State of Florida

Department of Transportation

DISTRICT FOUR

EXHIBIT A
Scope of Services
Transportation Systems Management and Operations (TSM&O) Device Maintenance Contract, District Four

Financial Project Number(s): 406795-7-72-01 & various

Contract Number: E4X61

Table of Contents

EXHIBIT A - SCOPE OF SERVICES

1 OBJECTIVE

The Florida Department of Transportation District Four Transportation Systems Management and Operations (TSM&O) Office, hereafter known as the Department, requires maintenance services by a TSM&O Device Maintenance firm, hereafter known as the Contractor, for TSM&O devices and infrastructure hereafter known as the System, located in the counties of Broward, Palm Beach, Martin, St. Lucie, and Indian River. The Contractor shall provide the ITS maintenance services as described in the Contract documents, 24 hours a day, 7 days a week and year-round for the term of the Contract. This System consists of, but is not limited to, the following:

The following list is not intended to be all-inclusive but should frame the general nature of devices and infrastructure that the Contractor may be expected to maintain. There may be other forces, including in-house staff, other maintaining agencies, or other contractors, who are authorized to perform similar services within the coverage area of this Contract. Standard practice and requirements for coordination of contractor activities, such as those within the Department's *Standard Specifications for Road and Bridge Construction,* are applicable in such cases.

- Lightning protection, grounding, and surge suppression for ITS and traffic control devices,
- Conduits,
- Communications cable,
- Conductors,
- Pull, splice, and junction boxes,
- Electrical power service assemblies,
- Pre-stressed concrete, steel and aluminum poles,
- Vehicle detection system (VDS) assemblies,
- Traffic controller assemblies,
- Equipment cabinets,
- Ramp signaling system (RSS) assemblies,
- Video equipment such as closed-circuit television (CCTV) cameras and associated poles and camera lowering device (CLD),
- Network devices such as managed field Ethernet switches (MFES), terminal servers, Ethernet extenders, and media converters,
- Dynamic message signs (DMS), electronic display signs, portable and arterial signs and their supports including structures,

- Wrong way vehicle detection system (WWVDS) assemblies,
- Emerging technology such as Connected Vehicle (CV), Smart Work Zone (SWZ), and Movable Bridge Notification System deployments,
- Highway advisor radios (HAR) / beacons assemblies,
- Rectangular Rapid Flashing Beacons (RRFB) assemblies,
- Wireless communication devices,
- Leased line communications,
- Portable and permanent emergency power generators,
- Uninterruptable power supplies (UPS) and power distribution/management units (PDU),
- Communications hubs and equipment shelters,
- Environmental conditioning equipment, and
- Hardware, software, and firmware related to ITS equipment and other traffic control devices.

The System described in this Scope of Services shall cover all existing and future ITS elements within the geographic coverage area and term defined in the Contract. This is a performance-based contract where the Contractor's compliance with this Scope of Services is evaluated periodically during the term of the Contract.

The Contractor shall submit all documentation submittals specified in this Contract (e.g. Standard Operating Procedures (SOP), plans, studies, reports, dashboards, agendas, meeting minutes, etc.) for Department's review and approval via emails, uploading to a designated software or network drive, or other means specified by the Department.

1.1 Item Additions and Deletions

During the Contract period and any renewal periods, the Department shall have the right to add or delete Items (services and/or commodities) from this Contract. Any new Items added shall be per the requirements, specifications, terms, and conditions stated herein or as later stipulated by the Department, and at mutually agreed pricing accepted, in writing, by both the Contractor and the Department. Items may be removed at the sole discretion of the Department, per the requirements, terms, and conditions herein and/or as permitted by Florida Statutes or Florida Administrative Code.

Due to the changing dynamics within any ITS, the Contractor will be able, upon written authorization by the Department's Project Manager and upon supplemental agreement to the Contract as to compensation and time, to perform additional services pertaining to the support and/or maintenance of the ITS field devices and infrastructure not otherwise identified in this Contract as may be required by the Department.

2 KEY TO ACRONYMS, ABBREVIATIONS AND DEFINITIONS

APL – Approved Products List

BTTS – Bluetooth Travel Time System

CADD – Computer-Aided Design and Drafting

CCTV – Closed-Circuit Television

CV – Connected Vehicle

DMS – Dynamic Message Signs

FDLE – Florida Department of Law Enforcement

FOC – Fiber Optic Cable

HAR – Highway Advisory Radio

IT – Information Technology

ITS – Intelligent Transportation Systems

ITSFM – ITS Facility Management

MFES – Managed Field Ethernet Switch

MIMS – Maintenance and Inventory Management System

MOT – Maintenance of Traffic

MVDS – Microwave Vehicle Detection System

NMS – Network Monitoring System

NTP – Notice to Proceed

OEM – Original Equipment Manufacturer

OSHA – Occupational Safety and Health Administration

OTDR – Optical Time Domain Reflectometer

PDU – Power Distribution/Management Units

PFB – Pedestrian Flashing Beacons

RMA – Return Material/Merchandise Authorization

RRFB - Rectangular Rapid Flashing Beacons

RSS – Ramp Signaling System

RTMC – Regional Transportation Management Center

RWIS – Road Weather Information System

SWZ – Smart Work Zone

SOG – Standard Operating Guidelines

SOP – Standard Operating Procedures

SOS – Scope of Services

SUE – Subsurface Utility Engineering

TMC – Transportation Management Center

UPS – Uninterruptable power supplies

US – United States

VDS – Vehicle Detection System

VSLS – Variable Speed Limit Sign

WAP – Wireless Access Point

WWVDS – Wrong Way Vehicle Detection System

Contract - The entire integrated agreement between the Contractor and the Department setting forth the obligations of the parties including the performance of the services and method of compensation. The Contract will be executed by both the Contractor and the Department and will include all documents, exhibits, appendices and attachments specifying requirements, description and terms of services to be performed/provided by the Contractor and billing rates for these services.

