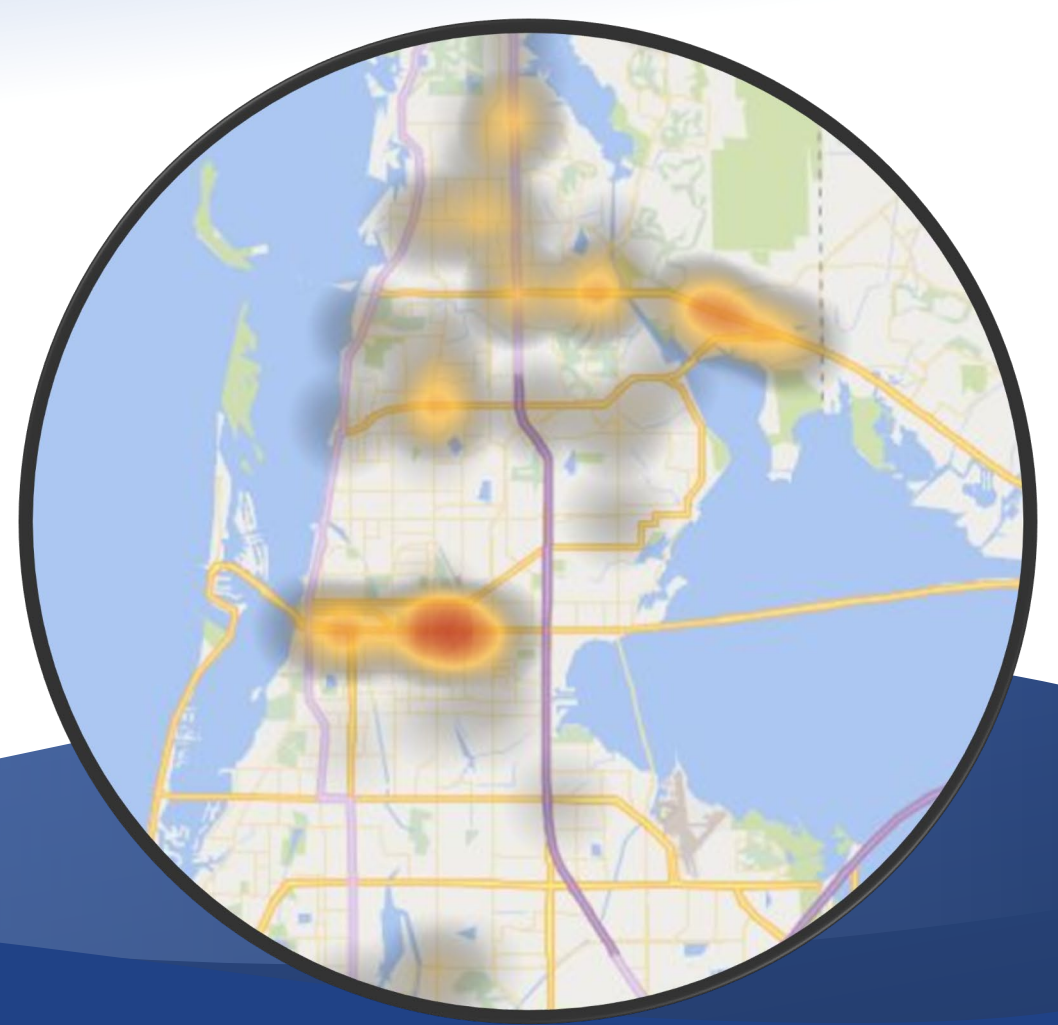


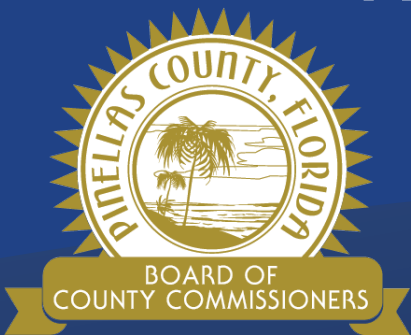
ATMS Program Update



Pinellas County Public Works

Kelli Hammer Levy, Director

