

December  
2016



## FDOT DISTRICT TWO **Level of Service**



# Florida Model Task Force Meeting

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District Growth and Development/ Modeling Supervisor



## DUVAL COUNTY OVERVIEW

### 2014 PEAK HOUR LEVEL OF SERVICE

- LOS A
- LOS B
- LOS C
- LOS D
- LOS E
- LOS F
- Segment Break
- Segment Map ID\*
- SIS Roadway
- County Boundary
- City Limits
- Nature Preserve
- Water Body

#### Data Sources:

1. FDOT Office of Transportation Statistics
2. Florida Geographic Data Library (FGDL)

\*Segment Map ID is referenced in LOS Report.

#### Disclaimer:

This document is for general planning purposes only. It is not intended for precise measurements.



DISTRICT TWO  
LEVEL OF SERVICE REPORT

SEPTEMBER 2015

NASSAU

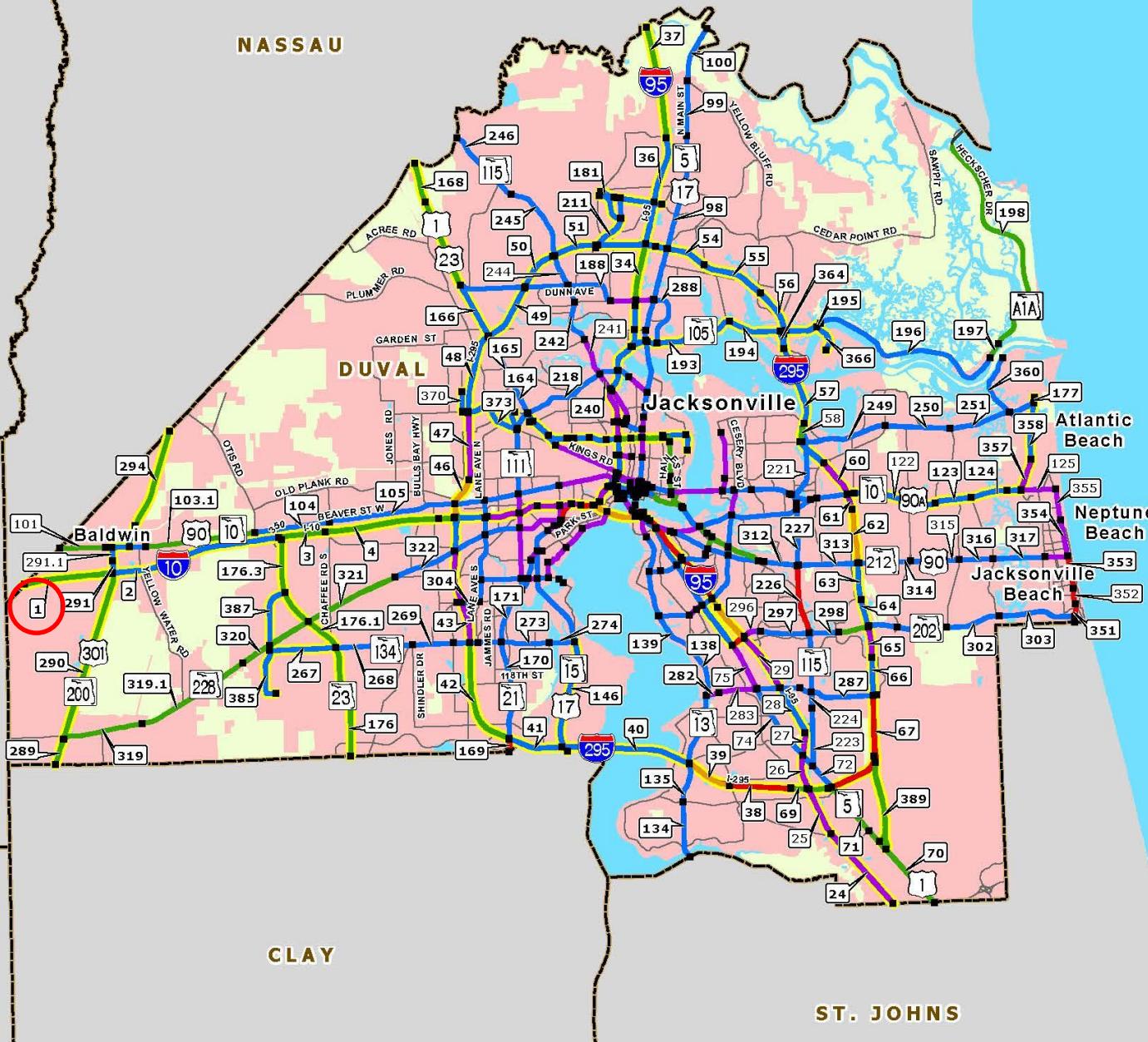
DUVAL

BAKER

BRADFORD

CLAY

ST. JOHNS



## 2014 DISTRICT TWO LOS ANALYSIS

Road	Map ID	Local	Segment Description												2013	2014	LOS	Growth	2019	LOS	2035	LOS
Location	Lanes	Facility AreaType	Committed	Miles	Speed	Count Station	Std Source	LOS STD	MSV Adj.	MaxService Volume	Traffic	Traffic	LOS	Growth Rate	Traffic	LOS	Traffic					
(All volumes are Peak Hour, Bidirectional)																						

### Duval

I-10*	1	From Nassau Co. Line to US 301																K 10.50%
Jacksonville	4/D	Freeway Transition	<input type="checkbox"/>	3.22	70 MPH	273134	FDOT Local	C C		5,190 5,190	2,205	2,100	B	1%	2,468	B	2,835	B
I-10*	2	From US 301 to SR 23																K 9.00%
Jacksonville	4/D	Freeway Urbanized	<input type="checkbox"/>	6.29	70 MPH	720109c	FDOT Local	D D		6,700 6,700	4,005	4,256	C	Var 1%	4,257	C	4,824	C
I-10*	3	From SR 23 to Chaffee Rd																K 9.00%
Jacksonville	6/D	Freeway Urbanized	<input type="checkbox"/>	1.74	70 MPH	720109c	FDOT Local	D D		10,060 10,060	4,005	4,256	B	Var 1%	4,257	B	4,824	B
I-10*	4	From Chaffee Rd. to Greenland Ave																K 9.00%
Jacksonville	6/D	Freeway Urbanized	<input type="checkbox"/>	4.35	70 MPH	720832	FDOT Local	D D		10,060 10,060	4,545	5,985	B	Var 1%	5,985	B	6,309	C
I-10*	5	From Greenland Ave to I-295																K 9.00%
Jacksonville	6/D	Freeway Urbanized	<input type="checkbox"/>	0.59	55 MPH	725020	FDOT Local	D D		10,060 10,060	5,625	5,985	B	Var 1%	6,156	C	7,101	C
I-10*	6	From I-295 to Lane Ave																K 8.50%
Jacksonville	6/2	Freeway Urbanized	<input type="checkbox"/>	1.11	55 MPH	725519	FDOT Local	D D		11,860 11,860	7,565	7,990	C	1%	8,449	C	9,741	C

