



TSM&O CONSORTIUM MEETING SUMMARY

Meeting Date: August 24, 2017 (Thursday) **Time:** 10:00 AM – 12:00 PM

Subject: TSM&O Consortium Meeting

Meeting Location: FDOT's Orlando Office
133 S. Semoran Blvd., Orlando, FL
Lake Apopka B Conference Room

I. OVERVIEW

The purpose of this recurring meeting is to provide an opportunity for District Five FDOT staff and regional agency partners to collaborate on the state of the TSM&O Program and ongoing efforts in District Five.

II. TSM&O DOCUMENTATION UPDATE – DAVID WILLIAMS, VHB

David Williams (VHB) gave a brief update to Consortium members on the status of District Five TSM&O Documents:

- Planning for TSM&O Guidebook – Final version submitted to FHWA
- TSM&O Implementation Plan – Initial Document complete, available for review at <http://www.cflsmartroads.com/tsmo.html>
 - This is a living document that will be updated as the District's TSM&O program evolves
- TSM&O Tools and Resources – Table complete as part of the District Five TSM&O Implementation Plan (Chapter 8)
- Network Services Labor-sharing agreement – draft submitted to FDOT Legal for review and further development
- TSM&O Strategy Guide – to commence development shortly

III. SIGNAL TECHNICIANS – DAVID WILLIAMS, VHB

David Williams provided a brief explanation of the District's efforts to improve the labor pool of available signal technicians for local, regional, and state agencies, as well as for private firms.

- During the June Consortium, local agency presenters indicated a lack of signal technicians to hire as staff
- District Five saw an opportunity to develop a curriculum/program in partnership with local postsecondary institutions
- District Five has identified Orange Technical College as a potential partner in developing a program that can provide a pipeline of entry-level signal technicians
- Question: Are you also working with traffic signalization training, not just computer-related training?
 - Answer (Jeremy Dilmore, FDOT District Five): The schools have to meet criteria in order to receive funding, so we'd like to use programs they already have in place to use as a pipeline. A networking background is a positive, and we will work on more details later.

- Question: Will the schools be teaching or will this be done through the municipalities?
 - Answer (Jeremy): These schools have CompTIA graduates, but no jobs, the first step is that we'd like to take graduates that are already available. Eventually, we'd like to influence their curriculum, but there are requirements in place so this will be a long-term process.
- Comment: Maybe we could also pull from other backgrounds (electrical and others). Locators move on to be a signal technician. It would be great if we could have someone that would work with electric as well as computers.
- Question: Could we create a one-minute recruiting video to communicate what we're doing and what the need is; something like a short sales pitch
 - Answer (Jeremy): Agreed, this is a good idea
- Question: Could we map out a career path and show them the difference between a government job and a private contractor
 - Answer (Jeremy): We'd like to be able to track graduates, but the schools did not have any data on their students
- Question: Is this being done statewide?
 - Answer (Jeremy): At the statewide meeting, I was told that they weren't even aware it was a problem
 - Comment (Joe Perri, VHB): My experience in working with agencies around the state would indicate there is a lack of signal technicians statewide
- Hiring Path Questions
 - Question: What is the path for other agencies? Ours start out as a journeyman and give incentives.
 - Comment: We all have the same problem, but we are comparing our hiring problems to each other so we aren't making any progress
 - Comment: We'd like to be able to provide some suggestions to HR to make a state standard and make it easier to push change through
 - Answer (Jeremy): Would we be able to build a list of how other agencies are building a pipeline to build some best practices?
- Question: Does state management realize that if we can't hire signal technicians we will have to opt out of maintaining the state signals and roads and then FDOT will be stuck with that problem? Local agencies have a great opportunity to opt out under the maintenance contract.
- **UPDATE:** Following the Consortium meeting, a conference call was held with instructors of the networking program at Orange Technical College. It was determined they have a viable 12- to 18-month program that should correlate well with the needs of the region regarding signal technicians; additional coordination with the College will be necessary
- More details regarding this District Five initiative will be provided at the next Consortium meeting

IV. SIGNAL DATA AGREEMENT, TTS – JEREMY DILMORE, FDOT DISTRICT FIVE

Jeremy Dilmore provided a status update on the discussions between FDOT District Five and Traffic Technology Services, Inc. (TTS) regarding a signal data agreement. Jeremy indicated he understood various local agencies were also in discussions with or have been approached by TTS, and he wanted to update everyone on the District's position. Jeremy noted this presentation was meant to provide additional information for the Consortium stakeholders' benefit; he advised that local agencies should do what is best for themselves based on their specific needs and situations.

- Initial Discussions (*What we thought the deal was* slide)
 - Signal Timing and Phasing data, and connection to MAP and SPaT messages

- TTS repackages this data and sends it to OEMs such as Audi
- Projections created, for connected vehicles to use
- Removes the need for DSRC
- District Five would share data with TTS who would in turn relay data back to the District for its own purposes
 - In this arrangement, FDOT is a mutual partner
- Agreement #1 (written agreement provided by TTS)
 - TTS wanted to sell back to District Five the data that they collected from District Five
 - In this arrangement, FDOT is a customer
- Agreement #2, made FDOT no longer a paying customer, but made language vague
 - Appears to give public access to data to make it justifiable
- FDOT will request copy of Gainesville agreement and can share language that Gainesville agreed to
- Las Vegas negotiated to be compensated for the data; it is unknown how much the compensation entailed. FDOT is trying to get a copy of the LV agreement.
- FDOT is not negotiating to get paid
- Jeremy would strongly suggest to local agencies to seek payment from TTS
- Others were told they would install everything and they would own the software
- **UPDATE:** shortly after the Consortium Meeting, the Department and TTS developed an updated draft agreement
 - TTS has indicated it would like to partner with local agencies in a similar fashion; further, TTS has noted that a one-time set-up fee *reimbursement* for participating local agencies is available if an agreement is signed by December 31, 2017
 - The amount of the one-time set-up fee reimbursement, as well as the mechanism for the reimbursement, will be determined through individual negotiations with TTS

V. DATA-DRIVEN ANALYSES – JEREMY DILMORE, FDOT DISTRICT FIVE

Jeremy Dilmore presented on a series of data-driven analyses performed by the District to see how well MPO/TPOs are programming projects in their Transportation Improvement Program (TIP) and Priority Projects List (PPL) that target problems identified in the analyses. These analyses were conducted using data available to the District, and were mapped using GIS software. Jeremy indicated this exercise was not meant as a critique, but as a showcase of how data-driven analyses could be used to help local agencies identify problem areas and focus points for future studies and/or improvements. The maps included an overlay of the MPO/TPO's 2016/17 TIP projects with the problem areas. Tables were also developed comparing the problem areas with programmed projects in the MPO/TPO's 2017/18-2021/22 TIP and PPL.

- This presentation served as a preview for local agencies to show what kind of analysis will be possible with the upcoming Planning Dashboard
- Crashes, Congestion, and Capacity were measured and mapped
 - Crashes were illustrated as "hotspots" using Signal Four Analytics crash data from 2014-2016
 - Congestion was illustrated by *Jam Factor*; a proprietary formula/value provided by HERE Data and normalized across the country
 - Capacity was illustrated along roadway segments using data from the FDOT Roadway Characteristics Inventory (RCI) Database
 - All facilities indicating a Level of Service (LOS) F were shown; the facilities with the worst volume/capacity (v/C) ratios were highlighted in red and compared against current TIP and PPL projects

- Jeremy briefly showed maps from all 5 district 5 MPOs, further analysis of this data can be seen in *Appendix B*
 - Hotspots are imprecise but provide a strong visual representation of where we may need to build projects
 - These hotspots are created using the *Kernel Density* tool in ArcMap
 - For more information on this tool, visit <http://pro.arcgis.com/en/pro-app/tool-reference/spatial-analyst/how-kernel-density-works.htm>
 - Jam Factor can be used to illustrate potential congestion project needs
 - Helps show a broader look and perspective at where to invest
 - Capacity Analysis illustrates the Level of Service for facilities in the region
 - This shows that all three measures are different, and show different roads to focus on, we should not just assume that they all correlate completely
 - The capacity analysis used current Annual Average Daily Traffic (AADT) data from the RCI Database; it does not account for those facilities that have such significant congestion that traffic counts cannot get an accurate measure of volume along the facility
 - This is a data constraint
 - Due to time constraints and data availability, facility limitations related to physical, financial, or policy constraints were not considered in this capacity analysis
 - This consideration will be necessary as MPO/TPOs program improvements to alleviate issues along these facilities
 - The District is developing a “constraints” dataset that will be available as part of the Planning Dashboard
 - In using this data, practitioners need to be mindful about addressing the whole system and not just implementing an improvement that shifts a bottleneck or hotspot from location to another
 - District Five looks forward to making this data available to local agencies to be used for a diverse range of uses beyond operations.
 - **Holistic decision-making from system-wide planning to operations**
 - Question: Is the HERE data available to take a look at weekend data for communities on the coast?
 - Answer (Jeremy): Yes, it is available. The Planning Dashboard will be set up so that the user can adjust what data is collected based on their data needs
 - For example, Volusia County users can specify to look at HERE data for Saturdays and Sundays during a defined time period
- Key Takeaways
 - MPOs already do a great job of programming according to their needs, but we'd like to be able to provide stronger tools to make data-driven decision-making easier
 - The Planning Dashboard should make data easier to access and reduce the duplication of data collection efforts
 - Still will need to consider local context and physical or policy constraints
 - Data constraints could limit the power of data-driven analyses; when assessing the Planning Dashboard outputs, users should keep in mind any data limitations associated with that output

- As specific subject matter experts, District Five wants to give local agencies the freedom to use the tool and look at the data from their perspective and collaborate with others around the same data
- Jon Cheney: Are these maps going to help us eventually get better funded? Sometimes local agencies have had issues getting funded for state road projects.
 - Jeremy: This is a broad tool that can be used for a diverse range of applications, including more informed applications and propositions
- The Planning Dashboard and its data will help users tell a better story to decision-makers;
 - Can help analyze past investments in order to choose projects that give us the best return on investment
 - Can provide decision-makers with strong performance metrics before and after project implementation

VI. CURRENT INITIATIVES – JEREMY DILMORE, FDOT DISTRICT FIVE

- Integrated Corridor Management Software (ICMS) – negotiations going well and are on budget.
 - Signal optimization tools – Data Fusion Environment (DFE) was slowed down. Looking forward to making a contract and starting the design process to get details and input on the design of the tools.
 - Would like to get something that is practical
- Hyper local weather reporting using camera networks (any camera on FL 511)
 - Question: Are you going to try video detection cameras as well?
 - Jeremy: We haven't tried that out, but that is an interesting proposition
- Active Arterial Management (AAM) Phase 2
 - Fixed some issues with BlueMac (AT&T and software data, and other issues with vendor)
 - Phase 3 is going smoothly; District Five has a good process in place
 - Would like to get internet access to put map behind the data points
 - Integrated well with SunGuide
 - 98% of matches in BlueMac are showing in Sun Guide
- Transit Signal Priority
 - Not getting the right communication from Siemens
 - When TSP was put on Siemens controllers, it did not work
 - Still in the hands of Siemens; trying to fix firmware issue that led to shortened pedestrian times (major safety issue)
 - Tried to use TransSuite to connect those who don't have centralized ATMS, but problems with Siemens controllers
- Consolidated Route and Mode Choice
 - Integrated route choice in a single application
 - We need to have real-time data for transit, because planned route data is not sufficient
 - Google can't justify a localized effort, but we can
 - Building an engine – not the app or the website – so that it can get into as many hands as possible
- ATSPM (Automated Traffic Signal Performance Metrics)
 - Server up and running; connected to Seminole county (UDOT)
 - Looking to make the software regional
 - Integrating with Github
 - When money isn't being made by those who control the lights, they aren't as interested
 - Working with Spectrum in order to get data down from signals and pulled into the dataset

- 8 to 1 ratio has worked thus far
 - Brevard County ATC controllers pointing to ATSPM Software
 - Would like to pull everyone across the district
 - Would like to upgrade 980s to ATC signals
- Traffic Management Center
 - Progress is slow because we are using dirt as the form instead of using wood form
- Operations Contracts
 - Begin on September 1
 - Volusia – HNTB/Metric
 - Brevard – HNTB
 - Osceola, Seminole, Orange, Lake – Metric
 - Marion, Sumter – HNTB
 - Expanding for arterial management
- Test for Think Client
 - Graphics processor not working well for them
 - TMC not working with Think Client
- Configuration of MIMS worked out with ITI
 - Still need to load devices
 - Would like to provide training
 - Domain trusts- conversation with Seminole, next is Orange to get ahold of CMS
 - Currently using remote desktops
- Sumter County Question: Congestion Management Grant Status
 - I-75 FRAME – procured the designer (Metric); Implementation scheduled for around November/December of 2018; construction time around a year
 - Connected Vehicle tied in
 - Could connect back to ICMS software
 - I-75 operations contract will need to be let
 - Provides preferential signal timing
 - This project is still 3 years out
- FDOT TSM&O Strategic Plan
 - On CFL Smart Roads -
http://www.cflsmartroads.com/projects/Project_approvedmasterplans.shtm
 - Five strategies
 - Better staffing
 - Gives Districts some direction
 - Developing Action Plan for what developments and funding will go into the 10-year cost feasible plan
 - Jeremy requested that Consortium stakeholders provide their feedback on the Strategic Plan

VII. ATTACHMENTS

- A – Sign in sheets
- B – Presentation Slides
- C – Meeting agenda

END OF SUMMARY

This summary was prepared by Jordan Crandall and David Williams, and is provided as a summary (not verbatim) for use by the Consortium Members. The comments do not reflect FDOT's concurrence. Please review and send comments via e-mail to dwilliams@vhb.com so they can be finalized for the files.



TSM&O Consortium Meeting

August 24, 2017

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Welcome to the TSM&O Consortium Meeting August 24, 2017



Transportation Systems Management & Operations



Meeting Agenda

1. Introduction
2. TSM&O Documentation
3. Signal Technicians
4. Signal Data Agreement
5. Data-Driven Analyses
6. Current Initiatives



TSM&O Documentation Update

David Williams, VHB



Transportation Systems Management & Operations



Status of D5 TSM&O Documents

- Planning for TSM&O Guidebook
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 - Table complete as part of the TSM&O Implementation Plan
- TSM&O Strategy Guide
 - Development to commence upon completion of Implementation Plan
- Network Services – Labor sharing agreement
 - Draft document submitted to FDOT Legal for review





District 5 Smart Roads

About TSM&O

District Secretary Steve Martin



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TSM&O

TSM&O is a program based on measuring performance, actively managing the multimodal transportation network, and delivering positive safety and mobility outcomes to the travelling public in Florida. The **FDOT District Five TSM&O Implementation Plan** can be accessed [here](#). Please forward any comments, questions or concerns to [Jeremy Dilmore](#) or [David Williams](#).

Vision:

Provide leadership and serve as a catalyst in becoming the national leader in mobility.

Mission:

Improve safety and mobility through the efficient application of traffic engineering principles and practices.



District 5 Smart Roads

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Questions?



Transportation Systems Management & Operations



Signal Technicians

David Williams, VHB

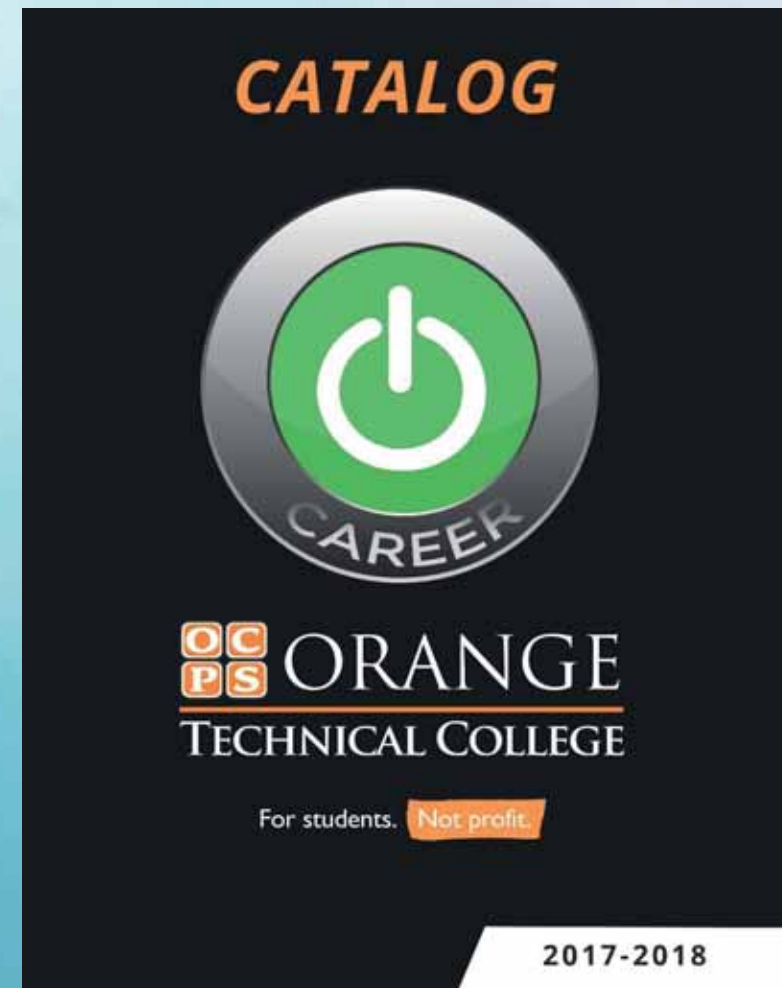


Transportation Systems Management & Operations



Help Wanted – Signal Technicians

- There is a staffing need for signal technicians in the region
 - Local/Regional/State Agencies
 - Private Firms
- District 5 has spoken with various postsecondary institutions
- Discussing potential curriculum that prepares students for immediate employment as signal technicians in the region
 - 6 to 12 month program?
- **Target Qualifications:** CompTIA certification; basic electronics training; possible preparation for CCENT and JNCIA certifications



Questions?



Transportation Systems Management & Operations



Signal Data Agreement with Traffic Technology Services, Inc.

Jeremy Dilmore, FDOT District Five



Transportation Systems Management & Operations



TTS Data Agreement

- General Overview
- Why data is important
 - Specific Value D5
- What we thought was going to be in the agreement
- What is in the agreement #1
- What is in the agreement #2



General Overview

- TTS is in business of collecting SPaT Data
- They repackage and send to OEMs notably Audi
- Audi uses the data to alert about phase changes

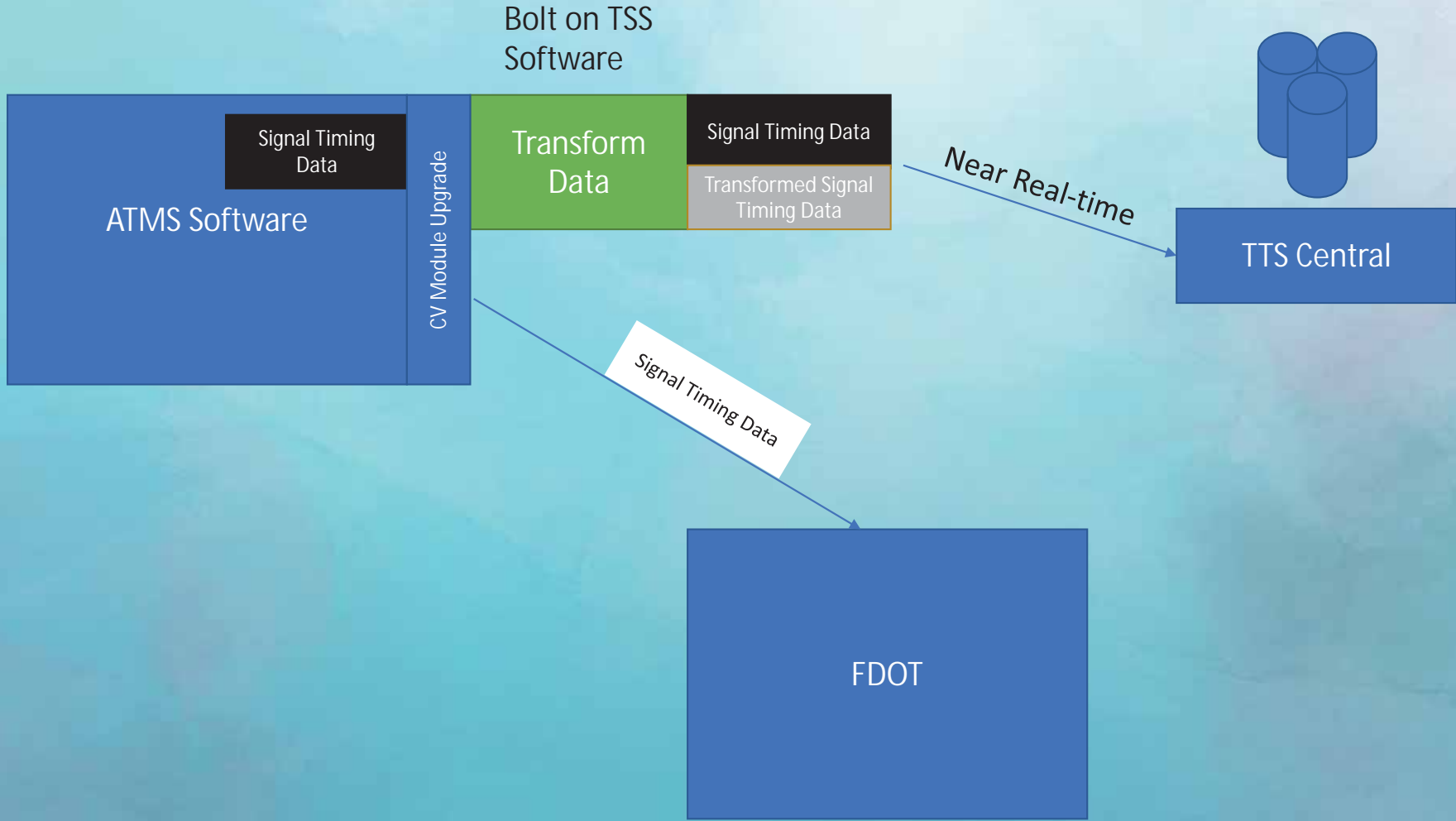


Importance to D5

- Solves an immediate problem
 - ATMS data to the DFE for the ICMS
 - Reduces Costs
- Longterm they need to improve algorithm
 - We have an environment to aid development
 - Future partnership

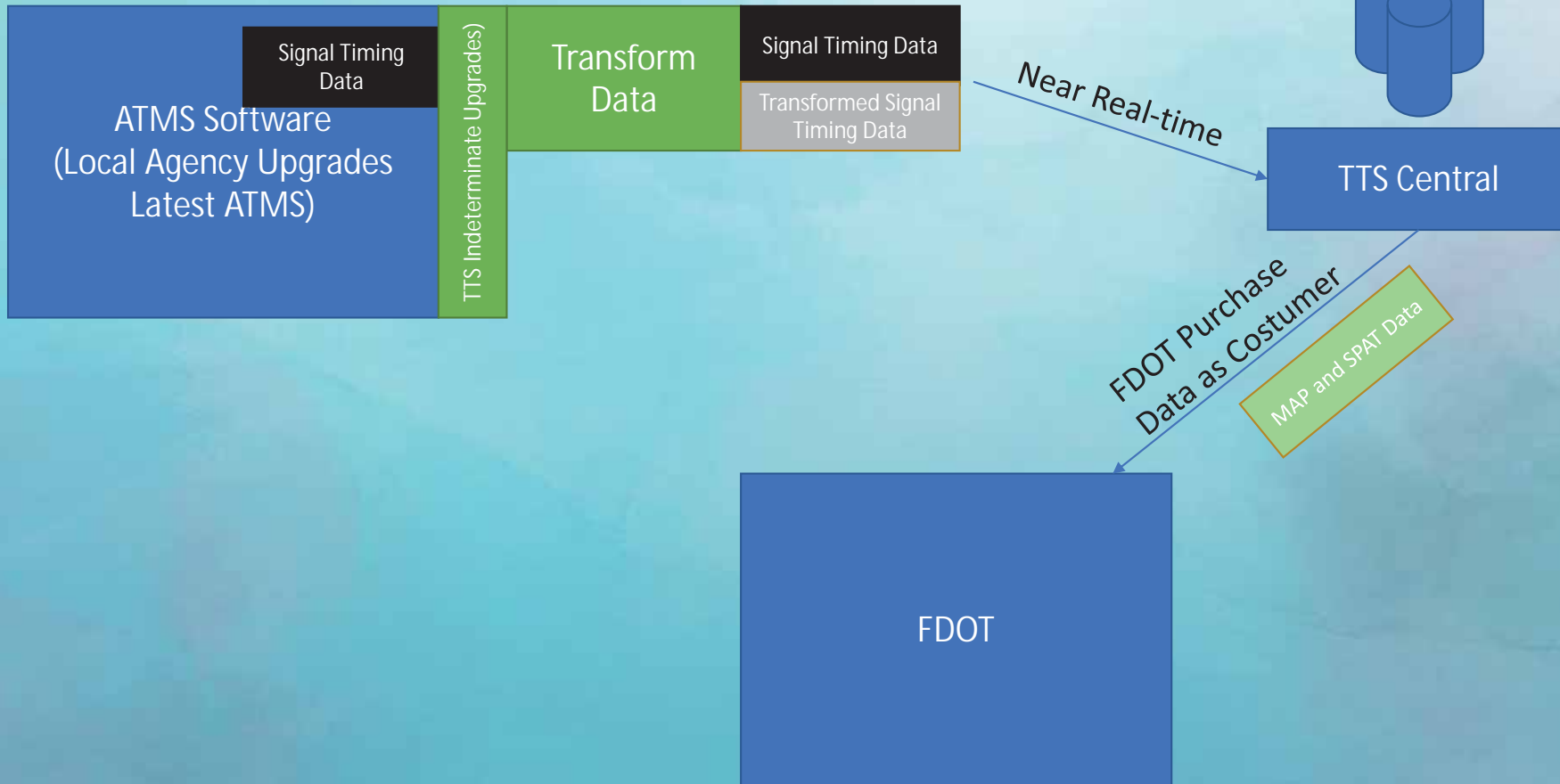


What we thought the deal was



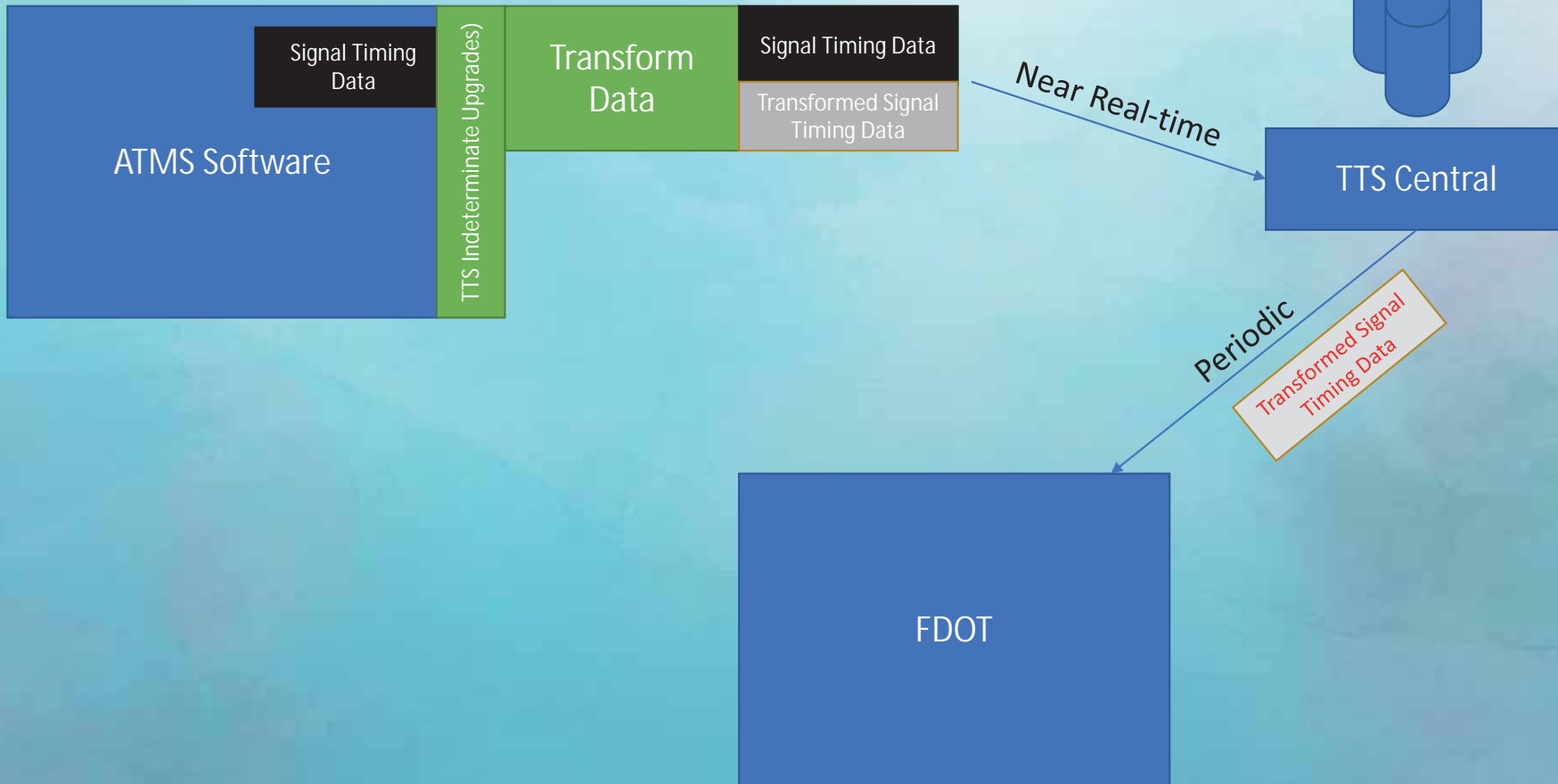
Agreement #1

Bolt on TSS
Software



Agreement #2

Bolt on TSS
Software



Questions?