Tom Washburn, Transportation Division Director



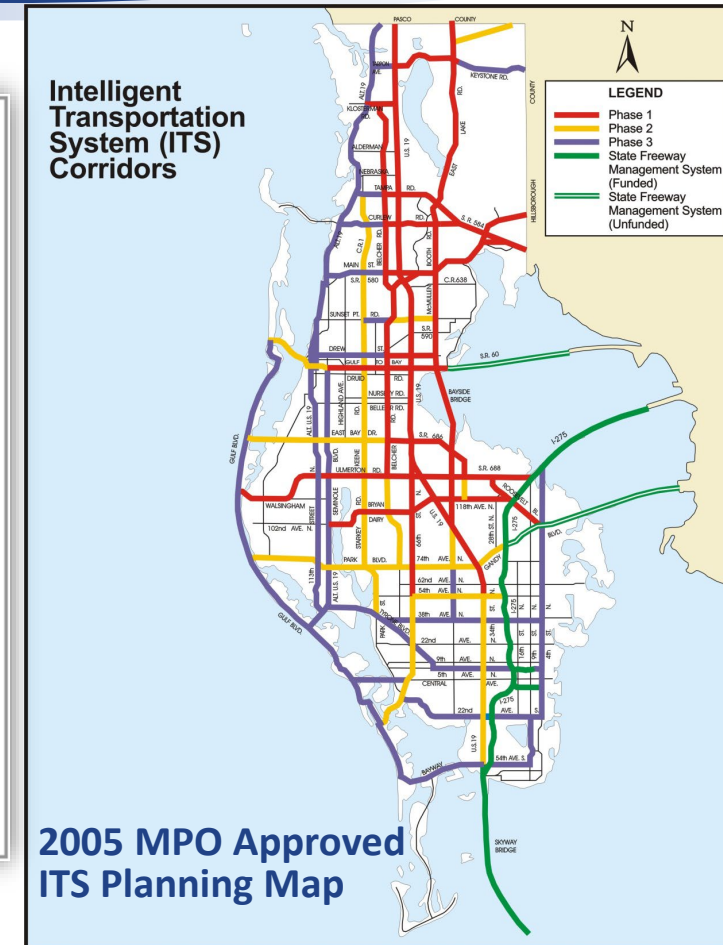
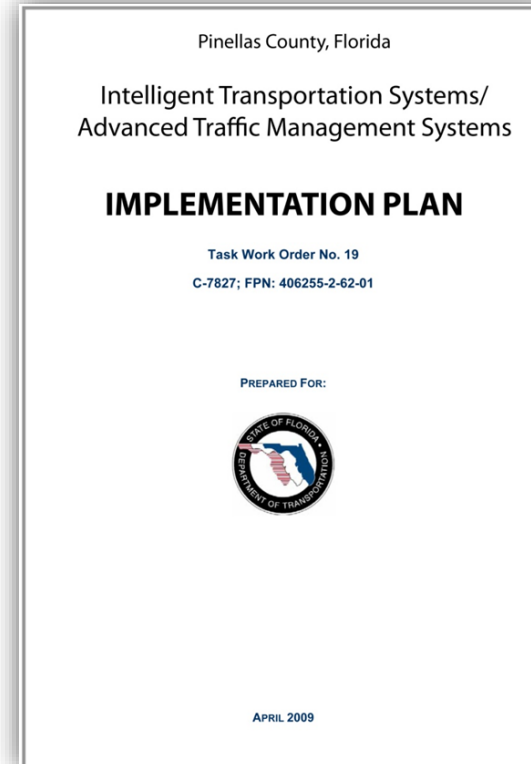
ATMS Program - History



