Florida Greenbook Advisory Council Meeting

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

Advisory Committee Meeting Minutes

Wednesday, April 17, 2024 (1:00 PM – 5:00 PM)
Thursday, April 18, 2024 (8:00 AM – Noon)

FDOT SunTrax Auditorium
100 Transformation Way
Auburndale, Florida 33823

Attendees:	**D1:** Kevin Ingle, Shane Parker **D2:** Kathryn Thomas, Kenneth Dudley (virtual), Gene Howerton, Ramon Gavarrete (virtual) **D3:** Adam Scurlock (virtual), Rick Hall, Keith Bryant (virtual) **D4:** John Olson, Robert Behar, Richard Tornese **D5:** Naziru Isaac, Gail Woods, Deborah Snyder **D6:** Karina Fuentes, Miguel Soria, Juvenal Santana **D7:** Daniel Lauricello, Richard Diaz **FTE:** Andra Diggs **Committee Staff:** Derwood Sheppard, Jacqui Morris, DeWayne Carver (virtual) **Associate Members:** Billy Hattaway **FACERS:** Travis Terpestra (virtual) **FDOT Technical Advisors:** Rhonda Taylor, Tiffany Gehrke, Austin Hensel (virtual), Chris Lewis (virtual), Keith Krieger **In-Person Guest:** Ryan Bell, Mary Raulerson, Jennifer Musselman, Alison Moss, Chris Bridges	
Topic:		Presenter
Day 1	**April 17, 2024 (1:00 PM – 5:00 PM)**	
1.	**Welcome - 2023 FGB status update**	Derwood Sheppard
	Derwood introduced himself as the Chair of the FGB Committee, welcomed everyone to the 2024 Florida Greenbook Advisory Council Meeting. He reviewed the meeting agenda, discussed the facility emergency exits and meeting logistics, and played the Welcome to SunTrax Video. He provided on this year's FDOT Transportation Symposium. 2024 Transportation Symposium on June 13th in Hollywood, FL at the Diplomat Hotel; a 2nd Transportation Symposium will be held in Central Florida on November 7th & 8th. The topics will be similar between the two, so there is no need to attend both. This is a FREE training event that will offer up to a total of 8.0 CEC/PDHs. Derwood reported the 2023 FGB is in rulemaking, but has been paused briefly due to the new MUTCD (in case we needed to adopt instantly). We are reassessing the MUTCD Notices of Proposed Amendments (NPA's).	

	Incorporating the new MUTCD into the FGB will require a lot of work. FDOT is cataloging items that require changes.	
2.	**Introductions, Membership and Survey**	Jacqui Morris
	Jacqui provided a membership update on the FGB Committee. We have advertised to fill a vacancy in District 4 for the rural representative, open through the end of June. Please encourage suitable candidates to apply. Jacqui described the planned FGB Usage Survey. • Which chapters of the FGB are people using? • Which chapters are the most useful? • And what documents are they using to supplement the FGB? • We want to be sure our users understand where to find criteria. • We will send out links after this meeting. • We plan to send the survey to FACERS for distribution through their network • The survey is comprehensive, but as short as possible, and requires about 2 minutes to complete. If anyone would like to see the survey before it goes out, please let Jacqui know. Derwood also suggested sending it out through LAP. There was a question about whether we have a database of local governments to send the survey to; Jacqui said we will send it out through the FGB also. Derwood supplemented the presentation with analysis that has been done on how often pages of our website are used. With the FDM, we can see how many times each chapter is clicked. With the FGB, all we know is the total number of clicks. Richard Tornese asked about speed management/traffic calming - can we get more in the FGB on speed management? Derwood offered there will be a target speed panel at the Transportation Symposium. Richard will share what Broward County is finding. It is a collaborative approach. Rick recommended checking with ITE as well. Derwood said that collaboration is required for speed management. Bob mentioned that Chapter 3 has no guidance on border width, so they are using the FDM. Also, the FGB only provides K values for vertical curves for RRR projects (not for new construction). Derwood suggested using the AASHTO Greenbook for criteria that is not in the FGB. The FGB is consistent with the AASHTO Greenbook. We will flag Bob's concerns for future consideration. **ACTION ITEM** Borderwidth and K values in FGB	
3.	**Plain Language and Formatting**	*Jacqui Morris*
	Jacqui discussed items that were requested as FGB edits over the last year.	

	She discussed: 1. Plain language, 2. Consistency, and 3. Reformatting the FGB to be similar to the FDM (sequential numbering of sections instead of letters) She provided some examples/suggestions of FGB plain language edits and provided a link to some draft plain language edits to the entire FGB. The draft is just a plain language example (just a starting point for discussion). The chapter chairs should begin thinking about plain language edits to their chapters. Please be alert to not changing any actual criteria. Jacqui reminded the committee that we must keep everything public. We also want to enhance search features, and links to content. Derwood noted that when we say “provide” or “design”, we don't need say “shall”. Use the active voice. It can be difficult to write certain things without using the word “must”.	
4.	**Sunshine Law and Rulemaking Timeline**	*Austin Hensel*
	Austin Hensel from the FDOT Office of General Counsel gave a presentation on <u>Government in the sunshine law:</u> • All communications must take place in meetings. • If there are two or more people, they constitute a board and are subject to the provisions of the law. • All meetings must be open and accessible. • An agenda is advisable. • People are permitted to record or tape the meetings. • The public must have access. • Give reasonable public notice ahead of time (at least 24 hours). • Cannot discriminate or restrict public access. • Must provide reasonable notice. • Minutes must be taken and promptly recorded. • Nothing can be off the record. • Potential consequences include non-criminal penalties (a fine of up to $500 and/or 2nd degree misdemeanor). • Attorney's fees can be assessed against the agency or its members. • Most importantly, any actions taken when the sunshine is violated are VOID. • Would need to repeat the entire process again, not just hold another meeting. • People can be removed from Office and we would lose public confidence.	

	Rulemaking: Austin shared a slide and discussed the process and the timeline. • Notice of Development of Rulemaking. • Notice of Proposed Rule (starts the 90-day clock). • Notice of Change/Withdrawal. • File for Adoption (rule takes effect 20 days later). • The JAPC technical review is at least 21 days prior to adoption. • Agency staff must be present at the hearing. • The agency can keep holding hearings. • Chapter 286 of Florida Statutes applies to all state agencies.	
	Attendees took a 35-minute break.	
5.	**Bicycle Ped Facility Design Guidance**	*Tiffany Gehrke*
	Tiffany presented a comparison of many components of bicycle/pedestrian accommodations between the Ohio Multimodal Design Guide, the AASHTO Greenbook, the FDM and the FGB (see presentation). Gene shared that he no longer feels safe cycling on the roadway. He would like to see more physical separation. He noted that most cyclists will not ride on the on-street facilities. Tiffany said the FDM indicates the importance of bicycle facility plans to provide a connected network of facilities and encouraged everyone to invest in bicycle network plans. Billy Hattaway noted that the Metroplan Study that looked at crashes in the Orlando area showed that most crashes are from wrong-way cycling on sidewalks. The primary danger is at intersections where cyclists may be right-hooked. Cyclists are also responsible for safety. Tiffany mentioned off-sets at intersections for turning bicycles (motorist yield zone). Gail was at a public meeting on a project to reduce travel lane width to install a buffered bicycle lane. The public opposition was extreme. The public did not want bicycle lanes because there are so many more cars than bicycles. Tiffany spoke about context, and its impact on bicycle volumes, and that fragmented facilities will have lower usage, so we need to be strategic about connectivity. Rick noted that in new town planning, no one wants to put a bicycle lane at the edge of the roadway. Bicycles can share the travel lane on local streets since speeds are low. Tiffany asked what additional guidance folks would like to see. Richard asked if there is a restriction on motorized devices. Locals can dictate which users can use the bicycle lanes. If trying to accommodate e-bicycles, consider separating the travel modes (especially for the disabled).	

	Pedestrian facilities should connect to those on adjoining projects, consistent with ADA. Provide wider sidewalks in more urban conditions. Miami is installing wider sidewalks to get pedestrians off the street. Tiffany suggested considering the speed of the cyclist and the offsets. Miami has had several discussions with the bicycle community. More experienced cyclists want to ride on the road, novices want to ride on the sidewalk. Tiffany noted the FGB does not include options for separated bicycle lanes around a roundabout. The FGB and FDM do not discuss the different sidewalk zones (frontage, buffer, and pedestrian). People do not walk right next to the face of the buildings. There is very little information on driveways in the FGB. The FDM accommodates by wider standards in higher contexts. Ohio and AASHTO give preferred widths for the different zones (with street cafes in central business districts). Should we discuss these zones in the FGB? The frontage zone (2-foot minimum) allows car doors to open. Rick asked about one-way streets. They are safer for intersections (but not for midblocks). Rick says many of these guides seem to feature one-way streets more than other types, but they do not account for the greater speeds. One-way streets tend to be faster for motor vehicles. Tiffany suggested that signal timing can be used to manage speeds, combined with other speed management techniques. She discussed wrong-way riding on one-way streets (contraflow bicycle lanes). She touched on bicycle ramps and differences in application between the FDM and the FGB. Physical separation is encouraged for speeds over 30mph. The FGB lacks guidance on where to provide the different types of facilities. Wide curb lanes are still included in the FGB, but tend to promote higher speeds. The FDM and the FGB differ regarding bicycle lanes and buffered bicycle lanes. The FDOT has included a sidewalk-level bicycle lane in the FDM. There are a lot of issues with intermediate-level bicycle lanes (i.e., drainage). 40mph and 35mph is more enticing for those who ride in the roadway, especially for those who have had a near miss. So, we say no intermediate-level bicycle lanes. The FDM has a shy distance based on the curb type. We need more shy distance with a vertical curb. The FGB provides minimums regardless of the adjacent curb type. Our guidance is consistent on buffers and widths. The FDM includes an option for a separated bicycle lane around roundabouts. The FGB does not.	
6.	**Florida FGB Subcommittee Meetings**	*Advisory Committee*

	Jacqui asked members to go the website to confirm they are included on the correct subcommittees and let her know if the information is accurate. Jacqui mentioned the new MUTCD and that changes to the FGB are needed. There will be more discussion of Context Classification in tomorrow's session. Central Office has been working on a lot of material with the subcommittees. Reformatting and plain language are easy to discuss, but more difficult to implement. We are working with Chris Lewis regarding MUTCD updates. Some revisions will be mandatory due to the new MUTCD. Derwood indicated we are updating the most appropriate links/references. The subcommittee chairs should huddle with their committees to pick a date or two for a meeting with Jacqui within the next 4 to 5 months. Plan for at least an hour-long meeting. If you are a chair, please get these meetings scheduled and start working on things we are ready to work on. We do need a chair for Chapter 20 (Drainage). **ACTION ITEM** Subcommittee chairs should huddle with their committees to pick a date or two for a meeting with Jacqui within the next 4 to 5 months	
7.	**MUTCD Updates**	*Chris Lewis*
	Jacqui introduced Chris Lewis of the FDOT Traffic Operations and Engineering Office to provide a presentation on MUTCD updates. Chris meets weekly with the different task teams, and every other week with FHWA. Rick asked what the top one or two examples of changes are that may be a problem for Florida. Chris mentioned standard language changing and toll plate signage. We are looking at whether we are creating issues for funding, safety, maintenance. Derwood said that Florida has generally aimed to go above the MUTCD (which has helped us). The digital feedback signs could be an issue with products we have already approved. Also, bicycle/ped signs are changing. The 2023 FGB has already adopted some of what the MUTCD wanted. A lot of material has also been rearranged. In general, FDOT is nearly in agreement with the changes. Chris said that about seven of the 650 NPA's are problematic for Florida. Jacqui shared a snapshot of a document listing the planned changes to each chapter of the FGB, and said the team in CO is going through the NPA's now. Chris discussed rapid rule adoption. The last time the MUTCD was updated was in 2012, so there are a lot of changes. The FGB changes are adopted by rulemaking. We have two years (until January 2026) to adopt the new MUTCD, and there are certain elements that are outside our control. FHWA is planning to update the MUTCD every four years going forward. The current changes are more significant because it has been nearly 15 years.	

	The FHWA is receptive to our plan for adoption. The FDOT is still digesting everything. We are in a pretty good position, but may be finding minor edits for years to come.	
8.	**Meeting Debrief – General Discussion – Public Comment**	*Derwood Sheppard*
	The meeting was opened for public comment with none offered. Rick encouraged everyone to remember the passing of former Florida Governor Bob Graham. Derwood asked everyone to check out the new RDO website FDOT-Roadway Design Office - Home Page. Jacqui said we see a need for more training for our technicians and young engineers. We are working on geometric design training focused on FGB criteria, but also covering the FDM and the AASHTO Greenbook. The training may be ready next summer (2025) as a 3-day in-person workshop. Someone asked if we could talk about the use of NACTO materials. Jacqui said we are trying to do this. Derwood reminded everyone of the vacancy for D4 rural representative. Derwood asked everyone to make sure to sign-in, including those who are attending on-line, to make sure to get credit for attending. Miquel requested copies of the presentation materials. Jacqui noted that all documents will be included with the meeting minutes Miquel mentioned that the NACTO conference is in Miami next month (on May 1), and that everyone is welcome to attend. The meeting adjourned at 4:50pm.	

	Day 2 April 18, 2024 (8:00 AM – Noon)	
10.	**Welcome** **Direction, Overview and Discussion**	*Derwood Sheppard*
	Derwood welcomed the group back for Day 2. He discussed meeting logistics and arrangements for the 45-minute SunTrax tour following the meeting.	
11.	**Chapter 19 Subcommittee Updates/Discussion**	*Rick Hall & Billy Hattaway*
	Jacqui discussed the Chapter 19 subcommittee work over the last year and introduced Rick to discuss the origin of Chapter 19. Rick asked who felt like they understood what Chapter 19 is doing at the end of the FGB. He emphasized that it is a legal document, for application to non-state facilities. It is adopted locally and used by local government engineering. That is why we spend so much time on it for our daily operations and for obtaining entitlements for private developments. Most wise jurisdictions insist that private developers use these government standards. Private streets can become public local streets. A major design shift has been occurring for 15 to 20 years. For 60 years, we were designing for just urban and rural conditions (everything else was forgotten). Some of them were actually suburban (based upon population density). Then along came the new urbanists, promoting walkability. There are a lot of bicycles in Germany and Europe (and in Seaside and Alice Beach). This was a design paradigm shift (new urbanism) and it has been a tough go. According to the earlier FGB, walkable urban was not legal. When a developer wanted to do walkable urban, they were told they could not park on a 4-lane arterial. It was an uphill battle, and we can thank folks like Billy Hattaway and DeWayne Carver for fighting that uphill battle. City and county engineering had no design guide. Chapter 19 was then set aside to define walkability within the FGB. We listed the characteristics: • Narrow streets. • Lower speeds. • Local government backing. The TND chapter was set aside and developed as one chapter, which worked well for a while. But many changes are happening towards compact, mixed-use development, including with the ITE. Is your development suburban or compact dense urban? You get to choose now. The AASHTO Greenbook adopted five context classifications in 2018 (with new definitions). A junior engineer can find how to design walkable streets. We are asking the committee to determine to what degree we want to incorporate context classification throughout the FGB.	

	There has been discussion of eliminating Chapter 19, which is logical after the concepts of Chapter 19 are incorporated into the other FGB chapters. It will be good for the FGB to describe the different context classifications. Job one is determining what kind of context is surrounding the roadway. The street design can then be perfectly tailored to the jurisdiction. Rick introduced Billy to continue the discussion. Billy explained we have not been designing based on safety, but on the operation of the roadway. We started talking about design for livable communities, but we were not ready as an industry (except for D4 Secretary Rick Chesser). We started doing things differently. In 2004, we had the AASHTO Flexibility in Design, which should be mandatory reading. We need to be concerned about liability. Florida has four of the five most dangerous roadways in the country. We knew we could not continue designing for just urban and rural conditions and contributing to safety problems. At the local level, we were not creating development patterns that encourage walking. There was no connectivity. Developers were pushing travel demand onto the State Highway System. We had to encourage local governments to do things differently. Developers are telling us they are developing “traditional” neighborhoods, but we had no way of reviewing their design. That is why the TND chapter was created in 2008. JAPC required the shift into the TND Handbook in 2011. We can reference other documents like the handbook in the FGB to appease JAPC. Folks like Michael Shepard, Paul Hiers, and DeWayne Carver took the PPM and restructured it in developing the FDM. We can provide specific guidance and training. The complete streets coalition told FDOT what they needed to fix. Kittleson helped develop the Context Classification Guide. That is how we got where we are today. Jacqui noted that when the committee began looking at Chapter 19, we also started looking at Chapter 1 to add context classification language. We have the right people to make this happen and to make sure we are telling the right story. Jacqui showed some draft redline additions to Chapter 1, with special attention to context classification. Rick noted that we need to think of context classification on two levels: 1. Present 2. Future Jacqui asked if there were any thoughts on adding this into FGB. We added a new context classification for special districts (special areas which C1 through C6 do not cover). Universities, industrial areas and airports are examples of special districts. We need to include all of this in the project scope (but limited on RRR projects).

	The FDM speaks to the elements that are appropriate for the context, looking at the entire project, not just one element. Tiffany noted that it is not mentioned in Chapter 1. It is important to have transition zones to avoid abrupt changes. Rick noted that there is a flaw in functional classification. We are not supposed to have access directly from an arterial, but many existing businesses do. We still need functional classification, but we should look first at context classification. C4, C5, C6 are designated by the length of the trip in higher context classifications, not limiting arterial and collectors to just long-distance trips. Do we need to go to Chapter 3 with the repurposing of Chapter 19 for urban walkable criteria? There is no single right answer.	
12	**FDOT Context Classification Guide Update**	*Kittleson & Associates*
	Jennifer Musselman spoke about the shift in transportation over the last couple decades. Florida is consistently on the "bad" list of the worst metropolitan areas in the US for pedestrian safety. 71% of us used to walk to school, while only 17% walk to school today. What is our response to these new challenges? Where is our industry headed? • Community context. • Multimodal. • Flexibility. Using maximum design values is not the best approach. There has been an evolution toward context-based design. We incorporated context classification into the FDM in 2018. We have the AASHTO Five now in the AASHTO Greenbook. Context classification is spreading across the country. It came from the locals and the need for more community engagement. Travel speed is tied to context classification. Our three most prevalent types of crashes are: 1. Lane departure. 2. Pedestrian/bicycle. 3. Intersections. How can context classification help us? Context classification tells us who is going to be using our streets, and informs us on how we design our streets. We need more sidewalks and curbs in urban contexts, which affects many different design elements. Also, Functional classification is not going away. We need to consider both. NCHRP 15-77 looks at the future of the AASHTO Greenbook. We are heading towards design tables for each context classification (grouped also by functional classification). FDOT has updated the FDM to support land use and transportation strategies (tying speed to context classification).	

	The City of Sarasota is going to full design criteria. The Space Coast TPO plans to adopt context classification for functionally classified roadways in Brevard County. Context classification establishes the framework. The FDOT provides a preliminary context classification for existing land uses. Kittleson is working with three pilot counties to test a process to assist counties with identifying their context classifications: 1. Pinellas (urban) 2. Hendry (rural) 3. Alachua (the mix of everything). All three counties have full-time staff. Alachua and Hendry do not identify as rural town. Alachua and Pinellas have areas that are developing rapidly. They use the FGB (and the FDM where they need more guidance). Jacqui noted that the team has been working the counties to refine this as a tool (a resource) to understand where we are. It is not meant to be rigid. Billy mentioned the Safe Streets for All grant (training on how to implement and develop). The FHWA provides training for designing for pedestrian safety. Tiffany noted the impact on developers to convince them to develop for walkability. Locals can change their codes or create overlay districts to encourage connectivity and designing for walkability. Different locations for certain types of signals, often driven by design speed. Context classification will hopefully inform all of the chapters of the FGB. The committee broke into groups to discuss and report back. Feedback from the groups included: • Would like to see less emphasis on vehicles, and more on safety. But the users also need to follow the rules of the road. Bicyclists prefer to ride as far from vehicles as possible. • We need to transition when the surroundings do not fit. • Locals need to do a better job of messaging of the why when eliminating lanes. • The public needs to understand that there is a bigger plan in the works. • We need to go back and see if designs work as intended. • Incorporate context into community planning. • The State Highway System is often a barrier. • We need local training in the districts. Let's get specific information on speed (before and after construction). Let's provide more flexibility within the FGB. Miquel spoke about design flexibility and stressed that education is critical. Smaller municipalities don't use context classification. How do we get this information to the smaller cities? We need consistent mapping of the context classification, and to update those maps as

	conditions change. New development can change context classification. Incorporating context classification will impact other FGB chapters significantly. Jennifer will provide this input back to Chapter 19 committee.	
13.	**Resiliency**	*Tony Frye*
	Tony Frye of the FDOT Office of Environmental Management (the State Transportation Resilience Officer) discussed the FDOT Resilience Policy (Delivering Resilience in Transportation). Jacqui suggested reaching out to Tony for help and resources. Billy mentioned roundabouts, which avoid the need for signalized intersections, which can be impacted by hurricanes. Jacqui asked if there are other ways FDOT can support local communities. Bob noted that funding is the biggest issue. The FDEP has a funding program that not many people are aware of. The City of Miami has been able to use grants and pair those grants with the general obligation bond (better than dollar for dollar). Tiffany suggested that beyond grants, we need good partnerships to stretch grants a bit further. Tony noted the USACE has a silver jackets program. He gave the example of the Tamiami Trail in Collier County is close to the service life for the bridges. What will work best for its many stakeholders? Raising/extending bridges? Jacqui asked the committee to share any pictures or stories. Please feel free to reach out to Tony.	
14.	**Committee Suggestions and Next Steps**	*Derwood Sheppard*
	Derwood asked if there any other emerging items that may impact the FGB moving forward? One thing is ratification of the new stormwater rule and what that might look like for transportation projects. The new nutrient removal requirements could significantly impact development projects. In the past, we ignored our swales for nutrient removal. The rules are effective in 18 months. Gene asked about attenuation in wetlands. Please send any questions to Derwood or to Jennifer Green. Miquel said that Miami is seeing more and more electric scooters. Tiffany mentioned participation in the bicycle/ped safety coalition. Micromobility devices have been defined in the bicycle chapter, specific to on-street parking. Consider opportunities to transform on-street parking into scooter and bicycle parking. There are dimensions for these different devices. We should not be designing for high-speed. Design for safe speeds (the speeds we want to see). Think about dimensions that are necessary to accommodate these devices. Miquel agreed for new construction, but what about RRR? Tiffany noted that scooters should be fine on the same facilities as bicycles (but consider their tire widths).	

