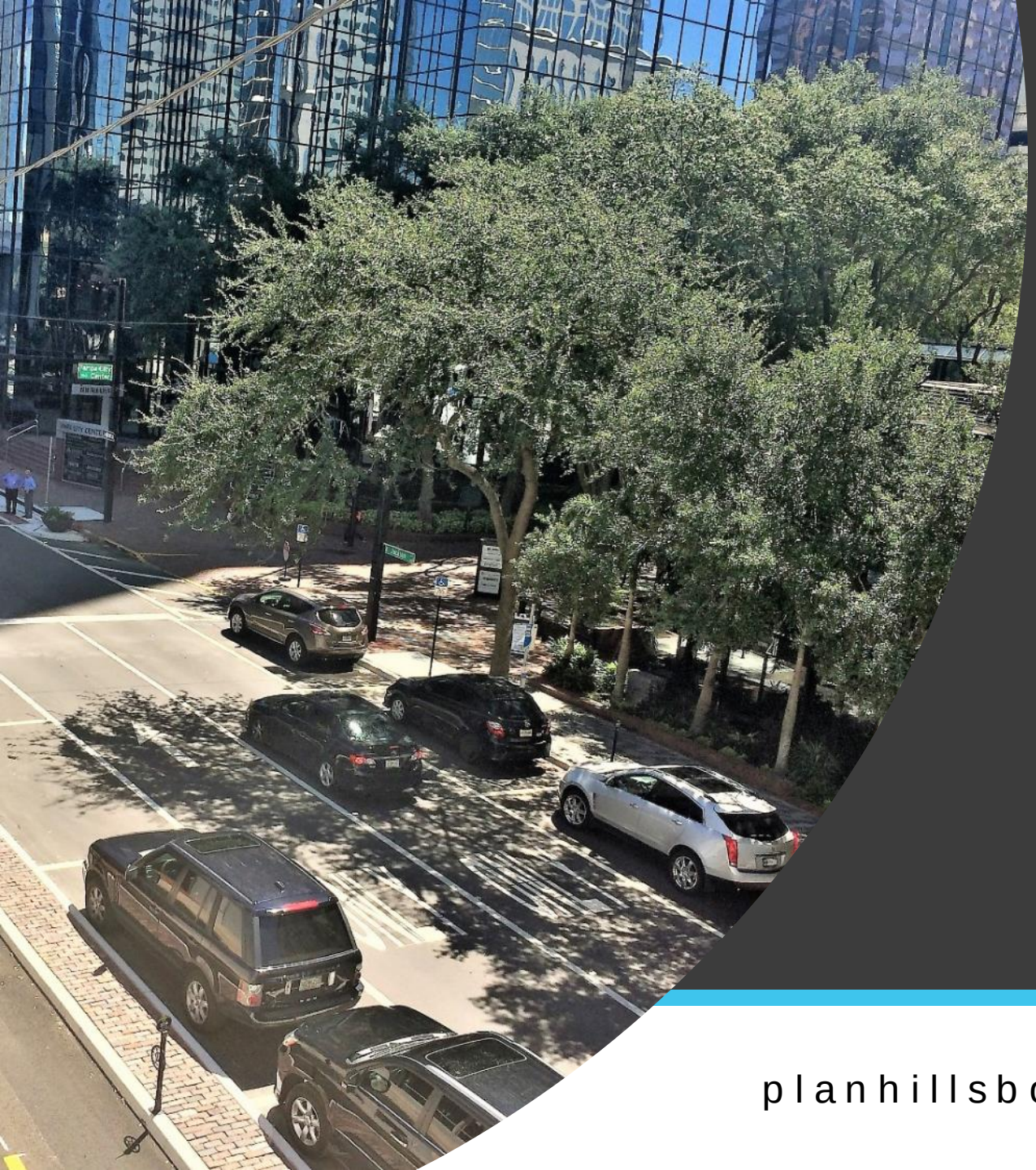


# Hillsborough Shared Data Portal & Analytical Tool

2020 FLPRITE Winter Workshop

February 28

planhillsborough.org

# Data & Analytics Portal – Why?

- Many datasets floating around HC
- Some are duplicates, others are **almost** duplicates
- Efficient data collection/production processes
- Common & shared data means less analytical variance
- Instills confidence in our agencies

# Regional Data Platform - Overview

The fusion and analysis of data from across the region brought together in one platform to enable the maximum amount of insight to be gleaned and in doing so creates the opportunity to manage our transport networks more efficiently and enhance mobility for all.

**Vision:**

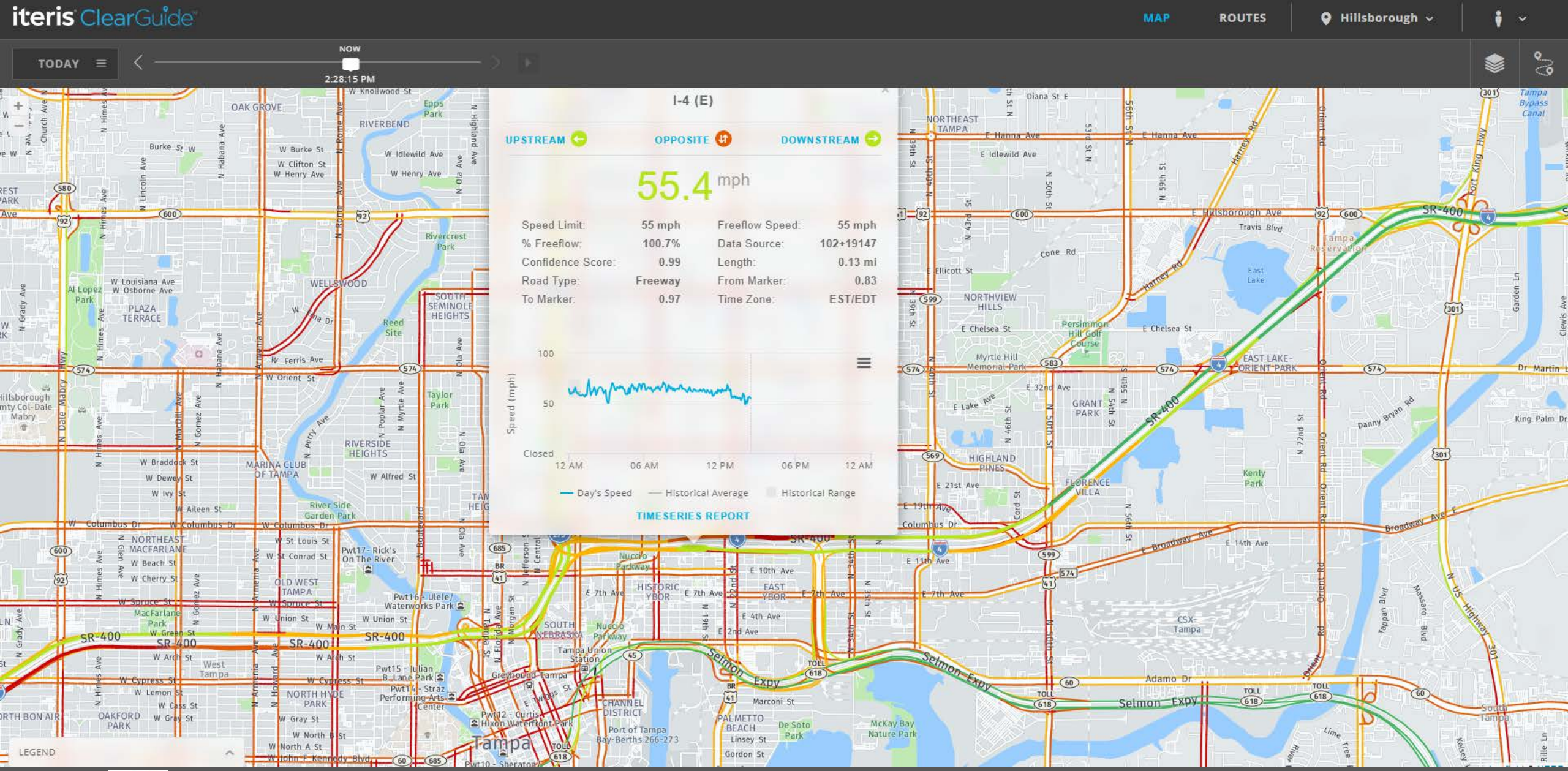
To use ‘big data’ to optimize mobility movement across the region, inform our future planning strategies and drive efficiency savings, this vision will be enabled by a proof of concept pilot project and then a series of projects as defined on the overall roadmap.

