

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION  
LOCALLY FUNDED AGREEMENT

THIS Locally Funded Agreement ("Agreement"), entered into this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_, by and between the State of Florida Department of Transportation hereinafter called the DEPARTMENT, and Broward County located at 1 North University Drive, Plantation, Florida 33324, hereinafter called the COUNTY.

**WITNESSETH**

WHEREAS, the DEPARTMENT and the COUNTY are desirous of having the COUNTY provide additional financial assistance to the DEPARTMENT for the continued development (design) of a full set of signed and sealed roadway construction plans for the DEPARTMENT's installation/deployment of Advanced Traffic Management Systems (ATMS) along SE 17<sup>th</sup> Street from SR-5/US-1 to Seabreeze Blvd in Broward County, Florida. (Financial Management (FM) Number 441754-1-32-01, Funded in Fiscal Year 2020/2021); and

WHEREAS, the COUNTY's additional financial assistance to the DEPARTMENT provides for additional work related to the engineering design services for an Adaptive Traffic Control System (ATCS) deployment included in a portion of the DEPARTMENT's design work, defined along SE 17 Street from Miami Road to Holiday Drive and along Sunrise Blvd from the South Leg of N Federal Highway to SR-A1A, (Financial Management (FM) number 441754-1-32-02, Funded in Fiscal Year 2020/2021) as set forth in Exhibit A attached hereto and made a part hereof and hereinafter referred to as the Project; and

WHEREAS, the improvements are in the interest of both the COUNTY and the DEPARTMENT and it would be more practical, expeditious, and economical for the DEPARTMENT to perform such activities; and

WHEREAS, the COUNTY by Action Item \_\_\_\_\_ dated the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_, a copy of which is attached hereto and made a part hereof, authorizes the Mayor, Vice-Mayor, or designee to enter into this Agreement.

NOW, THEREFORE, in consideration of the mutual benefits to be derived from joint participation on the Project, the parties agree to the following:

1. The recitals set forth above are true and correct and are deemed incorporated herein.
2. The DEPARTMENT shall be responsible for assuring that the Project complies with all applicable Federal, State and Local laws, rules, regulations, guidelines and standards.
3. The COUNTY agrees to make all previous studies, maps, drawings, surveys and other data and information pertaining to the Project available to the DEPARTMENT at no extra cost.

4. The DEPARTMENT shall have the sole responsibility for resolving claims and requests for additional work for the Project. The DEPARTMENT will make reasonable efforts to obtain the COUNTY input in its decisions.
  
5. The total cost for the DEPARTMENT's design work and the Project is estimated to be ONE MILLION FOUR HUNDRED FORTY FIVE THOUSAND FOUR HUNDRED SEVENTY THREE DOLLARS AND NO CENTS (\$1,445,473.00). The COUNTY's share of the Project is an estimated amount of TWO HUNDRED NINETY SEVEN THOUSAND SIXTY SEVEN DOLLARS AND NO CENTS (\$297,067.00), which sum shall be paid to the DEPARTMENT. In the event the actual cost of the Project is less than the funds provided, the difference will be refunded to the COUNTY. In the event the actual cost of the Project, without modifications, results in a sum greater than that paid by the COUNTY, then such sum shall be the sole responsibility of the COUNTY and shall be paid to the DEPARTMENT.
  - (A) The COUNTY agrees that it will, within thirty (30) days of the execution of this Agreement, furnish the DEPARTMENT with a check in the amount of TWO HUNDRED NINETY SEVEN THOUSAND SIXTY SEVEN DOLLARS AND NO CENTS (\$297,067.00) towards the Project Costs.

In the event payment is not received by the DEPARTMENT within thirty (30) days of execution of this Agreement the DEPARTMENT reserves the right to terminate this Agreement and remove the Project from the DEPARTMENT's Work Program.

Remittance shall be made payable to the Department of Transportation. Payment shall be clearly marked to indicate that it is to be applied to FM Number 441754-1-32-02. The DEPARTMENT shall utilize this amount towards costs of Project No. 441754-1-32-02.