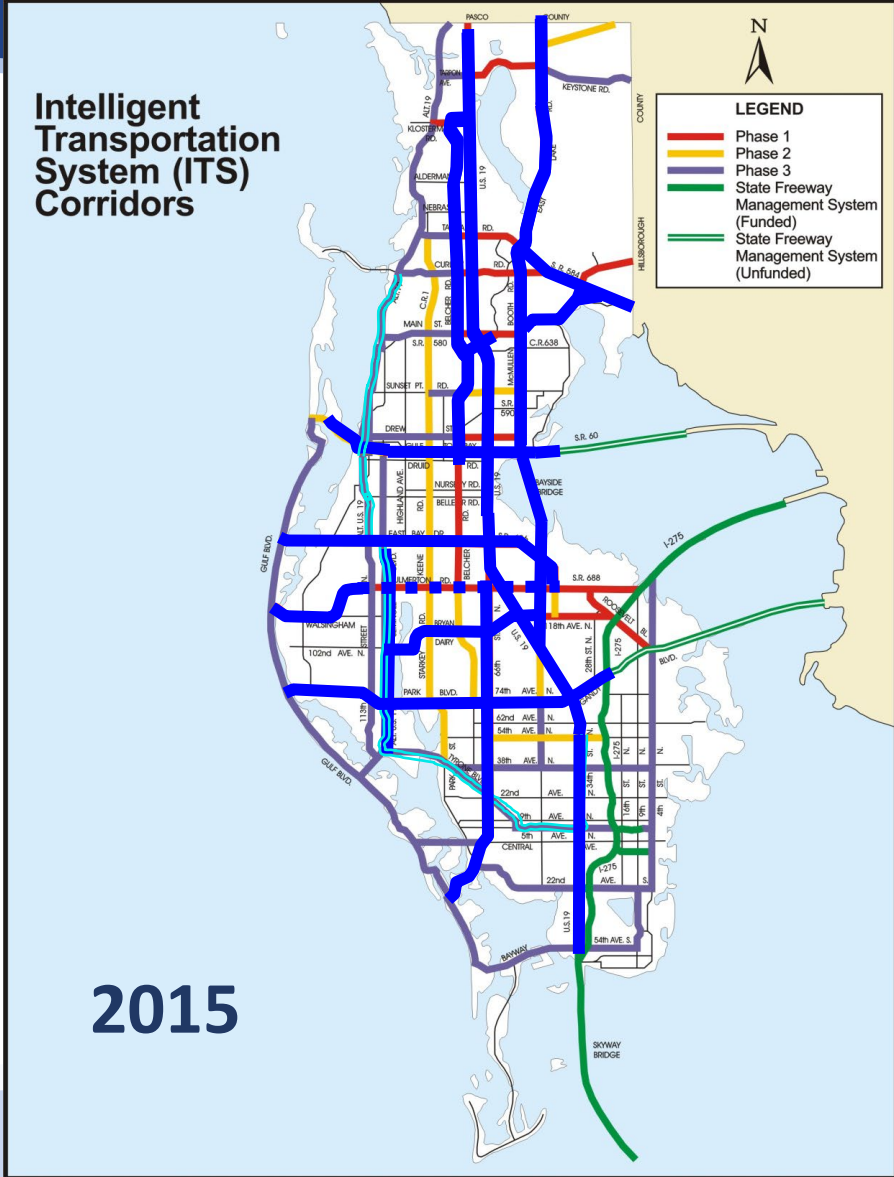
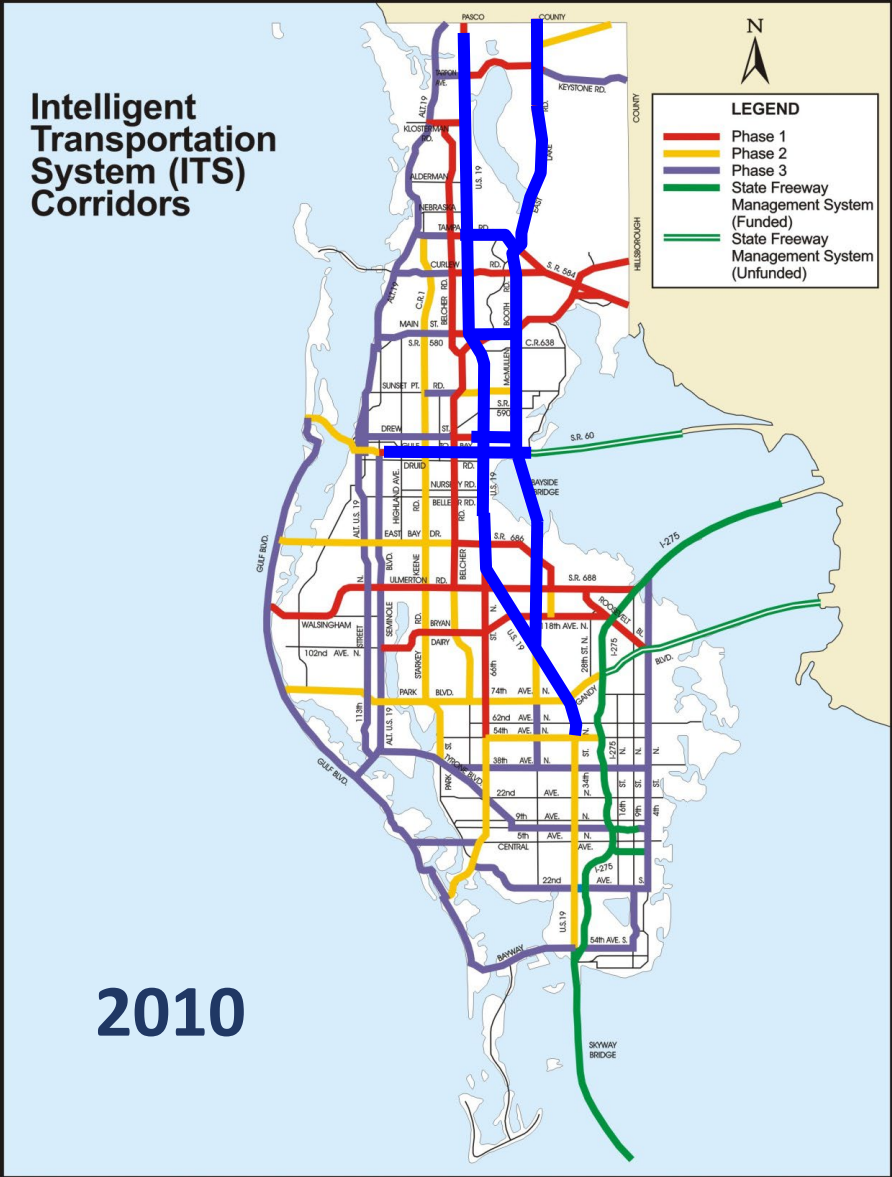
Initiated in 2004

Program Strategy

- **Focus on Arterials and Collectors**
- **Fiber Optic Communication Backbone**
 - CCTV Cameras: Complete video coverage of corridors
 - DMS Signs: Located strategically for evacuation and travel-time information
- **Traffic Control Center: Includes workstations for FDOT, St Pete, and Clearwater**
- **Master Plan Update: Recently Completed**