# Goals for the Data & Analytics Portal

- Aggregate datasets originating in agencies across HC
- Provide analytical capabilities related to safety & congestion
- Acquire/develop multimodal long-range planning tool
- **Rapid deployment**
- **Proven platform**

# ClearGuide

## Real-time contextual mobility intelligence

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# Route Performance

Time Range: 1D | 7D | 1M | 3M | 6M | YTD | 1Y

From: 02/07/2019 → 02/06/2020

Metric 1: Average Speed

Metric 2: Average Travel Time

Metric 3: None

Keyword:

My Routes Only

Tags: kes | All | Any

Routes: TIA North/Anderson Rd to Greater Downtown; Westhore District to Greater Downtown; Hidden River/Telecom Park to New Tampa Commercial; New Tampa Commercial to Hidden River/Telecom Park; Hidden River/Telecom Park to Port Redwing & Big Bend | Select All

Time Of Day: All  Include Days: All

+ Show Advanced

Output: Table  RENDER

| Route Name | ID | Average Speed (mph) | Average Travel Time (mins) | Length (mi) | Tags |
|---|---|---|---|---|---|
| Hidden River/Telecom Park to New Tampa Commercial | 241 | 49.2 | 7.77 | 6.33 | commuter route, kes |
| Hidden River/Telecom Park to Port Redwing & Big Bend | 239 | 56.4 | 26.58 | 23.92 | commuter route, kes |
| New Tampa Commercial to Hidden River/Telecom Park | 240 | 56.7 | 6.17 | 5.75 | commuter route, kes |
| TIA North/Anderson Rd to Greater Downtown | 243 | 34.6 | 11.6 | 6.5 | commuter route, kes |
| Westhore District to Greater Downtown | 242 | 56 | 5.51 | 4.47 | commuter route, kes |

Showing 1 to 5 of 5 entries  Show 25 entries  Previous 1 Next

# Current Use Cases

## Speed and Traffic volume

- Identify mobility and safety priorities
- Report/Visualize mobility and safety performance
- Identify solutions
- Bottleneck analysis
- Corridor Delay reports

# Future Use Cases

Crash, Incident, Volume, more modes

- Evaluate project options
- Prioritize project options
- Predict Outcome
- Incidents by corridor/intersection report
- High crash locations
- Corridor Delay reports
- CAV

# CLEARGUIDE SERVICE FEATURES

- Map
- Map Animations
- Custom Route Selection Tool
- Reports

5 minute, 15-minute, Hourly, Daily

Quantity selections (Speed, Travel Time, Travel Time Index, Free flow speed, Samples, High Quality Samples).

Reliability statistics that make sense for links and routes like percentiles, min/mean/max and standard deviations.

# CLEARGUIDE SERVICE FEATURES

- Alerts and Trend Analysis Bundle
- Regional Dashboard
- Data Downloader
- Route Alerts
- Trend Map

# CLEARGUIDE SERVICE FEATURES

- Incidents and Social Media
- HERE Incident Feed
- Waze Incident Feed
- Local Agency Incident Data
- HERE Traffic Safety Warning Feature

# CLEARGUIDE SERVICE FEATURES

- Integration of Volume Data
  - Vehicle hours of delay
  - Person hours of delay
  - Vehicle miles and person miles traveled
  - User delay & wasted fuel reports
- Bottleneck Detection and Reporting
- Iteris ClearPath Weather
- Custom Free Flow Speed
- Truck Data

# Planning Use Cases

Performance Reports

Preparing for Public Relations

Project Selection & Resource Prioritization

# Performance Reports

- Inform planning and design studies
- Meet reporting requirements
- Create materials to support grant applications
- Identify mobility and safety priorities
- Develop performance reports and visualization
- Meet Federal requirements (MAP-21)
- See number of anomalies over the past month, year etc.
- Before & After Studies
- Changes in Mobility and Safety Conditions over Time
- Top 10 Reports
- Congestion Contributors

# Public Relations Reports

Prepare press releases for public outreach

Inform citizens, legislators etc. on project impacts

Generate statistics and content for media consumption

Prepare actionable reports for legislators and federal agencies; prepare corridor delay reports

# Project Selection & Resource Prioritization

Generate Key Performance Indicators to evaluate requests for funding and select projects that meet best bang for the buck

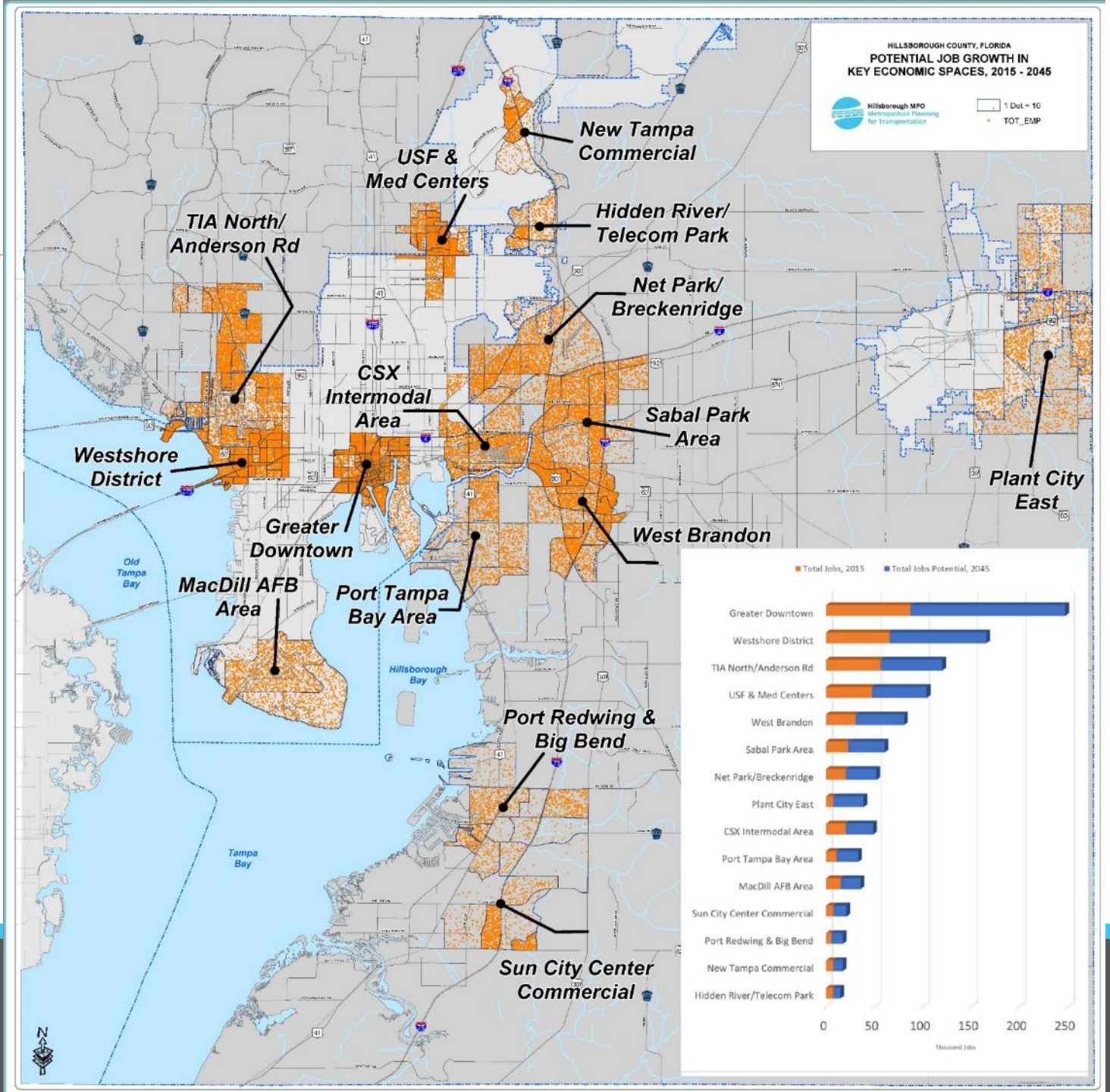
View entire district or state with data combinations to highlight mobility and safety issues