Payment shall be mailed to:  
Florida Department of Transportation  
Program Management Unit - Attention: Leos A. Kennedy, Jr.  
3400 W. Commercial Boulevard  
Fort Lauderdale, Florida 33309-3421

In lieu of mailing payment to the DEPARTMENT, the COUNTY may also submit the payment for the Project via wire transfer.

Wire transfer/Payments are to be made to:

Wells Fargo Bank, N.A.  
Account # 4834783896  
ABA # 121000248  
Chief Financial Officer of Florida  
Re: DOT – K 11-78, Financial project # 441754-1-32-02.

In order for the DEPARTMENT to receive credit for the funds due to the DEPARTMENT, the reference line must contain "FDOT" and an abbreviated purpose, financial project number or LFA account number.

Once the wire transfer is complete, please contact Kenneth Ward at 850-414-4886.

- (B) If the Project costs are in excess of the advance deposit amount, the COUNTY will provide an additional deposit within fourteen (14) calendar days of notification from the DEPARTMENT. The DEPARTMENT will notify the COUNTY as soon as it becomes apparent that Project costs are in excess of the advanced deposit amount; however, failure of the DEPARTMENT to so notify the COUNTY shall not relieve the COUNTY from its obligation to pay for its full participation. If the COUNTY cannot provide the additional deposit within fourteen (14) calendar days, a letter must be submitted to and approved by the DEPARTMENT's Project Manager indicating the date the deposit will be made and the DEPARTMENT's written consent to the payment of the additional deposit on said date. The COUNTY understands the request and approval of the additional time could delay the Project, and additional costs at the COUNTY's expense may be incurred due to delay of the Project. In the event of non-payment, the DEPARTMENT reserves the right to terminate this Agreement and remove the Project from the Department's Work Program.
- (C) Should Project modifications occur that increase the COUNTY's payment for the Project costs, the COUNTY will be notified by the DEPARTMENT. The COUNTY agrees to provide, without delay, in advance of the additional work being performed, adequate funds to ensure that cash on deposit with the DEPARTMENT is sufficient to fully fund the cost of the Project. The DEPARTMENT shall notify the COUNTY as soon as it becomes apparent the actual costs will exceed the deposit amount. However, failure of the DEPARTMENT to so notify the COUNTY shall not relieve the COUNTY from its obligation to pay for its full participation. Funds due from the COUNTY during the Project not paid within forty (40) calendar days from the date of the invoice are subject to an interest charge at a rate established pursuant to Section 55.03, F.S. In the event the COUNTY fails to make the additional payment within the time hereinabove set forth, in addition to any other remedy, the DEPARTMENT reserves the right to terminate this Agreement.
- (D) The DEPARTMENT intends to have its final and complete accounting of all costs incurred in connection with the work performed hereunder within three hundred sixty (360) days of final payment to the Consultant. The DEPARTMENT considers the Project complete when the final payment has been made to the Consultant, not when the design work is complete. All Project cost records and accounts shall be subject to audit by a representative of the COUNTY for a period of three (3) years after final close out of the Project. The COUNTY will be notified of the final cost. Both parties agree that in the event the final accounting of total Project costs pursuant to the terms of this Agreement is less than the total deposits to date, the excess funding will be refunded to the COUNTY. If the final accounting is not

performed within three hundred sixty (360) days, the COUNTY is not relieved from its obligation to pay.