	Miquel noted that they need to change some of their signing. Tiffany asked how we rebrand to include scooters. This is a big conversation at the national level. Check NACTO for additional information. NACTO is up and coming with innovation (more visionary). John noted that D4 is seeing more and more golf carts and getting questions about accommodating that size vehicle. Tiffany said that should be a community decision. Golf carts are more for luxury (not a primary means of transportation). Some people use scooters and bicycles because that is all they can afford. Miquel noted there is a Florida statute regarding where golf carts can and cannot be used. Billy mentioned there are two categories of these devices (golf carts, EFV's). A golf cart must be properly equipped to be street legal. They must be inspected by the DMV, and they are not considered golf carts after that. Golf carts are being used more and more as primary vehicles. The Villages uses them for primary transportation. The local agency must approve their use on public streets.	
15.	**Meeting Debrief** **General Discussion** **Public Comment**	*Jacqui Morris*
	Derwood opened the meeting for public comment, but none were received. He noted we have made good progress with 2023 FGB, but incorporating the new MUTCD will be a big lift. Jacqui thanked everyone for participating. Derwood thanked the SunTrax meeting team and their photographer. The meeting adjourned at 11:39am.	

RULEMAKING – 2024

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

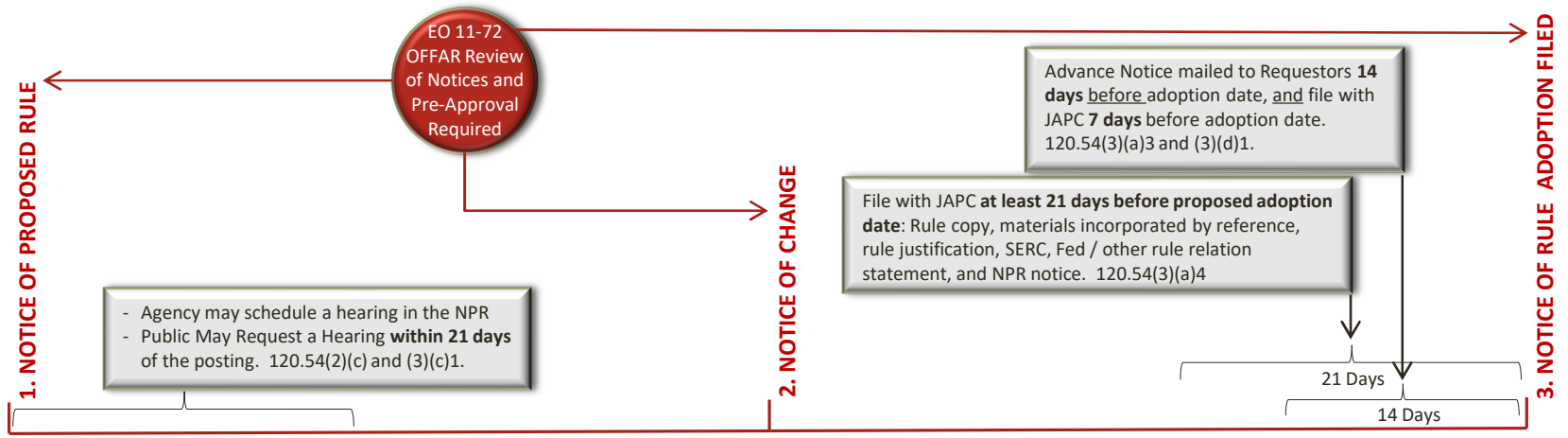
NPR MUST INCLUDE (120.54(3)(a)1.):
-A short, plain explanation of the purpose and effect of the proposed action
-Full text of proposed rule or amendment, and a summary
-Ref. to rulemaking authority
-Ref. to statute or LOF being implemented / interpreted
-A statement of estimated regulatory costs (SERC) (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

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.

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

TIMELINE



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

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 broadly construed and its exemptions are to be narrowly construed. Under the Sunshine Law, two or more people who are tasked with making a decision or recommendation constitute a "Board or Commission" 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 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. But note that 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 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 **sections 775.082** or **775.083, F.S.**, which provide 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.

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 17th, 2024, 1:00 PM – 5:00 PM
April 18th, 2024, 8:00 AM – Noon

FDOT SunTrax Test Facility

Public Meeting

FDOT

Agenda

Day 2 – April 18

8:00 AM	Welcome Direction, Overview and Discussion	*Derwood Sheppard*
8:30 AM	Chapter 19 Subcommittee Updates & Discussion	*Rick Hall & Billy Hattaway*
9:15 AM	FDOT Context Classification Guide Update	*Kittleson & Associates*
10:15 AM	**Break**	***15 Min***
10:30 AM	Resiliency	*Tony Frye*
11:00 AM	Committee Suggestions and Next Steps	*Derwood Sheppard*
11:30 AM	Meeting Debrief • General Discussion • Public Comment	*Jacqui Morris*

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 Back

Derwood Sheppard, P.E.

Florida Greenbook Committee Chair

Florida Department of Transportation -
State Roadway Design Engineer

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

Roundtable Discussion

Chapter 19 Subcommittee Updates & Discussion

Rick Hall, P.E.
&
Billy Hattaway, P.E.

15 Minute Break

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.

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

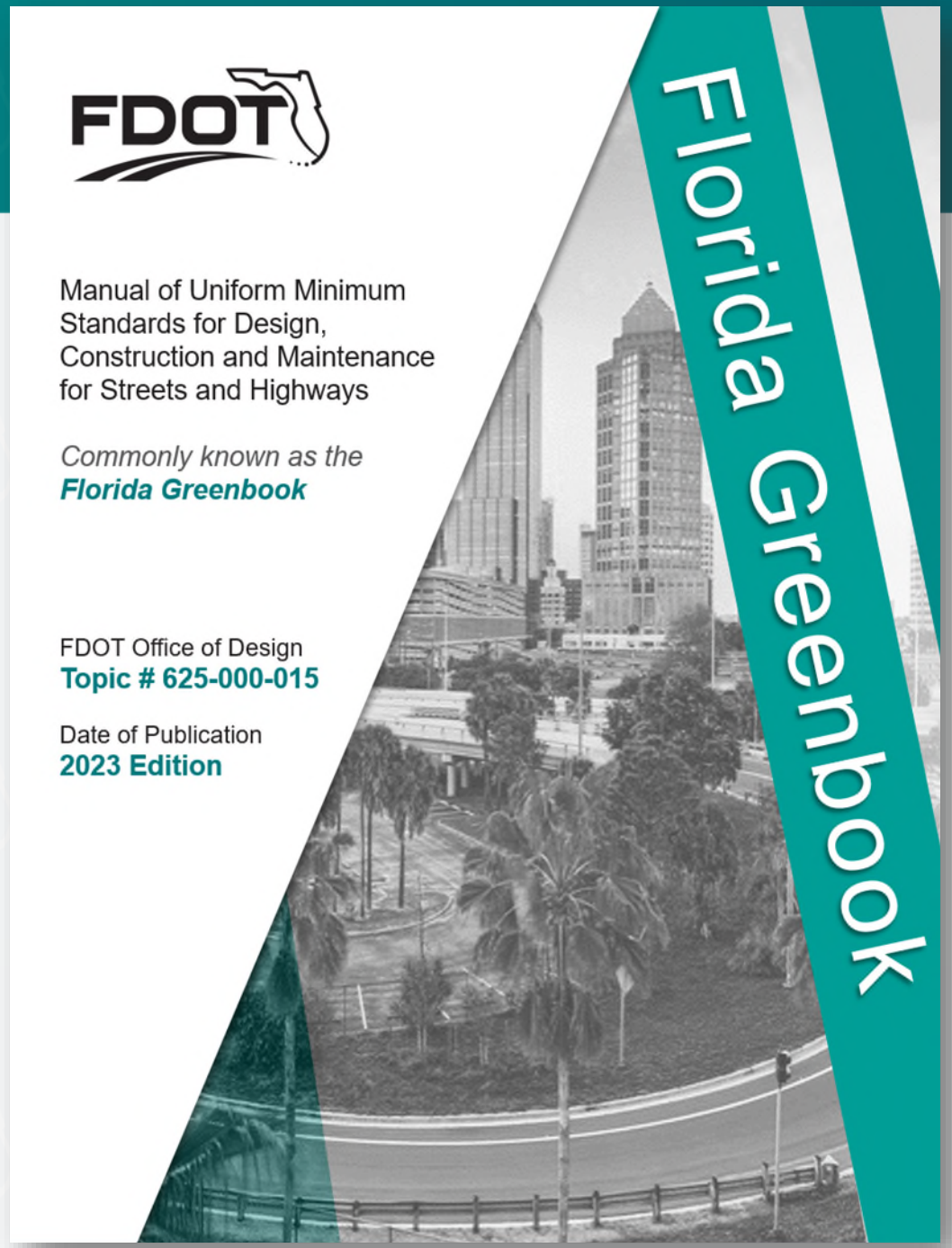
F.S. 334.044 – Authorizes FDOT to develop and adopt uniform minimum standards and criteria for the design, construction, maintenance, and operation of public roads pursuant to the provisions of F.S 336.045

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.

2023 Florida Greenbook

Next Steps to implementation:

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



Sunshine Law and Rulemaking Timeline

Austin Hensel

Administrative Law Division

Florida Department of Transportation
Office of the General Counsel

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

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

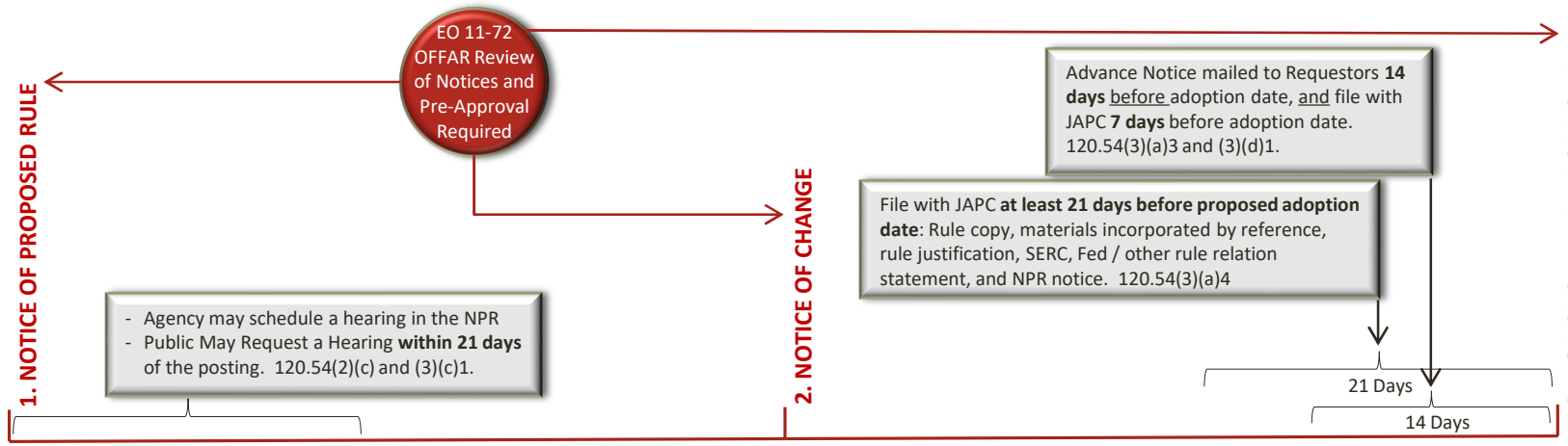
NPR MUST INCLUDE (120.54(3)(a)1.):
-A short, plain explanation of the purpose and effect of the proposed action
-Full text of proposed rule or amendment, and a summary
-Ref. to rulemaking authority
-Ref. to statute or LOF being implemented / interpreted
-A statement of estimated regulatory costs (SERC) (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

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.

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

TIMELINE

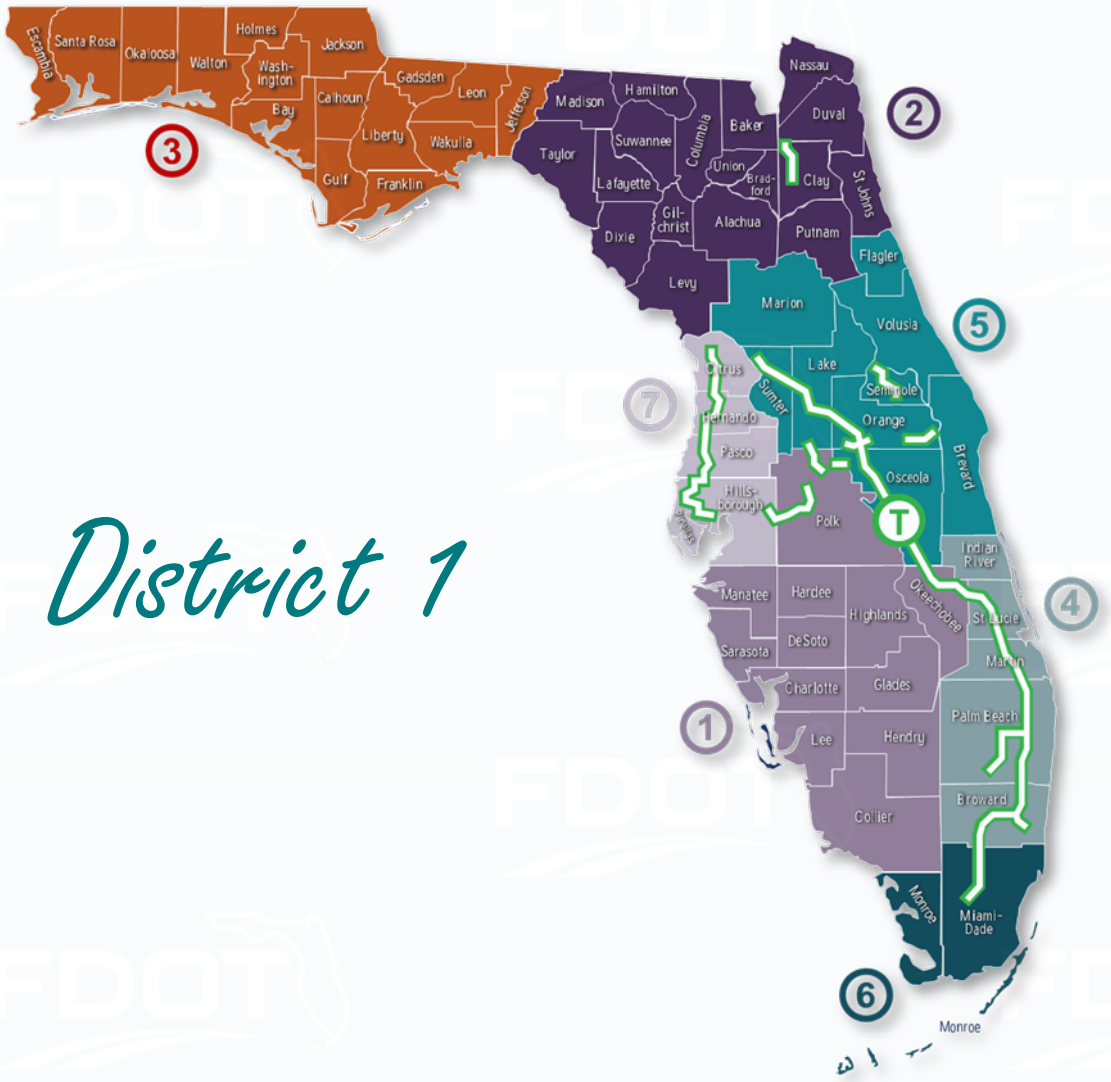


RULE MAY NOT BE FILED FOR ADOPTION:
1. Less than 28 days after posting of the NPR or more than 90 days after posting of the NPR (62 day window)
2. Until 21 days after the Notice of Change (if any)
3. Until 14 days after the final public hearing (if any)
4. Until 21 days after a SERC required under 120.541, 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

