Parklets
    - The speed categories of ≤ 25 and ≤ 45 forces cities to maintain coll. to suburban standards
  - Chapter 16 - Residential Street Design
  - Chapter 17 - Bridges and Other Structures
    - Bridge cross slope
    - Bridge/Structure/Wall criteria outside of DOT ROW under LAP projects
  - Chapter 20 – Drainage
    - More talk about drainage in the future with new DEP rules - Performance Design
- Context Classification
  - Further development of context classification approach
  - Match context classification with FDOT
- Education
  - Better guidance on approval flow for LAP projects required by department
  - Can FDOT conduct Greenbook training modules?
  - Have more local governments adopt it as a standard instead of re-inventing wheels

    - Improve communication with public
    - Need better "PR" many agencies don't use book
    - Positive way to navigate changing rules in middle of project
    - Publicize it more so locals know its value. It's Free!
    - Show public how new ideas should be used
- Formatting and Alignment
    - Allows for lesser standards than FDM
    - Clarification of differences in criteria with FDM
    - Consideration and reference of NACTO Standards
    - Convert to format for the FDM
    - Do overview to see if some of the 'shalls' can be changed to 'shoulds'
    - K-Value different in FGB vs. FDM - not provided for new construction (RRR K-values)
    - More 'shall' statement considerations in urban environment - justification through footnotes is troublesome
    - Needs to discuss how other manuals conflict with Greenbook criteria, such as NACTO
    - Only use numerical for each section. Eliminate the alphabetical break down.
    - Should' does not set the bar and gets exploited by politicians and lawyers
    - Should' must be replaced with 'must'
    - Support local ideas very strongly
    - Update chapters that haven't been touched in a while
- General Greenbook
    - Approve new members faster
    - Guidance is needed on safe systems - Vision Zero
    - Rotate consultant members often
    - Landscape Guidelines/Rules
- Meetings
    - Meet in-person!
    - Meet twice a year in person
    - More presentations like this morning was helpful
    - More subcommittee meetings for chapter discussions
    - Need workshops at other meetings. APWA, FES, SAME
    - Try another meeting location with walkability and bike ability for real
    - Workshop review of chapters
- Resilience
    - Impacts of Hurricanes
- Rulemaking
    - Faster adoption process
    - Faster approval of book!
    - Provide status of rule making process
    - Speed up the rule making process

Appendix C

How might we align the Florida Greenbook with context classification and the Traditional Neighborhood Development?

- Add Context Based Design
- Add context chapter
- Add Context Classification to Chapter 1 and filter through remaining chapters
- Adjust Chapter 1 with some parameters
- Align Context classification with FDOT
- Allow/Encourage unique elements of Context Classification definitions needed by locals
- Assign one person to incorporate throughout
- Building in room for modal - priority networks
- Define Context area and set minimum roadway standards for each context area. Each county and city define deviations from minimum roadway standards.
- Define local context and get consensus
- Define TND and Context Classification Definitions Section
- Develop a new chapter - Rick, Billy, Derwood & Ramon (should be involved)
- Explain in chapter 1 how context classification criteria is organized throughout the Greenbook
- Focusing more on descriptive characteristics than labels which may be established by locals differently
- Follow the pattern established by the FDM
- Get buy in from locals on matrix - hand out in meetings and modify
- Go through the Greenbook and sort out the context that is C3R/C3C
- How Do they connect
- Identify schedule with milestones
- Incorporate both in introduction chapter
- Insert components into the various chapters
- Introduce in chapter using matrix
- Keeping it somewhat flexible or high level to account for local variability
- Make clear the relationship between current land use and context classification vs future land use
- Make sure chapters align with context classification
- Mirror FDM
- Model table to reflect criteria for each context zone
- Modify Greenbook to follow FDM
- Reference the FDOT Context Classification Guide
- Remove T.N.D.
- Reorganize FGB to flow from planning to maintenance
- Review how FDM does it. Follow/Improve
- Specific Chapter - Context Classification
- Strengthen the Greenbook better matrix
- Towards Zero Deaths
- Understanding community vision and mobility goals which vary throughout the state
- Use more technical criteria for elected officials

Advisory Committee Annual Meeting

Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways

Commonly known as the Florida Greenbook

April 11th, 2023 8:00 AM – 5:00 PM
Florida's Turnpike Headquarters

Public Meeting

FDOT

Florida Greenbook

The ***Manual of Uniform Minimum Standards for Design, Construction and Maintenance (Florida Greenbook)*** provides uniform minimum standards and criteria for the design, construction, and maintenance of all public streets, roads, highways, bridges, sidewalks, curbs and curb ramps, crosswalks, bicycle facilities, underpasses, and overpasses used by the public for vehicular and pedestrian travel.

Florida Statutes (F.S.) - Authority

F.S. 334.044 – Authorizes FDOT to develop and adopt uniform minimum standards and criteria for the design, construction, maintenance, and operation of public roads pursuant to the provisions of F.S 336.045

F.S. 336.045 – The Florida Greenbook Advisory Committee, composed of four professional engineers within each of the FDOT's seven districts, is established to aid in development of these standards. All design and construction plans for projects to become part of the county road system are required to conform with these standards and must be certified to be in substantial conformance by a Florida P.E.

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Online Attendees

Meeting Logistics

The chat feature can be used to ask questions to the presenters or share resources.

Be sure to mute your microphone unless you are asking a question.

You may turn on or off your video camera accordingly.

Raise your virtual hand to ask a live question.

Welcome

Derwood Sheppard, P.E.

Florida Greenbook Committee Chair

Florida Department of Transportation -
State Roadway Design Engineer

Sunshine Law and Rulemaking Timeline

Ashley Peacock

Assistant General Counsel, Administrative Law Division

Florida Department of Transportation
Office of the General Counsel

RULEMAKING – 2023

PROCESS

WORKSHOP(S)
Notice of Development of Rulemaking
-Advised publish NDR in FAR at least 21 days b/f publishing NPR – in case req. for meeting received
-Provide at least **14 Day** notice of Workshop,
-Multiple Workshops may be held
-120.54(2)(a) and (c).

1. NOTICE OF PROPOSED RULE
-Agency head approval required (120.54(3))
-Publish in the FAR (120.54(2)(a))
-Docs to be sent to JAPC (120.54(3)(a)4.)
-Schedule rule hearing (i.e., public meeting) if requested (120.54(2)(c))

2. NOTICE OF CHANGE
Notice of Change / Withdrawal
-Based on public comments or JAPC comments
-Pub. in the FAR at least **21 days before Adoption**
-AST may modify draft as recommended by JAPC, withdraw entire rule, or refuse to modify the rule 120.54(3)(d)1.

3. ADOPTION
Notice of Adoption
-Agency head approval required (120.54(3)(e)1.)
-Rule becomes effective 20 days after filing (120.54(3)(e)6.)

NDR / NRD MUST INCLUDE (120.54(2)(a)):
- -Subject area to be addressed
- -Explain purpose and effect of proposed rule
- -Specific legal authority
- -Text of rule (if avail), or statement how to get a copy
- -Agency contact person
- -Place, date, time of Workshop
- **Courtesy copy to JAPC**

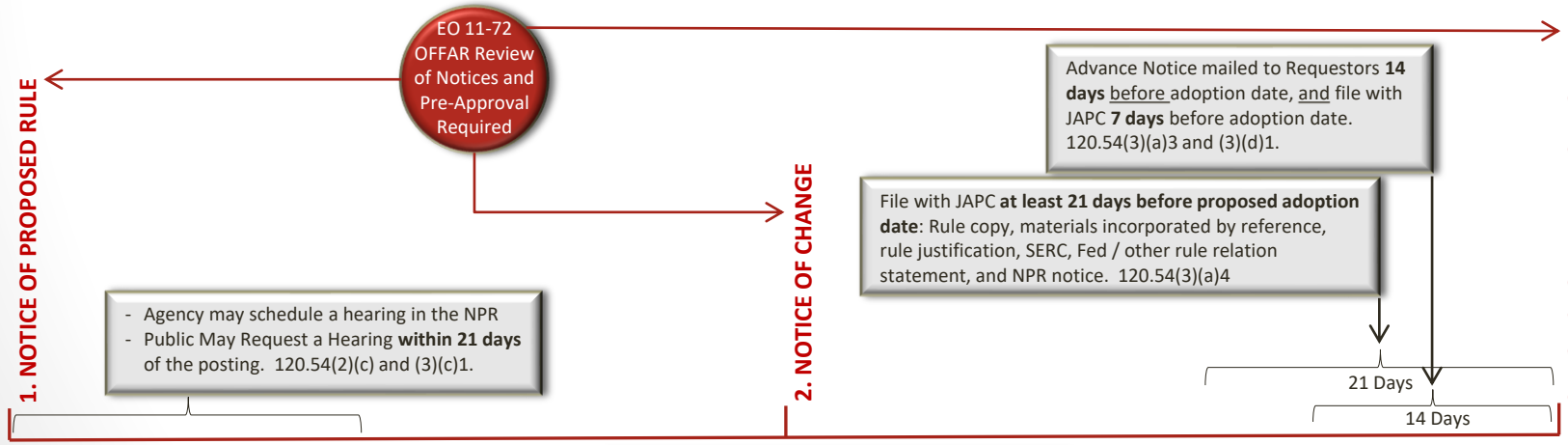
NPR MUST INCLUDE (120.54(3)(a)1.):
- -A short, plain explanation of the purpose and effect of the proposed action
- -Full text of proposed rule or amendment, and a summary
- -Ref. to rulemaking authority
- -Ref. to statute or LOF being implemented / interpreted
- -A statement of estimated regulatory costs (SERC) (120.541(2), F.S.) **OR** a statement that FDOT has determined a SERC is not required (rule not expected to increase regulatory costs in excess of $200,00 in first year) **and** a statement whether legislative ratification is required
- -Statement inviting interested persons to provide additional SERC info (within 21 after pub. of the notice)
- -Statement regarding process for requesting a public hearing on the proposed rule
- -Reference to date that NRD appeared / published

FILE WITH DEPARTMENT OF STATE:
- -One coded copy of the rule in Word
- -One copy of materials incorporated by reference in the rule (e.g., forms), certified by the agency
- -Summary of the rule
- -Summary of any hearings held on the rule
- -Written summary of facts and circumstances justifying the rule 120.54(3)(e)1., F.S.

WORKSHOP REQUIREMENTS:
- -Opportunity to request Workshop. 120.54(2)(c). Better practice to just schedule.
- -Agency staff available to answers questions about the draft rule
- -Workshop may be facilitated by a neutral third party

OTHER NOTES:
- Possible to incorporate material in rule by reference. 120.54(1)(i)
- "Negotiated rulemaking" an option. 120.54(2)(d)
- Agency and DOAH hearings on the rule are possible. 120.54(3)(c)1. and 120.54(3)(c)2.

TIMELINE



- Agency may schedule a hearing in the NPR
- Public May Request a Hearing **within 21 days** of the posting. 120.54(2)(c) and (3)(c)1.

Advance Notice mailed to Requestors **14 days** before adoption date, and file with JAPC **7 days** before adoption date. 120.54(3)(a)3 and (3)(d)1.

File with JAPC **at least 21 days before proposed adoption date**: Rule copy, materials incorporated by reference, rule justification, SERC, Fed / other rule relation statement, and NPR notice. 120.54(3)(a)4

- **JAPC Comments** / Objections Received
- Agency Response to JAPC Comments – **30 Days**. 120.545(3).

If changes are warranted based on public hearing, comments from the public, or JAPC comments or objection, modify draft via **Notice of Change**. Scope of allowable changes limited. 120.54(3)(d)1.

RULE MAY NOT BE FILED FOR ADOPTION:
1. Less than 28 days after posting of the NPR or more than 90 days after posting of the NPR (62 day window)
2. Until 21 days after the Notice of Change (if any)
3. Until 14 days after the final public hearing (if any)
4. Until 21 days after a SERC required under 120.541, F.S., has been provided to all persons who submitted a lower cost regulatory alternative and made available to the public
5. Until the ALJ has rendered a decision under 120.56(2)

WHICHEVER APPLIES. 120.54(3)(e)2., F.S.

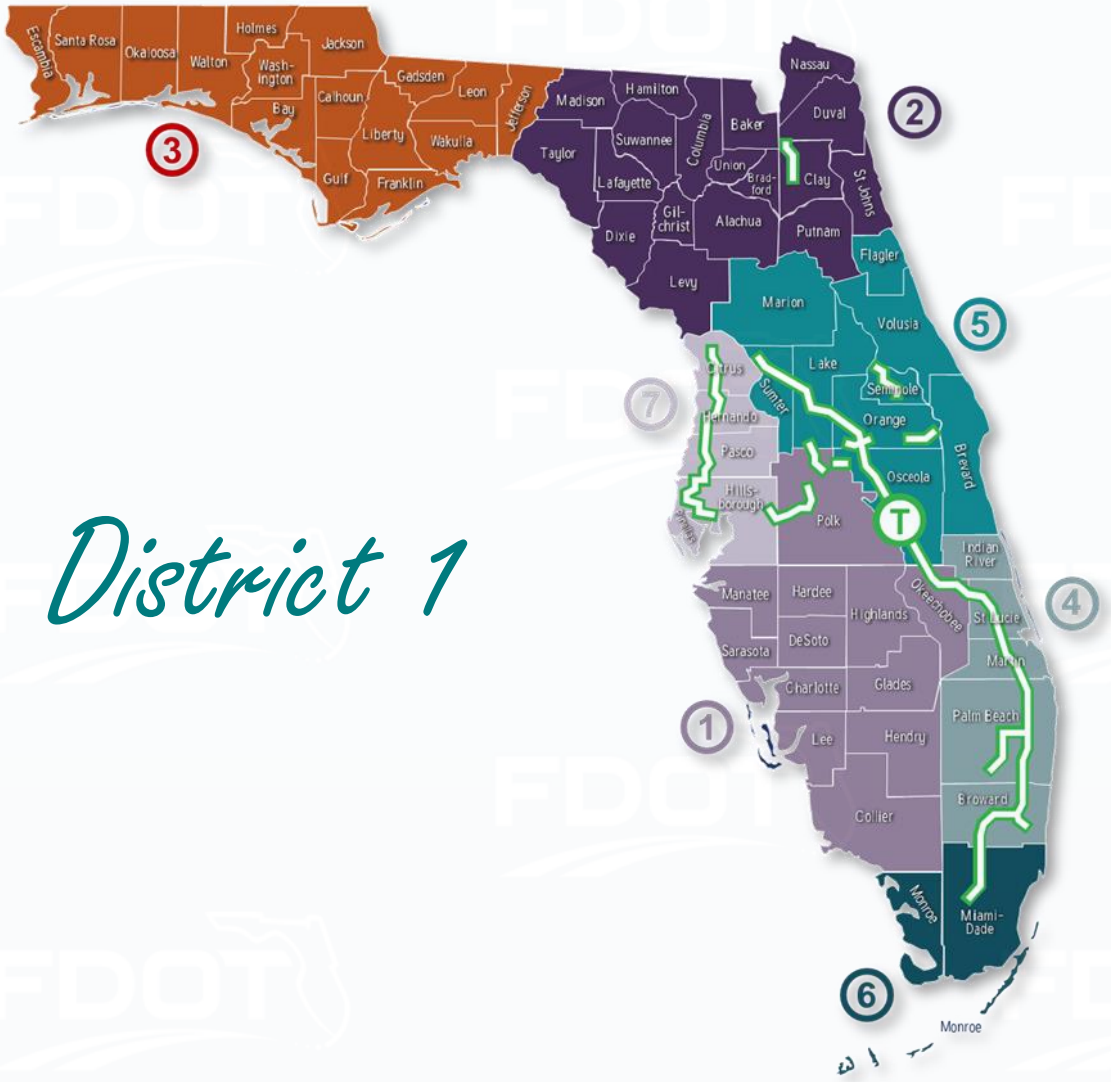
EVENTS THAT IMPACT TIME RULES MAY BE FILED FOR ADOPTION:
120.54(3)(e)2., F.S.
- If a notice of change is filed the time to file for adoption is extended to 45 days after the date of publication, but not file sooner than 21 days. 120.54(3)(d)1.
- Filing of a Public Hearing (i.e., Public Meeting)
- Administrative hearing

Introductions & Membership Changes

Guest Attendees -Please be sure to sign-in

**If you are attending virtually (Microsoft Teams), type your name and e-mail address in the chat

Introductions

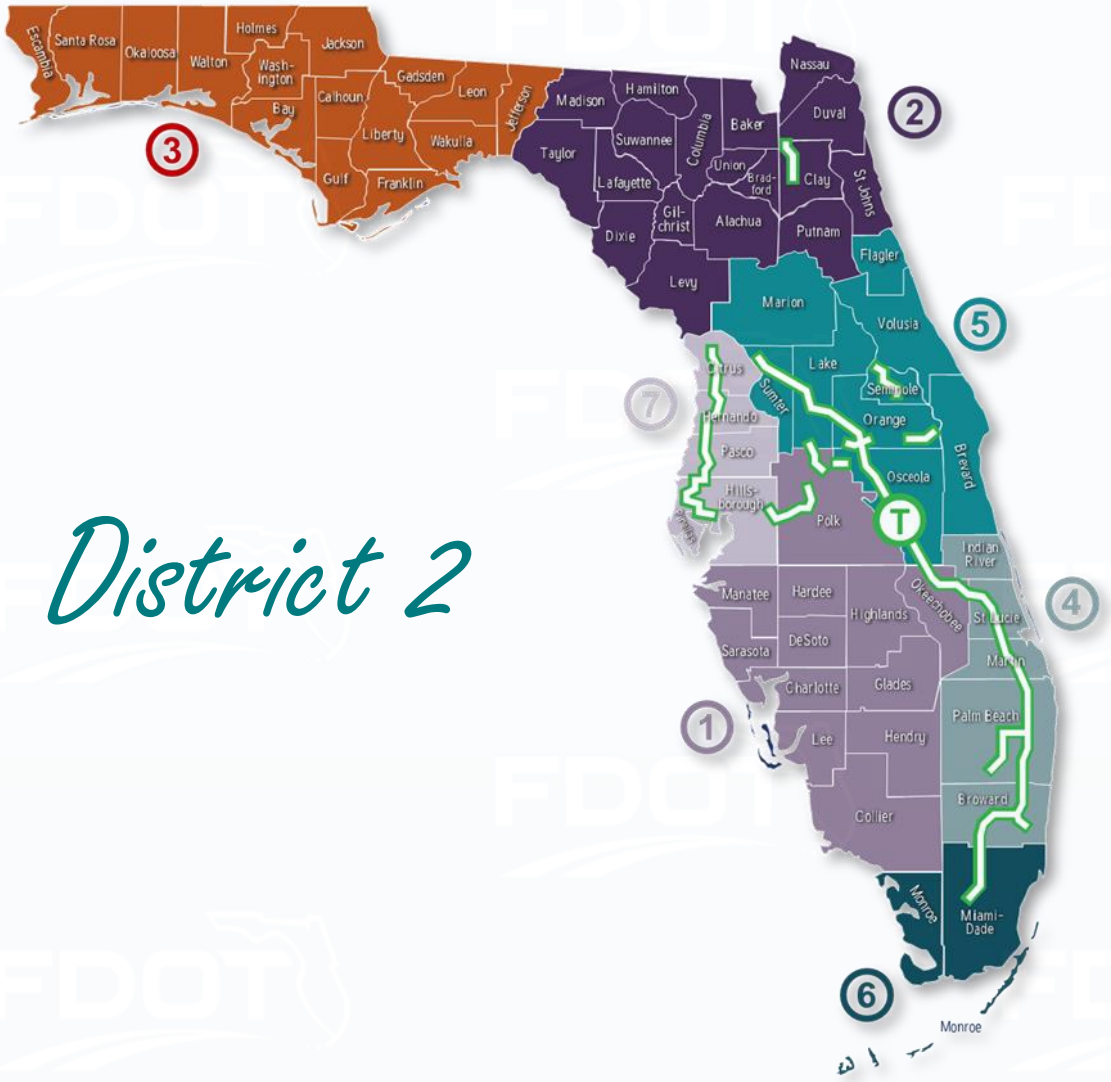


District 1

Committee Members

- **Kevin Ingle, P.E.**
  - District Design Engineer - FDOT - District 1
- **Shane Parker, P.E,**
  - Public Works Director - Hendry County
- **Andy Tilton, P.E.**
  - Water Resource Director - Johnson Engineering, Inc.
- **Nikesh Patel, P.E.**
  - City Engineer - City of Sarasota

Introductions

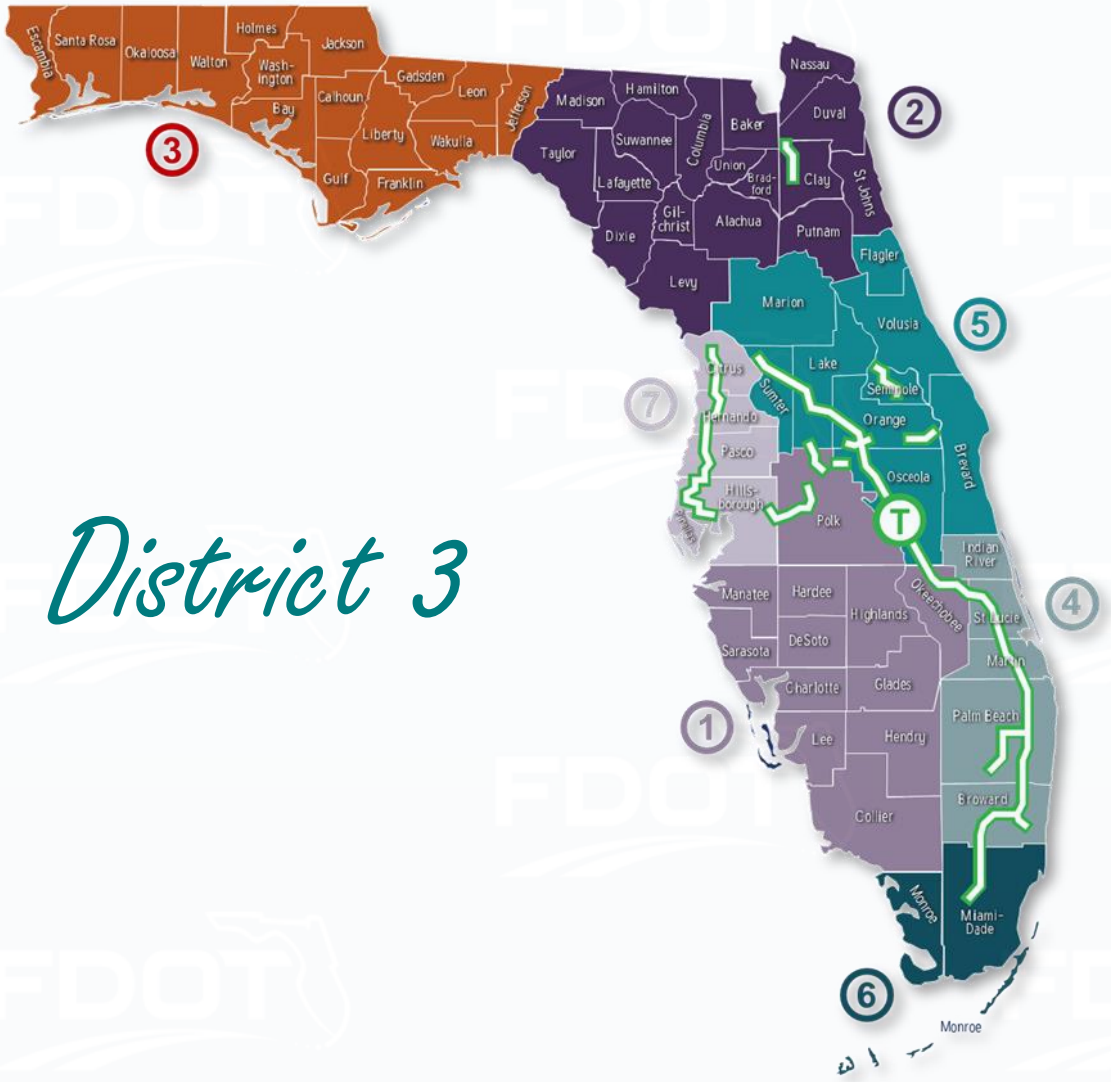


District 2

Committee Members

- **Kathryn D. Thomas, P.E.**
  - District Design Engineer - FDOT - District 2
- **Kenneth Dudley, P.E.**
  - County Engineer - Taylor County Board of County Commissioners
- **Gene Howerton, P.E.**
  - Vice President - Arcadis U.S., Inc.
- ★ **Ramon Gavarrete, P.E.**
  - Public Works Director – Alachua County Board of County Commissioners