- (E) In the event the final accounting of total Project costs indicate that the Project costs are greater than the total deposits to date, the COUNTY will pay the additional amount within forty (40) calendar days from the date of the invoice from the DEPARTMENT. The COUNTY agrees to pay interest at a rate as established pursuant to *Section 55.03, F.S.*, on any invoice not paid within forty (40) calendar days until the invoice is paid.
6. In the event it becomes necessary for either party to institute suit for the enforcement of the provisions of this Agreement, each party shall be responsible to pay their own attorney fees and court costs. Venue with respect to any such litigation shall be in Broward County.
7. This Agreement and any interest herein shall not be assigned, transferred or otherwise encumbered by the COUNTY under any circumstances without the prior written consent of the DEPARTMENT. However, this Agreement shall run to the DEPARTMENT and its successors.
8. Except as otherwise set forth herein, this Agreement shall continue in effect and be binding to both the COUNTY and the DEPARTMENT until the Project (FM# 441754-1-32-02) is completed as evidenced by the written acceptance of the DEPARTMENT.
9. The COUNTY warrants that it has not employed or obtained any company or person, other than bona fide employees of the COUNTY, to solicit or secure this Agreement, and it has not paid or agreed to pay any company, corporation, individual or firm, other than a bona fide employee employed by the COUNTY. For breach or violation of this provision, the DEPARTMENT shall have the right to terminate the Agreement without liability.
10. The COUNTY / Vendor/ Contractor:
- (A) shall utilize the U.S. Department of Homeland Security's E-verify system to verify the employment eligibility of all new employees hired by the COUNTY / Vendor/ Contractor during the term of the contract; and
- (B) shall expressly require any subcontractors performing work or providing services pursuant to the state contract to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the contract term.
11. This Agreement is governed by and construed in accordance with the laws of the State of Florida.

12. This document incorporates and includes all prior negotiations, correspondence, conversations, agreements, or understandings applicable to the matters contained herein, and the parties agree that there are no commitments, agreements or understandings concerning the subject matter of this agreement that are not contained in this document. Accordingly, it is agreed that no deviation from the terms hereof shall be predicated upon any prior representation or agreements whether oral or written. It is further agreed that no modification, amendment, or alteration in the terms and conditions contained herein shall be effective unless contained in a written document executed with the same formality and of equal dignity herewith.
13. Any or all notices (except invoices) given or required under this Agreement shall be in writing and either personally delivered with receipt acknowledged or sent by certified mail, return receipt requested. All notices delivered shall be sent to the following addresses:

If to the DEPARTMENT:

Florida Department of Transportation - District Four  
3400 West Commercial Blvd.  
Fort Lauderdale, Florida 33309-3421  
Attn: Leos A. Kennedy, Jr.  
With a copy to: Donovan Pessoa  
A second copy to: Office of the General Counsel

If to the COUNTY:

Broward County  
1 North University Drive, Box B300, Suite#3200B  
Plantation, Florida 33426  
Attn: Richard Tornese, P.E.,  
Director, Highway Construction and Engineering Division  
With a copy to: County Attorney

*The remainder of this page left intentionally blank*

IN WITNESS WHEREOF, the COUNTY has caused this Agreement to be executed on its behalf this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, by the Mayor or Vice Mayor, authorized to enter into and execute same by Action of the Board on the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, and the DEPARTMENT has executed this Agreement through its Director of Transportation Development for District \_\_\_\_\_, Florida Department of Transportation, this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

**BROWARD COUNTY, FLORIDA**

ATTEST:

BROWARD COUNTY, by and through  
its Board of County Commissioners

\_\_\_\_\_  
Broward County Administrator, as  
ex officio Clerk of the Broward County  
Board of County Commissioners

\_\_\_\_\_  
MAYOR  
\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_

Approved as to form by:  
Andrew J. Meyers  
Broward County Attorney  
Governmental Center, Suite # 423  
115 South Andrews Avenue  
Fort Lauderdale, Florida 33301  
Telephone (954) 357-7600  
Telecopier (954) 357-7641

BY GAVIN RYNARD Digitally signed by GAVIN RYNARD  
Date: 2020.08.31 16:58:25 -04'00' 08-31-2020  
Gavin Rynard (date)  
Assistant County Attorney

MICHAEL KERR Digitally signed by MICHAEL KERR  
Date: 2020.08.31 16:59:09 -04'00' 08-31-2020  
Michael J. Kerr (date)  
Deputy County Attorney

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

ATTEST: \_\_\_\_\_ (SEAL)  
EXECUTIVE SECRETARY

BY: \_\_\_\_\_  
DIRECTOR OF TRANSPORTATION  
DEVELOPMENT

NAME: \_\_\_\_\_

DISTRICT \_\_\_\_\_

Availability of Funds Approval:

LEGAL REVIEW:

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
OFFICE OF THE GENERAL COUNSEL