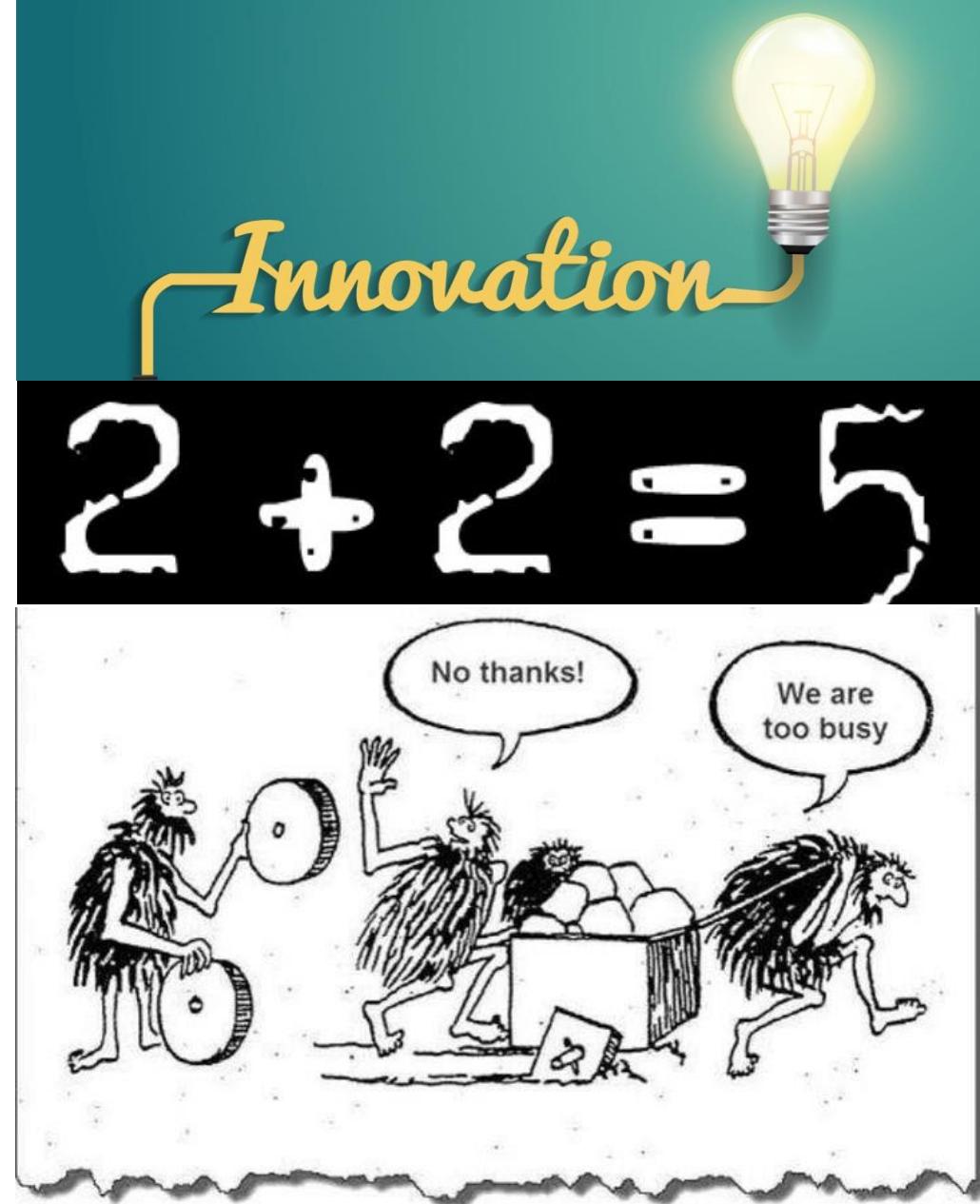
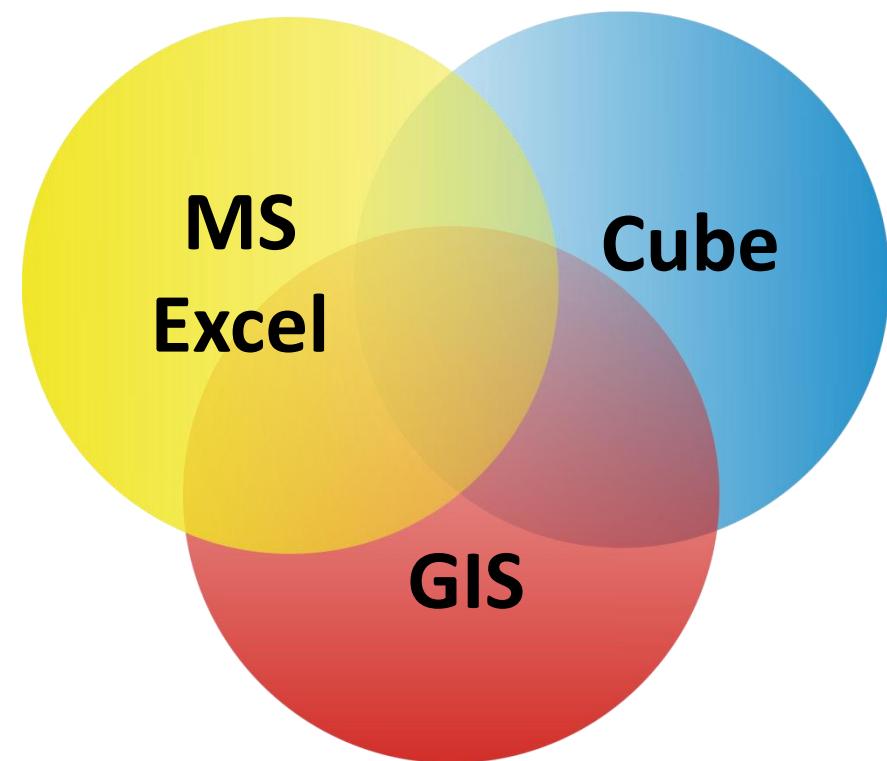
# Motivation & Purpose

- Improve accuracy of results
  - Utilize travel demand model results
  - Consider auxiliary lanes in MSV
- Enhance user friendliness
  - Interactive mapping system as opposed to static pdfs
  - Ease of annual update and reporting

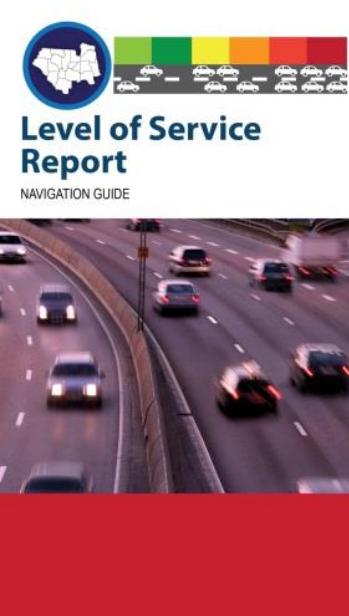
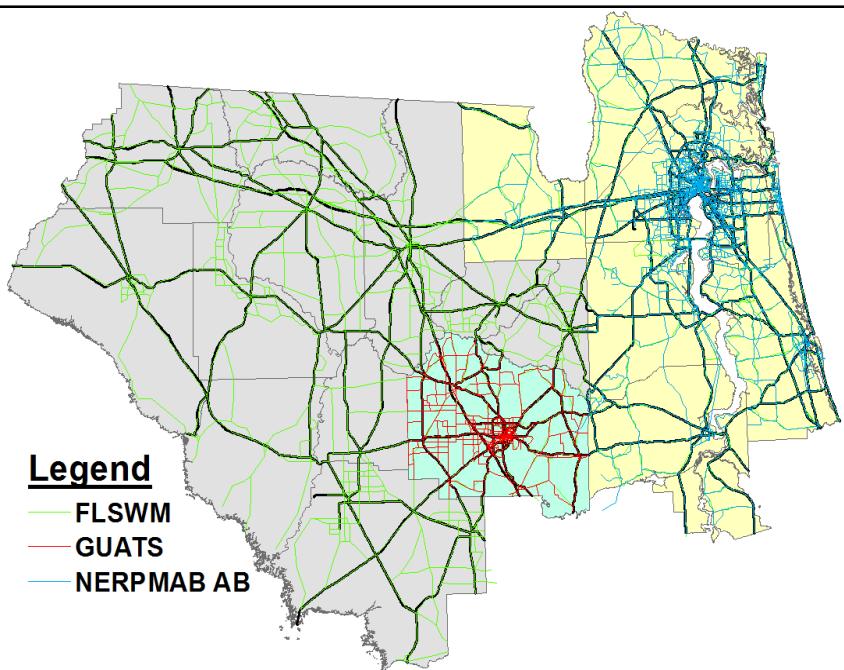