# ClearGuide

## Top 20 Most Miserable Commutes – Countywide

15x15 OD pairs

6 measures of congestion for AM&PM peaks

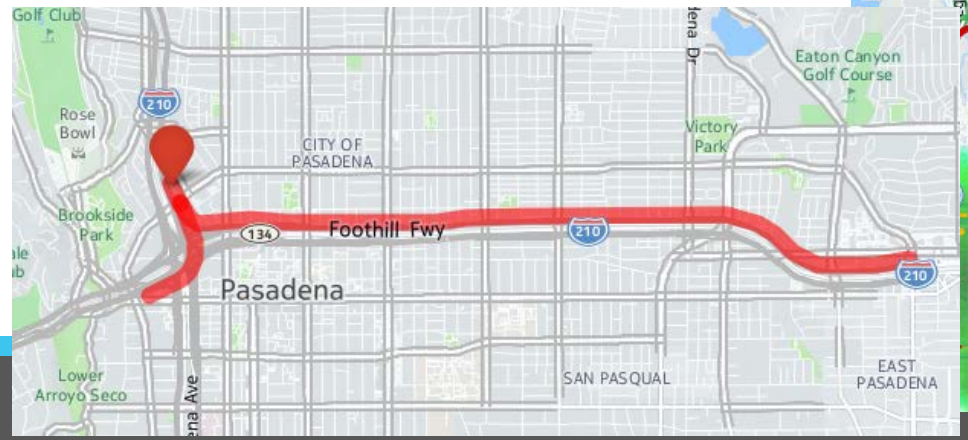


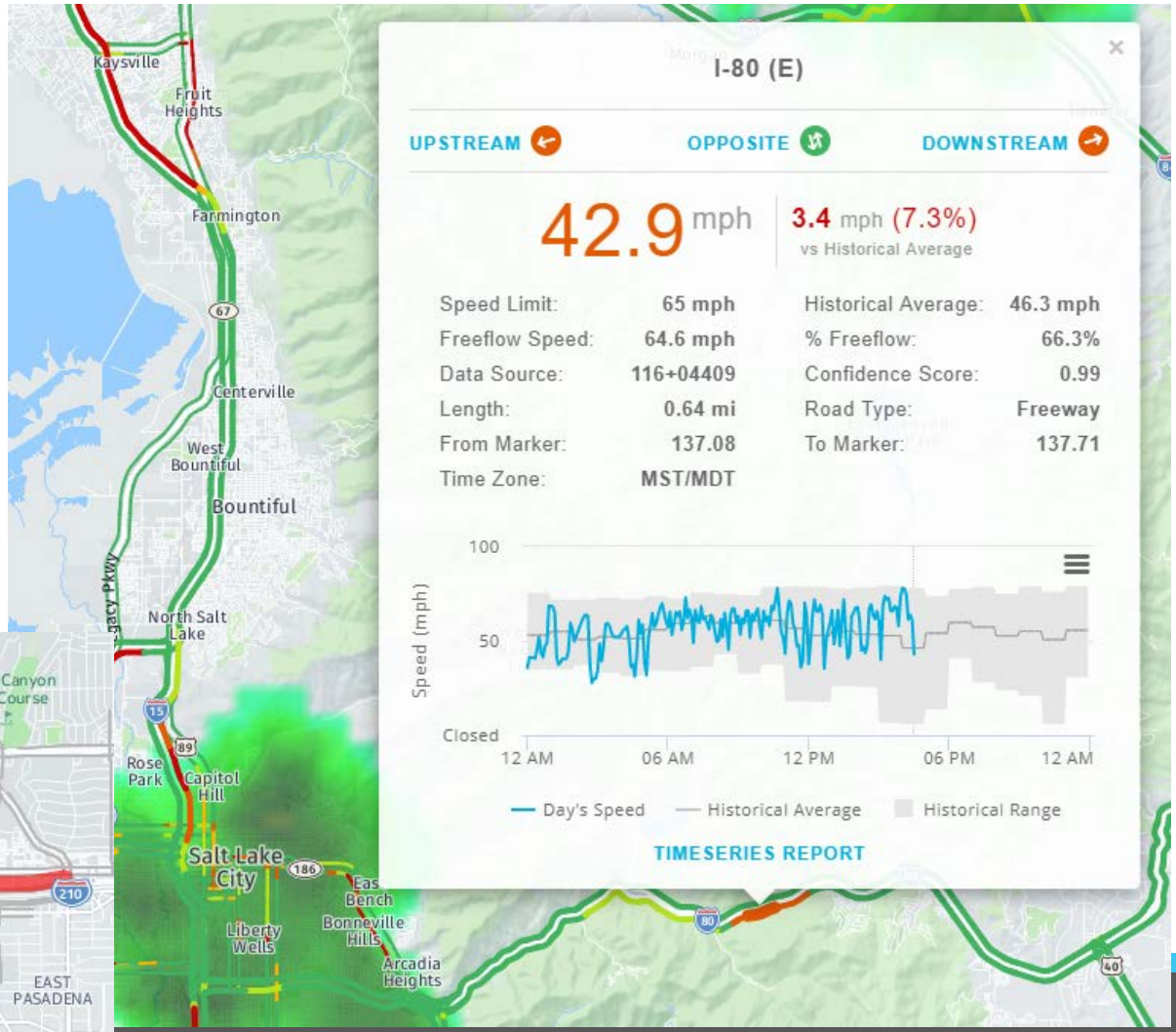
# Operations Use Cases

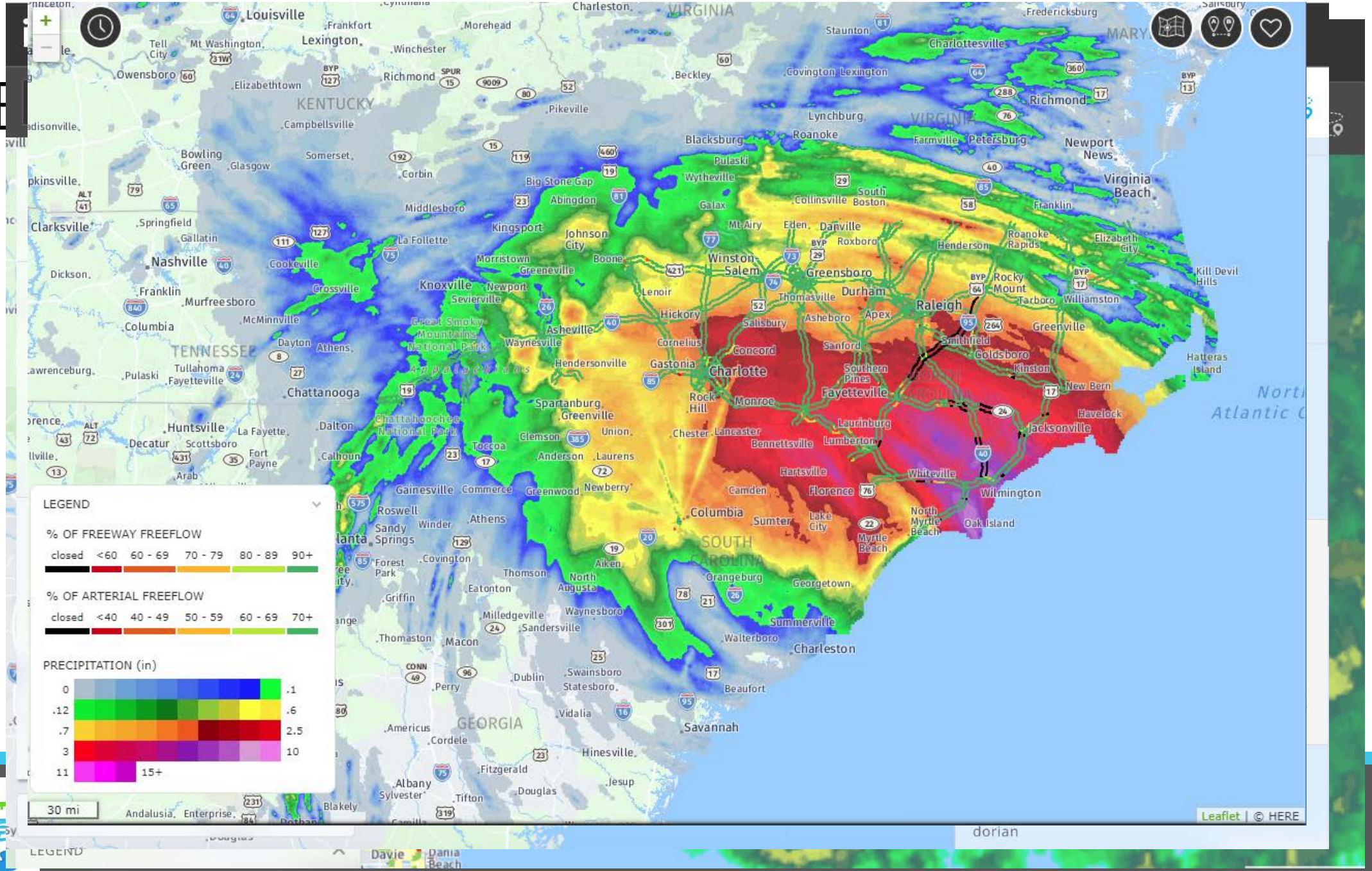
| | | |
|---|---|---|
| ICM Management | Maintenance of Work Zone traffic | Manage network traffic |