**EXHIBIT “A”  
SCOPE OF WORK  
FM# 441754-1-32-02**

The DEPARTMENT’s Advanced Traffic Management Systems (ATMS) project consists of design services for the implementation of Intelligent Transportation System (ITS) improvements along SR-A1A/SE 17th Street. This scope of services is for additional work related to the engineering design services for an adaptive traffic control system (ATCS) deployment in a portion of the project limits as defined below. The County is providing financial assistance for the development of construction plans. The improvements being design shall include, but are not limited to the following:

Adding an Adaptive Traffic Control System (ATCS), inclusive of a transit signal prioritization (TSP), along SR A1A from Miami Road to Holiday Drive and along Sunrise Blvd. from the South Leg of No Federal Highway to SR-A1A. The proposed improvements require the installation of hardware, software, communication equipment, testing, and training County personnel on the operation of the ATCS software and equipment.

The ATCS design must include installation of the hardware/software needed at each traffic signal and any required server and/or centralized management software at the Broward County Traffic Management Center (depends on adaptive system selected) and enhancements to the vehicle detection system along the corridor. Signal performance measures (SPM) provided by high resolution data must be included in the design.

The signalized intersections included in this scope are shown in Table 1 below:

#	Roadway	Cross Street	Replace Cabinet/ Controller	ATCS System Deployment	Traffic Detection Upgrade	Existing Signal Structure	Existing Fiber at Cabinet Ethernet Switch	Remarks	
1	SR-A1A	Miami Rd	No	Yes	Yes	Mast Arm	Yes	WB Left Turn Signal	
2	SR-A1A	SE 10 <sup>th</sup> Ave	Yes	Yes	Yes	Mast Arm	Yes		
3	SR-A1A	Cordova Rd	Yes	Yes	Yes	Mast Arm	Yes		
4	SR-A1A	SE 15 <sup>th</sup> Ave	No	Yes	Yes	Mast Arm	Yes		
5	SR-A1A	Eisenhower Blvd	Yes	Yes	Yes	Mast Arm	Yes		
	SR-A1A	Drawbridge	No	Maintained by FDOT consider as a Traffic Disruptor					
6	SR-A1A	SE 23 <sup>rd</sup> Ave	Yes	Yes	Yes	Mast Arm	No		
7	SR-A1A	Mayan Dr	Yes	Yes	Yes	Mast Arm	No		
8	SR-A1A	Harbor Beach Pkwy	Yes	Yes	Yes	Trombone	No		
9	SR-A1A	Holiday Dr	Yes	Yes	Yes	Trombone	No		
10	Sunrise Blvd	US-1 / South N Federal Hwy	No	Yes	Yes	Mast Arm	Yes	3-way intersection w/bypasses including ATCS implementation along US-1 NB	

#	Roadway	Cross Street	Replace Cabinet/ Controller	ATCS System Deployment	Traffic Detection Upgrade	Existing Signal Structure	Existing Fiber at Cabinet Ethernet Switch	Remarks	
11	Sunrise Blvd	NE 9 <sup>th</sup> Ave	Yes	Yes	Yes	Span Wire	Yes	EB LT Signal	
12	Sunrise Blvd	NE 10 <sup>th</sup> Ave	Yes	Yes	Yes	Mast Arm	Yes	WB LT and Ped Signal	
13	Sunrise Blvd	NE 12 <sup>th</sup> Ave	Yes	Yes	Yes	Mast Arm	Yes	EB LT and Ped Signal	
14	Sunrise Blvd	NE 15 <sup>th</sup> Ave	No	Yes	Yes	Mast Arm	Yes		
15	Sunrise Blvd	NE 16 <sup>th</sup> Terr	No	Yes	Yes	Mast Arm	Yes	WB LT and Ped Signal	
16	Sunrise Blvd	NE 17 <sup>th</sup> Way	No	Yes	Yes	Mast Arm	Yes		
17	Sunrise Blvd	US-1 / North N Federal Hwy	Yes	Yes	Yes	Mast Arm	Yes	3-way intersection w/bypasses including ATCS implementation along US-1 SB	
18	Sunrise Blvd	NE 20 <sup>th</sup> Ave	Yes	Yes	Yes	Mast Arm	Yes	3- way intersection	
19	Sunrise Blvd	Middle River Dr	No	Yes	Yes	Mast Arm	Yes	3-way intersection	
20	Sunrise Blvd	Bayview Dr	Yes	Yes	Yes	Mast Arm	Yes		
21	Sunrise Blvd	Seminole Dr	Yes	Yes	Yes	Mast Arm	Yes		
	Sunrise Blvd	Drawbridge	No	Maintained by FDOT consider as a Traffic Disruptor					
22	Sunrise Blvd	Fire Station #13	No	No	No	Span Wire	No	Connect cabinet to Fiber	
23	Sunrise Blvd	N. Birch Rd	Yes	Yes	Yes	Span Wire	No		
24	Sunrise Blvd	SR-A1A	Yes	Yes	Yes	Mast Arm	No		