Introductions

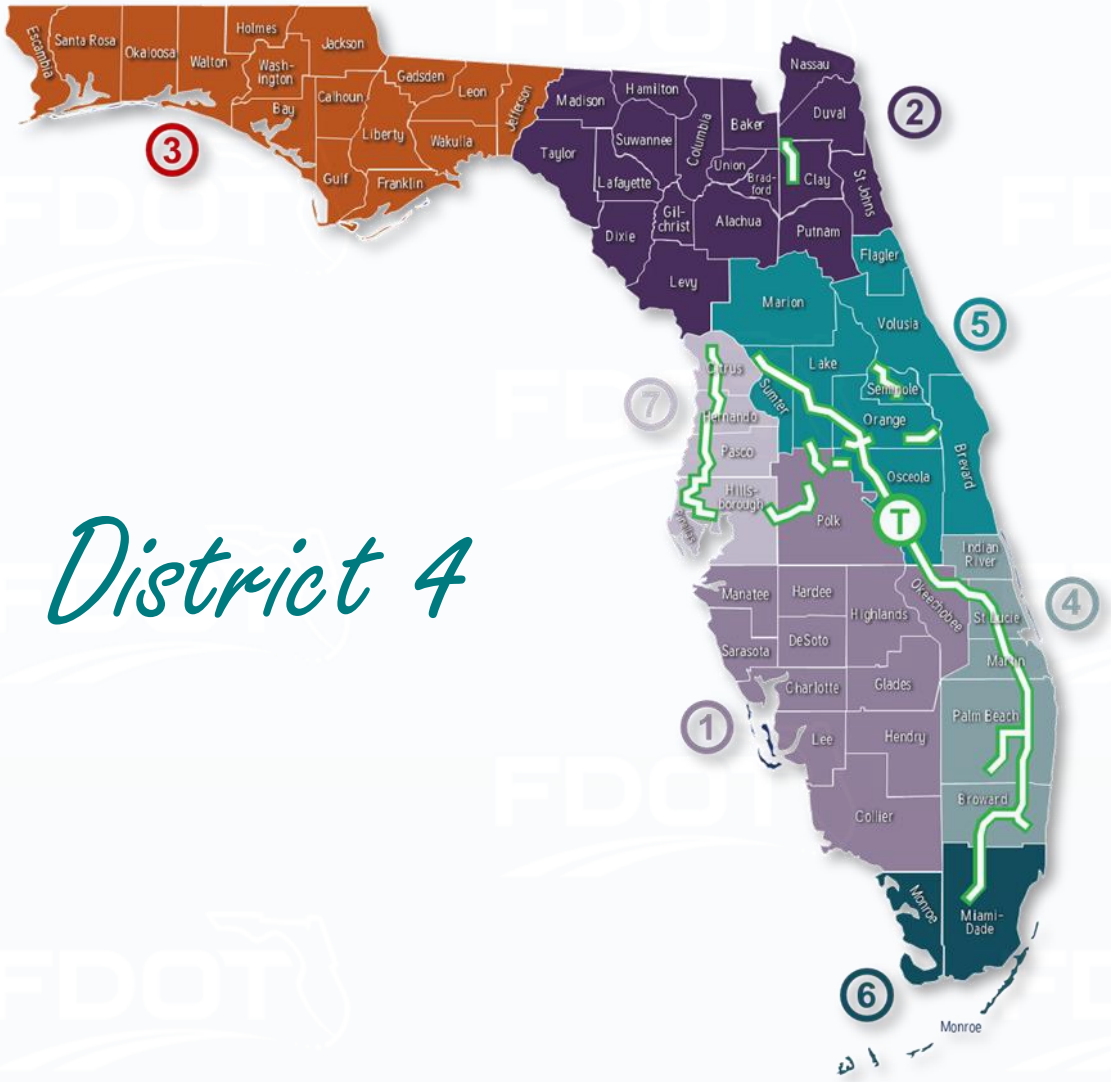


District 3

Committee Members

- **Adam Scurlock, P.E.**
  - District Design Engineer - FDOT - District 3
- **Rick Hall, P.E.**
  - Hall Planning and Engineering, Inc.
- ★ **Chance Powell, P.E.**
  - Traffic Operations Engineer – Walton County Board of County Commissioners
- **Keith Bryant, P.E., P.T.O.E.**
  - Public Works Director - Bay County

Introductions

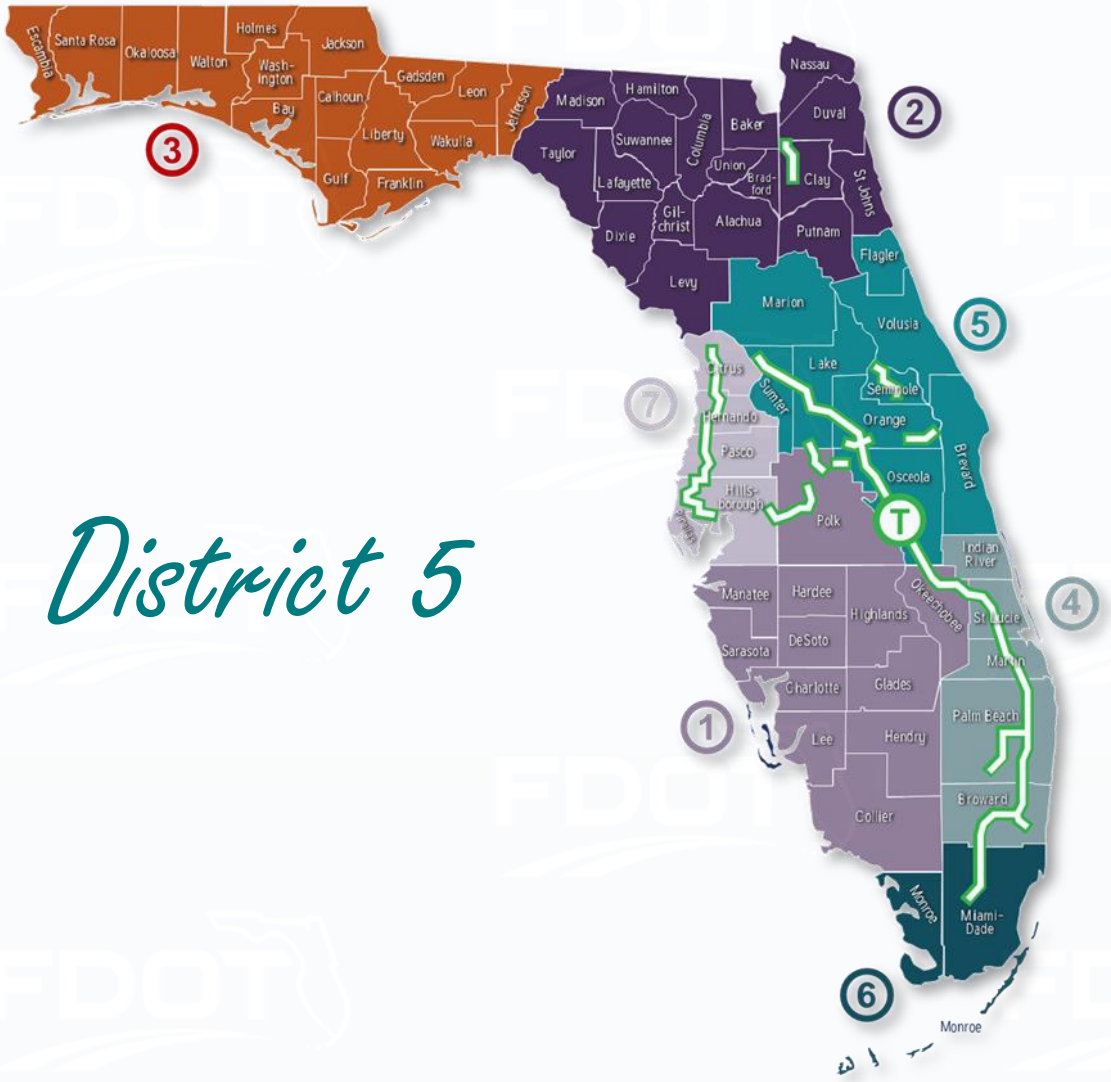


District 4

Committee Members

- **John Olson, P.E.**
  - District Design Engineer - FDOT - District 4
- **Robert Behar, P.E.**
  - President - R.J. Behar and Company, Inc.
- **Richard B. Szpyrka, P.E.**
  - Director of Public Works - Indian River County
- **Richard Tornese, P.E.**
  - County Engineer - Broward County

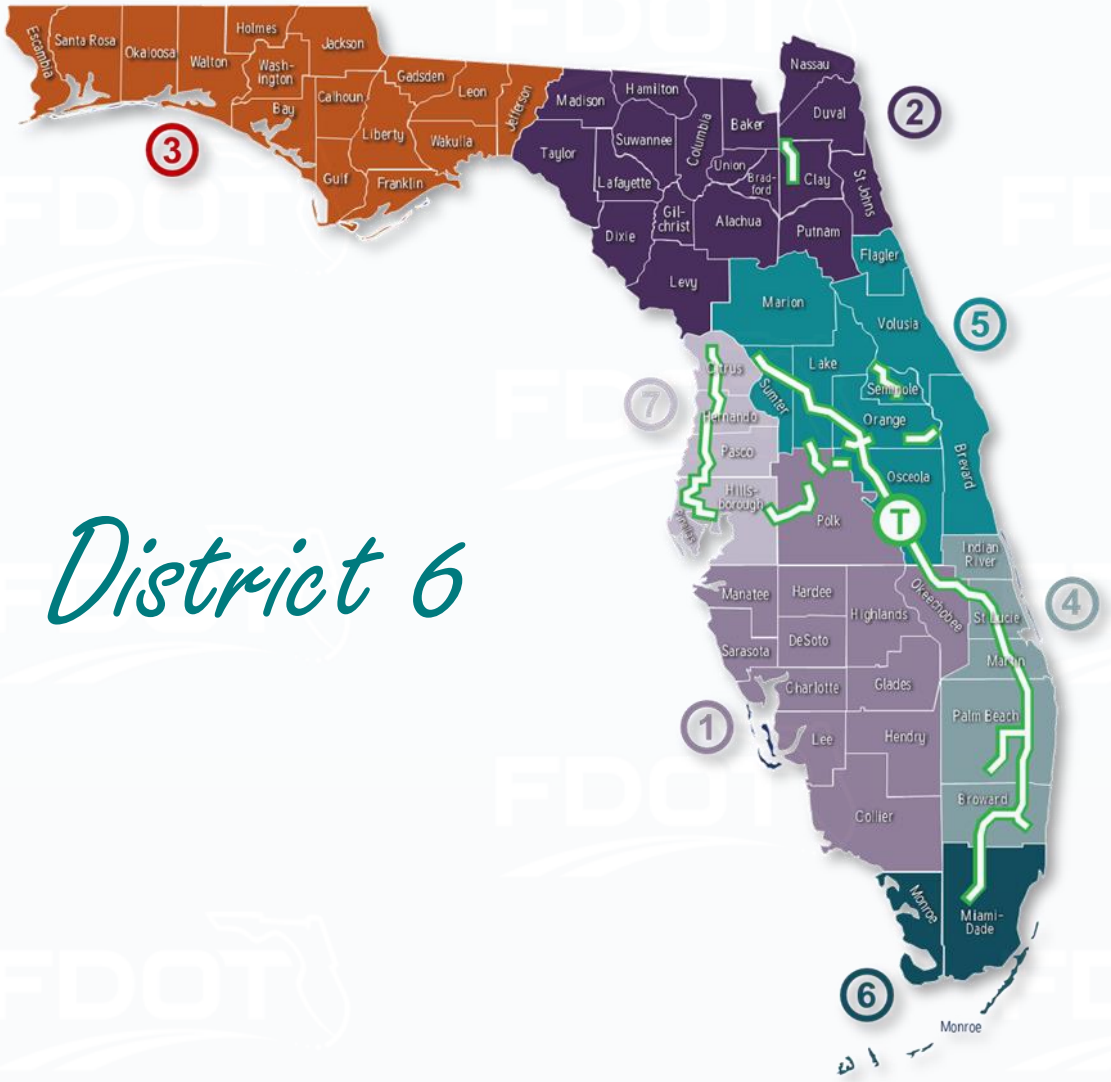
Introductions



Committee Members

- **Jeffrey Cicerello, P.E.**
  - District Design Engineer - FDOT - District 5
- **Gail Woods, P.E.**
  - Assistant Vice President – TranSystems
- **Ghulam Qadir, P.E.**
  - Chief Engineer - Orange County Public Works
- **Deborah L. Snyder, P.E., P.T.O.E.**
  - Public Works Director - Sumter County Board of County Commissioners

Introductions

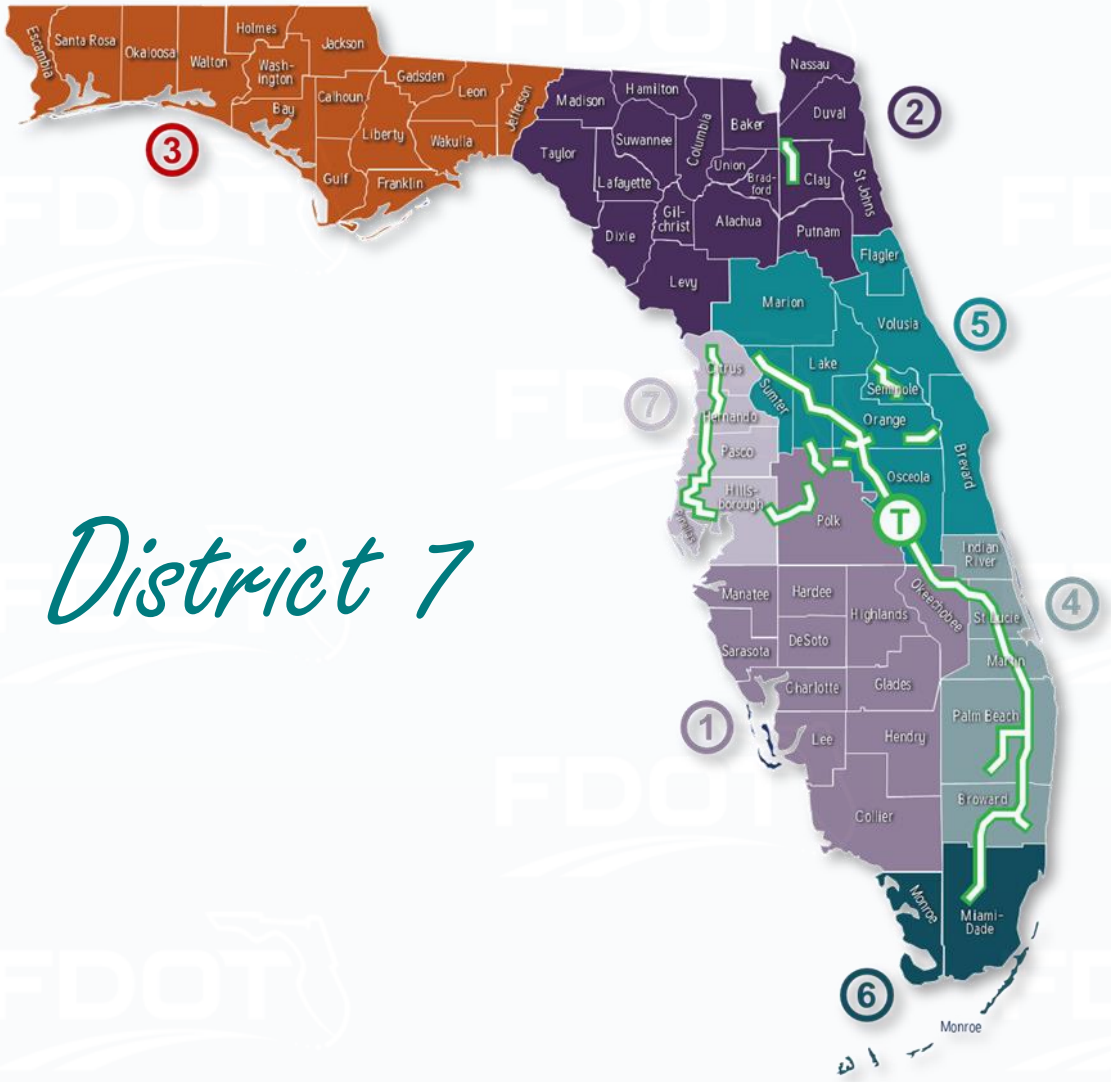


District 6

Committee Members

- **Karina Fuentes, P.E.**
  - District Design Engineer - FDOT - District 6
- **Andres Garganta, P.E.**
  - Vice President – WGI
- **Miguel Soria, P.E**
  - Assistant Director, Highway Engineering - Miami-Dade County, Public Works Department
- **Juvenal Santana, P.E.**
  - Director - City of Miami Public Works Department

Introductions



District 7

Committee Members

- **Allan Urbonas, P.E.**
  - District Design Engineer - FDOT - District 7
- **Richard Diaz, Jr., P.E.**
  - President - Diaz Pearson & Associates, Inc.
- ★ **D. Todd Crosby, P.E.**
  - Assistant County Engineer – Hernando County Board of County Commissioners
- ★ **Calvin Hardie, P.E.**
  - Chief Design Engineer – City of Tampa

Introductions

Associate Members

- **Kenneth J. Leeming, P.E.**
  - Chief Engineer, Orange County Public Works Department
- **Charles Ramdatt, P.E., P.T.O.E., AICP**
  - City of Orlando
- **Allen W. Schrumpf, P.E.**
  - Senior Associate - DRMP, Inc.
- ★ **Billy Hattaway, P.E.**
  - Principal - Fehr & Peers

FACERS Representative

- **Benjamin Bartlett, Director**
  - Public Works Director - Volusia County

Introductions

FDOT Technical Advisors

- **Benjamin Gerrell, P.E.**
  - FDOT Roadway Design Engineer
- **Tiffany Gehrke**
  - FDOT State Complete Streets Coordinator
- **Keith Krieger, P.E.**
  - Roadway Design Engineer – FDOT Consultant, Atkins

Committee Staff

- **Michael Shepard, P.E.**
  - Director, Office of Design
- **Derwood Sheppard, P.E.**
  - State Roadway Design Engineer
- **Jacqui Morris, CPM**
  - Publications Coordinator
- **VACANT**
  - Roadway Design Criteria Administrator
- **DeWayne Carver, AICP**
  - Criteria Publications Manager

Complete Streets & Context Classification

Overview

Tiffany Gehrke

FDOT State Complete Streets Coordinator

DeWayne Carver

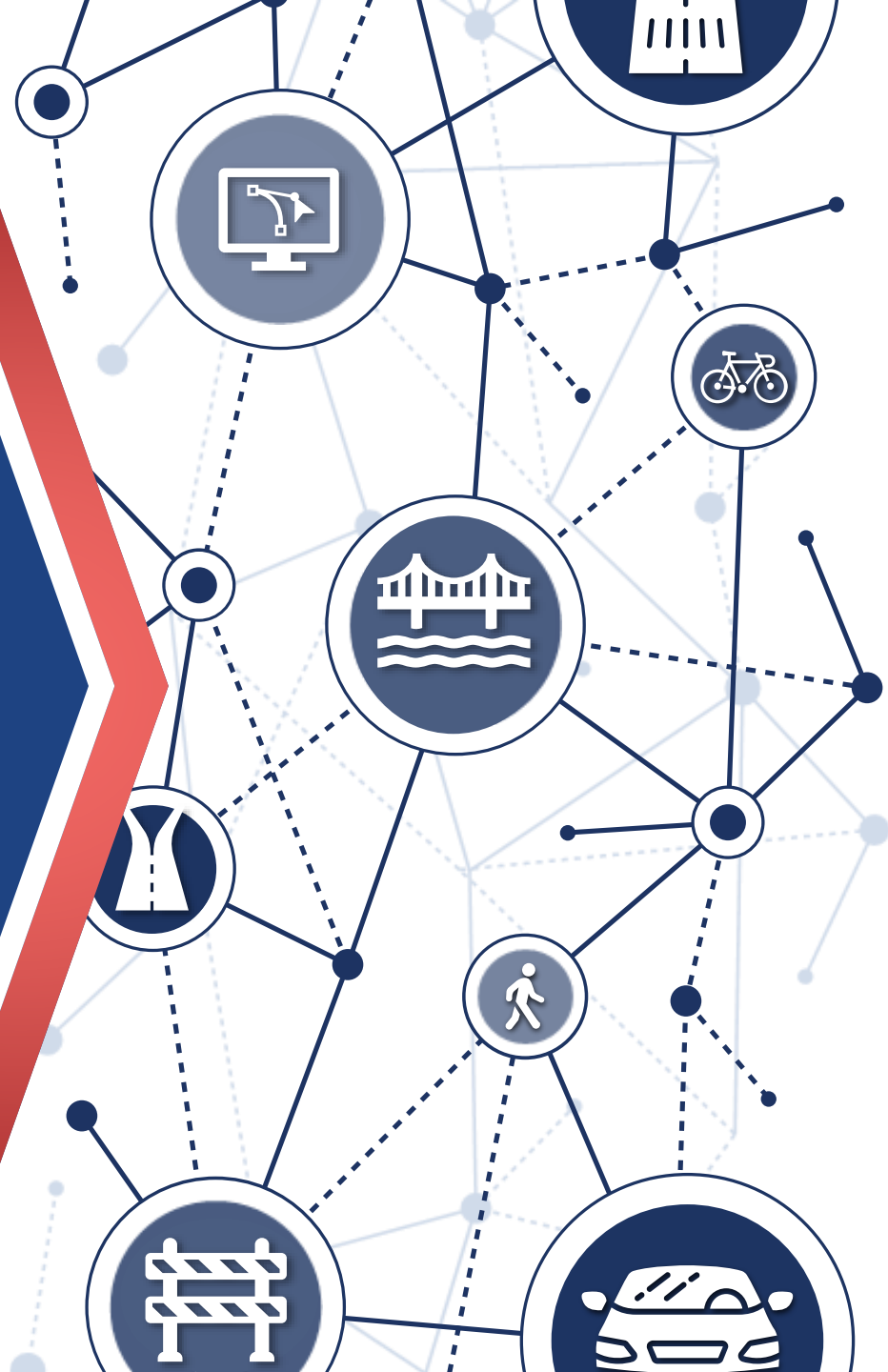
FDOT Criteria Publications Manager

Florida Greenbook Meeting

FDOT Complete Streets & Context Classification

April 11, 2023

Tiffany Gehrke & DeWayne Carver



Florida Department of Transportaion

Mission Statement

FDOT's continuing mission is to provide a safe transportation system that ensures the mobility of people and goods, enhances economic prosperity, and preserves the quality of our environment and communities.

Complete Streets

Fundamentally,
FDOT's **Complete Streets**
Approach is about **linking land use & transportation decisions/investments.**

What is a “Complete Street”?

Kahoot.it

Game Pin:

What is a “Complete Street”?

Kahoot.it

Game Pin:

What is a “Complete Street”?

Kahoot.it

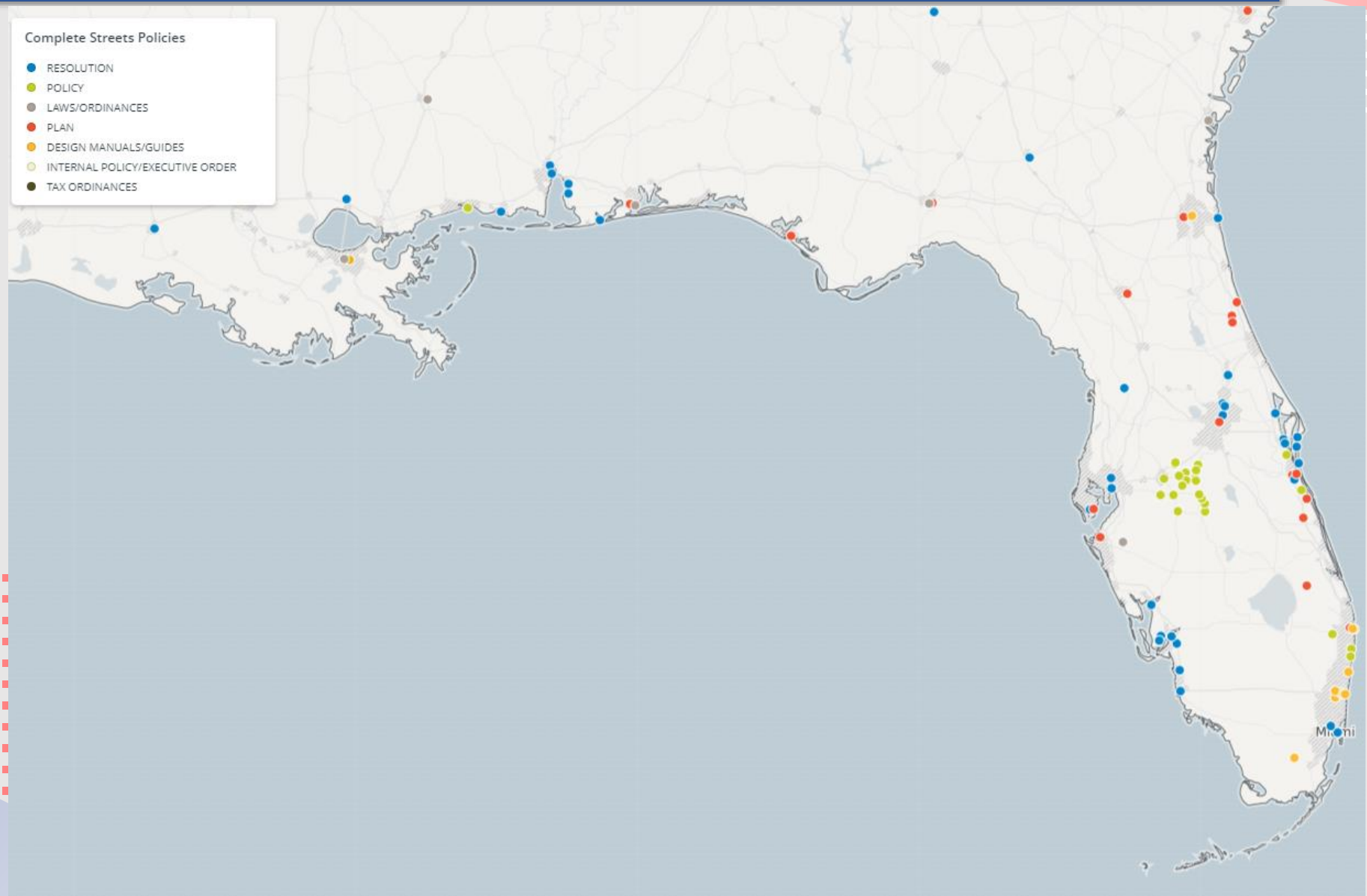
Game Pin:

What is a “Complete Street”?

