

MOBILITY ADVANCEMENT PROGRAM

FY 2020 PUBLIC WORKS BUDGET REQUEST



BRWARD COUNTY PUBLIC WORKS DEPARTMENT

SUMMARY OF FY2020 BUDGET REQUEST

Budget Request for FY2020	
Road Capacity Expansion	\$2,040,000
Adaptive Signal Control	\$618,000
Fiber Optic Network	\$332,000
Mast Arm Conversion	\$177,000
Intersection Improvement	\$1,289,000
School Zone Safety Improvement	\$160,000
Lighting	\$874,000
Sidewalks	\$808,000
Video Detection Maintenance	\$315,000
Total	\$6,613,000

**FY2020 Budget Approved in Surtax Plan
\$7,415,917**



ROAD CAPACITY EXPANSION

Scope of Work

Expand segments of County arterials from four to six lanes. These segments tend to be congested; have a level of service at, or approaching, "F"; and have right-of-way generally available for expansion. As part of the project, work will also include, as needed, improving road drainage, adding bike lanes and sidewalk, upgrading traffic signals and controller cabinets, installing fiber optic cables, improving turn lanes, and adding landscape and irrigation. Travel time and traffic volume data will be collected before and after the project is completed to evaluate the effectiveness and optimize the operation of the roadway.

Expected benefits of these projects are higher traffic through-put, reduced congestion, increased mobility opportunities, and pedestrian and bicyclist safety.

Budget Request for Road Capacity Expansion in FY2020 - \$2,040,000

Funding is requested for the design of one Road Capacity Expansion project. Details of the project are provided below.

R01 - Pine Island Road, from Nova Drive to Griffin Road, Town of Davie

Expand Pine Island Road between Nova Drive to Griffin Road from four to six lanes. This project continues the recent expansion of Pine Island Road from four to six lanes between I-595 and Nova Drive.

Schedule:

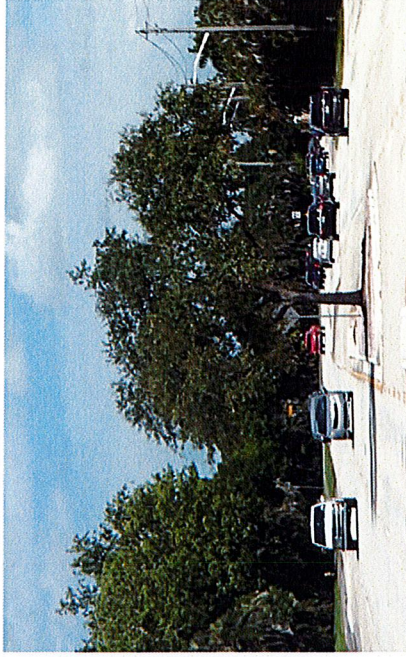
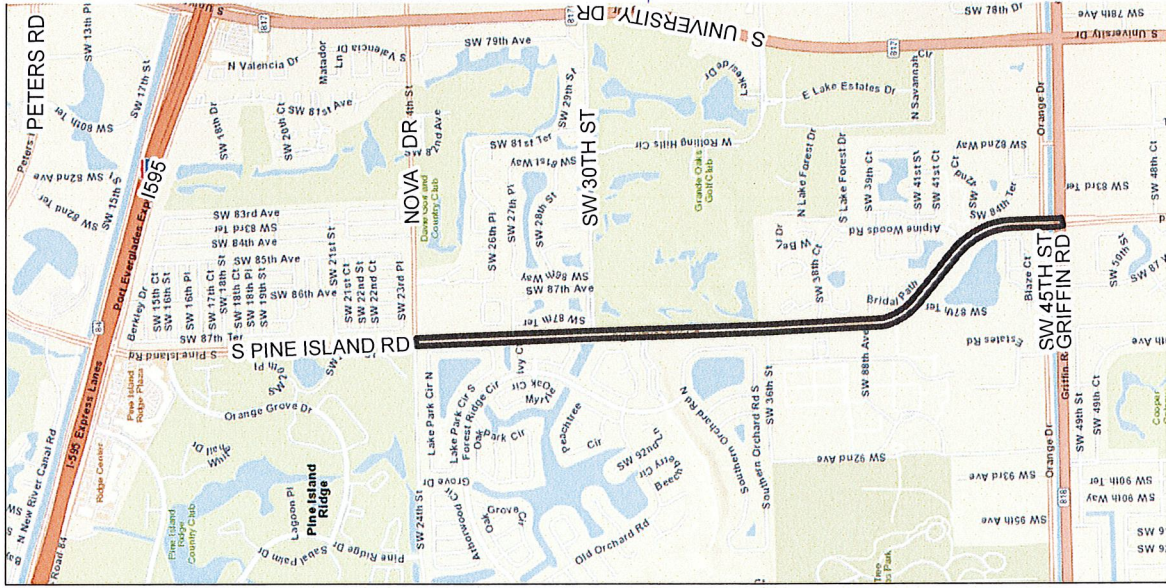
Board-Approved Design Start – 2020
Current Design Start – 2020
Reasons for Change – N/A