# Conceptualization

- Leverage existing analysis and data
- Network conflation
- Integrated system



# Implementation



This screenshot shows the FDOT District Two LOS tool interface. It features a map legend, location search, attribute search, and navigation guide sections.

**Level of Service**

**Map Legend**

- Map Layer Transparency
- Level of Service Segment Breaks
- Level of Service Segments
  - A
  - B
  - C
  - D
  - E
  - F
- Strategic Intermodal System (SIS)
  - Existing SIS
  - Proposed SIS
- County Boundary

**Location Search**

Enter an address or landmark and click the Find Address button to verify the address and zoom to that location.

Sample address: 100 S Main St  
Sample intersection: E Bay St & S Main St  
Sample landmark: The Jacksonville Landing  
Sample city: Jacksonville

Address, intersection or landmark: \_\_\_\_\_  
City: \_\_\_\_\_

**Attribute Search**

Map layer: - Search Visible Layers -  
Search value: \_\_\_\_\_  
Search

**First-Time User?** View Navigation Guide  
**Returning User?** Start Using LOS Tool

If you have any questions or comments, please contact:  
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219B Edison Avenue MS 32204  
Jacksonville, Florida 32204  
ameera.sayeed@dot.state.fl.us

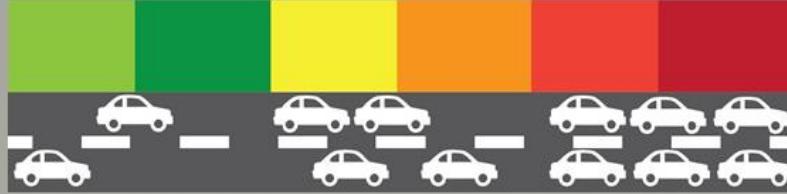
**FDOT DISTRICT TWO**

POWERED BY **esri**

# Demo



## Level of Service



FDOT DISTRICT TWO

First-Time User?

View Navigation Guide

Returning User?

Start Using LOS Tool

If you have any questions or comments, please contact:

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[ameera.sayeed@dot.state.fl.us](mailto:ameera.sayeed@dot.state.fl.us)

<http://fdot-d2-los.hdrgateway.com/>

**Interactive Map Tools**

The screenshot displays a comprehensive map interface with several key components:

- Top Left:** A "Level of Service" section featuring a map icon and a color-coded legend from green to red, representing traffic levels.
- Top Center:** A "Measure Tool" panel showing "Measurement Functions" like distance and area, and a result of "101.8 Miles".
- Top Right:** A toolbar with icons for print, zoom, and other map functions, circled in red.
- Left Side:** A "Map Legend" panel with checkboxes for "Map Layer Transparency", "Level of Service Segment Breaks", "Level of Service Segments" (labeled A-F), "Strategic Intermodal System (SIS)" (Existing and Proposed), and "County Boundary".
- Map Navigation Tools:** A row of icons for zooming, panning, and other navigation functions, highlighted with a red box.
- Clear Map Graphics:** A button to clear map overlays.
- Reset Map Legend:** A button to reset the map legend settings.
- Navigation Guide:** A panel showing a detailed map of a region with various roads and county boundaries, labeled with county names like TAYLOR, SUWANNEE, COLUMBIA, UNION, BAKER, CLAY, and NASSAU.
- Overview Map Tool:** A large overview map of the Southeastern United States, focusing on states like Alabama, Georgia, South Carolina, and Florida, with a callout to Jacksonville.
- Google Street View:** A street view image of a bridge over water, identified as FL-10 in Jacksonville, Florida.
- Basemap Gallery:** A section titled "Choose from a variety of Esri Base Maps" showing thumbnails for ArcGIS Streets, ArcGIS Aerial, ArcGIS Hybrid, ArcGIS Topo, ArcGIS Light Gray, and ArcGIS Dark Gray.
- Map Information:** A section for viewing map feature attributes.
- Bottom:** A scale bar from 0 to 20mi and the text "FDOT DISTRICT TWO".



## Level of Service



## Map Legend

Map Layer Transparency

• Level of Service Segment Breaks

Level of Service Segments

- A
- B
- C
- D
- E
- F

Strategic Intermodal System (SIS)

- Existing SIS
- Proposed SIS

County Boundary



The Map Legend feature allows the user to toggle on/off data layers using the check boxes. Some features are scale dependent, meaning they will only display when zoomed to a certain level.

## Location Search

Enter an address or landmark and click the Find Address button to verify the address and zoom to that location.

Sample address: 100 S Main St  
Sample intersection: E Bay St & S Main St  
Sample landmark: The Jacksonville Landing  
Sample city: Jacksonville

Address, intersection or landmark:

City:

Find Address

## Attribute Search

Map layer:

Search value:

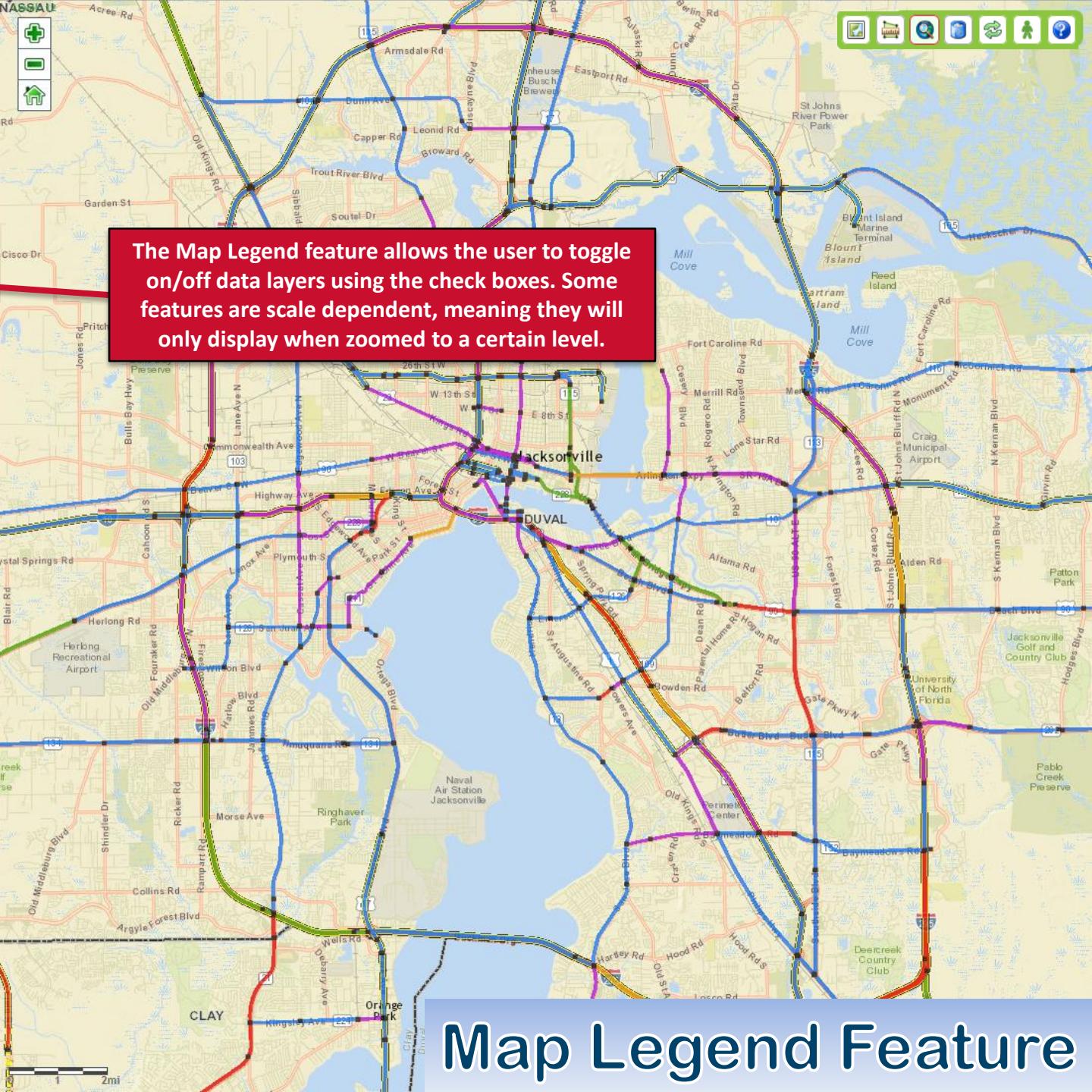
Search

## Map Information

Click a map feature to see its attribute values.

Level of Service Segments

FDOT DISTRICT TWO



# Map Legend Feature



## Level of Service



### Map Legend

- Map Layer Transparency
- Level of Service Segment Breaks
- Level of Service Segments
  - A
  - B
  - C
  - D
  - E
  - F
- Strategic Intermodal System (SIS)
  - Existing SIS
  - Proposed SIS
- County Boundary

### Location Search

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Sample intersection: E Bay St & S Main St  
Sample landmark: The Jacksonville Landing  
Sample city: Jacksonville

Address, intersection or landmark:

City:

### Attribute Search

Map layer:

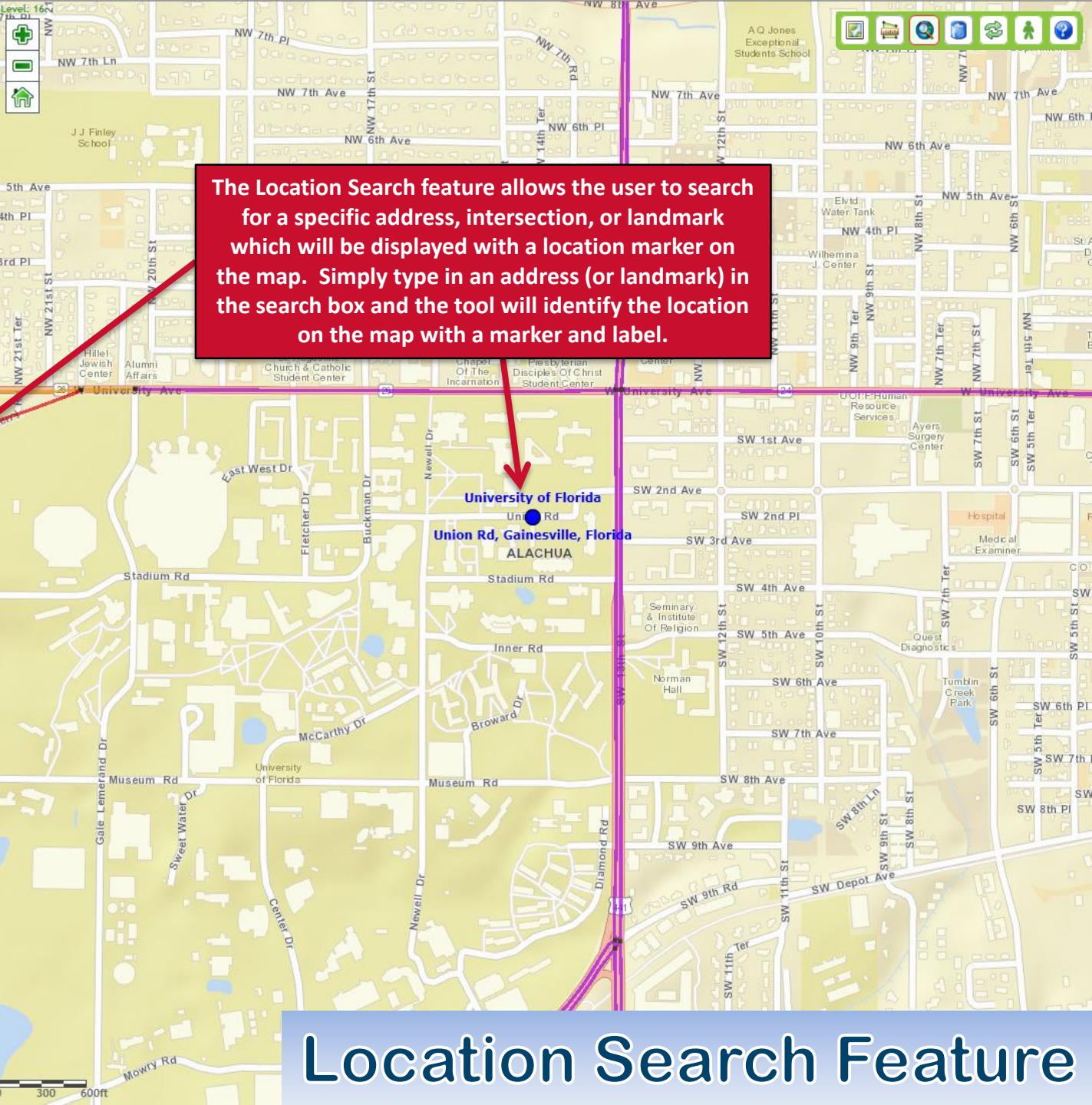
Search value:

### Map Information

Click a map feature to see its attribute values.

Level of Service Segments

**FDOT DISTRICT TWO**



# Location Search Feature



## Level of Service



### Attribute Search

Map layer:  
Level of Service Segments

Fields:  
Roadway ID

Search value:  
71070000

Search

#### Level of Service Segments (7 features)

#	Segment Description	Map Location
---	---------------------	--------------

► 1) SR 21 / Blanding Blvd. from CR 215 to CR 218  
[Highlight](#)

► 2)  
SR 21 / Blanding Blvd. from CR 218 to N. City Limit  
(Palmetto St)  
[Highlight](#)

► 3)  
SR 21 / Blanding Blvd. from N. City Limit of Middleburg to  
Old Jennings Rd  
[Highlight](#)

► 4)  
SR 21 / Blanding Blvd. from Old Jennings Rd to College Dr  
[Highlight](#)

► 5)  
SR 21 / Blanding Blvd. from College Dr to Suzanne Ave  
[Highlight](#)

► 6)  
SR 21 / Blanding Blvd. from Suzanne Ave to SR 224/Kingsley Ave  
[Highlight](#)

► 7)  
SR 21 / Blanding Blvd. from SR 224/Kingsley Ave (SR-224) to  
Duval Co. Line  
[Highlight](#)

### Map Information

Click a map feature to see its attribute values.