Contractor - The individual, firm, joint venture or company contracting with the Department to perform the contractual services described in the Contract.

Contract Start Date - The Contract Start Date for this Contract will begin at the end of the Transition Period, from which point, the new ITS Maintenance Contractor will assume responsibilities for providing all services as stated in the new ITS Maintenance Contract.

Department/District Four/District/FDOT - The Florida Department of Transportation, District Four.

Department's Project Manager - The Department's staff member(s), manager(s), and/or consultant(s) with overall responsibility and authority to oversee the contractual services being provided by the Contractor for the Department as described in this Contract.

Letter of Authorization (LOA) - A letter of authorization issued by the Department or the Department's Project Manager (or his/her designee) authorizing the Contractor to commence work on a specific task in accordance with the contractual services being performed/provided by the Contractor as described in the Contract. Completion due dates and fees are specified in the LOA.

Master Cabinet – A field ITS cabinet that acts as an aggregate point (for both communications and power) between multiple dependent sites and the Communications Hub/ SunGuide Regional Transportation Management Center (RTMC) i.e. any failures at the Master Cabinet will cause failures at the dependent device sites.

Notice to Proceed (NTP) - A letter issued by the Procurement Office or the Department's Project Manager (or his/her designee) at Contract Execution. There shall be one NTP issued. The NTP shall authorize the start of the transition period as well as the start of the full maintenance services (anticipated December 20th, 2024) after the successful completion of the transition services. Contract begins when the Contractor assumes full maintenance responsibilities. For any additional work that may be added to the initial Contract by Supplemental Agreement, an additional NTP shall be issued.

Per Site – Per Site includes all ITS devices, equipment, components, etc. for the operations of a complete ITS site. For example, at a WWVDS site, for that off-ramp, all highlighted wrong way signs , primary and secondary wrong way signs and poles, all detection equipment, flashing beacons, incoming and outgoing verification cameras, communications and power equipment, supporting structures, ITS cabinets, and all equipment inside the cabinets including Ethernet switches and UPS shall be collectively referred to as per site when the term Per Site is used.

Per Unit – Per Unit includes only specific ITS devices, equipment, components, etc. For example, if multiple VDS units and/or cameras are collocated on one pole, then each VDS unit/camera shall be separately referred to as per unit when the term Per Unit is used.

Transition Period - For this Contract, the Transition Period is approximately a two-month period following the Contract NTP till Contract Start Date. This period is to allow the Contractor to mobilize and transition from the existing Contract to the new Contract.

3 USE OF APPROVED PRODUCTS

The Contractor shall follow the Department's latest *Standard Specifications for Road and Bridge Construction*. The Contractor shall review the Department's *Approved Product List* (*APL*) for devices required as part of the work and must utilize approved products or otherwise approved by the Department. All devices furnished by the Contractor shall be new and unused.

4 SERVICES TO BE PROVIDED

4.1 Overview of Maintenance Services Required

The objective of services required under this Contract is to ensure continuous 24 hours a day, 7 days a week, year-round system operation and functionality of all components of the System. The Department will assign a Project Manager responsible for oversight of this Contract and assignment of tasks to the Contractor. References to the Department or the Department's Project Manager within this scope include the Department's Project Manager or designees.

The Contractor will be evaluated periodically based on performance evaluation criteria specified in this Contract. The Contractor will be required to perform new device and infrastructure installations as needed and as requested by the Department; all System support, including but not limited to scheduled, preventive maintenance; and failed or destroyed component replacement. All services shall be performed per a Letter of Authorization (LOA) as directed by the Department's Project Manager.

The Contractor shall be on-call 24 hours a day, 7 days a week, year-round for the duration of the Contract to respond to emergency repairs and/or replacement work, including but not limited to hurricane watches and warnings. If a State of Emergency is declared by the Governor of Florida, the Contractor may be called upon to provide repair and replacement services associated with disaster recovery. The Contractor shall provide the Department's Project Manager with a list of telephone numbers that will be answered at all times by the Contractor's personnel. The Contractor shall maintain staffing levels required by this Scope of Services document at all times to ensure services required by the Scope of Services document and appendices under this Contract are met.

Throughout the term of this Contract, the Department's Project Manager will conduct reviews of the Contractor's work and daily operations. The Contractor shall cooperate and assist the Department's Project Manager throughout the review process.

4.1.1 Applicable Specifications and Standards

All work shall be prepared using United States customary units in accordance with the latest editions of standards and requirements utilized by the Department, which include, but are not limited to, publications such as:

- 29 Code of Federal Regulations (CFR), Part 1910.1001 – Asbestos Standard for Industry, U.S. Occupational Safety and Health Administration (OSHA)
- 29 CFR, Part 1926.1101 – Asbestos Standard for Construction, OSHA
- 40 CFR, Part 61, Subpart M – Asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP), Environmental Protection Agency (EPA)
- 40 CFR, Part 763, Subpart E – Asbestos-Containing Materials in Schools, EPA
- 40 CFR, Part 763, Subpart G – Asbestos Worker Protection, EPA
- Americans with Disabilities Act Accessibility Guidelines
- CADD (Computer-Aided Design and Drafting) Manual
- CADD Production Criteria Handbook
- Ch. 469, F.S. – Asbestos Abatement, Florida Department of Business and Professional Regulation
- Ch. 62-257, Florida Administrative Code – Asbestos Program, Florida Department of Environmental Protection
- Code of Federal Regulations
- Florida Administrative Codes
- Florida Department of Business & Professional Regulations Rules
- Florida Department of Environmental Protection Rules
- Florida Department of Transportation Basis of Estimates Manual
- Florida Department of Transportation Design Standards for Design, Construction, Maintenance, and Utility Operations on the State Highway System
- Florida Department of Transportation Instructions for Structures Related Design Standards
- Florida Department of Transportation Materials Manual
- Florida Department of Transportation Plans Preparation Manual
- Florida Department of Transportation Standard Specifications for Road and Bridge Construction
- Florida Statutes
- Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways
- Manual on Uniform Traffic Control Devices, Federal Highway Administration
- Standard Highway Signs Manual, Federal Highway Administration
- Florida Department of Transportation Traffic Engineering Manual
- National Electrical Safety Code
- National Electrical Code

- Florida Department of Transportation Structures Manual
- Florida Department of Transportation Structures Design Office Temporary Design Bulletins (available on Florida Department of Transportation Structures web site only)
- Florida Department of Transportation Preferred Details (available on Florida Department of Transportation Structures web site only)
- Florida Department of Transportation 2017 Utility Accommodation Manual

4.1.2 Scheduled Preventive Maintenance

Typical scheduled preventive maintenance includes system inspection and other activities recommended by equipment manufacturers to be performed at periodic intervals. During the term of the Contract, the Contractor shall perform scheduled, periodic preventive maintenance based upon the District Four ITS Maintenance Standard Operating Procedure (SOP) document (attached in Appendix "1" of the Contract) and manufacturer recommendations and as authorized by the Department's Project Manager. Scheduled preventive maintenance also includes periodic inspections and cleaning as well as documentation of these actions. The Department has provided preventive maintenance checklists as part of the ITS Maintenance SOP to ensure that consistent and comprehensive maintenance activities are executed correctly and documented by the Contractor. As part of the ITS Maintenance SOP document update, the Contractor shall update the preventive maintenance checklists and submit them for Department's review and approval. The Contractor shall follow the most up to date version of the Department's preventive maintenance checklists in performing the preventive maintenance services. At a minimum, the Contractor shall be responsible for performing adequate preventive maintenance services as per manufacturer's recommendation and to ensure that the manufacturer warranties remain valid.

The Contractor shall provide Preventive Maintenance services during off-peak hours in weekdays, typically from 10:00 AM to 3:00 PM or 8:00 PM to 5:00 AM, and weekends when the preventive maintenance activities involve MOT/lane closures or equipment downtime for the term of the Contract. Based on the location of an ITS device, the actual peak hours may vary, and the Contractor needs to coordinate with the Department and modify the above timings for performing Preventive Maintenance services. The Department may change or extend these hours at its discretion. For all other instances, the Contractor may choose to perform the Preventive Maintenance services at all times.

The Contractor shall contact the Regional Transportation Management Center (RTMC) Operations staff to report any downtime prior to performing the preventive maintenance in the field. Field technicians shall take all essential parts, and tools necessary to perform the preventive maintenance, and repair any minor deficiencies observed at the site. Minor deficiencies include but not limited to, a device cable being unplugged, tripped circuit breaker, loose connector, etc. Such deficiencies shall be corrected as part of the preventive maintenance services. For all major deficiencies such as, but not limited to, a non-

functional device site with damaged equipment, components exposed to weather, exposed power cabling, or items constituting a safety hazard such as structural damages, the Contractor shall work with Department's Project Manager (or his/her designee) for work authorization to rectify those issues. For all infrastructure deficiencies identified during the Preventive Maintenance services, regardless of major or minor, the Contractor shall report to the Department within 24 hours in writing and include it as part of the Biweekly Preventive Maintenance Report.

4.1.2.1 Assignment of Preventive Maintenance Work

The Department shall assign the preventive maintenance services work to the Contractor using an LOA based on fixed fee (unit rate) costs as identified in the Exhibit "C" Contract Price Proposal. Before performing any Preventive Maintenance services, the Contractor shall prepare and submit to the Department's Project Manager (or his/her designee) for review and approval, a detailed Preventive Maintenance Plan on an annual basis.

4.1.2.2 Preventive Maintenance Plan

The Preventive Maintenance Plan **(official deliverable)** developed by the ITS Maintenance Contractor shall include detailed preventive maintenance procedures along with checklists of the preventive maintenance tasks to be performed for all ITS devices deployed in the District. The plan shall include an annual time schedule of all preventive maintenance activities scheduled and periodic interval of each activity during the calendar year. The Preventive Maintenance Plan shall include at a minimum, all preventive maintenance procedures described in the District Four ITS Maintenance SOP document. The Preventive Maintenance Plan shall be developed per system and per corridor, sorted by device ID in ascending order and final approved by the Department by December 15 of each year. For ensuring that the Preventive Maintenance Plan is finalized and approved by the Department by December 15 of each year, the Contractor shall submit a draft report to the Department's review and comments on or before November 1 of each year. The Contractor shall include all preventive maintenance plan development costs within the on-site and operations staffing fixed price (lump sum) section of the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation.

The Contractor shall prepare and submit a Preventive Maintenance Six-Month Status Report (**official deliverable**) every six months. The Preventive Maintenance Six-Month Status Report shall include at a minimum a recap of preventive maintenance activities performed in the last six months reporting period, any major issues encountered, adherence to the preventive maintenance schedule from the Annual Preventive Maintenance Plan, deviation from the original schedule and justifications if any, and an outlook of the preventive maintenance activities that will be performed in the next six months. Each year, the first Preventive Maintenance Six-Month Status Report shall be submitted on or before June 15 and the second Preventive Maintenance Six-Month Status Report shall be submitted on or before December 15. The Contractor shall include all preventive

maintenance six-month status report development costs within the on-site and operations staffing fixed price (lump sum) section of the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation.