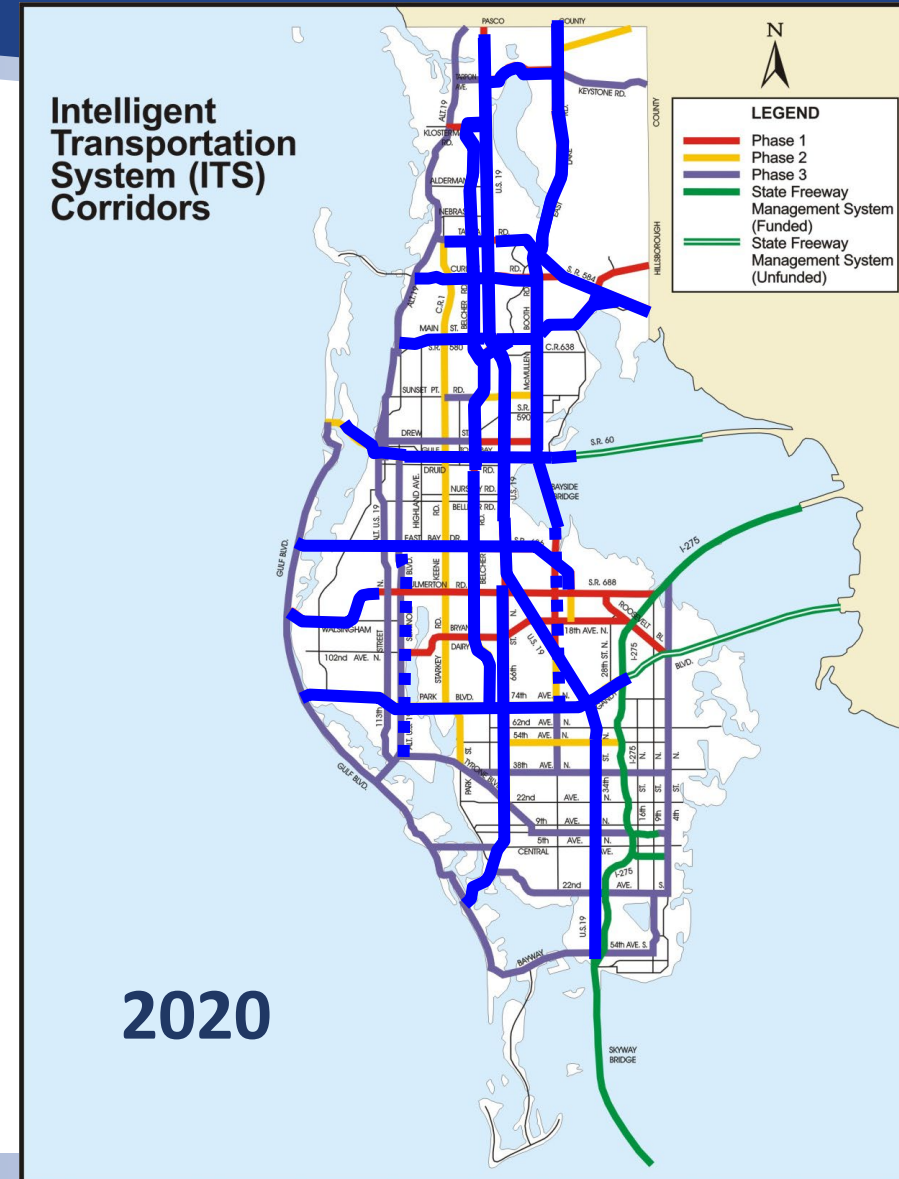
ATMS Program - History



ATMS Program - History

Funding

- **Dedicated Funding: Ninth Cent Fuel Tax**
 - ~4M Annually
- **Funds Design, Construction, Operations and Maintenance**
- **Grant Revenue >\$39M**



ATMS Program – The System Today

- **400 Miles of Fiber Optic Cable**
- **228 CCTV Cameras**
- **62 DMS Signs**
- **102 Bluetooth Travel Time Sensors**
- **6 Intersection Video Analytic Devices**
- **Traffic Management Center**



What Does Success Look Like?

Outcomes

- **Optimized Traffic Flow**
 - Adaptive and Responsive Signal Timings
- **Reliable Communications**
 - Redundant
 - County Facility Connections
- **Timely Equipment Status Alerts**
- **Faster response to congestion and crashes**
- **Identification of potential crashes, near misses, wrong way driving**

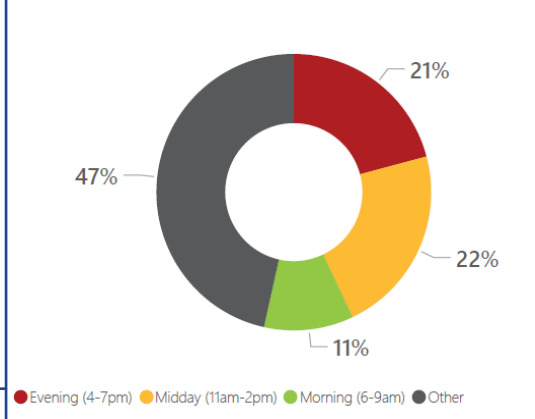
Limitations

- **Roadway Capacity**
- **Seasonal Impacts e.g., Spring Break, Spring Training**
- **Non-recurring Congestion**
 - Crashes
 - Emergency Pre-Emption
 - Construction

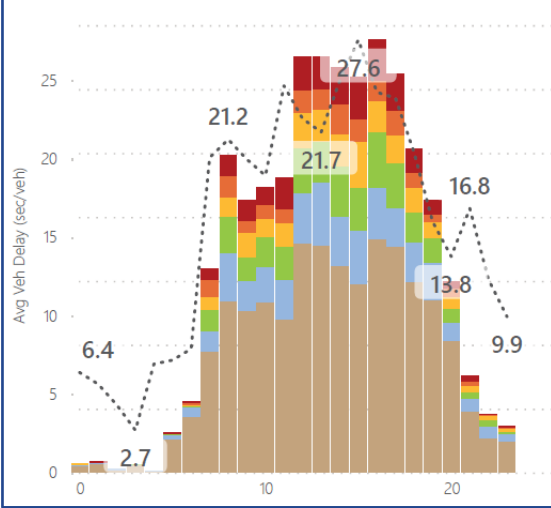
How will we Know it is Working?