Capital Cost Estimate:

Board-Approved Capital Cost - \$24,000,000
Current Capital Cost - \$24,000,000
Reasons for Change – N/A

FY2020 Budget Request:

\$2,040,000 for design



Existing 2-Lane Section



Proposed 3-Lane Section

ADAPTIVE SIGNAL CONTROL

Scope of Work

Implement state-of-the-art technology to continuously monitor and adjust signal timing along designated road segments based on real-time traffic conditions. Advanced vehicle detection and communication devices will be installed along each road segment. Additional hardware and software will be installed in the traffic control cabinets to form an integrated control system with the traffic signals. Travel time and traffic volume data will be collected before and after the project to evaluate the effectiveness and optimize the operation of the project.

Adaptive traffic signal control is an innovative technology applicable for certain congested roadways with highly variable traffic conditions. While it cannot eliminate overcapacity conditions, it has the capability to more effectively manage traffic to reduce the duration of peak periods. Expected benefits of this project are reduced travel time, reduced duration of peak conditions, and increase traffic volume throughput.

Budget Request for Adaptive Traffic Signal Control in FY2020 - \$618,000

Funding is being requested for the design of three Adaptive Traffic Signal Control projects. Details of the projects are provided below.

**A01 Broward Boulevard from SR-7 to US-1.
Ft. Lauderdale**

Implement Adaptive Traffic Signal Control
on Broward Boulevard from SR-7 to US-1.

Schedule:

Board-Approved Design Start – 2020

Current Design Start – 2020

Reasons for Change – N/A

Capital Cost Estimate:

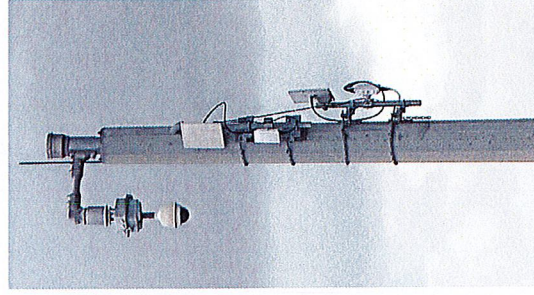
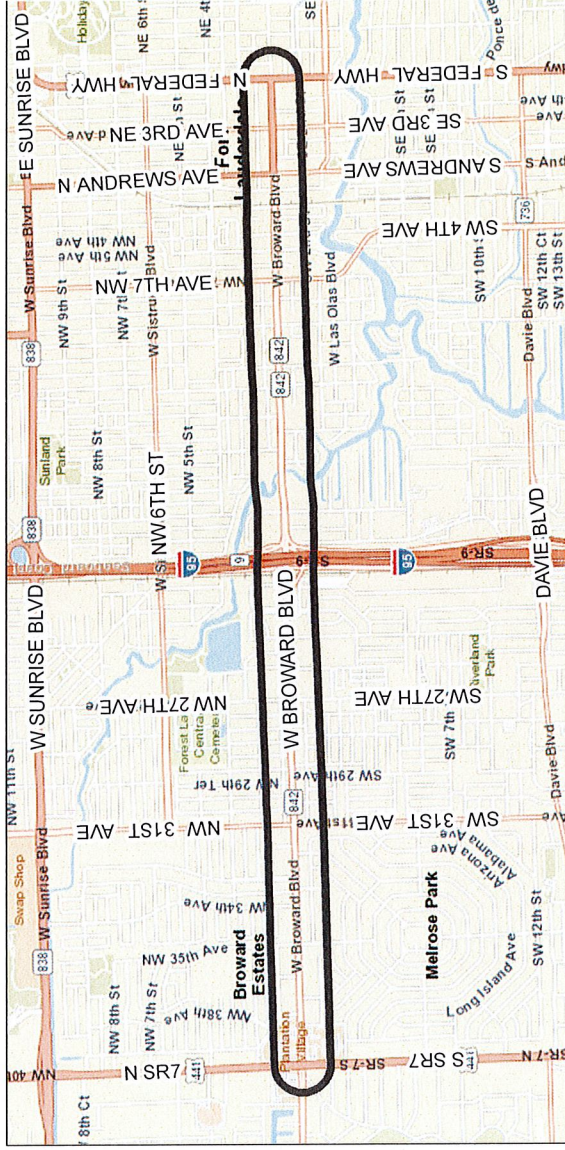
Board-Approved Capital Cost - \$1,650,000