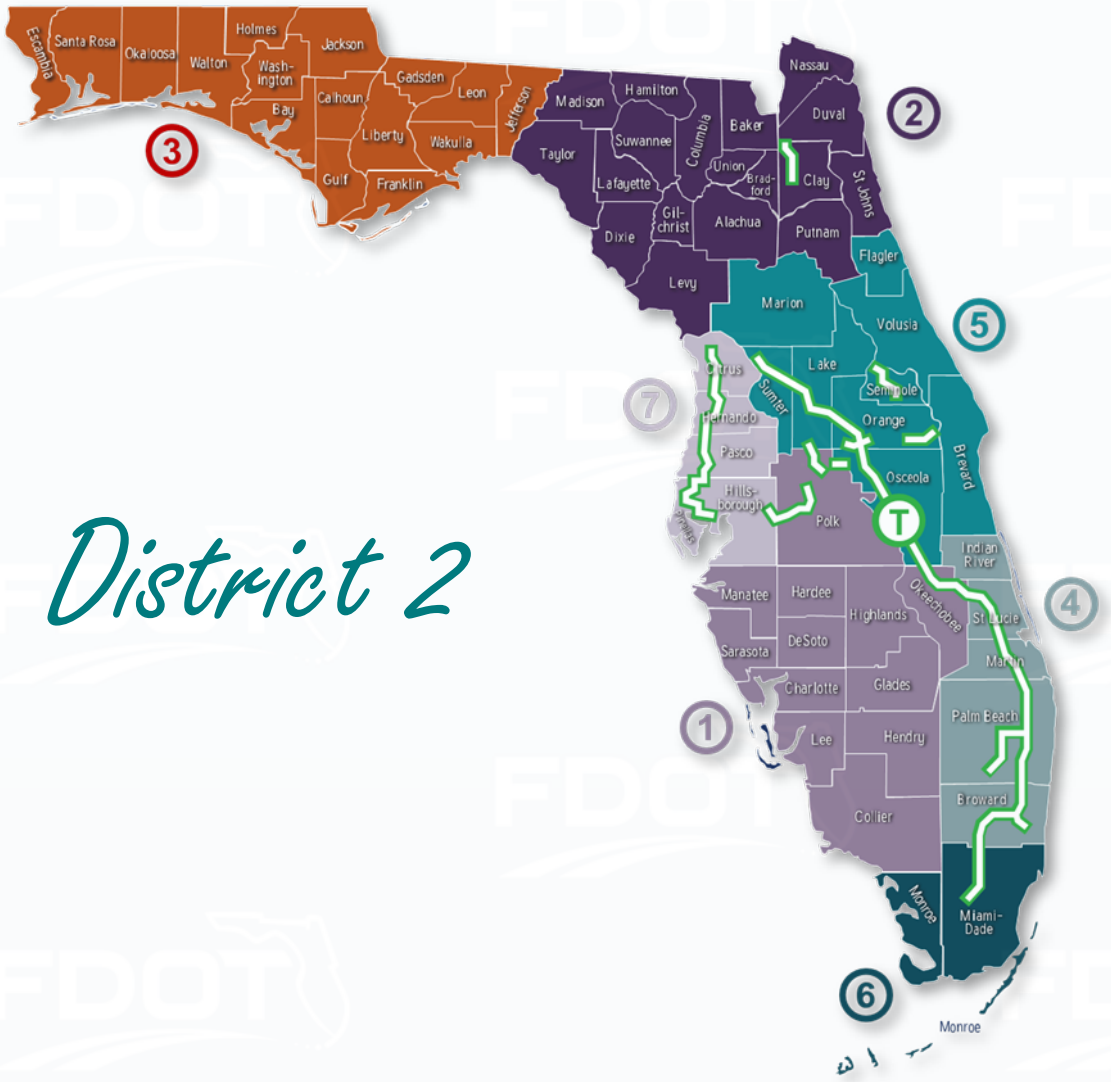


District 1

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

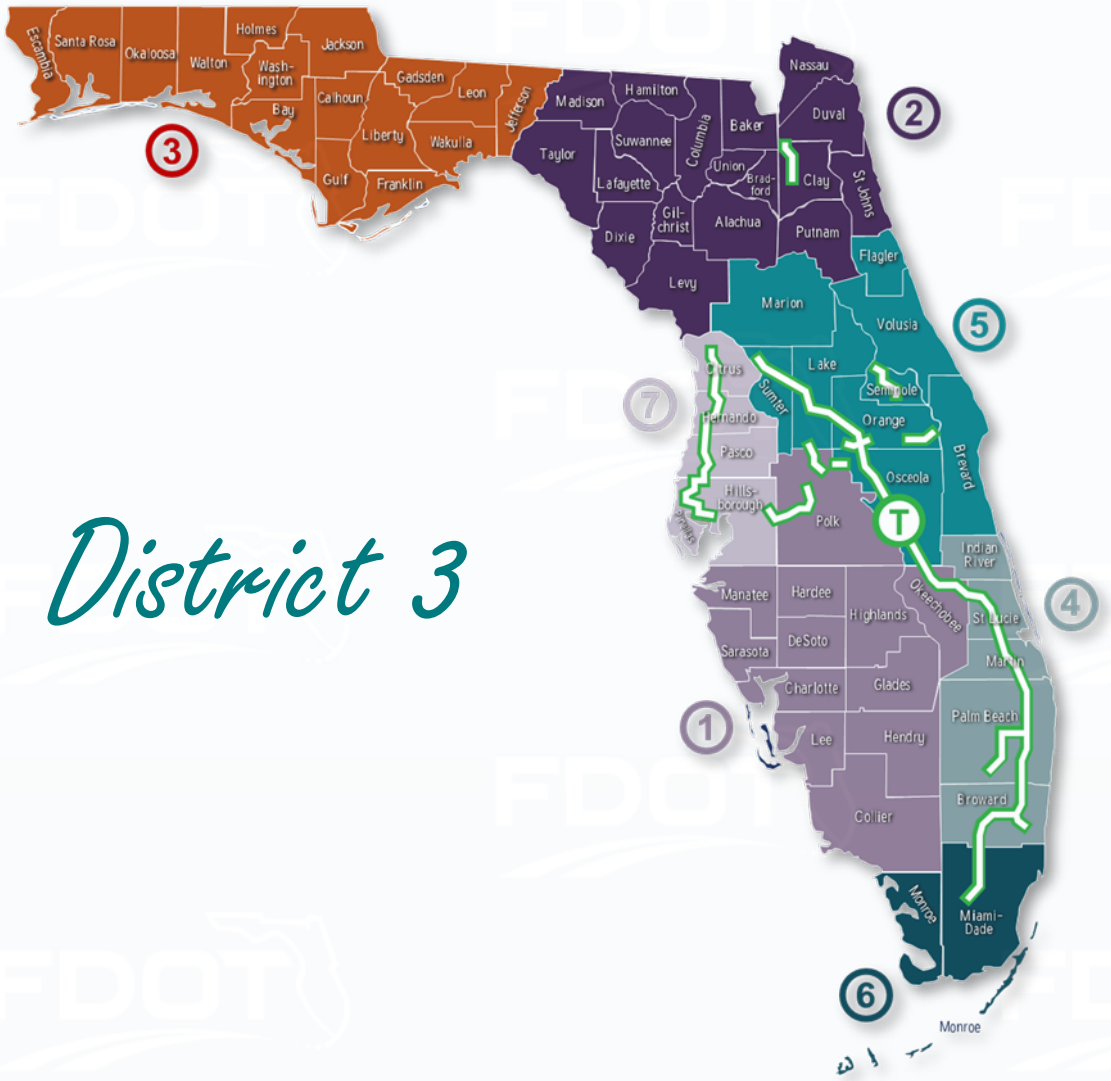


District 2

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

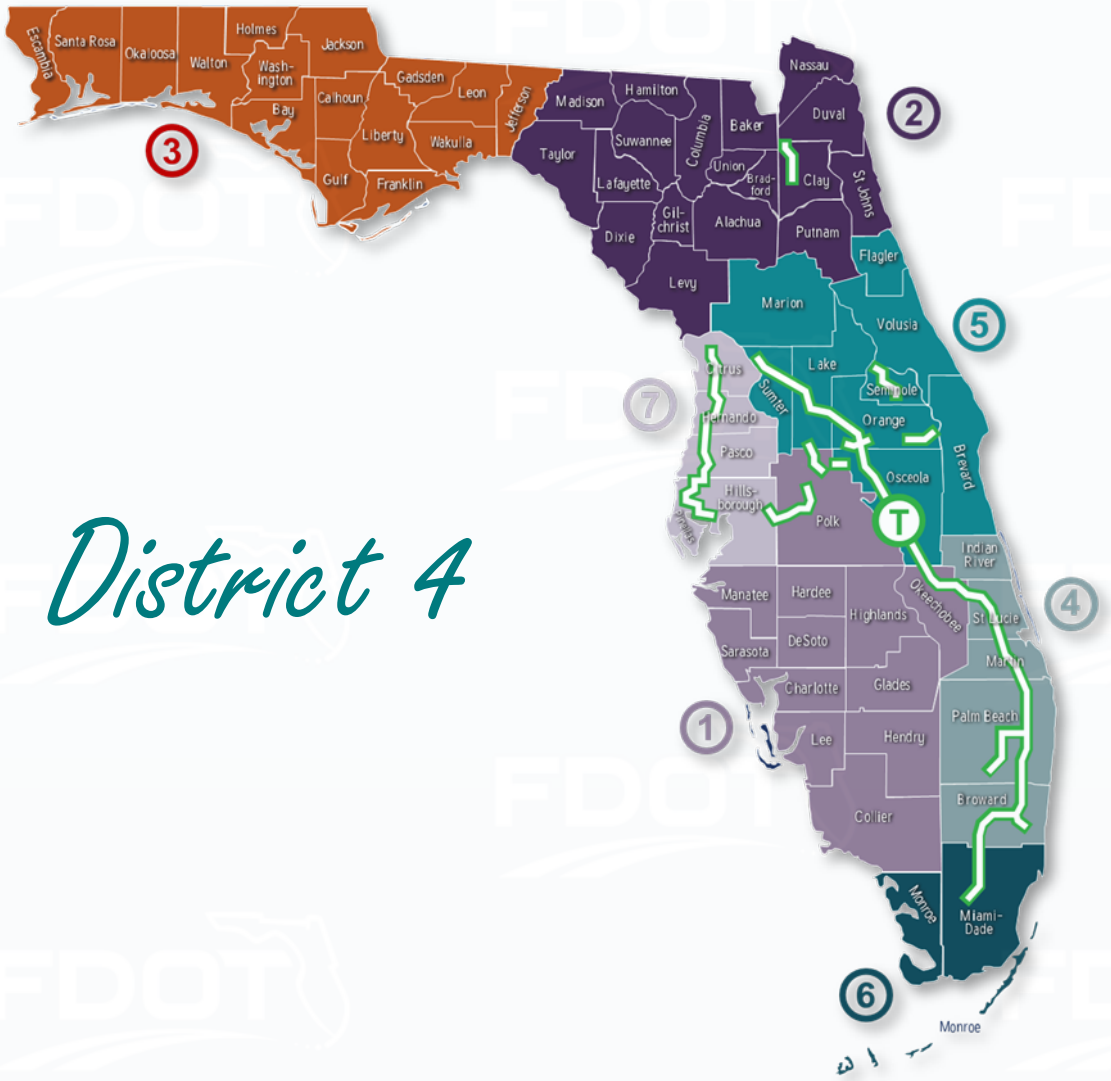


District 3

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

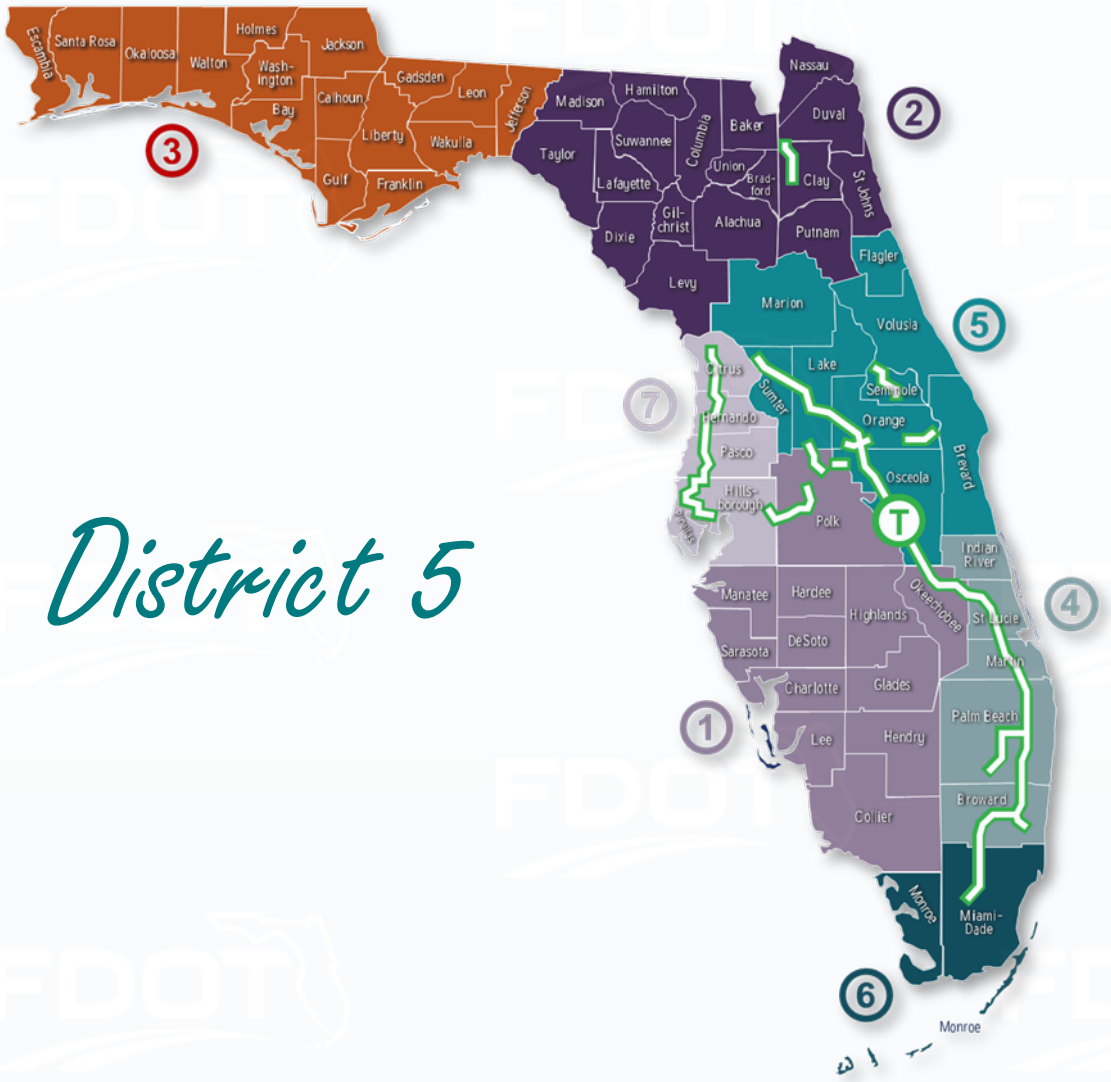


District 4

Committee Members

- **John Olson, P.E.**
  - District Design Engineer - FDOT - District 4
- **Robert Behar, P.E.**
  - President - R.J. Behar and Company, Inc.
- **Richard Tornese, P.E.**
  - County Engineer - Broward County

Introductions

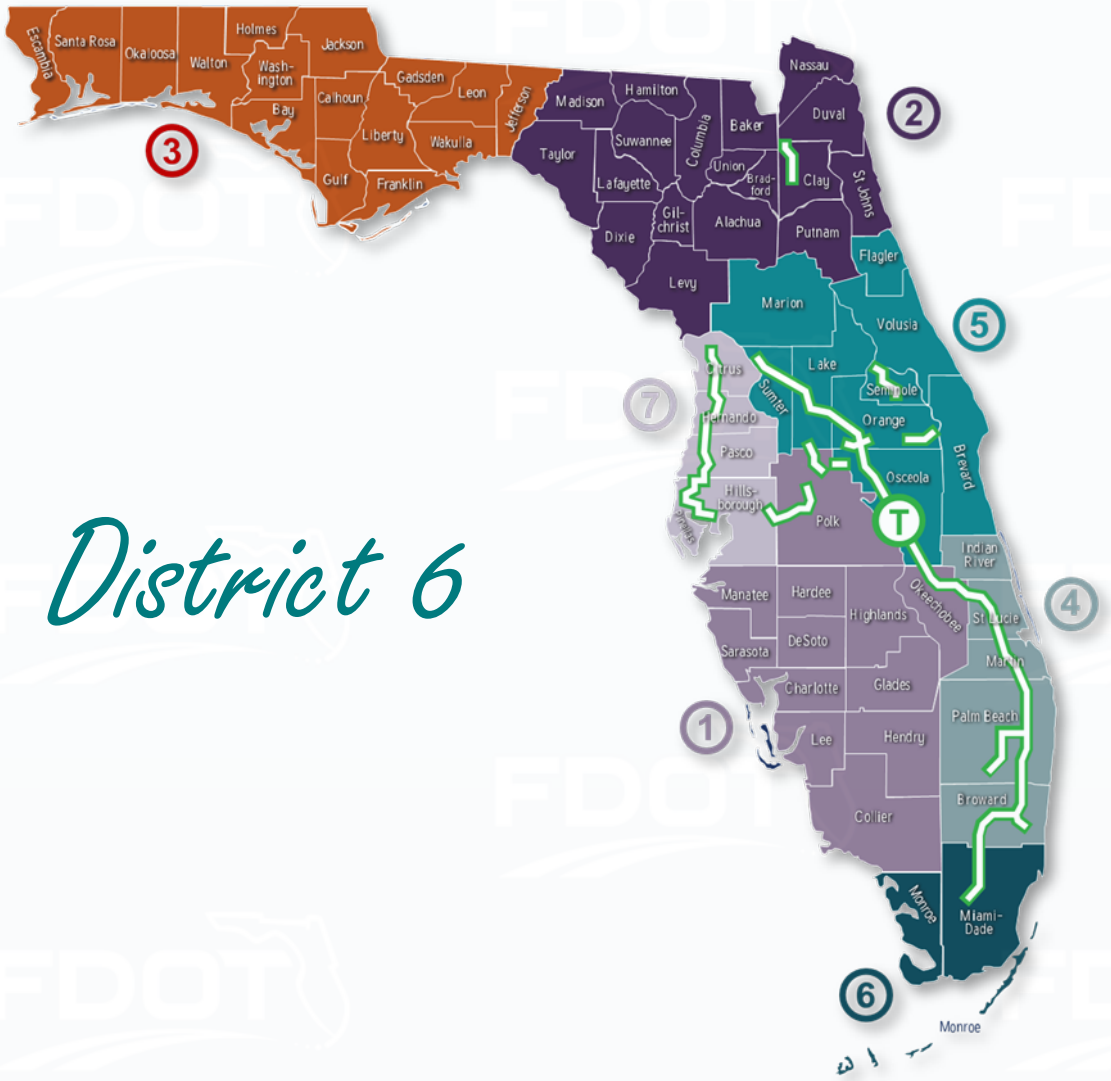


District 5

Committee Members

- **Ed Kestory, 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

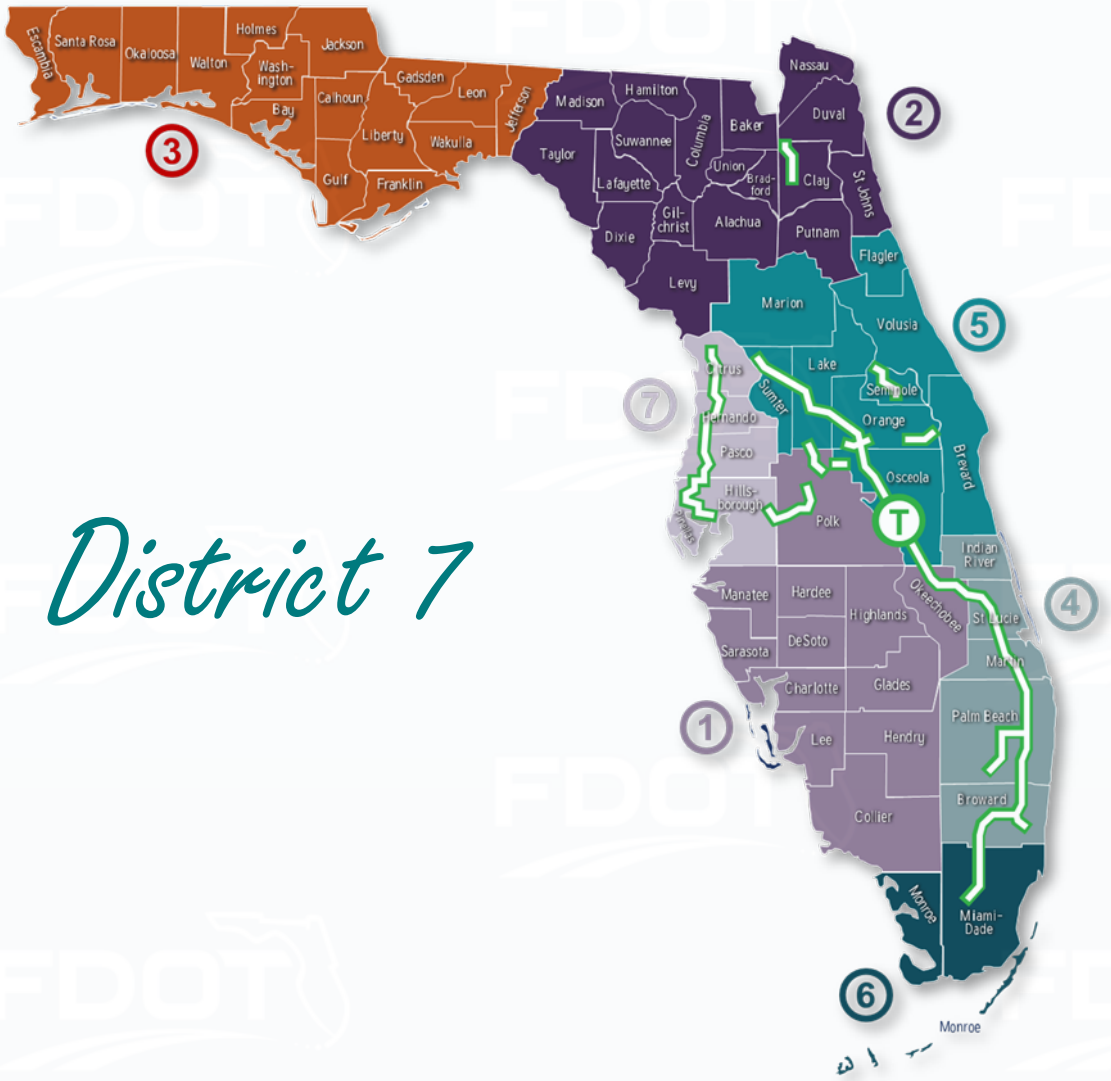


District 6

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

- **Travis Terpstra** - Senior Project Manager (Volusia County Public Works Department)

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, CNUa**
  - Publications Coordinator
- **Rhonda Taylor, P.E.**
  - Roadway Design Criteria Administrator
- **DeWayne Carver, CNUa**
  - Criteria Publications Manager

FDOT

FLORIDA GREENBOOK

Committee Vacancy

Seeking a D4 Local Agency Rural Representative.

https://forms.office.com/g/G5Y33kc1zj?origin=lprLink

Usage Survey

https://forms.office.com/g/ArcM94fyfE?origin=lprLink

Plain Language and Formatting

PLAIN LANGUAGE GUIDELINES

The Plain Writing Act of 2010 defines plain language as:

*Writing that is **clear, concise, well-organized**, and follows other best practices appropriate to the subject or field and intended audience.*

SEVERAL PRINCIPLES OF PLAIN LANGUAGE

a. Use active voice.
b. Use short sentences.
c. Write clearly.
d. Use present tense.
e. Use lists and tables.
f. Omit unnecessary words and sentences.
g. Use common, everyday words.
h. Place words carefully.
i. Avoid using too many commas.
j. Use “must” instead of “shall”.
k. Use consistent terminology.

FLORIDA GREENBOOK – PLAIN LANGUAGE EXAMPLES

a. Use active voice.

Change: Elimination of conditions that may result in serious or fatal crashes should receive the highest priority in the schedule for reconstruction.

To: Prioritize the reconstruction of potentially hazardous conditions.

Change: Coordination of horizontal and vertical alignment should begin with preliminary design, during which stage adjustments can be readily made.

To: Begin coordinating horizontal and vertical alignments during preliminary design while making changes is easier.

b. Use short sentences.

Change:	The priorities for safety improvements should be based on the objective of obtaining the maximum reduction in crash potential for a given expenditure of funds.
To:	Prioritize safety improvements to obtain the largest reduction in crash potential per construction dollar.
Change:	Sufficient detail and explanation must be given to justify approval to those reviewing the request.
To:	Provide sufficient detail and explanation to justify approval.

c. Write clearly.

Change: The FDOT's Drainage Design Guide (DDG) is a reference for designers, providing guidelines and examples of how these objectives can be accomplished.

To: See the FDOT Drainage Design Guide (DDG) for guidelines and examples for accomplishing these objectives.

Change: The length of vertical curve must never be less than three times the design speed of the highway.

To: The vertical curve length must be at least three times the highway design speed.