4.1.2.3 Bi-Weekly Preventive Maintenance Schedule

The Contractor shall prepare and submit a Bi-Weekly Preventive Maintenance Schedule **(official deliverable)** as part of the Bi-Weekly Status Report to the Department for review and approval. The Bi-Weekly Preventive Maintenance Schedule shall be submitted at least 2 business days prior to the Bi-Weekly Contract Meeting. The Bi-Weekly Preventive Maintenance Schedule shall be per system and per corridor, sorted by device ID in ascending order and delivered to the Department. The Bi-Weekly Preventive Maintenance Schedule shall describe all scheduled Preventive Maintenance activities for the upcoming two weeks. For any deviations from the schedule, the Contractor shall request approval from the Department. In addition to the schedule, the Contractor shall coordinate with RTMC Operations staff prior to performing the actual preventive maintenance work at least 72 hours but, not more than 7 calendar days in advance of any scheduled maintenance work. The Department shall reserve the right to request the Contractor to reschedule the dates if RTMC Operations is utilizing a device site scheduled for Preventive Maintenance services. Should this happen, the Contractor shall reschedule the preventive maintenance services for another day. The Contractor shall notify RTMC Operations from the field at the time of performing the preventive maintenance activities which may result in equipment being offline. Based on the preventive maintenance schedule, the ITS Maintenance Contractor shall identify all Maintenance of Traffic (MOT) and lane closure requirements necessary to perform preventive maintenance services on the selected devices and submit the necessary information to the Department's Project Manager (or his/her designee) for approval as detailed in MOT Requirements section of this Scope of Services document. The Biweekly Preventive Maintenance Schedule shall at a minimum include:

- Proposed dates of Preventive Maintenance visits;
- Proposed locations of site visits;
- Device ID number;
- MOT applicability;
- Other items as requested by the Department.

The Contractor shall include all biweekly preventive maintenance schedule development costs within the on-site and operations staffing fixed price (lump sum) section of the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation.

4.1.2.4 Bi-Weekly Preventive Maintenance Report

The Contractor shall prepare and submit a Bi-Weekly Preventive Maintenance Report **(official deliverable)** as part of the Bi-Weekly Status Report to the Department for review and approval. The Preventive Maintenance Report shall include the details the preventive maintenance activities performed at each device site, completed checklists, listing of all parts or materials used, and inventory database reports. The Bi-Weekly Preventive Maintenance Report shall be per system and per corridor, sorted by device ID in ascending order and delivered to the Department. The Bi-Weekly Preventive Maintenance Report shall be submitted to the Department's Project Manager (or his/her designee) every two weeks at least 2 business days prior to the Biweekly Contract Meeting. The Bi-Weekly Preventive Maintenance Report shall include all field observations gathered, all items checked, verified and repairs made during each Preventive Maintenance visit. The Contractor shall take pictures before and after each Preventive Maintenance visit and include the pictures in the Biweekly Preventive Maintenance Report. Each picture shall be clear and in focus and shall include a timestamp showing the date and time when the picture was taken. The Contractor shall include all biweekly preventive maintenance report development costs within the on-site and operations staffing fixed price (lump sum) section of the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation.

4.1.2.5 Compensation for Preventive Maintenance Services

The Department shall compensate the Contractor based on fixed fee (unit rate) at the amounts established under Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation. Below are the work descriptions for various items listed under this work category.

CCTV Camera System: The CCTV camera system preventive maintenance fixed fee (unit rate) includes all preventive maintenance services to be provided at the CCTV camera site. This includes but not limited to, CCTV camera, camera lowering device, camera pole, mounting brackets, associated cabinet, communications and network equipment, power equipment, grounding, lightning protection, surge protection devices, cables, UPS and batteries, graffiti removal, PDU and other ancillary equipment. All MOT and lane closure costs for preventive maintenance services shall be included in this fixed fee (unit rate).

Dynamic Message Sign (DMS) System: The DMS preventive maintenance fixed fee (unit rate) includes all preventive maintenance services to be provided at the DMS site. This includes but not limited to, using a bucket truck to service DMS panel, DMS controller, mounting brackets, associated cabinet, communications and network equipment, power equipment, grounding, lightning protection, surge protection devices, cables, UPS and batteries, graffiti removal, PDU and other ancillary equipment. All MOT and lane closure costs for preventive maintenance services shall be included in this fixed fee (unit rate).

Microwave Vehicle Detection System (MVDS) With Calibration: The MVDS preventive maintenance with calibration fixed fee (unit rate) includes all preventive maintenance services to be provided at the MVDS site including **full lane by lane calibration as per D4 MVDS Calibration Procedures** (attached in Appendix "2" of the Contract). This includes but not limited to, the detector unit, detector pole, mounting brackets, associated junction box/cabinet, communications and network equipment, power equipment, grounding, lightning protection, surge protection devices, cables, UPS and batteries, graffiti removal, PDU and other ancillary equipment. For locations where a MVDS unit is collocated with other ITS components like a CCTV camera, DMS Sign structure etc., the Contractor shall be compensated separately for each device. For locations with multiple MVDS units, the Contractor shall be compensated separately for each unit serviced. All MOT and lane closure costs for preventive maintenance services shall be included in this fixed fee (unit rate).