| Emergency Operations (weather, fires) | Incident Management | Special Event/Holiday Management |
| Before and After Analysis | Signal Synchronization | Justify need for signal system upgrades |

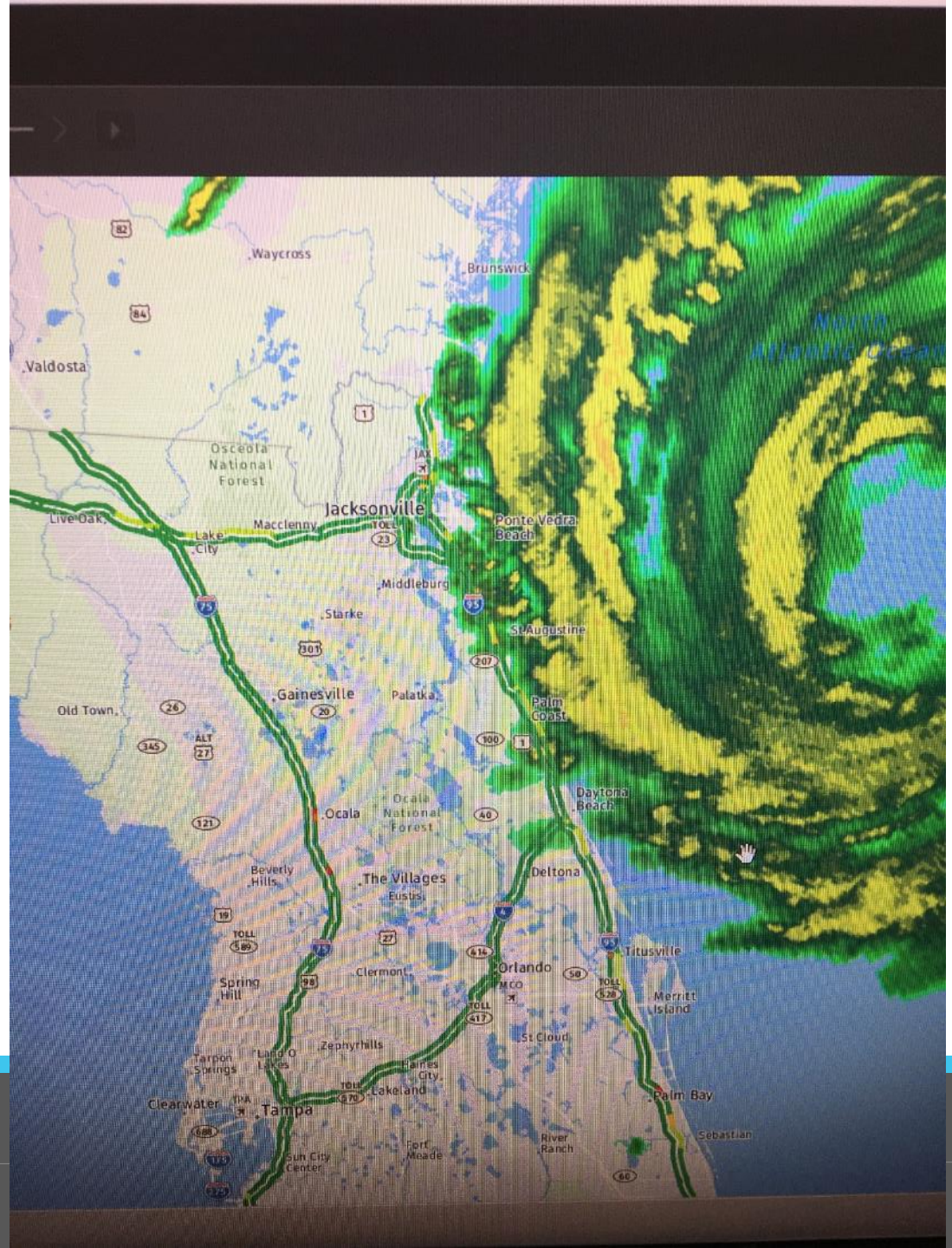
# Real Time Operations

- Monitor bottlenecks and anomalies in real-time
- Overlay Waze, incident, and weather data on the map
- Receive alerts on custom routes