Current Capital Cost - \$1,650,000

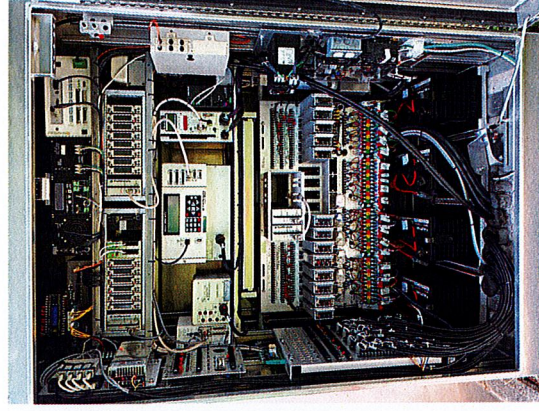
Reasons for Change – N/A

FY2020 Request:

\$198,000 for design



Traffic Sensor Array



Traffic Control Devices

**A02 Hallandale Beach Boulevard
from SR-7 to A1A.
Hallandale Beach**

Implement Adaptive Traffic Signal
Control on Hallandale Beach
Boulevard from SR-7 to A1A.

Schedule:

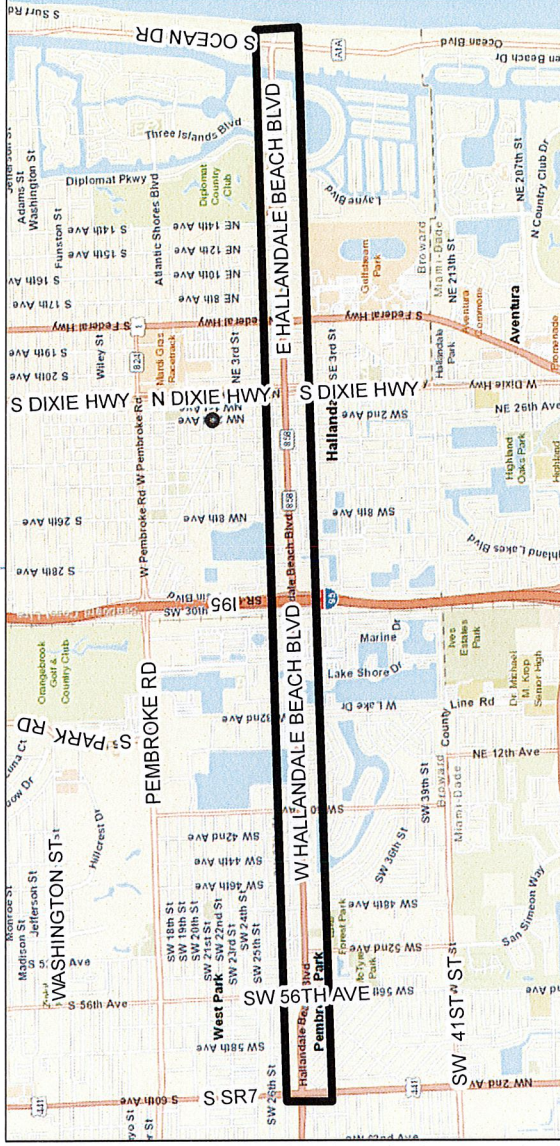
Board-Approved Design Start – 2020
Current Design Start – 2020
Reasons for Change – N/A

Capital Cost Estimate:

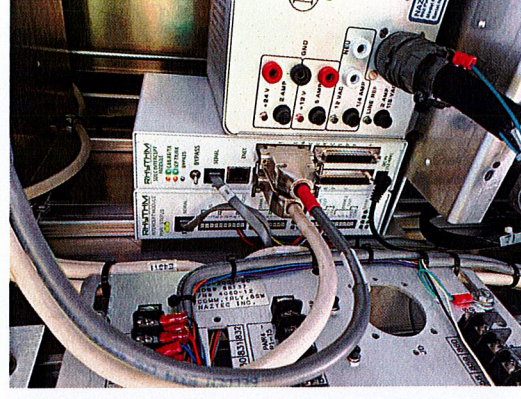
Board-Approved Capital Cost -
\$1,275,000
Current Capital Cost - \$1,275,000
Reasons for Change – N/A

FY2020 Request:

\$153,000 for design



Traffic Sensor Processor



Traffic Sensor Processor

A03 University Drive from Sunrise Boulevard to Stirling Road, Plantation and Davie

Implement Adaptive Traffic Signal Control on University Drive from Sunrise Boulevard to Stirling Road.

Schedule:

Board-Approved Design Start – 2022

Current Design Start – 2020

Reasons for Change – Fiber optic cables have already been installed on this road segment and will simplify the application of this new technology. With the inclusion of this project in FY2020, all three adaptive traffic signal control projects will be implemented on road segments with existing fiber optic cables.