Kahoot.it

Game Pin

Complete Streets Policies



Timeline of FDOT Complete Streets

1984

Florida law requires bicyclists and pedestrians be considered in road construction projects

1999

FDOT adopts Transportation Design for Livable Communities Policy

2014

FDOT adopts Complete Streets Policy

2018

FDOT defined Context Classifications and published new context-based Design Manual (FDM)

Identified Context Classification for all state roadways

2018 - Today

FDOT Adopts Target Speed and Speed Management Guidance

Updated 5 additional manuals and guidebooks

Integrated Safe System into FDOT Design Manual

Launched ConnectPed & Complete Streets 360°

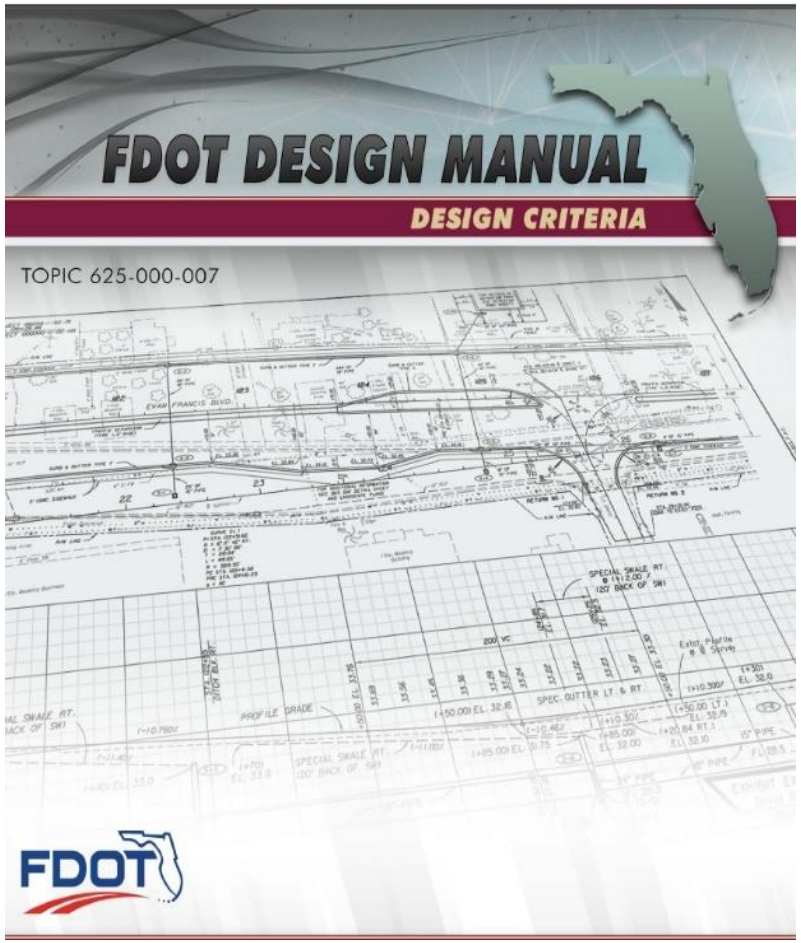
Conducted extensive FDOT training

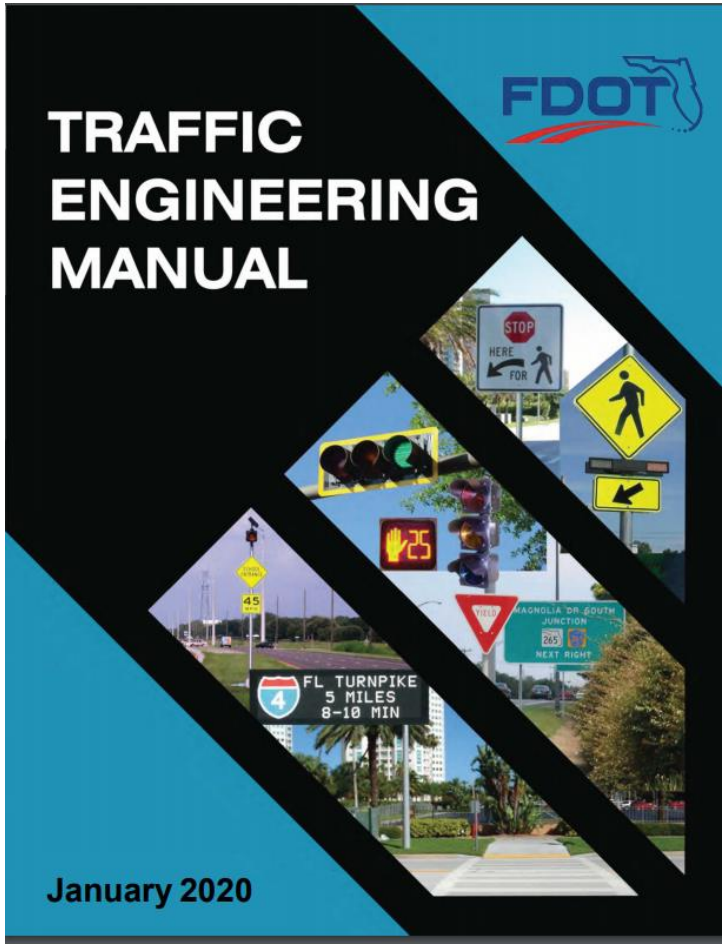
Florida Statute

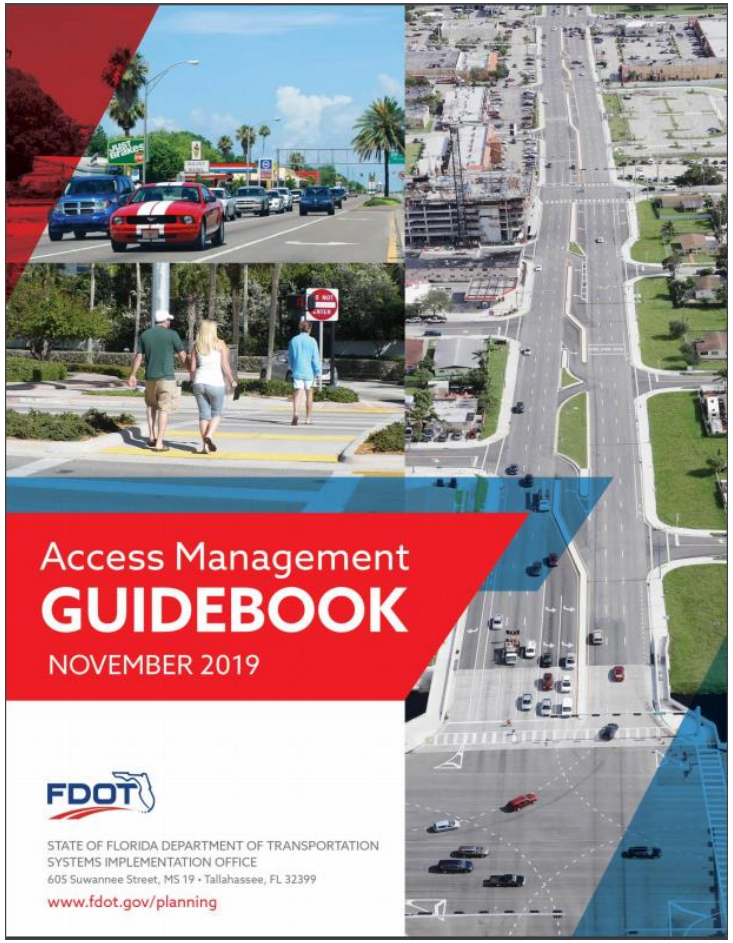
335.065 Bicycle and pedestrian ways along state roads and transportation facilities.—

(1)(a) **Bicycle and pedestrian ways shall be given full consideration** in the planning and development of transportation facilities, including the **incorporation of such ways into state, regional, and local transportation plans and programs**. Bicycle and pedestrian ways shall be established in conjunction with the construction, reconstruction, or other change of any state transportation facility, and special emphasis shall be given to projects in or within 1 mile of an urban area.

Designing & Operating our Roadways



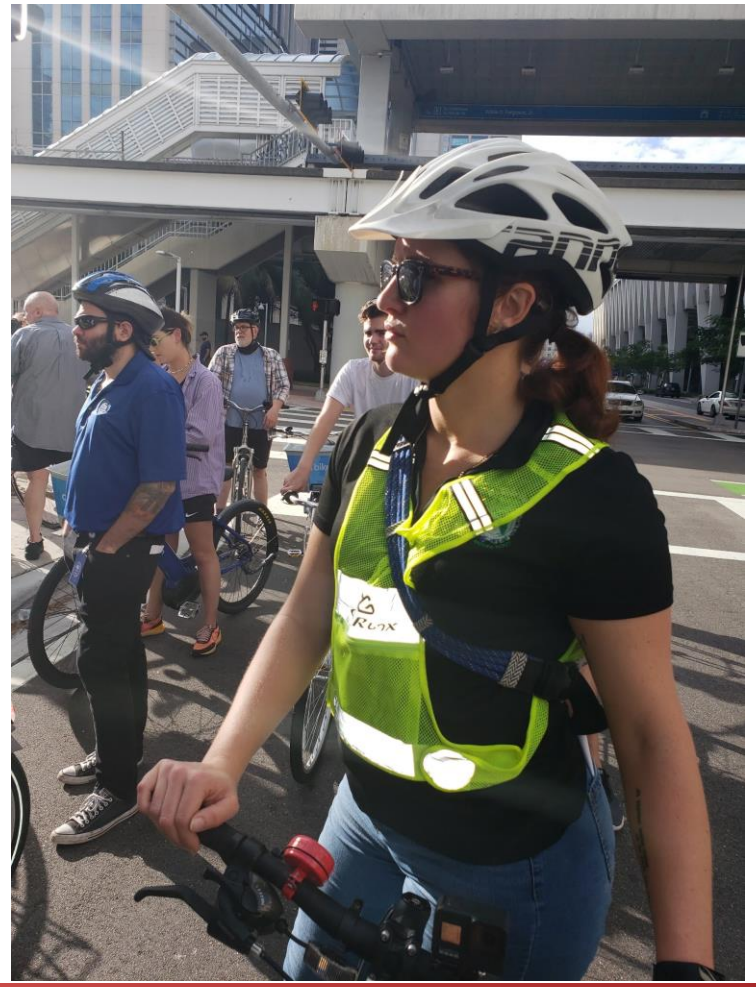




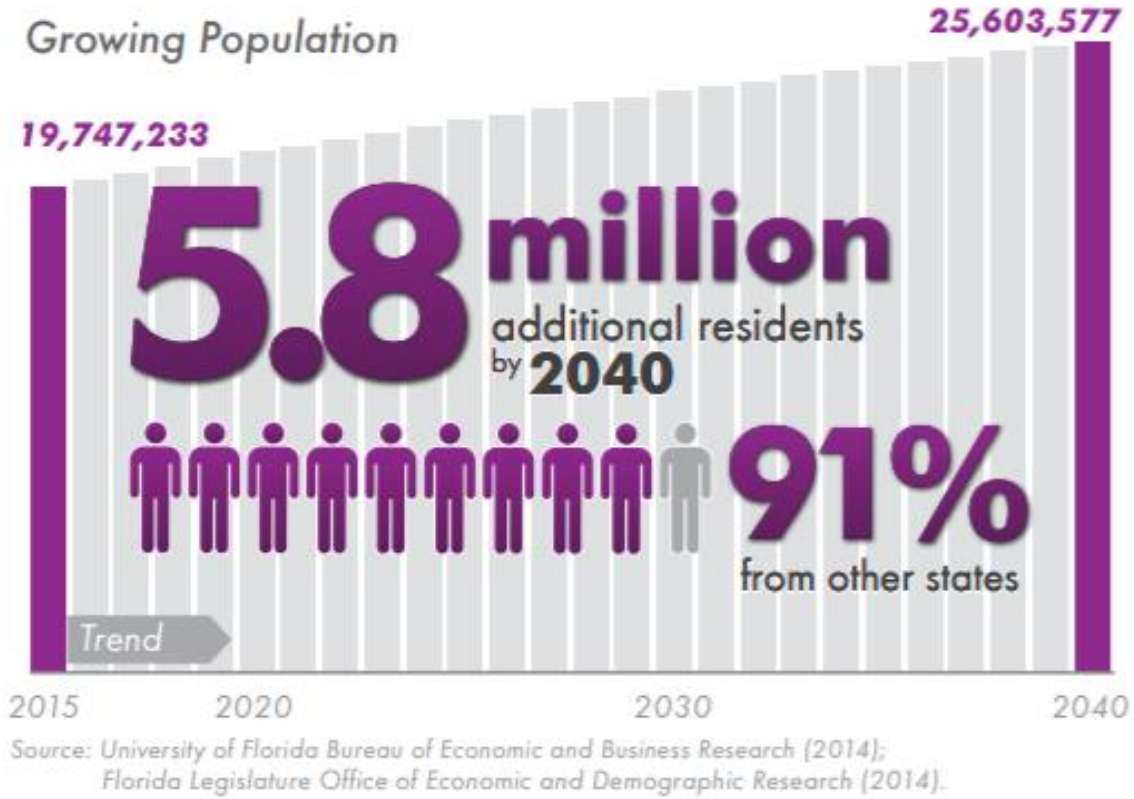
Why Complete Streets are Important

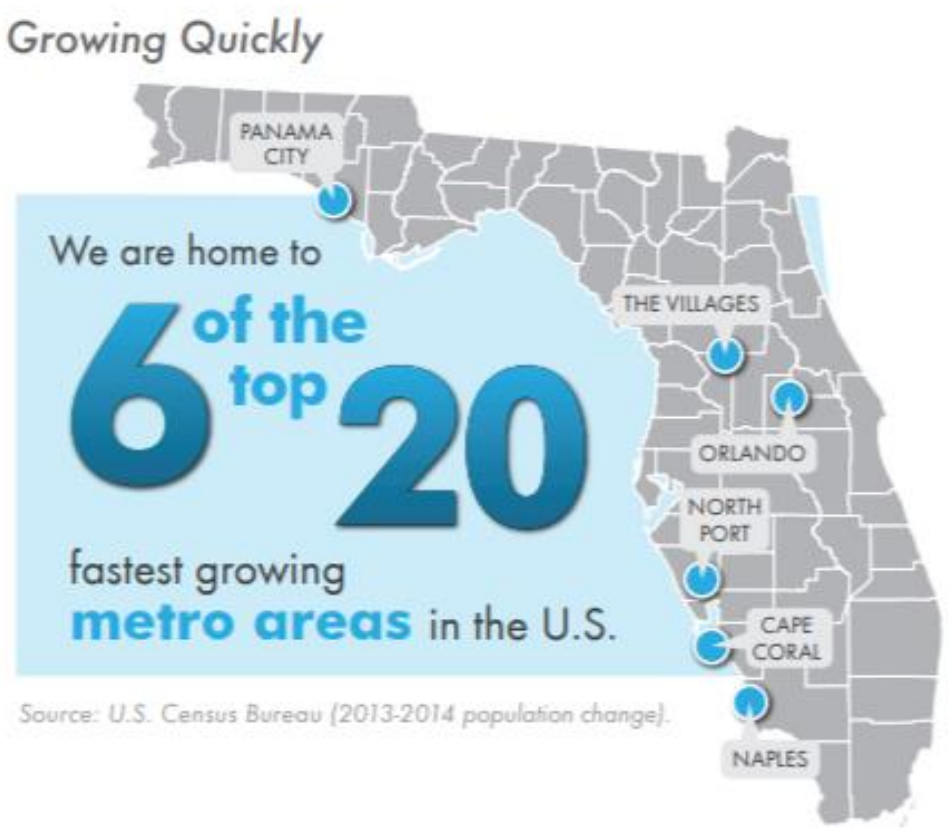
Kahoot.it

Game Pin:



Importance


Growing Population
25,603,577
19,747,233
5.8 million
additional residents
by 2040
91%
from other states
Trend
2015
2020
2030
2040
Source: University of Florida Bureau of Economic and Business Research (2014);
Florida Legislature Office of Economic and Demographic Research (2014).

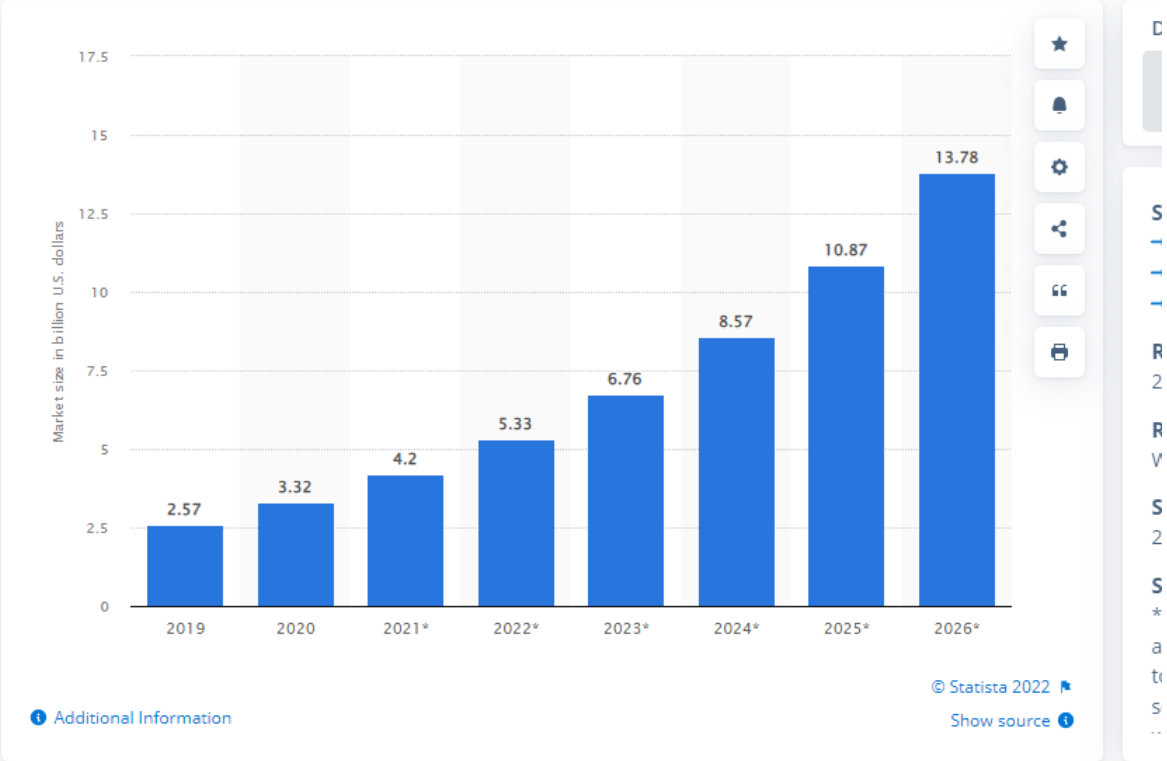

Growing Quickly
PANAMA CITY
We are home to
6 of the top 20
fastest growing
metro areas in the U.S.
THE VILLAGES
ORLANDO
NORTH PORT
CAPE CORAL
NAPLES
Source: U.S. Census Bureau (2013-2014 population change).

Importance

Transportation & Logistics › Vehicles & Road Traffic

Global bike-sharing service market size between 2020 and 2026

(in billion U.S. dollars)

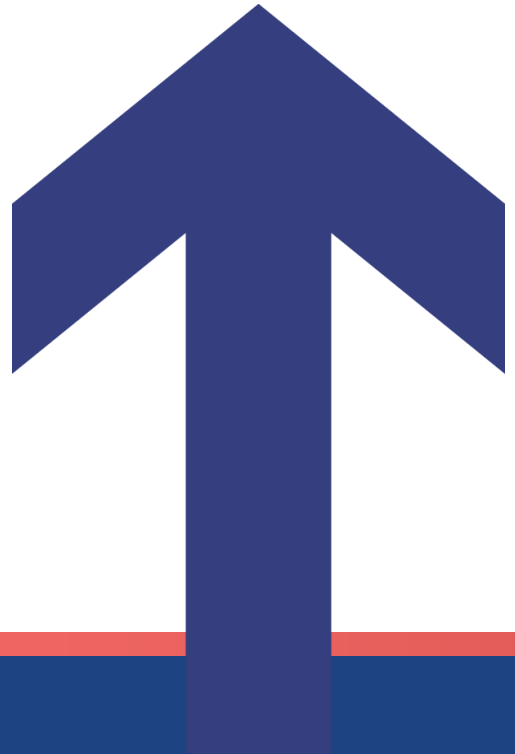


Importance

Nationally,

2021 road fatalities were up

11% **over 2020**



1 fatality every 12 minutes nationally

42,915 lives lost in 2021 in the United States

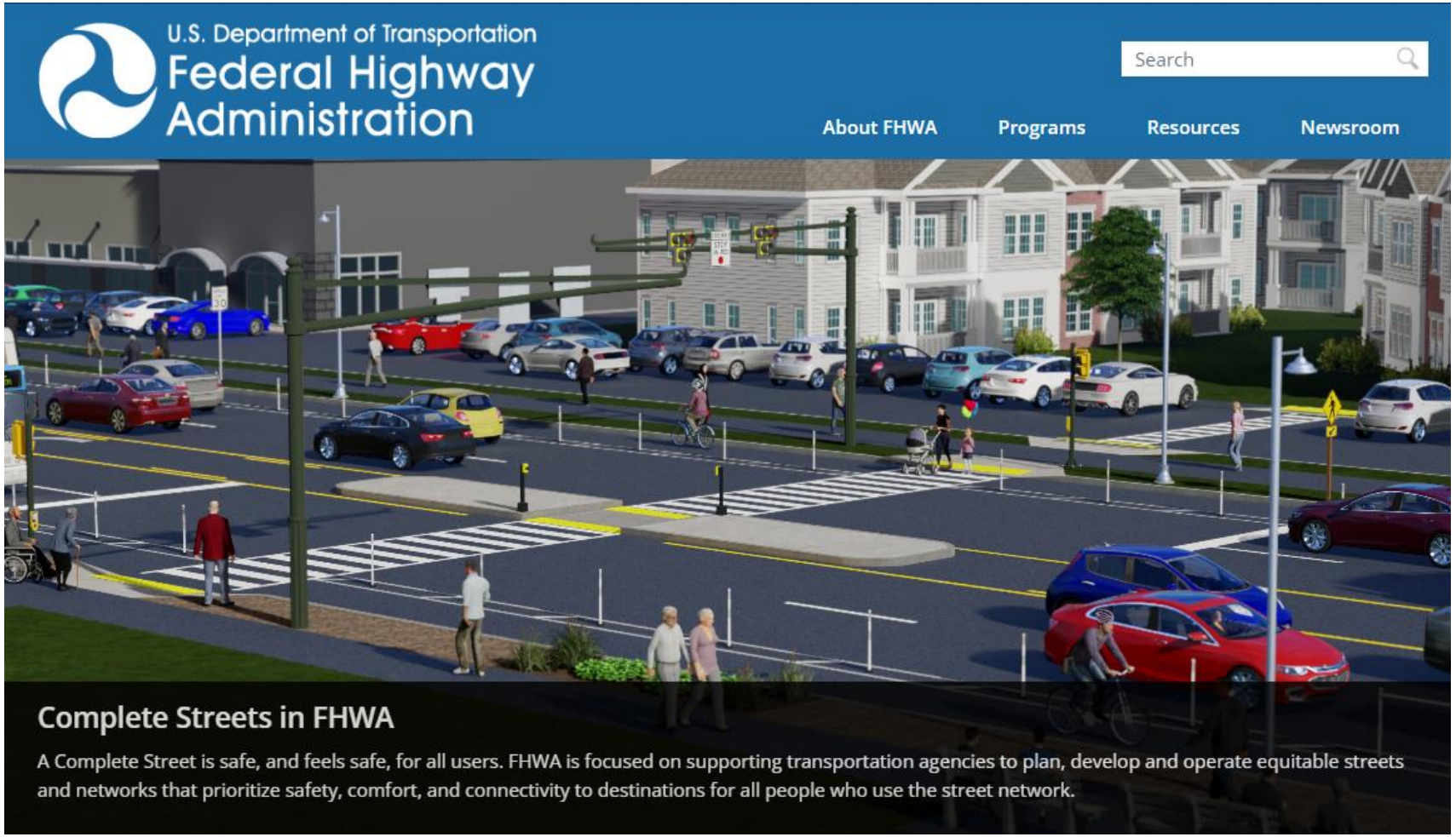
Importance

9 fatalities every day in Florida

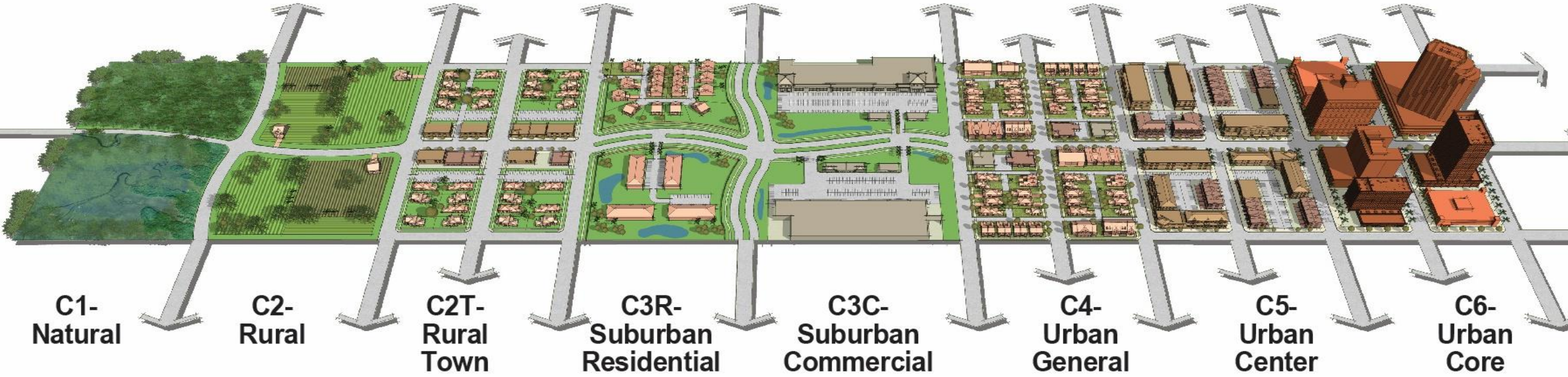
28% of Fatalities in Florida are of People & Walking

Importance

Importance


U.S. Department of Transportation
Federal Highway Administration
Search
About FHWA
Programs
Resources
Newsroom
Complete Streets in FHWA
A Complete Street is safe, and feels safe, for all users. FHWA is focused on supporting transportation agencies to plan, develop and operate equitable streets and networks that prioritize safety, comfort, and connectivity to destinations for all people who use the street network.

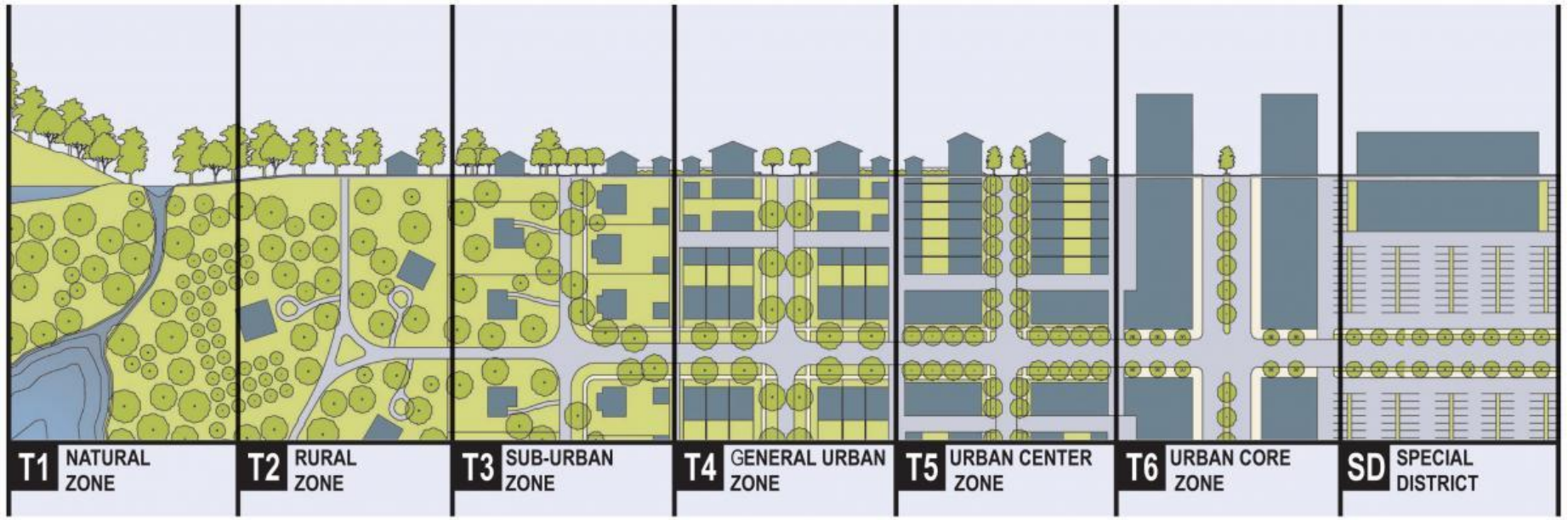
Context-Based Approach



- Context classification
- Transportation characteristics

- Roadway users
- Regional and local travel demand
- Challenges and opportunities of each roadway user

Urban to Rural Transect (DPZ)



Least Walkable
(least urban)

Most Walkable
(most urban)

C1- Natural

- Lands preserved in a **natural or wilderness condition**, including lands unsuitable for settlement due to natural conditions. **Not intended for future development.**

C2- Rural

- **Sparsely settled lands**; may include agricultural land, grassland, woodland, and wetlands. Lands that **could be developed in the future**.