FLORIDA GREENBOOK – PLAIN LANGUAGE EXAMPLES

e. Use lists and tables.

Change: Examples of Transportation Operations Plan (TOP) strategies include travel demand management, signal retiming, use of Intelligent Transportation Systems (ITS), speed enforcement, and traffic incident management.

To: Examples of Transportation Operations Plan (TOP) strategies include:

- Travel demand management,
- Signal retiming,
- Use of Intelligent Transportation Systems (ITS),
- Speed enforcement, and
- Traffic incident management.

FLORIDA GREENBOOK – PLAIN LANGUAGE EXAMPLES

f. Omit unnecessary words and sentences.

Change:	As is the case for all elements in a facility's design, the designer must consider site specific conditions and determine the proper level of service the facility's drainage system should provide.
To:	Consider site-specific conditions in determining the level of service a new drainage system should provide.
Change:	This chapter recognizes that Florida is regularly affected by adverse weather conditions.
To:	Florida is frequently affected by adverse weather conditions.
Change:	As space and the overall character of the highway determine, low plant material may be included, but it should not obstruct sight distance.
To:	Low plant material can be installed where space allows (without obstructing sight distances).

h. Place words carefully.

Change:	Present to the stakeholders viable partnership solutions and….
To:	Describe viable partnership solutions to the stakeholders and….
Change:	One of the most common deficiencies that may be easy to correct is lack of adequate left turn storage.
To:	Inadequate left-turn storage is a common deficiency that can be easy to correct.

Plain Language Formatting Examples

- https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/roadway/floridagreenbook/combine04172024.pdf

Agenda

Day 1 – April 17

1:00 PM	Welcome 2023 FGB status update	*Derwood Sheppard*
1:15 PM	Sunshine Law and Rulemaking Timeline	*Austin Hensel*
1:45 PM	Introductions, Membership and Survey	*Advisory Committee*
2:00 PM	Florida Greenbook updates & Roundtable	Derwood Sheppard
2:30 PM	Plain Language and Formatting	*Jacqui Morris*
2:45 PM	**Break**	**15 Min**
3:00 PM	Bike Ped Facility Design Guidance	*Tiffancy Gehrke*
4:00 PM	Florida Greenbook Subcommittee Meetings	*Advisory Committee*
4:15 PM	MUTCD Update	*Chris Lewis*
4:45 PM	Meeting Debrief • General Discussion • Public Comment	*Derwood Sheppard*

Online Attendees

Meeting Logistics

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

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Raise your virtual hand to ask a live question.

Bike Ped Facility Design Guidance

Tiffany Gehrke
FDOT Completes Streets Coordinator

Subcommittee Meetings

https://forms.office.com/g/F0RvxDYdFr?origin=lprLink

MUTCD Updates

Chris Lewis, P.E.
Florida Department of Transportation -
State Traffic Services Program Engineer

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

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

FDOT

Florida Greenbook Subcommittee Meeting

April 18, 2024

National Shift Toward Context Classification

Our Transportation World Is Changing

CRITICAL safety needs

	US Metro Area (2022)	Pedestrian deaths/ 100,000 people per year
1	Deltona-Daytona Beach-Ormond Beach, FL	4.25
2	Albuquerque, NM	4.19
3	Memphis, TN-MS-AR	3.93
4	Tampa-St. Petersburg-Clearwater, FL	3.55
5	Charleston-North Charleston, SC	3.54
6	Jacksonville, FL	3.44
7	Bakersfield, CA	3.41
8	Orlando-Kissimmee-Sanford, FL	3.37
9	Stockton, CA	3.35
10	Fresno, CA	3.25

Source: Dangerous By Design, Smart Growth America, National Complete Streets Coalition

Focus on Expanding Mobility

By 2030:

1/3 of Floridians will be retired or planning to retire

more than half

of older Americans would rather drive less

24%

Of Floridians will be over 65 in 2040

Sources: Surface Transportation Policy Project. "Americans' Attitudes Toward Walking and Creating Better Walking Communities." 2003; APTA 2009 Public Transportation Fact Book; 2008 National Household Travel Survey; Steven Raphael and Alan Berube. "Socioeconomic Differences in Household Automobile Ownership Rates: Implications for Evacuation Policy," paper prepared for the Berkeley Symposium March 2006, http://urbanpolicy.berkeley.edu/pdf/raphael.pdf.

What does the future hold?

71% Of adults today walked to school as children

17% Of children today walk to school

Source: A century of change:
the U.S. labor force, 1950–2050, Bureau of Labor Statistics

What is our response to these new challenges?

funding limitations

economic development

safety needs

environmental concerns

rising costs

shifting market demands

Where Our Industry Is Headed

Community Context

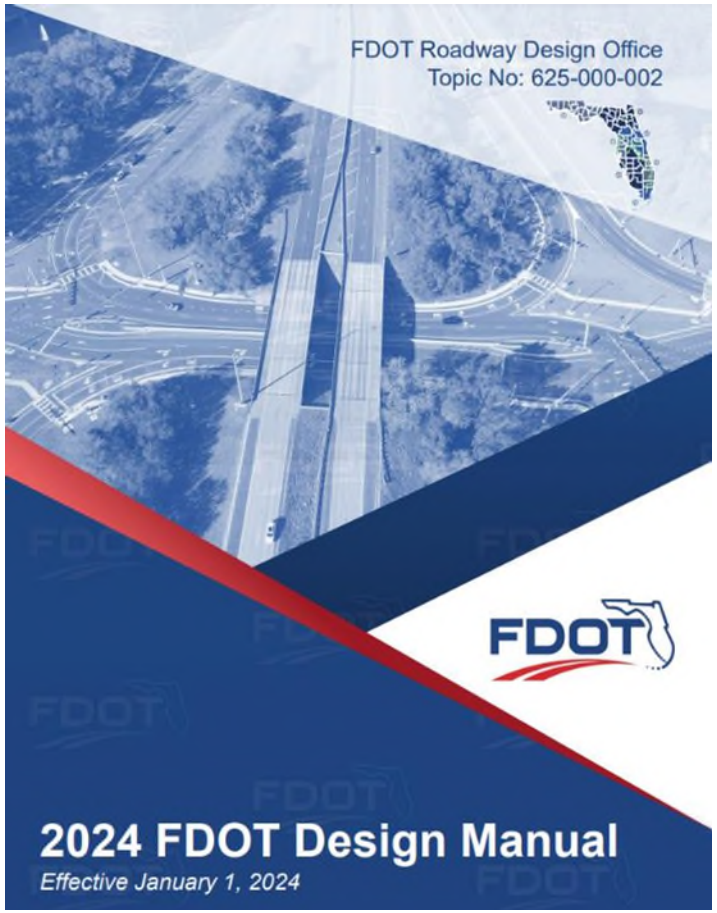
- Context Based Standards

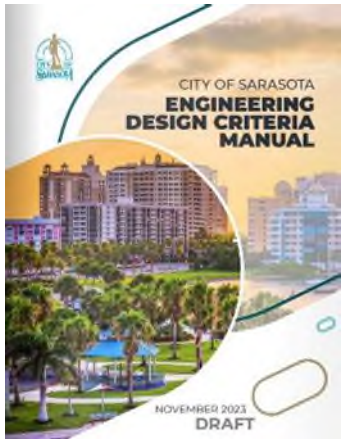
Multi-modal Accommodation

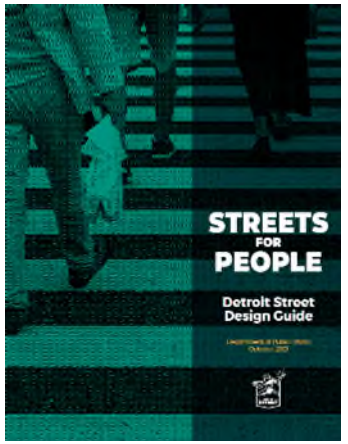
- Users and uses of a roadway are better defined

Flexibility

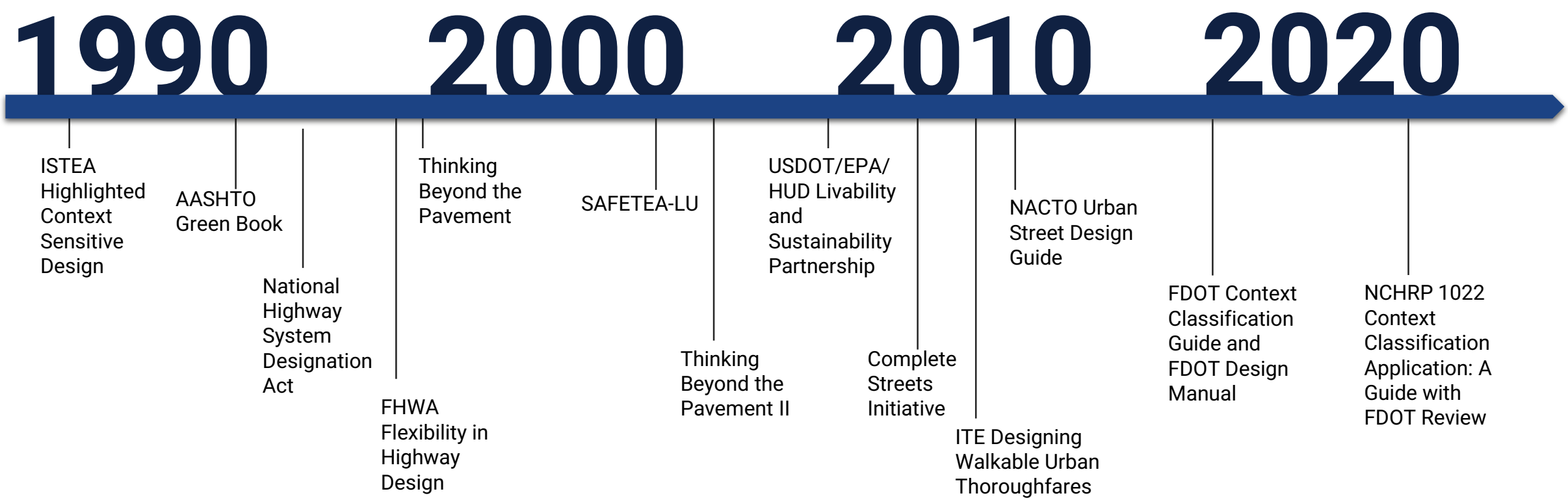
- “maximum” values are not always the best or safest





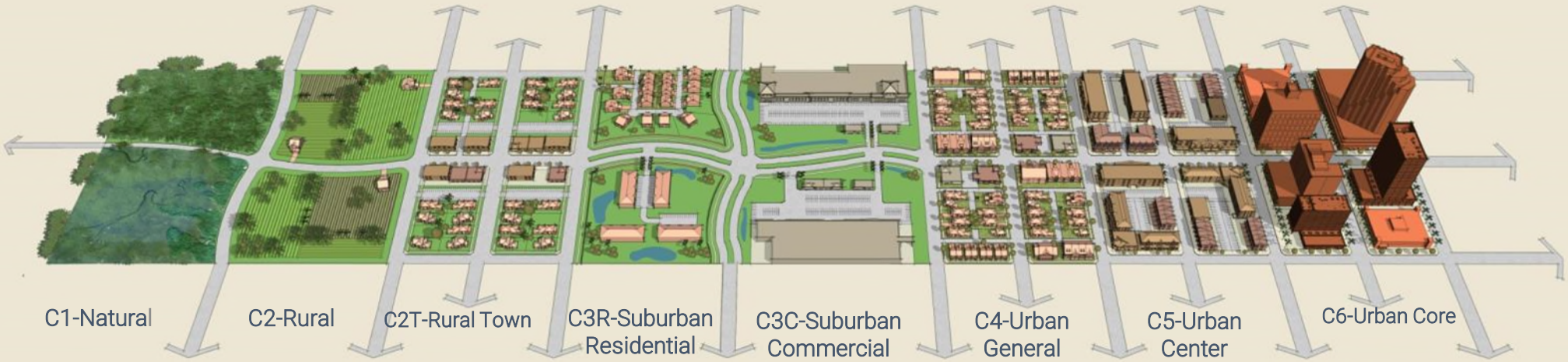


Evolution of **Context-based Design**



FDOT Context Classifications

Introduced with 2018 FDOT Design Manual



Context Classification, Allowable Design Speeds and Design Criteria are closely linked

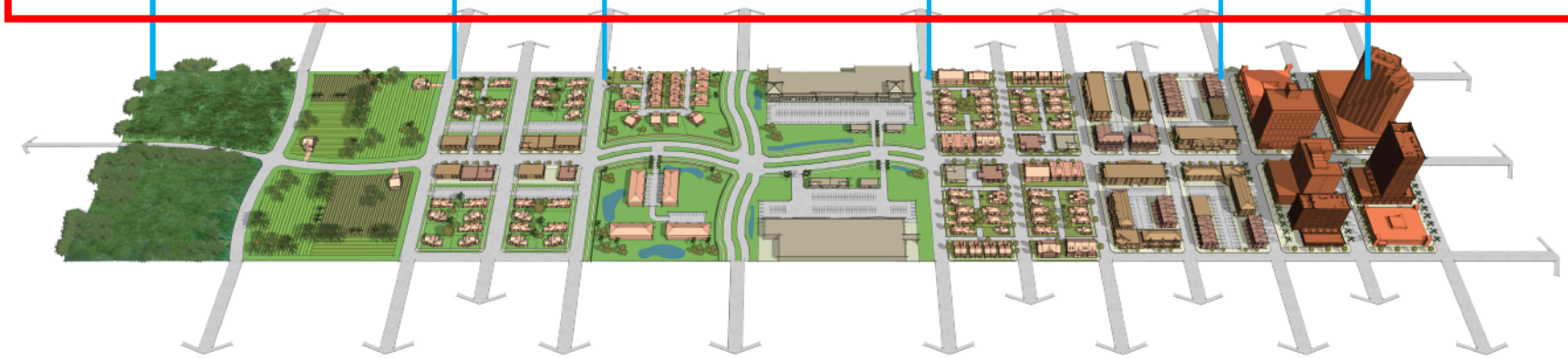
For non-limited-access roadways, the FDOT Design Manual (*FDM)* provides design criteria and standards based on context classification

FDM design speed ranges for non-limited access facilities

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

National Adoption

Green Book 1-6	**Rural**			**Urban**						
SmartCode (2003)/ **ITE/CNU** (2010)	Natural	Rural		Suburban			General Urban	Urban Center	Urban Core	Special District
Massachusetts (2006)	Rural Natural	Rural Developed	Rural Village	Low Density	Town Center	High Density	Urban Residential	Urban Park	Commercial Business District	
Pennsylvania/New Jersey (2008)	Rural			Suburban Neighborhood	Suburban Corridor	Suburban Center	Town/Village Neighborhood	Town/Village Center	Urban Core	
California (2016)	Natural	Developing	Rural Main Street	Suburban Low Density		Suburban High Density	Urban Low Density		Urban High Density	
Florida (2017)	Natural	Rural	Rural Town	Suburban Residential		Suburban Commercial	Urban General	Urban Center	Urban Core	Special District
Minnesota (2018)	Natural	Rural	Rural Crossroad	Suburban Residential		Suburban Commercial	Urban Residential	Urban Commercial	Urban Core	Industrial Warehouse
Green Book 7/ NCHRP 855 (2018)	**Rural**		**Rural Town**	**Suburban**			**Urban**		**Urban Core**	
Oregon (2019)			Rural Community	Suburban Fringe	Suburban Residential Corridor	Suburban Commercial Corridor	Urban Mix		Downtown/ Commercial Business District	
Washington (2019)	Rural			Suburban			Urban		Urban Core	
AASHTO TCGD (2019)	**Rural & Natural Areas**		**Rural Town**	**Suburban**			**Urban**		**Urban Core**	**Industrial, Warehouse, or Port**
Maryland (2019)	Rural		Traditional Town Center	Suburban		Suburban Activity Center		Urban Center	Urban Core	
Pennsylvania (2020)	Rural		Rural Town	Suburban			Urban		Urban Core	
NCHRP 15-72 (2021)	**Rural**		**Rural Town**	**Suburban**			**Urban**		**Urban Core**	**Special Context**



Agencies adopted Context-Based Design… and for many different reasons…

Massachusetts DOT (2006)

PennDOT (2008)

New Jersey DOT (2008)

Washington DOT (2012)

Florida DOT (2018)

Montana DOT (2019)

Oregon DOT (2020)

Tennessee DOT (Ongoing)

Others…

Pop Quiz! What is the Posted Speed on this Corridor?

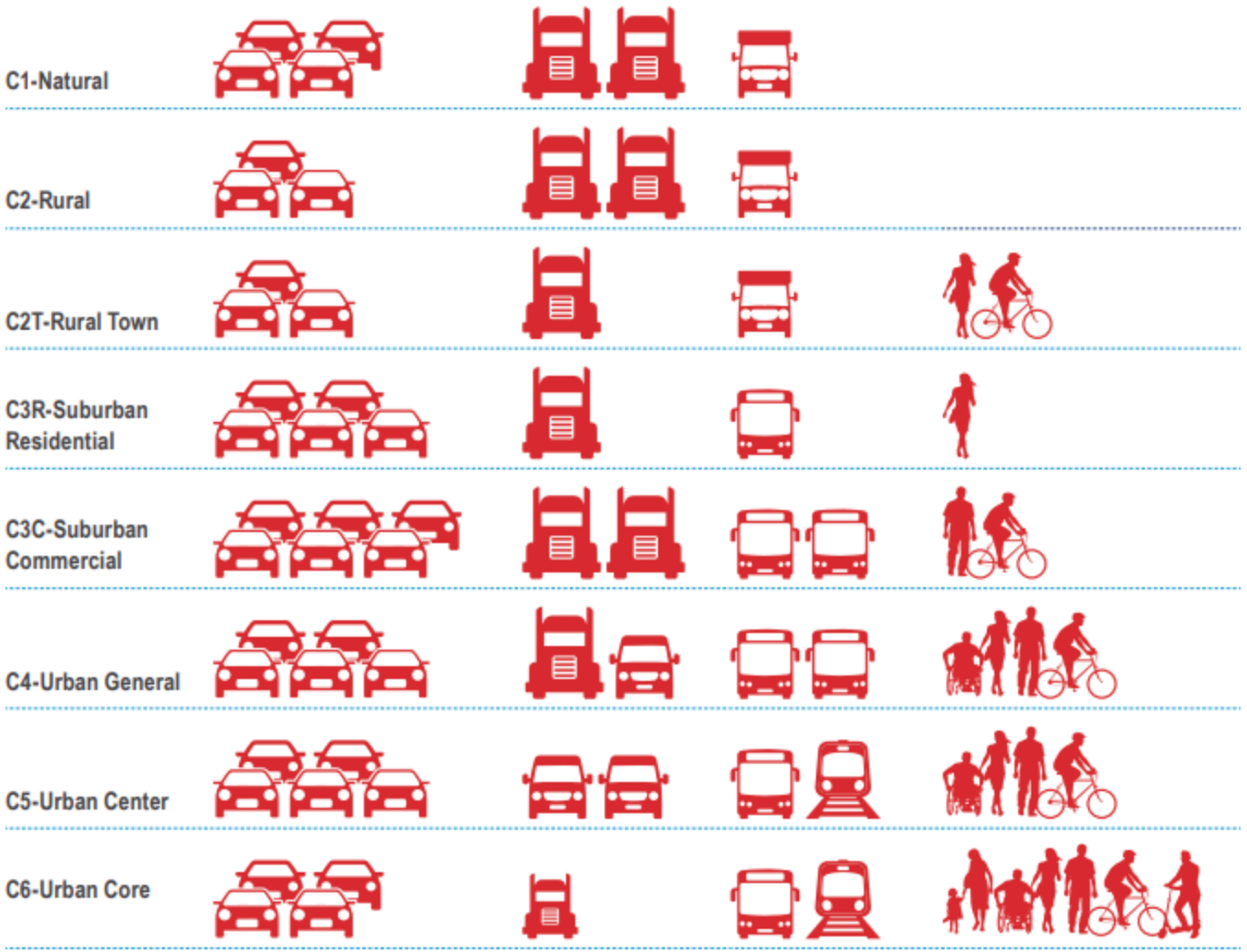
Context Matters!