Capital Cost Estimate:

Board-Approved Capital Cost -

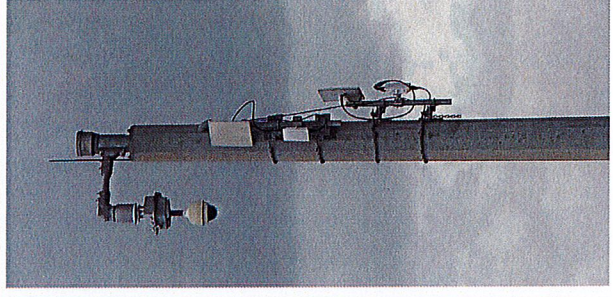
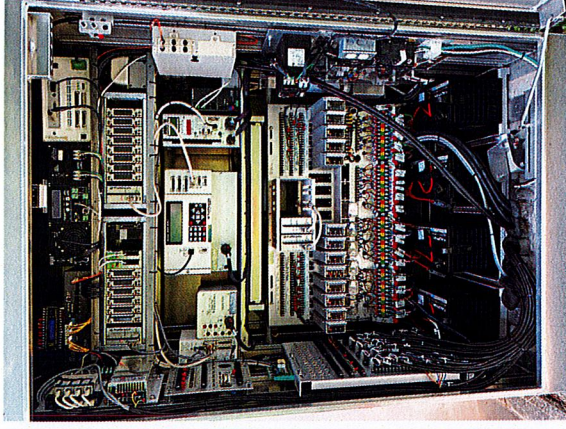
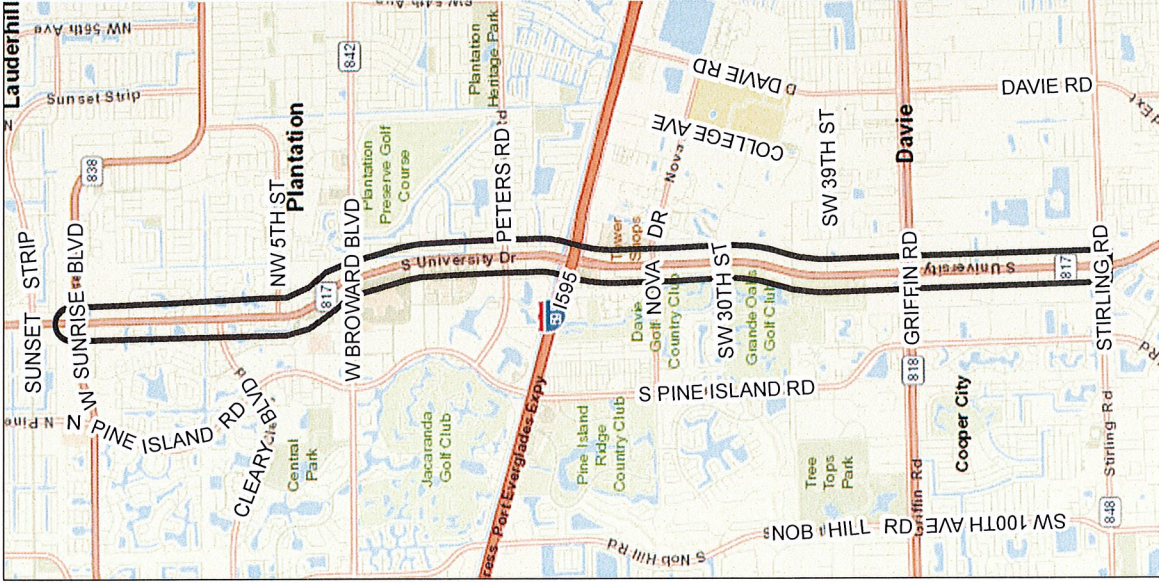
\$2,225,000

Current Capital Cost - \$2,225,000

Reasons for Change – N/A

FY2020 Request:

\$267,000 for design



ADAPTIVE SIGNAL CONTROL

Rescheduled Projects

Two Adaptive Signal Control projects were scheduled to start in FY2020 and have been rescheduled. The reasons for the rescheduling are provided below:

A07 Commercial Boulevard from Rock Island Road to NW 21 Avenue, Fort Lauderdale

Schedule:

Board-Approved Design Start – 2020

Current Design Start – To be included in 5-year plan

Reasons for Change – FDOT is planning an improvement project in the vicinity. The rescheduling will allow County and FDOT staff to continue our coordination on the scope and timing in order to minimize potential conflicts and impact to the public.

A13 Miramar Parkway from SW 184 Avenue to Monarch Lakes Boulevard, Miramar

Schedule:

Board-Approved Design Start – 2020

Current Design Start – To be included in 5-year plan

Reasons for Change – This project was originally scheduled to accommodate a major development in northwest Dade County. This schedule of this development is now later than originally anticipated. Rescheduling this project allows the earlier start of the University Drive project described above.

FIBER OPTIC NETWORK

Scope of Work

Install fiber optic cables to expand existing fiber optic network. Expanding the fiber optic network will allow full implementation of new, data-intensive technologies such as adaptive signal control, transit signal priority and queue-jumping for transit, and enhanced, interactive, traffic signal control systems. Fiber optic network also increases redundancy and resiliency of the traffic signal communications equipment. Typically, additional cable capacity is included in each project for future high-speed communication needs.