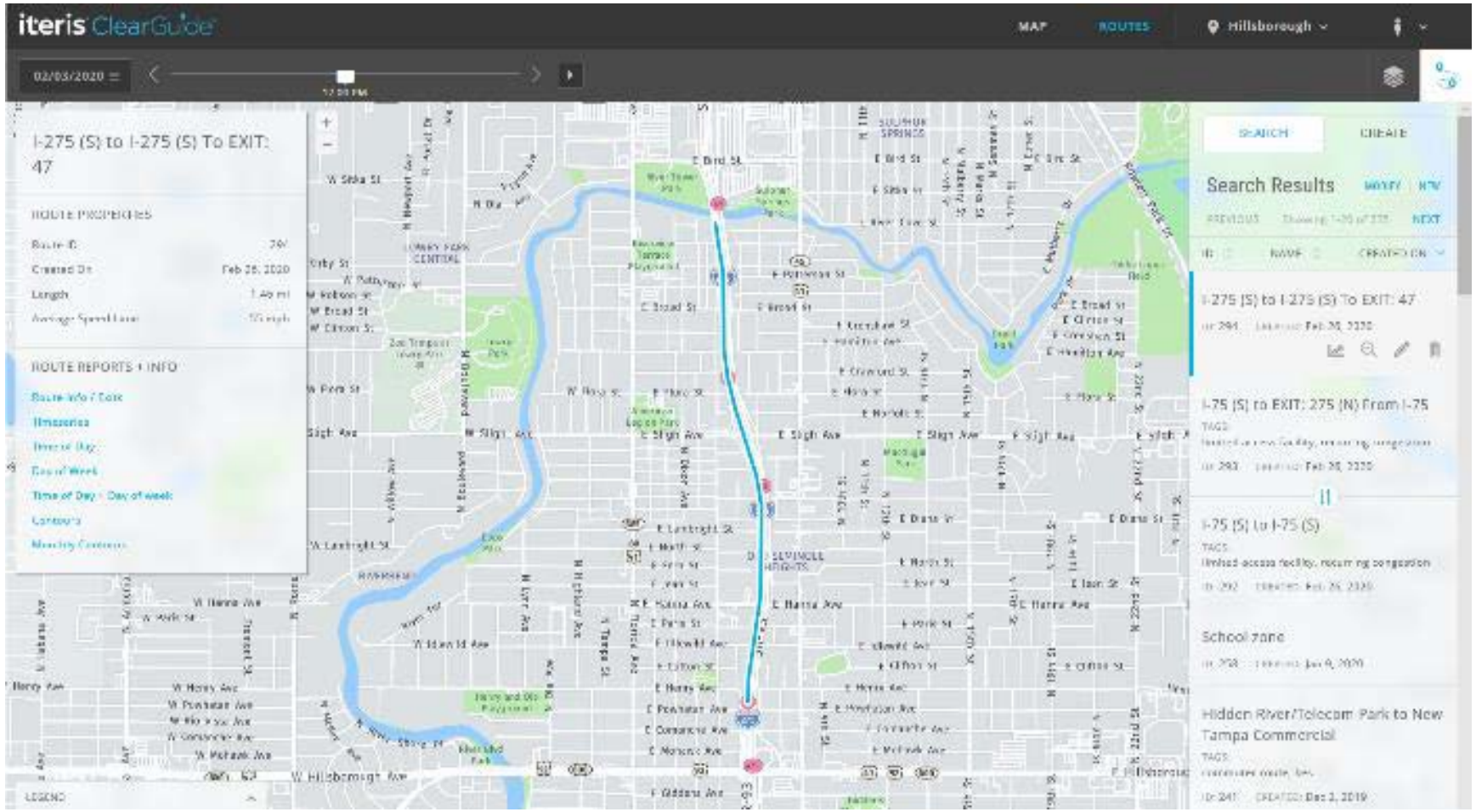


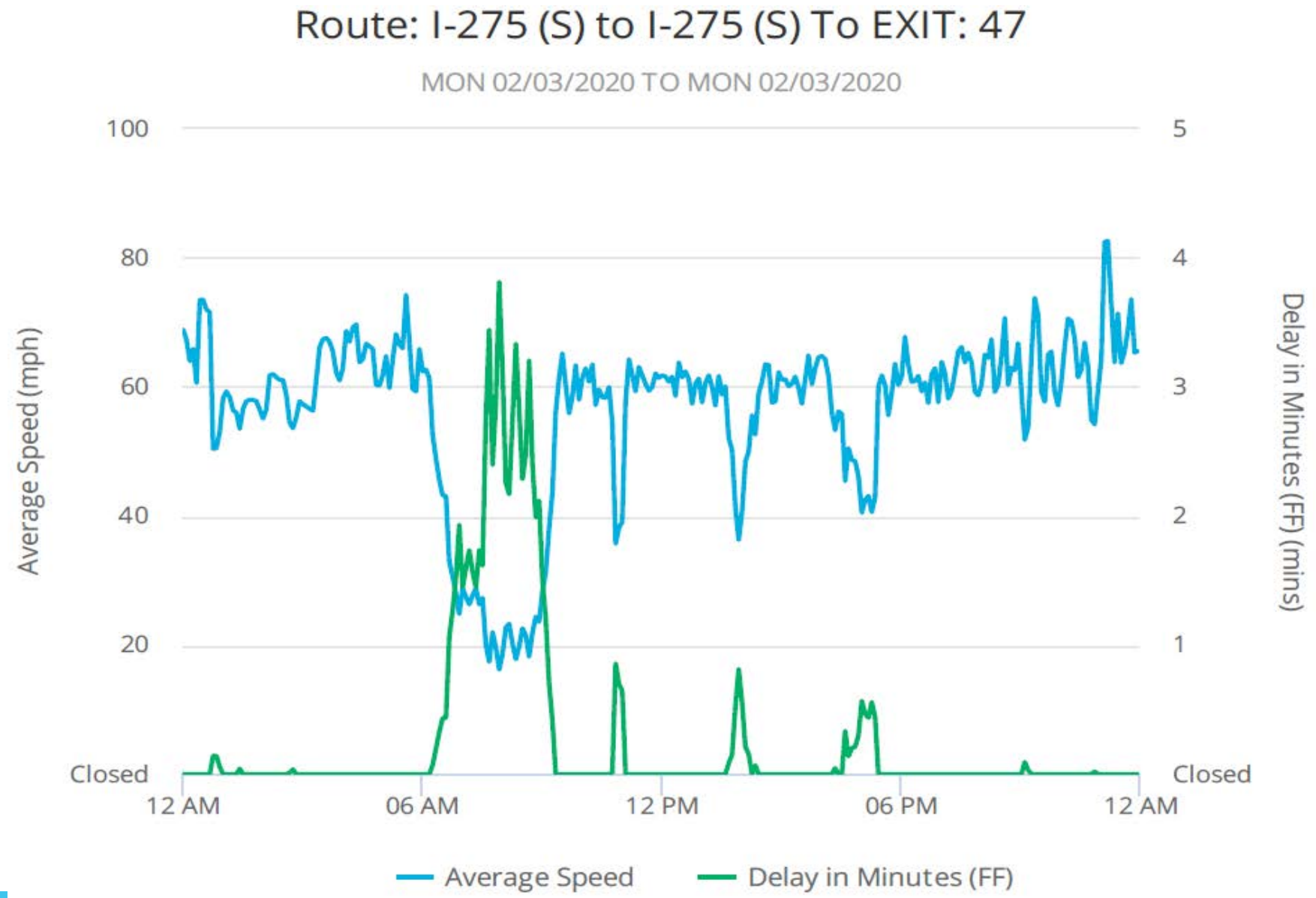




LEGEND
% OF FREEWAY FREEFLOW
closed <60 60 - 69 70 - 79 80 - 89 90+
% OF ARTERIAL FREEFLOW
closed <40 40 - 49 50 - 59 60 - 69 70+
PRECIPITATION (in)
0 .1
.12 .6
.7 2.5
3 10
11 15+
30 mi
Leaflet | © HERE
KENTUCKY
VIRGINIA
TENNESSEE
SOUTH CAROLINA
GEORGIA
Louisville
Lexington
Richmond
Charleston
Nashville
Knoxville
Asheville
Charlotte
Raleigh
Greensboro
Durham
Winston-Salem
Fayetteville
Jacksonville
Wilmington
Columbia
Charleston
Savannah
Chattanooga
Huntsville
Atlantic