Microwave Vehicle Detection System (MVDS) Without Calibration: The MVDS preventive maintenance without calibration fixed fee (unit rate) includes all preventive maintenance services to be provided at the MVDS site less calibration. This includes but not limited to, the detector unit, detector pole, mounting brackets, associated junction box/cabinet, communications and network equipment, power equipment, grounding, lightning protection, surge protection devices, cables, UPS and batteries, graffiti removal, PDU and other ancillary equipment. For locations where a MVDS unit is collocated with other ITS components like a CCTV camera, DMS Sign structure etc., the Contractor shall be compensated separately for each device. For locations with multiple MVDS units, the Contractor shall be compensated separately for each unit serviced. All MOT and lane closure costs for preventive maintenance services shall be included in this fixed fee (unit rate).

Bluetooth Travel Time System (BTTS): The BTTS preventive maintenance fixed fee (unit rate) includes all preventive maintenance services to be provided at the BTTS site. This includes but is not limited to, cleaning and inspecting all sensors for proper operation, mounting brackets, associated cabinet, communications and network equipment, power equipment, grounding, lightning protection, surge protection devices, cables, UPS and batteries (if applicable), graffiti removal, PDU and other ancillary equipment, and pest control. All MOT and lane closure costs for preventive maintenance services shall be included in this fixed fee (unit rate).

Wrong Way Vehicle Detection System (WWVDS): The WWVDS preventive maintenance fixed fee (unit rate) includes all preventive maintenance services to be provided at the WWVDS site. This includes but not limited to, cleaning and inspecting highlighted wrong way signs, primary and secondary wrong way signs and poles, flashing beacons, incoming and outgoing verification cameras, all detection equipment, communications and power equipment, supporting structures, cabinets, grounding, lightning protection, surge protection devices, cables, UPS and batteries, graffiti removal, PDU and other ancillary

equipment. All MOT and lane closure costs for preventive maintenance services shall be included in this fixed fee (unit rate).

Communications Hub Building: The communications hub building preventive maintenance fixed fee (unit rate) includes all preventive maintenance services to be provided at the hub building site. This includes but not limited to, hub building, AC units, generator units, hub security cameras, Cyberlocks, room alert environmental sensors, fuel tanks including fueling and re-fueling, UPS and batteries, PDU, communications and network equipment except for Layer 3 Hub Switches and its accessories, power equipment, grounding, lightning protection, surge protection devices, graffiti removal, cables, and other ancillary equipment. All MOT and lane closure costs for preventive maintenance services shall be included in this fixed fee (unit rate).

Communications Hub Cabinet: The communications hub cabinet preventive maintenance fixed fee (unit rate) includes all preventive maintenance services to be provided at the hub cabinet site. This includes but not limited to, hub cabinet, Cyberlocks, UPS and batteries, PDU, generator units and fuel tanks if applicable, communications and network equipment except for Layer 3 Hub Switches and its accessories, power equipment, grounding, lightning protection, surge protection devices, cables, graffiti removal, and other ancillary equipment. All MOT and lane closure costs for preventive maintenance services shall be included in this fixed fee (unit rate).

Ramp Signalling System (RSS): The RSS preventive maintenance fixed fee (unit rate) includes all preventive maintenance services to be provided at the Ramp Signalling site, and the corresponding advisory sign flashing beacon sites. This includes but not limited to, all ramp signals (pole and heads), detection system supporting the ramp signal operations (typically inductive loops), supporting flashing beacon assemblies, cameras located on top of the signal heads (if applicable), cables, associated cabinet, controller, communications and network equipment, power equipment, grounding, lightning protection, surge protection devices, cables, UPS and batteries, graffiti removal, PDU and other ancillary equipment. All MOT and lane closure costs for preventive maintenance services shall be included in this fixed fee (unit rate). The mainline MVDS that are integrated with the RSS shall be paid separately using the MVDS preventive maintenance pay item.

Variable Speed Limit Signs (VSLS): The VSLS preventive maintenance fixed fee (unit rate) includes all preventive maintenance services to be provided at the speed check sign site. This includes but not limited to, sign, speed detectors, electronic display panel, controller, associated cabinet, communications and network equipment, power equipment, solar panel assembly and batteries, graffiti removal, UPS and batteries, PDU, grounding, lightning protection, surge protection devices, cables, and other ancillary equipment. All MOT and lane closure costs for preventive maintenance services shall be included in this fixed fee (unit rate).

Road Weather Information System (RWIS): The RWIS preventive maintenance fixed fee (unit rate) includes all preventive maintenance services to be provided at the RWIS site. This includes but not limited to, sensors, mounting brackets, controller, associated cabinet, communications and network equipment, power equipment, solar panel assembly and batteries, UPS and batteries, graffiti removal, PDU, grounding, lightning protection, surge protection devices, cables, and other ancillary equipment. All MOT and lane closure costs for preventive maintenance services shall be included in this fixed fee (unit rate).

Wireless Access Points (WAP): The WAP preventive maintenance fixed fee (unit rate) includes all preventive maintenance services to be provided at the wireless access point site. This includes but not limited to, antennas, wireless radio units, controller, associated cabinet, communications and network equipment, power equipment, solar panel assembly and batteries if any, UPS and batteries, graffiti removal, PDU, grounding, lightning protection, surge protection devices, cables, and other ancillary equipment. All MOT and lane closure costs for preventive maintenance services shall be included in this fixed fee (unit rate).

Inductive Loops Detection System: The inductive loops detection system preventive maintenance fixed fee (unit rate) includes all preventive maintenance services to be provided at the inductive loops site. This pay item is for inductive loops sites that are not part of the ramp signalling system. This includes but not limited to, all loops, controller, cables, associated cabinet, UPS and batteries, graffiti removal, PDU, communications and network equipment, power equipment, grounding, lightning protection, surge protection devices, cables, and other ancillary equipment. All MOT and lane closure costs for preventive maintenance services shall be included in this fixed fee (unit rate).