Context Classification & Safety Mission

Context Classification	Users	Design Speed Range	Safety (Percent of Serious Injury & Fatal Crashes in Top 3 Emphasis Areas)		
			Lane Departure	Pedestrian / Bicycle	Intersectio
C6 Urban Core		25-30	0.3%	0.9%	2.4%
C5 Urban Center		25-35	0.6%	3.2%	5.1%
C4 Urban General		25-45	14.7%	33.7%	38.7%
C3C Suburban Commercial		35-55	32.2%	40.7%	34.5%
C3R Suburban Residential		35-55	12.9%	8.5%	4.9%
C2T Rural Town		25-45	0.9%	1.1%	1.8%
C2 Rural		55-70	29.2%	4.3%	9.2%
C1 Natural		55-70	4.6%	0.7%	0.8%

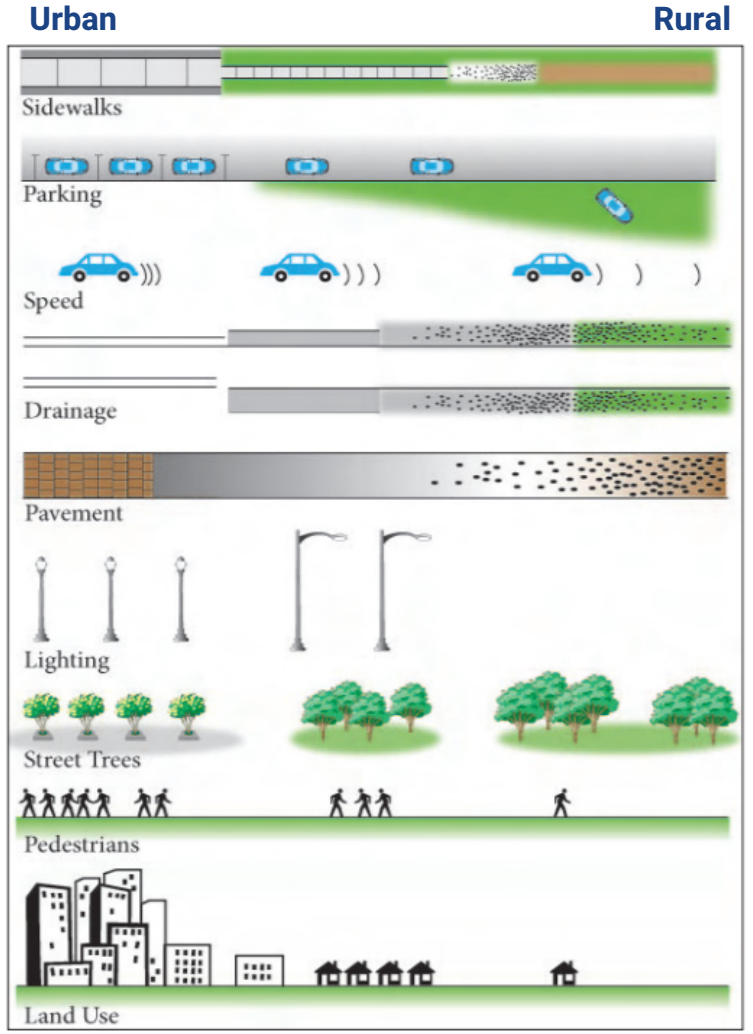
What Context Classification Does (and Does Not) Tell Us

Provides cues ON LIKELY types of uses and users



Can Inform Local Planning & Design

- Land use context anticipates **who will need to use the road and how**
- Context influences the **geometric design** of the roadway and the **types of amenities** required in the right-of-way
- As **intensity and mix of uses increase**, there is a greater need to **prioritize other modes of travel**



PennDOT Smart Transportation Guide

Transportation Context

- Roadway Functional Classification
- Trip Making Characteristics (trip length, trip purpose, trip volumes, peaking characteristics, etc.)
- Access Classification (mobility vs access)

Context Classification + TRANSPORTATION CHARACTERISTICS

Design Application

NCHRP 15-77 - Aligning Geometric Design with Roadway Context

For each context:

- Design controls
- Sight distance considerations
- Cross Section Value Ranges
- Intersection Considerations

Table 16-10: Suburban Context Cross Section Design Elements

Design Element	Local	Collector	Arterial
Number of Travel Lanes	2 lanes	2-4 lanes	2-4 lanes[1]
Median Provisions	Raised: Not anticipated Flush: 0-to-2 ft.	Raised: 8-to-22 ft.	
Pedestrian Features			
Type of Facility	Pedestrian walking space may include shoulder or sidewalk.	Sidewalk on both sides; potential shared-use path.	
Width	6 ft	6 ft	6 ft, increase to 8 ft in clusters of development and where transit is present
Buffer	Provide buffer, or sufficient sidewalk width for buffering, if sidewalk or path is adjacent to the curb.		
Pedestrian Refuge Island	Consider refuge island when four or more travel lanes are present. If signalized, provide adequate time for single-stage crossing. 6 ft minimum, 8 ft preferred, measured in the direction of pedestrian travel.		
On-Street Parking	May be present for residential use and is typically undesignated.	Consider on-street parking near residential and commercial development. On-street parking: 8 ft	Not typical; may be present near commercial development when speeds are 35 mph or less.
Bicycle Features			
Preferred Facility	Shared lane markings.	Separated bicycle lane or shared-use path preferred. Consider a 6-8-ft buffered bicycle lane depending on roadway characteristics.	Separated bicycle lane or shared-use path preferred.
Buffers	Not anticipated.	Bicycle facilities should be separated from travel lanes by a buffer	
Types of separation	Not anticipated.	Raised island, flexible delineator posts, concrete barrier, guardrail, bioswale, ditch.	
Travel Lane Width(s)			
Through Lanes and Turn Lanes	9-11 ft	10-12 ft	11-12 ft
Auxiliary Lanes	10 ft	10-12 ft	11-12 ft
Shoulder[2]			
Width	2-6 ft	4-8 ft	4-8 ft
Composition Material	Paved	Paved	Paved
Function	Pedestrian/bicycle use, mail/garbage pickup.	Pedestrian/bicycle use, emergency use, mail/garbage pickup.	
Lane & Shoulder Cross Slopes	Avoid superelevation, use normal crown.	2% preferred / 4% maximum	

Values are meant to be a starting point for the AASHTO Green Book update team to continue discussions

Design Application

Table 222.2.1 Standard Sidewalk Widths

Context Classification		Sidewalk Width (feet)
C1	Natural	5
C2	Rural	5
C2T	Rural Town	6
C3	Suburban	6
C4	Urban General	6
C5	Urban Center	10
C6	Urban Core	12

Notes:

(1) For C2T, C3 and C4, sidewalk width may be increased up to 8 feet when the demand is demonstrated.

(2) For C5 and C6, when standard sidewalk width cannot be attained, provide the greatest attainable width possible, but not less than 6 feet.

(3) For RRR projects, unaltered sidewalk with width 4 feet or greater may be retained within any context classification.

(4) See ***FDM 260.2.2*** for sidewalk width requirements on bridges.

FDOT Design Manual

Table 3-2. Target Speed Ranges

Context Classification	Interstate Connector; Major or Minor Arterial (mph)	Major or Minor Collector (mph)	Local (mph)
Downtown Core	20–25	20–25	20
Urban Village	25–30	25	20
Urban General Commercial/Mixed Use	25–35	25–30	25
Urban General Residential	25–35	25–30	20–25
Suburban Commercial or Industrial	30–40	25–35	25
Suburban Residential	30–40	25–35	25

DRAFT Sarasota Engineering Design Criteria Manual

Local Shift Towards Context Classification

Some Intended Outcomes for Local Agencies

Adopting local context classifications can support land use and transportation strategies including:

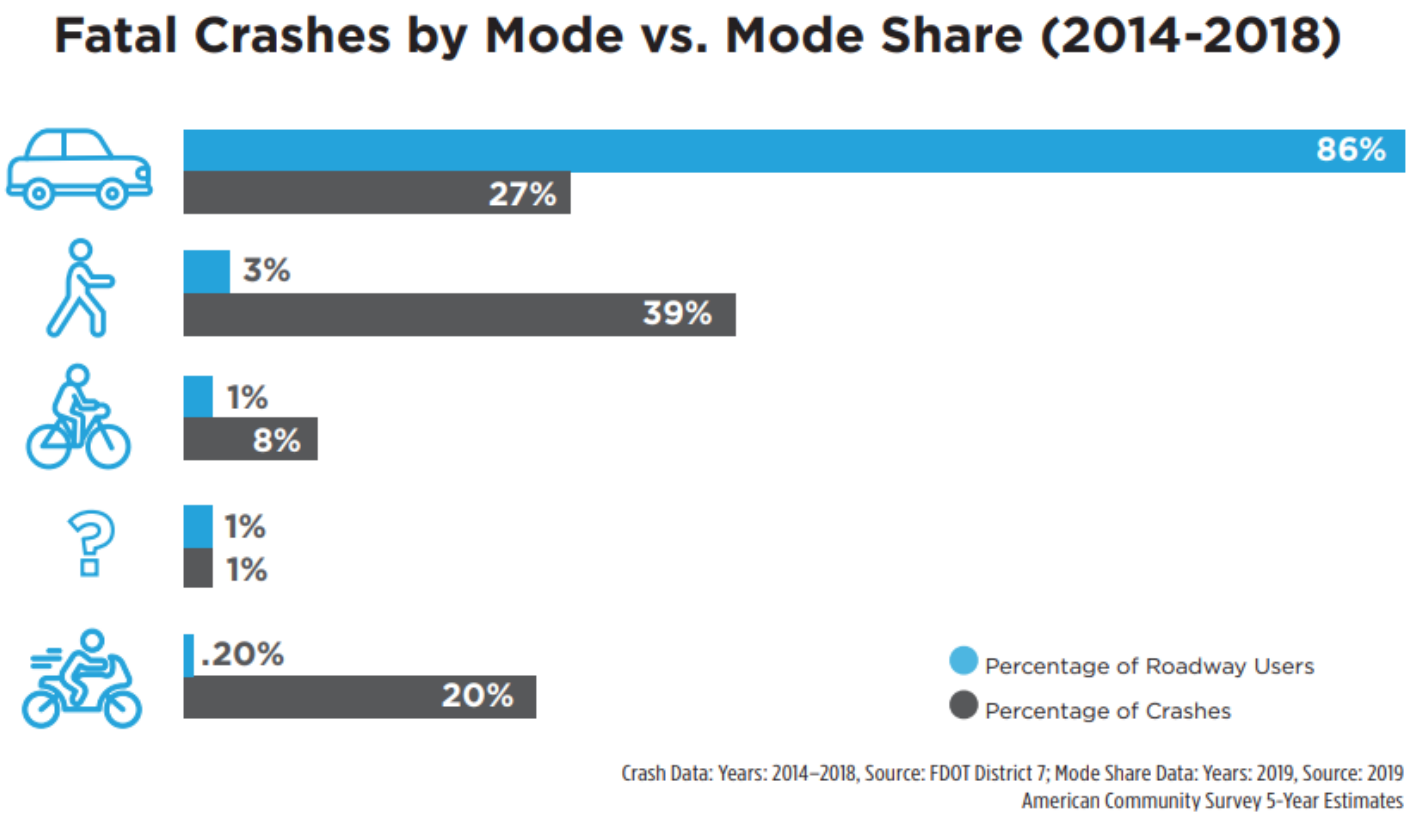
- Aligning land use and transportation decisions
- Community and context driven roadway design
- Setting and implementing target speeds
- Multimodal safety and target zero

Context Classification measures set a framework for multimodal travel…

1. Roadway network connectivity
2. Land use and built form
   - Mix of uses
   - How buildings address the street
3. Intensity of use

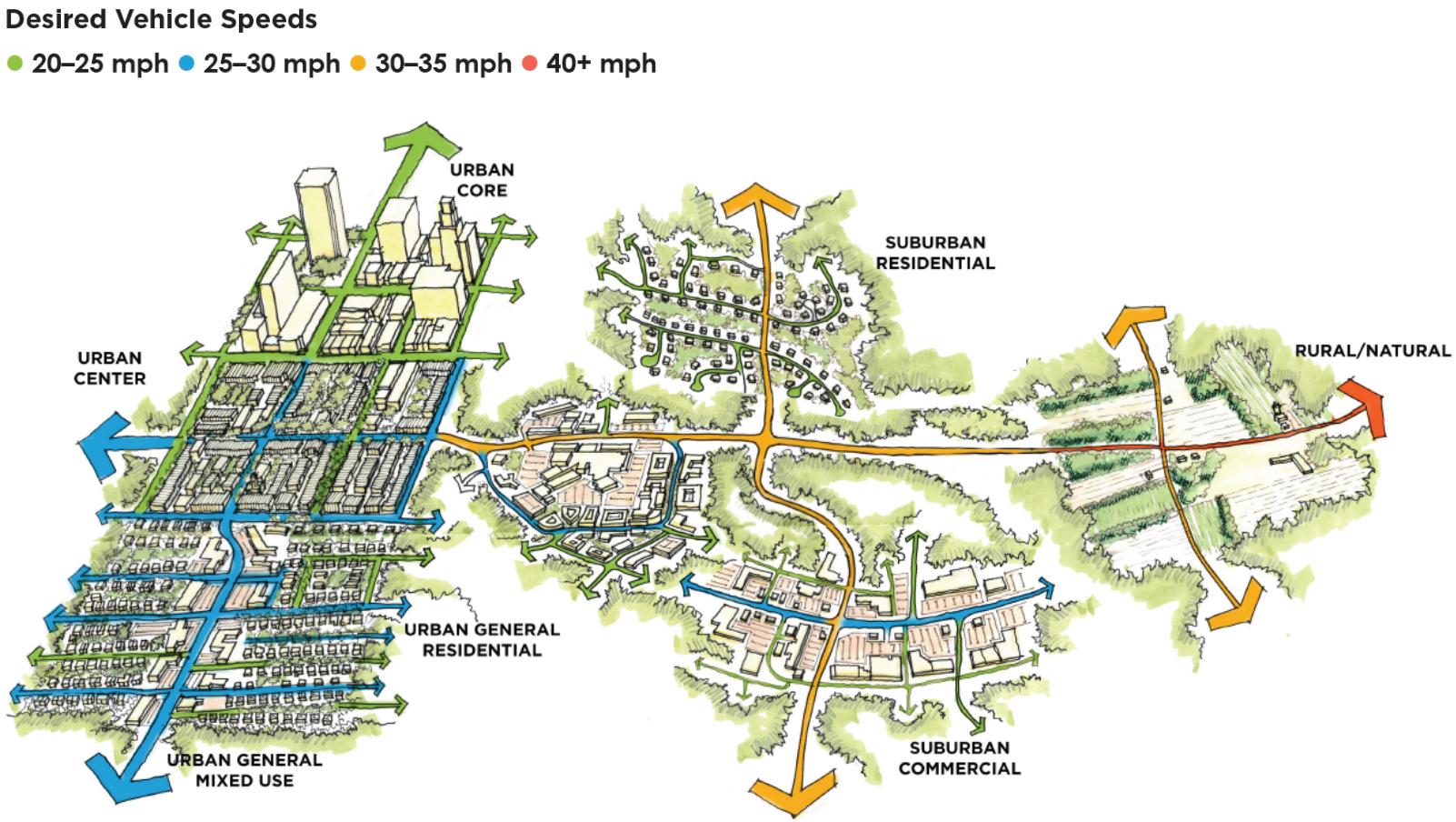
City of Tampa

Vison Zero Action Plan



City of Tampa

Tying speed to context classification



City of Sarasota

Updating design manual with context-based design criteria

Table 3-2. Target Speed Ranges

Context Classification	Interstate Connector; Major or Minor Arterial (mph)	Major or Minor Collector (mph)	Local (mph)
Downtown Core	20–25	20–25	20
Urban Village	25–30	25	20
Urban General Commercial/Mixed Use	25–35	25–30	25
Urban General Residential	25–35	25–30	20–25
Suburban Commercial or Industrial	30–40	25–35	25
Suburban Residential	30–40	25–35	25

Table 3-3. Emphasis

Context Classification	Modal Emphasis				
	Pedestrian	Bicycle	Transit	Passenger Vehicle	Commercial Truck
Downtown Core	High	High	High	Low	Medium
Urban Village	High	Medium–High	High	Medium–Low	Medium
Urban General Commercial/ Mixed Use	High	Medium	Medium–High	Medium	Low
Urban General Residential	Medium–High	Medium	Medium	Medium	Low
Suburban Commercial or Industrial	High	Medium	Commercial: Medium–High Industrial: Low	High	Medium–High
Suburban Residential	High	Medium	Medium	High	Medium

City of Sarasota

Updating design manual with context-based design criteria

Downtown Core

Table 3-4. Downtown Core Frontage Area Widths

Functional Classification	Building Shy Zone	Pedestrian Zone	Amenity Zone Width	Lateral Offset	Total Frontage Area Width
Interstate Connector or Major and Minor Arterials	2 feet	8 feet minimum **12 feet preferred**	5 feet minimum **8 feet preferred**	1.5 feet minimum **4 feet preferred**	16.5 feet minimum **26 feet preferred**
Major or Minor Collectors	2 feet	6 feet minimum **12 feet preferred**	4 feet minimum **6 feet preferred**	1.5 feet minimum **4 feet preferred**	13.5 feet minimum **24 feet preferred**
Local	2 feet	5 feet minimum **10 feet preferred**	3 feet minimum **6 feet preferred**	1.5 feet minimum **4 feet preferred**	11.5 feet minimum **22 feet preferred**

Space Coast TPO

SCTPO plans to adopt context classification for functionally classified roadways in Brevard County to apply the new 2023 FDOT MQ/LOS Handbook

INTERRUPTED FLOW FACILITIES

STATE SIGNALIZED ARTERIALS

Class I (40 mph or higher posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	16,800	17,700	**
4	Divided	*	37,900	39,800	**
6	Divided	*	58,400	59,900	**
8	Divided	*	78,800	80,100	**

Class II (35 mph or slower posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	7,300	14,800	15,600
4	Divided	*	14,500	32,400	33,800
6	Divided	*	23,300	50,000	50,900
8	Divided	*	32,000	67,300	68,100

(C3C-Suburban Commercial)

AADT

	B	C	D	E
2 Lane	*	15,300	21,700	**
4 Lane	*	30,700	36,600	**
6 Lane	*	47,700	54,100	**
8 Lane	*	64,000	64,200	**

(C3R-Suburban Residential)

	B	C	D	E
2 Lane	*	19,600	22,400	**
4 Lane	*	34,300	37,300	**
6 Lane	*	52,900	55,100	**

Preliminary Context Classification Evaluation

FDOT Context Classification Measures

TABLE 1 CONTEXT CLASSIFICATION MATRIX

Context Classification	(1) Distinguishing Characteristics	(2) Primary Measures								(3) Secondary Measures			
		Land Use	Building Height	Building Placement	Fronting Uses	Location of Off-street Parking	Roadway Connectivity			Allowed Residential Density	Allowed Office/ Retail Density	Population Density	Employment Density
							Intersection Density	Block Perimeters	Block Length				
		Description	Floor Levels	Description	Yes/No	Description	Intersections/ Square Mile	Feet	Feet	Dwelling Units/ Acre	Floor-Area Ratio (FAR)	Persons/Acre	Jobs/Acre
C1-Natural	Lands preserved in a natural or wilderness condition, including lands unsuitable for settlement due to natural conditions.	Conservation Land, Open Space, or Park	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C2-Rural	Sparsely settled lands; may include agricultural land, grassland, woodland, and wetlands.	Agricultural or Single-Family Residential	1 to 2	Detached buildings with no consistent pattern of setbacks	No	N/A	<20	N/A	N/A	<1	N/A	<2	N/A
C2T-Rural Town	Small concentrations of developed areas immediately surrounded by rural and natural areas; includes many historic towns.	Retail, Office, Single-Family or Multi-Family Residential, Institutional, or Industrial	1 to 2	Both detached and attached buildings with no or shallow (<20') front setbacks	Yes	Mostly on side or rear; occasionally in front	>100	<3,000	<500	>4	>0.25	N/A	>2
C3R-Suburban Residential	Mostly residential uses within large blocks and a disconnected or sparse roadway network.	Single-Family or Multi-Family Residential	1 to 2, with some 3	Detached buildings with medium (20' to 75') front setbacks	No	Mostly in front; occasionally in rear or side	<100	N/A	N/A	1 to 8	N/A	N/A	N/A
C3C-Suburban Commercial	Mostly non-residential uses with large building footprints and large parking lots within large blocks and a disconnected or sparse roadway network.	Retail, Office, Multi-Family Residential, Institutional, or Industrial	1 (retail uses) and 1 to 4 (office uses)	Detached buildings with large (>75') setbacks on all sides	No	Mostly in front; occasionally in rear or side	<100	>3,000	>660	N/A	<0.75	N/A	N/A
C4-Urban General	Mix of uses set within small blocks with a well-connected roadway network. May extend long distances. The roadway network usually connects to residential neighborhoods immediately along the corridor or behind the uses fronting the roadway.	Single-Family or Multi-Family Residential, Institutional, Neighborhood Scale Retail, or Office	1 to 3, with some taller buildings	Both detached and attached buildings with no setbacks or up to medium (<75') front setbacks	Yes	Mostly on side or rear; occasionally in front	>100	<3,000	<500	>4	N/A	>5	>5
C5-Urban Center	Mix of uses set within small blocks with a well-connected roadway network. Typically concentrated around a few blocks and identified as part of a civic or economic center of a community, town, or city.	Retail, Office, Single-Family or Multi-Family Residential, Institutional, or Light Industrial	1 to 5, with some taller buildings	Both detached and attached buildings with no or shallow (<20') front setbacks	Yes	Mostly on side or rear; occasionally in front, or in shared off-site parking facilities	>100	<2,500	<500	>8	>0.75	>10	>20
C6-Urban Core	Areas with the highest densities and building heights, and within FDOT classified Large Urbanized Areas (population >1,000,000). Many are regional centers and destinations. Buildings have mixed uses, are built up to the roadway, and are within a well-connected roadway network.	Retail, Office, Institutional, or Multi-Family Residential	>4, with some shorter buildings	Mostly attached buildings with no or minimal (<10') front setbacks	Yes	Side or rear; often in shared off-site garage parking	>100	<2,500	<660	>16	>2	>20	>45

More information on measures with undefined thresholds (N/As) are included in Appendix B. The thresholds presented in Table 1 are based on the following sources, with modifications made based on Florida case studies:

1) *2008 Smart Transportation Guidebook: Planning and Designing Highways and Streets that Support Sustainable and Livable Communities*, New Jersey Department of Transportation and Pennsylvania Department of Transportation;
2) *2012 Florida TOD Guidebook*, Florida Department of Transportation;
3) *2009 SmartCode Version 9.2.*, Duany, Andres, Sandy Sorlien, and William Wright; and
4) *2010 Designing Walkable Urban Thoroughfares: A Context Sensitive Approach*, Institute of Transportation Engineers and Congress for the New Urbanism.