Waycross
Brunswick
Valdosta
Osceola National Forest
Jacksonville
Live Oak
Macclenny
Lake City
Ponte Vedra Beach
Middleburg
Starke
St Augustine
Gainesville
Palatka
Old Town
Palm Coast
Daytona Beach
Ocala
Ocala National Forest
Beverly Hills
The Villages
Eustis
Deltona
Titusville
Orlando
Clermont
Spring Hill
Merritt Island
St Cloud
Zephyrhills
Tarpon Springs
Lakeland
Clearwater
Tampa
Palm Bay
Sebastian
River Ranch
Fort Meade
Sun City Center

# I-275SB @ Sligh for 3&4 Feb 2020

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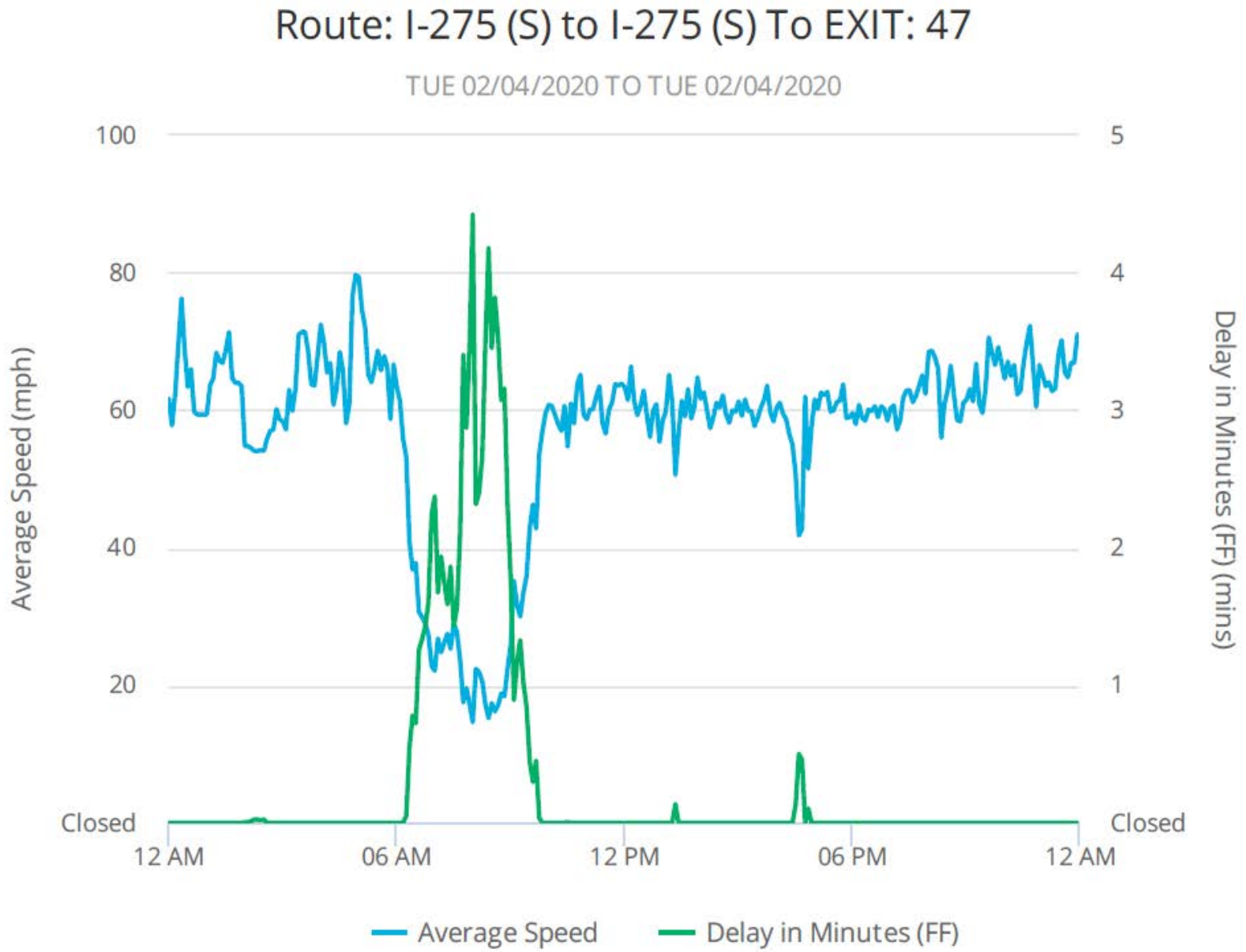