Magnetic Traffic Detection System (Sensys Detector): The magnetic traffic detection system preventive maintenance fixed fee (unit rate) includes all preventive maintenance services to be provided at the Sensys site. This pay item is for Sensys sites that are not part of the Ramp Signaling System. This includes but not limited to, all detector units at the site, pole, wireless equipment, mounting brackets, associated junction box/cabinet, UPS and batteries, graffiti removal, PDU, communications and network equipment, power equipment, grounding, lightning protection, surge protection devices, cables, and other ancillary equipment. All MOT and lane closure costs for preventive maintenance services shall be included in this fixed fee (unit rate).

Highway Advisory Radio (HAR) System: The HAR preventive maintenance fixed fee (unit rate) includes all preventive maintenance services to be provided at the HAR transmitter site and the corresponding HAR advisory signs/beacons. This includes but not limited to, transmitter, pole, flashing beacon assemblies, solar panel assembly and batteries (if applicable), associated cabinet, UPS and batteries, graffiti removal, PDU, communications and network equipment, power equipment, grounding, lightning protection, surge protection devices, cables, and other ancillary equipment. All MOT and lane closure costs for preventive maintenance services shall be included in this fixed fee (unit rate).

Portable Generators: The portable generators preventive maintenance fixed fee (unit rate) includes all preventive maintenance services to be performed to the portable generators such as replenishing the fuel, oil, filters, and other system components. The Contractor shall perform preventive maintenance services only on the portable generators that are in use. If applicable, all MOT and lane closure costs for preventive maintenance services shall be included in this fixed fee (unit rate).

Permanent Mount Generators (Not Part of a Communications Hub Building or Cabinet): The permanent mount generators (not part of a communications hub building or cabinet) preventive maintenance fixed fee (unit rate) includes all preventive maintenance services to be performed to the permanent mount generators such as replenishing the fuel, oil, filters, and other system components, graffiti removal, and running the generator to ensure proper operation, and pest control. The Contractor shall include the annual permit fee for each permanent mount generator in the preventive maintenance fixed fee if applicable. All MOT and lane closure costs for preventive maintenance services shall be included in this fixed fee (unit rate).

Portable Smart Work Zone (SWZ) Devices: The Portable SWZ Devices preventive maintenance fixed fee (unit rate) includes all preventive maintenance services to be provided at the portable SWZ device site. This includes but not limited to, SWZ trailers, message signs, cameras, detectors, antennas, wireless radio units, controller, associated cabinet, communications and network equipment, power equipment, solar panel assembly and batteries if any, UPS and batteries, graffiti removal, grounding, lightning protection, surge protection devices, cables, and other ancillary equipment. All MOT and lane closure costs for preventive maintenance services shall be included in this fixed fee (unit rate). The Contractor shall perform preventive maintenance services only on the portable SWZ devices that are requested by the Department.

Pedestrian Flashing Beacon (PFB) Assemblies: PFB includes and is not limited to school zone flashing beacons, pedestrian crossing beacons, and Rectangular Rapid Flashing Beacons (RRFB). The PFB preventive maintenance fixed fee (unit rate) includes all preventive maintenance services to be provided at the PFB sites. This includes but not limited to, flashing beacons, detection and activation system, controller, associated cabinet, communications and network equipment, power equipment, solar panel assembly and batteries if any, UPS and batteries, graffiti removal, grounding, lightning protection, surge protection devices, cables, and other ancillary equipment. All MOT and lane closure costs for preventive maintenance services shall be included in this fixed fee (unit rate). The Contractor shall perform preventive maintenance services only on the PFB sites that are requested by the Department.

4.1.3 Diagnostic and Troubleshooting Services

Non-scheduled maintenance includes reactive maintenance, replacements, repairs, and diagnostic work necessary to correct deficiencies and keep the System operational. The

Contractor shall provide diagnostic and troubleshooting services when equipment is inoperable and field troubleshooting is needed to identify the problem, 24 hours a day and 7 days a week, year-round for the term of the Contract.

4.1.3.1 Assignment of Diagnostic Services Work

The RTMC Operations Staff identifies failures and notifies the ITS Maintenance Contractor. The Contractor shall perform a field visit to identify and diagnose the repairs as follows:

Minor Repairs: Minor repairs for this Contract are repairs/replacement of ITS components due to equipment malfunction or end of service life. Minor repairs also include, but are not limited to, reattaching loose cable connections, power reset of all equipment, and other incidental repair work. Minor repairs are generally considered to be repairs that require less than 4 hours of labor and less than $3,500 in materials, as described in this Scope of Services document and for those repairs listed under minor repair section of the Exhibit "C", Contract Price Proposal. The Contractor shall perform the necessary repair/replacement work, which includes the diagnostic services. A diagnostic report is not required for Minor Repairs.