Transportation Systems Management & Operations



Data-Driven Analyses

Crashes, Congestion, Capacity

Jeremy Dilmore, FDOT District Five



Transportation Systems Management & Operations



Data-Driven Analyses

- Staff conducted an exercise to see how well FDOT and local/regional agencies are programming their projects in response to transportation issues in their region
- Each MPO/TPO's coverage area was reviewed according to 3 categories:
 - Crash Density (Hotspots) from 2014-2016
 - Jam Factor (Congestion) occurring from July 25, 2017 through July 27, 2017 during the 4:30pm to 5:30pm Peak Hour
 - Capacity Availability according to current AADT (RCI) and the *Generalized Annual Average Daily Volumes* in the 2012 FDOT Quality/Level of Service Handbook Tables
- The 8 to 10 areas of greatest concern were identified from each of these categories and compared against the agency's TIP and PPL



Data-Driven Analyses

- TIP/PPL projects considered as part of this exercise had to be related to the three key focus areas of a strong TSM&O program:

SAFETY


CAPACITY

OPERATIONS

- TIP/PPL project categories that were included in this exercise:
 - **Safety** (sidewalks, bike lanes, lighting, guardrails, railroad crossing safety, etc.)
 - **Capacity**
 - **Operations** (intersection improvements, signals, etc.)
 - **Multimodal** (freight/rail improvements, multimodal trails, etc.)
 - **Bridge Repair / Replacement**
 - **Planning / PD&E Studies**
 - **Disaster Reconstruction** (Hurricane Matthew)



Data-Driven Analyses

- Maps are provided, showing problem areas/facilities and then overlaying those with 2016/17 TIP projects
- Tables are provided, showing the problem areas/facilities with identified 2017/18 TIP and PPL projects
- In the tables, a  indicates the team was unable to find a TIP or PPL project near the identified area/facility

MetroPlan Orlando

Crash Hotspots
Congestion Hotspots
Capacity Issues



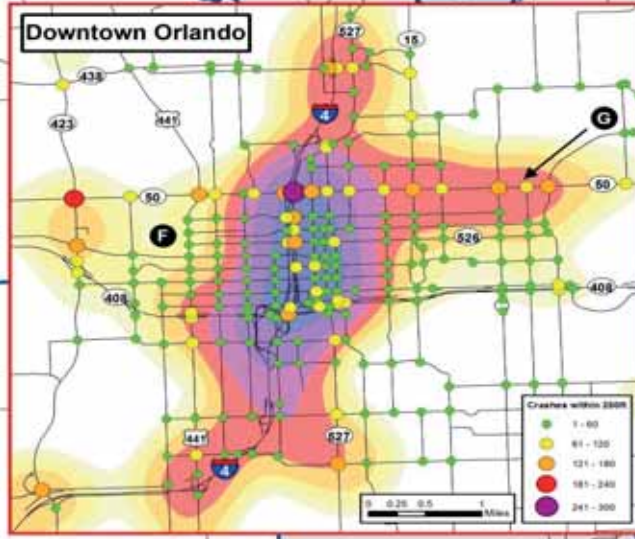
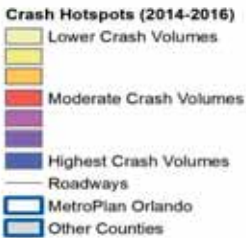
Transportation Systems Management & Operations



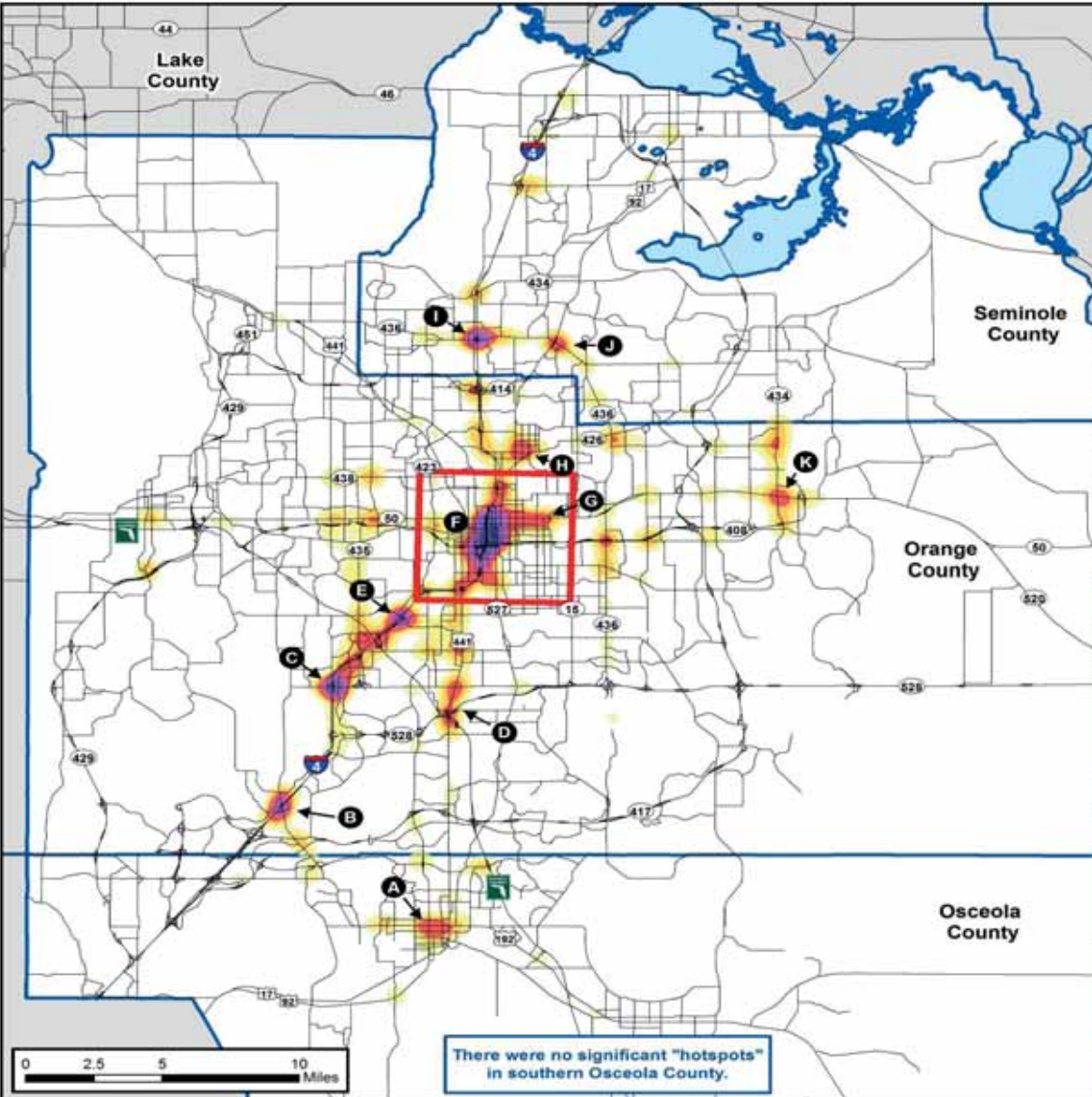


**MetroPlan Orlando
and Local Agencies
Crashes
2014-2016**

Hotspot	Description	County
A	US 192 near John Young Pkwy and Main St	Osceola
B	I-4 and SR 535 (Apopka Vineland Rd)	Orange
C	I-4 and SR 482 (Sand Lake Rd)	Orange
D	US 441, SR 482, SR 528, and Florida's Turnpike	Orange
E	I-4 near Millenia Blvd and Florida's Turnpike	Orange
F	Downtown Orlando, see Inset Map	Orange
G	SR 50 from Ferncreek Ave to Maguire Blvd	Orange
H	Dennings Ave near Fairbanks Ave and Morse Blvd	Orange
I	SR 436 near I-4	Seminole
J	SR 436 near US 17/92	Seminole
K	SR 50 near Alafaya Trl	Orange



Sources: MetroPlan Orlando (2017), Signal Four Analytics (2014-2016), and FDOT RCI Database (2017).



There were no significant "hotspots" in southern Osceola County.



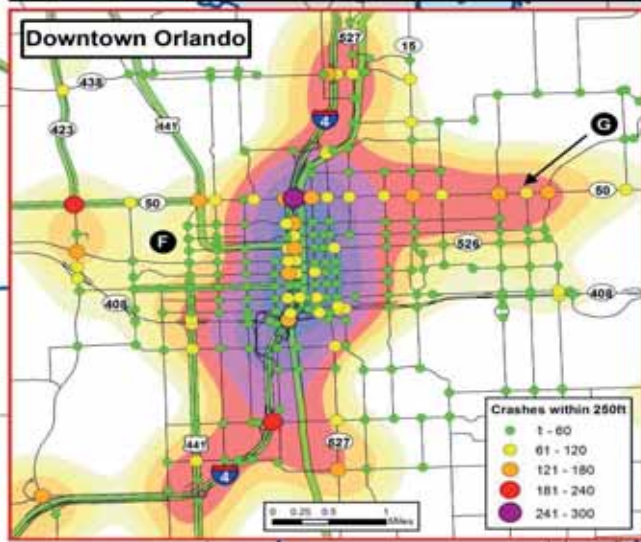
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- Crash Hotspots (2014-2016)**
- Lower Crash Volumes
 - Moderate Crash Volumes
 - Highest Crash Volumes
 - MetroPlan Orlando TIP*
 - MetroPlan Orlando TIP*
 - Roadways
 - MetroPlan Orlando
 - Other Counties

*Note: Projects in the Transportation Improvement Program were categorized according to their work mix. Categories shown on this map include: Bridge Planning / PD&E Study, Capacity, Safety, Operations, Multimodal, and Disaster Reconstruction projects. The geospatial data is taken from the MetroPlan Orlando 2016/17 TIP.

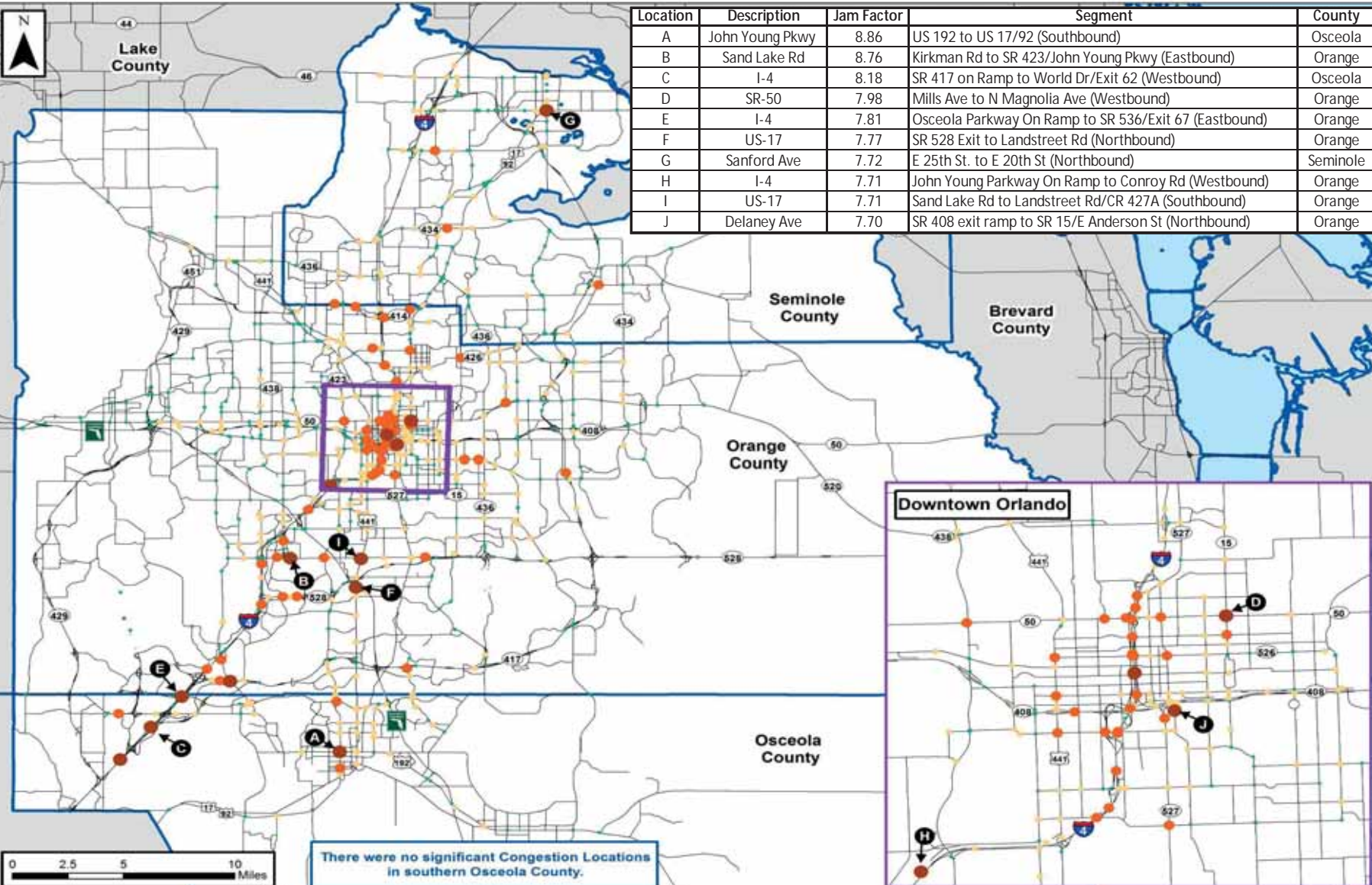
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There were no significant "hotspots" in southern Osceola County.

MetroPlan Orlando – Crash Hotspots

Hotspot	Description	County	TIP	Phase	PPL	Priority No.
A	US 192 near John Young Pkwy and Main St	Osceola	2 Projects: Widening and Intersection Improvement Project	CST	US 192 BRT (4069302)	3 (Transit Projects, Category A)
B	I-4 and SR 535 (Apopka Vineland Rd)	Orange	4 Projects: Intersection Improvements, PD&E, I-4	CST, ROW	Ultimate Configuration for General Use & Managed Lanes (2424848 & 4314561)	1 (Interstate Projects)
C	I-4 and SR 482 (Sand Lake Rd)	Orange	Widen SR 482 to 6 lanes (4071434) + I-4 Master Plan (4084161)	CST, ROW	Ultimate Configuration for General Use & Managed Lanes (2424847) + I-Drive Area Fixed Transit Circulator System Study	3 (Transit Projects, Category B)
D	US 441, SR 482, SR 528, and Florida's Turnpike	Orange	4 Projects: Turnpike interchange and operations, intersection and transit	PD&E, PE	SR 482 Multimodal/CSS Improvements	
E	I-4 near Millenia Blvd and Florida's Turnpike	Orange	3 I-4 Related Projects	PD&E, ROW	Ultimate Configuration for General Use & Managed Lanes	2 (Interstate Projects)
F	Downtown Orlando, see Inset Map	Orange	3 I-4 Related Projects (Interchange and Capacity); other projects	ROW	3 Projects (I-4 and Shared Use paths)	
G	SR 50 from Ferncreek Ave to Maguire Blvd	Orange			Shared Use Path Construction/ Improvements (4412301/4390661)	34/28
H	Denning Dr near Fairbanks Ave and Morse Blvd	Orange	Extend Turn Lane at Fairbanks Ave			
			Intersection Improvements (Norfolk Avenue) (48084291) (FY16-17)			
I	SR 436 near I-4	Seminole	Multimodal/ CSS Improvements		SR 436 Corridor Premium Transit/Complete Streets Feasibility Study	



Location	Description	Jam Factor	Segment	County
A	John Young Pkwy	8.86	US 192 to US 17/92 (Southbound)	Osceola
B	Sand Lake Rd	8.76	Kirkman Rd to SR 423/John Young Pkwy (Eastbound)	Orange
C	I-4	8.18	SR 417 on Ramp to World Dr/Exit 62 (Westbound)	Osceola
D	SR-50	7.98	Mills Ave to N Magnolia Ave (Westbound)	Orange
E	I-4	7.81	Osceola Parkway On Ramp to SR 536/Exit 67 (Eastbound)	Orange
F	US-17	7.77	SR 528 Exit to Landstreet Rd (Northbound)	Orange
G	Sanford Ave	7.72	E 25th St. to E 20th St (Northbound)	Seminole
H	I-4	7.71	John Young Parkway On Ramp to Conroy Rd (Westbound)	Orange
I	US-17	7.71	Sand Lake Rd to Landstreet Rd/CR 427A (Southbound)	Orange
J	Delaney Ave	7.70	SR 408 exit ramp to SR 15/E Anderson St (Northbound)	Orange

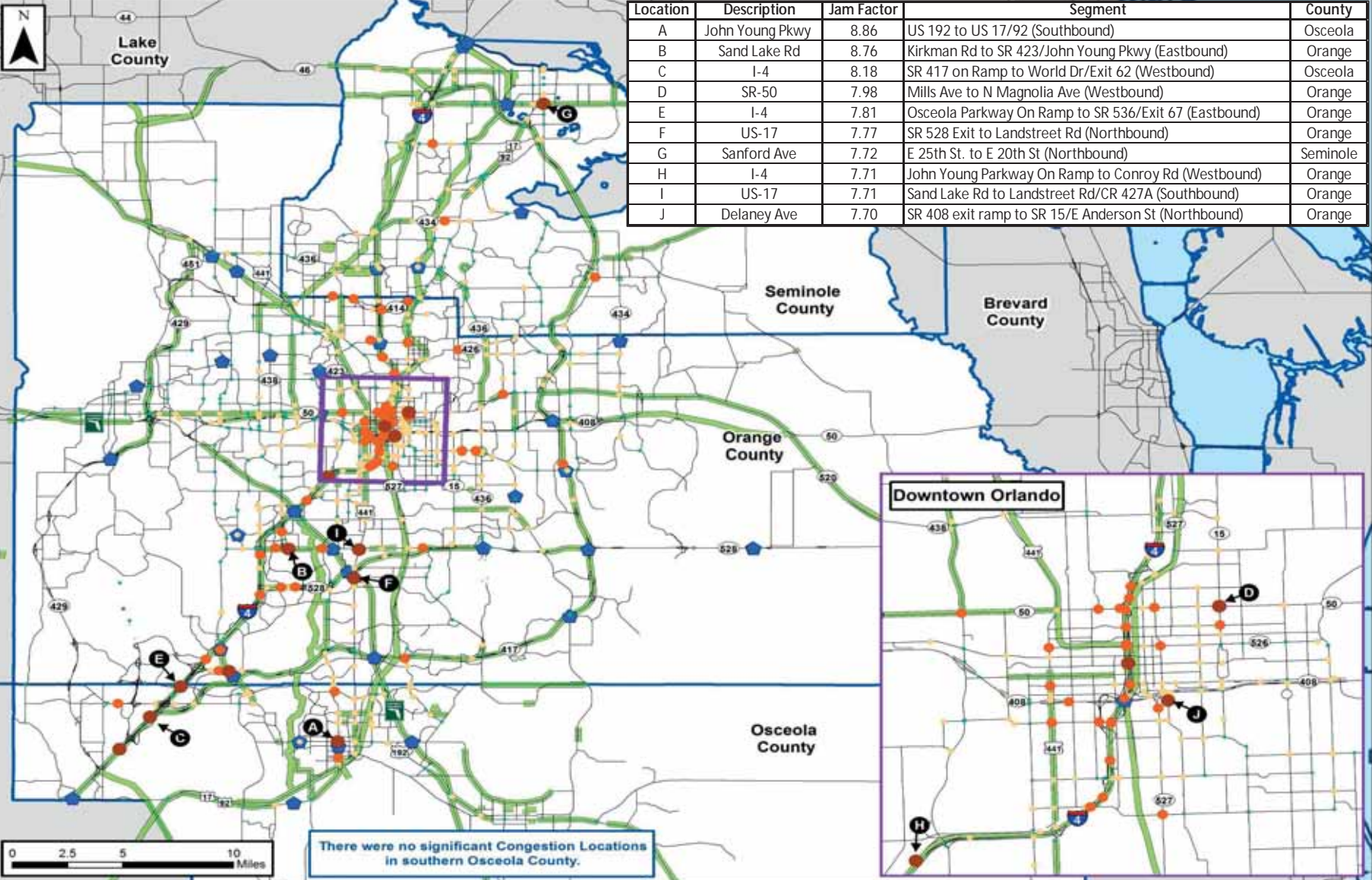


**MetroPlan Orlando
and Local Agencies**

**Congestion Indicator
HERE Data
4:30 - 5:30 PM
Tues-Weds-Thurs
July 25-27, 2017**

- Congestion Indicator**
- Low
 - Moderate
 - High
- Roadways**
- MetroPlan Orlando
 - Other Counties

Sources: MetroPlan Orlando (2017), Signal Four Analytics (2014-2016), FDOT RCI Database (2017), HERE (2017).



Location	Description	Jam Factor	Segment	County
A	John Young Pkwy	8.86	US 192 to US 17/92 (Southbound)	Osceola
B	Sand Lake Rd	8.76	Kirkman Rd to SR 423/John Young Pkwy (Eastbound)	Orange
C	I-4	8.18	SR 417 on Ramp to World Dr/Exit 62 (Westbound)	Osceola
D	SR-50	7.98	Mills Ave to N Magnolia Ave (Westbound)	Orange
E	I-4	7.81	Osceola Parkway On Ramp to SR 536/Exit 67 (Eastbound)	Orange
F	US-17	7.77	SR 528 Exit to Landstreet Rd (Northbound)	Orange
G	Sanford Ave	7.72	E 25th St. to E 20th St (Northbound)	Seminole
H	I-4	7.71	John Young Parkway On Ramp to Conroy Rd (Westbound)	Orange
I	US-17	7.71	Sand Lake Rd to Landstreet Rd/CR 427A (Southbound)	Orange
J	Delaney Ave	7.70	SR 408 exit ramp to SR 15/E Anderson St (Northbound)	Orange



MetroPlan Orlando and Local Agencies


**Congestion Indicator
HERE Data
4:30 - 5:30 PM
Tues-Weds-Thurs
July 25-27, 2017**

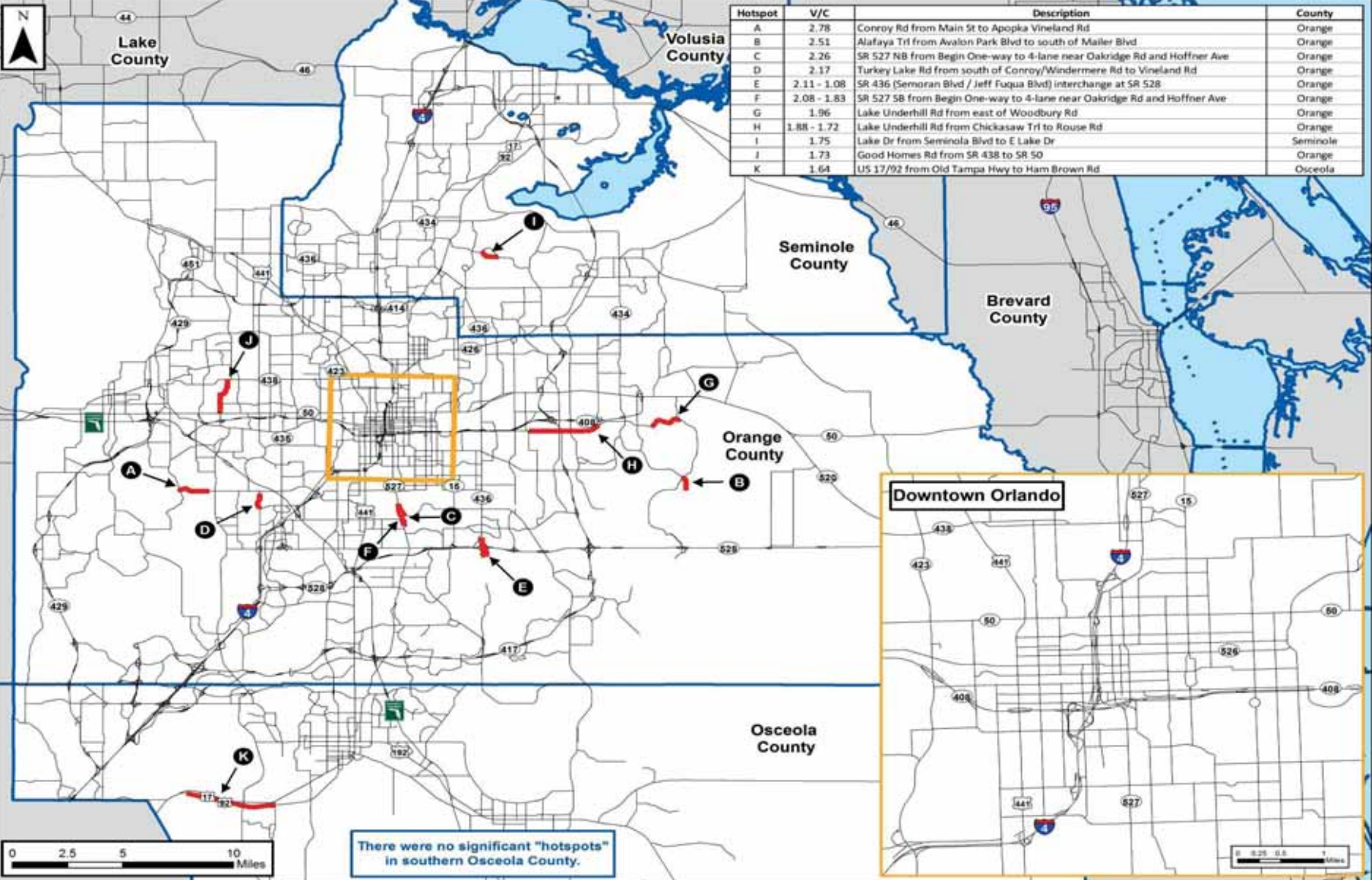
- Congestion Indicator**
- Low
 - Moderate
 - High
 - MetroPlan Orlando TIP*
 - Roadways
 - MetroPlan Orlando
 - Other Counties

*Note: Projects in the Transportation Improvement Program were categorized according to their work mix. Categories shown on this map include: Bridge Planning / PD&E Study, Capacity, Safety, Operations, Multimodal, and Disaster Reconstruction projects. The geospatial data is taken from the MetroPlan Orlando 2016/17 TIP.