Budget Request for Fiber Optic Construction in FY2020 - \$332,000

Funding is being requested for the design of three Fiber Optic Network projects. Details of the projects are provided below.

F04 McNab Road from Pine Island Road to SR-7.

Tamarac, North Lauderdale, and Ft. Lauderdale

Install fiber optic cables on McNab Road from Pine Island Road to SR-7.

Schedule:

Board-Approved Design Start – 2020

Current Design Start – 2020

Reasons for Change – N/A

Capital Cost Estimate:

Board-Approved Capital Cost - \$1,332,500

Current Capital Cost - \$1,332,500

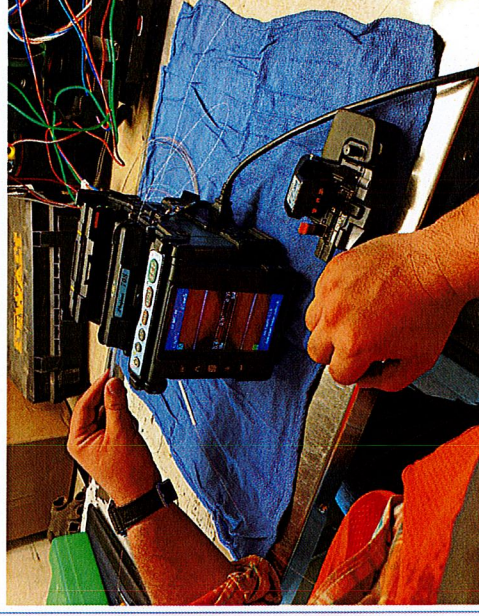
Reasons for Change – N/A

FY2020 Request:

\$114,000 for design



Placing Fiber Optic Conduit



Splicing Fiber Optic Conductor

F05 Pine Island Road from Oakland Park Boulevard to McNab Road, Sunrise, Tamarac

Install fiber optic cables on Pine Island Road from Oakland Park Boulevard to McNab Road.

Schedule:

Board-Approved Design Start – 2020

Current Design Start – 2020

Reasons for Change – N/A

Capital Cost Estimate:

Board-Approved Capital Cost -

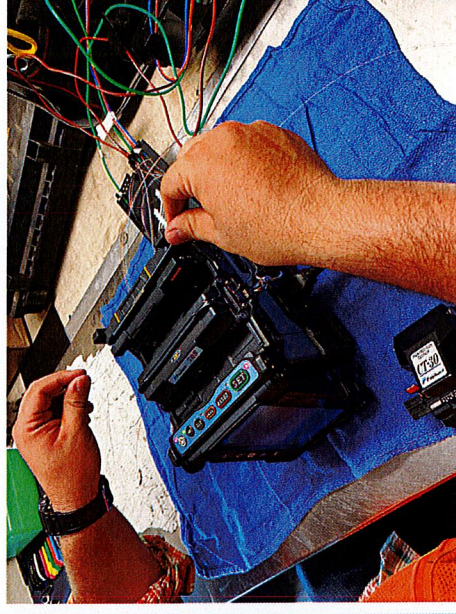
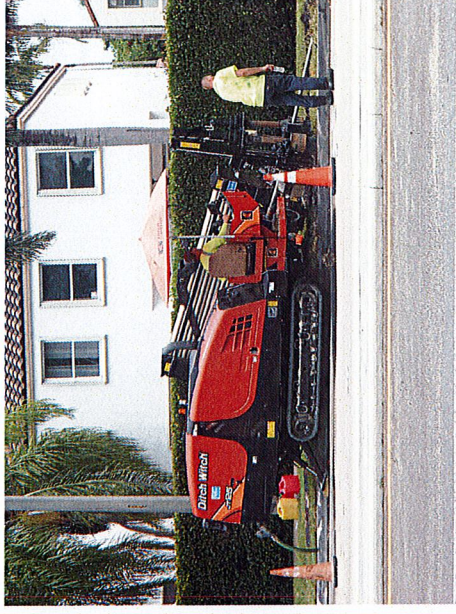
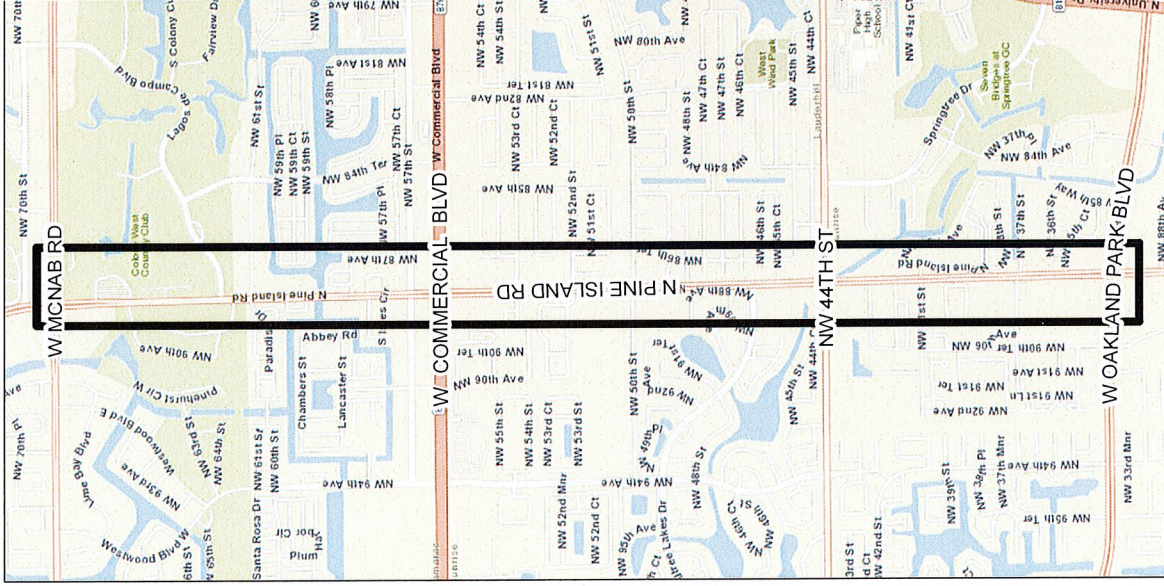
\$1,218,750