C2T- Rural Town

- Small concentrations of **town area** 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**.

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

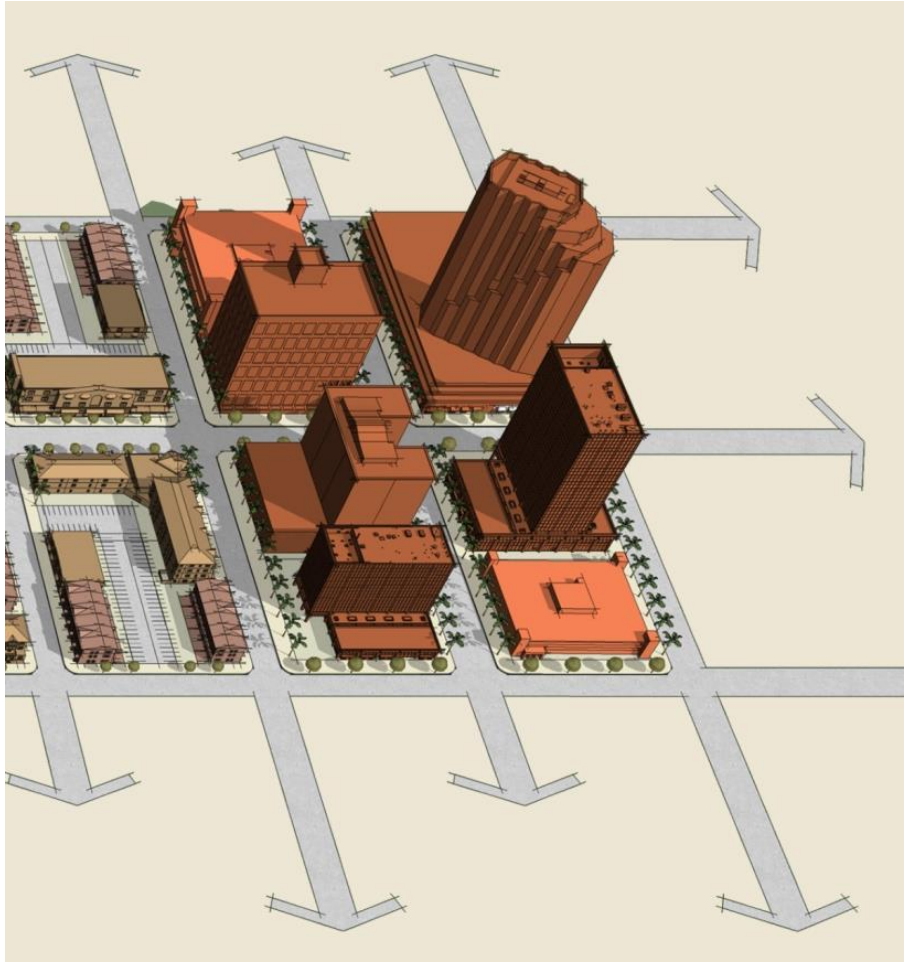
Mix of uses set within small blocks with a **well-connected roadway network**. The roadway network usually **connects to residential neighborhoods** immediately along the corridor or on the back side of blocks fronting the roadway.

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**.



Special Districts

- Areas that do not adhere to context classification measures
- Have a mix of users that can create unique travel patterns
- Examples:
  - University campuses
  - Airports
  - Rail yards
  - Shipyards
  - Freight distribution enters
  - Refineries
  - Sports complexes

University of Florida, Gainesville, FL

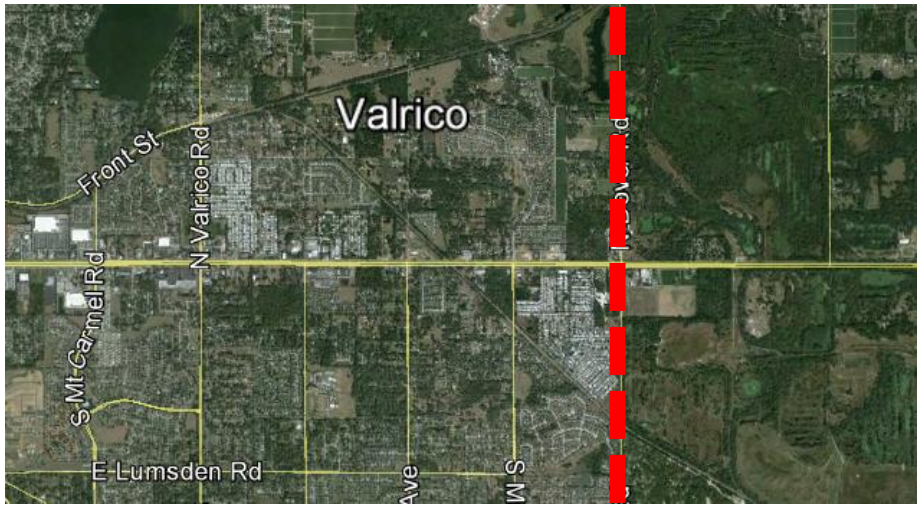
Port of Miami, Miami, FL

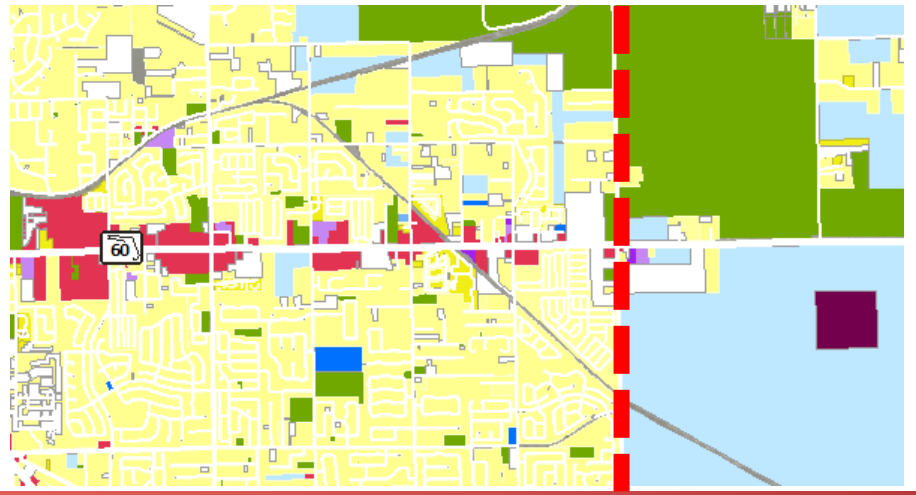
Distinguishing Characteristics
SR 60 Valrico, Hillsborough County

- Mostly commercial uses along the roadway
- Large blocks
- Disconnected network
- Looks like ___

Kahoot.it

Game Pin:





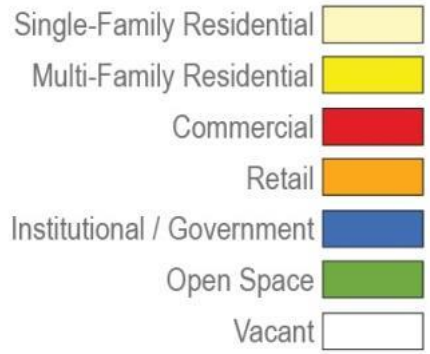
- Mostly agriculture and open space
- Sparse network
- Looks like _____

Distinguishing Characteristics
SR 574 (DR. MLK JR. Blvd) – Tampa

Kahoot.it

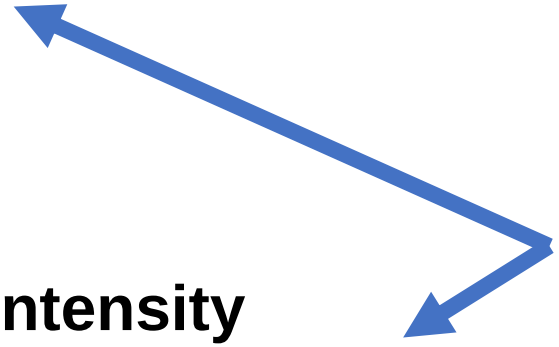
Game Pin:

- Mix of uses
- Small blocks
- Well connected roadway network
- Extends many blocks
- Connects to residential neighborhood
- Looks like at least ___ or higher
- We'll stay with this example



Evaluate Primary Measures

- **Street Connectivity**
  - Block Length
  - Block Perimeter
  - Intersection Density
- **Development Form and Intensity**
  - Building Placement
  - Presence of Fronting Uses
  - Location of Off-Street Parking
  - Land Uses
  - Building Height



- May need to cross-reference measures
- Looking for a majority of measures to make determination

Evaluate Primary & Secondary Measures

		(2 A/B) Primary Measures			
		Roadway Connectivity			
		Intersection Density	Block Perimeters	Block Length	Land Use
Context Classification	(1) Distinguishing Characteristics	Intersections/ Square Mile	Feet	Feet	Description
C1-Natural	Lands preserved in a natural or wilderness condition, including lands unsuitable for settlement due to natural conditions.	N/A	N/A	N/A	Conservation Land, Open Space, and/or Park
C2-Rural	Sparsely settled lands; may include agricultural land, grassland, woodland, and wetlands.	<20	N/A	N/A	Agricultural and/ or Single-Family Residential
C2T-Rural Town	Small concentrations of developed areas immediately surrounded by rural and natural areas; includes many historic towns.	>100	<3,000	<500	Retail, Office, Single-Family Residential, Multi-Family Residential, Institutional, and/or Industrial
C3R-Suburban Residential	Mostly residential uses within large blocks and a disconnected or sparse roadway network.	<100	N/A	N/A	Single-Family and/ or Multi-Family Residential
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.	<100	>3,000	>660	Retail, Office, Multi-Family Residential, Institutional, and/or Industrial
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.	>100	<3,000	<500	Single-Family or Multi-Family Residential, Institutional, Neighborhood Scale Retail, and/ or Office
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.	>100	<2,500	<500	Retail, Office, Single-Family or Multi-Family Residential, Institutional, and/or Light Industrial
C6-Urban Core	Areas with the highest densities and building heights, and within FDOT classified Large Urbanized Areas (population > one million). Many are regional centers and destinations. Buildings have mixed uses, are built up to the roadway, and are within a well-connected roadway network.	>100	<2,500	<660	Retail, Office, Institutional, and/ or Multi-Family Residential

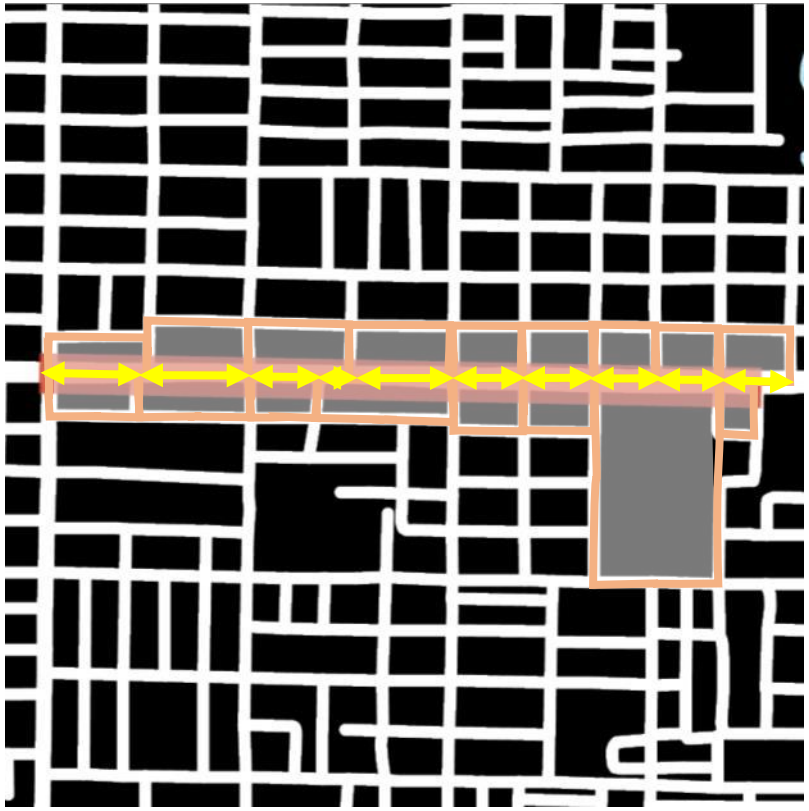
(2 C) Secondary Measures							
Building Height	Building Placement	Fronting Uses	Location of Off-street Parking	Allowed Residential Density	Allowed Office/ Retail Density	Population Density	Employment Density
Floor Levels	Description	Yes/No	Description	Dwelling Units/ Acre	Floor-Area Ratio (FAR)	Persons/Acre	Jobs/Acre
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1 to 2	Detached buildings with no consistent pattern of setbacks	No	N/A	<1	N/A	<2	N/A
1 to 2	Both detached and attached buildings with no or shallow (<20') front setbacks	Yes	Mostly on side or rear; occasionally in front	>4	>0.25	N/A	>2
1 to 2, with some 3	Detached buildings with medium (20' to 75') front setbacks	No	Mostly in front; occasionally in rear or side	1 to 8	N/A	N/A	N/A
1 (retail uses) and 1 to 4 (office uses)	Detached buildings with large (>75') setbacks on all sides	No	Mostly in front; occasionally in rear or side	N/A	<0.75	N/A	N/A
1 to 3, with some taller buildings	Both detached and attached buildings with no setbacks or up to medium (<75') front setbacks	Yes	Mostly on side or rear; occasionally in front	>4	N/A	>5	>5
1 to 5, with some taller buildings	Both detached and attached buildings with no or shallow (<20') front setbacks	Yes	Mostly on side or rear; occasionally in front, or in shared off-site parking facilities	>8	>0.75	>10	>20
>4, with some shorter buildings	Mostly attached buildings with no or minimal (<10') front setbacks	Yes	Side or rear; often in shared off-site garage parking	>16	>2	>20	>45

Distinguishing Characteristics
SR 574 (DR. MLK JR. Blvd) – Tampa

Kahoot.it

Game Pin:

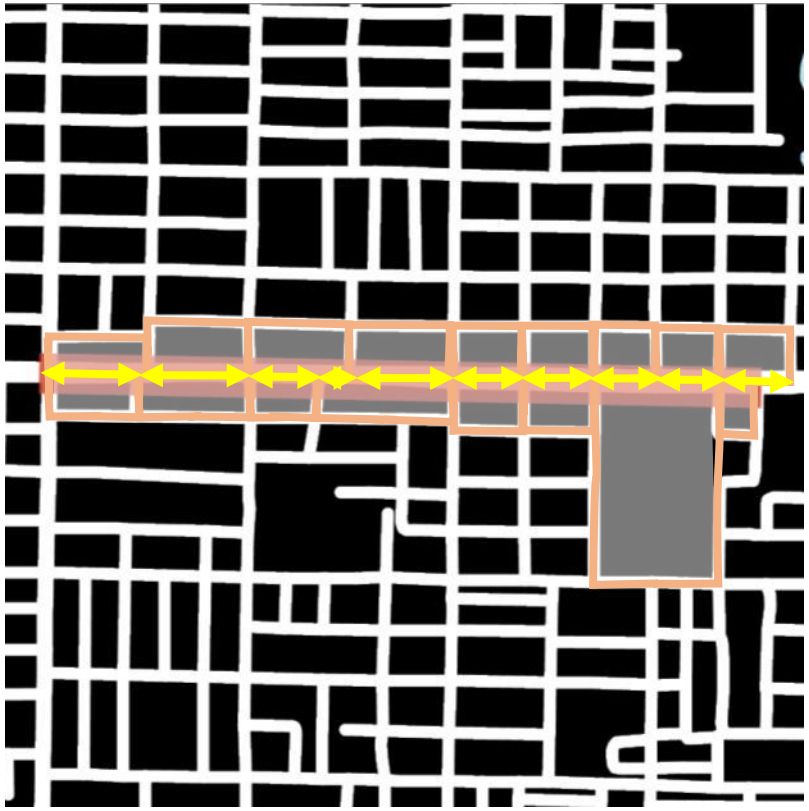
- Average Block Length: 490 feet
- Block length <500 ft so…
- Looks like ___ or ____
- Need additional measures



Street & Block Network

Distinguishing Characteristics
SR 574 (DR. MLK JR. Blvd) – Tampa

- Average Block Perimeter: 1,760 feet
- Perimeter <2500 so…
- Could be C4 or C5
- Need additional measures



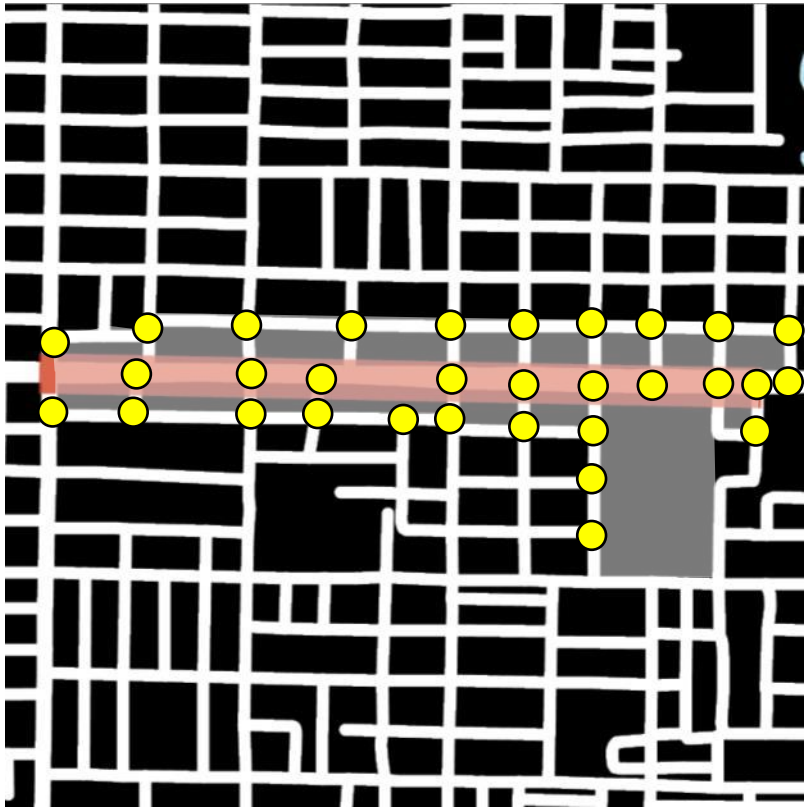
Street & Block Network

Distinguishing Characteristics
SR 574 (DR. MLK JR. Blvd) – Tampa

- Intersection Density:

  $$\frac{34 \text{ intersections}}{0.15 \text{ sq. miles}} = 230$$

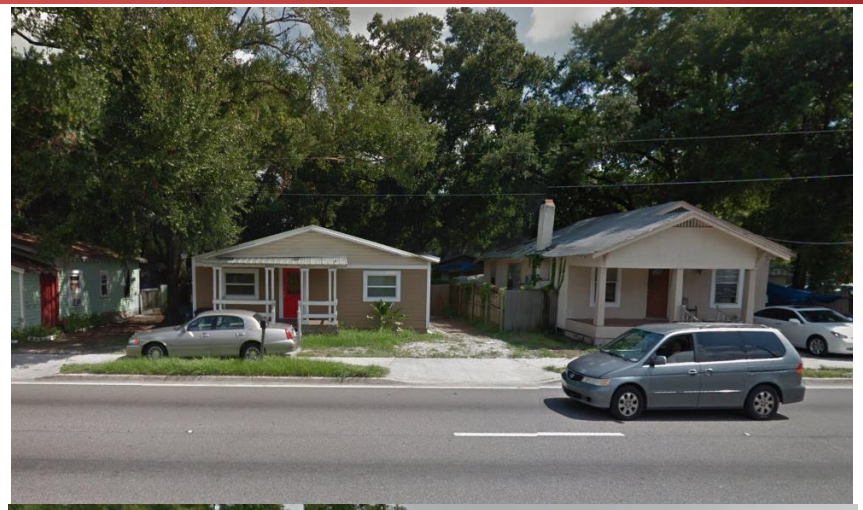
  intersections/sq. mile
- Intersection Density >100
- Could be C4 or C5
- Need additional measures

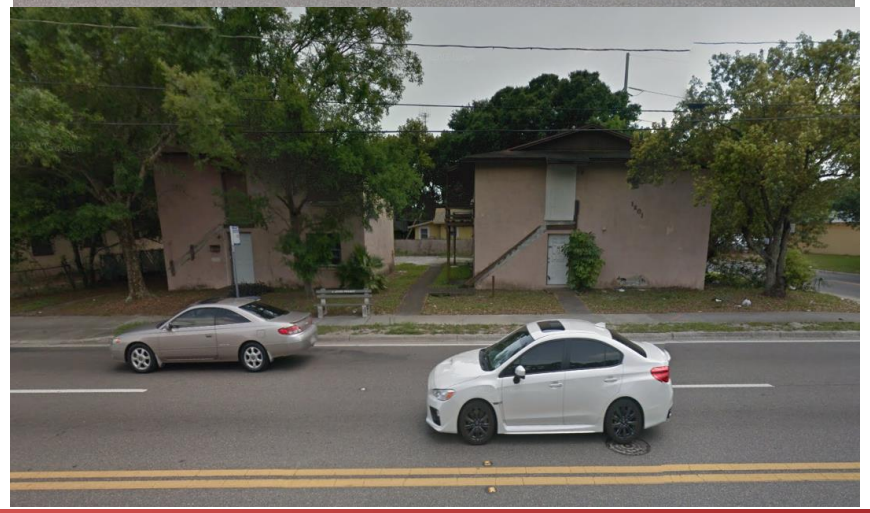


Street & Block Network

Distinguishing Characteristics
SR 574 (DR. MLK JR. Blvd) – Tampa

- 1-2 Floor Buildings
- Looks like __ or higher





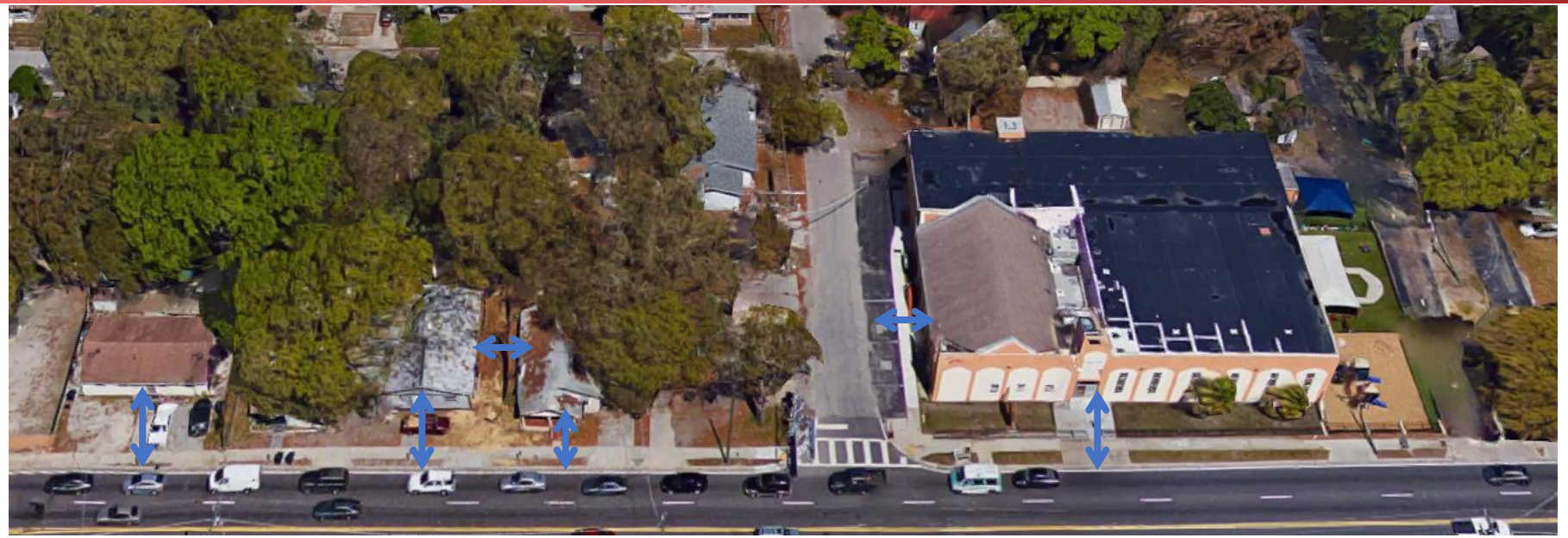
Kahoot.it

Game Pin:

Distinguishing Characteristics
SR 574 (DR. MLK JR. Blvd) – Tampa

Kahoot.it

Game Pin:



- Detached buildings
- Shallow to medium setbacks
- Buildings do front the street / are accessible via sidewalk
- Parking mostly on side, occasionally in front or rear
- Looks like _____

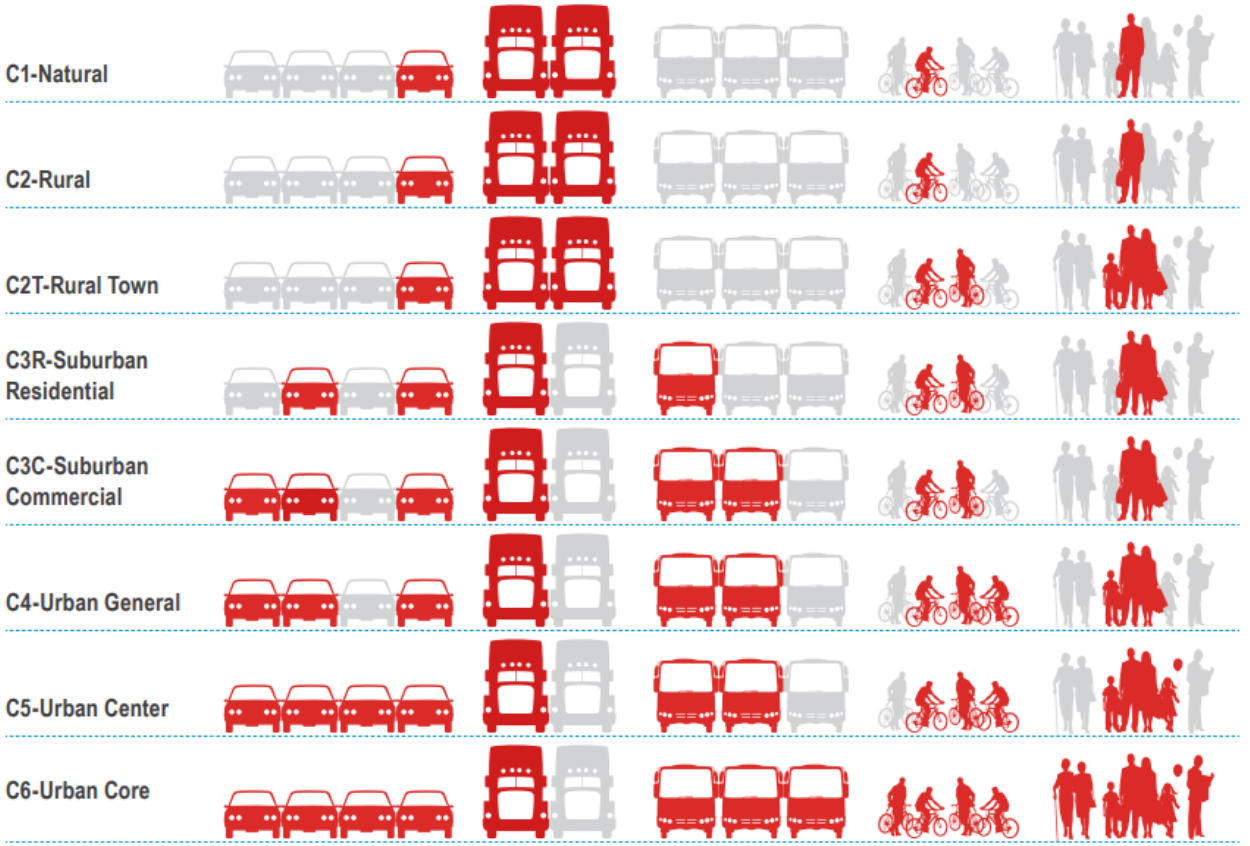
Who Determines Context Classification?