Automated Traffic Signal Performance Measures (ATSPMs)

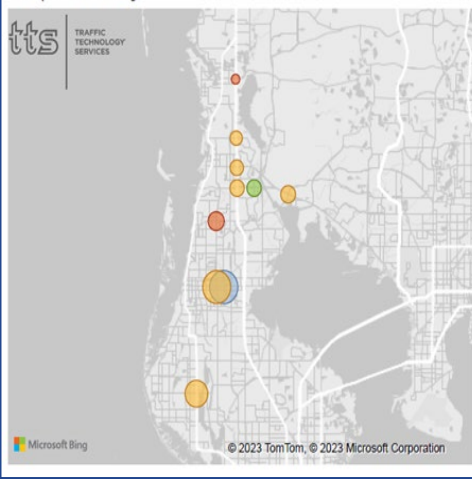
Red Arrivals by Peak



Avg Delay by Hour



Top Delay



INRIX U.S. Signals Scorecard – Full Year 2022 Performance Summary
Based on Data Gathered and Averaged over 4 weeks in March, June, September, and November 2022

Ulmerton Road & Seminole Boulevard	StreetView
County, State	Pinellas, FL
MPO	Pinellas County MPO
Observed Crossing/Day	2,803
Delay/Vehicle (secs), Weekly Avg	41
Arrival on Green (%), Weekly Avg	42%
Vehicle Split Failure %, Weekly Avg	0.50%
Peak Demand Hour	Friday 4:30 - 5:30 PM
Peak Hour Factor	0.95
Peak Hour Delay/Vehicle (Secs)	45

Map Legend

- A < 10 sec
- B = 10-20 sec
- C > 20-35 sec
- D = 35-55 sec
- E = 55-80 sec
- F > 80 sec

Legend Scale

- 10.30 to 14.68
- 14.68 to 15.26
- 15.26 to 17.90
- 17.90 to 24.26
- 24.26 to 59.60

ATMS Program – The Next 3 Years

Additional Allocation: \$18M

- **Corridor Retiming**
 - 250 Signals
 - FY 24 Goal - 75 Signals / 8 Corridors
- **Video Analytics**
 - 390 Signals
 - FY 24 Goal – 130 Signals
- **Quarterly Progress Updates**

Projects

- **GIS Fiber Mapping: BTS and PW ARPA**
- **Emergency Vehicle Pre-emption Upgrade w/Emergency Services**
- **SR60 Upgrade**
- **ATCMTD Smart Cities**
- **ATMS Projects: SR 580, SR 586, Alderman Rd, & 113th St**

Ninth Cent Reauthorization: FY26

**Quarterly Progress Report
ATMS Improvements**
TRANSPORTATION DIVISION • Traffic Maintenance Section

1ST QUARTER FY24
Oct 23 • Nov 23 • Dec 23

PROGRAM SUMMARY
ATMS or Advance Traffic Management System improvements include signal retiming, adaptive intersections, and video analytic devices. Signal retiming reduces congestion, a map of the 8 retiming corridors has been provided on page 2. Adaptive intersections provide real time adjustments to improve traffic flow and offer an improved response to seasonal traffic. Adaptive intersections are beneficial on corridors with highly variable traffic patterns such as East Lake Rd. Video analytics help keep traffic moving efficiently and provide predictive intersection analytics.

KEY PERFORMANCE INDICATORS
• \$18,000,000 has been allocated for ATMS Improvements (\$6M each for FY24, FY25, and FY26).

- ① **Number of Signal Corridors Retimed**
Running total of intersections retimed. GOAL: 120 Intersections (40 per year).
- ② **Adaptive Intersections Completed**
Running total of adaptive intersections completed. GOAL: 150 Intersections (50 per year).
- ③ **Intersections with Video Analytic Upgrades**
Running total of intersections upgraded with improved video analytics. GOAL: 390 Intersections (130 per year).

KEY PROGRAM MILESTONES Progress to Date

STATUS	MILESTONE
✓	Identify Signal Retiming Corridors Map of corridor locations provided on page 2.
✓	Identify and retain consultants to perform signal retiming.
✓	Identify adaptive intersections for upgrades.
In Progress	Identify and retain contractors to perform adaptive intersection upgrades.
In Progress	Prioritize intersections for analytic video upgrades.

Accomplishments: This is a new program for this fiscal year.

QTR.	Running Total Intersections Retimed	Running Total Adaptive Intersections Completed	Running Total Video Analytic Upgrades
1ST	0 ¹	0 ¹	0 ²
2ND	0	0	0
3RD	0	0	0
4TH	0	0	0

Notes:
Purchase Orders are being issued to consultants for the corridors identified on the map on page 2.
*YTB contract is being prepared and finalized for the Video Analytic Devices.

PUBLIC WORKS
Transportation Division
Traffic Maintenance Section
2215 10TH AVE, SUITE 2
CLEARWATER, FL 34615-2026
727-464-6666
www.pinellas.gov

ATMS - SIGNAL RETIMING CORRIDORS
(Location Map →)

CORRIDOR KEY

Corridor	Roadway
1	McMullen Booth Rd From: Cutlew Rd To: Drew St
2	66 TH St From: US 19 To: 46 TH Ave
3	Ulmerton Rd From: 56 TH St To: Feather Sound
4	Alt. 19 From: Cutlew Rd To: Dodecanese
5	49 TH St From: 46 TH Ave To: 94 TH Ave
6	49 TH St From: 14 TH St To: Lake
7	Gulf Blvd From: Corey Ave To: Pinellas Bayway
8	Drew St From: Hampton To: Keene Rd

MAP FEATURES

- Unincorporated Area
- Arterial Road
- State Road
- Interstate
- Signal Retiming Corridor

Pinellas County Public Works

ATMS Master Plan – The Next 10 Years



Construction Projects

- **Pace Slows**

Focus Shifts:

- **Communication Redundancy**
- **Replacements & Upgrades**

Operations and Maintenance

Connected Vehicle (CV) Applications

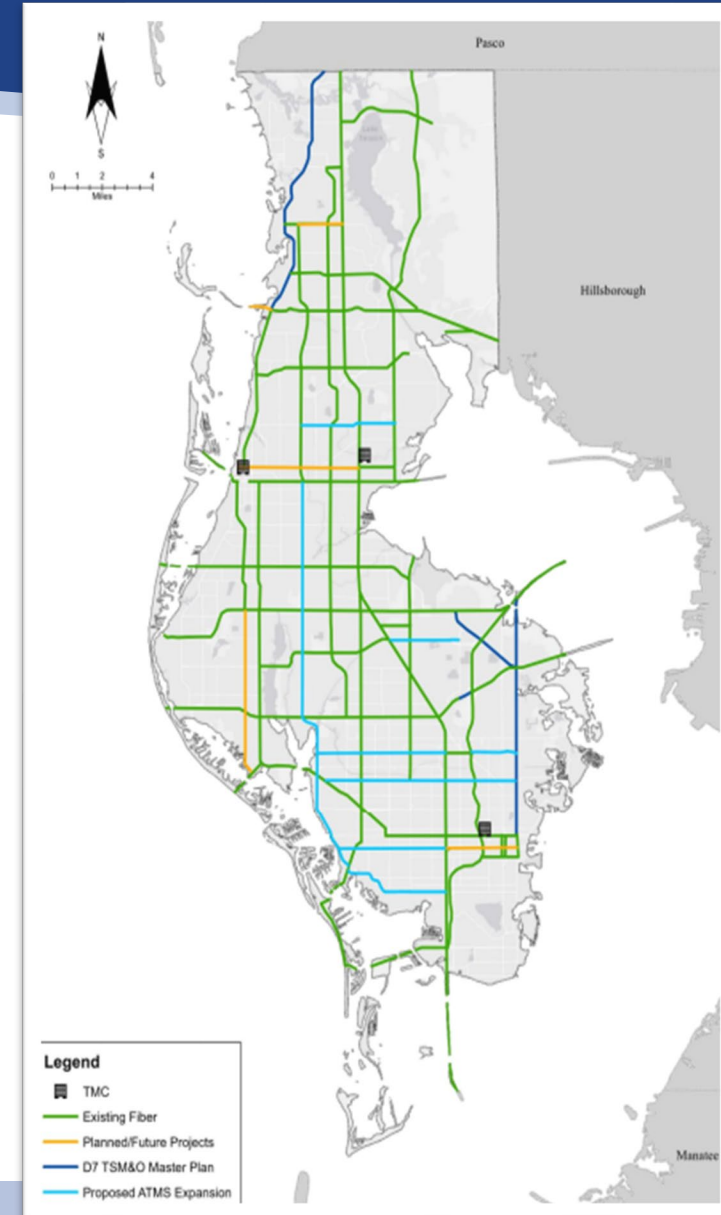


ATMS Master Plan – The Next 10 Years

Planned Construction Projects

Deployment	From (West/South)	To (East/North)	Construction Cost *
CR-1 Phase I	SR-688 (Ulmerton Rd)	SR-60 (Court St)	\$3,562,908
38th Ave N Phase I	49 th St	US-92 (4 th St N)	\$2,454,208
CR-1 Phase III	Country Club Rd	Park Blvd	\$2,956,641
CR-1 Phase II	Park Blvd	SR-688 (Ulmerton Rd)	\$3,349,597
Sunset Point Rd	CR-1 (N Keene Rd)	McMullen Booth Rd	\$2,219,771
118th Ave N	US-19	28 th St N	\$2,257,637
CR-1 Phase IV	49 th St S	Country Club Rd	\$2,638,364
Central Ave	Park St S	US-19	\$2,426,479
38th Ave N Phase II	Alt US-19 (Tyrone Blvd)	49 th St N	\$1,774,634
54th Ave N Phase I	58 th St N	US-19	\$1,166,786
54th Ave N Phase II	CR-1 (Park St N)	58 th St N	\$1,505,934
54th Ave N East	I-275 NB Off-Ramp	US-92 (4 th St N)	\$1,278,208
22nd Ave	49 th St	US-19 (24 th St N)	\$670,747
Total	-	-	\$28,261,914