#### Level of Service Segments

[Highlight this feature on the map](#)

[Print attribute table](#)

[Export attribute table](#)

[Create LOS segment report](#)

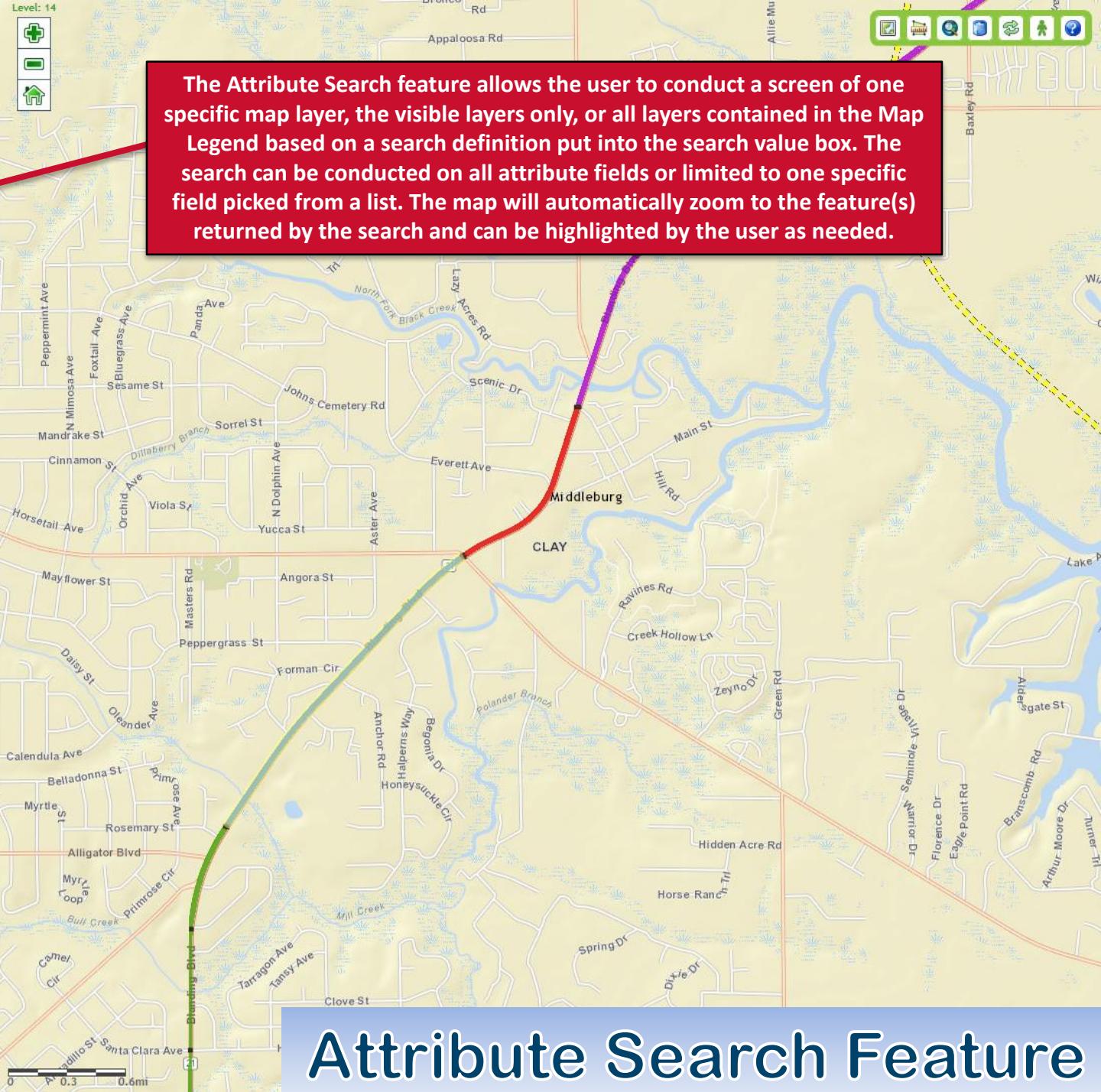
Segment Description	SR 21 / Blanding Blvd. from SR 224/Kingsley Ave (SR-224) to Duval Co. Line
Segment ID	282
Location	Clay County

FDOT DISTRICT TWO

Level: 14



The Attribute Search feature allows the user to conduct a screen of one specific map layer, the visible layers only, or all layers contained in the Map Legend based on a search definition put into the search value box. The search can be conducted on all attribute fields or limited to one specific field picked from a list. The map will automatically zoom to the feature(s) returned by the search and can be highlighted by the user as needed.



# Attribute Search Feature



## Level of Service



## Map Information

Click a map feature to see its attribute values.

### Level of Service Segments

[Highlight this feature on the map](#)

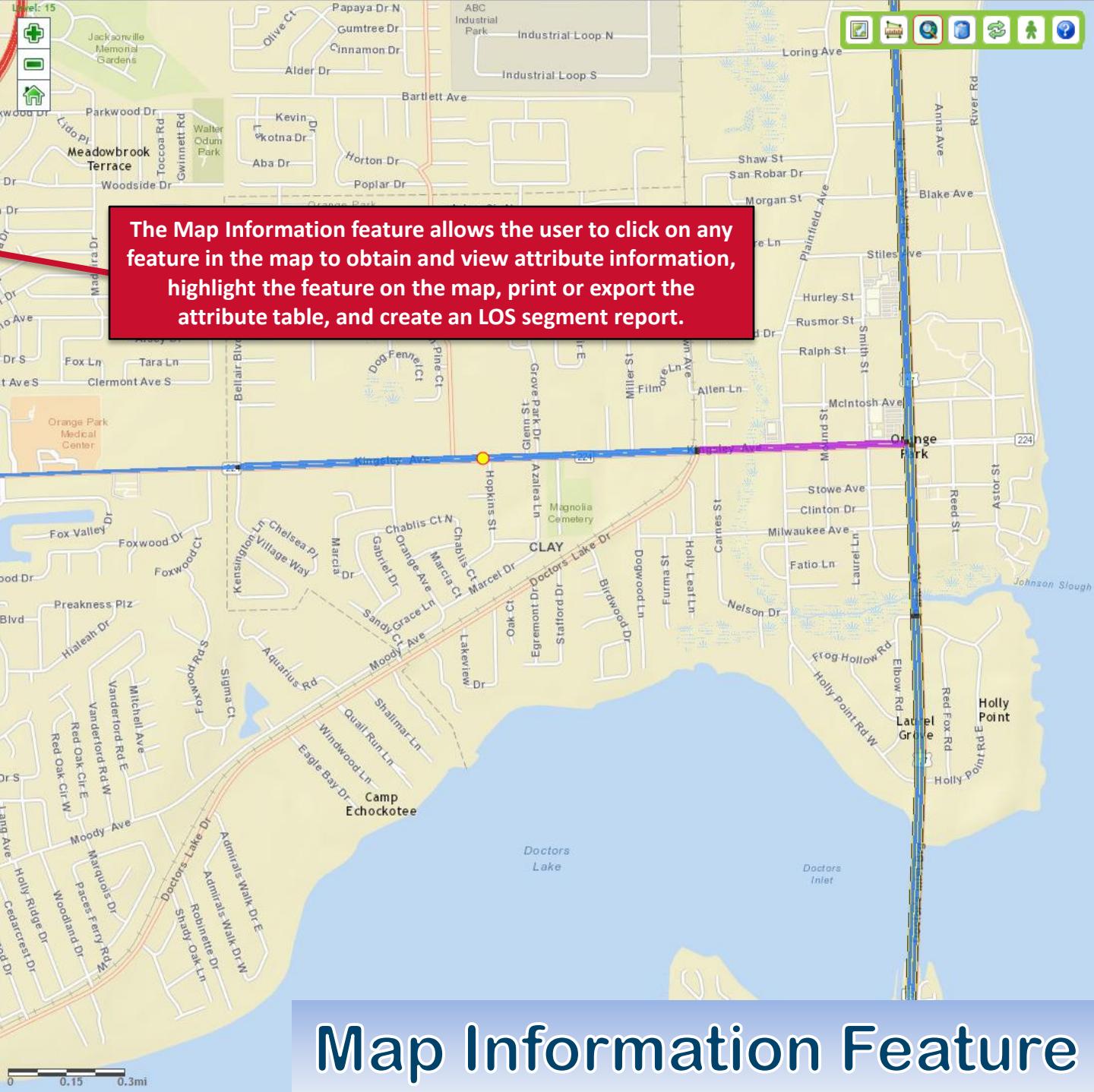
[Print attribute table](#)