Sources: MetroPlan Orlando (2017), Signal Four Analytics (2014-2016), FDOT RCI Database (2017), HERE (2017).

MetroPlan Orlando – Jam Factor

Location	Description	Segment	County	TIP	Phase	PPL	Priority No.
A	John Young Pkwy	US-192 to US-17-92 (Southbound)	Osceola	Widen to 6 lanes (4184032) + Intersection Improvements to W Oak St at John Young Parkway (4349161)	CST	Widen to 6 lanes and flyover at Pleasant Hill Rd. (4184033) + US 192 BRT (4069302)	7 (FY22/23 SIS Projects) + 3 (Transit Projects)
B	Sand Lake Rd	Kirkman Rd to SR-423/John Young Pkwy (Eastbound)	Orange	Widen to 6 lanes (4071435) + John Young Pkwy at SR 482/Sand Lake Road flyover (4071436)	CST	OIA Bus Rapid Transit (4292151)	2 (FY22/23)
C	I-4	SR-417 on Ramp to World Dr/Exit 62 (Westbound)	Osceola	Add 4 managed lanes (4314561)	ROW		
D	SR-50	Mills Ave to N Magnolia Ave (Westbound)	Orange			Bus Rapid Transit Project Development + Video Detection Upgrade - 2 Parramore Ave to Coy Dr	4 (Transit Projects, Cat. A) +15 (TSM&O Projects)
E	I-4	Osceola Parkway On Ramp to SR-536/Exit 67 (Eastbound)	Orange	Add 4 Managed Lanes (2424848)	ROW	Ultimate Configuration for General Use & Managed Lanes- Add 4 Managed Lanes (2424848 & 4314561)	1 (Interstate Projects)
F	US-17	SR-528 Exit to Landstreet Rd (Northbound)	Orange	Turnpike and 528 Interchange Improvements (4371562) + OIA Connector Alternatives Analysis (4292151)	PD&E		
G 	Sanford Ave	E 25th St. to E 20th St (Northbound)	Seminole				
H	I-4	John Young Parkway On Ramp to Conroy Rd (Westbound)	Orange	Add 4 Managed Lanes SR 435 to SR 434 (4321931) + I-4 Master Plan, Advance Right-of-Way Acquisition (4084161)	ROW, PE, INC, OPS, DSB, MNT		
I	US-17	Sand Lake Rd to Landstreet Rd/CR-427A (Southbound)	Orange	Intersection Improvements (4375921)	CST	SR 482 Multimodal/CSS Improvements	



Hotspot	V/C	Description	County
A	2.78	Conroy Rd from Main St to Apopka Vineland Rd	Orange
B	2.51	Alafaya Trl from Avalon Park Blvd to south of Mailer Blvd	Orange
C	2.26	SR 527 NB from Begin One-way to 4-lane near Oakridge Rd and Hoffner Ave	Orange
D	2.17	Turkey Lake Rd from south of Conroy/Windermere Rd to Vineland Rd	Orange
E	2.11 - 1.08	SR 436 (Semorán Blvd / Jeff Fuqua Blvd) interchange at SR 528	Orange
F	2.08 - 1.83	SR 527 SB from Begin One-way to 4-lane near Oakridge Rd and Hoffner Ave	Orange
G	1.96	Lake Underhill Rd from east of Woodbury Rd	Orange
H	1.88 - 1.72	Lake Underhill Rd from Chickasaw Trl to Rouse Rd	Orange
I	1.75	Lake Dr from Seminola Blvd to E Lake Dr	Seminole
J	1.73	Good Homes Rd from SR 438 to SR 50	Orange
K	1.64	US 17/92 from Old Tampa Hwy to Ham Brown Rd	Osceola

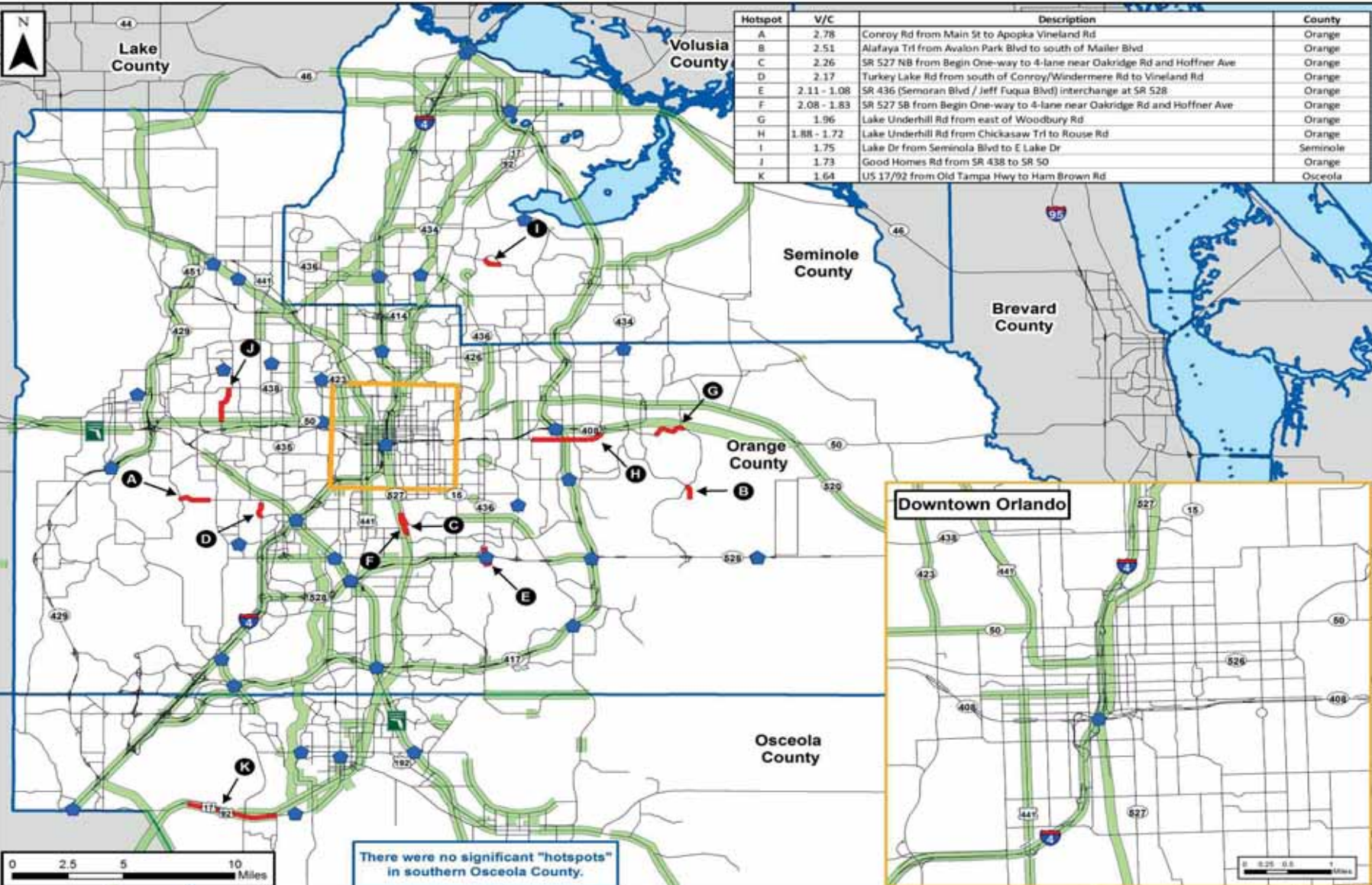


MetroPlan Orlando and Local Agencies Capacity Analysis (2017)

- Capacity Hotspots**
- Largest V/C Ratios
 - Roadways
 - MetroPlan Orlando
 - Other Counties

Sources: MetroPlan Orlando (2017), and FDOT RCI Database (2017).

Note: Physical and political constraints, as well as TCEA restrictions, were not considered during the capacity analyses.



Hotspot	V/C	Description	County
A	2.78	Conroy Rd from Main St to Apopka Vineland Rd	Orange
B	2.51	Alafaya Trl from Avalon Park Blvd to south of Mailer Blvd	Orange
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D	2.17	Turkey Lake Rd from south of Conroy/Windermere Rd to Vineland Rd	Orange
E	2.11 - 1.08	SR 436 (Semoan Blvd / Jeff Fuqua Blvd) interchange at SR 528	Orange
F	2.08 - 1.83	SR 527 SB from Begin One-way to 4-lane near Oakridge Rd and Hoffner Ave	Orange
G	1.96	Lake Underhill Rd from east of Woodbury Rd	Orange
H	1.88 - 1.72	Lake Underhill Rd from Chickasaw Trl to Rouse Rd	Orange
I	1.75	Lake Dr from Seminola Blvd to E Lake Dr	Seminole
J	1.73	Good Homes Rd from SR 438 to SR 50	Orange
K	1.64	US 17/92 from Old Tampa Hwy to Ham Brown Rd	Osceola



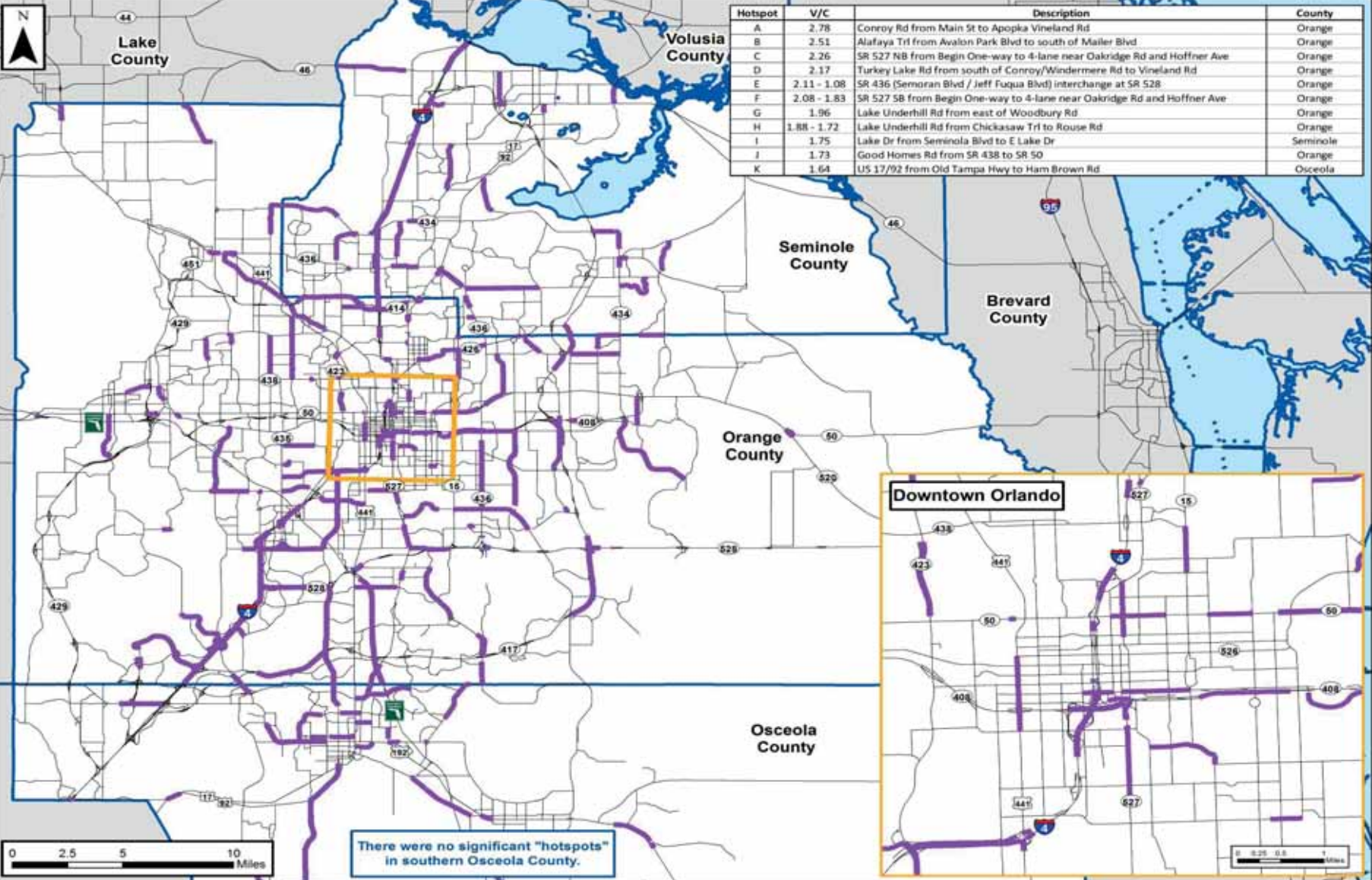
MetroPlan Orlando and Local Agencies Capacity Analysis (2017)

- Capacity Hotspots**
- Largest V/C Ratios
 - MetroPlan Orlando TIP*
 - MetroPlan Orlando TIP*
 - Roadways
 - MetroPlan Orlando
 - Other Counties

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Sources: MetroPlan Orlando (2017), and FDOT RCI Database (2017).

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Hotspot	V/C	Description	County
A	2.78	Conroy Rd from Main St to Apopka Vineland Rd	Orange
B	2.51	Alafaya Trl from Avalon Park Blvd to south of Mailer Blvd	Orange
C	2.26	SR 527 NB from Begin One-way to 4-lane near Oakridge Rd and Hoffner Ave	Orange
D	2.17	Turkey Lake Rd from south of Conroy/Windermere Rd to Vineland Rd	Orange
E	2.11 - 1.08	SR 436 (Semoran Blvd / Jeff Fuqua Blvd) interchange at SR 528	Orange
F	2.08 - 1.83	SR 527 SB from Begin One-way to 4-lane near Oakridge Rd and Hoffner Ave	Orange
G	1.96	Lake Underhill Rd from east of Woodbury Rd	Orange
H	1.88 - 1.72	Lake Underhill Rd from Chickasaw Trl to Rouse Rd	Orange
I	1.75	Lake Dr from Seminola Blvd to E Lake Dr	Seminole
J	1.73	Good Homes Rd from SR 438 to SR 50	Orange
K	1.64	US 17/92 from Old Tampa Hwy to Ham Brown Rd	Osceola

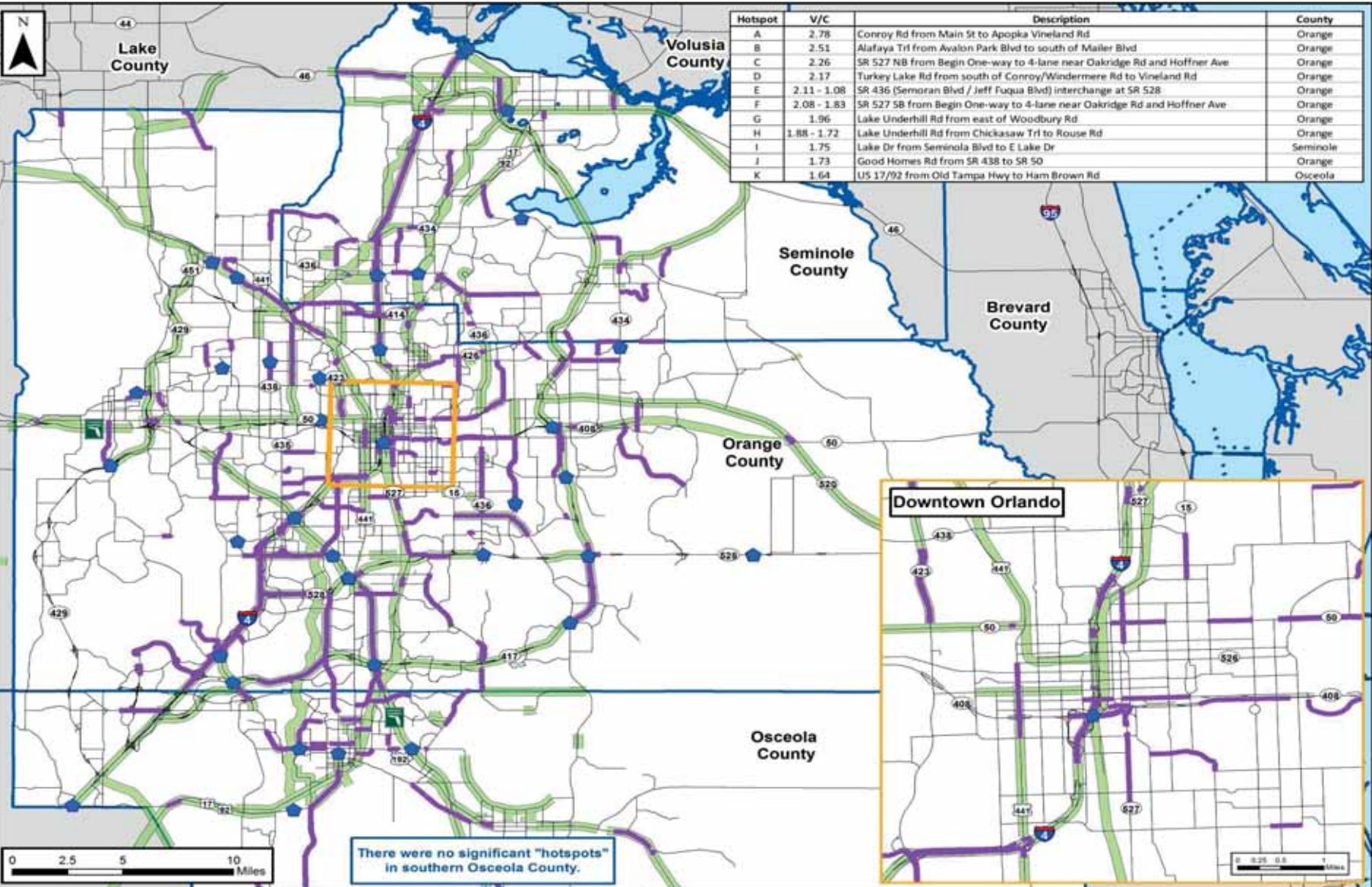


**MetroPlan Orlando
and Local Agencies
Capacity Analysis (2017)**

- Level of Service F**
- Other LOS F Facilities
 - Roadways
 - MetroPlan Orlando
 - Other Counties

Sources: MetroPlan Orlando (2017), and FDOT RCI Database (2017).

Note: Physical and political constraints, as well as TCEA restrictions, were not considered during the capacity analyses.



MetroPlan Orlando and Local Agencies Capacity Analysis (2017)





- Level of Service F**
- Other LOS F Facilities
 - MetroPlan Orlando TIP*
 - MetroPlan Orlando TIP*
 - Roadways
 - MetroPlan Orlando
 - Other Counties

*Note: Projects in the Transportation Improvement Program were categorized according to their work mix. Categories shown on this map include: Bridge, Planning / PD&E Study, Capacity, Safety, Operations, Multimodal, and Disaster Reconstruction projects. The geospatial data is taken from the MetroPlan Orlando 2016/17 TIP.

Sources: MetroPlan Orlando (2017), and FDOT RCI Database (2017).

Note: Physical and political constraints, as well as TCEA restrictions, were not considered during the capacity analyses.

MetroPlan Orlando – Capacity Analysis

Hotspot	V / C	Description	County	TIP	Phase	PPL	Priority No.
A 	2.78	Conroy Rd from Main St to Apopka Vineland Rd	Orange				
B 	2.51	Alafaya Trl from Avalon Park Blvd to south of Mailer Blvd	Orange				
C	2.26	SR 527 NB from Begin One-way to 4-lane near Oakridge Rd and Hoffner Ave	Orange			Context Sensitive Improvements (Planning Study complete, PE/CST unfunded)	3 (State Road System)
D	2.17	Turkey Lake Rd from south of Conroy/Windermere Rd to Vineland Rd	Orange			Intersection Improvements at Turkey Lake Rd and Vineland Rd	24 (TSM&O)
E	2.11 – 1.08	SR 436 interchange at SR 528	Orange	SR 528 widen to 9 lanes from SR 436 to Goldenrod Rd	PE, CST	SR 436 Corridor Premium Transit / Complete Streets	1 (Transit: Category B)
F	2.08 – 1.83	SR 527 SB from Begin One-way to 4-lane near Oakridge Rd and Hoffner Ave	Orange			Context Sensitive Improvements (Planning Study complete, PE/CST unfunded)	3 (State Road System)
G 	1.96	Lake Underhill Rd from east of Woodbury Rd to Avalon Park S Blvd	Orange				
H	1.88 – 1.72	Lake Underhill Rd from Chickasaw Trl to Rouse Rd	Orange	Widen Lake Underhill Rd to 4 lanes from Econlockhatchee Trl to Rouse Rd	ROW, CST		
I 	1.75	Lake Dr from Seminola Blvd to E Lake Dr	Osceola				

Lake-Sumter MPO

Crash Hotspots
Congestion Hotspots
Capacity Issues

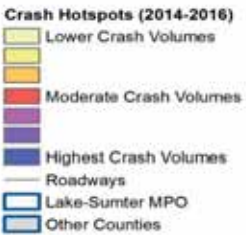


Transportation Systems Management & Operations



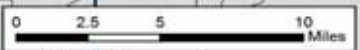
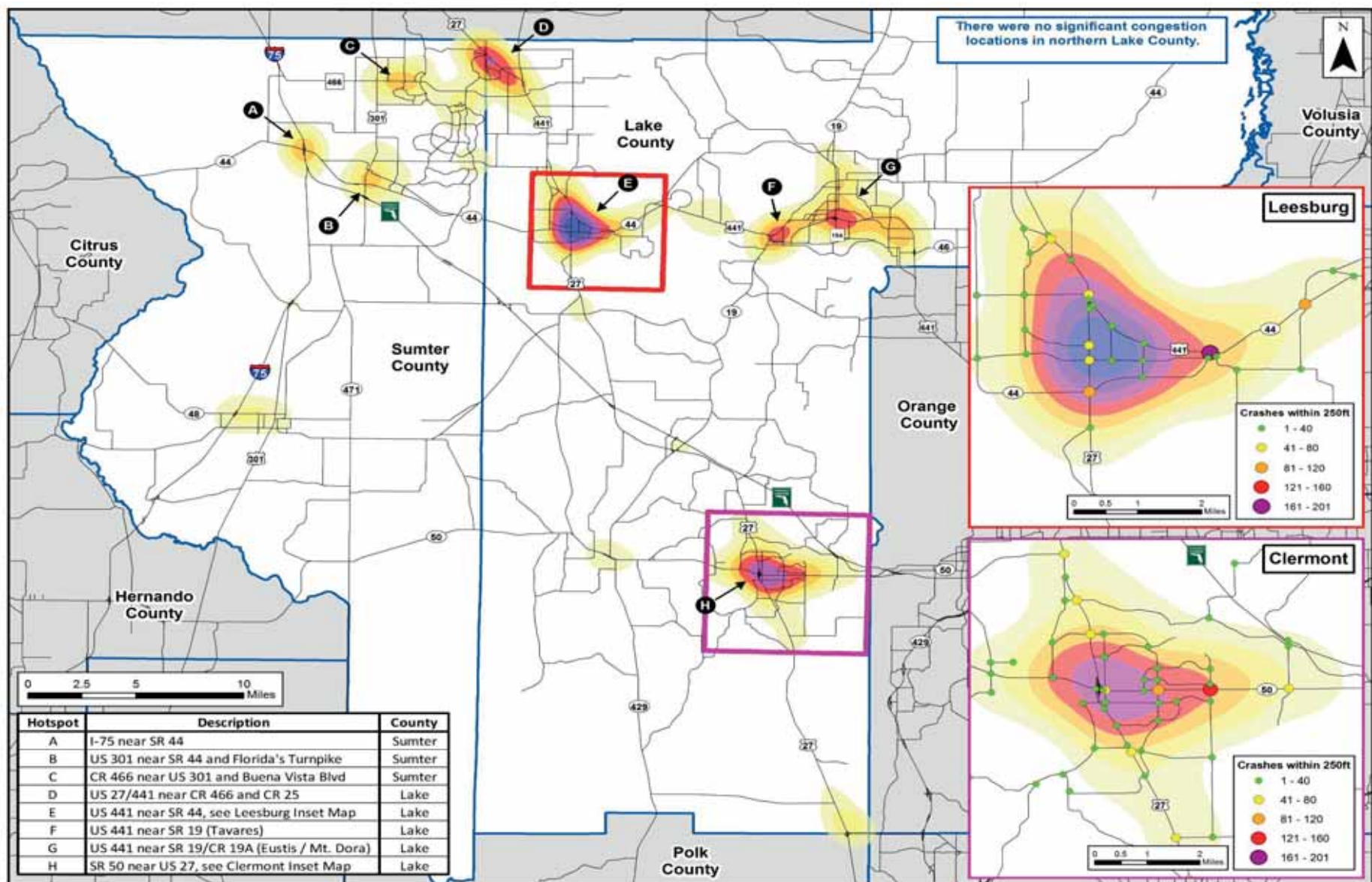


Lake-Sumter MPO and Local Agencies Crashes 2014-2016



Sources: Lake-Sumter MPO (2017), Signal Four Analytics (2014-2016), FDOT RCI Database (2017), HERE

There were no significant congestion locations in northern Lake County.



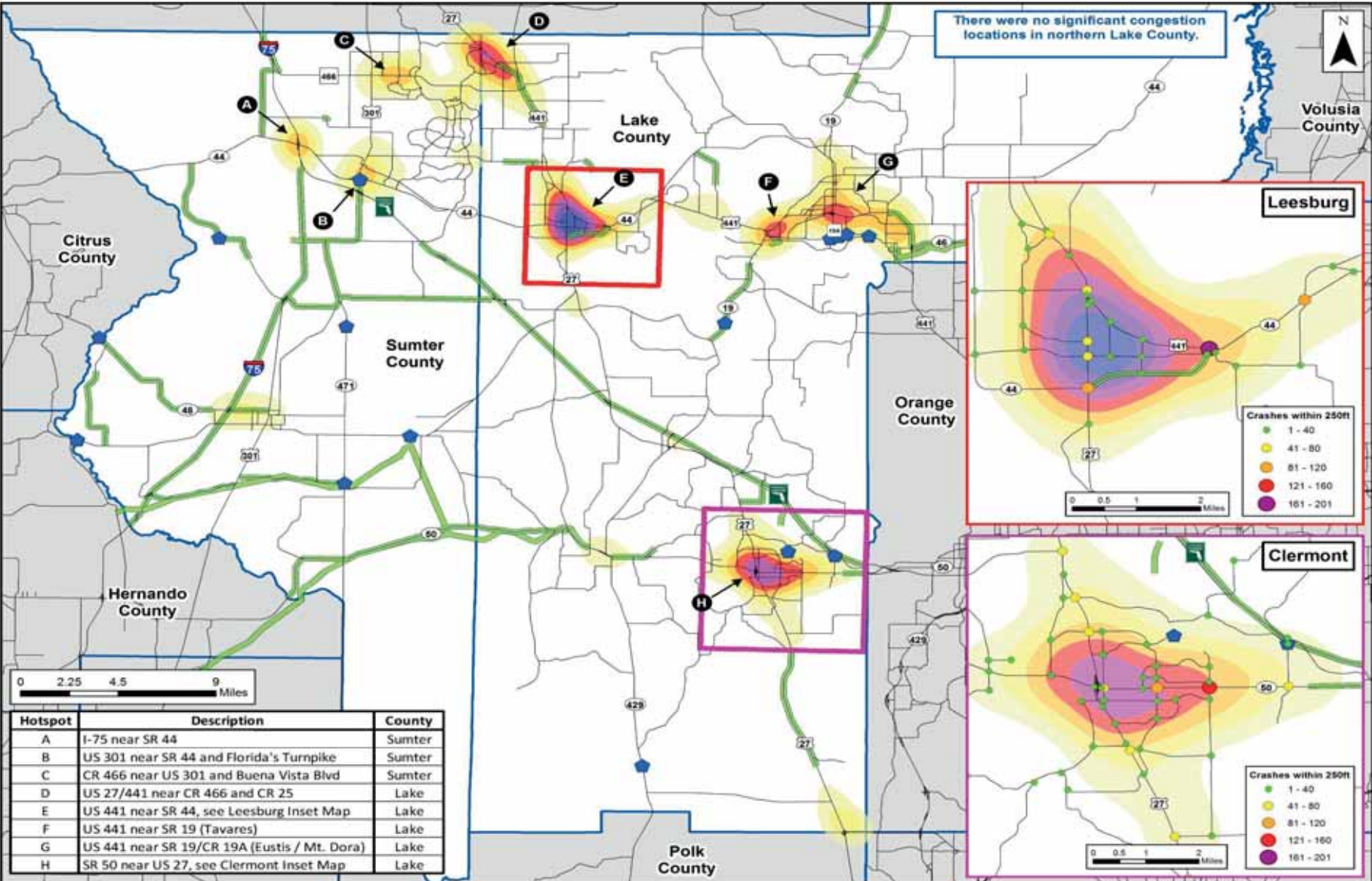
Hotspot	Description	County
A	I-75 near SR 44	Sumter
B	US 301 near SR 44 and Florida's Turnpike	Sumter
C	CR 466 near US 301 and Buena Vista Blvd	Sumter
D	US 27/441 near CR 466 and CR 25	Lake
E	US 441 near SR 44, see Leesburg Inset Map	Lake
F	US 441 near SR 19 (Tavares)	Lake
G	US 441 near SR 19/CR 19A (Eustis / Mt. Dora)	Lake
H	SR 50 near US 27, see Clermont Inset Map	Lake

Lake-Sumter MPO and Local Agencies Crashes 2014-2016

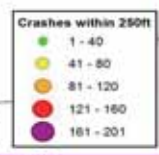
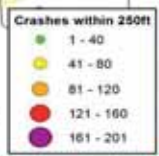
- Crash Hotspots (2014-2016)**
- Lower Crash Volumes
 - Moderate Crash Volumes
 - Highest Crash Volumes
 - Lake-Sumter MPO TIP*
 - Lake-Sumter MPO
 - Other Counties

*Note: Projects in the Transportation Improvement Program were categorized according to their work mix. Categories shown on this map include: Bridge, Planning / PO&E Study, Capacity, Safety, Operations, Multimodal, and Disaster Recovery projects. The geospatial data is taken from the LSMPPO 2016/17 TIP.