Current Capital Cost - \$1,218,750

Reasons for Change – N/A

FY2020 Request:

\$104,000 for design



F03 Atlantic Boulevard from Coral Springs Drive to SR-7.

Coral Springs, Margate

Install fiber optic cables on Atlantic Boulevard from Coral Springs Drive to SR-7.

Schedule:

Board-Approved Design Start – 2021

Current Design Start – 2020

Reasons for Change – The project schedule is advanced by a year in order to coordinate with an upcoming adaptive traffic control project on Atlantic Boulevard.

Capital Cost Estimate:

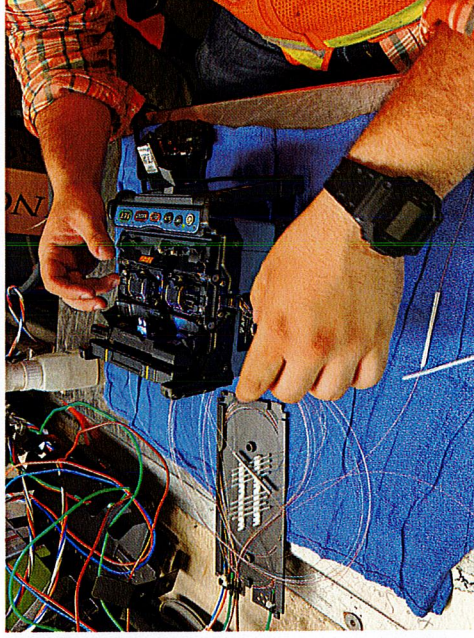
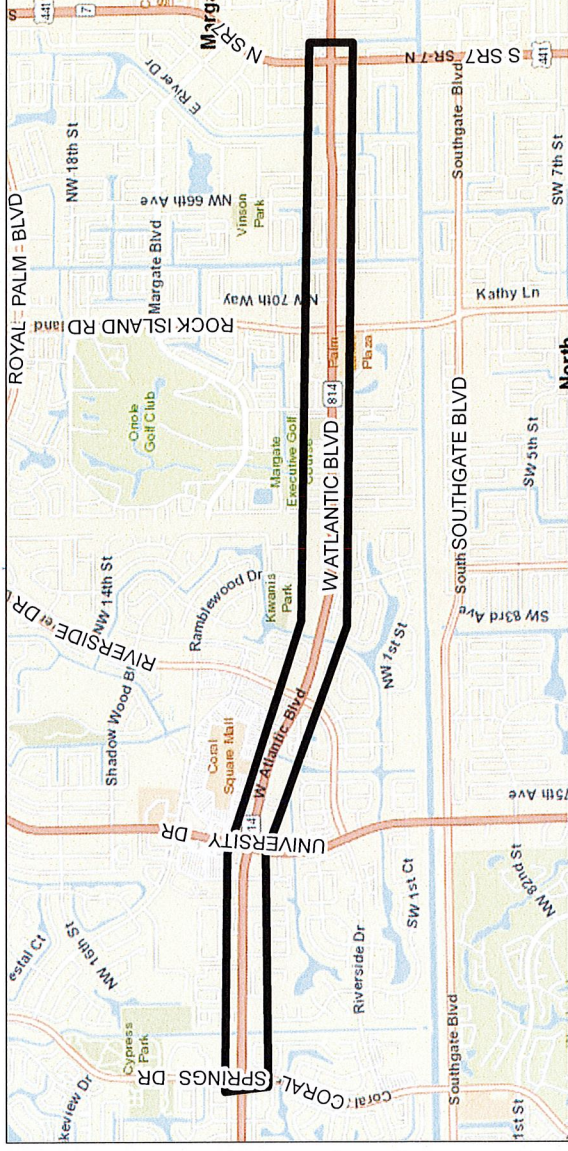
Board-Approved Capital Cost - \$1,333,000