Major Repairs: Major repairs for this Contract are defined as non-typical repairs that need diagnostic services to identify the problem and perform extensive repair services. Typically, major repairs may require maintenance of traffic (MOT) and lane closures, utility coordination and regional agency coordination. Major repairs can be damages caused by crashes, vandalism, theft, weather events and third-party Contractors; fiber cuts; power loss from the utility service point; etc. Typical major repairs and parts replacement consist of, but are not limited to, repair or replacement of damaged, missing, or malfunctioning equipment in order to maintain the ITS operation and functionality. Major repairs are generally considered to be repairs that require more than 4 hours of labor and more than $3,500 in materials, and any repairs not listed in either the minor repair services section of this scope of services document or those listed in the minor repair section of the Exhibit "C", Contract Price Proposal. For all major repairs, the Contractor shall contact the Department's Project Manager (or his/her designee) to report the field findings. The Contractor shall document troubleshooting and repair activities and services performed at the site. Depending on the criticality of the repair, and nature of the device site or component malfunction or failure, the Department may issue the Contractor verbal authorization for diagnostic services to expedite the repair process. For certain repairs that are emergency and pose imminent safety threats, the Contractor may start the repair while approvals are pending to bring the system to a safe and stable condition. The Contractor shall prepare and submit a diagnostic report and a final repair report for each major repair for the Department's review and approval.

Upon receiving the Contractor's diagnostic report, the Department's Project Manager (or his/her designee) will review the diagnostic report and will provide concurrence or

additional direction on how to proceed with the repair. Diagnostic report for major repairs shall be approved by the Department's Project Manager (or his/her designee) in writing before any repair services can be performed by the Contractor except for emergency cases noted previously.

4.1.3.2 Diagnostic Report and Final Repair Report

For all major repairs, the Contractor shall prepare and submit to the Department, a diagnostic report **(official deliverable)** and a final repair report **(official deliverable)** identifying the cause of the malfunction, the equipment/device that failed and the type of repair required to restore operability of the component or device site.

The diagnostic report at a minimum shall include the following information:

- Date and time the Contractor is notified of the failure;
- Name of the person preparing the preliminary diagnostic report;
- Equipment/device that failed and location;
- Brief description of the failure;
- Technician(s) responding to the failure;
- Arrival time at the site of the reported failure;
- Brief description of the proposed repair work;
- Repair cost estimate consisting of labor hours and material cost

The final repair report at a minimum shall include the following information:

- Date and time the Contractor is notified of the failure;
- Name of the person preparing the final repair report;
- Equipment/device that failed and location;
- Detailed description of the failure and impacts to overall system operations, including if the failure is due to a weather related event, materials, workmanship defect, power failure, leased communications problem, electrical and mechanical components, hardware malfunctions, software failures, etc.;
- Operational status of all devices connected to the site/cabinet location;

- Site conditions noted, i.e. submerged, structure down, no power;
- Technician(s) responded to the failure;
- Arrival time at the site of the reported failure;
- Repair completion time;
- Name of the person from RTMC operations contacted to verify the working condition of the device upon repair completion;
- Detailed description of the completed repair work;
- Model number, serial number, FDOT Asset Management number, MIMS number of the equipment needing repairs and/or replacement, new spare parts used, and documentation of all warranty covered equipment for return material/merchandise authorization (RMA) process and inventory tracking purposes e.g. device not covered by warranty, new unit to be purchased or replaced with stock item.
- Updated ITSFM report;
- Digital photographs required for documentation, including timestamps showing date and time when the photo was taken;
- Total repair cost consisting of actual labor hours and material cost expended for the complete repair, deviation from diagnostic report, and justification if any.

4.1.3.3 Diagnostic Report and Final Repair Report Response Time

The Contractor shall comply with the following response time requirements when performing Diagnostic Services:

Table 4.1.3-1: Diagnostic Report Response Time

Failure Priority	Type of Repair	Diagnostic Report Response time
Emergency	Minor Repair	No diagnostic report needed

Table 4.1.3-1: Diagnostic Report Response Time		
Failure Priority	**Type of Repair**	**Diagnostic Report Response time**
Urgent	Major Repair	Diagnostic report within 4 hours of failure notification for repairs in Broward County; Contractor proceeds with repairs prior to diagnostic report being approved. Diagnostic report within 6 hours of failure notification for repairs in other counties. Contractor proceeds with repairs prior to diagnostic report being approved. Final Repair Report within 24 hours of completion of the repair.
	Minor Repair	No diagnostic report needed
	Major Repair	Diagnostic report within 6 hours of failure notification for repairs in Broward County; Diagnostic report within 8 hours of failure notification for repairs in other counties. Final Repair Report within 48 hours of completion of the repair.
Priority	Minor Repair	No diagnostic report needed

Table 4.1.3-1: Diagnostic Report Response Time		
Failure Priority	**Type of Repair**	**Diagnostic Report Response time**
	Major Repair	Diagnostic report within 24 hours of failure notification for repairs in Broward County; Diagnostic report within 24 hours of failure notification for repairs in other counties. Final Repair Report within 48 hours of completion of the repair.
Routine	Minor Repair	No diagnostic report needed
	Major Repair	Diagnostic report within 48 hours of failure notification for repairs in Broward County; Diagnostic report within 48 hours of failure notification for repairs in other counties. Final Repair Report within 72 hours of completion of the repair.

4.1.3.4 Diagnostic Work, Diagnostic Report and Final Repair Report Time Restrictions

The Contractor shall not be allowed to bill any diagnostic services for minor repairs. For, major repairs, the Contractor shall be allowed to bill the time spent (a maximum of 8 hours total per repair) for troubleshooting the failed components/devices/equipment, identifying probable cause of failure and for preparing the diagnostic report. Any additional time beyond the allowed maximum time requires approval from the Department.

For major repairs, the Contractor shall be allowed to bill the time spent (a maximum of 4 hours total per repair) for preparing the final repair report. Any additional time beyond the allowed maximum time requires approval from the Department.

4.1.3.5 Compensation for Diagnostic Services

For minor repairs, no additional compensation shall be made for diagnostic services. The Contractor shall include all diagnostic service costs within the Minor Repair fixed fee (unit rate) section of the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation. For major repairs, the Contractor shall include all diagnostic services costs within the Repair Services costs. The diagnostic services including the diagnostic report and final repair report costs shall be based on the actual hours spent, using the fixed fee (unit rate) per hour established under the Staffing Rates section of the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation.