FDOT Context Classification Measures

TABLE 1 CONTEXT CLASSIFICATION MATRIX

Context Classification	(1) Distinguishing Characteristics	(2) Primary Measures: Land Use – Description	Building Height – Floor Levels	Building Placement – Description	Fronting Uses – Yes/No	Location of Off-street Parking – Description	Roadway Connectivity: Intersection Density – Intersections/ Square Mile	Roadway Connectivity: Block Perimeters – Feet	Roadway Connectivity: Block Length – Feet	(3) Secondary Measures: Allowed Residential Density – Dwelling Units/ Acre	Allowed Office/ Retail Density – Floor-Area Ratio (FAR)	Population Density – Persons/Acre	Employment Density – Jobs/Acre
C1-Natural	Lands preserved in a natural or wilderness condition, including lands unsuitable for settlement due to natural conditions.	Conservation Land, Open Space, or Park	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C2-Rural	Sparsely settled lands; may include agricultural land, grassland, woodland, and wetlands.	Agricultural or Single-Family Residential	1 to 2	Detached buildings with no consistent pattern of setbacks	No	N/A	<20	N/A	N/A	<1	N/A	<2	N/A
C2T-Rural Town	Small concentrations of developed areas immediately surrounded by rural and natural areas; includes many historic towns.	Retail, Office, Single-Family or Multi-Family Residential, Institutional, or Industrial	1 to 2	Both detached and attached buildings with no or shallow (<20') front setbacks	Yes	Mostly on side or rear; occasionally in front	>100	<3,000	<500	>4	>0.25	N/A	>2
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C4-Urban General	Mix of uses set within small blocks with a well-connected roadway network. May extend long distances. The roadway network usually connects to residential neighborhoods immediately along the corridor or behind the uses fronting the roadway.	Single-Family or Multi-Family Residential, Institutional, Neighborhood Scale Retail, or Office	1 to 3, with some taller buildings	Both detached and attached buildings with no setbacks or up to medium (<75') front setbacks	Yes	Mostly on side or rear; occasionally in front	>100	<3,000	<500	>4	N/A	>5	>5
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4) *2010 Designing Walkable Urban Thoroughfares: A Context Sensitive Approach*, Institute of Transportation Engineers and Congress for the New Urbanism.

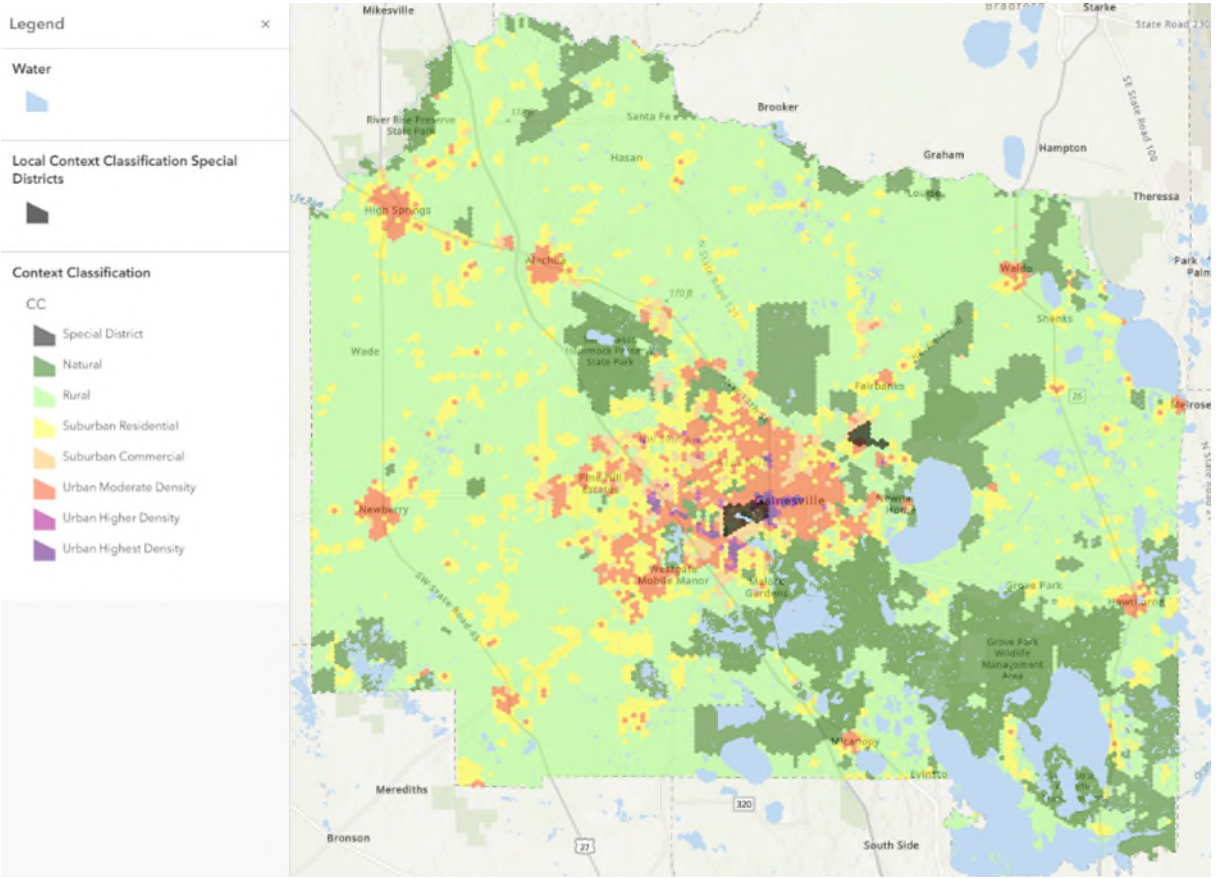
Key Measures

- Street connectivity differentiates urban, suburban, and rural
- Land use differentiates:
  - Rural Town from other urban contexts
  - Suburban Commercial from Suburban Residential
  - Natural from Rural
- Population/employment density differences Urban Center from Urban Core

Preliminary Local Context Classification

What is FDOT Providing?

- Layers for individual measures
- Preliminary *existing* context classification for buffer areas



Example Output

Preliminary Local Context Classification

What is FDOT Providing?

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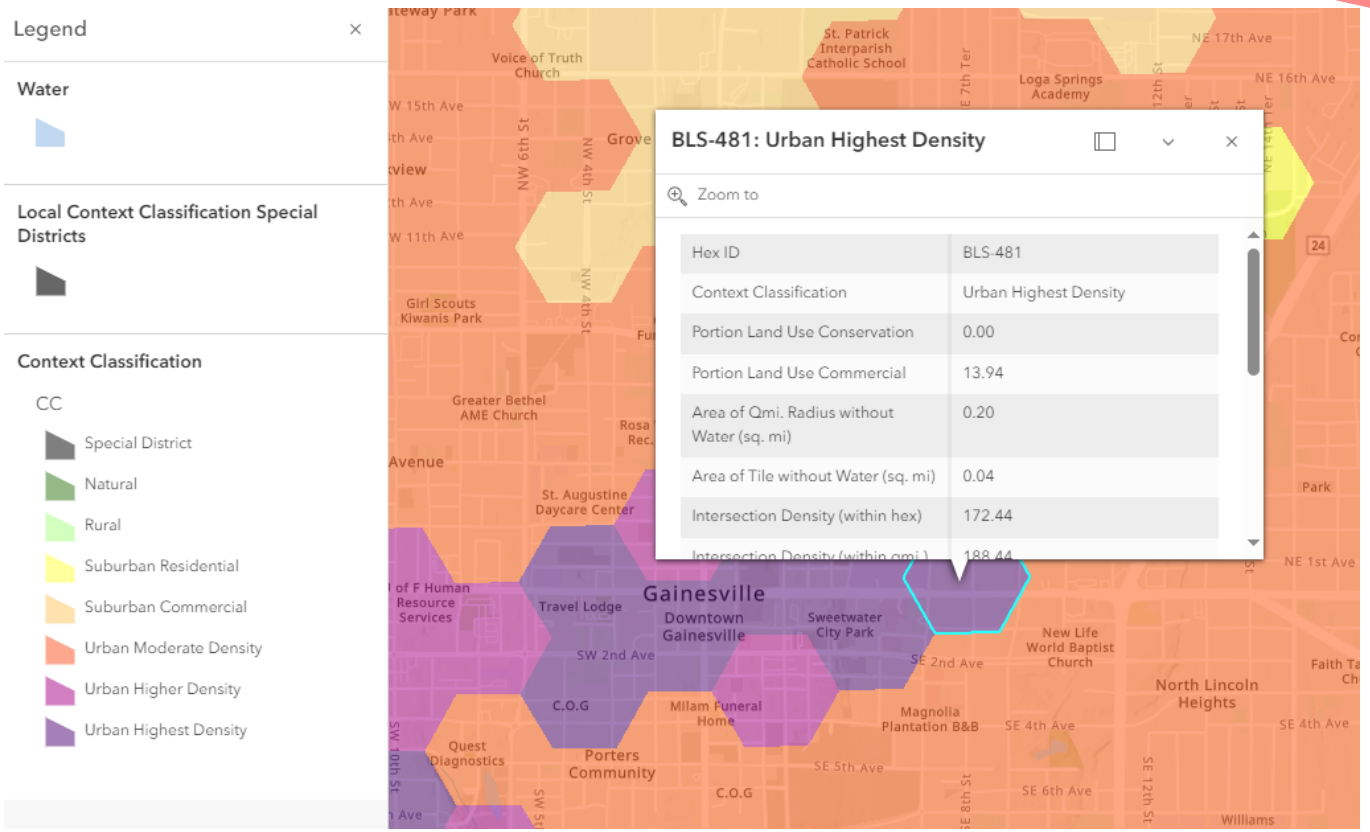
- Preliminary *existing* context classification for buffer areas



Example Output

Preliminary Local Context Classification

Options for local agency application:

- Assign context classification to local street network
- Refine transition points
- Determine future context classification

Preliminary Local Context Classification

Worked with 3 pilot counties to test the method:

- Mix of urban, rural, and suburban
- Mix of common challenges
- Local agency champion

Preliminary Local Context Classification

- Pinellas
  - Fully built out with a mix of urban and suburban development
  - Development pressure is primarily infill development
  - Barrier islands
- Hendry
  - Rural inland county
  - Explore thresholds of what makes a rural town different from a developed intersection and a suburban community
- Alachua
  - Includes City of Gainesville and several smaller towns
  - Explore interactions with large college campus

Pilot County Meetings

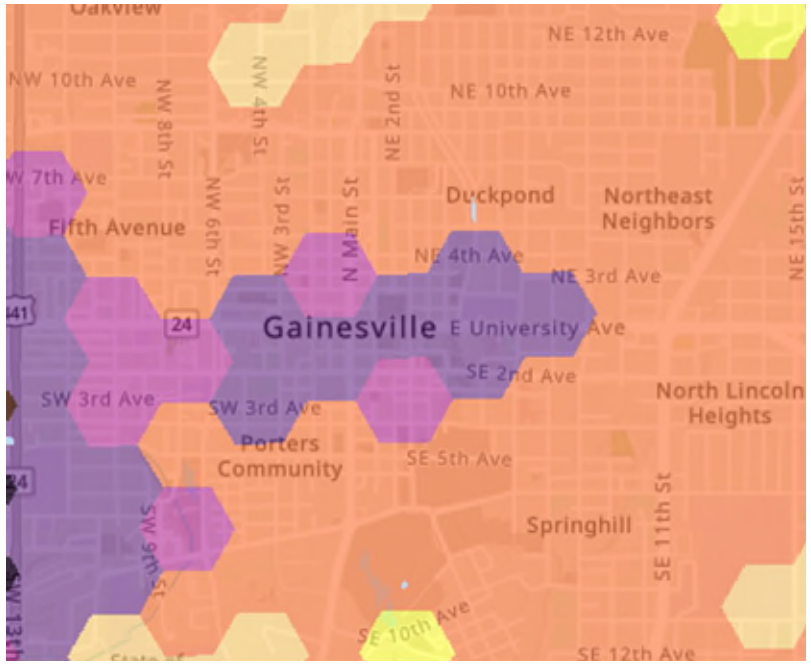
Key Themes:

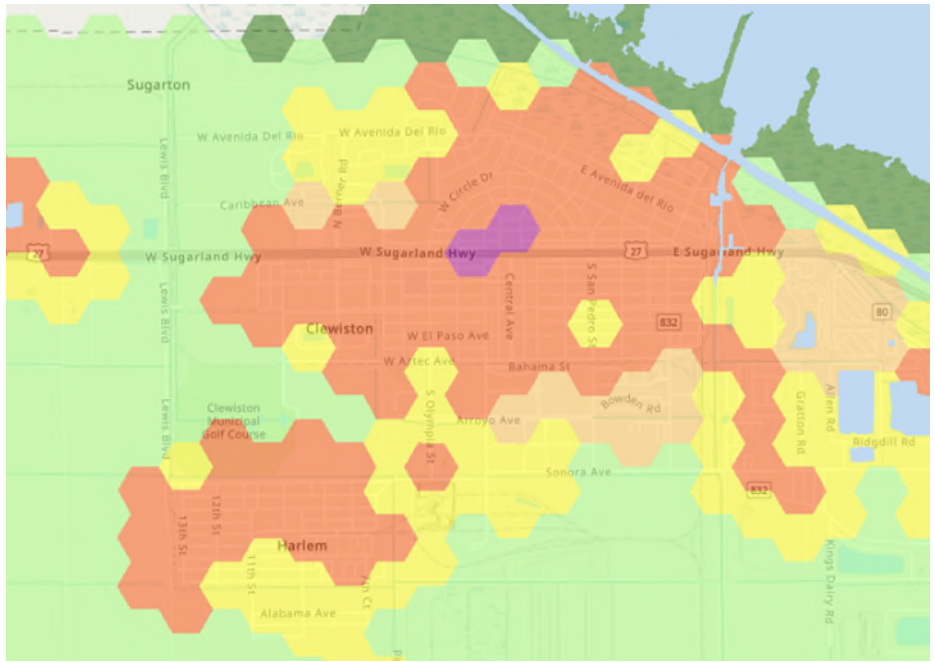
- All three counties had GIS resources to use the data
- Alachua and Hendry expressed concern over use of “Rural Town” term
- Alachua and Pinellas have areas that are rapidly changing and may be challenging to classify with existing data
- Generally using mix of Greenbook and FDM for roadway design
- Request for additional training and outreach

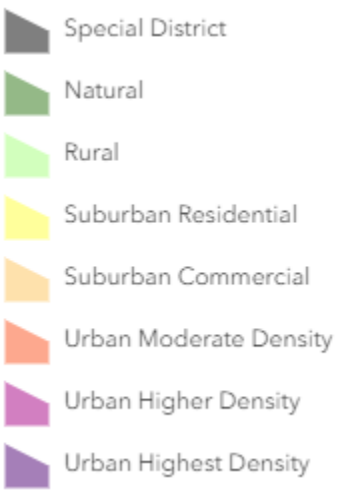
Pilot County Meetings

Key Themes:

- May be value in identifying city centers even if C6 does not apply to state roads