MON 02/03/2020 TO MON 02/03/2020
100
80
60
40
20
Closed
5
4
3
2
1
Closed
Average Speed (mph)
Delay in Minutes (FF) (mins)
12 AM
06 AM
12 PM
06 PM
12 AM
Average Speed
Delay in Minutes (FF)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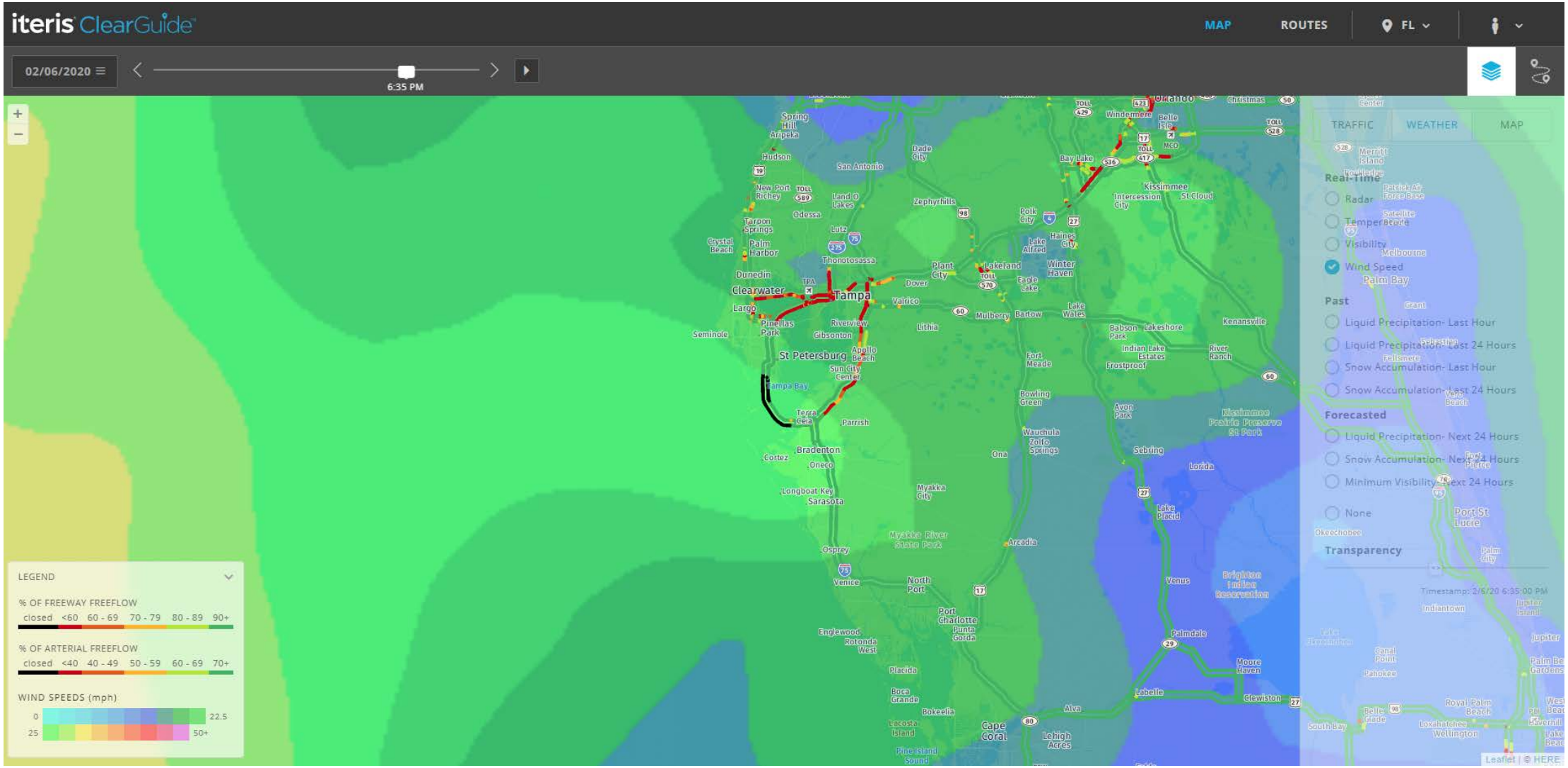
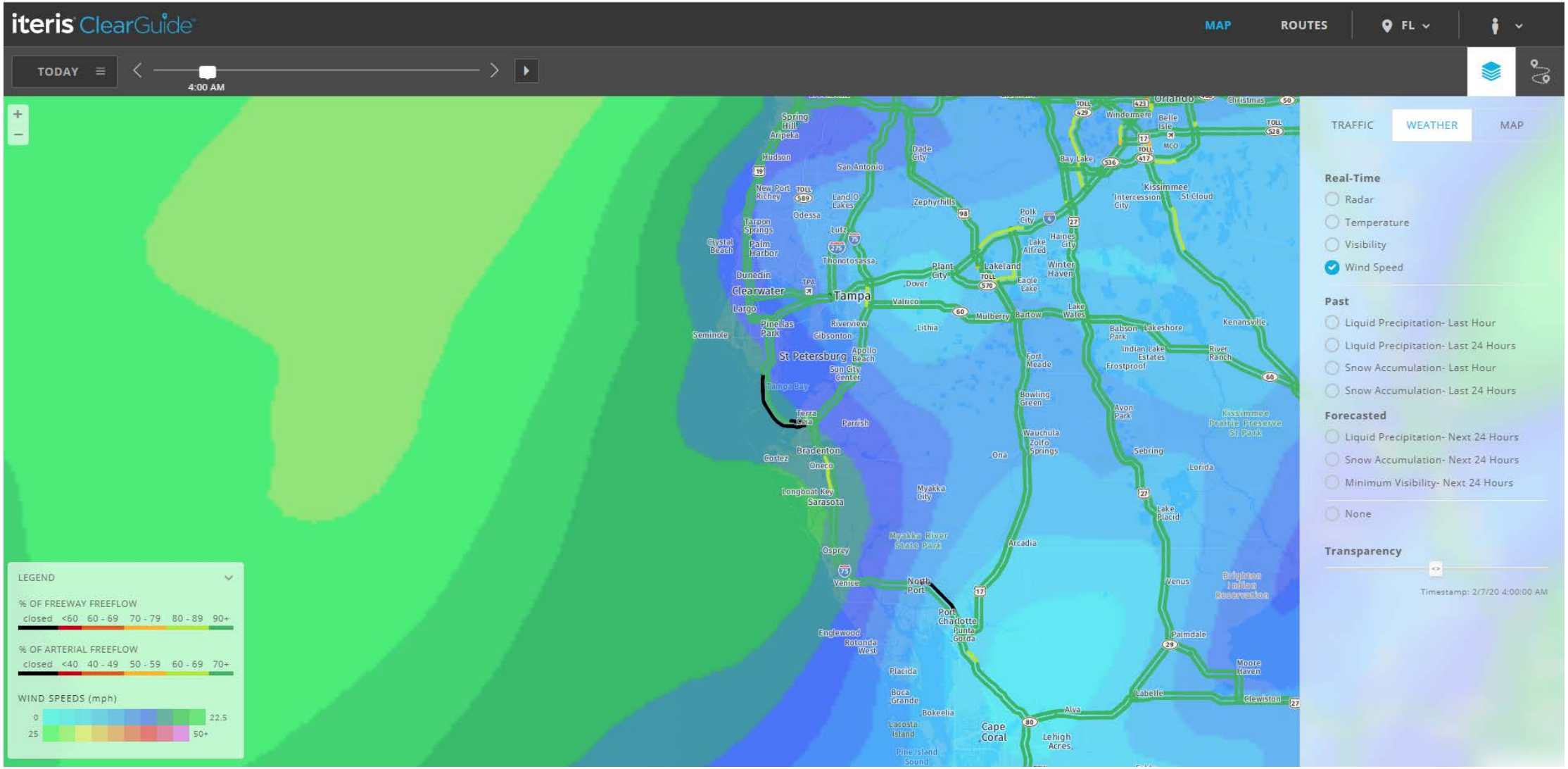
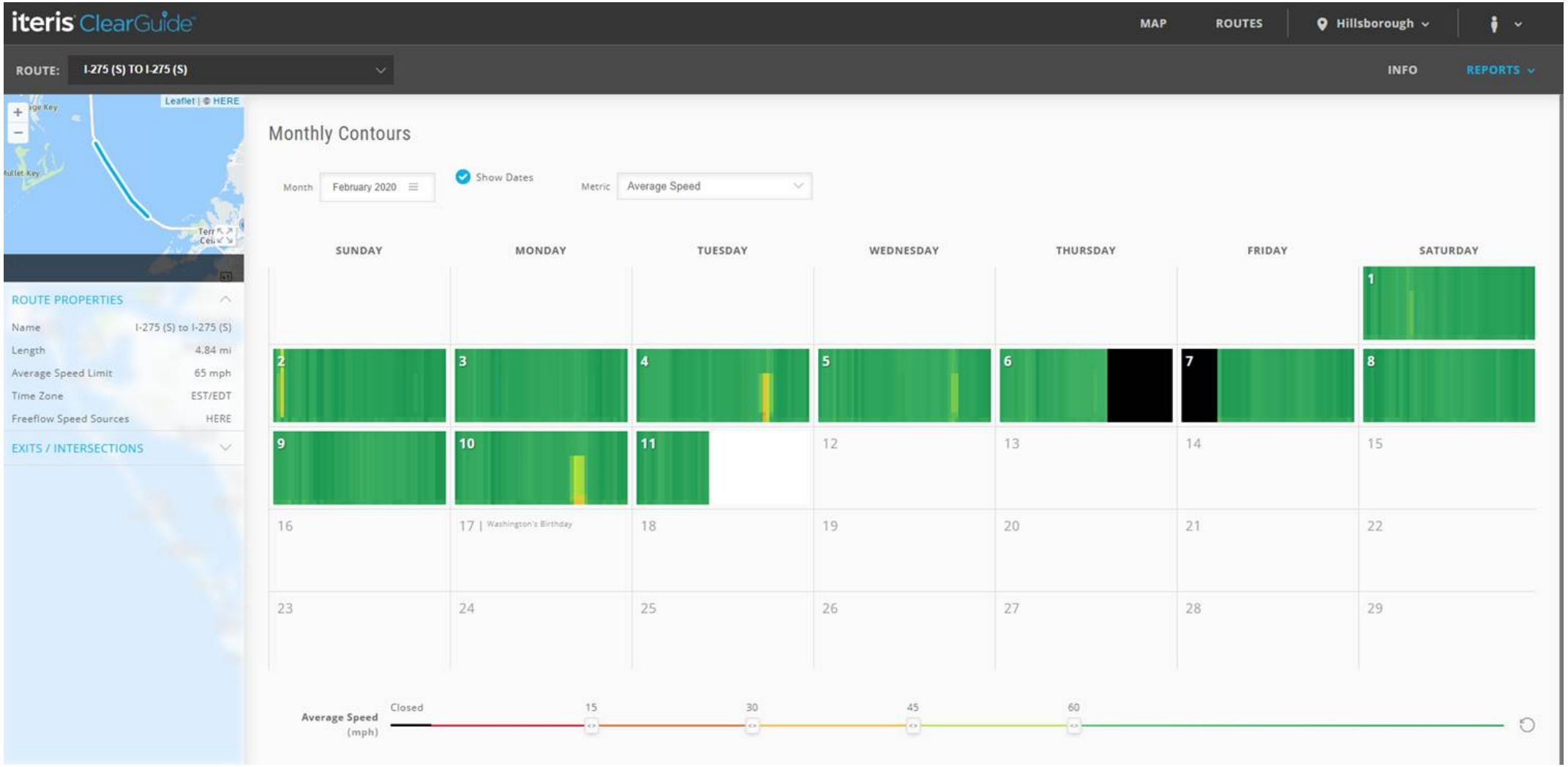
TUE 02/04/2020 TO TUE 02/04/2020
100
80
60
40
20
Closed
5
4
3
2
1
Closed
Average Speed (mph)
Delay in Minutes (FF) (mins)
12 AM
06 AM
12 PM
06 PM
12 AM
Average Speed
Delay in Minutes (FF)