[Export attribute table](#)

[Create LOS Segment Report](#)

Segment Description	SR 224 / Kingsley Ave. from Bellair Blvd to Doctors Lake Drive
Segment ID	7284
Location	Orange Park
Roadway	SR 224 / Kingsley Ave.
County	Clay
Roadway ID	71130000
Begin MP	1.044
End MP	2.234
Segment Extent	Bellair Blvd to Doctors Lake Drive
Median Treatment	Divided
Directionality	Two-Way
SIS	No
SIS Type	Non SIS
Area Type	Urbanized
Facility Type	Arterial
Max. Service Vol. Adjustment Factor	0
Local LOS Standard	E
Standard K-Factor	0.09
FDOT LOS Standard	D
Segment Length (mi)	1.19
GOOGLE STREET VIEW	<a href="http://maps.google.com/maps?q=&amp;layer=c&amp;cbll=30.165250814925,-81.7201645478826">http://maps.google.com/maps?q=&amp;layer=c&amp;cbll=30.165250814925,-81.7201645478826</a>
Lanes 2015	4
Lanes 2020	4
Lanes 2025	4
Lanes 2030	4
Lanes 2035	4
Lanes 2040	4
AADT 2015	25000
AADT 2020	26250
AADT 2025	27500
AADT 2030	28750
AADT 2035	30000
AADT 2040	31250
Peak Volume 2015	2250
Peak Volume 2020	2363
Peak Volume 2025	2475
Peak Volume 2030	2588
Peak Volume 2035	2700
Peak Volume 2040	2813
Peak Max. Service Vol. 2015	3580

FDOT DISTRICT TWO



**Level of Service**

The LOS Report feature provides the user with the ability to create LOS reports for an entire county, a single segment or a custom selection of segments. The reports are created in PDF format and can be viewed and downloaded by the user.

**Switch to Map Selection**

Current Selection is From a List

Print report glossary

Counties: **Baker**

Print County Report

LOS Segments: - Select a Segment -

**Switch between List Selection and Map Selection.**

Pick a county from the drop down list and print a comprehensive LOS report for the respective county. The report will be displayed in a new browser tab.

**Level of Service Report**  
Baker County

**FDOT** FLORIDA DEPARTMENT OF TRANSPORTATION DISTRICT TWO

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**LOS Report Feature**



## Level of Service



### LOS Report

[Switch to Map Selection](#)

Current Selection is From a List

[Print report glossary](#)

Counties:  
Baker

[Print County Report](#)

LOS Segments:  
Baker - I-10 - 84

Desc: Columbia Co. Line to SR 10/US 90  
County: Baker  
Road: I-10  
Segment Id: 84  
Roadway Id: 27090000

[Export attribute table](#)

[Create Segment Report](#)

Creating segment report.  
Generating map image...  
Adjusting map extent to fit screen  
Generating map image...  
Saving map image...  
Loading saved map image...  
Generating report content...  
Merging final report content.  
Report is available to open or print at the bottom of the browser.

## Graphics

Select the type of graphic to add:

Fill color:

#00ffff

Graphic:

Line

Border color:

#007f00

Color:

Blue

Line color:

#0000bf

Color:

Dark Blue

Text color:

#dc303e

Color:

Red

[Clear All Graphics](#)

[Print Map](#)

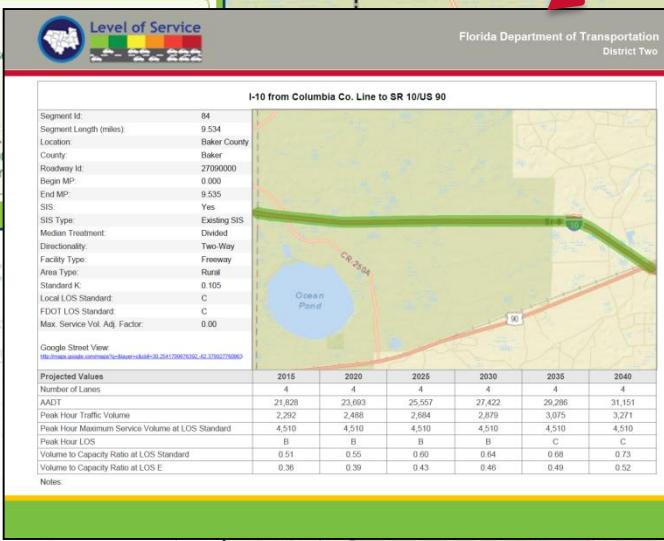
FDOT DISTRICT TWO

Level: 13



Pick a specific LOS segment from a dropdown list which contains only segments for the selected county. The map will automatically zoom to and highlight the selected feature.

Create a single-page report for the selected feature and/or export the attributes to an Excel file.