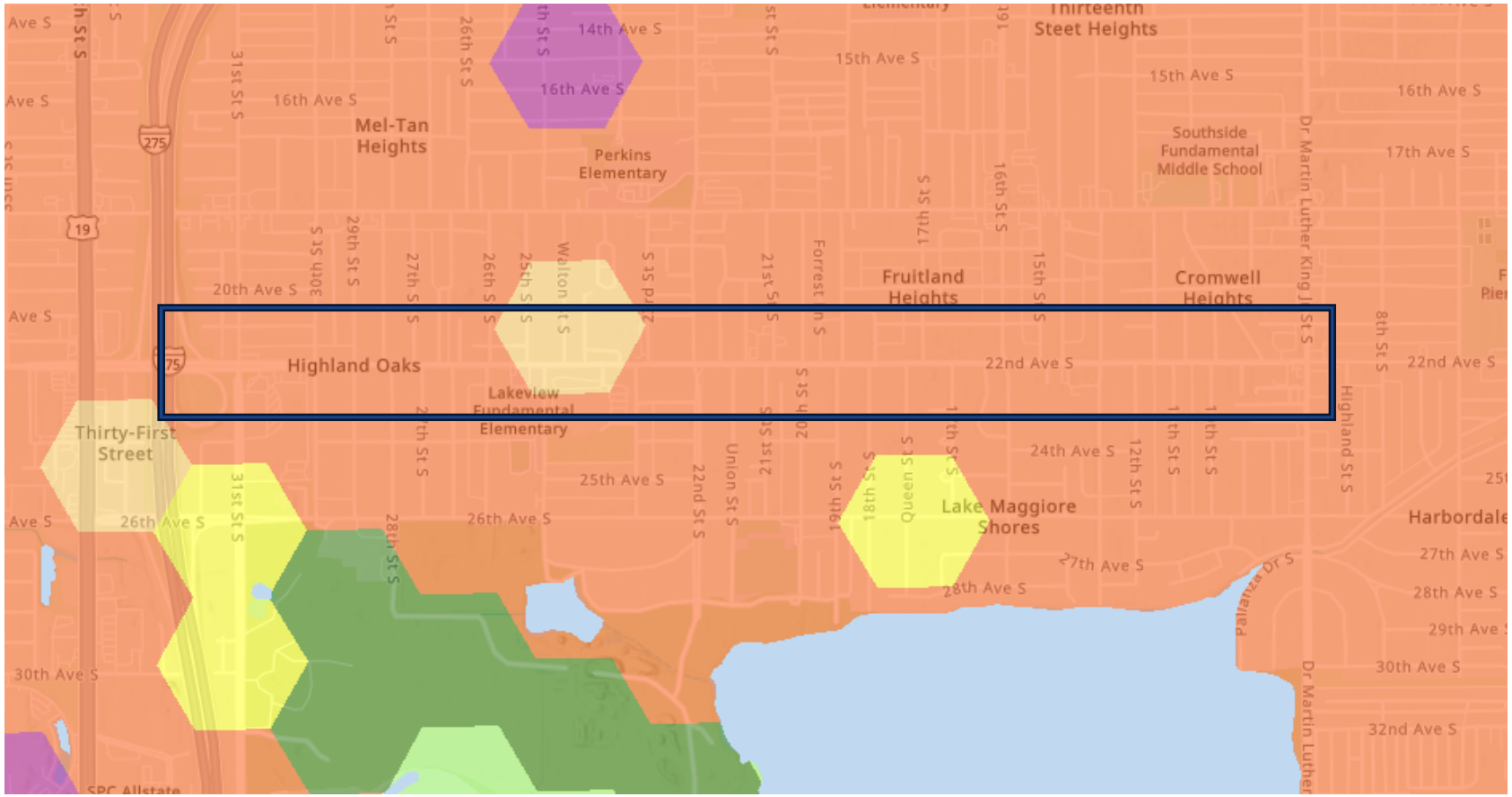




Potential Application

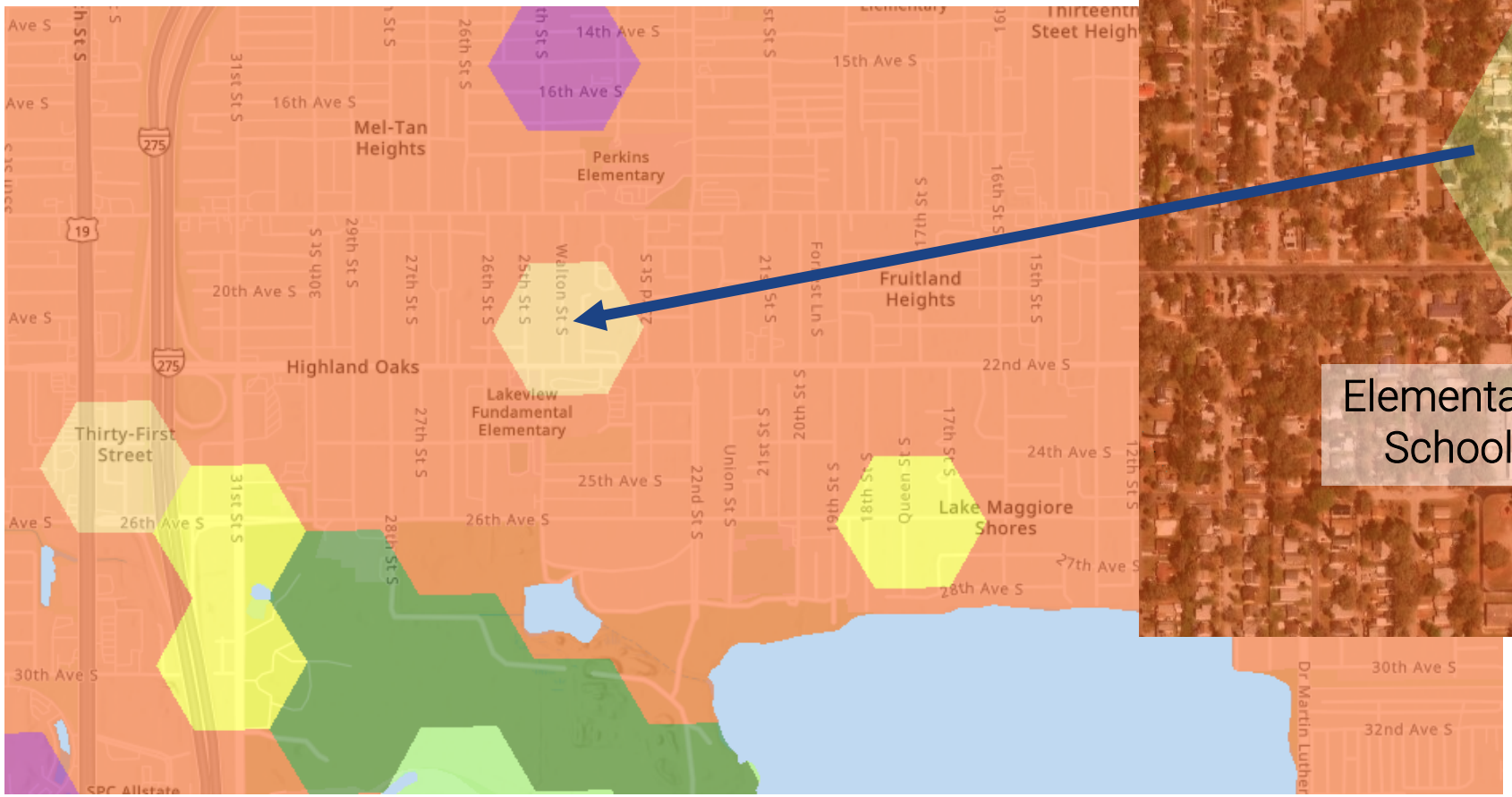
1. Project Level Review

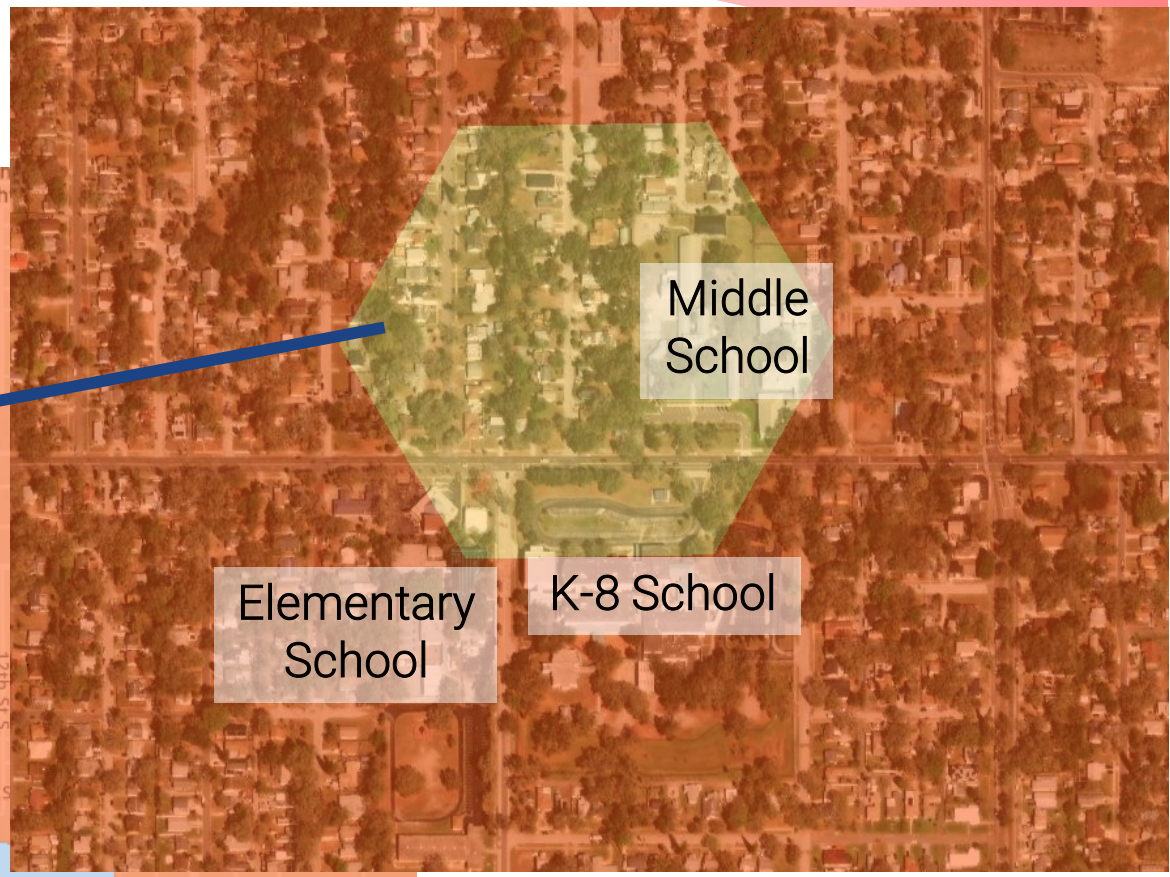
Corridor Project: Preliminary Context Classification is Primarily Urban with One Suburban Area



1. Project Level Review

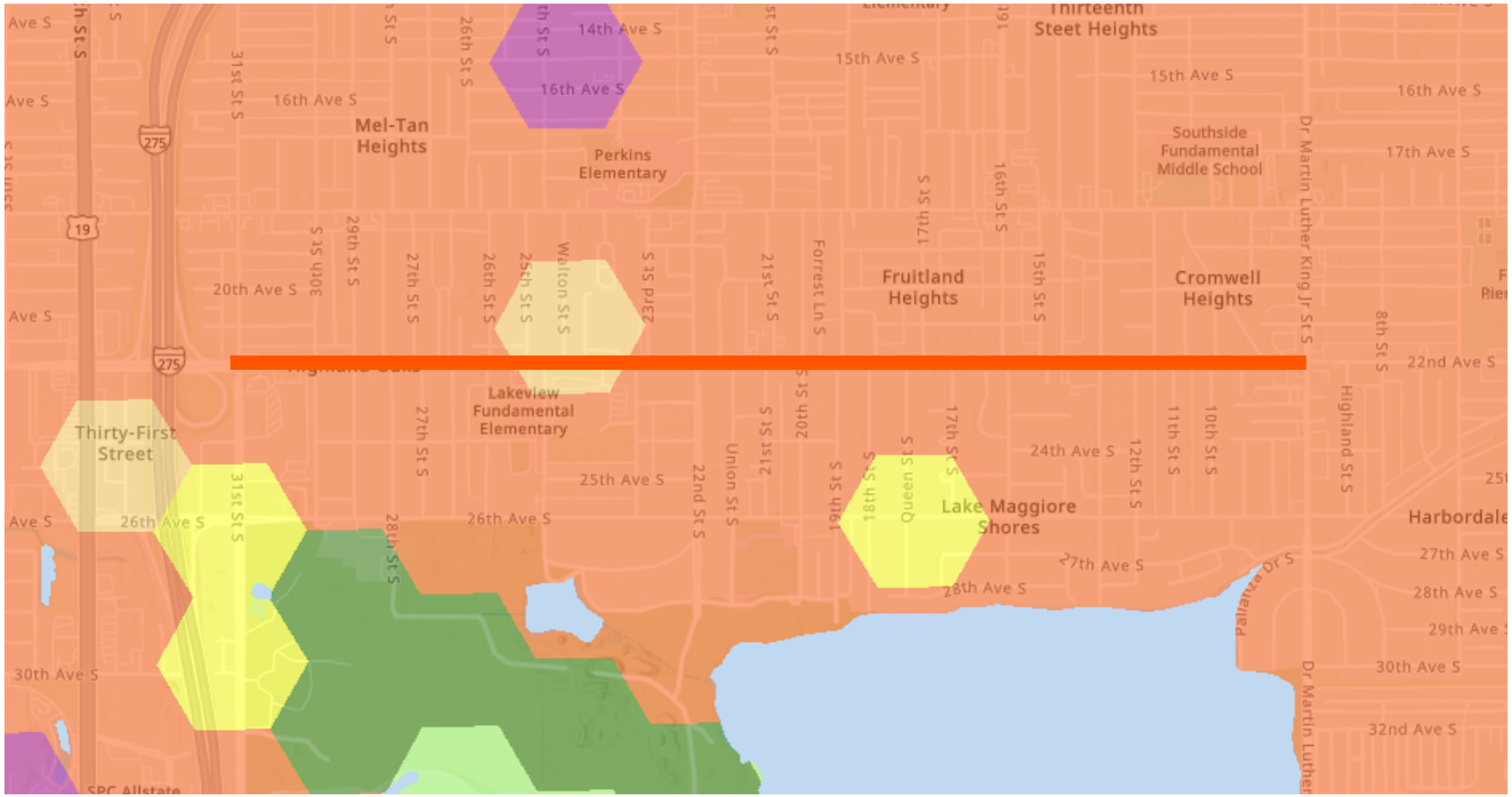
Several schools with large parcels create fewer network connections, leading to a preliminary suburban context





1. Project Level Review

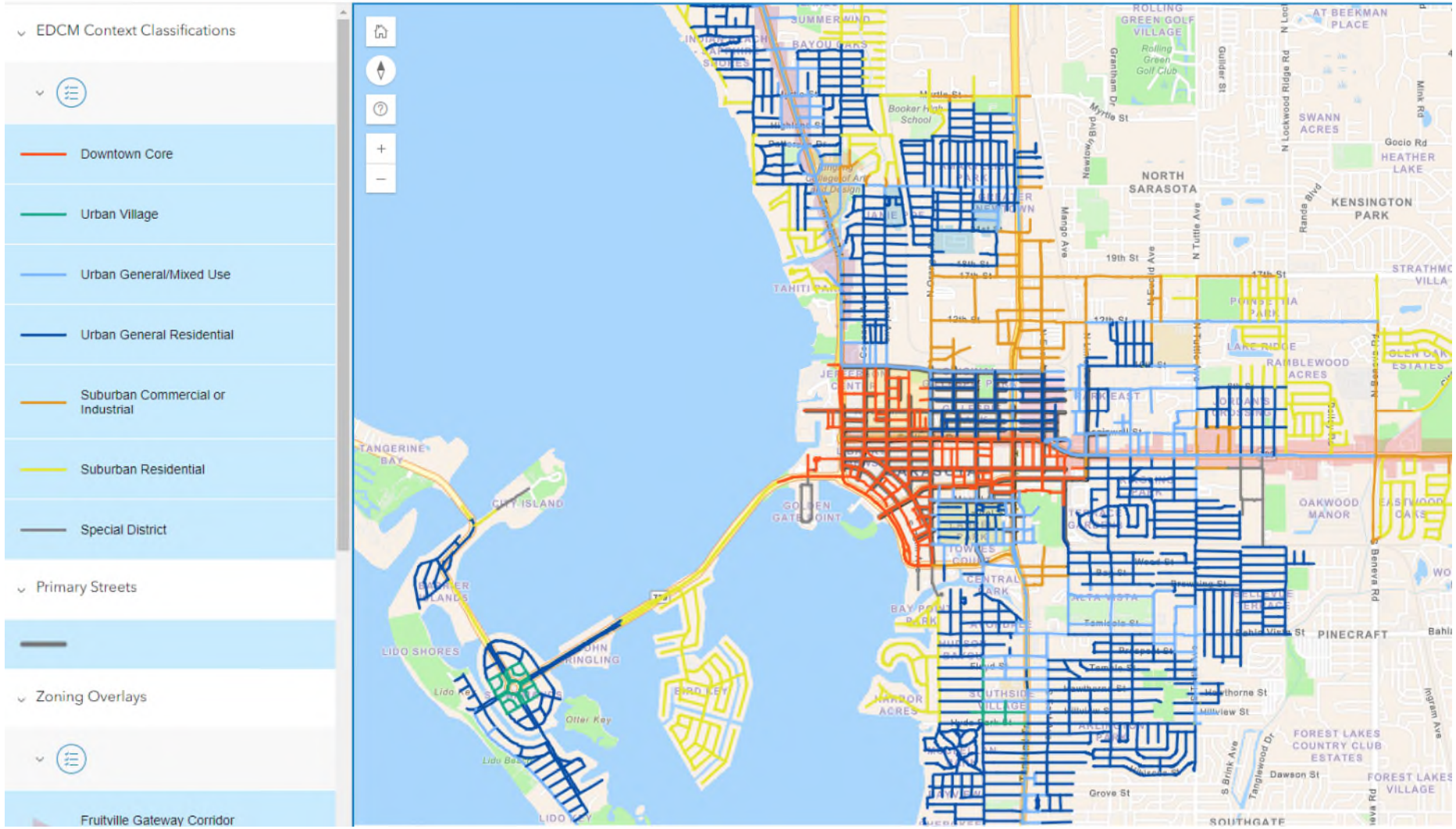
Outcome: Assign a consistent urban context for entire corridor



- Special District
- Natural
- Rural
- Suburban Residential
- Suburban Commercial
- Urban Moderate Density
- Urban Higher Density
- Urban Highest Density

2. Preliminary Systemwide Assignment

City of Sarasota DRAFT Context Classifications



3. Model Recalibration

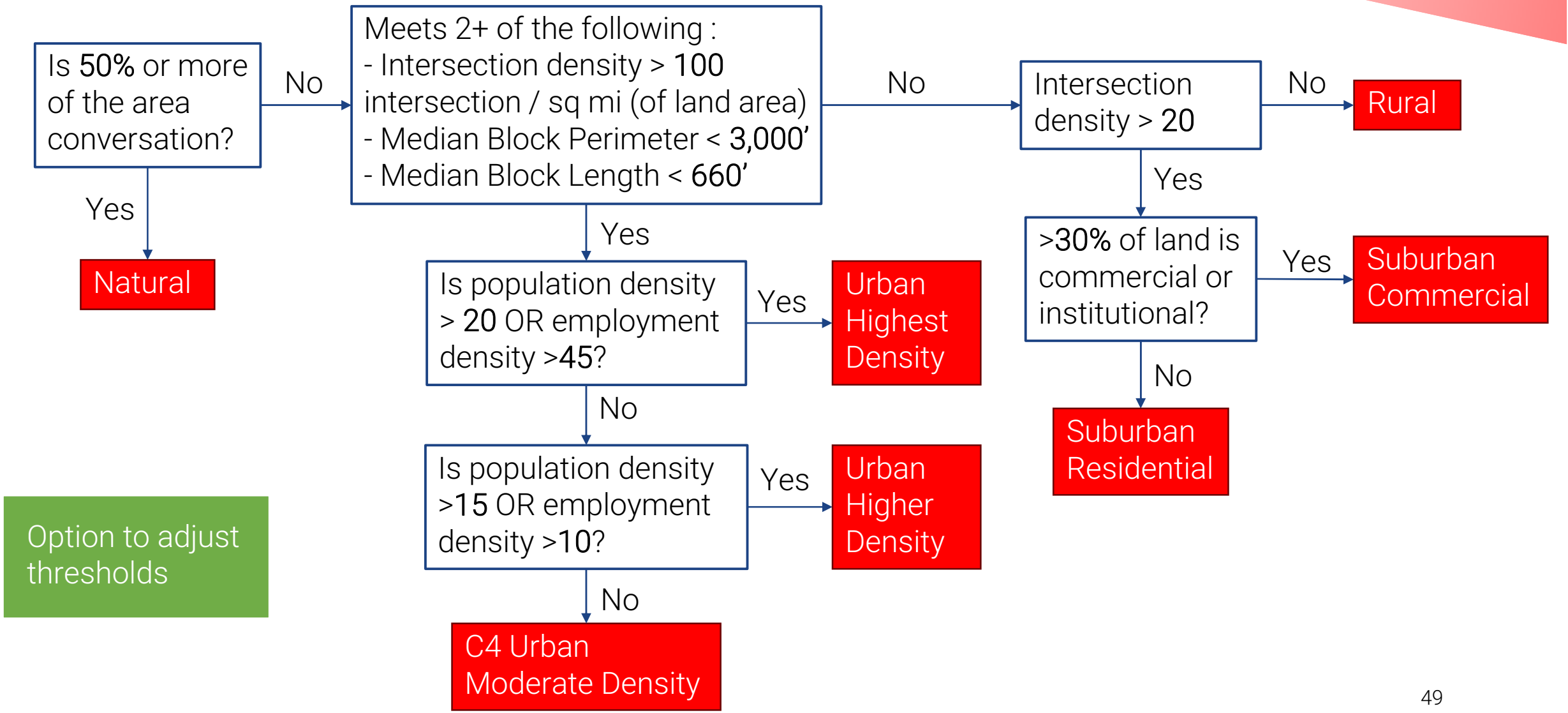
Data provided:

- Intersection density per square mile
- Average/median block perimeter
- Average/median block length
- Population density
- Employment density
- Existing land use

Option to incorporate additional data sources

Examples: Building footprint, location of parking

3. Model Recalibration



Break Out Groups

Focus Group Discussion

- How could this be useful to you? To your community? To communities that are unlike yours?
- What training would be helpful?
- What type of staff/resources are needed?
- How could this impact other chapters of the Greenbook?

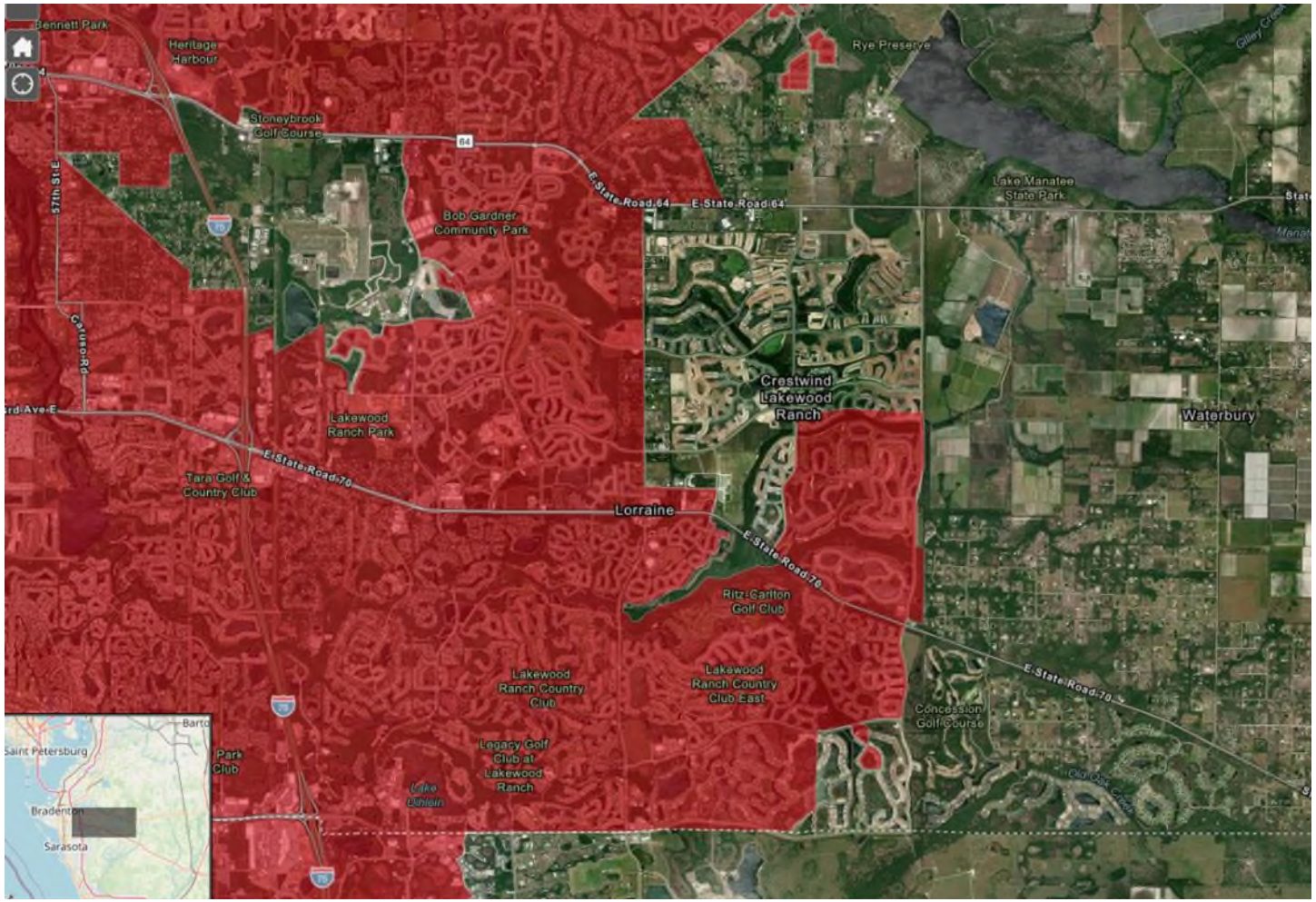
Report Back

Relationship to FHWA Urban/Rural Designations

Urban/Rural Boundary

- FHWA Urban boundaries impact:
  - Functional classification – historically how design criteria was applied
  - Performance monitoring – annual highway statistics (i.e., lane and centerline miles, vehicle miles traveled)
  - STBG Apportionment Formula – Affect where funds may be spent within a State, not how much funding the State receives