Sources: Lake-Sumter MPO (2017), Signal Four Analytics (2014-2016), FDOT RCI Database (2017), HERE

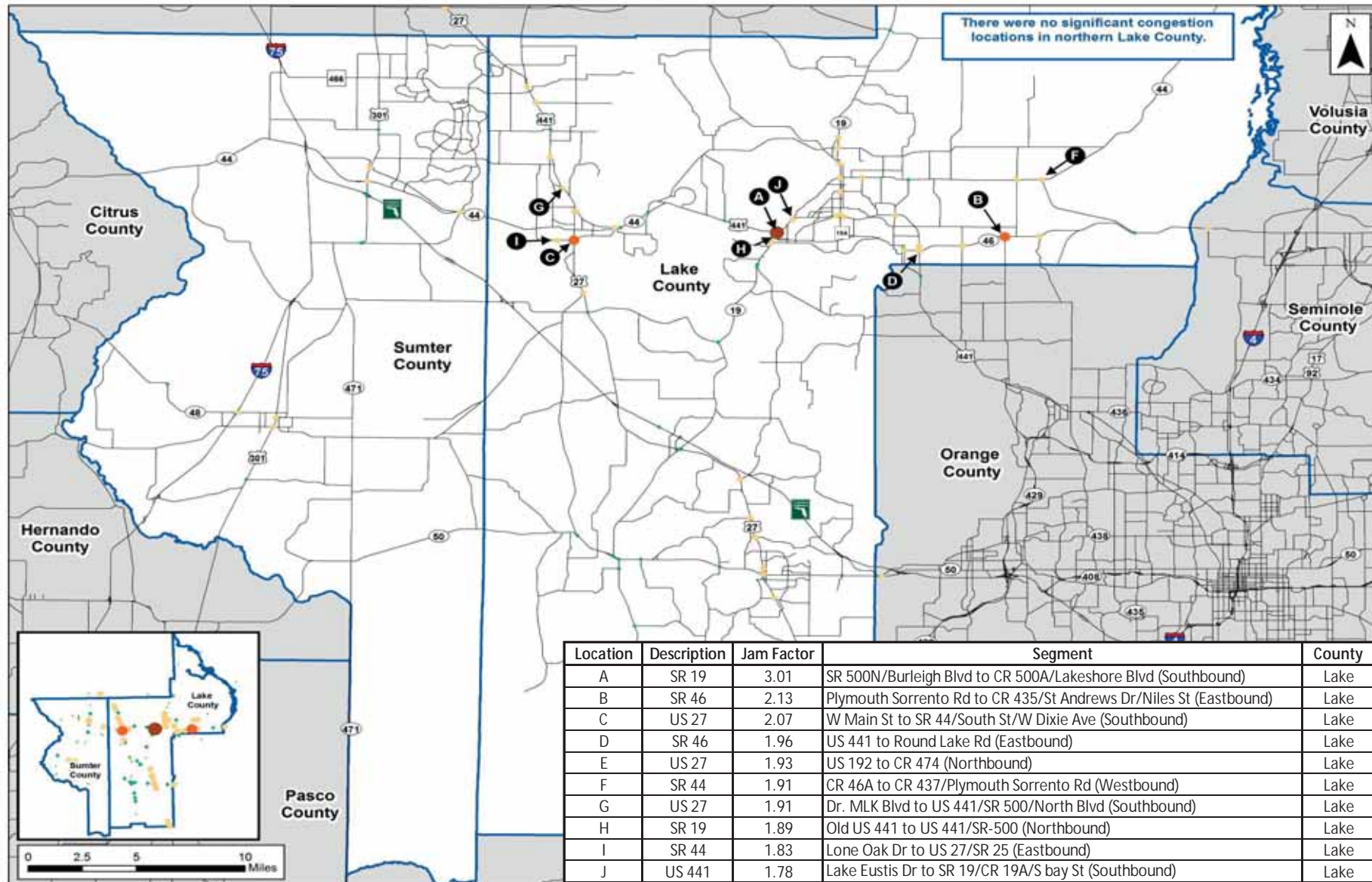


Hotspot	Description	County
A	I-75 near SR 44	Sumter
B	US 301 near SR 44 and Florida's Turnpike	Sumter
C	CR 466 near US 301 and Buena Vista Blvd	Sumter
D	US 27/441 near CR 466 and CR 25	Lake
E	US 441 near SR 44, see Leesburg Inset Map	Lake
F	US 441 near SR 19 (Tavares)	Lake
G	US 441 near SR 19/CR 19A (Eustis / Mt. Dora)	Lake
H	SR 50 near US 27, see Clermont Inset Map	Lake



Lake-Sumter MPO – Crash Hotspots

Hotspot	Description	County	TIP	Phase	PPL	Priority No.
A	I-75 near SR 44	Sumter	Add Lanes & Rehabilitate Pavement (2426263 / 4301321)	DIH	Add Turn lane(s) (4301881)	
B	US 301 near SR 44 and Florida's Turnpike	Sumter	Add Lanes & Rehabilitate Pavement (4301321)	DIH	Add Turn Lane (SR 44) (4301881)	
C	CR 466 near US 301 and Buena Vista Blvd	Sumter			Add Turn Lane (SR 44) (4301881)	
D	US 27/441 near CR 466 and CR 25	Lake	Add Lanes and Reconstruct (2383955)	DIH		
E 	US 441 near SR 44, see Leesburg Inset Map	Lake				
F 	US 441 near SR 19 (Tavares)	Lake				
G 	US 441 near SR 19/CR 19A (Eustis / Mt. Dora)	Lake				
H	SR 50 near US 27, see Clermont Inset Map	Lake	Add Lanes & Reconstruct (2384298)			



There were no significant congestion locations in northern Lake County.



Lake-Sumter MPO and Local Agencies

Congestion Indicator
HERE Data
4:30 - 5:30 PM
Tues-Weds-Thurs
July 25-27, 2017

- Congestion Indicator
- Low
 - Moderate
 - High
 - Roadways
 - Lake-Sumter MPO
 - Other Counties

Location	Description	Jam Factor	Segment	County
A	SR 19	3.01	SR 500N/Burleigh Blvd to CR 500A/Lakeshore Blvd (Southbound)	Lake
B	SR 46	2.13	Plymouth Sorrento Rd to CR 435/St Andrews Dr/Niles St (Eastbound)	Lake
C	US 27	2.07	W Main St to SR 44/South St/W Dixie Ave (Southbound)	Lake
D	SR 46	1.96	US 441 to Round Lake Rd (Eastbound)	Lake
E	US 27	1.93	US 192 to CR 474 (Northbound)	Lake
F	SR 44	1.91	CR 46A to CR 437/Plymouth Sorrento Rd (Westbound)	Lake
G	US 27	1.91	Dr. MLK Blvd to US 441/SR 500/North Blvd (Southbound)	Lake
H	SR 19	1.89	Old US 441 to US 441/SR-500 (Northbound)	Lake
I	SR 44	1.83	Lone Oak Dr to US 27/SR 25 (Eastbound)	Lake
J	US 441	1.78	Lake Eustis Dr to SR 19/CR 19A/S bay St (Southbound)	Lake

Sources: Lake-Sumter MPO (2017), Signal Four Analytics (2014-2018), FDOT RCI Database (2017), HERE (2017).



Lake-Summer MPO and Local Agencies

Congestion Indicator
HERE Data
4:30 - 5:30 PM
Tues-Weds-Thurs
July 25-27, 2017

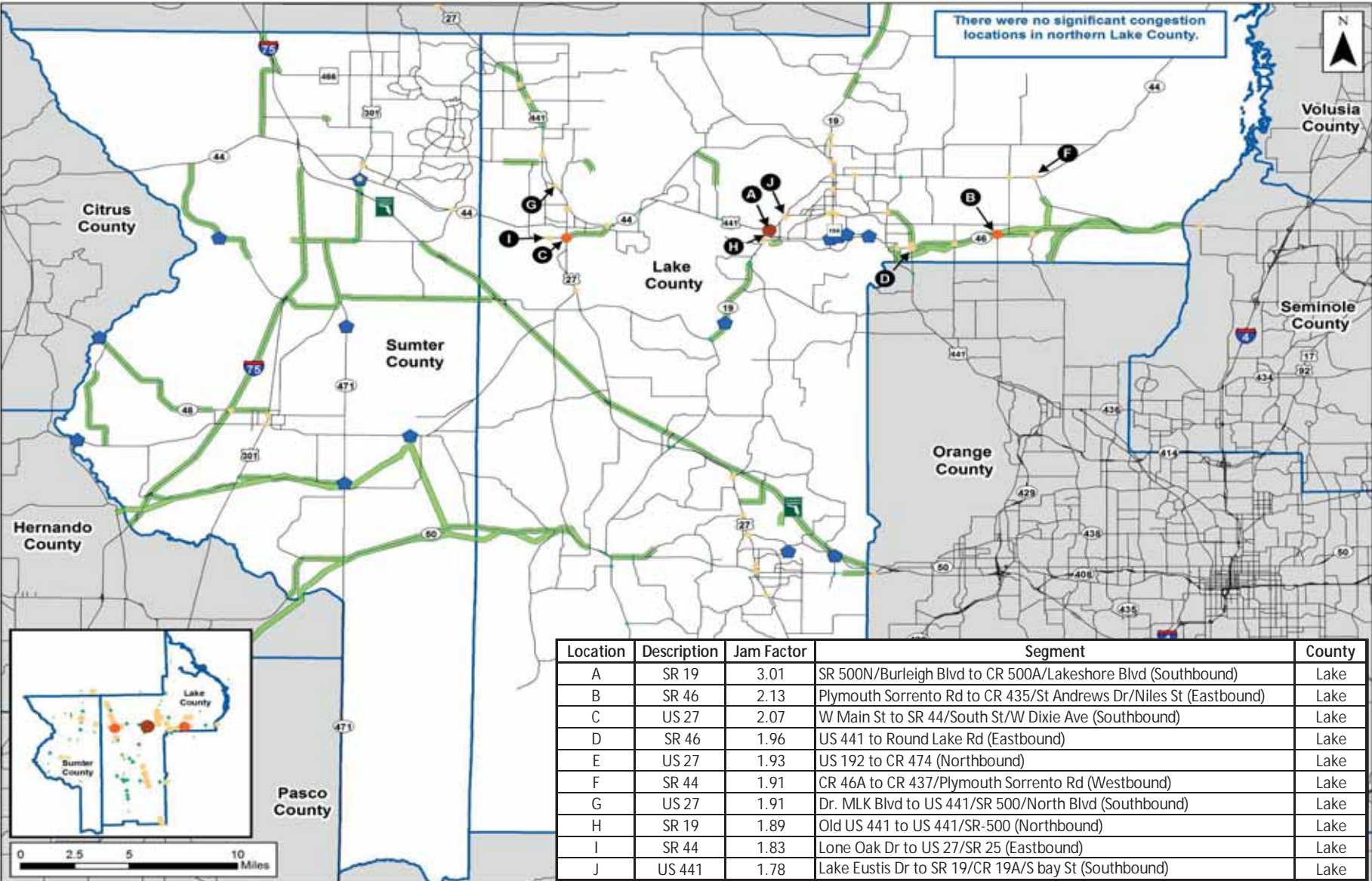
- Congestion Indicator
- Low
 - Moderate
 - High
 - Lake-Summer MPO TIP
 - Lake-Summer MPO TIP
 - Roadways
 - Lake-Summer MPO
 - Other Counties

*Note: Projects in the Transportation Improvement Program were categorized according to their work mix. Categories shown on this map include: Bridge, Planning / PD&E Study, Capacity, Safety, Operations, Multimodal, and Disaster Recovery projects. The geospatial data is taken from the LSMPO 2016/17 TIP

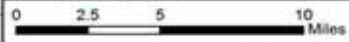
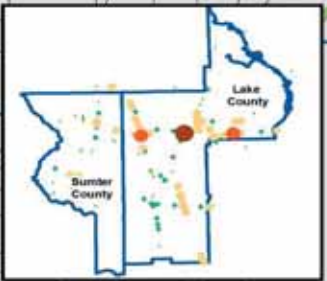
Sources: Lake-Summer MPO (2017), Signal Four Analytics (2014-2018), FDOT RCI Database (2017), HERE (2017).

August 2017




There were no significant congestion locations in northern Lake County.



Location	Description	Jam Factor	Segment	County
A	SR 19	3.01	SR 500N/Burleigh Blvd to CR 500A/Lakeshore Blvd (Southbound)	Lake
B	SR 46	2.13	Plymouth Sorrento Rd to CR 435/St Andrews Dr/Niles St (Eastbound)	Lake
C	US 27	2.07	W Main St to SR 44/South St/W Dixie Ave (Southbound)	Lake
D	SR 46	1.96	US 441 to Round Lake Rd (Eastbound)	Lake
E	US 27	1.93	US 192 to CR 474 (Northbound)	Lake
F	SR 44	1.91	CR 46A to CR 437/Plymouth Sorrento Rd (Westbound)	Lake
G	US 27	1.91	Dr. MLK Blvd to US 441/SR 500/North Blvd (Southbound)	Lake
H	SR 19	1.89	Old US 441 to US 441/SR-500 (Northbound)	Lake
I	SR 44	1.83	Lone Oak Dr to US 27/SR 25 (Eastbound)	Lake
J	US 441	1.78	Lake Eustis Dr to SR 19/CR 19A/S bay St (Southbound)	Lake



Lake-Sumter MPO – Jam Factor

Location	Description	Segment	County	TIP	Phase	PPL	Priority No.
A 	SR-19	SR-500N/Burleigh Blvd to CR-500A/Lakeshore Blvd (Southbound)	Lake				
B	SR-46	Plymouth Sorrento Rd to CR-435/St Andrews Dr/Niles St (Eastbound)	Lake	PD&E/EMO Study (2382751)	PD&E	Lake Wekiva Trail (FY16-17) + SR 46 Realignment (SEG 2C)	1 (ROW Projects) / Programmed Funding
C	US-27	W Main St to SR-44/South St/W Dixie Ave (Southbound)	Lake	Safety Improvements (SR 44) (4390161) (FY16-17 TIP)		3 Projects: Leesburg Complete Streets + US 27 Corridor ATMS (SR 44 to SE HWY 42) + West Main St Improvements	14 (PE Design Projects) / 8 (Construction Projects)
D	SR-46	US 441 to Round Lake Rd (Eastbound)	Lake	2 Projects: Add Lanes and Reconstruct (2382752 + 4293561)	ROW, CST, PD&E	SR 46 Realignment (SEG 2C) From Round Lake Rd to Orange County Line (#429-206)	Programmed Funding
E 	US-27	US-192 to CR-474 (Northbound)	Lake				
F	SR-44	CR 46A to CR-437/Plymouth Sorrento Rd (Westbound)	Lake	Safety - Resurfacing from W of CR 437 to Volusia County Line (4373481)	CST		
G 	US-27	Dr. MLK Blvd to US-441/SR-500/North Blvd (Southbound)	Lake				
H	SR-19	Old US 441 to US-441/SR-500 (Northbound)	Lake	North Lake Trail (4336731) (FY16-17 TIP)			
I 	SR-44	Lone Oak Dr to US-27/SR-25 (Eastbound)	Lake				



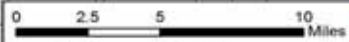
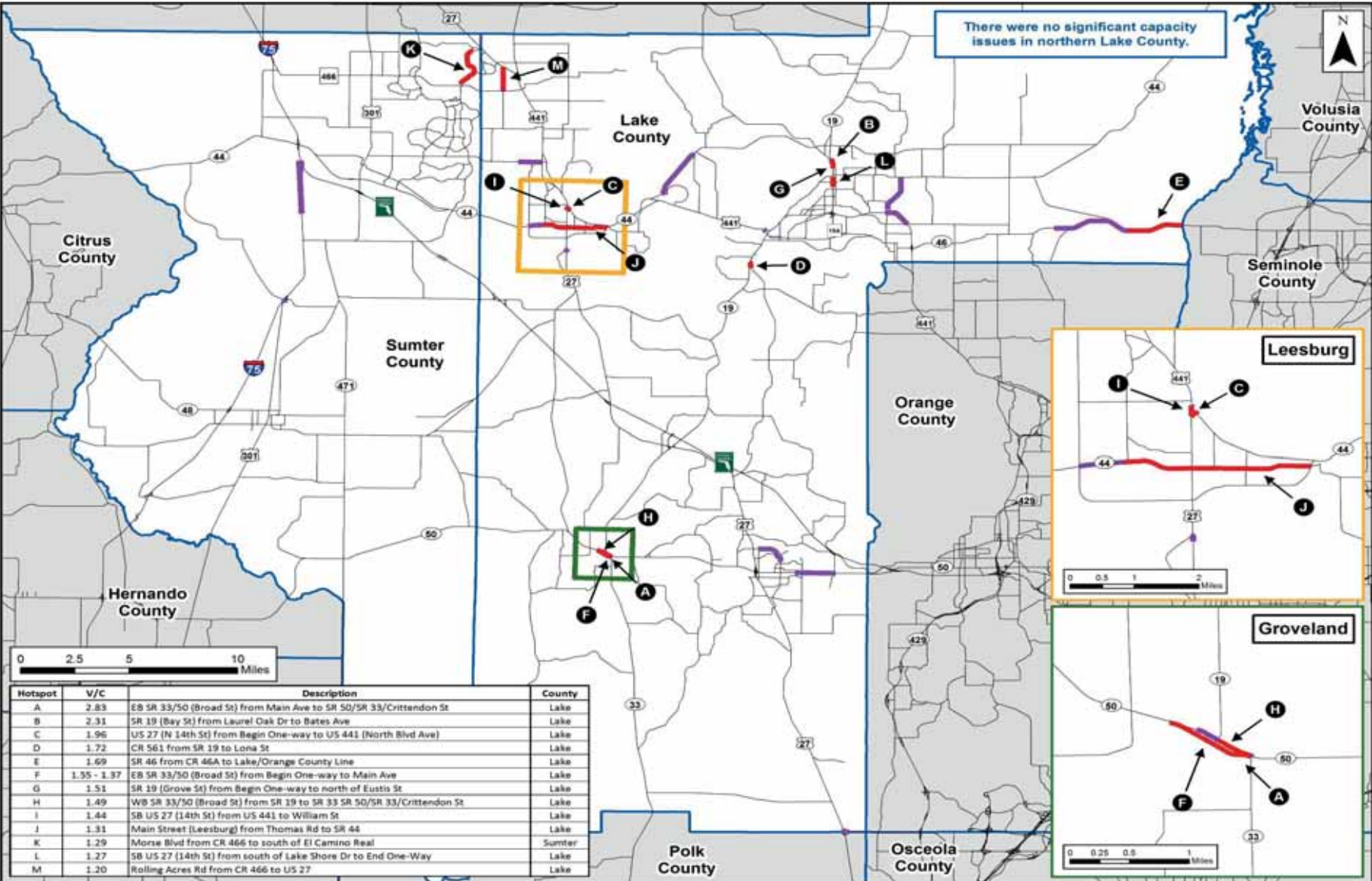
Lake-Sumter MPO and Local Agencies Capacity Analysis (2017)

- Capacity Hotspots**
- Largest V/C Ratio
 - Other LOS F Facilities
 - Roadways
 - Lake-Sumter MPO
 - Other Counties

Sources: Lake-Sumter MPO (2017), Signal Four Analytics (2014-2016), FDOT RCI Database (2017).

Note: Physical and political constraints, as well as TCEA restrictions, were not considered during the capacity analyses.

August 2017



Hotspot	V/C	Description	County
A	2.83	EB SR 33/50 (Broad St) from Main Ave to SR 50/SR 33/Crittendon St	Lake
B	2.31	SR 19 (Bay St) from Laurel Oak Dr to Bates Ave	Lake
C	1.96	US 27 (N 14th St) from Begin One-way to US 441 (North Blvd Ave)	Lake
D	1.72	CR 561 from SR 19 to Lona St	Lake
E	1.69	SR 46 from CR 46A to Lake/Orange County Line	Lake
F	1.55 - 1.37	EB SR 33/50 (Broad St) from Begin One-way to Main Ave	Lake
G	1.51	SR 19 (Grove St) from Begin One-way to north of Eustis St	Lake
H	1.49	WB SR 33/50 (Broad St) from SR 19 to SR 33 SR 50/SR 33/Crittendon St	Lake
I	1.44	SB US 27 (14th St) from US 441 to William St	Lake
J	1.31	Main Street (Leesburg) from Thomas Rd to SR 44	Lake
K	1.29	Morse Blvd from CR 466 to south of El Camino Real	Sumter
L	1.27	SB US 27 (14th St) from south of Lake Shore Dr to End One-Way	Lake
M	1.20	Rolling Acres Rd from CR 466 to US 27	Lake



Lake-Sumter MPO and Local Agencies Capacity Analysis (2017)

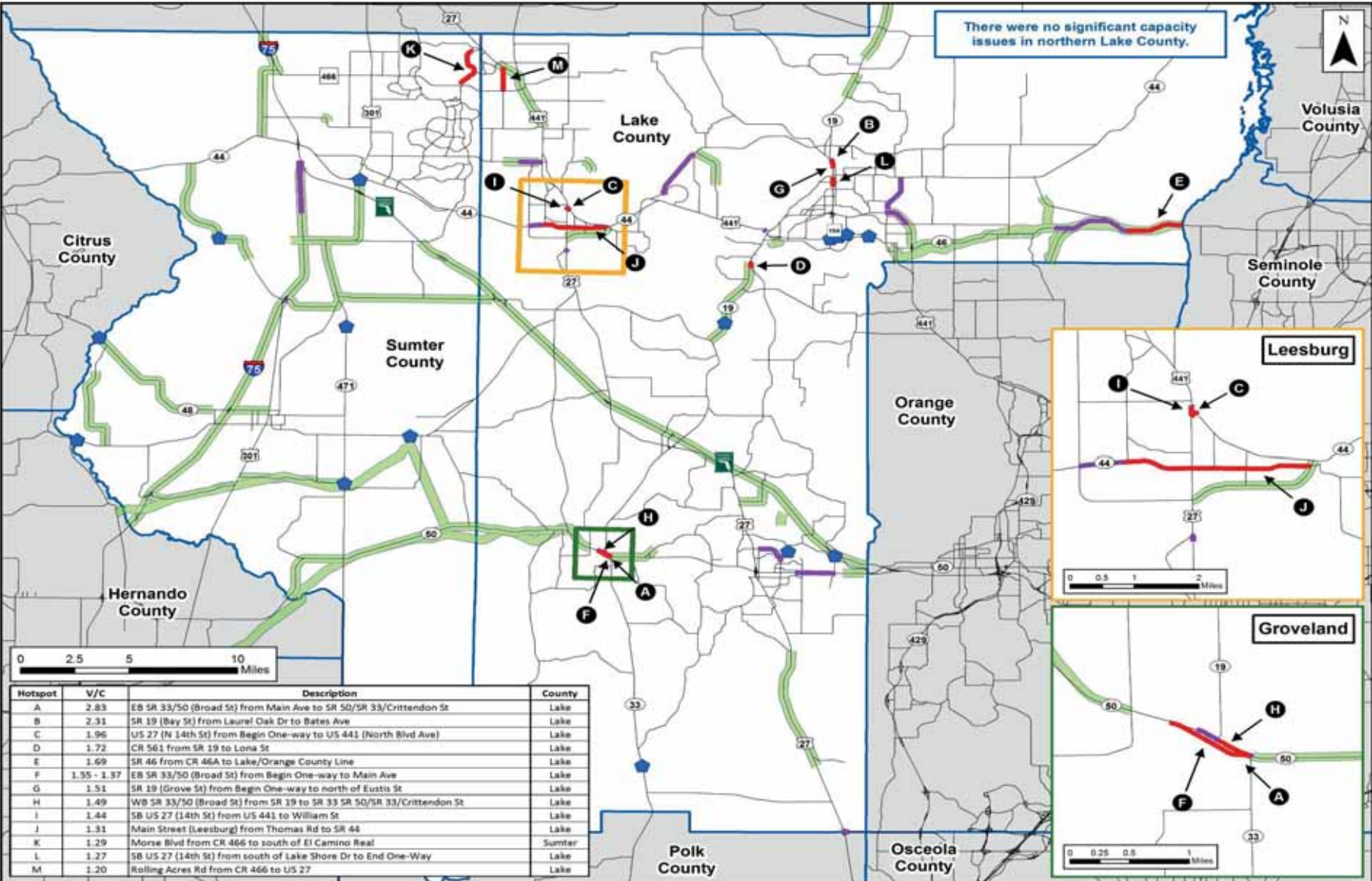
- Capacity Hotspots**
- Largest V/C Ratio
 - Other LOS F Facilities
 - Lake-Sumter MPO TIP*
 - Lake-Sumter MPO TIP*
 - Roadways
 - Lake-Sumter MPO
 - Other Counties

*Note: Projects in the Transportation Improvement Program were categorized according to their work mix. Categories shown on this map include: Bridge, Planning / PO&E Study, Capacity, Safety, Operations, Multimodal, and Disaster Recovery projects. The geospatial data is from the LSMPO 2016/17 TIP.

Sources: Lake-Sumter MPO (2017), Signal Four Analytics (2014-2016), FDOT RCI Database (2017).



Note: Physical and political constraints, as well as TCEA restrictions, were not considered during the capacity analyses.