Current Capital Cost - \$1,333,000

Reasons for Change – N/A

FY2020 Request:

\$114,000 for design



FIBER OPTIC NETWORK

Rescheduled Projects

One Fiber Optics Network project was scheduled to start in FY2020 and has been rescheduled. The reasons for the rescheduling are provided below:

F07 Pine Island Road from McNab Road to Atlantic Boulevard. Coral Springs, Tamarac

Schedule:

Board-Approved Design Start – 2020

Current Design Start – To be included in 5-year plan

Reasons for Change – This project was rescheduled to accommodate the advance of Project F03 as described above. It is anticipated that this project will be schedule early in the 5-year plan.

MAST ARM UPGRADE

Scope of Work

Convert County-owned traffic signals from span-wire supports to superior, wind resistant mast arm supports. In addition to the mast arms, traffic signals, sidewalks, ADA improvements, repaving, and re-stripping are also performed at the intersection, as needed.

Signals supported on mast arms generally have less damage after windstorms and require less repairs to return to operation. Expected benefits are faster recovery and return to normal conditions after windstorm events.

Budget Request for Mast Arm Upgrade in FY2020 - \$177,000

Funding is being requested for the design of two Mast Arm Upgrade projects. Details of the projects are provided below.

**M04 Foster Road and NW 2 Avenue.
Hallandale Beach**

Upgrade the traffic signal at the intersection of Tyler Street and N 19 Avenue from span wire to mast arm support.

Schedule:

Board-Approved Design Start – 2023

Current Design Start – 2020

Reasons for Change – This intersection has no known right-of-way issues.

Capital Cost Estimate:

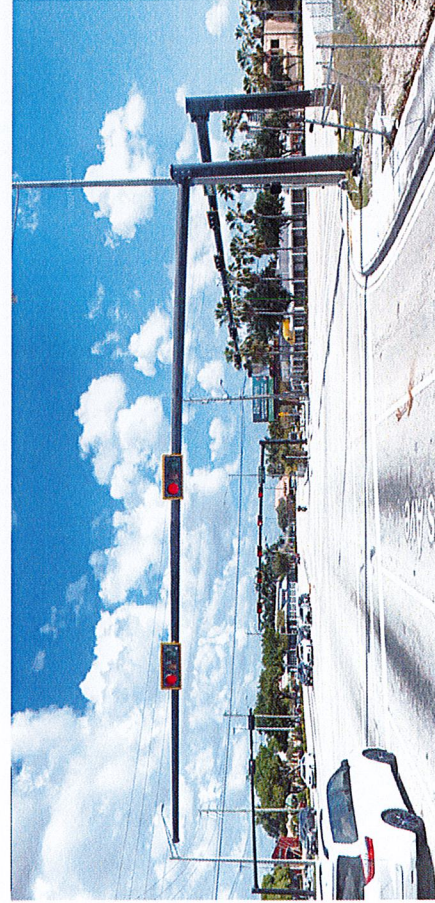
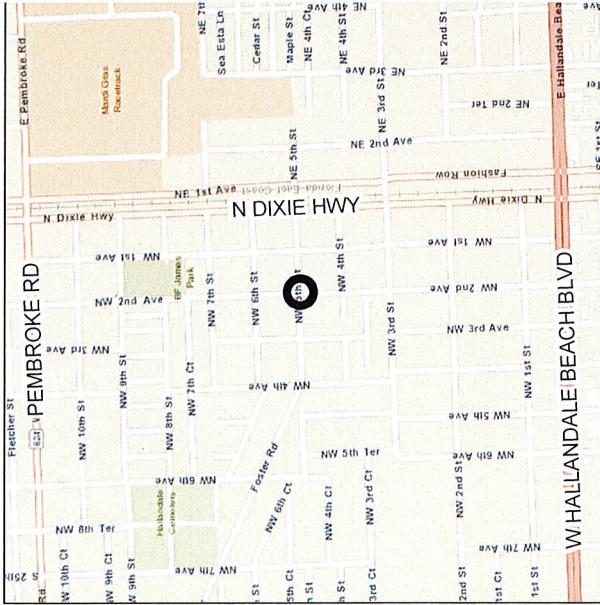
Board-Approved Capital Cost - \$600,000

Current Capital Cost - \$480,000

Reasons for Change – N/A

FY2020 Request:

\$84,000 for design



Proposed Mast Arm Signal



Existing Traffic Signal

M05 Tyler Street and N 19 Avenue, Hollywood

Upgrade the traffic signal at the intersection of Tyler Street and N 19 Avenue from span wire to mast arm support.

Schedule:

Board-Approved Design Start – 2023

Current Design Start – 2020

Reasons for Change – This intersection has no known right-of-way issues and is located in the vicinity of the projects being rescheduled.