- District Staff
  - District can assign staff to oversee context classification evaluation
  - On projects where FDOT currently coordinates with local governments, FDOT should continue to coordinate with local governments to calibrate context classification on each project
  - Local form-based codes and zoning can be used to inform FDOT's context classification determination

- **Final determination is made by FDOT**

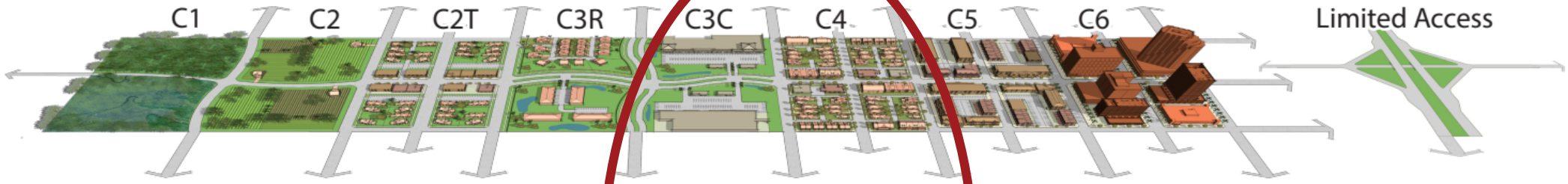
Understanding Expected User Types

FIGURE 15 EXPECTED USER TYPES IN DIFFERENT CONTEXT CLASSIFICATIONS



Context Classification & Safety

76% of fatal and serious injury pedestrian and bicycle crashes occur in C3C or C4 Contexts



	C1	C2	C2T	C3R	C3C	C4	C5	C6	Limited Access	State Road Network
Lane Miles ††	2,071 (5%)	11,286 (25%)	521 (1%)	3,436 (8%)	10,084 (22%)	4,790 (11%)	305 (<1%)	93 (<1%)	12,345 (27%)	44,931
Number of Fatalities and Serious Injuries on Entire State Roadway Network (SDIS, 2015-2020)										
Bike/Ped	61 (1%)	461 (5%)	98 (1%)	794 (8%)	3,809 (41%)	3,269 (35%)	254 (3%)	85 (1%)	545 (6%)	9,376
All Users	1,055 (1%)	9,713 (14%)	535 (1%)	6,711 (9%)	24,839 (35%)	12,342 (17%)	698 (1%)	192 (<1%)	15,200 (21%)	71,285

†† Source: RCI database queried by TDA and reported on 6/14/2021.

FDOT FLORIDA'S COMPLETE STREETS A 360° APPROACH

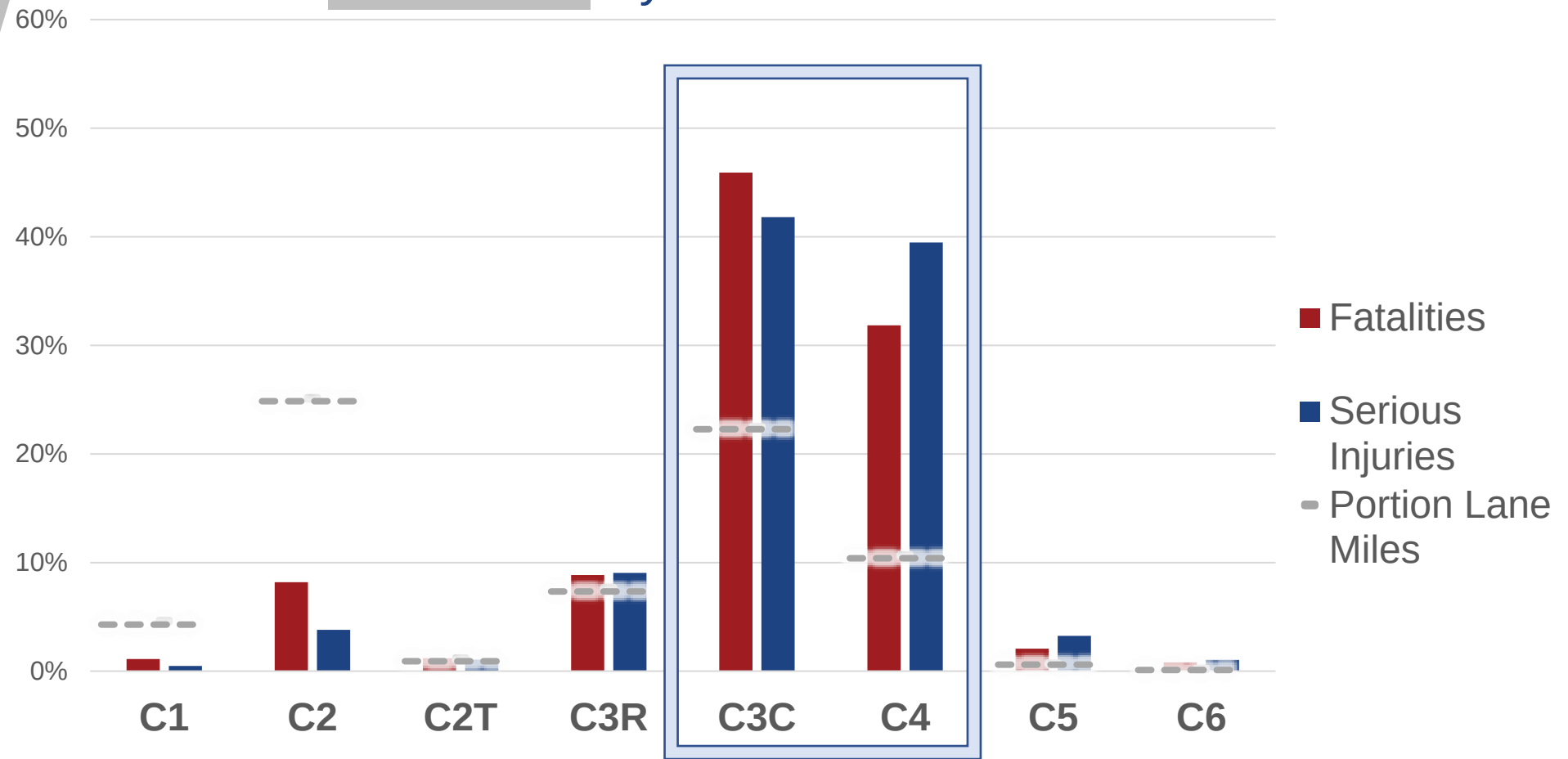
Target Zero

Florida's Safety Vision: Eliminate all transportation-related fatalities and serious injuries for all modes of travel.

Considering Crashes Involving a Pedestrian or Cyclist

80% Of Fatal & Serious Injury Crashes

occur on **33%** Of the System



FDOT FLORIDA'S COMPLETE STREETS A 360° APPROACH

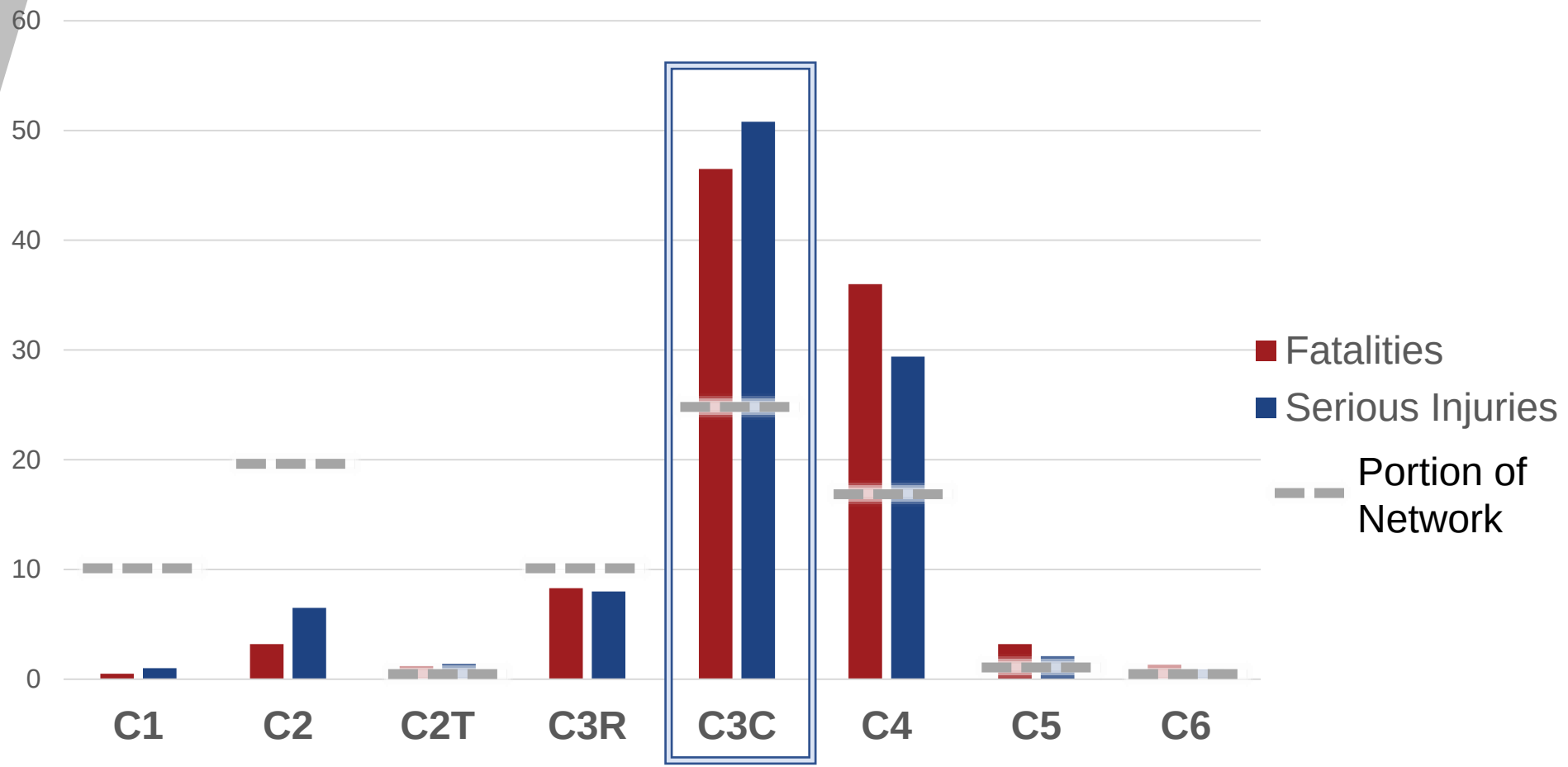
Target Zero

Florida's Safety Vision: Eliminate all transportation-related fatalities and serious injuries for all modes of travel.

Considering All Crashes

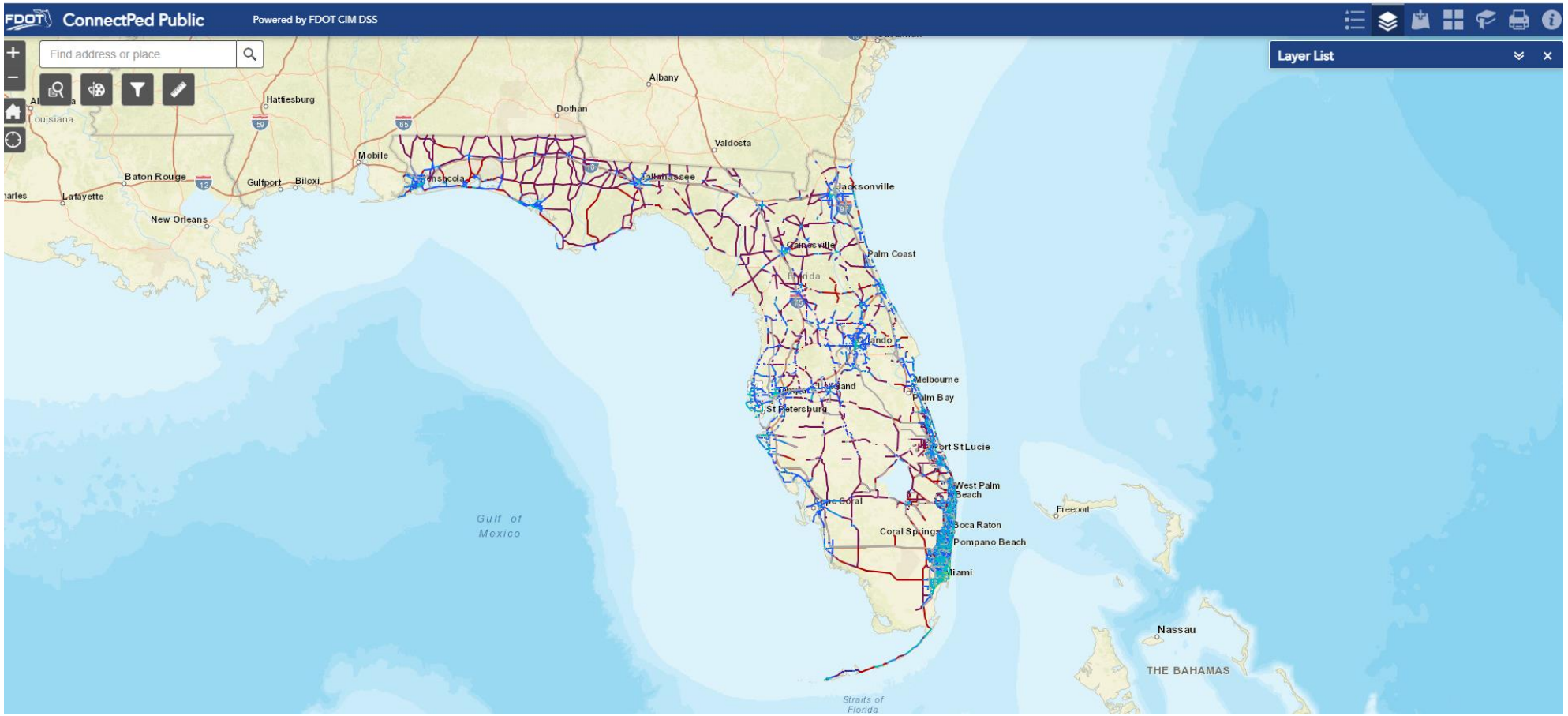
OVER **50%** OF FATAL AND SERIOUS INJURY CRASHES occur on **24%** OF THE SYSTEM

TARGET ZERO
FATALITIES & SERIOUS INJURIES

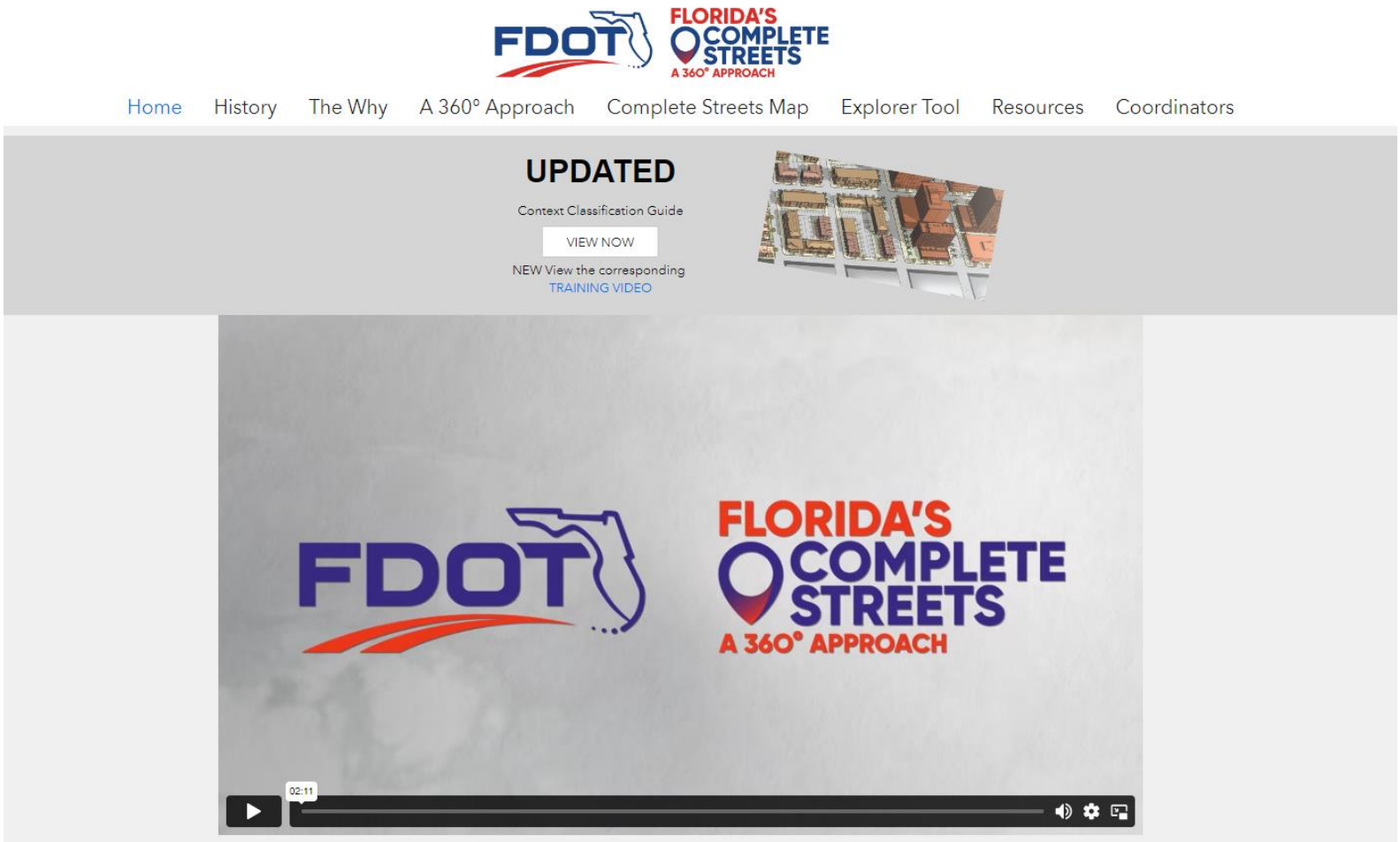


FDOT FLORIDA'S COMPLETE STREETS A 360° APPROACH

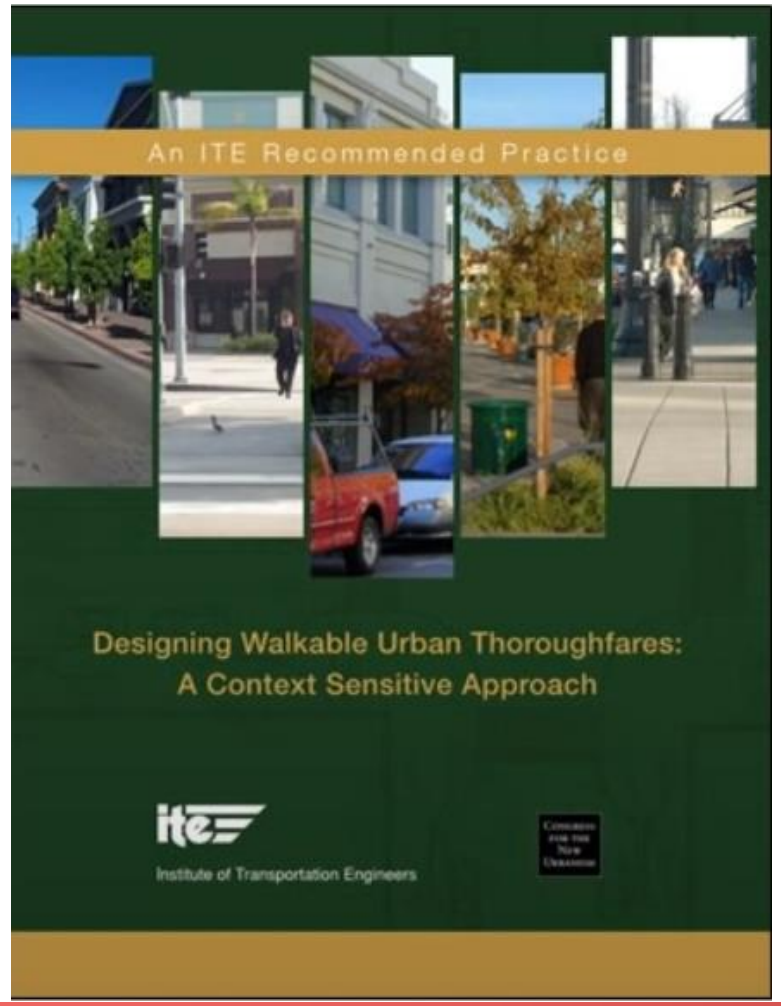
ConnectPed

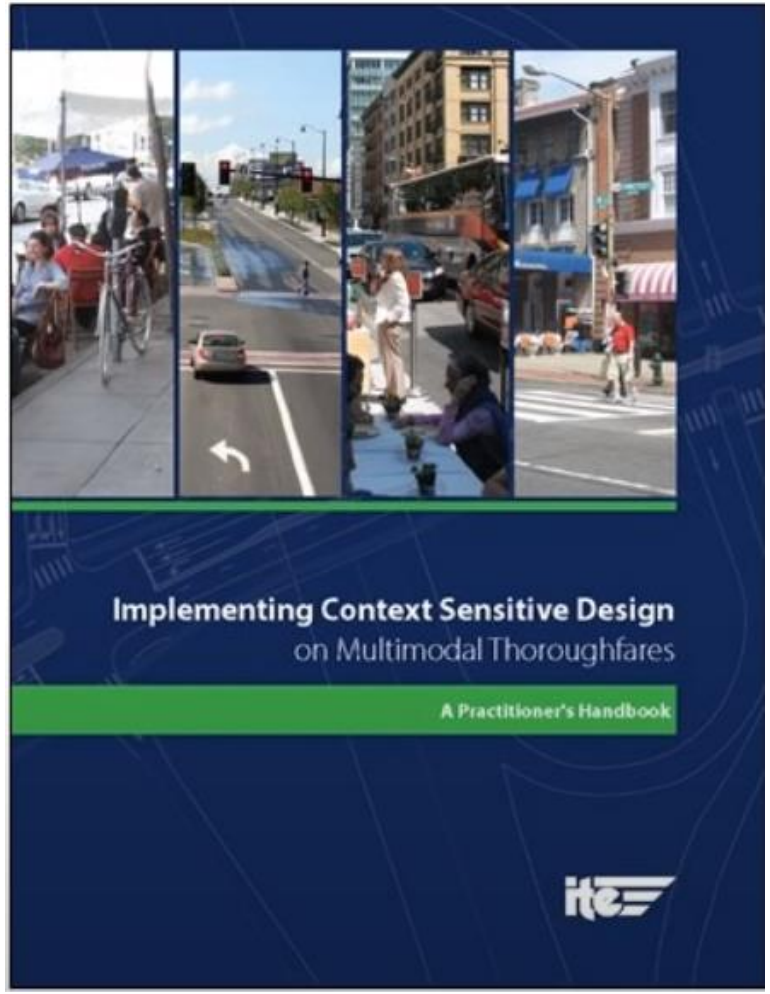

ConnectPed Public
Powered by FDOT CIM DSS
Find address or place
Layer List
Albany
Dothan
Hattiesburg
Louisiana
Mobile
Valdosta
Baton Rouge
Gulfport
Biloxi
Lafayette
New Orleans
Tallahassee
Jacksonville
Gainesville
Palm Coast
Florida
Orlando
Melbourne
Palm Bay
St Petersburg
Port St Lucie
West Palm Beach
Boca Raton
Coral Springs
Pompano Beach
Miami
Freeport
Nassau
THE BAHAMAS
Gulf of Mexico
Straits of Florida

FLCOMPLETESTREETS.COM



ITE Resources





Any Questions?

Tiffany Gehrke
State Complete Streets Coordinator
Roadway Design Office
(850) 414-4283
Tiffany.Gehrke@dot.state.fl.us

DeWayne Carver, AICP
Criteria Publications Manager
Roadway Design Office
(850) 414-4322
Dewayne.carver@dot.state.fl.us

Break

15 Minute Break

Context Classification
Panama City Case Study

Rick Hall, P.E.