**Table 1 – Signalized Intersections**

Staff Hours are being requested for the following services:

**PROJECT GENERAL TASKS**

- 3.11. Railroad, Transit, and/or Airport Coordination – Transit Coordination for Transit Signal Prioritization.

**33. ITS ANALYSIS**

- 33.1 ITS Analysis – Evaluate and select an APL-approved ATCS system for this project and coordinate with ATCS manufacturer/vendor.
- 33.2 Communication Plans Analysis – Review of the existing COUNTY’S existing fiber infrastructure available along SE 17 Street intersections is connected at the cabinet field ethernet switches from Miami Road to Eisenhower Blvd. The existing IP network consists of Cisco IE3000 Field ethernet switches with 10/100 Ethernet ports connected to the Broward County TMC via 1Gb backbone using single mode fiber. A review of the existing COUNTY’s communication plans, analyze any effects of

adding new devices to the existing fibers. At intersections where Broward County fiber infrastructure is not available, Consultant is to analyze and design the fiber communications to the cabinet locations. All IP address for the Broward County network will be issued by Broward County Traffic Engineering Division (BCTED) for use on this project.

- 33.3 Lightning Protection Analysis – Responsible for a complete and reliable lightning protection system design for the new devices attached to the existing structures as well as ATCS field device cabinets and communications hubs. The ATCS components of the project shall be protected from damage caused by lightning strikes, transient voltage surges, and induced current. Design all grounding, lightning protection, and surge protection in accordance with Underwriters Lab (UL) 96A specifications.

Design shall include surge protection devices for all cables and conductors (power, video, and data). All Project ATCS subsystems, devices and ancillary components with electrical interconnects shall be protected from voltage surges caused by lightning, transient voltage surges, and external electromagnetic fields at the time of installation of each device.

The lightning protection system shall be designed in accordance with the latest version of the FDOT Standard Specifications for Road and Bridge Construction, Supplemental Specification 785.

- 33.4 Power Subsystem – The project's 24 intersections have existing separate power services. Consultant to verify if the transformer, disconnect, wiring, voltage and load capacity of existing power service are not exceeded with the addition of the ATCS project. It is anticipated that the existing power subsystem will be utilized. Consultant will review existing power subsystem installations and include in the design the necessary work to ensure compliance with current Broward County Traffic Engineering Division standards.

The power service connection is to be redesigned from the service point to the cabinet for the Sunrise Blvd. and Birch Road intersection in accordance with the last standards.

- 33.5 Voltage Drop Calculations
- 33.6 Design Documentation – Prepare Power Design Analysis Report (PDAR)
- 33.7 Existing ITS System – Review signal as-builts of each intersection to ensure that the ATCS design of the new system will integrate with Broward County's existing devices. The design will include the necessary infrastructure and components to ensure proper connection of the new ATCS system to the existing components. This shall include all proposed ATCS components as well as existing subsystems that will remain.

At a minimum, the work in this project consists of the following major components:

1. Replacement of any systems or components that are required to implement the ATCS.
2. Provisions for testing of all furnished and installed components and any other component or subsystems that will remain operational.
3. Plans shall include notes that require contractor to set up training of County personnel for the operation of the hardware and software installed as part of this project.