August 2017



Hotspot	V/C	Description	County
A	2.83	EB SR 33/50 (Broad St) from Main Ave to SR 50/SR 33/Crittendon St	Lake
B	2.31	SR 19 (Bay St) from Laurel Oak Dr to Bates Ave	Lake
C	1.96	US 27 (N 14th St) from Begin One-way to US 441 (North Blvd Ave)	Lake
D	1.72	CR 561 from SR 19 to Lona St	Lake
E	1.69	SR 46 from CR 46A to Lake/Orange County Line	Lake
F	1.55 - 1.37	EB SR 33/50 (Broad St) from Begin One-way to Main Ave	Lake
G	1.51	SR 19 (Grove St) from Begin One-way to north of Eustis St	Lake
H	1.49	WB SR 33/50 (Broad St) from SR 19 to SR 33 SR 50/SR 33/Crittendon St	Lake
I	1.44	SB US 27 (14th St) from US 441 to William St	Lake
J	1.31	Main Street (Leesburg) from Thomas Rd to SR 44	Lake
K	1.29	Morse Blvd from CR 466 to south of El Camino Real	Sumter
L	1.27	SB US 27 (14th St) from south of Lake Shore Dr to End One-Way	Lake
M	1.20	Rolling Acres Rd from CR 466 to US 27	Lake

Lake-Sumter MPO – Capacity Analysis

Hotspot	V / C	Description	County	TIP	Phase	PPL	Priority No.
A	2.83	EB SR 50 / SR 33 from Main Ave to SR 50 / SR 33 / Crittendon St	Lake	South Lake Trail Phase 3B from SR 33 to Silver Eagle Rd	ROW, CST		
B 	2.31	SR 19 (Bay St) from Laurel Oak Dr to Bates Ave	Lake				
C	1.96	US 27 (N 14 th St) from Begin One-Way to US 441 (N Blvd Ave)	Lake			Leesburg Complete Streets	14
D	1.72	CR 561 from SR 19 to Lona St	Lake	SR 19 from CR 48 to CR 561-add 2 lanes	PD&E		
E	1.69	SR 46 from CR 46A to Lake/Orange County Line	Lake	CR 46A Realignment from SR 46 to north of Arundel Way	ROW, CST		
F 	1.55 – 1.37	EB SR 50 / SR 33 from Begin One-way to Main Ave	Lake				
G 	1.51	SR 19 (Grove St) from Begin One-way to north of Eustis St	Lake				
H	1.49	WB SR 50 / SR 33 (Broad St) from SR 19 to SR 50 / SR 33/ Crittendon St	Lake	South Lake Trail Phase 3B from SR 33 to Silver Eagle Rd	ROW, CST		
I	1.44	SB US 28 (14 th St) from US 441 to William St	Lake			US 27 & SR 44 Intersection Improvement PD&E	Table 5 (PD&E Projects)

Space Coast TPO

Crash Hotspots
Congestion Hotspots
Capacity Issues

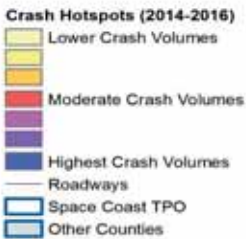


Transportation Systems Management & Operations

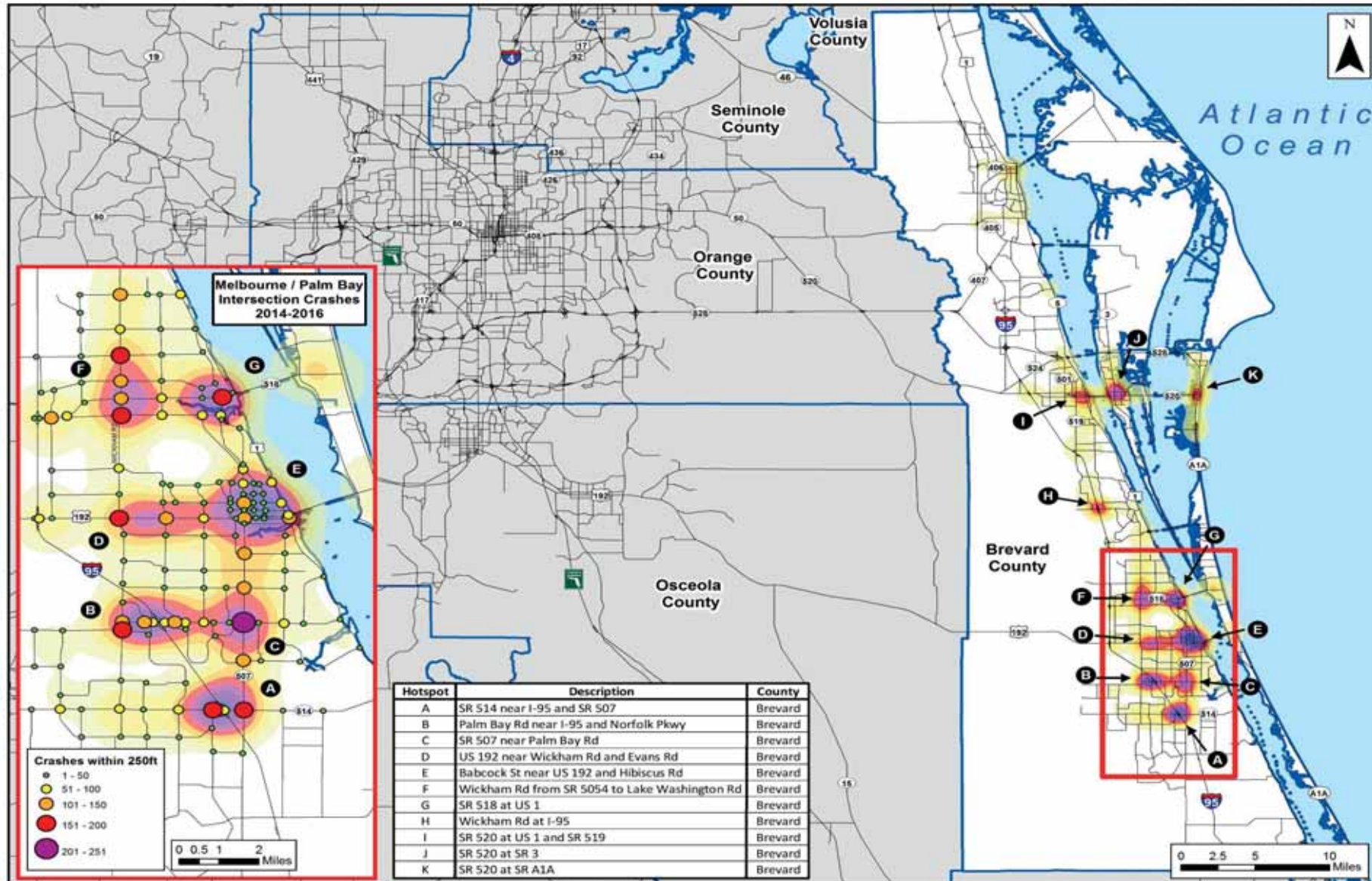




Space Coast TPO and Local Agencies Crashes 2014-2016

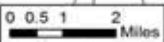


Sources: Space Coast TPO (2017), Signal Four Analytics (2014-2016), and FDOT RCI Database (2017).



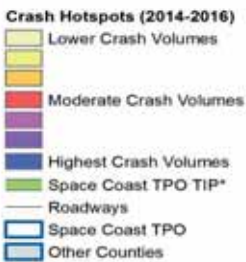
Melbourne / Palm Bay Intersection Crashes 2014-2016

Crashes within 250ft



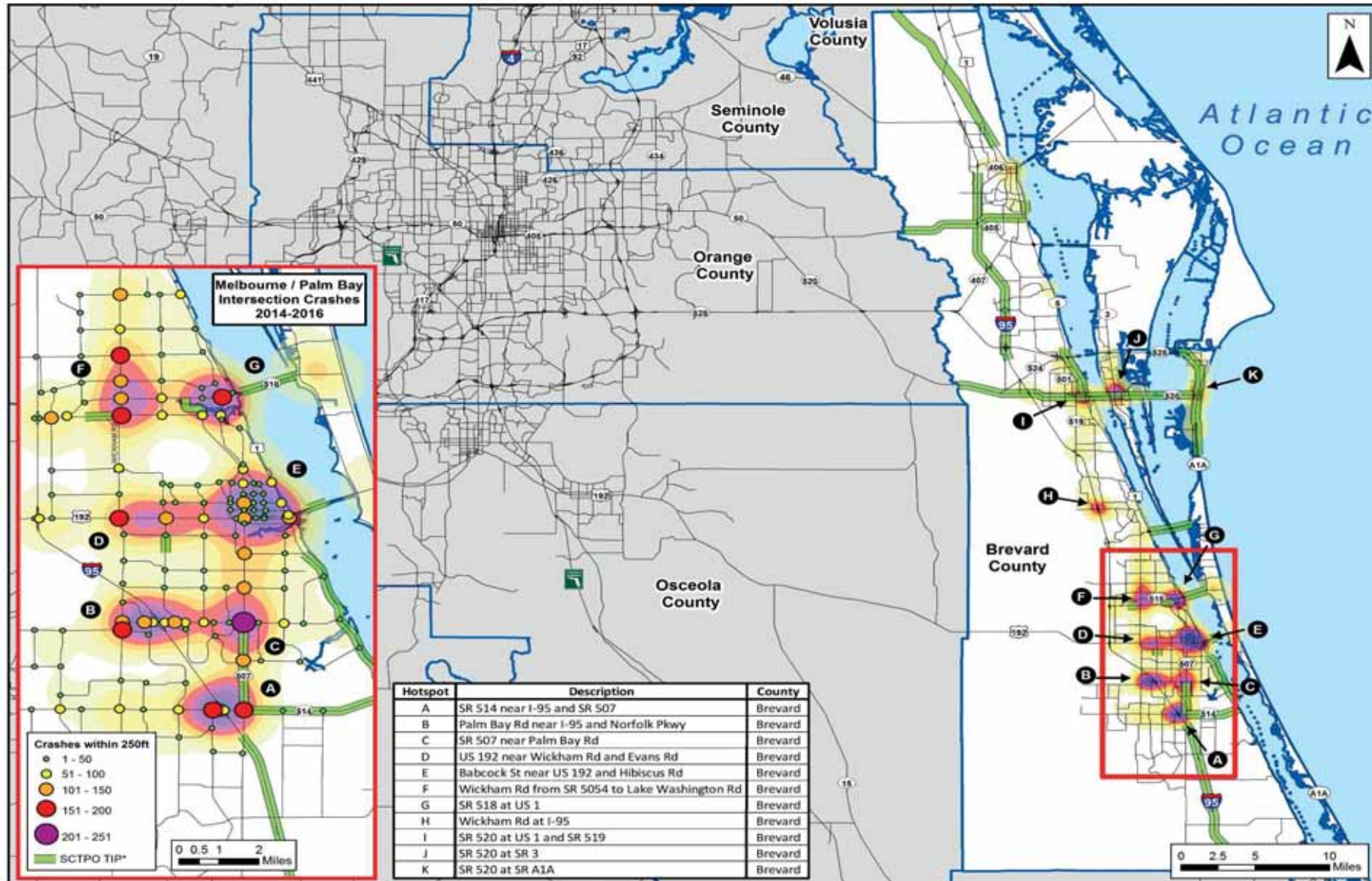


Space Coast TPO and Local Agencies Crashes 2014-2016

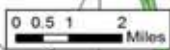
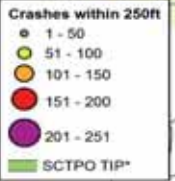


*Note: Projects in the Transportation Improvement Program were categorized according to their work mix. Categories shown on this map include: Bridge, Planning / PD&E Study, Capacity, Safety, Operations, and Multimodal. The geospatial data is taken from the LSMPO 2016/17 TIP.

Sources: Space Coast TPO (2017), Signal Four Analytics (2014-2016), and FDOT RCI Database (2017).



Melbourne / Palm Bay Intersection Crashes 2014-2016



Space Coast TPO – Crash Hotspots

Hotspot	Description	County	TIP	Phase	PPL	Priority No.
A	SR 514 near I-95 and SR 507	Brevard	Roadway Capacity and Major Bridge Projects (4301361)	PD&E		
		Brevard	Add Lanes and Rehabilitate Pavement (I-95) (4130721)			
B	Palm Bay Rd near I-95 and Norfolk Pkwy	Brevard	Roadway Capacity and Major Bridge Projects (SR 507) (2376506)	PD&E		
C	SR 507 near Palm Bay Rd	Brevard	Roadway Capacity and Major Bridge Projects (2376506)	PD&E		
		Brevard	Roadway Capacity and Major Bridge Projects (SR 514) (4301361)	PD&E		
D★	US 192 near Wickham Rd and Evans Rd	Brevard	Safety Enhancements (Evans Road) (4279821)			
E	Babcock St near US 192 and Hibiscus Rd	Brevard				
F	Wickham Rd from SR 5054 to Lake Washington Rd	Brevard	Add Left Turn Lane(s) (4159731); New Road Construction (4046671)			
G	SR 518 at US 1	Brevard	Bridge Repair (4294941)			
H★	Wickham Rd at I-95	Brevard				
I	SR 520 at US 1 and SR 519	Brevard	Safety Enhancements (4309422) + Transit Improvements (4206421)			



**Space Coast TPO
and Local Agencies**

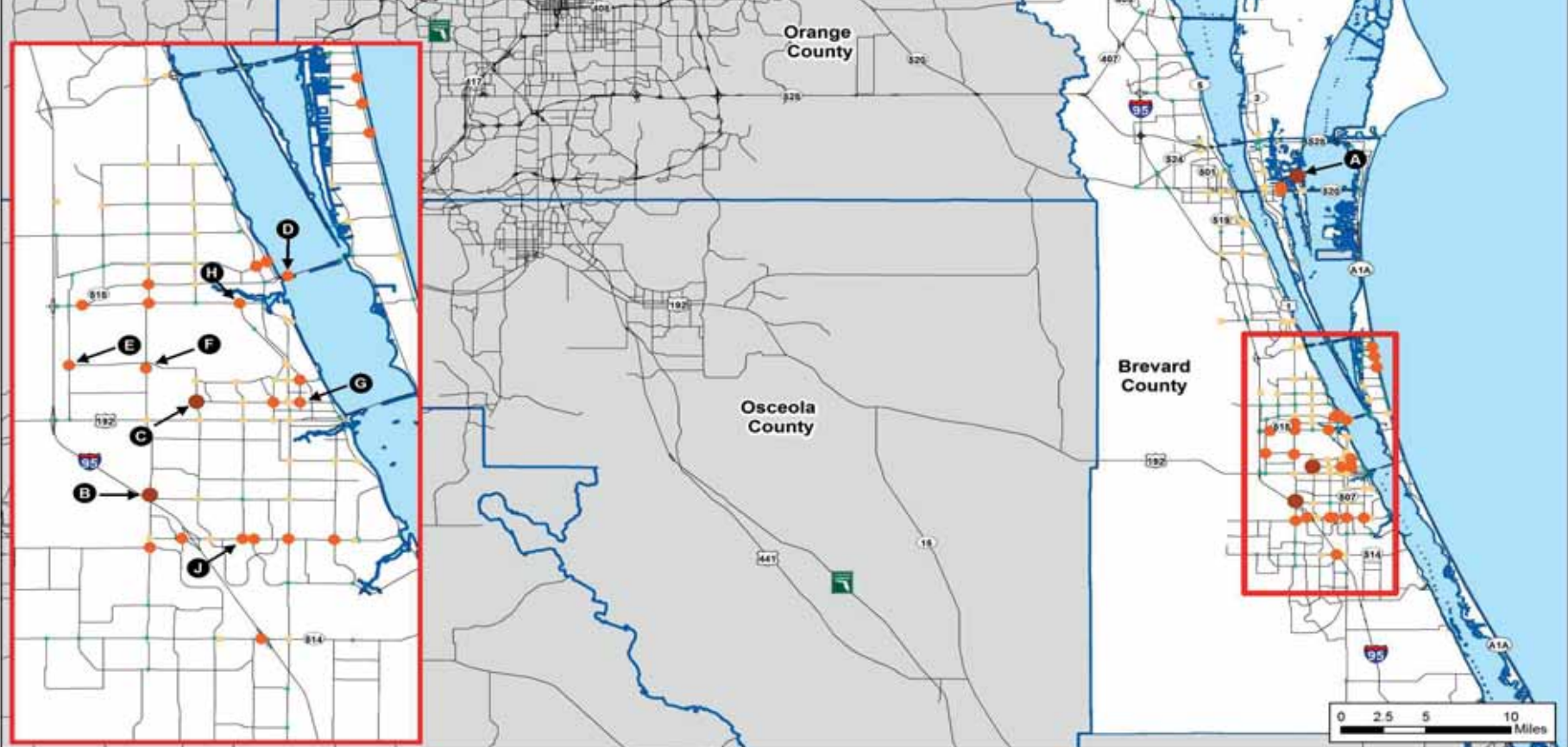
**Congestion Indicator
HERE Data
4:30 - 5:30 PM
Tues-Weds-Thurs
July 25-27, 2017**

- Congestion Indicator**
- Low
 - Moderate
 - High
- Roadways
 Space Coast TPO
 Other Counties

Sources: Space Coast TPO (2017),
Signal Four Analytics (2014-2016),
FDOT RCI Database (2017), HERE
(2017)

August 2017

Location	Description	Jam Factor	Segment	County
A	Sykes Creek Pky	6.76	Banana River Dr to Triangle Road (Westbound)	Brevard
B	Minton Rd	5.73	Eber Blvd to Palm Bay Rd NE (Southbound)	Brevard
C	Evans Rd	5.24	Hibiscus Blvd W to US-192/New Haven Rd (Southbound)	Brevard
D	SR-518	4.96	Indian River East to N. Harbor City Blvd (Westbound)	Brevard
E	John Rodes Blvd	4.95	Ellis Rd to SR-518/ Eau Gallie Blvd (Northbound)	Brevard
F	Wickham Rd	4.73	Old Nasa Blvd to Sarno Rd (Northbound)	Brevard
G	Hibiscus Blvd	4.57	Apollo Blvd to CR-507/Babcock St (Westbound)	Brevard
H	Sarno Rd	4.42	Apollo Blvd N to N. Harbor City Blvd (Eastbound)	Brevard
I	Park Ave	4.37	Gardner St. to Draa Rd (Northbound)	Brevard
J	Palm Bay Rd	4.36	NE Dairy Rd to Hollywood Blvd (Westbound)	Brevard





Space Coast TPO
and Local Agencies

Congestion Indicator
HERE Data
4:30 - 5:30 PM
Tues-Weds-Thurs
July 25-27, 2017

Congestion Indicator

- Low
- Moderate
- High

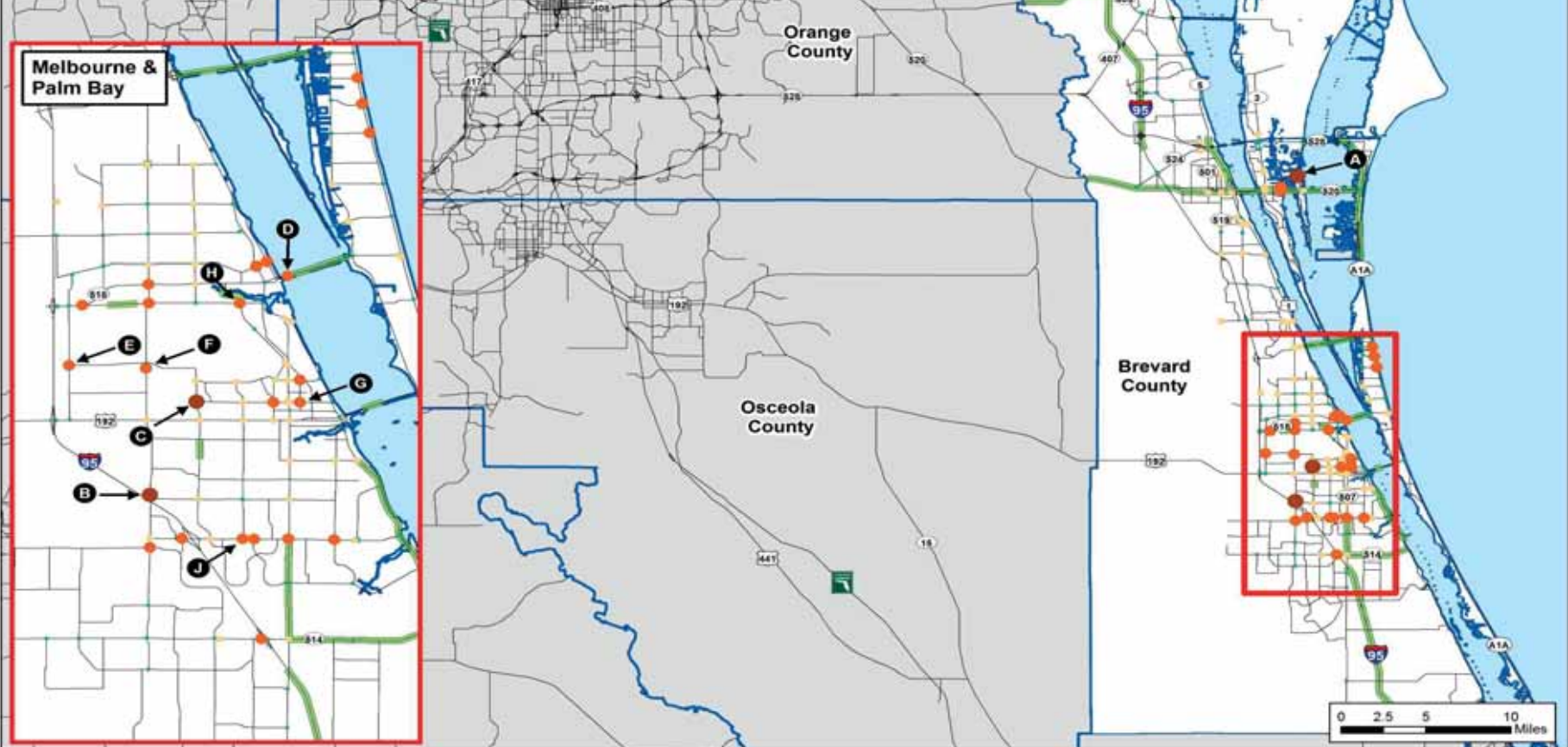
- Space Coast TPO TIP*
- Roadways
- Space Coast TPO
- Other Counties

*Note: Projects in the Transportation Improvement Program were categorized according to their work mix. Categories shown on this map include: Bridge, Planning / PO&E Study, Capacity, Safety, Operations, and Multimodal. The geospatial data is taken from the SCTPO 2016/17 TIP

Sources: Space Coast TPO (2017), Signal Four Analytics (2014-2016), FDOT RCI Database (2017), HERE (2017)

August 2017



Location	Description	Jam Factor	Segment	County
A	Sykes Creek Pky	6.76	Banana River Dr to Triangle Road (Westbound)	Brevard
B	Minton Rd	5.73	Eber Blvd to Palm Bay Rd NE (Southbound)	Brevard
C	Evans Rd	5.24	Hibiscus Blvd W to US-192/New Haven Rd (Southbound)	Brevard
D	SR-518	4.96	Indian River East to N. Harbor City Blvd (Westbound)	Brevard
E	John Rodes Blvd	4.95	Ellis Rd to SR-518/ Eau Gallie Blvd (Northbound)	Brevard
F	Wickham Rd	4.73	Old Nasa Blvd to Sarno Rd (Northbound)	Brevard
G	Hibiscus Blvd	4.57	Apollo Blvd to CR-507/Babcock St (Westbound)	Brevard
H	Sarno Rd	4.42	Apollo Blvd N to N. Harbor City Blvd (Eastbound)	Brevard
I	Park Ave	4.37	Gardner St. to Draa Rd (Northbound)	Brevard
J	Palm Bay Rd	4.36	NE Dairy Rd to Hollywood Blvd (Westbound)	Brevard



Melbourne & Palm Bay



Space Coast TPO – Jam Factor

Location	Description	Segment	County	TIP	Phase	Priority No.
A 	Sykes Creek Pky	Banana River Dr to Triangle Road (Westbound)	Brevard			
B 	Minton Rd	Eber Blvd to Palm Bay Rd NE (Southbound)	Brevard			
C	Evans Rd	Hibiscus Blvd W to US-192/New Haven Rd (Southbound)	Brevard	US 192 and Hollywood Blvd/Evans Intersection Improvements	CST	2
D	SR-518	Indian River East to N. Harbor City Blvd (Westbound)	Brevard	SR 518 Bridge Rehabilitation (4294941)	-	25
E	John Rodes Blvd	Ellis Rd to SR-518/ Eau Gallie Blvd (Northbound)	Brevard	Eau Gallie Blvd to Bend at Aurora (8 ft sidewalk/multi-use path)	Design & CST	34
F	Wickham Rd	Old Nasa Blvd to Sarno Rd (Northbound)	Brevard	3 Projects: New Road Construction + Eau Gallie Intersections Traffic Ops Improvement + Extend/Widen Ellis Road Connection	CST	1 (SIS Highway Component)
G	Hibiscus Blvd	Apollo Blvd to CR-507/Babcock St (Westbound)	Brevard			
H	Sarno Rd	Apollo Blvd N to N. Harbor City Blvd (Eastbound)	Brevard	Sarno Rd Add Lanes and Reconstruction Apollo Blvd from Sarno Road to Eau Gallie Blvd (2412411)	CST, Railroad and Utilities	
I	Park Ave	Gardner St. to Draa Rd (Northbound)	Brevard	East Central Rail Trail From Kingman Road to Volusia County Line (4240404)		



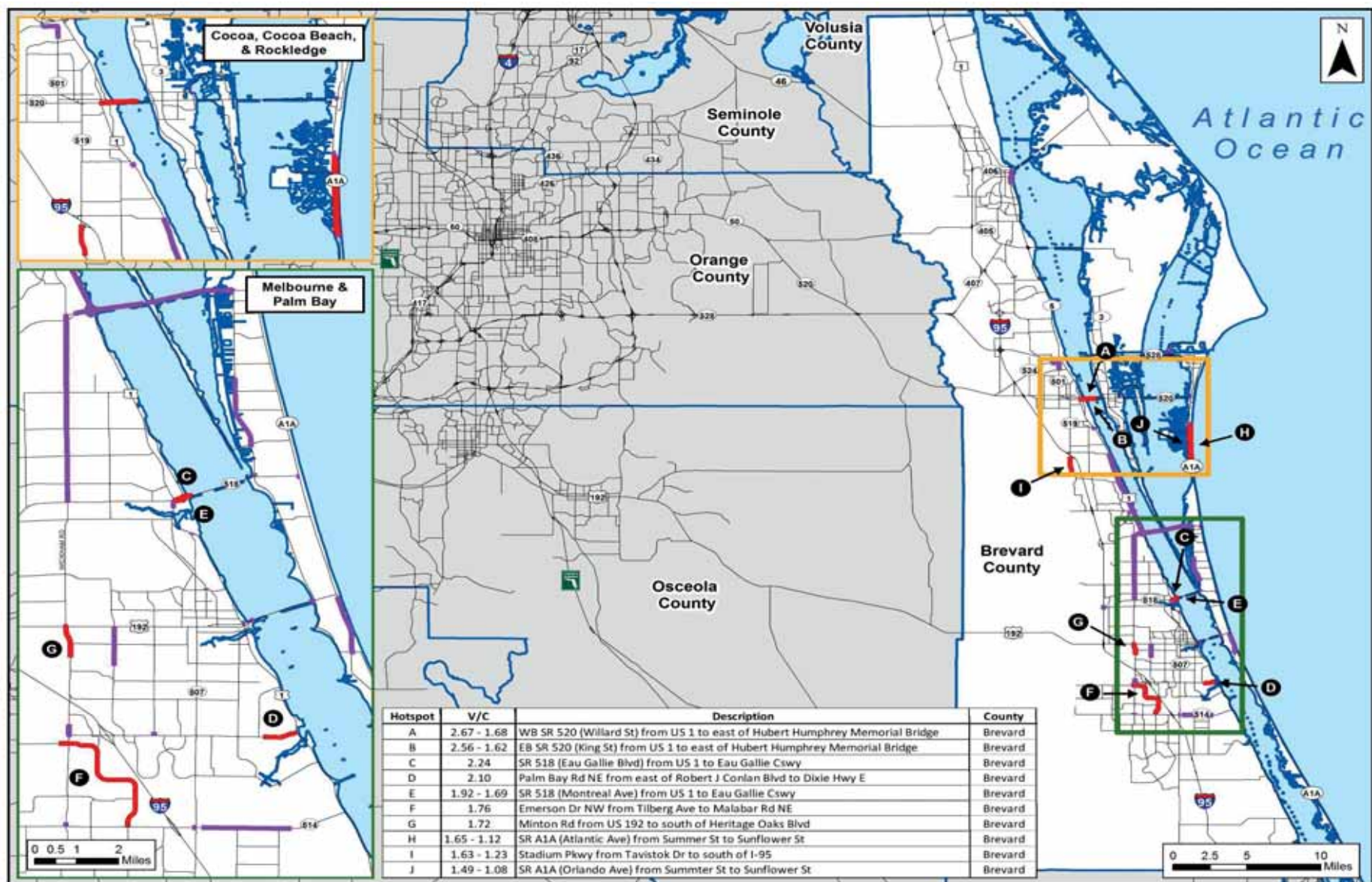
**Space Coast TPO
and Local Agencies
Capacity Analysis (2017)**

- Capacity Hotspots**
- Largest V/C Ratios
 - Other LOS F Facilities
 - Roadways
 - Space Coast TPO
 - Other Counties

Sources: Space Coast TPO (2017), Signal Four Analytics (2014-2016), and FDOT RCI Database (2017).