Hall Planning and Engineering

COMPLETE STREETS ORDINANCE

Panama City, FL

CNU FL - February 2023

R. A. Hall, P.E.

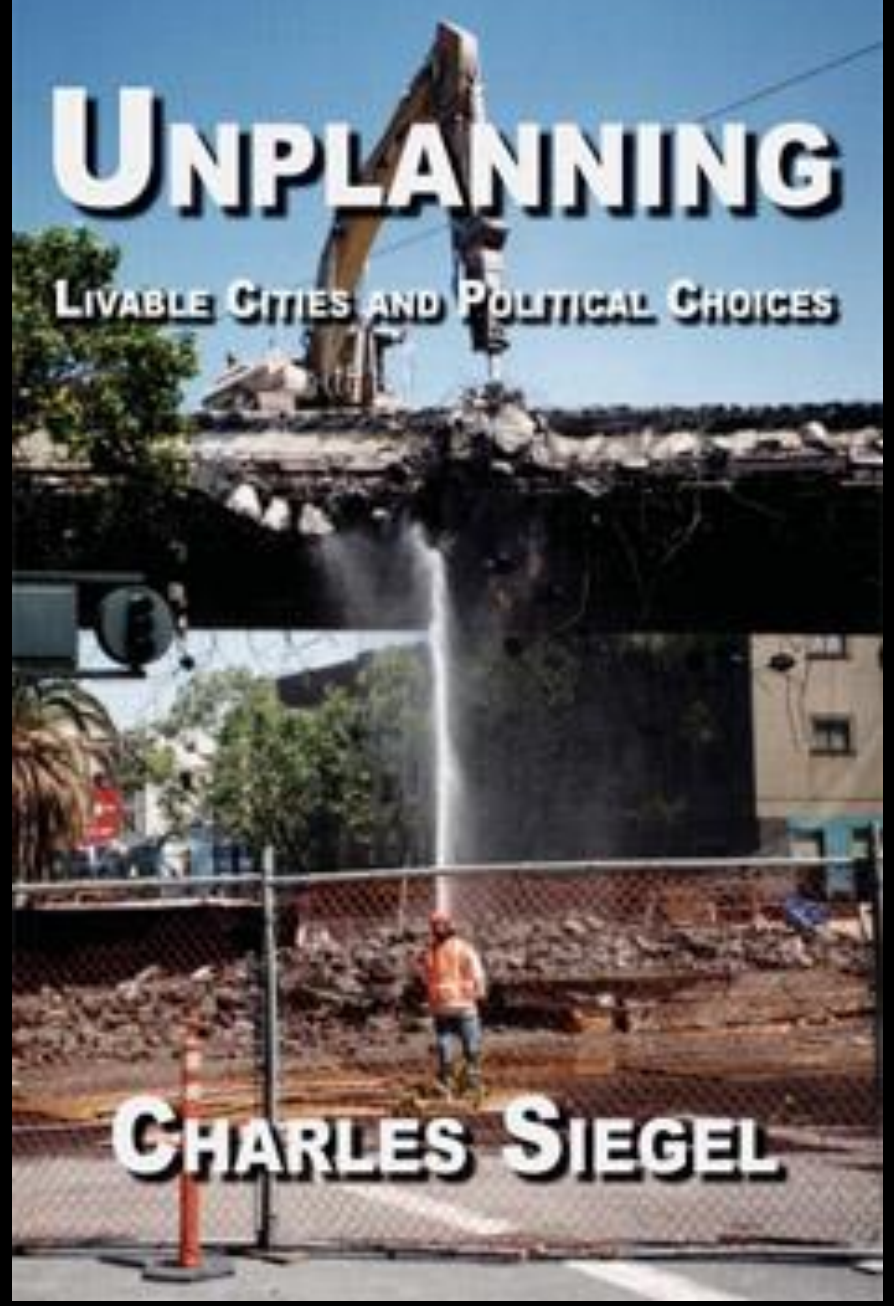
Hall Planning & Engineering Inc. and Dover Kohl & Partners

You are either in Suburban context

or you are in Urban context

Know this, then design the streets

Rick Hall



Get this book and zoom through it!

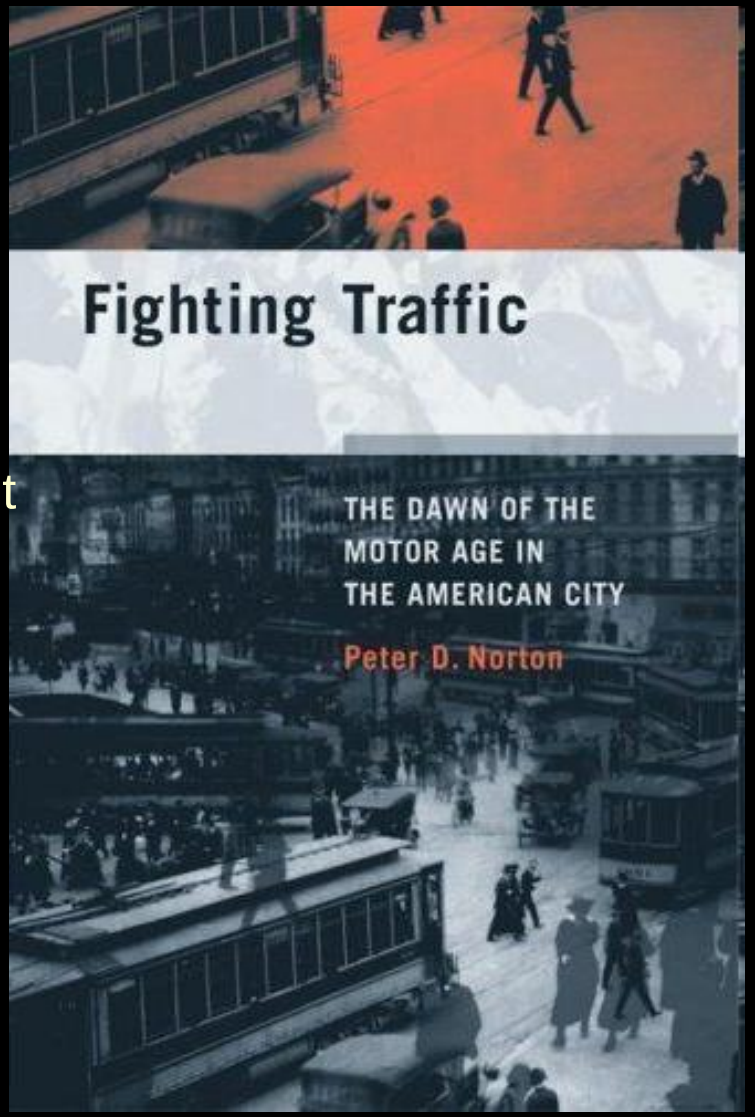
- Great history of Modernists
- How they changed everything
- Thoughts on next steps to fix it!
- 70 pages w/ the background one needs to understand development and street design

http://preservenet.com/unplanning/index.html

The Transformation 1900-1940

- When did streets became Auto-dominant
- 1900 to 1940 History is told
- 1st autos were uninvited guests
- 100,000 person protest for child / auto deaths, NYC
- **1924** the pivot point beginning Auto Dominance
- Motordom left the table! To influence government policy

- *Fighting Traffic* by Peter D. Norton



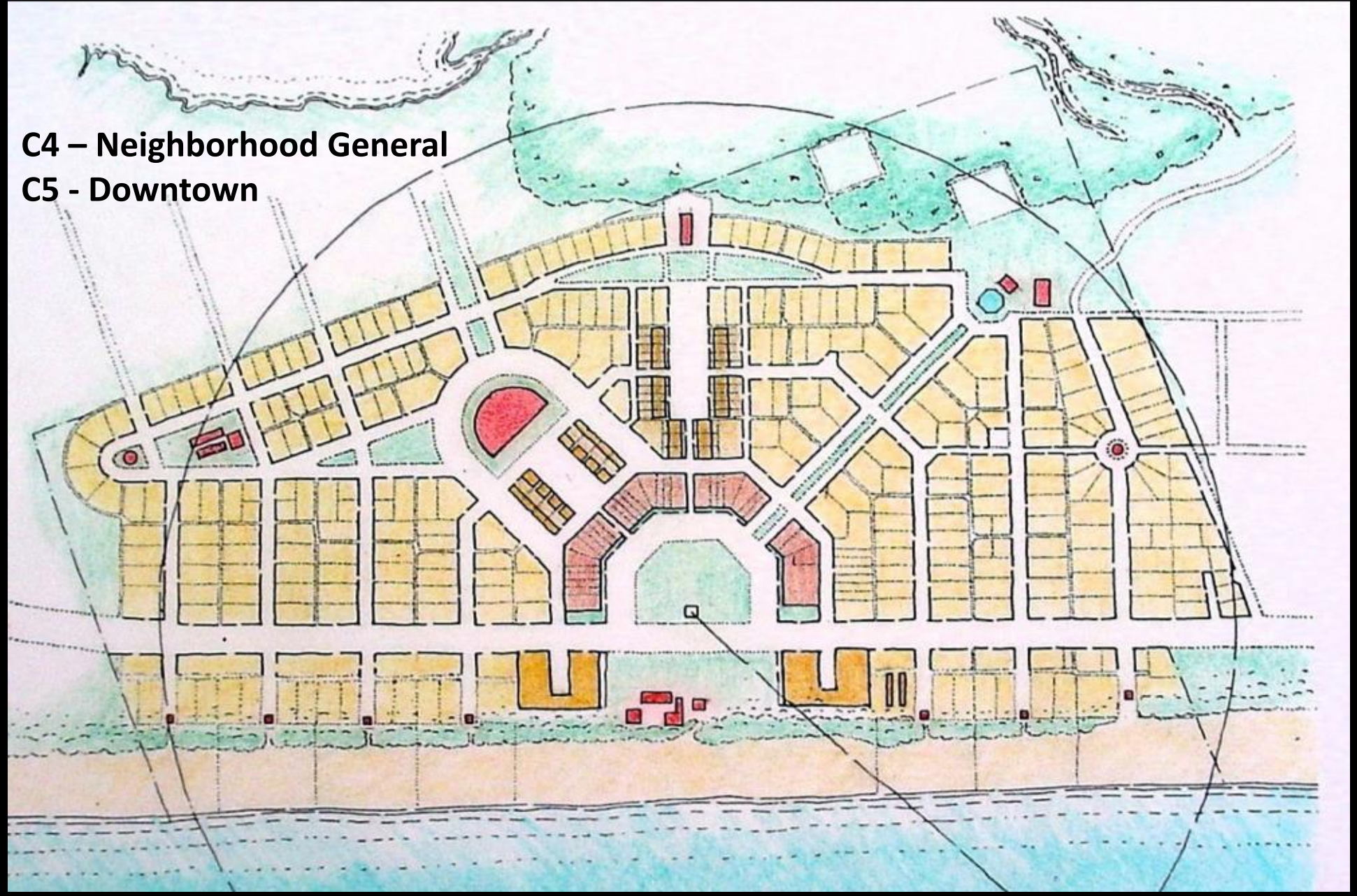
HPE
Hall Planning & Engineering, Inc.

principle 1. urban form first

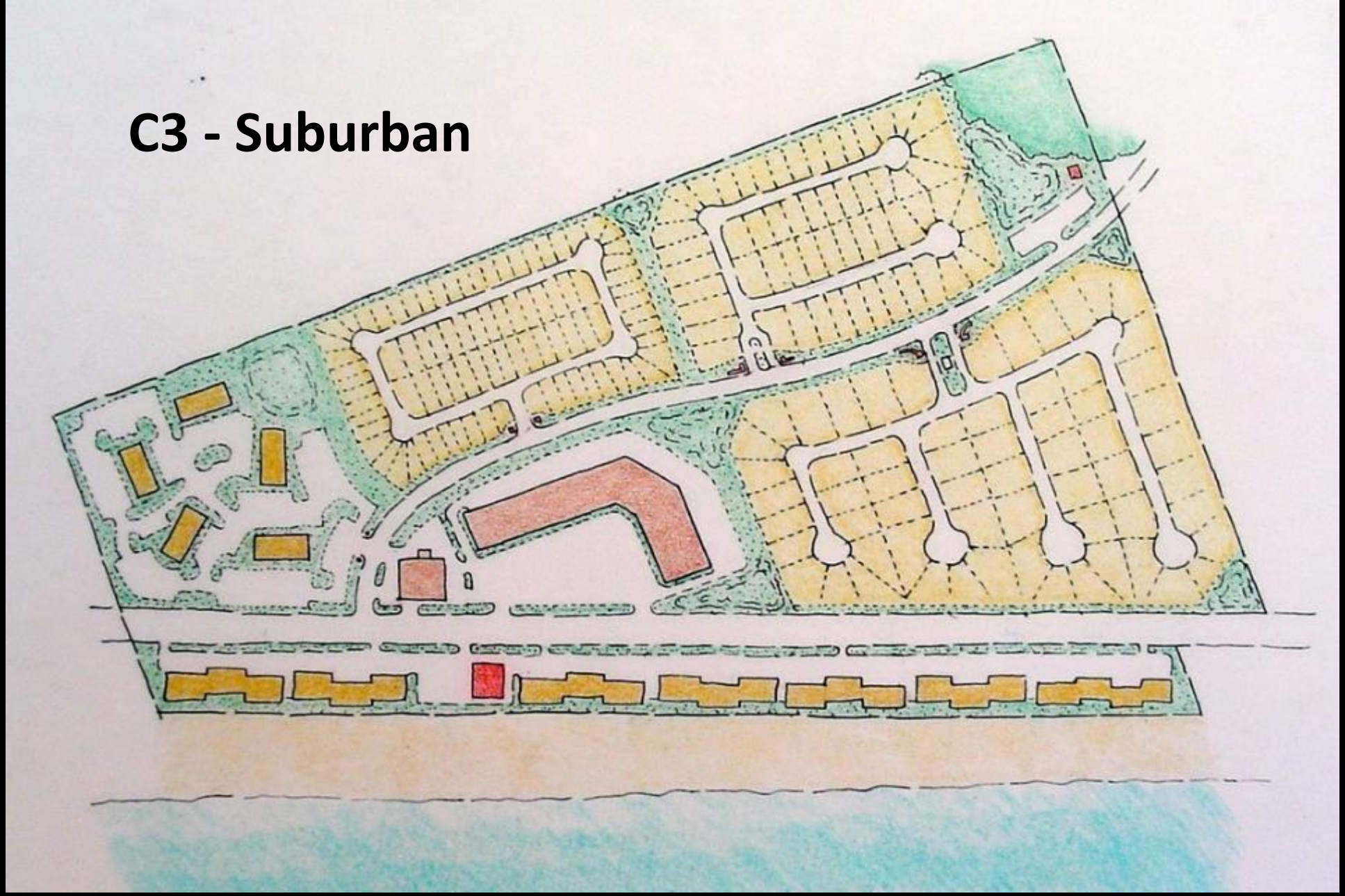
LU1 – TR2

plan the urban structure / land use 1st
the transportation 2nd

Town Founder - Robert Davis, Seaside



Seaside with Robert Davis by Tom Low



Seaside without Robert Davis

by Tom Low

A POLICY ON GEOMETRIC DESIGN OF

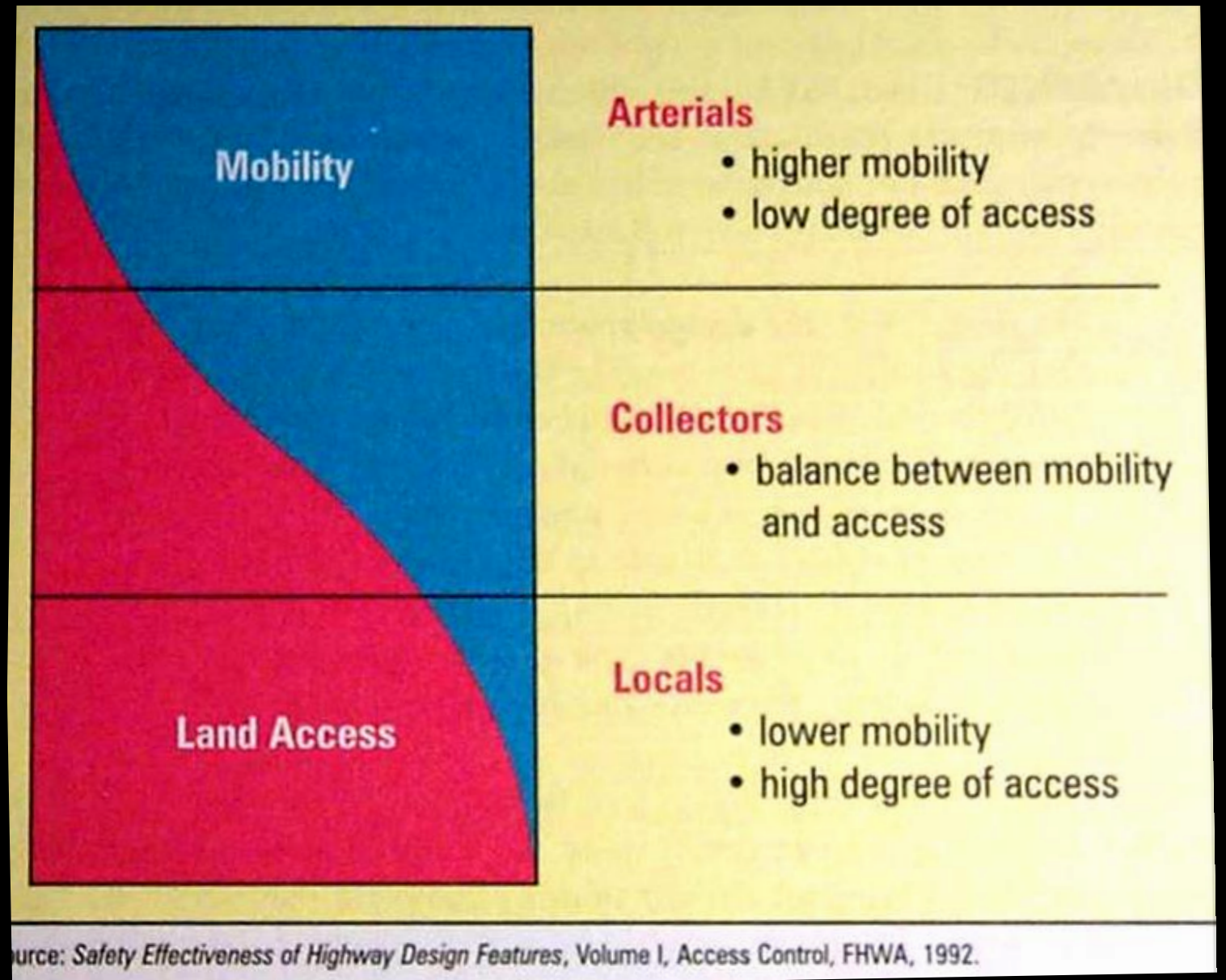
HIGHWAYS AND STREETS

2001

FOURTH EDITION

AMERICAN ASSOCIATION OF STATE HIGHWAY
AND TRANSPORTATION OFFICIALS

Flexibility in Highway Design - FHWA



The Elements of a Complete Streets Policy

Effective 2018

Smart Growth America
Improving lives by improving communities

National Complete Streets Coalition

BikeWalkLee

A Coalition to Complete Lee County's Streets

NOW, THEREFORE, BE IT RESOLVED, by the City of Neptune Beach of, State of Florida, as follows:

1. That the City of Neptune Beach adopts the Complete Streets Policy ("Policy") attached hereto as Exhibit A, and made part of this Resolution.
2. That the next substantive revision of the City of Neptune Beach Comprehensive Plan should incorporate Complete Streets policies and principles consistent with the Policy.

This Resolution adopted by the City Council of Neptune Beach, Florida, at the Regular Council Meeting held this 4th day of September, 2018.

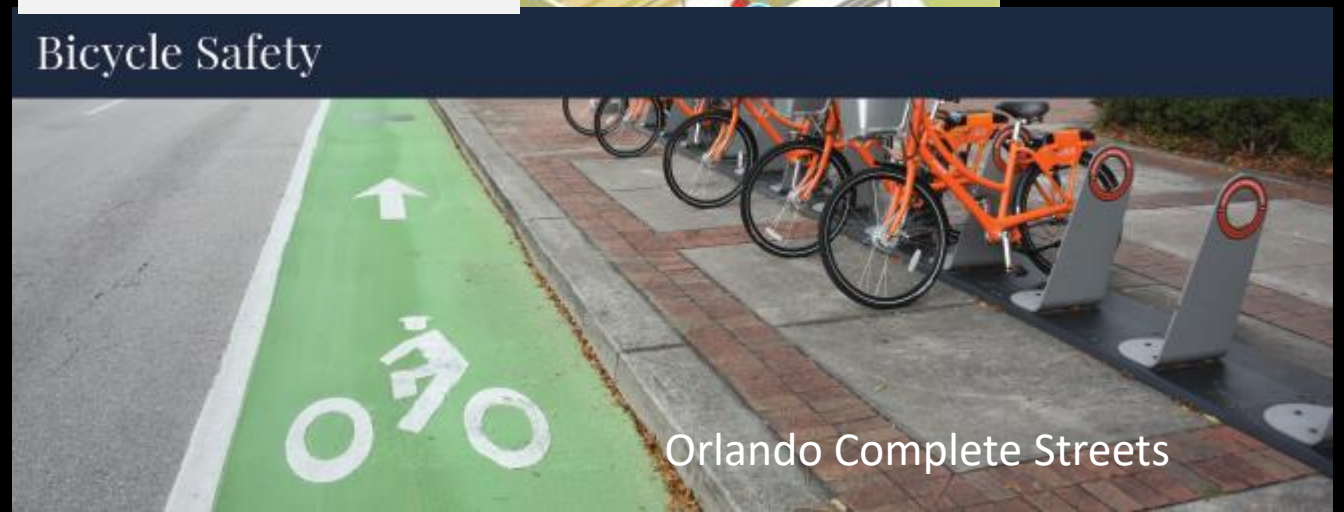
Elaine Brown, Mayor

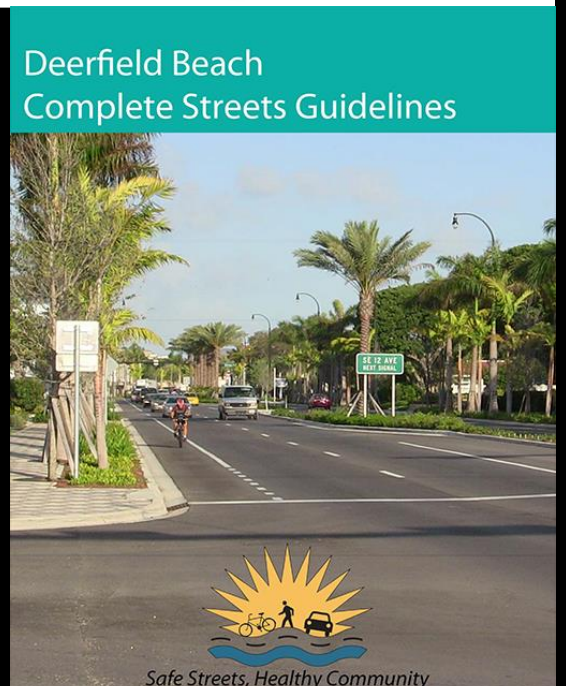
ATTEST:

Catherine Ponson, City Clerk

CITY OF NEPTUNE BEACH * FLORIDA * 1931

bikewalkcentralflorida





AASHTO

A Policy on Geometric Design of Highways and Streets

THE GREEN BOOK

2018
7th Edition

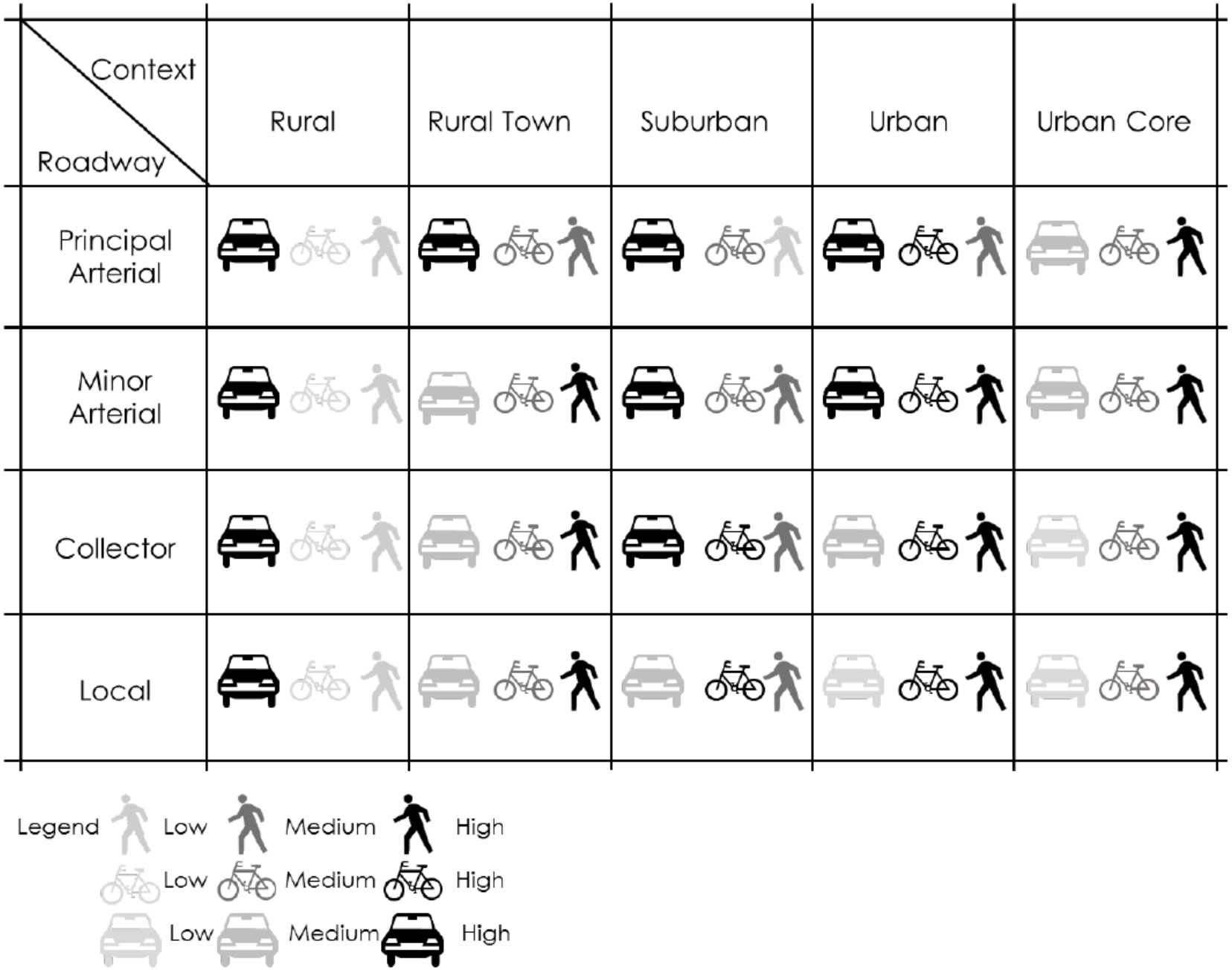
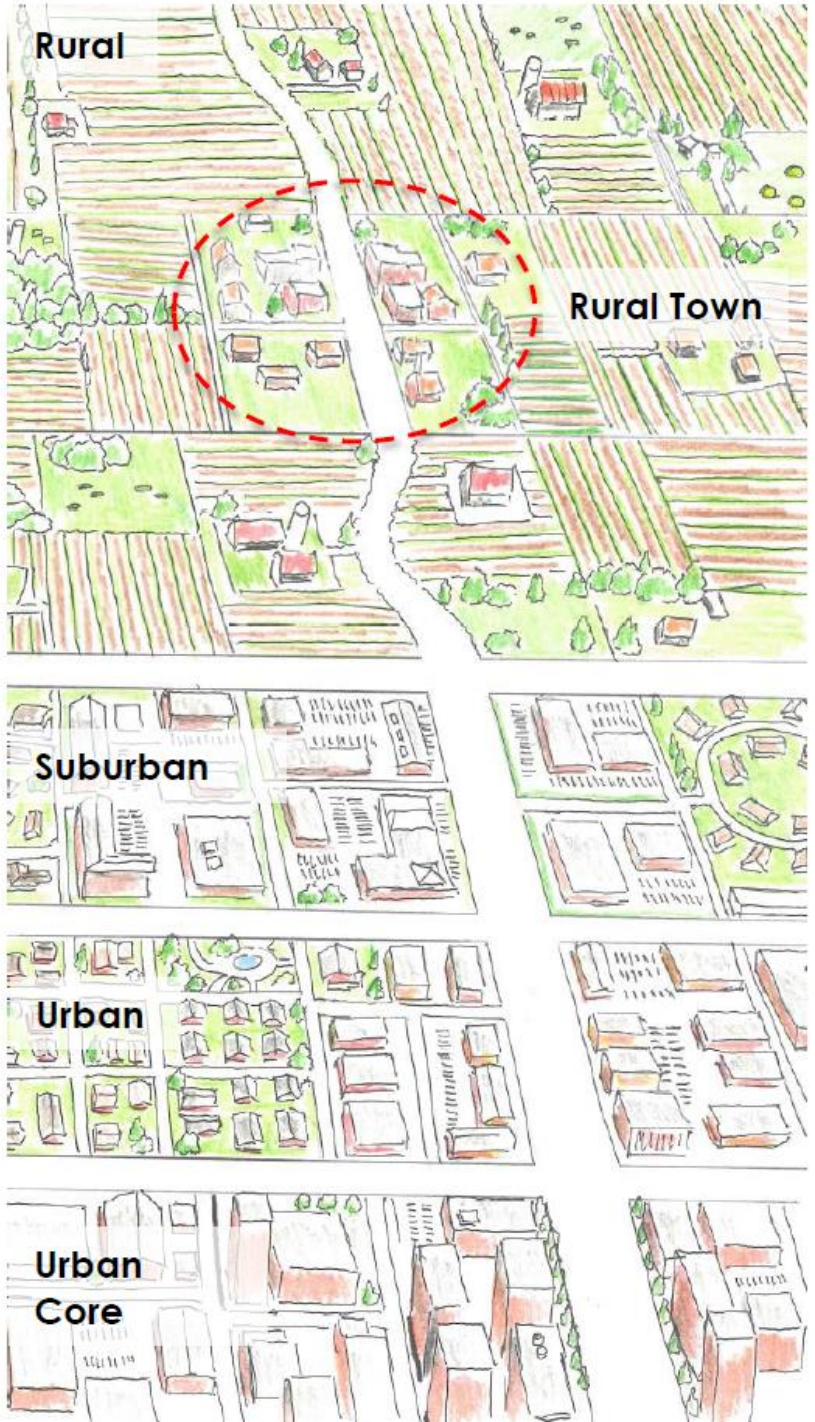


Figure 2 Expanded FCS conceptual typical user priority

An Expanded Functional Classification System for Highways and Streets

Subordinate to CONTEXT Classification

1. **RURAL**: areas with lowest density, few houses or structures (widely dispersed or no residential, commercial and industrial uses) and usually large set backs
2. **RURAL TOWN**: areas with low density but diverse land uses with commercial main street character, potential for on-street parking and sidewalks, and small setbacks
3. **SUBURBAN**: areas with medium density, mixed land uses within and among structures (including mixed use town centers, commercial corridors and residential areas) and with varied set backs
4. **URBAN**: areas with high density, mixed land uses and prominent destinations, potential for some on- street parking and sidewalks, and mixed setbacks
5. **URBAN CORE**: areas with highest density and mixed land uses within and among pre-dominately high rise structures, and with small set backs



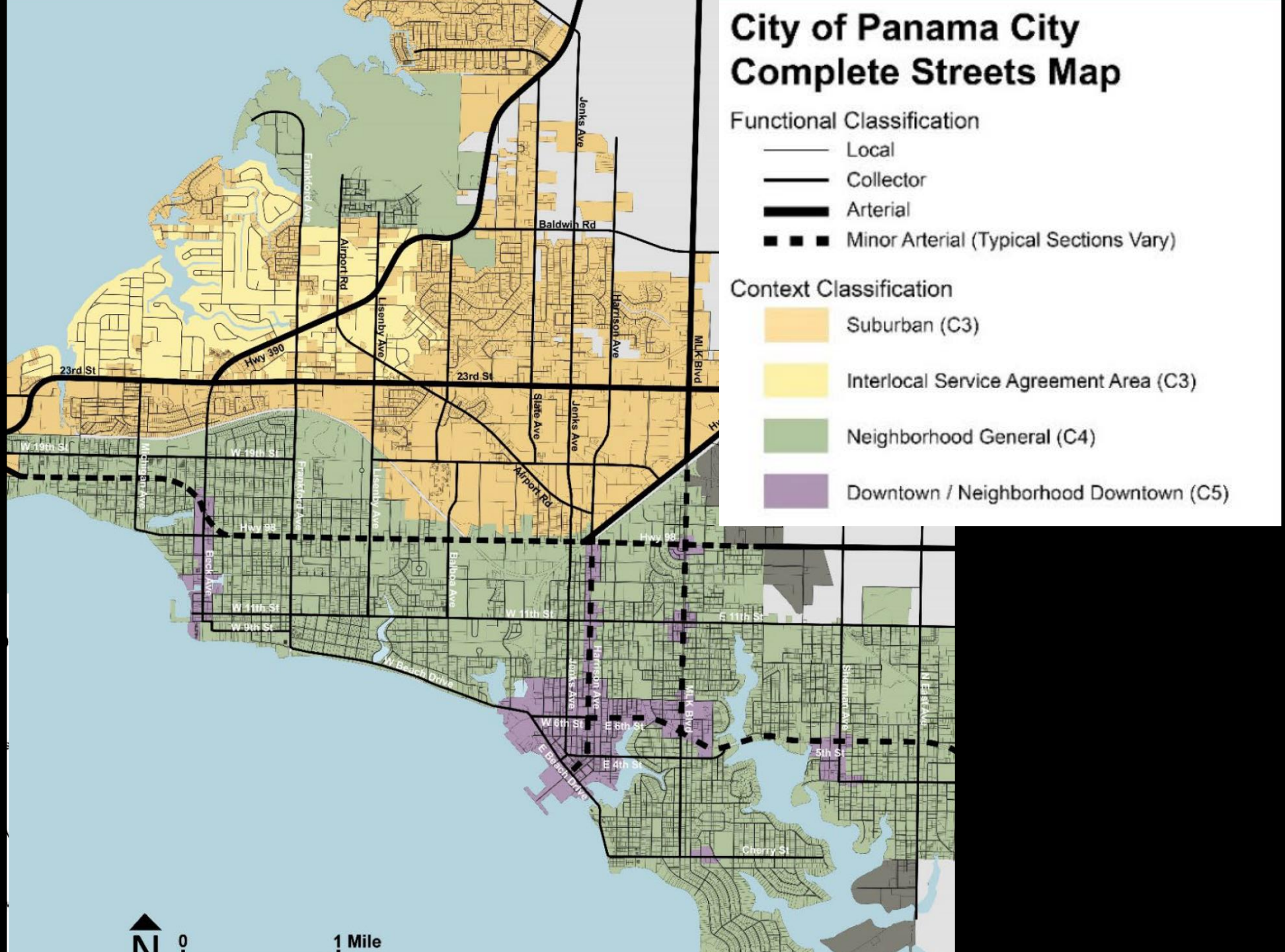
AASHTO said one of the major changes in this updated addition of the **Green Book** is a "reorganization of the "Design Controls and Criteria" found in Chapter 2, with new emphasis on "transportation of people" rather than focusing primarily on moving vehicles."

"The chapter now discusses multimodal level of service and puts greater emphasis on lower-speed, walkable, urban zones," the organization noted.

Panama City, FL
Context Based Complete Streets Resolution

Table 1. Context and Functional Classification

Context Classification	**Functional Classification**			
	Local Street	Collector Street	Minor Arterial Street	Arterial Street
C3 Suburban	Low Speed, 2 Lane, Short Distance	Medium Speed, 2 or 4 Lane, Medium Distance	Medium Speed, 2 or 4 Lane, Intermediate Distance	Higher Speed, 2 - 6 Lane, Longer Distance
C4 Neighborhood General	Low Speed, 2 Lane, Short Distance	Low Speed, 2 Lane, Medium Distance	Medium Speed, 2 - 4 Lane, Longer Distance	N. A.
C5 Neighborhood Downtown / Downtown	Low Speed, 2 Lane, Short Distance	Low Speed, 2 Lane, Medium Distance	Low Speed, 2 - 4 Lane, Longer Distance	N. A.


City of Panama City
Complete Streets Map
Functional Classification
Local
Collector
Arterial
Minor Arterial (Typical Sections Vary)
Context Classification
Suburban (C3)
Interlocal Service Agreement Area (C3)
Neighborhood General (C4)
Downtown / Neighborhood Downtown (C5)
Baldwin Rd
Jenks Ave
Frankford Ave
Airport Rd
Lisenby Ave
Harrison Ave
MLK Blvd
Hwy 390
23rd St
State Ave
W 19th St
Michigan Ave
Hwy 98
Beck Ave
Bunker Ave
W 11th St
W 9th St
E 11th St
W Beach Drive
W 8th St
E 6th St
E 4th St
E Beach Drive
Sherman Ave
N E 5th Ave
5th St
Cherry St
N
0
1 Mile

Street Design Matrix

		Street Design Standards								
Priority	Street Design Elements	C3 / Local	C3 / Collector	C3 / Arterial	C4 / Local	C4 / Collector	C4 / Minor Arterial	C5 / Local	C5 / Collector	C5 / Minor Arterial
1	Max Speed Limit	25 mph	40 mph	40-45 mph	25 mph	30 mph	30 mph	25 mph	30 mph	25-30 mph
2	Lane Width	2 Lanes, 9 - 10 ft	2 - 4 Lanes, 11 - 12 ft	2 - 6 Lanes, 11 - 12 ft	2 Lanes, 9 - 10 ft	2 Lanes, 10 ft	2 - 4 Lanes, 10 - 11 ft	2 Lanes, 9 - 10 ft	2 Lanes, 10 ft	2 - 4 Lanes, 10 ft
3	Side-walks	5' min / 6' pref	5' min / 6' pref	5' min / 8' pref	5' min / 6' pref	6' min / 8' pref	6' min / 8'+ pref	5' min / 8' pref	6' min / 8' pref	6' min / 10'+ pref
4	Street Trees / Planting Zone	Every 40 ft pref Planting strip, 4' min / 5'+ pref	Every 40 ft Planting strip, 4' min / 5'+ pref	Every 40 ft Planting strip, 4' min / 6'+ pref	Every 30 ft pref Planting strip, 4' min / 5'+ pref	Every 30 ft Planting strip or tree grate, 4' min / 5'+ pref	Every 30 ft Planting strip or tree grate, 4' min / 6'+ pref	Every 30 ft Planting strip or tree grate, 4' min / 5'+ pref	Every 30 ft Planting strip or tree grate, 4' min / 5'+ pref	Every 30 ft Tree grate, 4' min / 5'+ pref
5	Edge/ Drainage Type	Curb / Swale	Curb / Swale	Curb / Swale	Curb / Swale	Curb/ Swale	Curb	Curb	Curb	Curb
6	Bicycle Facilities	Shared Lanes	Separate Lanes	Separate Lanes	Shared Lanes	Separate or Shared Lanes	Separate or Shared Lanes	Shared Lanes	Separate or Shared Lanes	Separate or Shared Lanes
7	On Street Parking	Optional	Optional	No	Optional	Preferred	Preferred	Preferred	Yes	Yes
8	Corner Radius	10 – 20 ft	20 – 30 ft	20 – 30 ft	10 – 15 ft	10 – 15 ft	10 – 15 ft	10 – 15 ft	15 ft	15 ft

Context Classification	C3 Suburban	C4 Neighborhood General	C5 Neighborhood Downtown

Street Design Matrix

		Street Design Standards								
Priority	Street Design Elements	C3 / Local	C3 / Collector	C3 / Arterial	C4 / Local	C4 / Collector	C4 / Minor Arterial	C5 / Local	C5 / Collector	C5 / Minor Arterial
1	Max Speed Limit	25 mph	40 mph	40-45 mph	25 mph	30 mph	30 mph	25 mph	30 mph	25-30 mph
2	Lane Width	2 Lanes, 9 - 10 ft	2 - 4 Lanes, 11 - 12 ft	2 - 6 Lanes, 11 - 12 ft	2 Lanes, 9 - 10 ft	2 Lanes, 10 ft	2 - 4 Lanes, 10 - 11 ft	2 Lanes, 9 - 10 ft	2 Lanes, 10 ft	2 - 4 Lanes, 10 ft
3	Side-walks	5' min / 6' pref	5' min / 6' pref	5' min / 8' pref	5' min / 6' pref	6' min / 8' pref	6' min / 8'+ pref	5' min / 8' pref	6' min / 8' pref	6' min / 10'+ pref
4	Street Trees / Planting Zone	Every 40 ft pref Planting strip, 4' min / 5'+ pref	Every 40 ft Planting strip, 4' min / 5'+ pref	Every 40 ft Planting strip, 4' min / 6'+ pref	Every 30 ft pref Planting strip, 4' min / 5'+ pref	Every 30 ft Planting strip or tree grate, 4' min / 5'+ pref	Every 30 ft Planting strip or tree grate, 4' min / 6'+ pref	Every 30 ft Planting strip or tree grate, 4' min / 5'+ pref	Every 30 ft Planting strip or tree grate, 4' min / 5'+ pref	Every 30 ft Tree grate, 4' min / 5'+ pref
5	Edge/ Drainage Type	Curb / Swale	Curb / Swale	Curb / Swale	Curb / Swale	Curb/ Swale	Curb	Curb	Curb	Curb

Street Design Matrix

		Street Design Standards								
Priority	Street Design Elements	C3 / Local	C3 / Collector	C3 / Arterial	C4 / Local	C4 / Collector	C4 / Minor Arterial	C5 / Local	C5 / Collector	C5 / Minor Arterial
5	Edge/ Drainage Type	Curb / Swale	Curb / Swale	Curb / Swale	Curb / Swale	Curb/ Swale	Curb	Curb	Curb	Curb
6	Bicycle Facilities	Shared Lanes	Separate Lanes	Separate Lanes	Shared Lanes	Separate or Shared Lanes	Separate or Shared Lanes	Shared Lanes	Separate or Shared Lanes	Separate or Shared Lanes
7	On Street Parking	Optional	Optional	No	Optional	Preferred	Preferred	Preferred	Yes	Yes
8	Corner Radius	10 – 20 ft	20 – 30 ft	20 – 30 ft	10 – 15 ft	10 – 15 ft	10 – 15 ft	10 – 15 ft	15 ft	15 ft

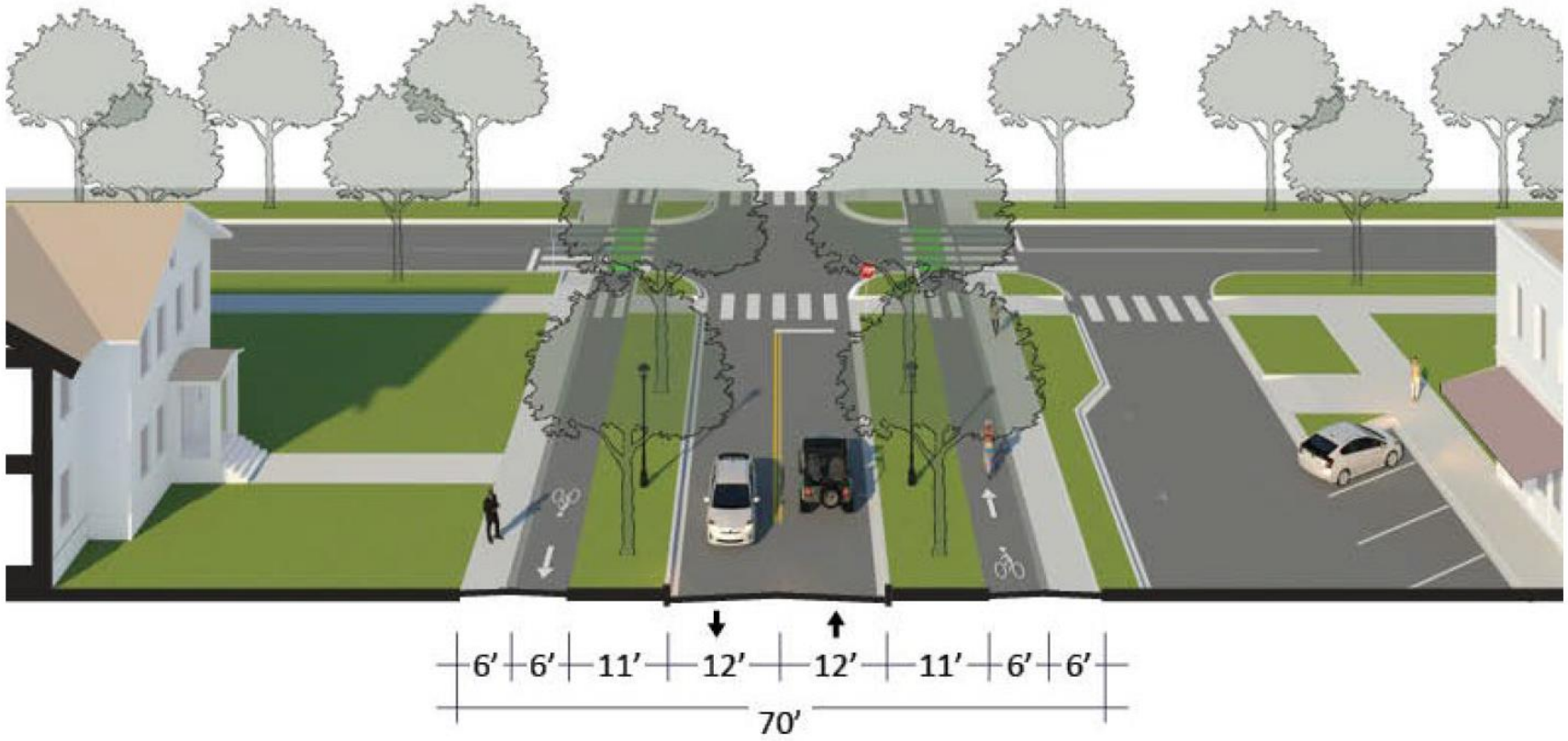
Context Classification	C3 Suburban	C4 Neighborhood General	C5 Neighborhood Downtown

Streets designed, implemented, maintained and operated within Panama City shall conform to the typical plan and profile drawings and descriptions in this section.

Context Classifications are defined in FDOT Complete Streets manuals. The City shall focus on at least the following four Classifications, with added classifications as deemed necessary. This list includes an added C4R Classification needed to adequately and fully define Panama City context:

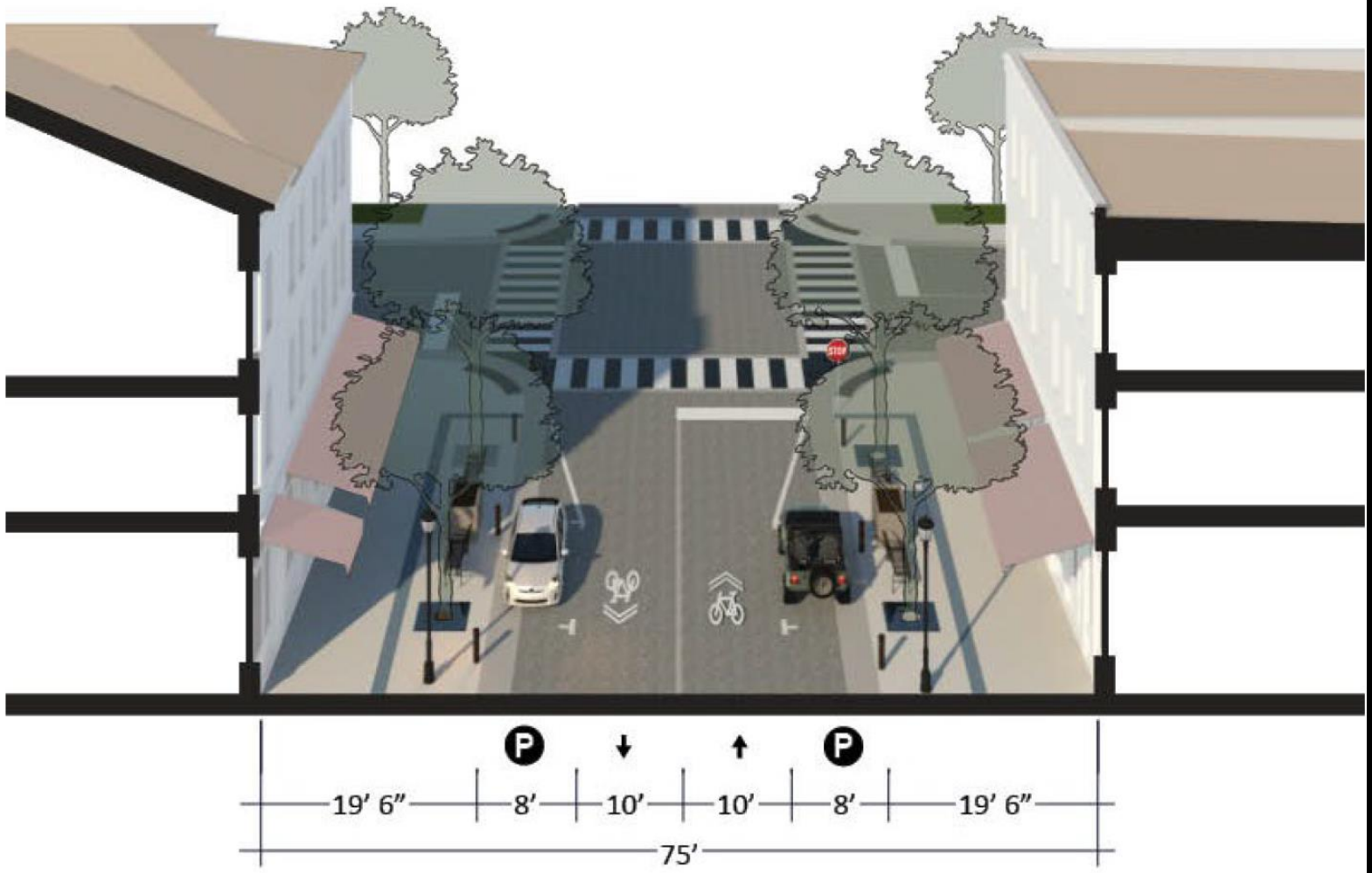
- C3 – Suburban
- C4R – Neighborhood Residential
- C4 –Neighborhood General 3 +1 FO 65%, Downtown General cap 120’
- C5 – Neighborhood Downtown 3+1 frontage occ 50%,
    - Downtown Center 120’ 80% frontage occ.