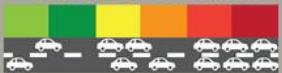


SEG_DESCRIPTION	LOS_SEG_ID	AREA_NAME	FACILITY	CNTY_NAME	ROADWAY	BEGIN_POST	END_POST
SR 121 from NE FLA Hospital Ent to Jeff Starling Rd (S. City Limit of Macclenny)	80	Baker County	SR 121	Baker		27030000	7.245 8.611

# LOS Report Feature



## Level of Service



### LOS Report

[Switch to List Selection](#)

Current Selection is From the Map

[Print report glossary](#)

Selection:

[New](#) [Add](#) [Remove](#)

Selected features:  
Baker - US 90 - 212  
Baker - US 90 - 213  
Baker - SR 121 / S 6th St. - 215  
Baker - SR 121 / N 6th St. - 1012  
Baker - US 90 - 4213  
Baker - SR 228 / S 5th St. - 4216  
Baker - US 90 - 7212

Export attributes

[Clear Selection](#)

[Create Selection Report](#)



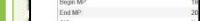
Florida Department of Transportation District Two

US 90 from W. City Limit (St. Mary's Dr) to Lower St



Florida Department of Transportation District Two

SR 121 / S 6th St. from Lower St to SR 10/US 90

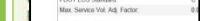


Florida Department of Transportation District Two

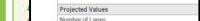
US 90 from SR 121 to SR 228



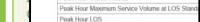
SR 121 / S 6th St. from Lower St to SR 10/US 90



SR 121 / N 6th St. from SR 10/US 90 to N. City Limit (Margaret St)



US 90 from SR 228 to E. City Limit (3000' E of Dugger St)



SR 228 / S 5th St. from SE City Limit (Wolfe Dr) to SR 10/US 90



US 90 from Lowder St to SR 121



Adjusting map extent to fit

Generating map image for Baker

Adjusting map extent to fit

Generating map image for Macclenny

Saving map image...

Loading saved map image...

Generating report content...

Processing next segment...

Generating map image for segment 5...

Adjusting map extent to fit segment...

Generating map image for segment 5...

Saving map image...

Loading saved map image...

Generating report content...

Processing next segment...

Generating map image for segment 6...

Adjusting map extent to fit segment...

Generating map image for segment 6...

Adjusting map extent to fit segment...

**FDOT DISTRICT TWO**

Select segments on the map by pressing down the left mouse button to start and letting it go to finish. The selected features will be displayed in a list. The user can add and/or remove features from the selection or clear the entire selection as needed.

Create a multi-page segment report for the selected features and/or export attributes for all segments to an Excel file.

SEG_DESCRIPTION	LOS_SEG_ID	AREA_NAME	FACILITY	CNTY_NAME	ROADWAY	BEGIN_POST	END_POST
US 90 from W. City Limit (St. Mary's Dr) to Lower St	212	157	Polyline	Macclenny	US 90	Baker	27010000
US 90 from SR 121 to SR 228	213	158	Polyline	Macclenny	US 90	Baker	27010000
SR 121 / S 6th St. from Lower St to SR 10/US 90	215	159	Polyline	Macclenny	SR 121 / S 6th St.	Baker	27030000
SR 121 / N 6th St. from SR 10/US 90 to N. City Limit (Margaret St)	1012	787	Polyline	Macclenny	SR 121 / N 6th St.	Baker	27030000
US 90 from SR 228 to E. City Limit (3000' E of Dugger St)	4213	873	Polyline	Macclenny	US 90	Baker	27010000
SR 228 / S 5th St. from SE City Limit (Wolfe Dr) to SR 10/US 90	4216	874	Polyline	Macclenny	SR 228 / S 5th St.	Baker	27070000
US 90 from Lowder St to SR 121	7212	1014	Polyline	Macclenny	US 90	Baker	27010000

# LOS Report Feature

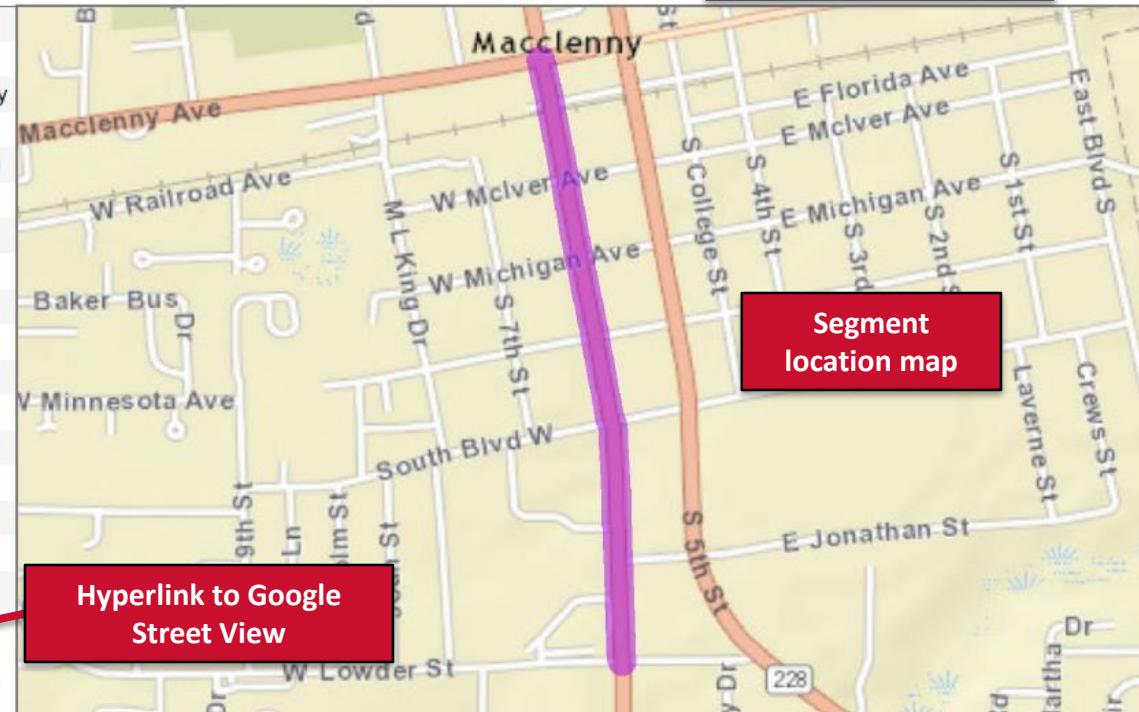


# LOS Segment Report

Segment characteristics		SR 121 / S 6th St. from Lowder St to SR 10/US 90						Segment description
Segment Id:	215							
Segment Length (miles):	0.658							
Location:	Macclellny							
County:	Baker							
Roadway Id:	27030000							
Begin MP:	10.137							
End MP:	10.796							
SIS:	No							
SIS Type:	Non SIS							
Median Treatment:	Divided							
Directionality:	Two-Way							
Facility Type:	Arterial							
Area Type:	Transition							
Standard K:	0.090							
Local LOS Standard:	D							
FDOT LOS Standard:	C							
Max. Service Vol. Adj. Factor:	0.05							
Google Street View:	<a href="http://maps.google.com/maps?q=&amp;layer=c&amp;cbll=30.2768639406483,-82.1225709376396">http://maps.google.com/maps?q=&amp;layer=c&amp;cbll=30.2768639406483,-82.1225709376396</a>							
Projected Values		2015	2020	2025	2030	2035	2040	
Number of Lanes	2	2	2	2	2	2	2	
AADT	11,481	12,789	14,098	15,406	16,714	18,023		
Peak Hour Traffic Volume	1,033	1,111	1,190	1,268	1,346	1,424	1,622	
Peak Hour Maximum Service Volume at LOS Standard	609	645	681	717	753	790	609	
Peak Hour LOS	D	C	B	A	A	B	F	
Volume to Capacity Ratio at LOS Standard	1.70	1.89	2.08	2.28	2.47	2.66		
Volume to Capacity Ratio at LOS E	0.77	0.86	0.94	1.03	1.12	1.21		

Notes: Facility is an Divided Two-Lane Arterial with left turn lanes causing a +5% adjustment factor to be applied.

Segment specific notes/comments



Existing and projected service volumes  
and LOS analysis results

# LOS Segment Report



## Level of Service



### Graphic Markup

Select the type of graphic to add to the map.