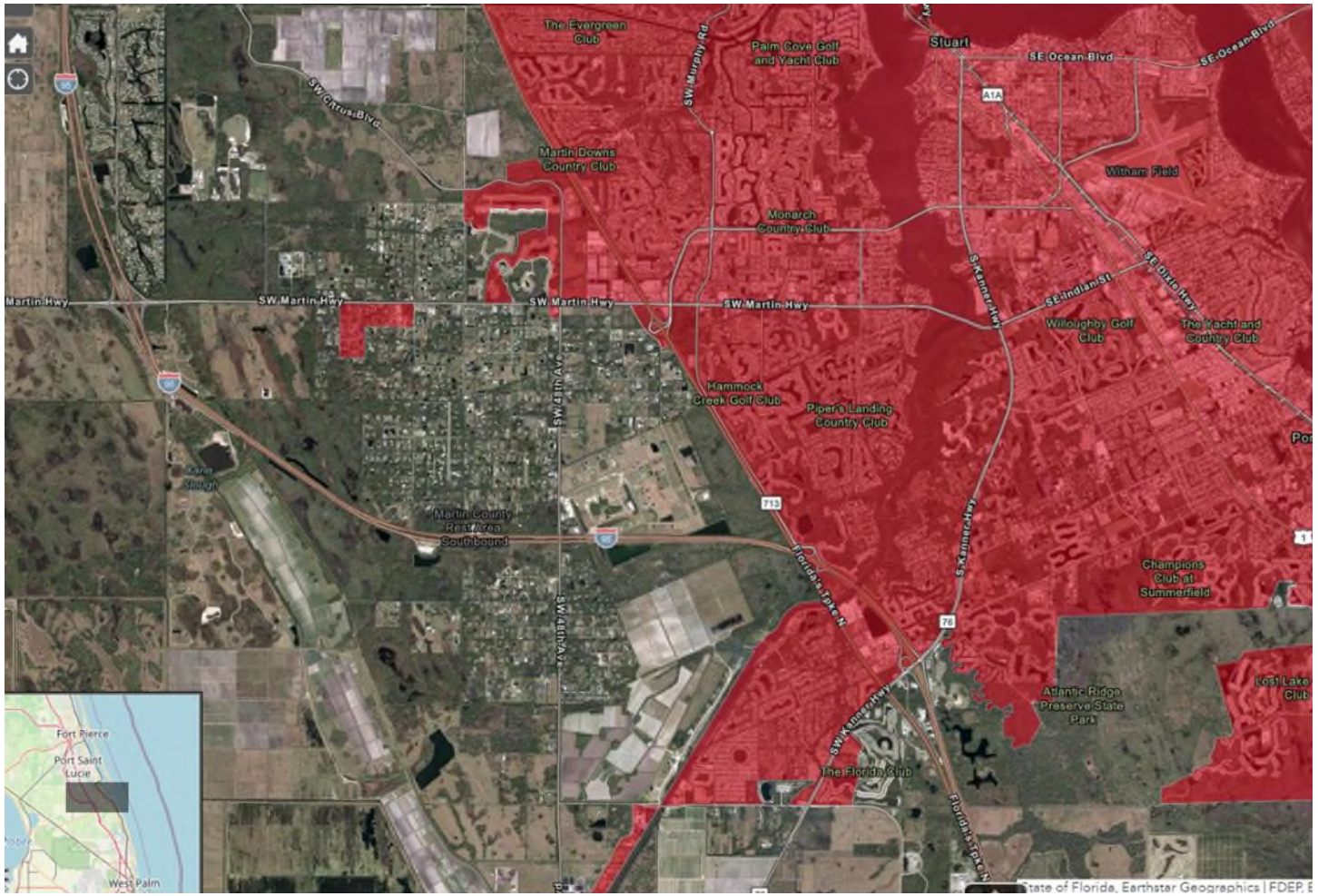
Urban/Rural Boundary



2020 update not keeping up with development

2020 Census Urban Area Boundary

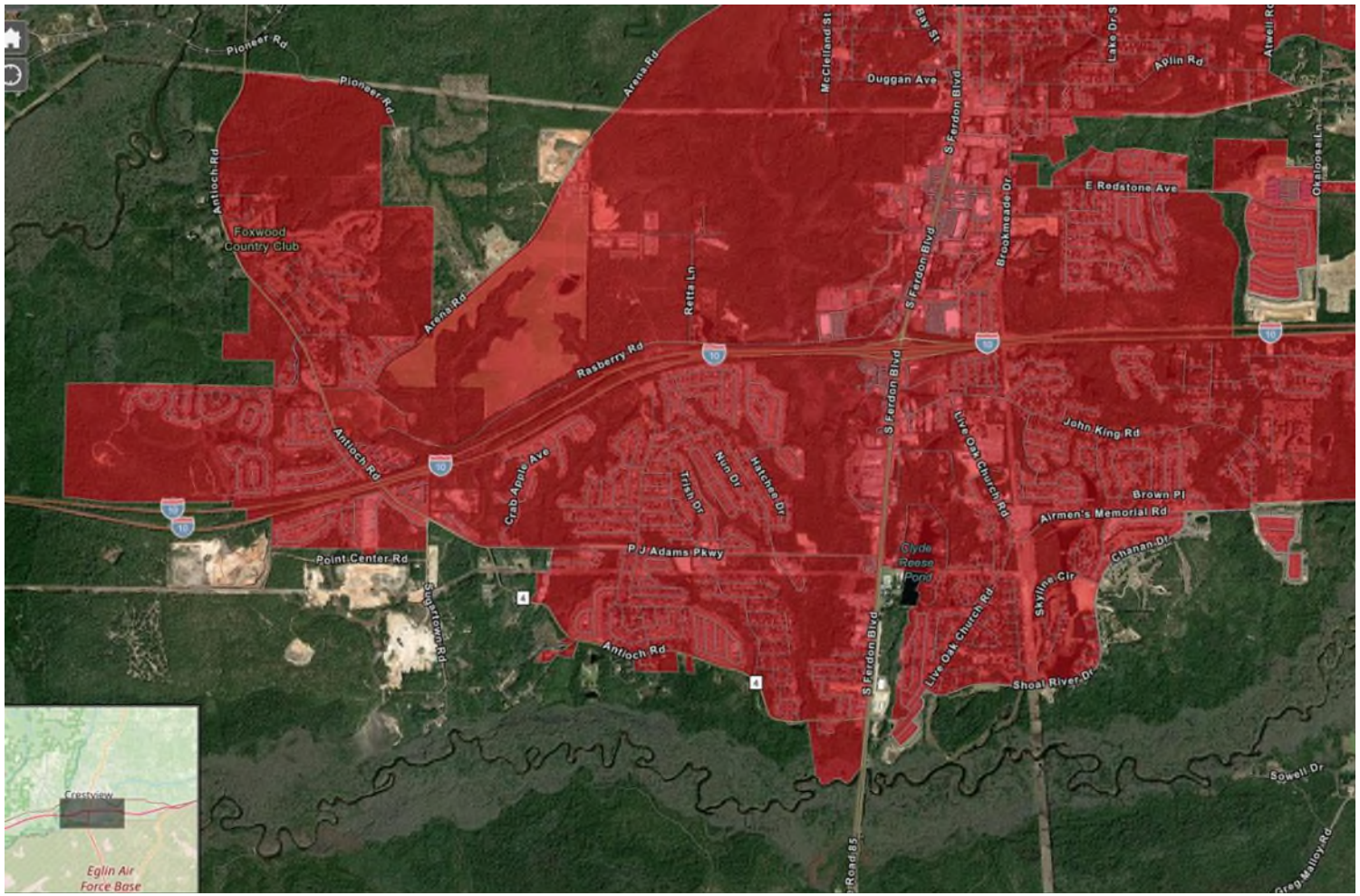
Urban/Rural Boundary



Older communities left out of urban boundary

2020 Census Urban Area Boundary

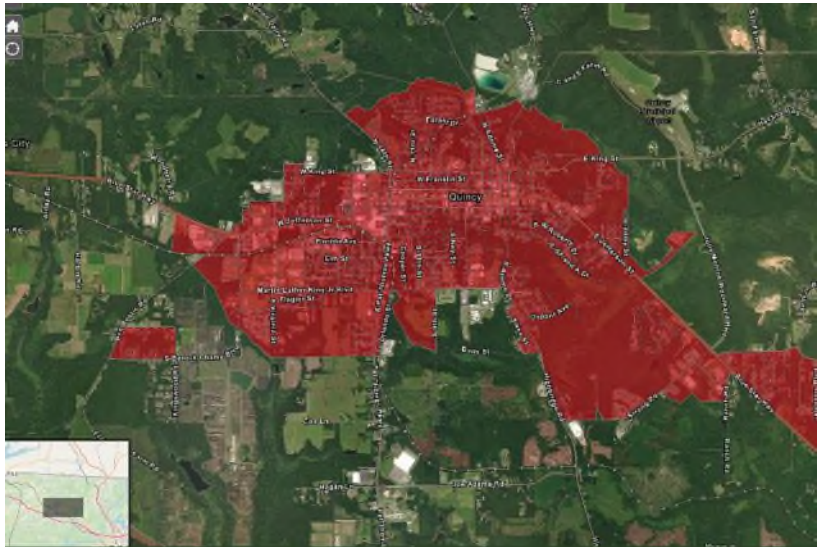
Urban/Rural Boundary



Undeveloped areas included in urban boundary

2020 Census Urban Area Boundary

Urban/Rural Boundary



Quincy, FL

High Springs, FL

Inconsistency in how rural towns are classified

2020 Census Urban Area Boundary

Preliminary Local Context Classification

Based on Existing Data

- Street connectivity - US TigerLines
  - Intersection density
  - Block Length
  - Block Perimeter
- Land Use – Florida Department of Revenue
- Population Density – 2020 Census
- Employment Density – Longitudinal Employer-Household Dynamics (LEHD)

DELIVERING RESILIENCE IN TRANSPORTATION

presented to

Florida Greenbook Advisory Committee Annual Meeting

presented by

Tony Frye, State Transportation Resilience Officer, Office of Environmental Management

04.17.2024

FDOT RESILIENCE POLICY

"It is the policy of the Florida Department of Transportation to consider resiliency of the State's transportation system to support the safety, mobility, quality of life, and economic prosperity of Florida and preserve the quality of our environment and communities. Resiliency includes the ability of the transportation system to adapt to changing conditions and prepare for, withstand, and recover from disruption. […]" (2020)

RESILIENCE ACTION PLAN

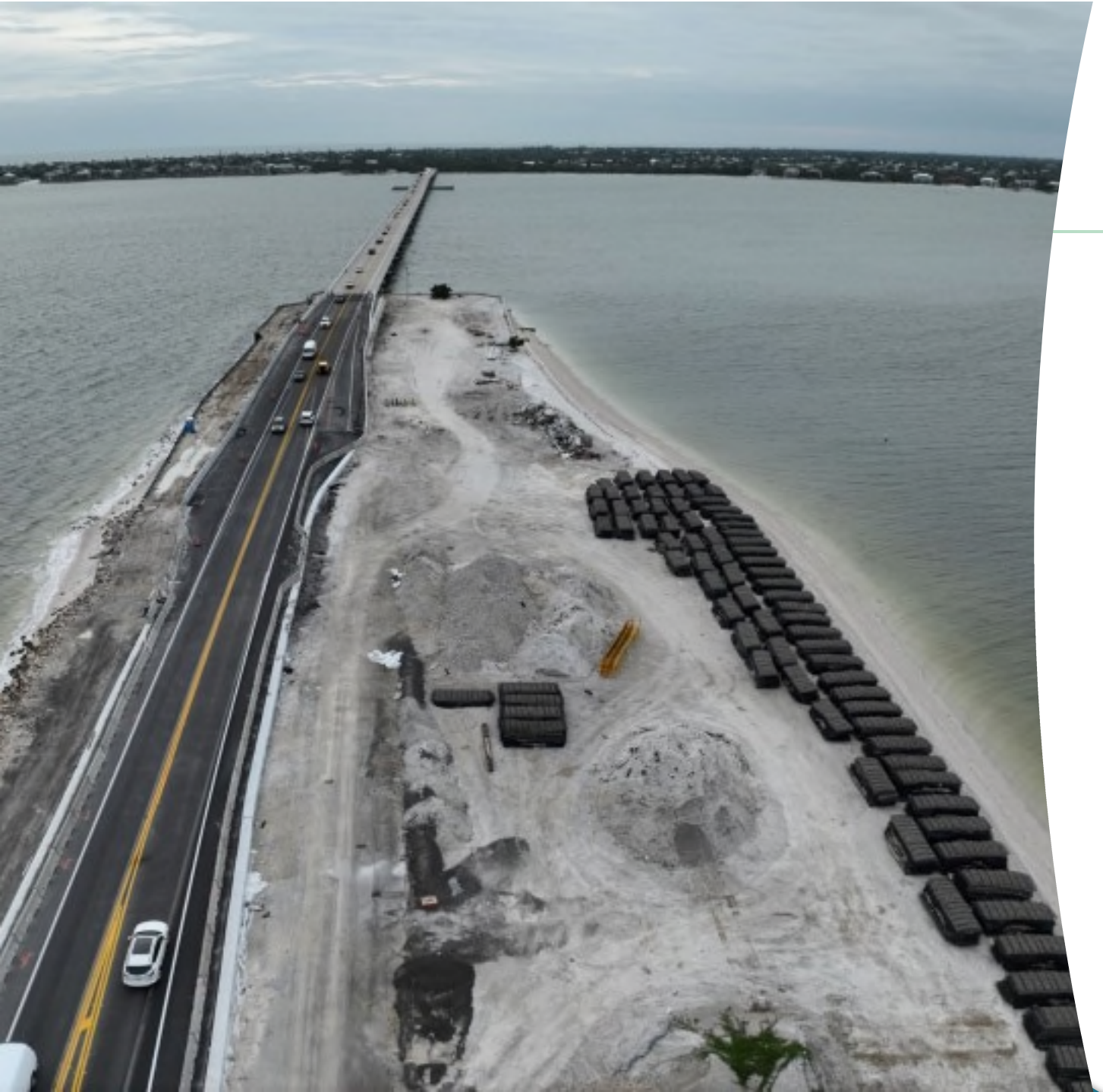
- Directed by Section 339.157, F.S. in 2022 Legislative Session
  - Clearly explain how FDOT is addressing current and future impacts of changing conditions on the State Highway System; what FDOT is doing to address them, including identifying areas of opportunity for change; and efforts taken to enhance partnerships to address multijurisdictional resilience needs.
- Resilience Action Plan (RAP) (Published in June 2023, Requirement for Triennial Updates Thereafter)
  - Hazards Encompassed: Coastal and Inland Flooding and Storm Surge
  - Assets Included: State Highway System
- https://www.fdot.gov/planning/policy/resilience/resilience-action-plan

FEDERAL PROTECT PROGRAM

- Promoting Resilience Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT)
  - Included in the Infrastructure Investment and Jobs Act (November 2021)
  - Statutory Emphasis on Incremental Improvements and Natural Hazards
  - Between $250 and $300 Million Annually to Competitive Discretionary Grants Nationally

CURRENT FDOT RESILIENCE ACTIVITIES

- PSEE Resilience Tracker Module Available for Use in All Projects
- ETDM Resilience Reports Available for Use in Project Development
- PD&E Manual Resilience Chapter (July 2025)
- Development of Statewide Resilience Website

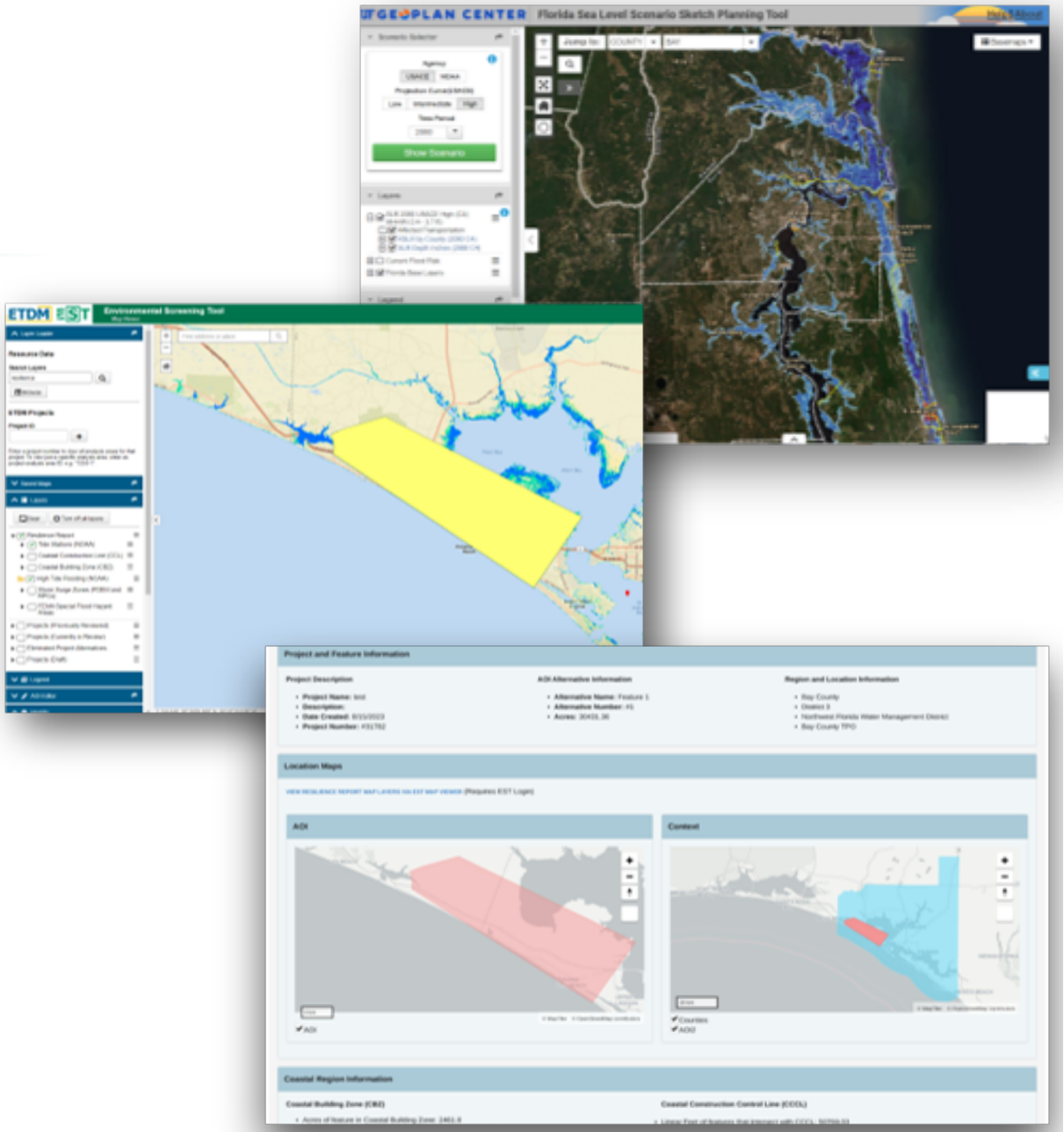


UPCOMING ACTIVITIES AND ENGAGEMENT

- Targeted Training Opportunities
- Conferences and Workshops with Local, State, and National Partners
- Supporting Update of FDEP SLIP Study

EXISTING RESILIENCE TOOLS

- Sea Level Scenario Sketch Planning Tool (Planning)
  - https://sls.geoplan.ufl.edu/
- RAP Data Viewer (Planning)
  - Link
- Environmental Screening Tool (EST) Area of Interest (AOI) Tool Resilience Report (Project Development and Environment)
  - https://www.fla-etat.org/est/secure/ (Access Limited)
- Project Suite (PSEE) Resilience Tracker Module (Design)
  - https://projectsuite.dot.state.fl.us/Pages/Home/Home.aspx



INHERENT RESILIENCE

- Ch. 3 Geometric Design
  - C.8.b.6 Roundabouts
- Ch. 5 Pavement Design and Construction
  - B.1.a Unpaved Roadway Material Selection
  - “The material chosen should exhibit low potential for losses due to wind, traffic and water erosion.”

INHERENT RESILIENCE

- Ch. 18 Signing and Marking
  - C.3.b Installation
  - “Due to the possibility of hurricane strength winds, overhead street name signs should not be installed on span wire but should be mounted to the strain pole or mast arm.”
- Ch. 20 Drainage
  - D.1 Watershed Approach to Evaluate Regional Stormwater Solutions (WATERSS) *Proposed

WHAT IS RESILIENCE?

GROUP ACTIVITY – RESILIENCE INTEGRATION

- What is resilience and how does or should it play a role in the Greenbook?
- How do you communicate internally and externally about resilience?
- What hurdles do you encounter in communicating resilience?
- What highlights of doing resilience related projects has worked?
- What hasn't worked?
- What is missing?


KEYS TO
THE
TOOLBOX

GROUP ACTIVITY – RESILIENCE APPLICATION

- What tools do you use to measure risk for integrating resilience into project delivery?
- How do you share data and seek information to inform decision-making?
- What works?
- What is missing?

HOW DO WE MAKE ENDS MEET?

QUESTIONS

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Office of Environmental Management

ENVIRONMENTALLY RESPONSIBLE TRANSPORTATION DELIVERED