Note: Physical and political constraints, as well as TCEA restrictions, were not considered during the capacity analyses.

August 2017



Hotspot	V/C	Description	County
A	2.67 - 1.68	WB SR 520 (Willard St) from US 1 to east of Hubert Humphrey Memorial Bridge	Brevard
B	2.56 - 1.62	EB SR 520 (King St) from US 1 to east of Hubert Humphrey Memorial Bridge	Brevard
C	2.24	SR 518 (Eau Gallie Blvd) from US 1 to Eau Gallie Cswy	Brevard
D	2.10	Palm Bay Rd NE from east of Robert J Conlan Blvd to Dixie Hwy E	Brevard
E	1.92 - 1.69	SR 518 (Montreal Ave) from US 1 to Eau Gallie Cswy	Brevard
F	1.76	Emerson Dr NW from Tilberg Ave to Malabar Rd NE	Brevard
G	1.72	Minton Rd from US 192 to south of Heritage Oaks Blvd	Brevard
H	1.65 - 1.12	SR A1A (Atlantic Ave) from Summer St to Sunflower St	Brevard
I	1.63 - 1.23	Stadium Pkwy from Tavistok Dr to south of I-95	Brevard
J	1.49 - 1.08	SR A1A (Orlando Ave) from Summer St to Sunflower St	Brevard



**Space Coast TPO
and Local Agencies
Capacity Analysis (2017)**

Capacity Hotspots

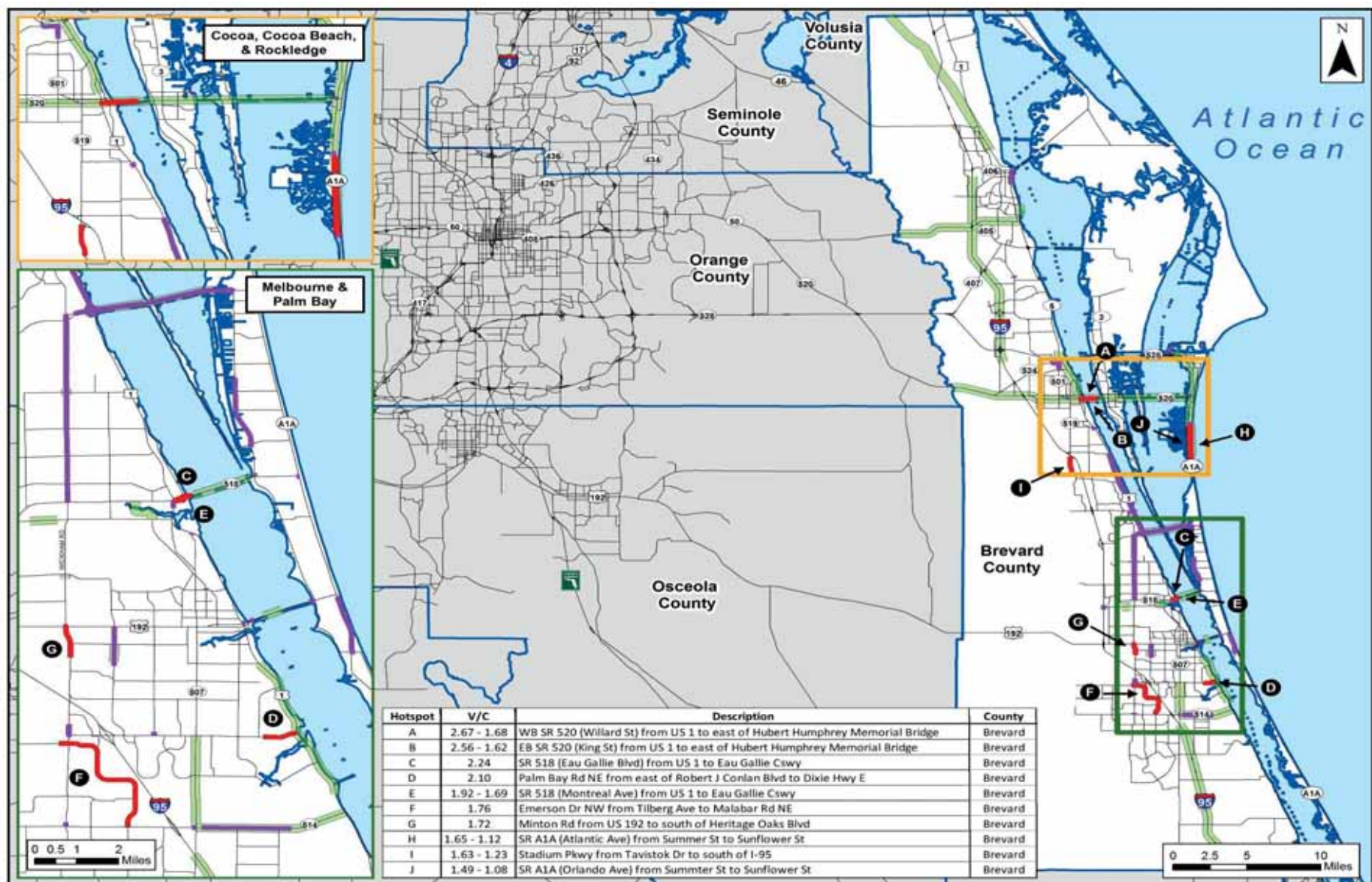
- █ Largest V/C Ratios
- █ Other LOS F Facilities
- █ Space Coast TPO TIP*
- █ Roadways
- Space Coast TPO
- Other Counties

*Note: Projects in the Transportation Improvement Program were categorized according to their work mix. Categories shown on this map include: Bridge, Planning / PO&E Study, Capacity, Safety, Operations, and Multimodal. The geospatial data is from the SCTPO 2016/17 TIP.


Sources: Space Coast TPO (2017), Signal Four Analytics (2014-2016), and FDOT RCI Database (2017).

Note: Physical and political constraints, as well as TCEA restrictions, were not considered during the capacity analyses.

August 2017



Space Coast TPO – Capacity Analysis

Hotspot	V / C	Description	County	TIP	Phase	PPL	Priority No.
A	2.67 – 1.68	WB SR 520 (Willard St) from US 1 to east of Hubert Humphrey Memorial Bridge	Brevard			US 1 to east city limits Bike/Ped and transit improvements; roundabout at Riverledge Blvd, eliminate right-turn slip lane at US 1	10 (2018)
B	2.56 – 1.62	EB SR 520 (King St) from US 1 to east of Hubert Humphrey Memorial Bridge	Brevard			US 1 to east city limits Bike/Ped and transit improvements; roundabout at Riverledge Blvd, eliminate right-turn slip lane at US 1	10 (2018)
C	2.24	SR 518 (Eau Gallie Blvd) from US 1 to Eau Gallie Cswy	Brevard			SR 518 Corridor Study (Eau Gallie to SR A1A) – Concept Development	25 (2018)
D 	2.10	Palm Bay Rd NE from east of Robert J Conlan Blvd to Dixie Hwy	Brevard				
E	1.92 – 1.69	SR 518 (Montreal Ave) from US 1 to Eau Gallie Cswy	Brevard	Pineapple Ave from SR 518 to Aurora Rd – bike/ped facility additions	PE, CST	SR 518 Corridor Study (Eau Gallie to SR A1A) – Concept Development	25 (2018)
F	1.76	Emerson Dr NW from Tilberg Ave to Malabar Rd NE	Brevard			Widen Malabar Rd to 4 lanes from FJHP Pkwy to Minton Ave (PE, PD&E, R/W funded)	12 (2018)
G	1.72	Minton Rd from US 192 to south of Heritage Oaks Blvd	Brevard	US 192 at Wickham Rd – add turn lanes	CST		
H	1.65 – 1.12	SR A1A (Atlantic Ave) from 21st St to Sunflower St	Brevard			SR A1A Streetscaping improvements from 2 nd St to Sunflower St; various sidewalk improvements; crosswalk improvements	3x (2018)
I 	1.63 – 1.23	Stadium Pkwy from Tavistok Dr to south of I-95	Brevard				

River to Sea TPO

Crash Hotspots
Congestion Hotspots
Capacity Issues

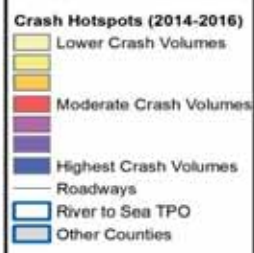


Transportation Systems Management & Operations



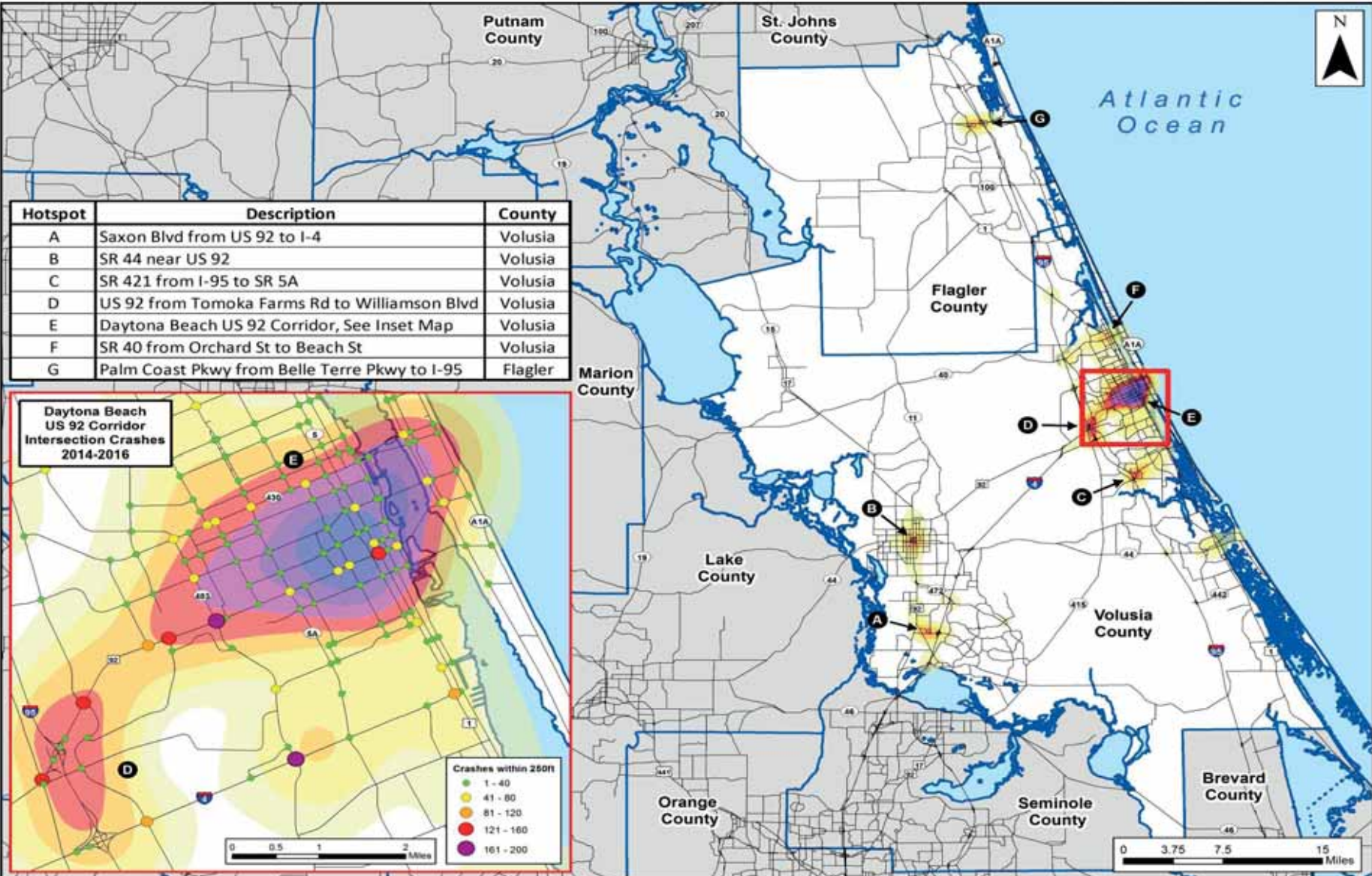


**River to Sea TPO
and Local Agencies
Crashes
2014-2016**

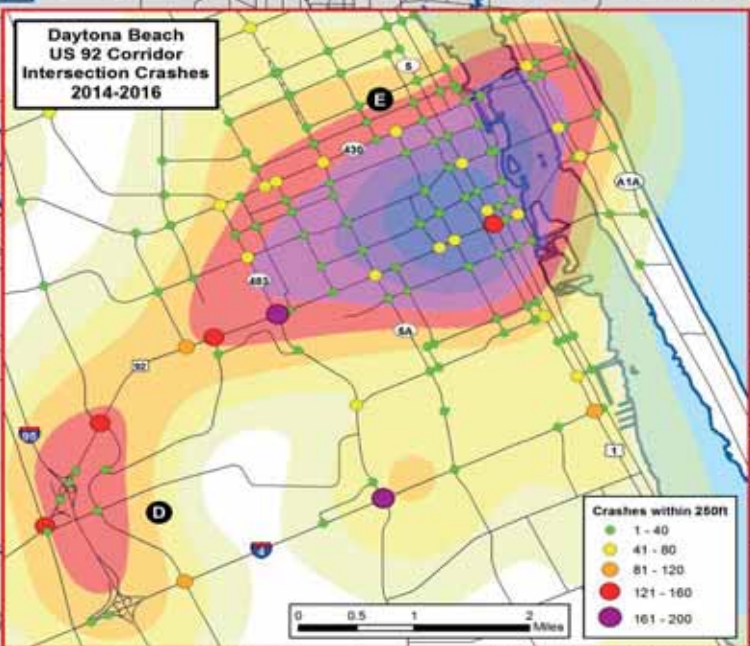


Sources: River to Sea TPO (2017), Signal Four Analytics (2014-2016), and FDOT RCI Database (2017).

August 2017



Hotspot	Description	County
A	Saxon Blvd from US 92 to I-4	Volusia
B	SR 44 near US 92	Volusia
C	SR 421 from I-95 to SR 5A	Volusia
D	US 92 from Tomoka Farms Rd to Williamson Blvd	Volusia
E	Daytona Beach US 92 Corridor, See Inset Map	Volusia
F	SR 40 from Orchard St to Beach St	Volusia
G	Palm Coast Pkwy from Belle Terre Pkwy to I-95	Flagler





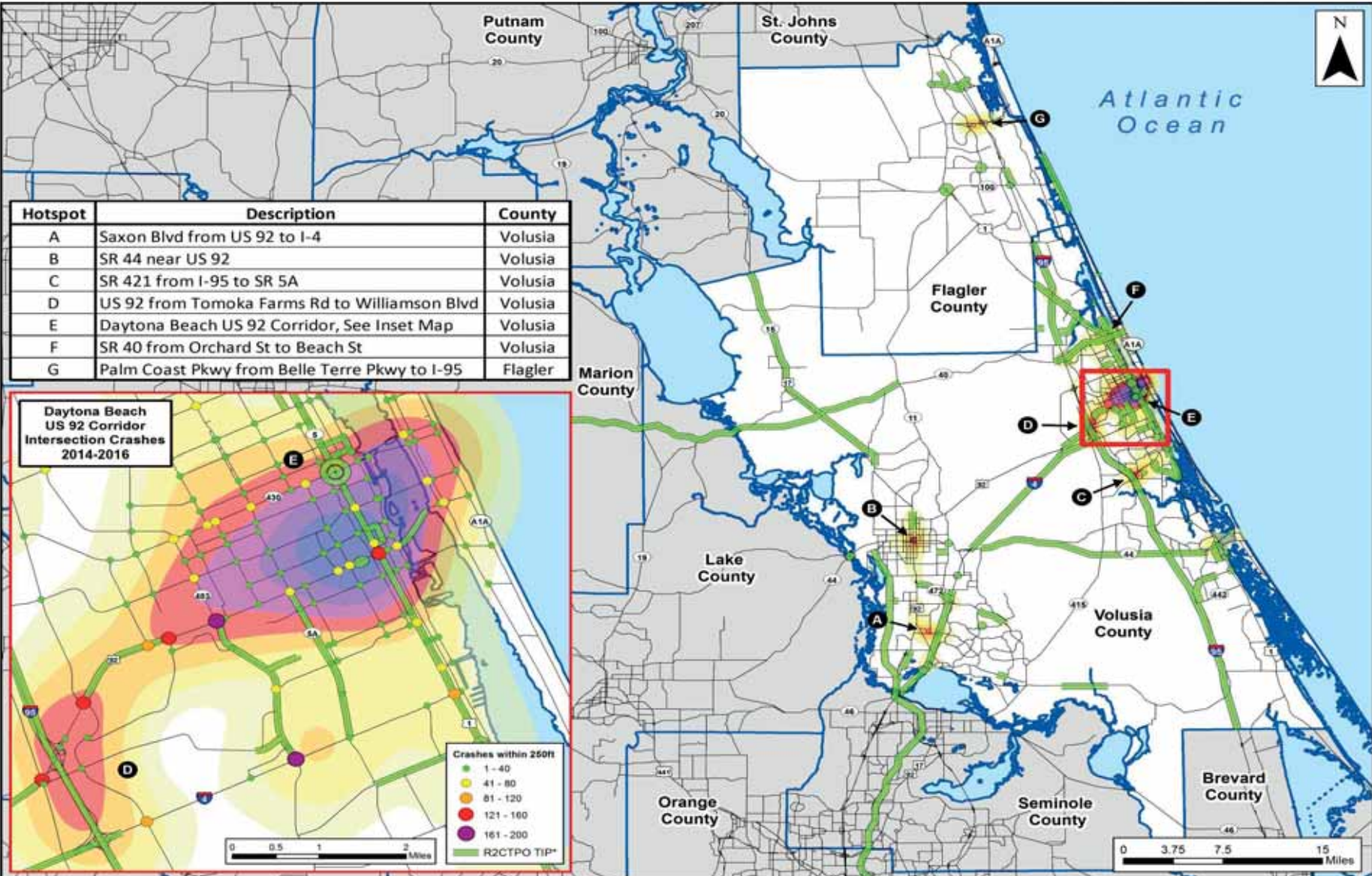
**River to Sea TPO
and Local Agencies
Crashes
2014-2016**

- Crash Hotspots (2014-2016)**
- Lower Crash Volumes
 - Moderate Crash Volumes
 - Highest Crash Volumes
 - River to Sea TPO TIP*
 - Roadways
 - River to Sea TPO
 - Other Counties

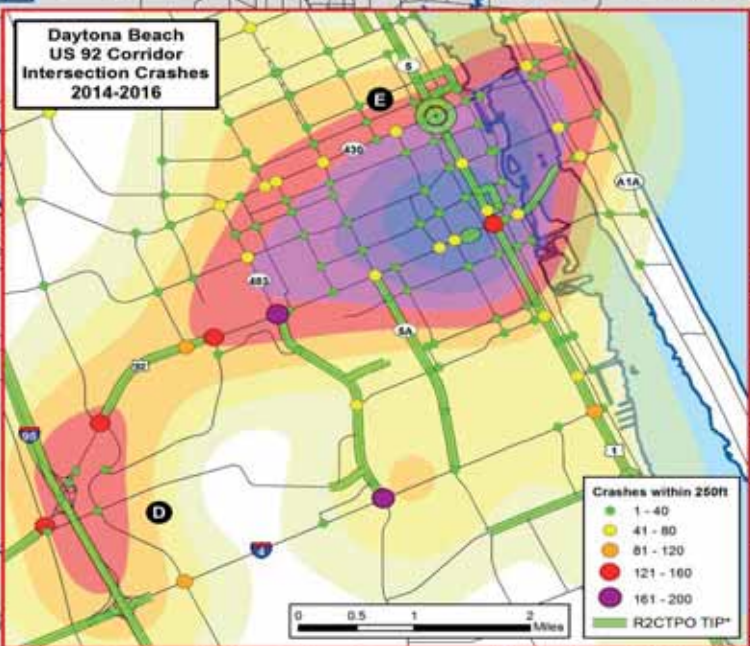
*Note: Projects in the Transportation Improvement Program were categorized according to their work mix. Categories shown on this map include: Bridge, Planning / PD&E Study, Capacity, Safety, Operations, Multimodal, and Disaster Recovery projects. The geospatial data is taken from the R2CTPO 2016/17 TIP.

Sources: River to Sea TPO (2017), Signal Four Analytics (2014-2016), and FDOT RCI Database (2017).

August 2017




Hotspot	Description	County
A	Saxon Blvd from US 92 to I-4	Volusia
B	SR 44 near US 92	Volusia
C	SR 421 from I-95 to SR 5A	Volusia
D	US 92 from Tomoka Farms Rd to Williamson Blvd	Volusia
E	Daytona Beach US 92 Corridor, See Inset Map	Volusia
F	SR 40 from Orchard St to Beach St	Volusia
G	Palm Coast Pkwy from Belle Terre Pkwy to I-95	Flagler



- Crashes within 250ft**
- 1 - 40
 - 41 - 80
 - 81 - 120
 - 121 - 160
 - 161 - 200
 - R2CTPO TIP*

River to Sea TPO – Crash Hotspots

Hotspot	Description	County	TIP	Phase	PPL	Priority No.
A	Saxon Blvd from US 92 to I-4	Volusia	Add Managed Use Lanes (I-4) (4084642)			1
B	SR 44 near US 92	Volusia	Road Intersection Improvement (4319221)		Alternative Intersection Design or Areawide Plan for Congestion Mitigation	4
C	SR 421 from I-95 to SR 5A	Volusia	Transit Service Enhancement (4302851)		Intersection Improvements (2409922)	17
D	US 92 from Tomoka Farms Rd to Williamson Blvd	Volusia	Pedestrian Improvements (4348711)	PD&E	Widening (4226271)	5
E	Daytona Beach US 92 Corridor, See Inset Map	Volusia	Bridge Repair (4394531)	CST		
			Voltran Transit Service Enhancement (4302851)	OPS		
F	SR 40 from Orchard St to Beach St	Volusia	Voltran Transit Service Enhancement (4302851)	OPS	Arterial Traffic Management (4402701)	9
			Operations Improvements (2409921 / 2409924)			
G 	Palm Coast Pkwy from Belle Terre Pkwy to I-95	Flagler				



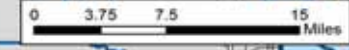
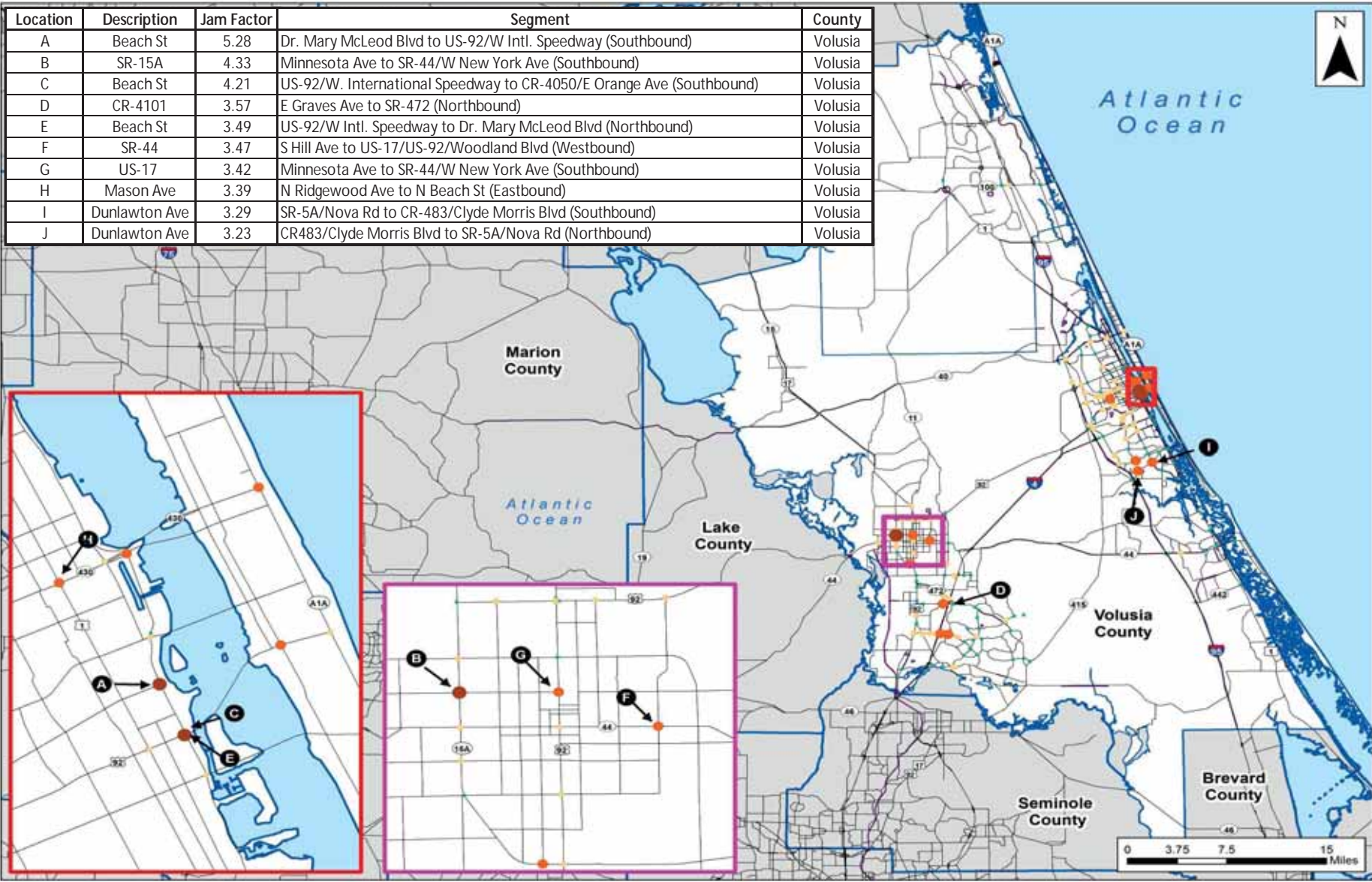
River to Sea TPO and Local Agencies

**Congestion Indicator
HERE Data
4:30 - 5:30 PM
Tues-Weds-Thurs
July 25-27, 2017**

- Congestion Indicator**
- Low
 - Moderate
 - High
 - Roadways
 - River2Sea TPO
 - Other Counties

Sources: River to Sea TPO (2017), Signal Four Analytics (2014-2016), FDOT RCI Database (2017), HERE (2017).