Fill color:

#00ff00

Graphic Types:

- Point
- Line Segment
- Multi-point Line
- Freehand Multi-point Line
- Polygon
- Freehand Polygon
- Rectangle
- Text

Border color:

#007f00

Line color:

#0000bf

Text color:

#dc303e

FDOT

[Clear All Graphics](#)

### Theme Colors



### Standard Colors



### Web Colors

#ff0000 #000000

Level: 19



2398

Short St

Orceola St

2213

Irene St

2301

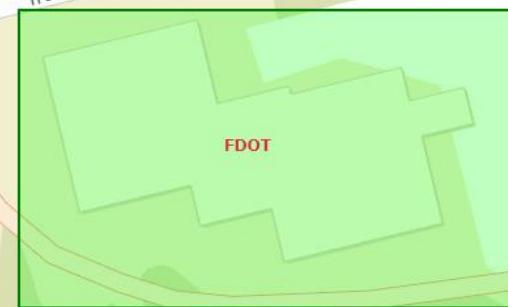
10

5

8

### History

The Graphic Markup feature allows the user to draw specific features on top of the map such as points, lines, polygons, and text.



Use the Graphic Themes menu to define the color palette for the specific graphics to be drawn on the map.



## Level of Service



## Print Map

Create a PDF of the current map view.

Select a print template:  
Letter ANSI A Landscape

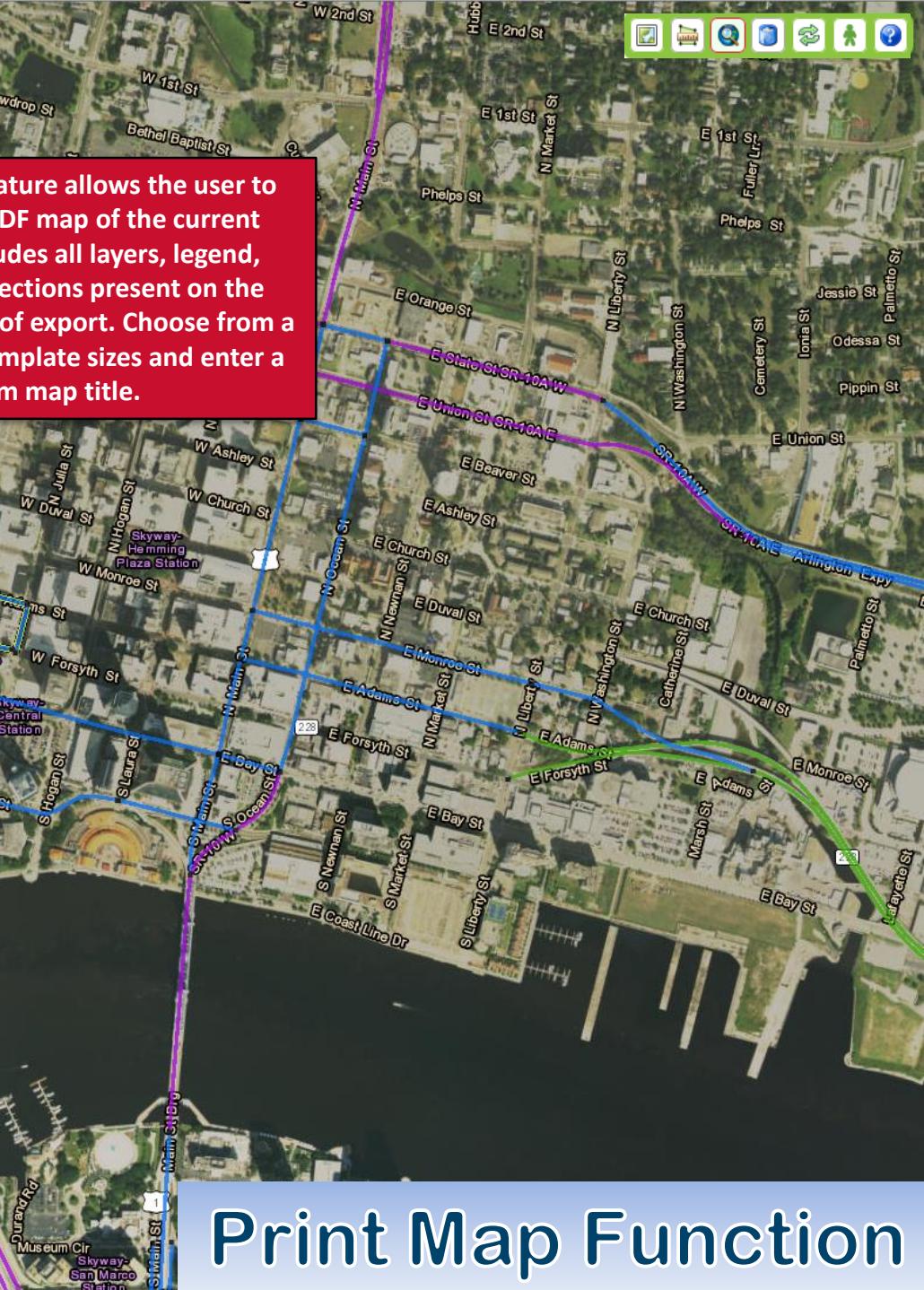
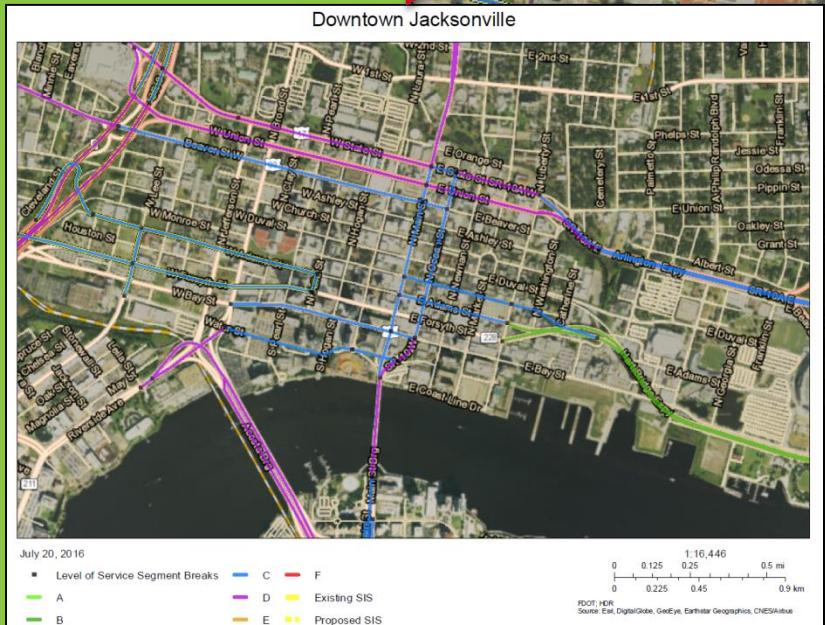
Map title:  
Downtown Jacksonville

A PDF of the current map has been created.

[Click here to view the PDF](#)

[Create PDF Map](#)

The Print Map feature allows the user to create a static PDF map of the current extent that includes all layers, legend, graphics and selections present on the screen at the time of export. Choose from a list of available template sizes and enter a custom map title.





FLORIDA DEPARTMENT OF TRANSPORTATION  
DISTRICT TWO

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