- 33.8 Queue Analysis – If SynchroGreen is selected, this task includes determining advance detector locations for each approach of the mainline (2 per intersection). If InSync is selected, this task includes optimizing the detector placement at the intersection to capture the required back of queue detection. Vehicle detection shall meet the requirements specified in Section 33.16.
- 33.9 Reference and Master ITS Design File
- 33.10 Reference and Master Communications Design File
- 33.11 Pole Elevation Analysis – The camera placement must limit the likelihood of occlusions, other blocking of vehicles and adjacent lanes detection that degrade the detection system performance below specified accuracy. The system must be designed so that signs, walls, guardrails, trees, and other physical elements do not degrade detection performance.
- 33.13 Quantities
- 33.14 Cost Estimate
- 33.15 Technical Special Provisions and Modified Special Provisions
- 33.16 Other ITS Analyses

#### Vehicle Detection

Select vehicle detection technology to meet the selected ATCS needs, Signal Performance Measures (SPM) system requirements, and as approved by FDOT and Broward County. The vehicle detection devices shall collect and process volume, speed, and occupancy data on a lane-by-lane basis for the corridor mainlines, in both directions of SE 17th Street and Sunrise Blvd. The data will be used by the ATCS system and by Broward County for functions including adaptive signal retiming, sharing information with other agencies, and data archiving for transportation planning and historical data analysis. The vehicle detection devices shall allow for connectivity to the Broward County TMC.

Vehicle detectors must meet the Project requirements under all environmental and traffic conditions expected for the corridors. The detection system shall be designed to meet Broward County Standards with respect to volume, speed, and occupancy; and be of high-resolution data so it may be utilized in Signal Performance Measures for all corridor traffic operation conditions. Optimal detector placement shall avoid visibility or installation conflicts, such as but not limited to with existing vegetation, landscape, structures, and signs.

#### Cabinet Replacement

Prepare the design for the replacement of sixteen (16) signal controller cabinets with NEMA TS2 Type 1 Size 6 new cabinets, Trafficware 2070 LN2 ITS with 1C Processor Module or equal, and new concrete bases at the signalized intersections identified in Table 1.

New controller cabinets will be in accordance with the FDOT APL and Broward County Approved

Signalization Equipment List and will contain a UPS housed in its own cabinet that will be mounted on the outside of the controller cabinet per manufacturer's recommendations. This UPS cabinet shall

contain all necessary equipment including the UPS, batteries, and a Power Interface Module (PIM) and transfer switch.

### Signal Performance Measures

Consultant shall provide Signal Performance Measures which can be obtained from the proposed ATCS project.

- 33.17 Field Reviews – Collect information from Broward County and available studies conducted for this project. The field review should include, but is not limited to, the following:
  - Existing Controller Timing Data
  - Controller Make, Model, Capabilities, firmware version and Condition/Age. Determine if the Controller removed from the project is to be delivered to the County or disposed by the Contractor.
  - Type of Detection as compared with what is recommended for the implementation of the ATCS.
  - Existing pull boxes and conduit working conditions at the signalized intersections in Table 1.
- 33.18 Technical Meetings
- 33.19 Quality Assurance/Quality Control
- 33.20 Supervision
- 33.21 Coordination – Certify that all necessary arrangements for utility work associated with this scope have been made and will not conflict with the physical construction schedule. Work closely with FDOT personnel to coordinate transmittals to Utility Companies and meet production schedules.

## **34. ITS PLANS**

Develop a set of construction Plans per FDOT requirements

- 34.4. General Notes/Pay Item Notes
- 34.6. Typical and Special Details
- 34.7. Plan Sheet - Utilize a minimum scale of 1-inch equals 100 feet with inset details at 1-inch equals 10 feet as required.
- 34.8. ITS Communications Plans – Develop Broward County network diagrams
- 34.9. Fiber Optic Splice Diagrams –The design shall include the splice of a new fiber optic cable into each cabinet that does not have existing fiber communications from the existing Broward County Fiber Optic Backbone along the corridor. Design plans shall include a wiring diagram for each cabinet that is being replaced detailing all necessary wiring connections.
- 34.10. Lighting Protection Plans

- 34.20. Quality Assurance/Quality Control
- 34.21. Supervision