* Estimated based on projected inflationary factors



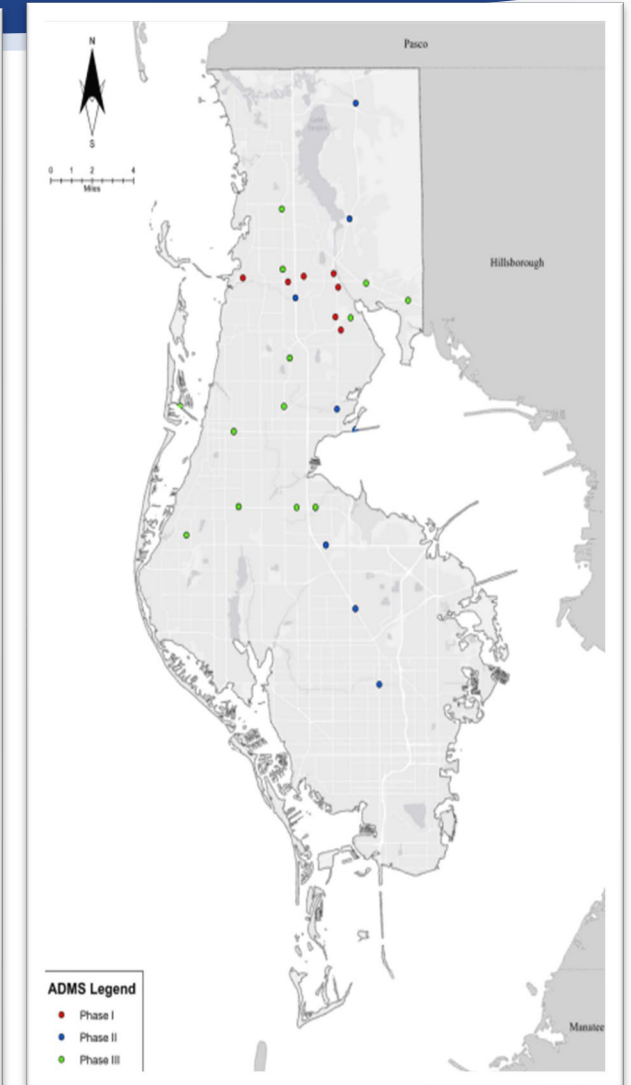
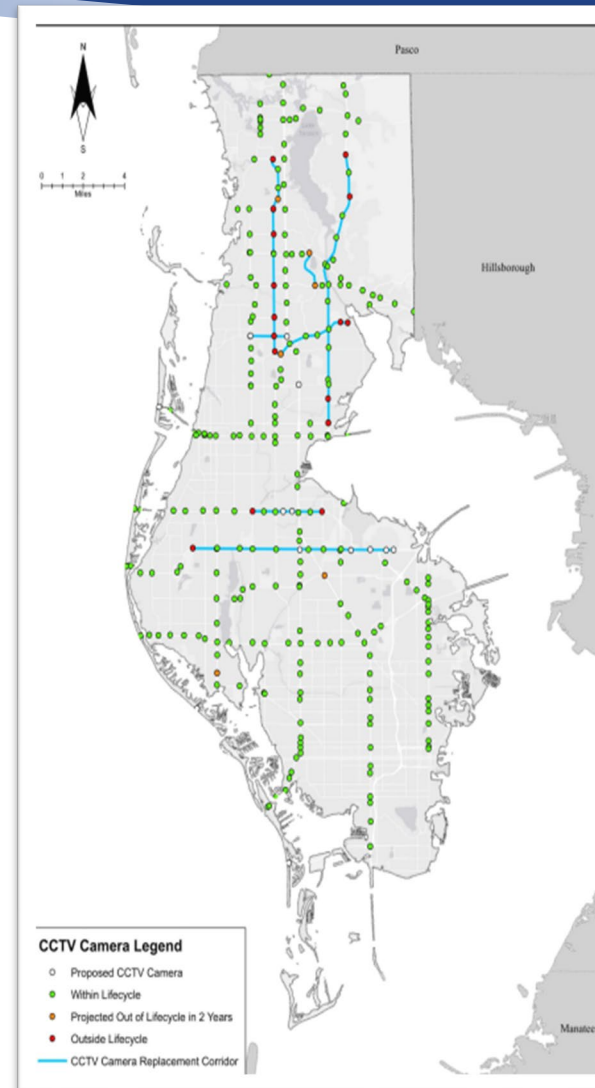
ATMS Master Plan – The Next 10 Years

Communication Redundancy CCTV Replacements/Upgrades

- **75-100 Units Beyond Lifecycle in Next 10 Years**
- **Estimated Cost: \$800K to \$1.5M (FY24 Dollars); \$100K to \$150K Annually Beginning in FY25**

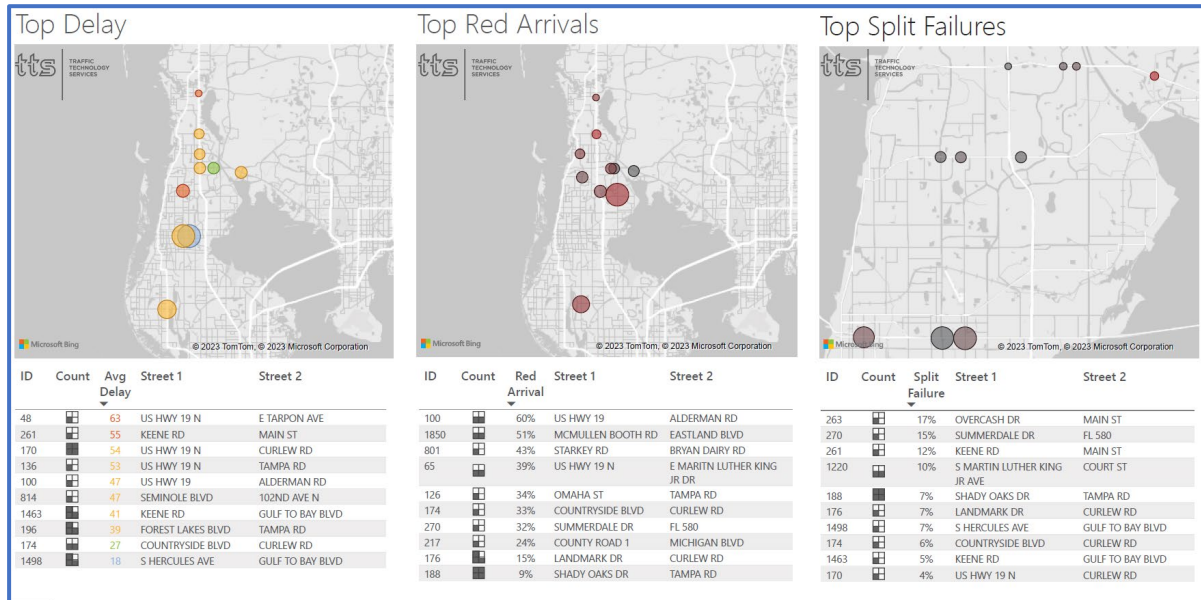
DMS Replacements/Upgrades

- **29 Signs, 3 Phases**
- **Estimated Cost: \$3M to \$4M (FY24 Dollars); \$300K Annually Beginning in FY25**