Location	Description	Jam Factor	Segment	County
A	Beach St	5.28	Dr. Mary McLeod Blvd to US-92/W Intl. Speedway (Southbound)	Volusia
B	SR-15A	4.33	Minnesota Ave to SR-44/W New York Ave (Southbound)	Volusia
C	Beach St	4.21	US-92/W. International Speedway to CR-4050/E Orange Ave (Southbound)	Volusia
D	CR-4101	3.57	E Graves Ave to SR-472 (Northbound)	Volusia
E	Beach St	3.49	US-92/W Intl. Speedway to Dr. Mary McLeod Blvd (Northbound)	Volusia
F	SR-44	3.47	S Hill Ave to US-17/US-92/Woodland Blvd (Westbound)	Volusia
G	US-17	3.42	Minnesota Ave to SR-44/W New York Ave (Southbound)	Volusia
H	Mason Ave	3.39	N Ridgewood Ave to N Beach St (Eastbound)	Volusia
I	Dunlawton Ave	3.29	SR-5A/Nova Rd to CR-483/Clyde Morris Blvd (Southbound)	Volusia
J	Dunlawton Ave	3.23	CR483/Clyde Morris Blvd to SR-5A/Nova Rd (Northbound)	Volusia





River to Sea TPO and Local Agencies

**Congestion Indicator
HERE Data
4:30 - 5:30 PM
Tues-Weds-Thurs
July 25-27, 2017**

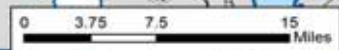
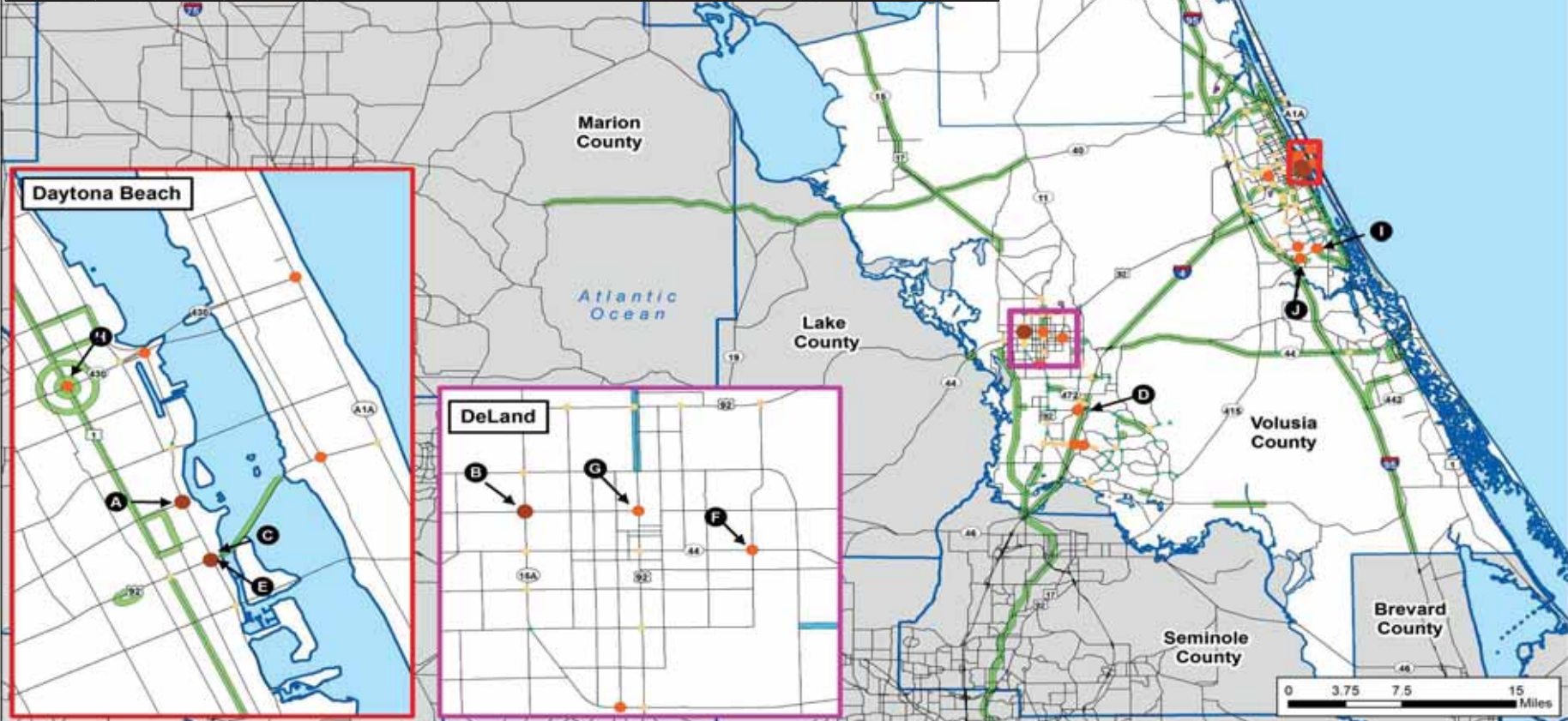
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 - River2Sea TPO TIP*
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Sources: River to Sea TPO (2017), Signal Four Analytics (2014-2016), FDOT RCI Database (2017), HERE (2017).

August 2017

Location	Description	Jam Factor	Segment	County
A	Beach St	5.28	Dr. Mary McLeod Blvd to US-92/W Intl. Speedway (Southbound)	Volusia
B	SR-15A	4.33	Minnesota Ave to SR-44/W New York Ave (Southbound)	Volusia
C	Beach St	4.21	US-92/W. International Speedway to CR-4050/E Orange Ave (Southbound)	Volusia
D	CR-4101	3.57	E Graves Ave to SR-472 (Northbound)	Volusia
E	Beach St	3.49	US-92/W Intl. Speedway to Dr. Mary McLeod Blvd (Northbound)	Volusia
F	SR-44	3.47	S Hill Ave to US-17/US-92/Woodland Blvd (Westbound)	Volusia
G	US-17	3.42	Minnesota Ave to SR-44/W New York Ave (Southbound)	Volusia
H	Mason Ave	3.39	N Ridgewood Ave to N Beach St (Eastbound)	Volusia
I	Dunlawton Ave	3.29	SR-5A/Nova Rd to CR-483/Clyde Morris Blvd (Southbound)	Volusia
J	Dunlawton Ave	3.23	CR483/Clyde Morris Blvd to SR-5A/Nova Rd (Northbound)	Volusia



River to Sea TPO – Jam Factor

Location	Description	Segment	County	TIP	Phase	PPL	Priority No.
A	Beach St	Dr. Mary McLeod Blvd to US-92/W Intl. Speedway (Southbound)	Volusia	2 Projects: Votran Transit Service Enhancement + Pedestrian Lighting Bundle B	OPS + CEI/CST	-	-
B	SR-15A	Minnesota Ave to SR-44/W New York Ave (Southbound)	Volusia	SR 15A (Spring Garden Blvd) at SR 44 (W New York Av) Turn Lane Feasibility Study	-	SR 44 – Miscellaneous upgrades to improve access to DeLand SunRail + SR 15A at SR 44 Turn Lane Feasibility Study	5 / 4 (Non-SIS) / 5 (Tier C)
C	Beach St	US-92/W. International Speedway to CR-4050/E Orange Ave (Southbound)	Volusia	3 Projects: US 92 Over Halifax River Bridges, Transit Enhancement, Capacity Improvements	CEI/CST/OPS/ROW	-	-
D	CR-4101	E Graves Ave to SR-472 (Northbound)	Volusia	Capacity Improvements (SR 472) (4391211)		SR 472 - widen from 4 lanes to 6 (Graves Av to Kentucky/MLK Blvd) I-4 Beyond the Ultimate (4084642)	1 (SIS Projects)
E	Beach St	US-92/W Intl. Speedway to Dr. Mary McLeod Blvd (Northbound)	Volusia	3 Projects: US 92 Over Halifax River Bridges, Transit Enhancement, Capacity Improvements	CEI/CST/OPS/ROW	SR 44 & Beresford Avenue Extension	2
F	SR-44	S Hill Ave to US-17/US-92/Woodland Blvd (Westbound)	Volusia		-		
G	US-17	Minnesota Ave to SR-44/W New York Ave (Southbound)	Volusia	Volusia County Pedestrian Lighting Bundle E (4398815)	CEI/CST	-	-
H	Mason Ave	N Ridgewood Ave to N Beach St (Eastbound)	Volusia	Votran Transit Service Enhancement - Increase Headways Routes 3 & 4 (4302851)		Mason Avenue Corridor Study (from Riverside Dr to Williamson Blvd)	1
I	Dunlawton Ave	SR-5A/Nova Rd to CR-483/Clyde Morris Blvd (Southbound)	Volusia	Dunlawton Av Walk Light Construction - Ph 1 (4355911)	CST (FY16-17)	2 Projects: Turn Lane, intersections	6 + 12 (Tier B) + 11 (Tier C)



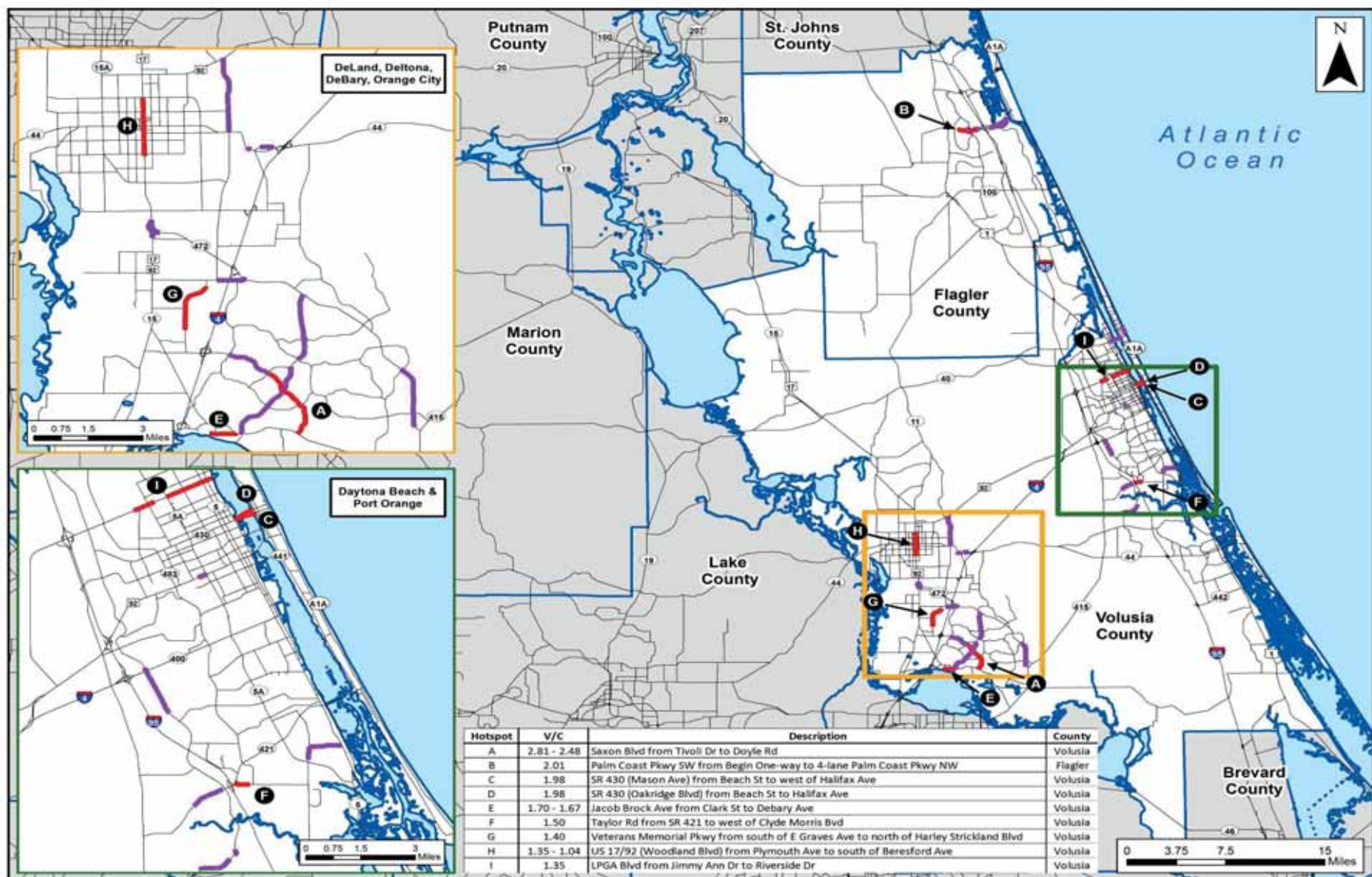
River to Sea TPO and Local Agencies Capacity Analysis (2017)

- Capacity Hotspots**
- Largest V/C Ratios
 - Other LOS F Facilities
 - Roadways
 - River to Sea TPO
 - Other Counties

Sources: River to Sea TPO (2017), Signal Four Analytics (2014-2016), and FDOT RCI Database (2017).

Note: Physical and political constraints, as well as TCEA restrictions, were not considered during the capacity analyses.

August 2017



Hotspot	V/C	Description	County
A	2.81 - 2.48	Saxon Blvd from Tivoli Dr to Doyle Rd	Volusia
B	2.01	Palm Coast Pkwy SW from Begin One-way to 4-lane Palm Coast Pkwy NW	Flagler
C	1.98	SR 430 (Mason Ave) from Beach St to west of Halifax Ave	Volusia
D	1.98	SR 430 (Oakridge Blvd) from Beach St to Halifax Ave	Volusia
E	1.70 - 1.67	Jacob Brock Ave from Clark St to Debary Ave	Volusia
F	1.50	Taylor Rd from SR 421 to west of Clyde Morris Blvd	Volusia
G	1.40	Veterans Memorial Pkwy from south of E Graves Ave to north of Harley Strickland Blvd	Volusia
H	1.35 - 1.04	US 17/92 (Woodland Blvd) from Plymouth Ave to south of Beresford Ave	Volusia
I	1.35	LPGA Blvd from Jimmy Ann Dr to Riverside Dr	Volusia



River to Sea TPO and Local Agencies Capacity Analysis (2017)

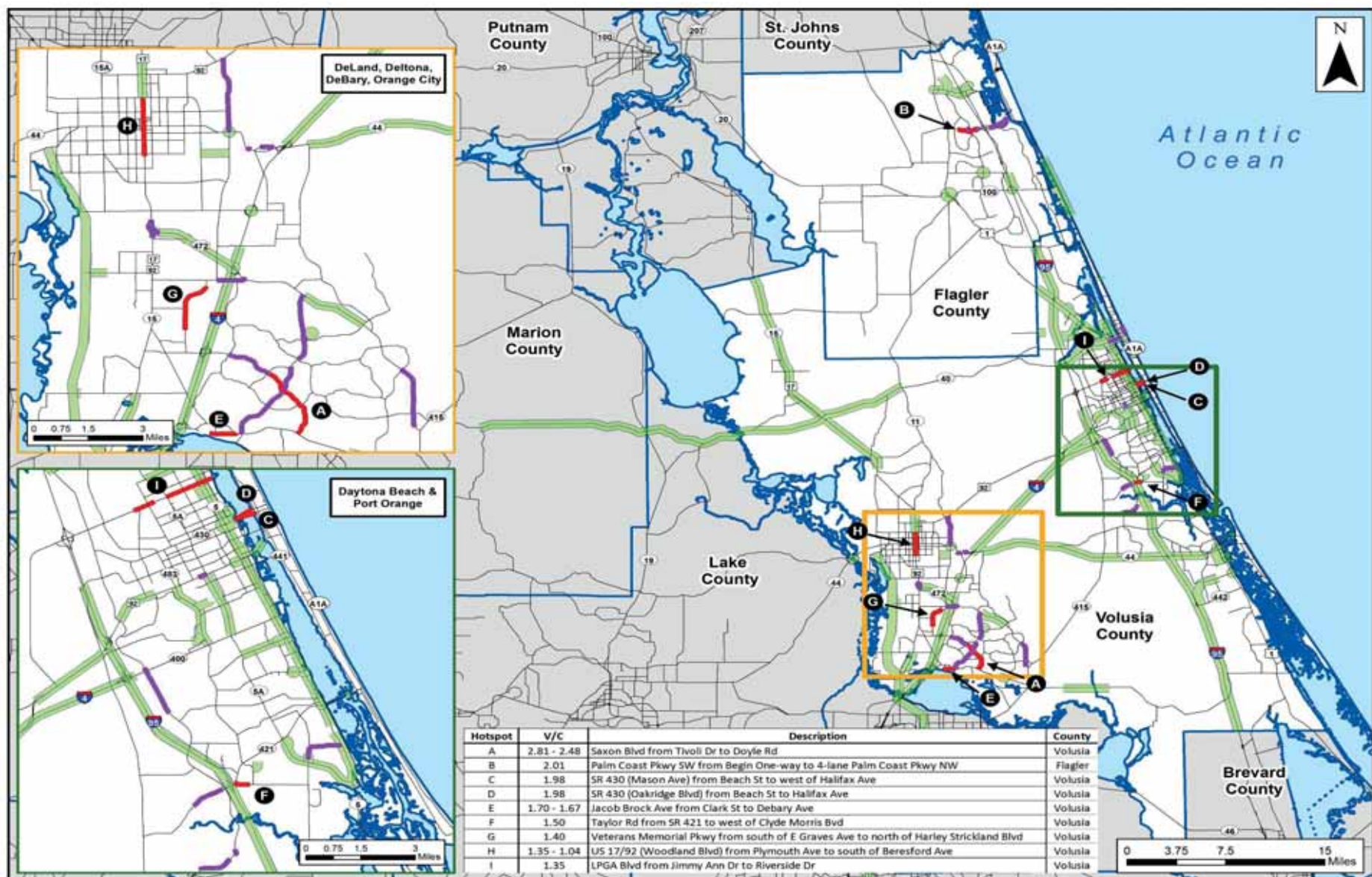
- Capacity Hotspots**
- Largest V/C Ratios
 - Other LOS F Facilities
 - River to Sea TPO TIP*
 - Roadways
 - River to Sea TPO
 - Other Counties

*Note: Projects in the Transportation Improvement Program were categorized according to their work mix. Categories shown on this map include: Bridge, Planning / PO&E Study, Capacity, Safety, Operations, Multimodal, and Disaster Recovery projects. The geospatial data is from the R2CTPO 2016/17 TIP.

Sources: River to Sea TPO (2017), Signal Four Analytics (2014-2016), and FDOT RCI Database (2017).

Note: Physical and political constraints, as well as TCEA restrictions, were not considered during the capacity analyses.

August 2017



River to Sea TPO – Capacity Analysis

Hotspot	V / C	Description	County	TIP	Phase	PPL	Priority No.
A	2.81 – 2.48	Saxon Blvd from Tivoli Dr to Doyle Rd	Volusia			Intersection improvements at Saxon Blvd and Tivoli Dr	7 (Tier B)
B 	2.01	Palm Coast Pkwy SW from Begin-One-way to 4-lane Palm Coast Pkwy NW	Flagler				
C	1.98	SR 430 (Mason Ave) from Beach St to Halifax Ave	Volusia	Pedestrian Lighting	CEI, CST	Mason Ave Corridor Study	1
D 	1.98	SR 430 (Oakridge Blvd) from Beach St to Halifax Ave	Volusia				
E	1.70 – 1.67	Jacob Brock Ave from Clark St to DeBary Ave	Volusia		CEI, CST	Mason Ave Corridor Study	1
F	1.50	Taylor Rd from SR 421 to west of Clyde Morris Blvd	Volusia			Taylor Rd/Williamson Blvd Intersection & Taylor Rd/ Dunlawton Ave corridor at I-95 intersection improvements	7
G	1.40	Veterans Memorial Pkwy from south of E Graves Ave to north of Harley Strickland Blvd	Volusia			Extension as part of I-4 Beyond the Ultimate	1
H 	1.35 – 1.04	US 17/92 (Woodland Blvd) from Plymouth Ave to south of Beresford Ave	Volusia				
I	1.35	LPGA Blvd from Jimmy Ann Dr to Riverside Dr	Volusia	Lighting Bundle	CEI, CST	LPGA Blvd Corridor Management Plan; LPGA Blvd widen to 3 lanes	3

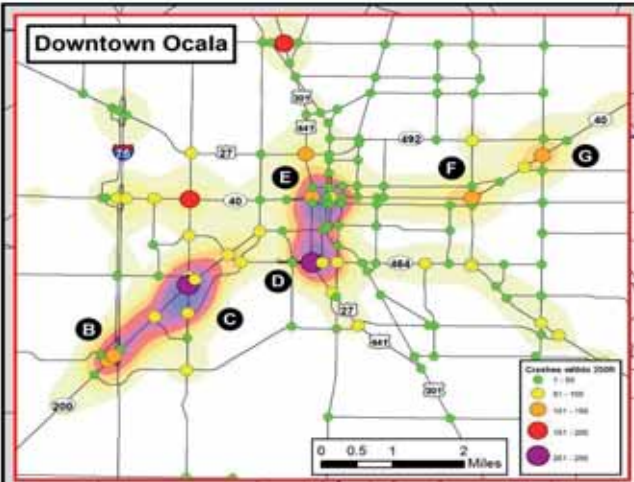
Ocala/Marion TPO

Crash Hotspots
Congestion Hotspots
Capacity Issues

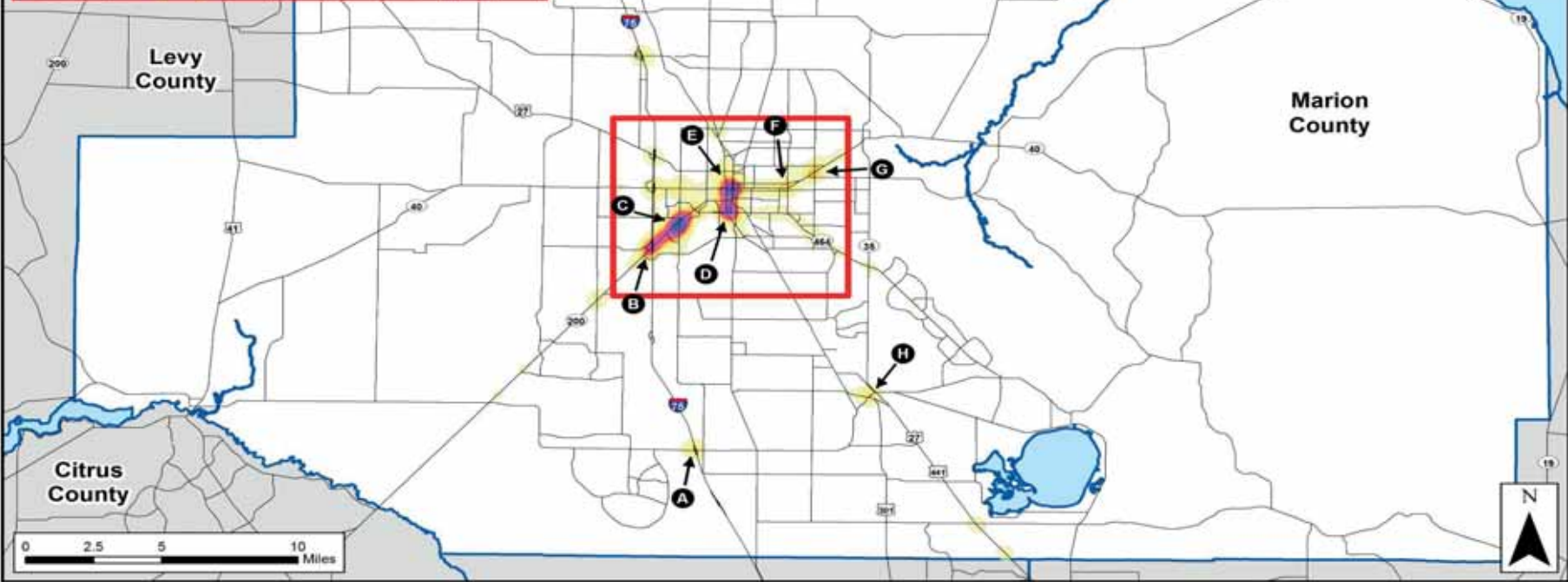


Transportation Systems Management & Operations

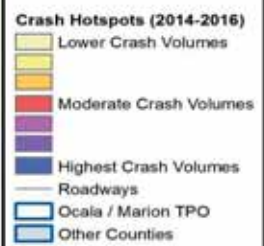




Location	Description	Jam Factor	Segment	County
A	NE 7th Ave	3.34	SR 40 to NE 36th Ave (Eastbound)	Marion
B	27th Ave	3.28	SW 20th Ct to SR 200/College Rd (Southbound)	Marion
C	NE 7th Ave	3.26	NE 36th Ave to SR 40/Silver Springs Blvd (Westbound)	Marion
D	W Anthony Rd	3.26	NE 35th St to US 301/US 441/Pine (Southbound)	Marion
E	SR 464 SW	2.94	7th Ave to US 27/US 441/US 301/Pine Ave (Eastbound)	Marion
F	35th St	2.9	W Anthony Rd to US 301/US 441/Pine St (Westbound)	Marion
G	10th St	2.87	N Magnolia Ave to US 301/Pine Ave (Westbound)	Marion
H	SR 200	2.81	SW 27th Ave to I-75 (Westbound)	Marion
I	SR 464	2.64	SE 3rd Ave to CR 464A/Magnolia Ave/ Lake Weir Rd (Eastbound)	Marion
J	SR 464	2.63	CR 464A/Magnolia Ave/ Lake Weir Rd to SE 3rd Ave (Westbound)	Marion



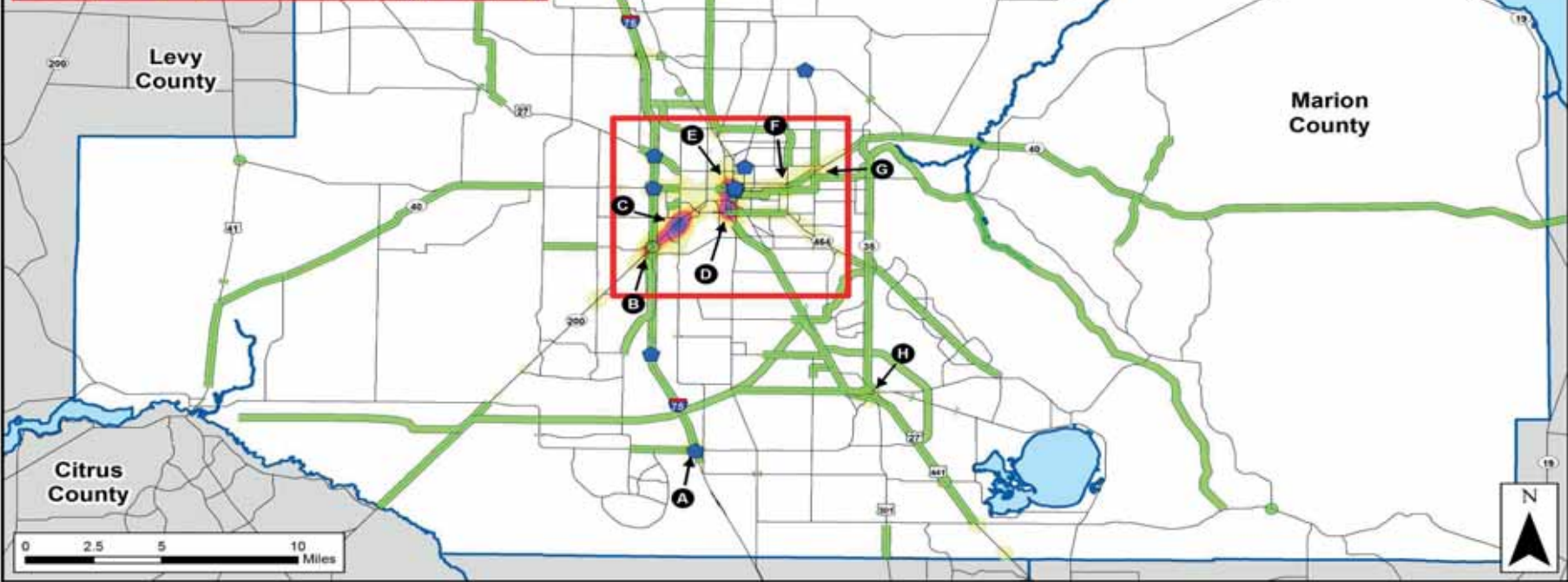
**Ocala/Marion TPO
and Local Agencies
Crashes
2014-2016**



Sources: Ocala/Marion TPO (2017), Signal Four Analytics (2014-2016), and FDOT RCI Database (2017).