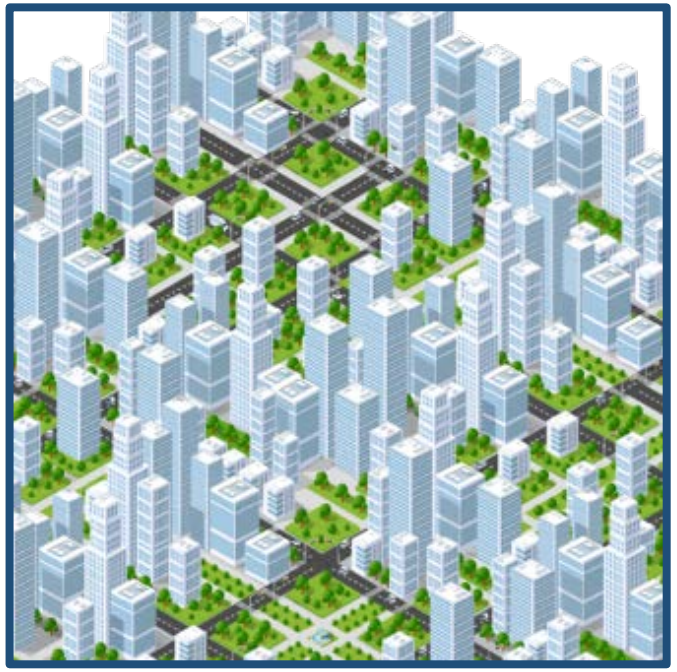

iteris ClearGuide
MAP
ROUTES
FL
02/06/2020
6:35 PM
TRAFFIC
WEATHER
MAP
Real-Time
Radar
Temperature
Visibility
Wind Speed
Past
Liquid Precipitation- Last Hour
Liquid Precipitation- Last 24 Hours
Snow Accumulation- Last Hour
Snow Accumulation- Last 24 Hours
Forecasted
Liquid Precipitation- Next 24 Hours
Snow Accumulation- Next 24 Hours
Minimum Visibility- Next 24 Hours
None
Transparency
LEGEND
% OF FREEWAY FREEFLOW
closed <60 60 - 69 70 - 79 80 - 89 90+
% OF ARTERIAL FREEFLOW
closed <40 40 - 49 50 - 59 60 - 69 70+
WIND SPEEDS (mph)
0 22.5
25 50+
Tampa
St Petersburg
Clearwater
Sarasota
Bradenton
Lakeland
Orlando
Kissimmee
Leaflet | © HERE


iteris ClearGuide
MAP
ROUTES
FL
TODAY
4:00 AM
TRAFFIC
WEATHER
MAP
Real-Time
Radar
Temperature
Visibility
Wind Speed
Past
Liquid Precipitation- Last Hour
Liquid Precipitation- Last 24 Hours
Snow Accumulation- Last Hour
Snow Accumulation- Last 24 Hours
Forecasted
Liquid Precipitation- Next 24 Hours
Snow Accumulation- Next 24 Hours
Minimum Visibility- Next 24 Hours
None
Transparency
Timestamp: 2/7/20 4:00:00 AM
LEGEND
% OF FREEWAY FREEFLOW
closed <60 60 - 69 70 - 79 80 - 89 90+
% OF ARTERIAL FREEFLOW
closed <40 40 - 49 50 - 59 60 - 69 70+
WIND SPEEDS (mph)
0 22.5
25 50+
Tampa
St Petersburg
Clearwater
Bradenton
Sarasota
Venice
Port Charlotte
Cape Coral
Lakeland
Orlando


iteris ClearGuide
MAP
ROUTES
Hillsborough
ROUTE:
I-275 (S) TO I-275 (S)
INFO
REPORTS
Leaflet | © HERE
Monthly Contours
Month
February 2020
Show Dates
Metric
Average Speed
SUNDAY
MONDAY
TUESDAY
WEDNESDAY
THURSDAY
FRIDAY
SATURDAY
ROUTE PROPERTIES
Name
I-275 (S) to I-275 (S)
Length
4.84 mi
Average Speed Limit
65 mph
Time Zone
EST/EDT
Freeflow Speed Sources
HERE
EXITS / INTERSECTIONS
Washington's Birthday
Average Speed (mph)
Closed
15
30
45
60

# Next Steps

- Incorporating new datasets
  - Crash
  - Incident
  - Transit
  - OD
  - Waze



# Next Steps

- Supplementing LOS maps in HC Comp Plan
- Building dashboards on website

# FAQs

- What is the data source?
  - HERE through FDOT
- Who has access?
  - Hillsborough Partners = FDOT, County, City of Tampa, Plant City, THEA, Temple Terrace
- How do I get access?
  - Contact Johnny Wong

# Thank You

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Anita Vandervalk

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