C3 Suburban Neighborhood Collector Street



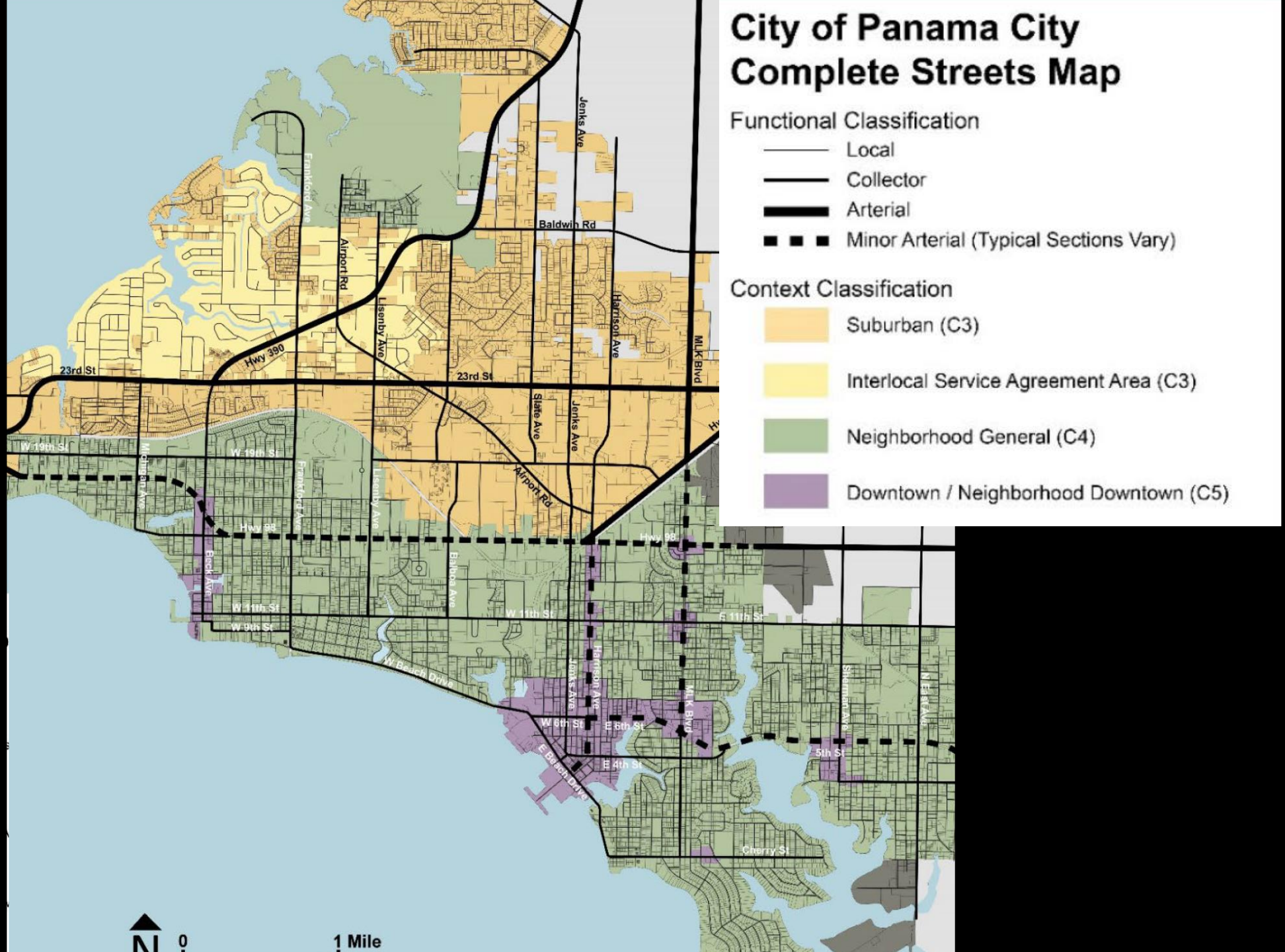
C3 / COLLECTOR

C5 Neighborhood Center or Downtown Minor Arterial Street



C5 / MINOR ARTERIAL (HARRISON AVENUE)

SPEED LIMIT 25


City of Panama City
Complete Streets Map
Functional Classification
Local
Collector
Arterial
Minor Arterial (Typical Sections Vary)
Context Classification
Suburban (C3)
Interlocal Service Agreement Area (C3)
Neighborhood General (C4)
Downtown / Neighborhood Downtown (C5)
Baldwin Rd
Jenks Ave
Frankford Ave
Airport Rd
Lisenby Ave
Harrison Ave
MLK Blvd
Hwy 390
23rd St
State Ave
W 19th St
Michigan Ave
Hwy 98
Beck Ave
Bunker Ave
W 11th St
W 9th St
E 11th St
W Beach Drive
W 8th St
E 6th St
E 4th St
E Beach Drive
Sherman Ave
N E 5th Ave
5th St
Cherry St
N
0
1 Mile

Access is a key parameter in the definition of conventional Functional Classifications.

- Arterial Streets are intended to provide less motor vehicle driver access to adjacent buildings or land uses.
- Local Streets provide much more motor vehicle driver access to adjacent buildings/land uses.
- Collector Streets connect arterial and local motor vehicle travel and should provide intermediate motor vehicle driver access to adjacent buildings/land uses.

- The emphasis on motor vehicle drivers is noted here to show that most reference material for functional classification has assumed only these specific users and thus prioritize motor vehicle travel functions on the networks.
- This definition inadvertently excluded other travelers moving on foot, by bicycle, by transit and by any other mode, from the definition of functional classification.
- Thus, the organizing theory was motor vehicle focused.
- This focus assumed, inadvertently, that travel demand for other modes was negligible.

The This Complete Streets Policy focuses on the following purposes for all Functional Classifications:

- Local Streets – provide access to all land uses for short distance travelers.
- Collector Streets – provide access to all land uses and serve to connect local and arterial streets for travel of a medium distance.
- Minor Arterial Streets – provide access to all land uses for all modes for longer distance travel in C4 and C5 Context Classification areas.
- Arterial Streets – provide access to all land uses, with some limited access control in the C3 Suburban Context Classifications and Rural Context Classifications where safety requires access control at higher speeds.
- Access should be Limited on Arterial roadways in Rural Context areas.

Florida Greenbook Collaboration Workshop

Advisory Committee

BRAINSTORMING

THERE ARE RULES

IDEATION

DEFER JUDGEMENT

There are no bad ideas at this point. There will be plenty of time to judge ideas later.

ENCOURAGE WILD IDEAS

It's the wild ideas that often create real innovation. It is always easy to bring ideas down to earth later!

BUILD ON THE IDEAS OF OTHERS

Think in terms of 'and' instead of 'but'. If you dislike an idea, challenge yourself to build on it and make it better.

STAY FOCUSED ON THE TOPIC

You will get better output if everyone is disciplined.

BE VISUAL

Try to engage the logical and creative sides of the brain. A quick sketch can help make your idea more understandable to someone else.

ONE CONVERSATION AT A TIME

Allow ideas to be heard and built upon.

GO FOR QUANTITY

Set a big goal for number of ideas and surpass it! Remember there is no need to make a lengthy case for yours since no one is judging. Keep ideas flowing.

TIME NEEDED 10 - 30 MINUTES

Lunch

75 Minute Lunch

AASHTO Greenbook

National Direction, Overview and Discussion

DeWayne Carver

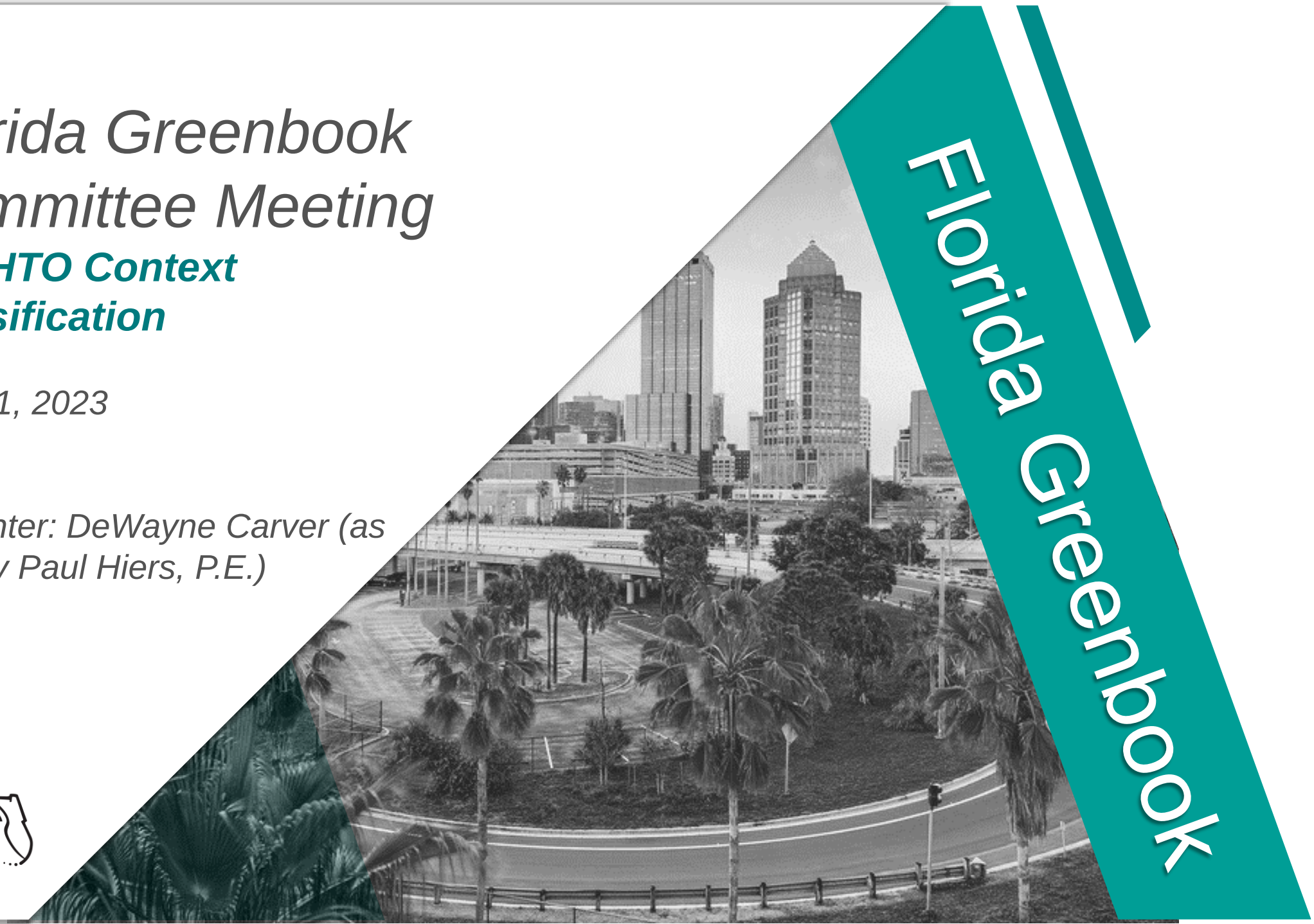
FDOT Criteria Publications Manager

Florida Greenbook Committee Meeting

AASHTO Context Classification

April 11, 2023

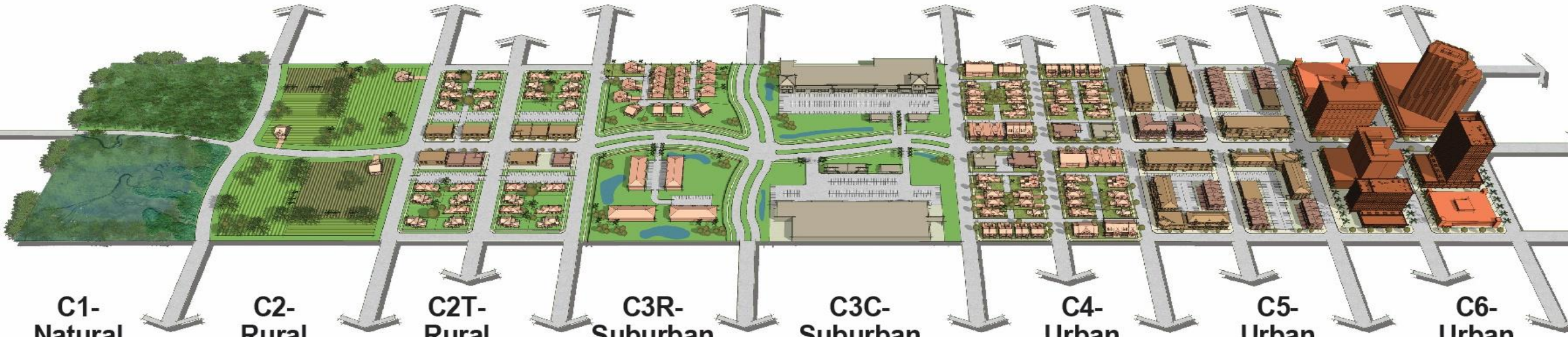
Presenter: DeWayne Carver (as Told by Paul Hiers, P.E.)



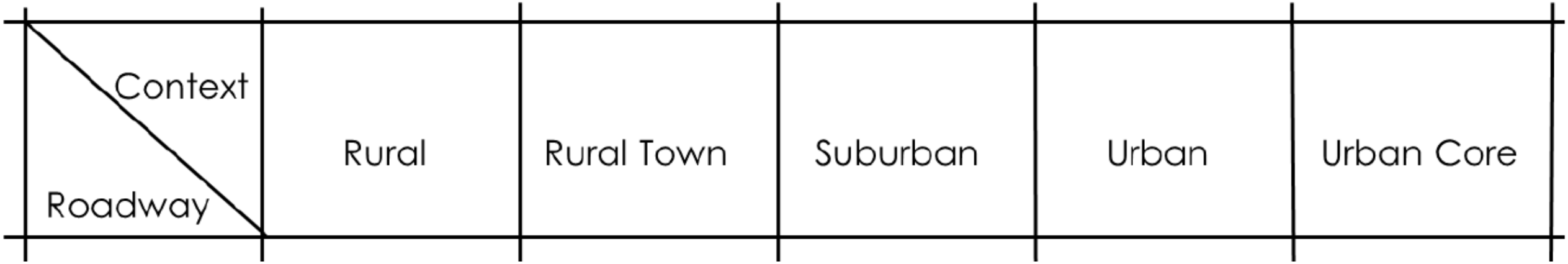
Florida Greenbook

The ***Manual of Uniform Minimum Standards for Design, Construction and Maintenance (Florida Greenbook)*** provides uniform minimum standards and criteria for the design, construction, and maintenance of all public streets, roads, highways, bridges, sidewalks, curbs and curb ramps, crosswalks, bicycle facilities, underpasses, and overpasses used by the public for vehicular and pedestrian travel.

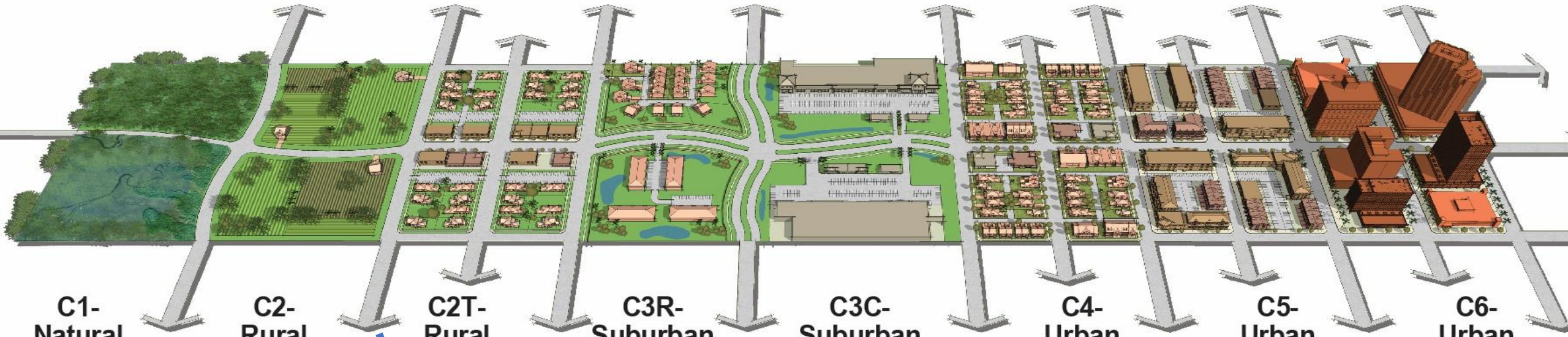
Context Classification



The “AASHTO Five”



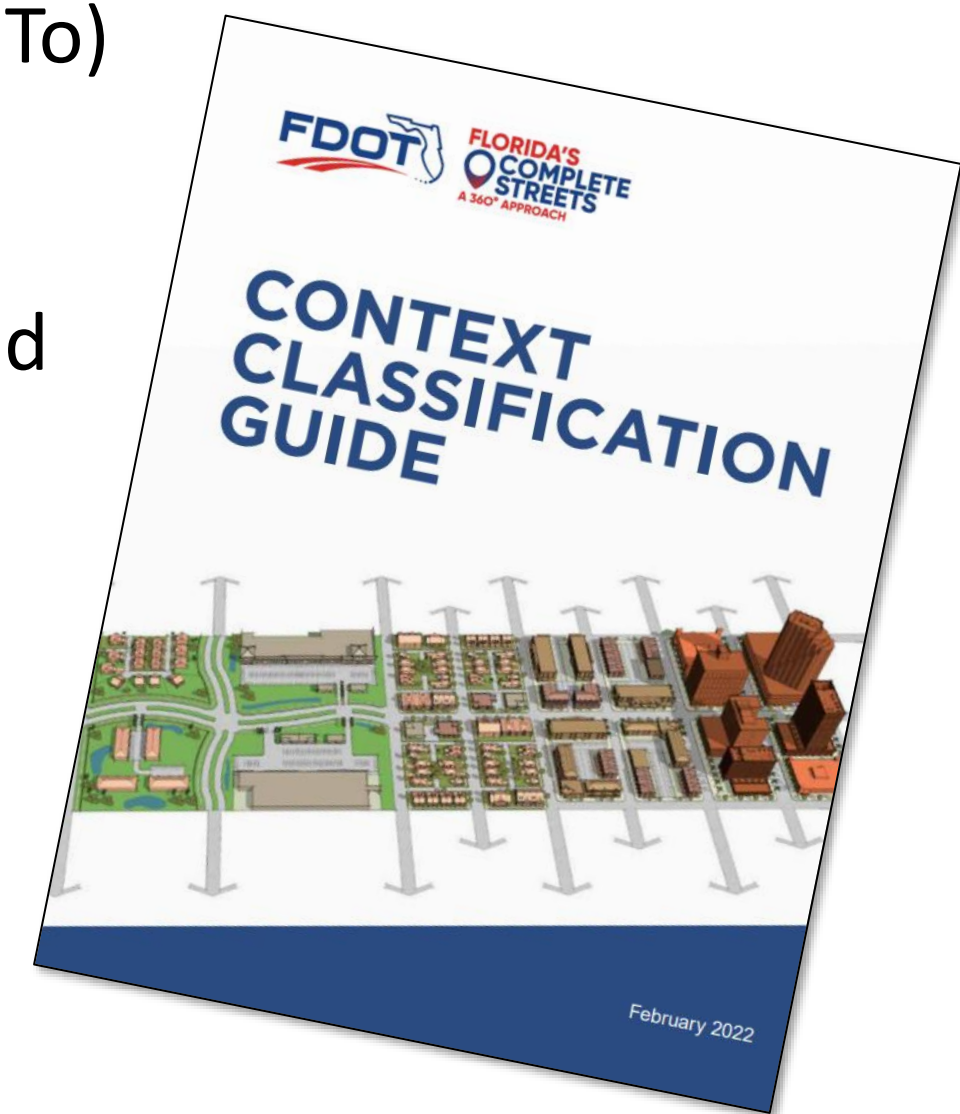
The “AASHTO Five” and FDOT CC



Context	Rural	Rural Town	Suburban	Urban	Urban Core
adway					

NCHRP Studies

- Determining Context Classifications (How To)
  - Adapt into next FDOT Context Classification Guide
- How the next AASHTO GB will be organized
  - AASHTO 5 plus Industrial
  - Outlines CC but does not go into detail
  - Bound by scope of project



AASHTO GB Organization

- New Part 4
- Provides Guidance on how to use Context Classification
- Attempted to integrate Bike/Ped throughout
  - Doubled chapter sizes
  - Probably will remove some of this
  - Refer to other manuals and resources (FGB idea?)

AASHTO GB Organization

- Committee members will be rewriting the chapters
- At least 2 years to get to Design Committee
- Process seems to be going faster than past experience – maybe as soon as 3 years to release (bets?)

I believe strongly in the direction the Department took in incorporating context classification. Also, that the AASHTO five applies to all corridors regardless who is the owner or maintaining agency. The guidance on context classification that will be provided in GB8 is relevant though not directly applicable. This should not deter the Florida Greenbook Committee from moving forward with adopting context classification that aligns with the Department's planning and design documents.

Paul Hiers, P.E.

Questions?

Digital Marketing – *Coming Soon!*

Marketing Materials

Statewide Ground-in Rumble Strip Initiative

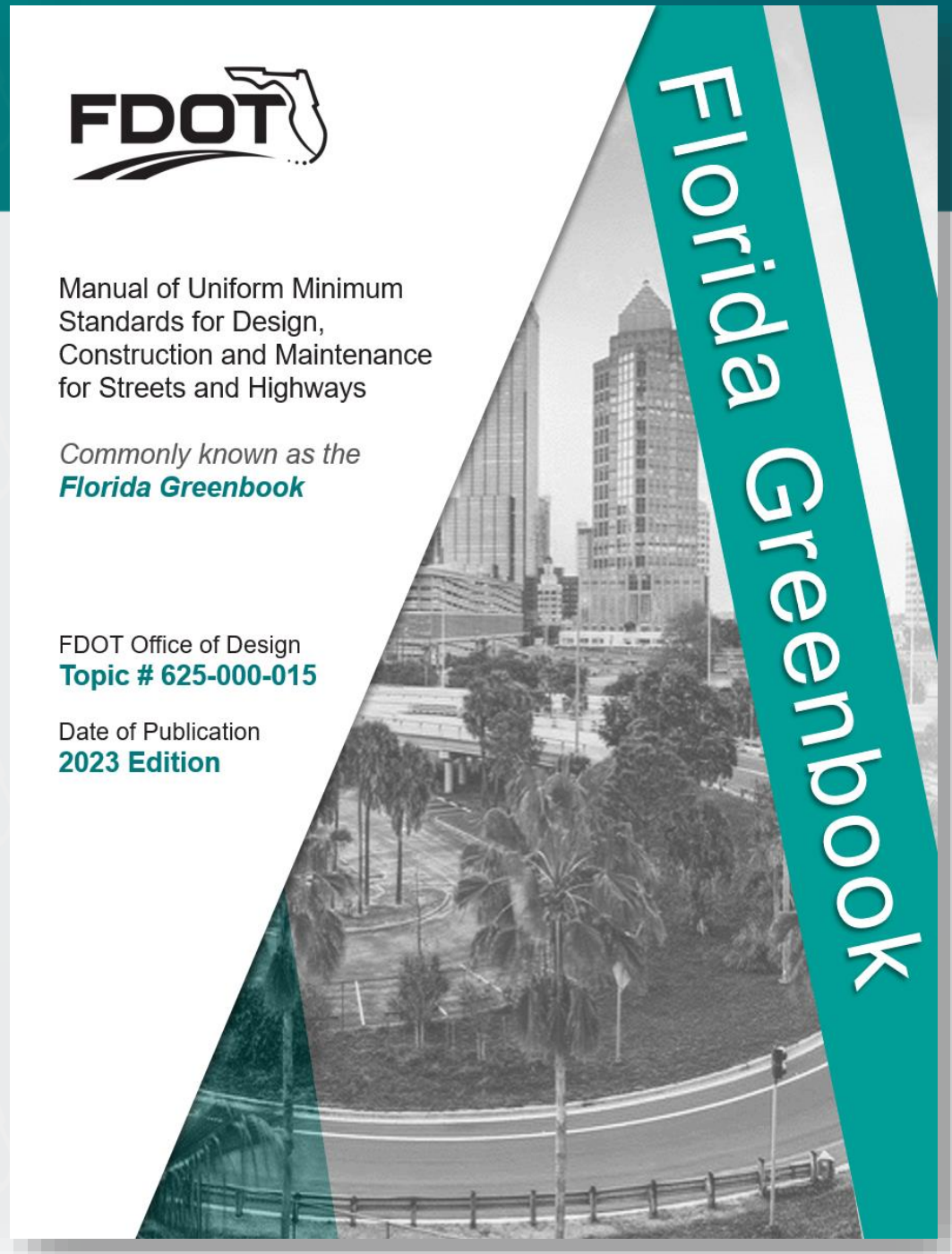
Break

15 Minute Break

2023 Florida Greenbook

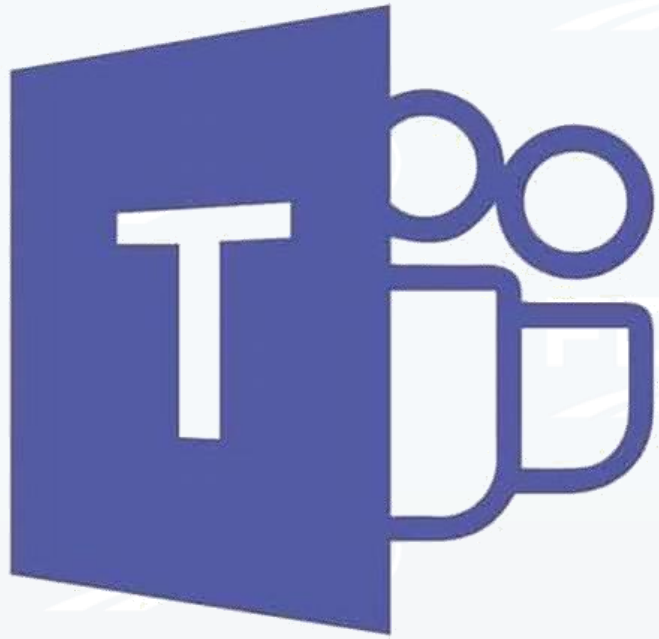
Next Steps to implementation:

Greenbook Committee consensus	***FDOT Legal Review***	***FDOT QC Review & Publishing***	***Florida Greenbook publishing - JAPC***
☑	☑		



Updates

- **Microsoft Teams Committee and Subcommittee Channels**
- **Online Meeting Request**
- **Committee Nominations**



Chapter 6 - Lighting

FDOT Lighting Update

- *In March of 2022, new guidance was provided for street lighting* ***color temperature (CCT)***
- *FDOT Design Manual (FDM) Chapter 231 changed per* ***Roadway Design Bulletin 22-02***
- *The result is that the large majority of roadways will now use* ***"warmer" 3000K CCT lights***
- *For more information, please see the video at:* *https://www.youtube.com/watch?v=m3QIwHnFveo*

FDM Table 231.2.3 Color Temperature (CCT)

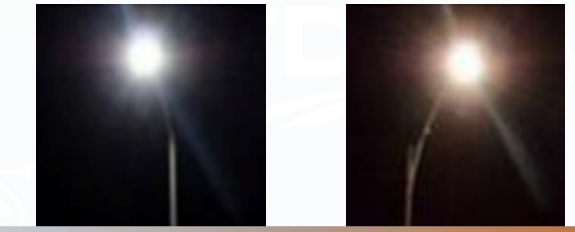
Design Speed	Context	CCT
Arterials and Collectors		
≤ 35 mph	All	2700K[1] or 3000K
≤ 50mph	All	3000K
≥ 55mph	C1 & C2	3000K
≥ 55mph	C3[2]	4000K
Limited Access Facilities		
All	All	3000K

Notes:
1. Consider use of 2700K per ***FDM 231.2***
2. Higher number context classifications may apply

AMA AMERICAN MEDICAL ASSOCIATION

IDA INTERNATIONAL DARK-SKY ASSOCIATION

Higher CCT:
"Cooler" or Whiter with Increased Blue



Lower CCT:
"Warmer" or "Softer" More Amber, Less Blue

4000K 3000K

General Discussion

Open for public comment

Online Attendees

Microsoft Teams Meeting Logistics

The chat feature can be used to ask questions to the presenters or share resources.

Be sure to mute your microphone unless you are asking a question.

You may turn on or off your video camera accordingly.

Raise your virtual hand to ask a live question.

Thank you for attending!

Contact

If you have any questions, comments or suggestions regarding the ***Florida Greenbook***, please contact:

Derwood Sheppard, P.E.
State Roadway Design Engineer
Email: Derwood.Sheppard@dot.state.fl.us
Phone: (850) 414-4334

DeWayne Carver, AICP
Criteria Publications Manager
Email: dewayne.carver@dot.state.fl.us
Phone: (850) 414-4348

Jacqui Morris, CPM
Criteria Publications Coordinator
Email: jacqueline.Morris@dot.state.fl.us
Phone: (850) 414-4352

FDOT