Location	Description	Jam Factor	Segment	County
A	NE 7th Ave	3.34	SR 40 to NE 36th Ave (Eastbound)	Marion
B	27th Ave	3.28	SW 20th Ct to SR 200/College Rd (Southbound)	Marion
C	NE 7th Ave	3.26	NE 36th Ave to SR 40/Silver Springs Blvd (Westbound)	Marion
D	W Anthony Rd	3.26	NE 35th St to US 301/US 441/Pine (Southbound)	Marion
E	SR 464 SW	2.94	7th Ave to US 27/US 441/US 301/Pine Ave (Eastbound)	Marion
F	35th St	2.9	W Anthony Rd to US 301/US 441/Pine St (Westbound)	Marion
G	10th St	2.87	N Magnolia Ave to US 301/Pine Ave (Westbound)	Marion
H	SR 200	2.81	SW 27th Ave to I-75 (Westbound)	Marion
I	SR 464	2.64	SE 3rd Ave to CR 464A/Magnolia Ave/ Lake Weir Rd (Eastbound)	Marion
J	SR 464	2.63	CR 464A/Magnolia Ave/ Lake Weir Rd to SE 3rd Ave (Westbound)	Marion






Ocala/Marion TPO and Local Agencies Crashes 2014-2016

- Crash Hotspots (2014-2016)**
- Lower Crash Volumes
 - Moderate Crash Volumes
 - Highest Crash Volumes
 - Ocala/Marion TPO TIP*
 - Ocala/Marion TPO TIP*
 - Roadways
 - Ocala / Marion TPO
 - Other Counties

*Note: Projects in the Transportation Improvement Program were categorized according to their work mix. Categories shown on this map include: Bridge, Planning / PD&E Study, Capacity, Safety, Operations, Multimodal, and Disaster Recovery projects. The geospatial data is taken from the Ocala/Marion TPO 2016/17 TIP.

Sources: Ocala/Marion TPO (2017), Signal Four Analytics (2014-2016), and FDOT RCI Database (2017).

Ocala/Marion TPO – Crash Hotspots

Hotspot	Description	County	TIP	Phase	PPL	Priority No.
A	I-75 at CR 484	Marion			Operational and Capacity Improvements at interchange (433651-1, -2 & -3)	10 (2023)
B	SR 200 near I-75	Marion	Add left and right turn lane(s) at I-75 off ramps (4356592)	CST		
C 	SR 200 near SW 20th St and SW 27th Ave	Marion				
D	US 301/441 near SR 464 and SR 200	Marion	US 441 Traffic Ops Improvement at SR 464 (Addition of NB left turn lane and modified NB turn lane) (4336601)			3 (Non-SIS, TIP) / 3 (2023) / 5 (2023)
E	US 301/441 near SR 200 and SR 40	Marion	US 441 Traffic Ops Improvement from SR 40 to SR 40A (4336611) Extend NB left-turn queue	ROW, CST	2 Projects: Intersection Op. Improvement and Downtown multi-modal improvements	2 (Non-SIS, TIP), 2 (2023), 5 (2023)
F 	SR 40 near NE 25th Ave	Marion				
G 	SR 40 near SR 492 and NE 36th Ave	Marion				
H	US 27 at US 301 and SR 35	Marion	Bellevue Greenway Trail Bike Path (4371901)	PLN	SR 35 Intersection Op. Improvement at SR 25, Foss Rd, and Robinson Rd. Add SB right-turn lanes (435208-1) - ROW/CST	4 (2023)



**Ocala/Marion TPO
and Local Agencies**

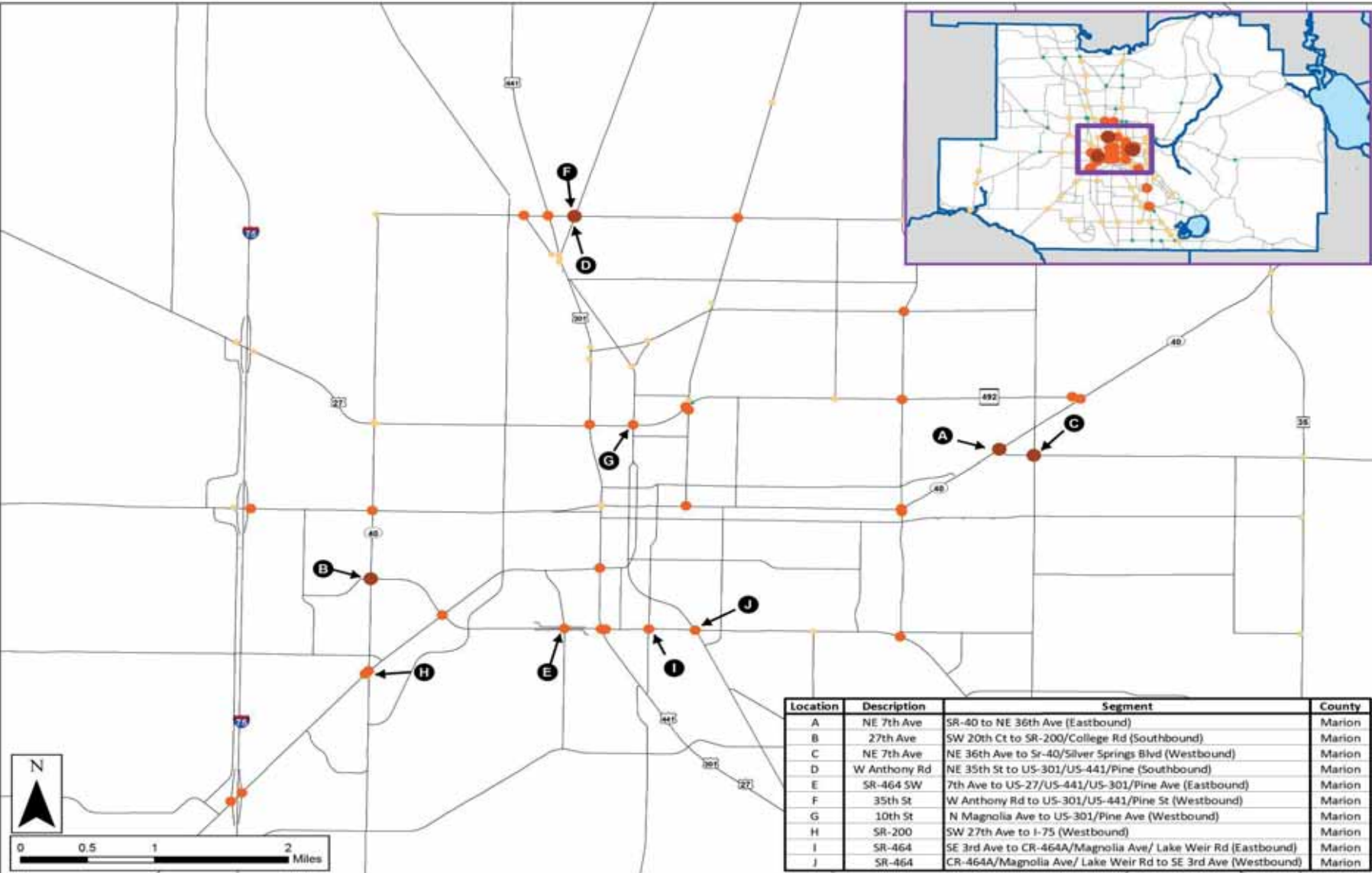
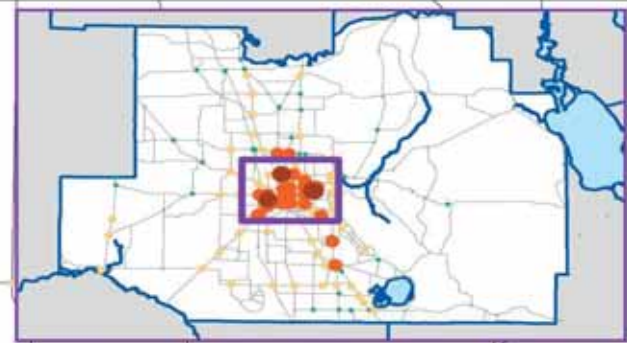
**Congestion Indicator
HERE Data
4:30 - 5:30 PM
Tues-Weds-Thurs
July 25-27, 2017**

Congestion Indicator

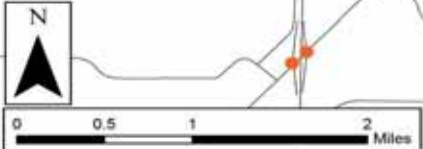
- Low
- Moderate
- High
- Roadways
- Ocala / Marion TPO
- Other Counties

Sources: Ocala/Marion TPO (2017), Signal Four Analytics (2014-2016), FDOT RCI Database (2017), HERE (2017).

August 2017



Location	Description	Segment	County
A	NE 7th Ave	SR-40 to NE 36th Ave (Eastbound)	Marion
B	27th Ave	SW 20th Ct to SR-200/College Rd (Southbound)	Marion
C	NE 7th Ave	NE 36th Ave to Sr-40/Silver Springs Blvd (Westbound)	Marion
D	W Anthony Rd	NE 35th St to US-301/US-441/Pine (Southbound)	Marion
E	SR-464 SW	7th Ave to US-27/US-441/US-301/Pine Ave (Eastbound)	Marion
F	35th St	W Anthony Rd to US-301/US-441/Pine St (Westbound)	Marion
G	10th St	N Magnolia Ave to US-301/Pine Ave (Westbound)	Marion
H	SR-200	SW 27th Ave to I-75 (Westbound)	Marion
I	SR-464	SE 3rd Ave to CR-464A/Magnolia Ave/ Lake Weir Rd (Eastbound)	Marion
J	SR-464	CR-464A/Magnolia Ave/ Lake Weir Rd to SE 3rd Ave (Westbound)	Marion





Ocala/Marion TPO and Local Agencies

**Congestion Indicator
HERE Data
4:30 - 5:30 PM
Tues-Weds-Thurs
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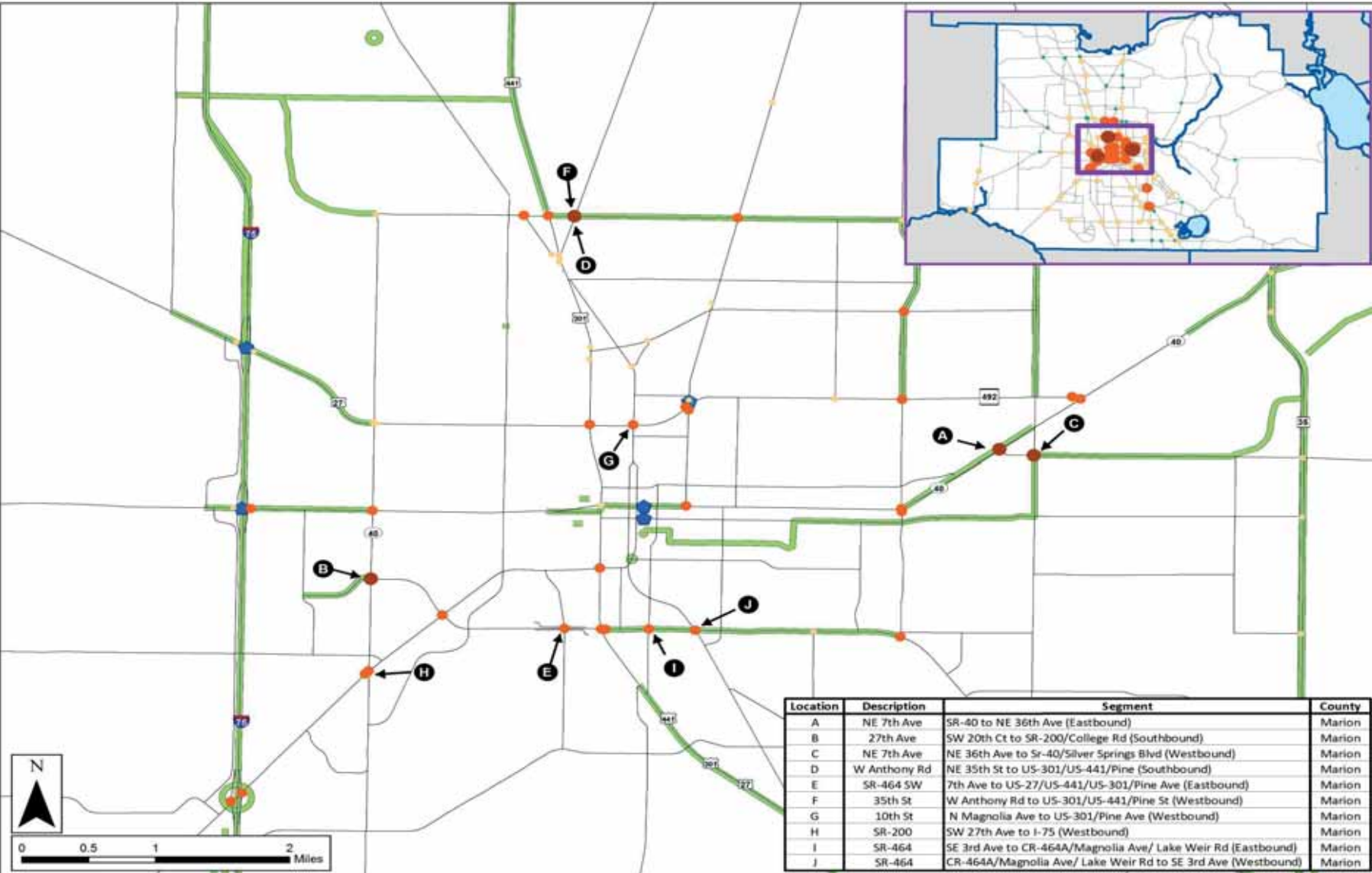
Congestion Indicator

- Low
- Moderate
- High
- Ocala/Marion TPO TIP*
- Ocala/Marion TPO TIP*
- Roadways
- Ocala / Marion TPO
- Other Counties

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Sources: Ocala/Marion TPO (2017), Signal Four Analytics (2014-2016), FDOT RCI Database (2017), HERE (2017).

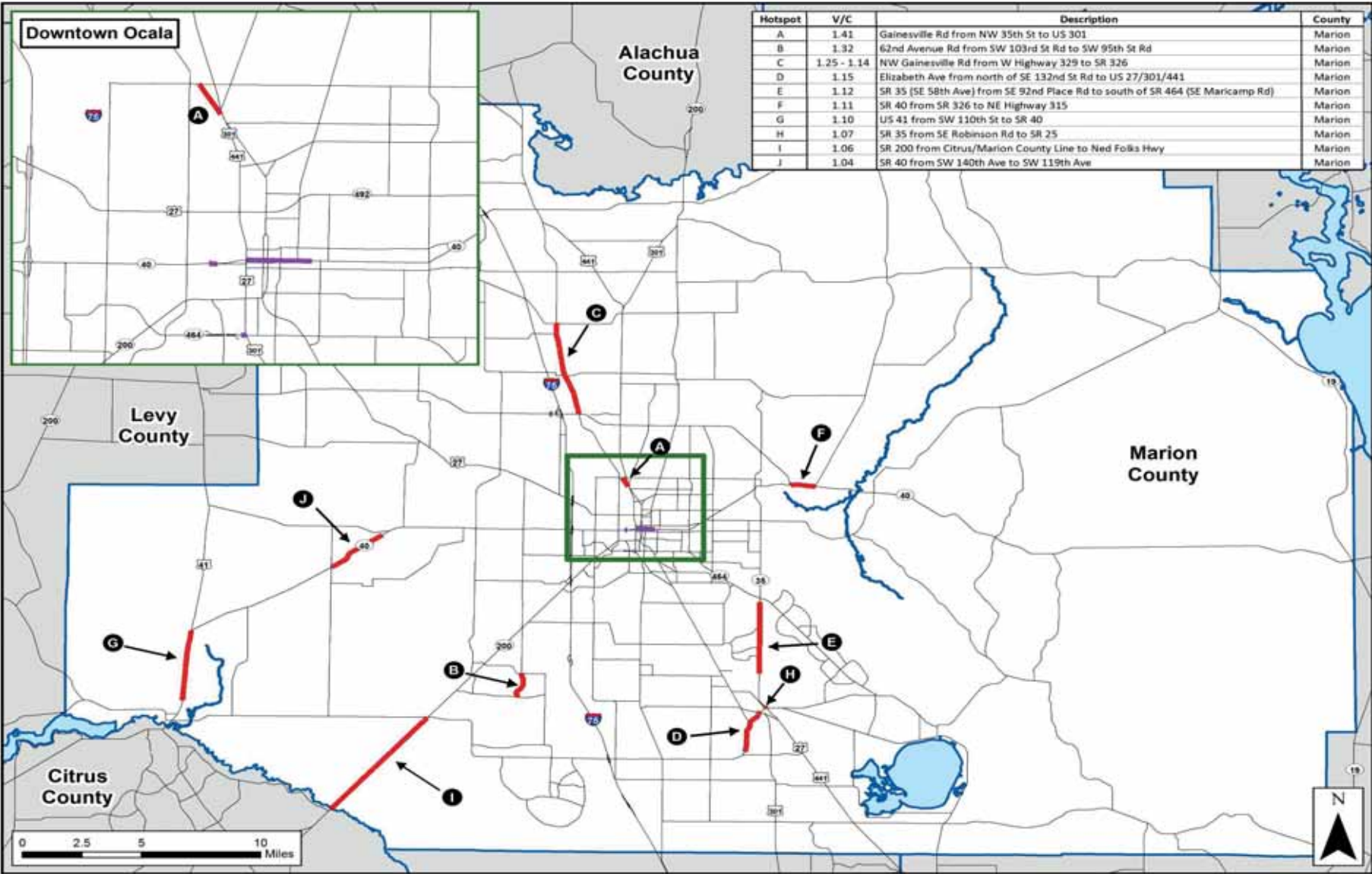
August 2017



Location	Description	Segment	County
A	NE 7th Ave	SR-40 to NE 36th Ave (Eastbound)	Marion
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C	NE 7th Ave	NE 36th Ave to SR-40/Silver Springs Blvd (Westbound)	Marion
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H	SR-200	SW 27th Ave to I-75 (Westbound)	Marion
I	SR-464	SE 3rd Ave to CR-464A/Magnolia Ave/ Lake Weir Rd (Eastbound)	Marion
J	SR-464	CR-464A/Magnolia Ave/ Lake Weir Rd to SE 3rd Ave (Westbound)	Marion

Ocala/Marion TPO – Jam Factor

Location	Description	Segment	County	TIP	Phase	PPL	Priority No.
A	NE 7th Ave	SR-40 to NE 36th Ave (Eastbound)	Marion	Safety Improvements (4319351)	DES	Ne 7th Street from NE 36th Ave to NE 44th Ave Sidewalk Addition	7+ 7 (2023 Off-System Priorities)
B 	27th Ave	SW 20th Ct to SR-200/College Rd (Southbound)	Marion				
C	NE 7th Ave	NE 36th Ave to Sr-40/Silver Springs Blvd (Westbound)	Marion	Safety Improvements (4319351) + Bike Path Downtown Ocala to Silver Springs Trail (4367561)	DES + PE	NE 7th Street from NE 36th Ave to NE 44th Ave Sidewalk Addition	7 + 7 (2023 Off-System Priorities)
D	W Anthony Rd	NE 35th St to US-301/US-441/Pine (Southbound)	Marion	Add Lanes & Reconstruct (NW 35th St)			
E	SR-464 SW	7th Ave to US-27/US-441/US-301/Pine Ave (Eastbound)	Marion			US 441 Intersection Op. Improvement II at SR 464 (433660-1)	3
F	35th St	W Anthony Rd to US-301/US-441/Pine St (Westbound)	Marion	Add Lanes & Reconstruct (NW 35th St)			
G	10th St	N Magnolia Ave to US-301/Pine Ave (Westbound)	Marion	Rail Safety Project (4369171)			
H	SR-200	SW 27th Ave to I-75 (Westbound)	Marion	Add Turn Lane(s) (4356592)	CST		
I	SR-464	SE 3rd Ave to CR-464A/Magnolia Ave/ Lake Weir Rd (Eastbound)	Marion	Traffic Ops Improvements from 441 to SE 25th Ave (4089052)	DIH	US 441 Intersection Op. Improvement II at SR 464 (433660-1)	3



Hotspot	V/C	Description	County
A	1.41	Gainesville Rd from NW 35th St to US 301	Marion
B	1.32	62nd Avenue Rd from SW 103rd St Rd to SW 95th St Rd	Marion
C	1.25 - 1.14	NW Gainesville Rd from W Highway 329 to SR 326	Marion
D	1.15	Elizabeth Ave from north of SE 132nd St Rd to US 27/301/441	Marion
E	1.12	SR 35 (SE 58th Ave) from SE 92nd Place Rd to south of SR 464 (SE Maricamp Rd)	Marion
F	1.11	SR 40 from SR 326 to NE Highway 315	Marion
G	1.10	US 41 from SW 110th St to SR 40	Marion
H	1.07	SR 35 from SE Robinson Rd to SR 25	Marion
I	1.06	SR 200 from Citrus/Marion County Line to Ned Folks Hwy	Marion
J	1.04	SR 40 from SW 140th Ave to SW 119th Ave	Marion

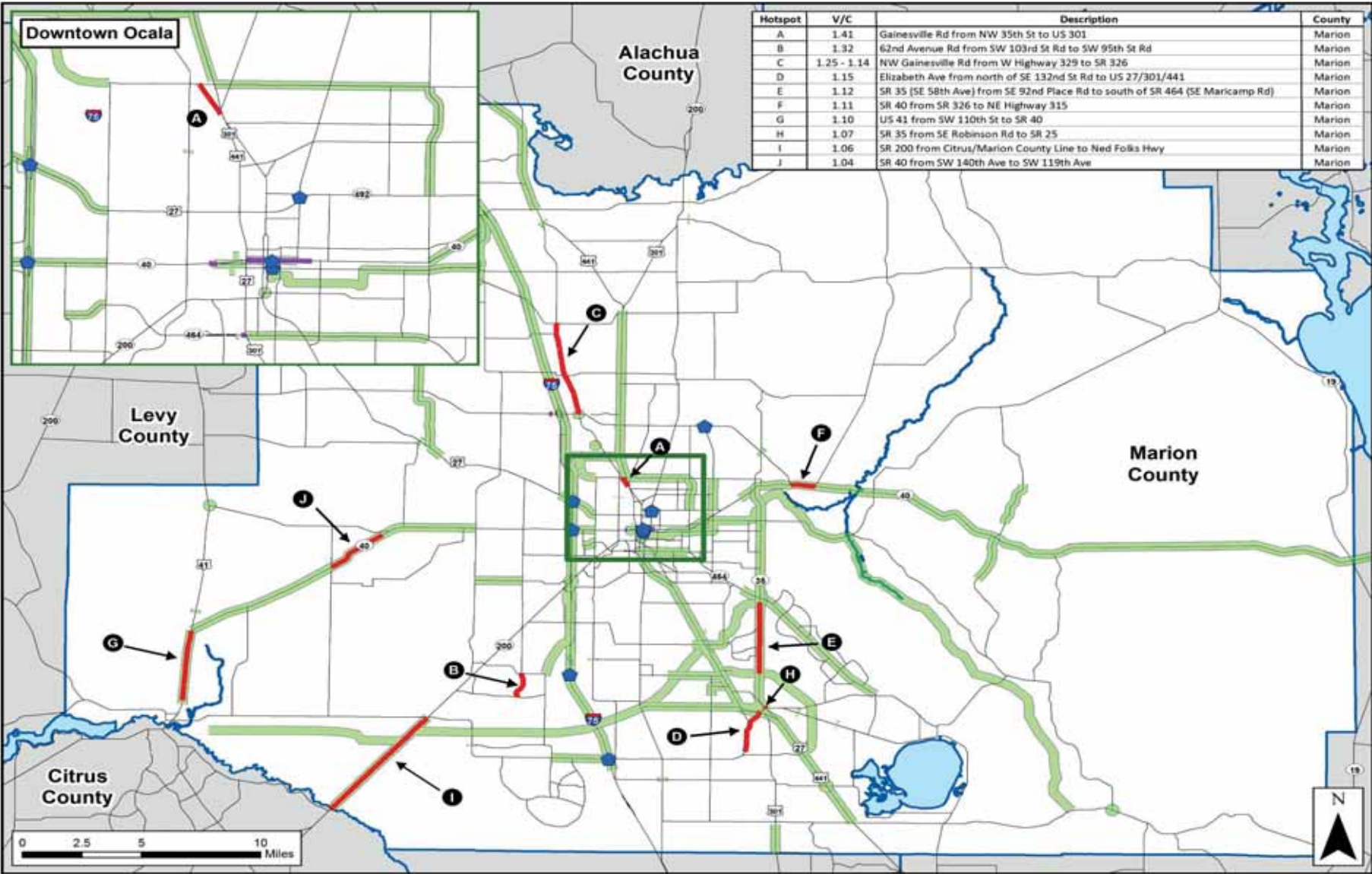


Ocala/Marion TPO and Local Agencies Capacity Analysis (2017)

- Capacity Hotspots**
- Largest V/C Ratio
 - Other LOS F Facilities
 - Roadways
 - Ocala / Marion TPO
 - Other Counties

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Hotspot	V/C	Description	County
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Ocala/Marion TPO and Local Agencies Capacity Analysis (2017)

- Capacity Hotspots**
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Ocala/Marion TPO – Capacity Analysis

Hotspot	V / C	Description	County	TIP	Phase	PPL	Priority No.
A 	1.41	Gainesville Rd from NW 35 th St to US 301	Marion				
B	1.32	62 nd Ave Rd from SW 103 rd St Rd to SW 95 th St Rd	Marion			SW 49 th Avenue <i>Capacity</i> (from SW 95 th St to Osceola Blvd) (funded in FY2019)	(1 (2023 Off-System))
C 	1.24 – 1.14	NW Gainesville Rd from W Highway 329 to SR 326	Marion				
D 	1.15	Elizabeth Ave from north of SE 132 nd St Rd to US 27/301/441	Marion				
E	1.12	SR 35 from SE 92 nd Place Rd to south of CR 464	Marion	Widen SR 35 to 4 lanes (from SE 92 nd Place Rd to CR 464); additional projects include pedestrian lighting and Belleview Greenway Trl	INC, DSB		
F	1.11	SR 40 from CR 326 to NE Highway 315	Marion	Add 2 lanes, 2 bridge structures, from CR 326 to CR 314 concrete (<i>part of SR 40 NE 60th Ct to CR 314 project</i>)	ROW, PE, CST		
G	1.10	US 41 from SW 110 th St to SR 40	Marion	Widen US 41 to 4 lanes from SW 111 th Place Ln to SR 40	ROW, CST	Add 2 lanes to SR 40 (from CR 328 to US 41)	14 (2023)
H	1.07	SR 35 from SE Robinson Rd to SR 25	Marion	SR 35 Intersection Op. Improvements at SR 25, Foss Rd, and Robinson Rd -add SB right turn lanes	PE	SR 35 Intersection Op. Improvements at SR 25, Foss Rd, and Robinson Rd -add SB right turn lanes (ROW, CST)	4 (2023)
I	1.06	SR 200 from Citrus/Marion County Line to Ned Folks Hwy	Marion			Add 2 lanes to SR 200 from CR 484 to Citrus County Line (CST)	8 (2023)

Data-Driven Analyses

- Key Takeaways
 - MPO/TPOs programmed well according to their needs
 - Planning Dashboard and associated data may simplify programming process; may also provide stronger case for elected/appointed officials to consider
 - Still must consider the physical and/or policy constraints associated with a facility
 - Data constraints may limit the power of data-driven analyses
 - e.g. GIS line work, crash points, ramp data



Questions?



Transportation Systems Management & Operations



Current Initiatives

Jeremy Dilmore, District Five TSM&O



Transportation Systems Management & Operations



Questions?



Transportation Systems Management & Operations



THANK YOU!

Next Consortium – October 19, 2017



Transportation Systems Management & Operations





TSM&O Consortium Meeting

MEETING AGENDA

D5 Urban Office
133 S. Semoran Blvd.
Orlando, FL 32807
Lake Apopka B Conference Room

August 24, 2017; 10:00 AM-12:00 PM

- 1) WELCOME
- 2) TSM&O DOCUMENTATION UPDATE
 - David Williams, VHB
- 3) SIGNAL TECHNICIANS – WORKING WITH LOCAL TECHNICAL SCHOOLS
 - David Williams, VHB
- 4) SIGNAL DATA AGREEMENT
 - Jeremy Dilmore, District Five TSM&O
- 5) DATA-DRIVEN ANALYSES – CRASHES, CONGESTION, AND CAPACITY
 - Jeremy Dilmore, District Five TSM&O
- 6) CURRENT INITIATIVES
 - Jeremy Dilmore, District Five TSM&O