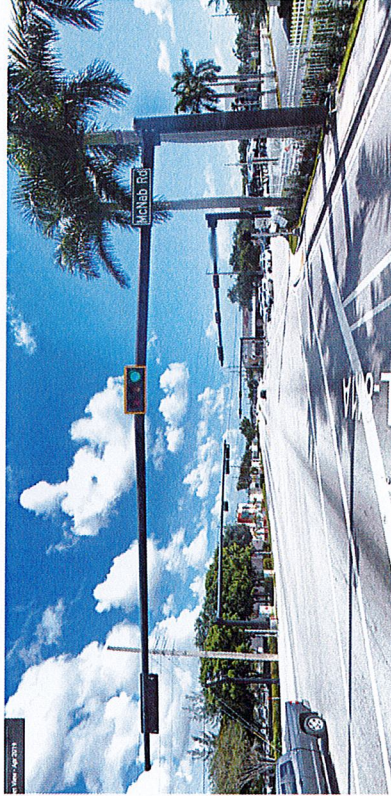
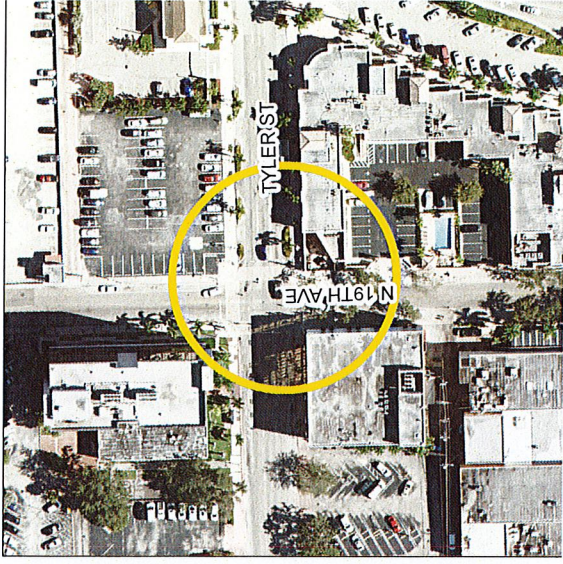
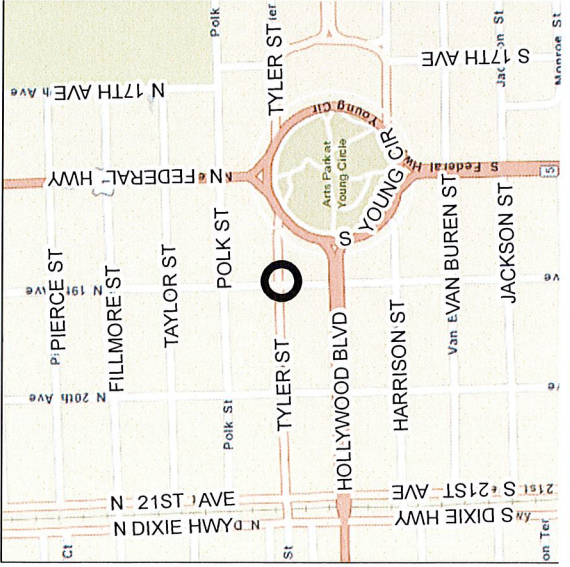
Capital Cost Estimate:

Board-Approved Capital Cost - \$600,000

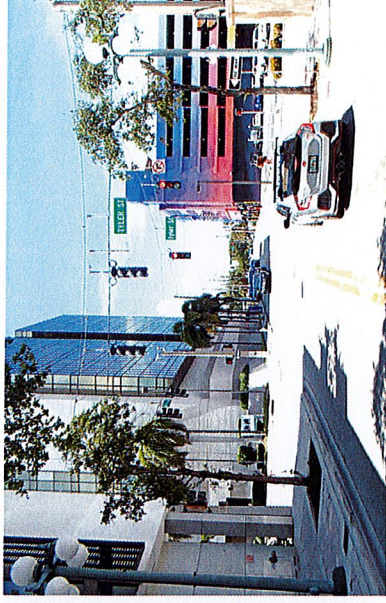
Current Capital Cost - \$546,000
Reasons for Change – N/A

FY2020 Request:

\$93,000 for design



Proposed Mast Arm Signal



Existing Traffic Signal

MAST ARM UPGRADES

Rescheduled Projects

Three Mast Arm Upgrades projects were scheduled to start in FY2020 and have been rescheduled. The reasons for the rescheduling are provided below:

M11 Johnson Street and N 26 Avenue. Hollywood

M15 NE 3 Avenue and Flagler Drive/Progresso Drive. Ft. Lauderdale

M15 Washington Street and S62 Avenue. Hollywood

Schedule:

Board-Approved Design Start – 2020

Current Design Start – To be included in 5-year plan

Reasons for Change – These projects are found to have right-of-way issues. They will be rescheduled in the 5-year plan to allow for timely resolution of the right-of-way issues.