ATMS Master Plan – The Next 10 Years

Connected Vehicle (CV) Applications



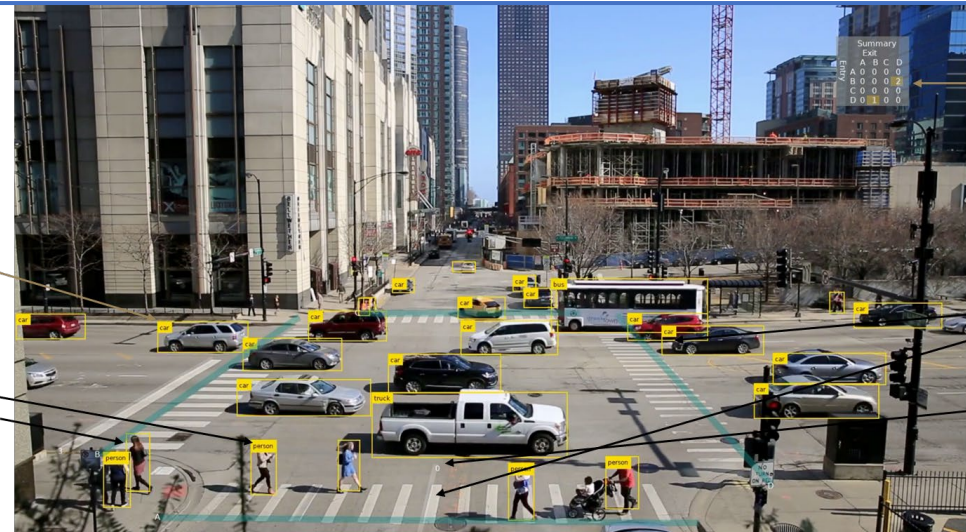
Benefits

- Real-Time Traffic Information
- Safety and Mobility
- Regional Coordination



Road user classification

Pedestrian detection and classification



Micro origin / destination matrix

Virtual Detection Lines

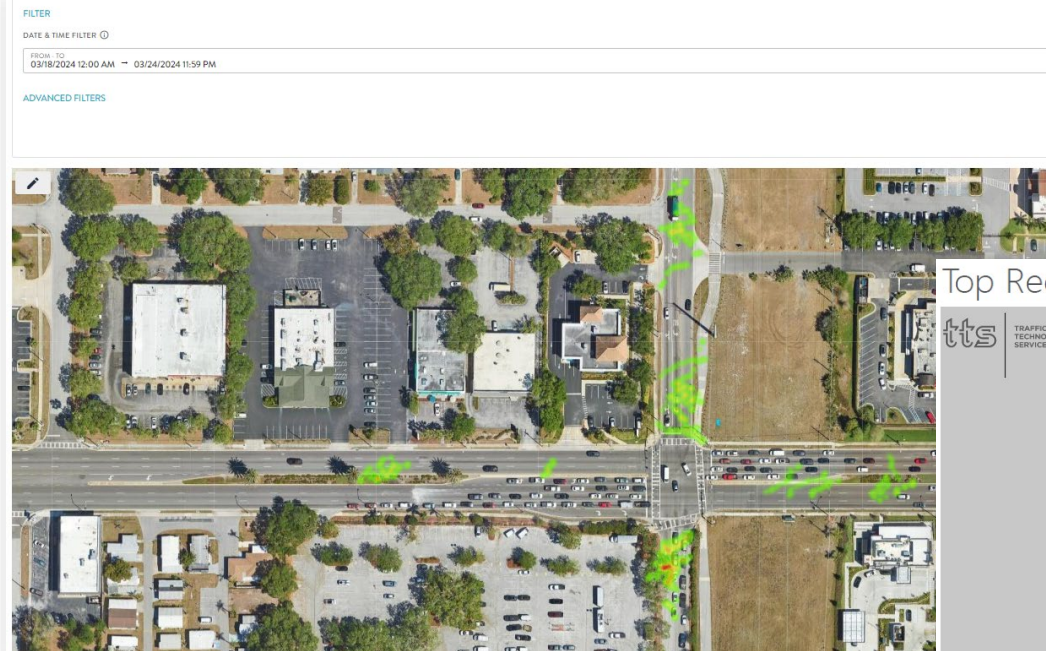
Pedestrian counter

What Does Success Look Like?

Outcomes

- **Optimized Traffic Flow**
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- **Identification of potential crashes, near misses, wrong way driving**

SR 60 & Old Coachman Road > Pedestrian Compliance Analysis



Top Red Arrivals



ID	Count	Red Arrival	Street 1	Street 2
100		60%	US HWY 19	ALDERMAN RD
1850		51%	MCMULLEN BOOTH RD	EASTLAND BLVD
801		43%	STARKEY RD	BRYAN DAIRY RD
65		39%	US HWY 19 N	E MARITN LUTHER KING JR DR
126		34%	OMAHA ST	TAMPA RD
174		33%	COUNTRYSIDE BLVD	CURLEW RD
270		32%	SUMMERDALE DR	FL 580
217		24%	COUNTY ROAD 1	MICHIGAN BLVD
176		15%	LANDMARK DR	CURLEW RD
188		9%	SHADY OAKS DR	TAMPA RD



Questions?