4.1.4 Repair Services

Repair services shall consist of the Contractor repairing or replacing any malfunctioning, damaged, vandalized device, component or a part of the System. The Contractor shall perform all necessary repair services to ensure that the system downtime is minimal. The Contractor shall provide repair services 24 hours per day and 7 days a week for the term of the Contract. Based on the criticality of the device to the RTMC Operations, the Department categorizes all failures into 4 failure priorities based on the order below:

- Emergency – 1st Priority
- Urgent – 2nd Priority
- Priority – 3rd Priority
- Routine – Least Priority

Failure priority, or the criticality of failures is determined by the RTMC Operations/IT staff. The Contractor should also report and confirm failures during diagnostic services and inform the Department's Project Manager (or his/her designee) if any new field observations are made.

The Contractor shall provide repair services for all failures detailed in the sections below. For all repairs, the Contractor shall update ITSFM accordingly after the repair is complete. The Contractor shall include cost associated with ITSFM update as part of the repair cost. The Contractor shall not be compensated separately for ITSFM update for repair services.

4.1.4.1 Emergency Failures

A failure is categorized as an emergency failure if it meets any of the following conditions:

- Failures that represent an immediate risk to the public;

- Failures that create safety hazards to motorists e.g., structural damage to ITS devices due to accidents, crashes, potential electrical and fire risk, exposure to chemicals or pollutants etc.;

- Impacts the operations of more than 10 devices in the region at the same time e.g., loss of power to a hub, cuts to fiber backbone;

- Any other failures deemed emergency failure by the Department.

All emergency failures shall be rectified by the Contractor using one of the below repair services:

- Minor repair services

- Major repair services

4.1.4.2 Urgent Failures

A failure is categorized as an urgent failure if it meets any of the following:

- Failures at a master cabinet or a local hub impacting operations of several devices at the same time;

- DMS failures;

- Wrong Way Vehicle Detection Systems (WWVDS) failures;

- Express Lanes device failures or failures that will impact Express Lanes operations;

- Ramp Signaling System (RSS) failures;

- Multiple CCTV camera failures, including three or more cameras adjacent to one another;

- Any other failures deemed urgent failure by the Department.

All urgent failures shall be rectified by the Contractor using one of the below repair services:

- Minor repair services

- Major repair services

4.1.4.3 Priority Failures

A failure is categorized as a priority failure if it meets any of the following conditions:

- Failures not deemed emergency or urgent but have impacts to the Department's operations.

All priority failures shall be rectified by the Contractor using one of the below repair services:

- Minor repair services
- Major repair services

4.1.4.4 Routine Failures

Failures that are not deemed emergency, urgent, or priority failure are categorized as routine failures.

All routine failures shall be rectified by the Contractor using one of the below repair services:

- Minor repair services
- Major repair services

4.1.4.5 Minor Repair

Minor repairs for this Contract are repairs/replacement of ITS components due to equipment malfunction or end of service life. Minor repairs also include, but are not limited to, reattaching loose cable connections, power reset of all equipment, and other incidental repair work. The Contractor shall perform the necessary repair/replacement work, which includes the diagnostic services. Minor repairs are generally considered to be repairs that require less than 4 hours of labor and less than $3,500 in materials.

There are 2 types of minor repair services in this Contract:

- Troubleshoot, reset and reboot services
- Device replacement services

4.1.4.5.1 Troubleshoot, Reset and Reboot Services

For each of the troubleshoot, reset and reboot service items listed in Exhibit "C" Contract Price Proposal, the Contractor shall perform either one or a combination of the following troubleshooting, reset, and reboot procedures:

- Reattach loose cable connections;
- Communications equipment power reset i.e. encoder, terminal server, Ethernet switch, wireless radio, media converters, etc.;
- Electrical equipment power reset i.e. circuit breakers, main breaker, GFCI outlet, power connections, UPS, PDU, etc.;
- Reset/reboot of CCTV camera and camera settings;
- Reset/reboot of DMS controller;
- Reset/reboot MVDS units;
- Reset/reboot BTTS units;
- Reset/reboot WWVDS units;
- Reset/reboot RSS units;
- Reset/reboot other TSM&O devices or equipment;
- Upload/upgrade software/firmware;
- By-pass UPS;
- Repair above ground conduits;
- Change Ethernet port on media converter;
- Clean camera lens;
- Seal components to prevent water intrusion;
- Clean fiber connector;
- Change UPS batteries;
- Clean CLD connectors;

- Reprogram CSU/DSU;
- Conduct pixel test for DMS;
- Change IP configuration for serial ports;
- Trim and reconnect corroded cables;
- Trim and prune vegetation obstruction;
- Repair/terminate network cables;
- Adjust flashing beacons;
- Reset Controller;
- Reset watchdog;
- Drill and tap hole for the installation of screws into the junction box;
- Reset network equipment;
- Check and reset alarm;
- Verify fiber connection;
- Any repair work not identified above which requires less than 4 hours of labor.

For locations with multiple devices collocated at the same site, the compensation for minor repair services shall be for the fixed fee (unit rate) amount of the master device e.g. for a location with CCTV camera and MVDS at same site, and both components are reported as failures, the contractor performs troubleshoot, reset and reboot work for items in the cabinet, the Contractor will get paid fixed fee (unit rate) for the Master component for performing the repair services, which is typically the CCTV camera.

For locations where multiple devices located at various locations but connected to one master device cabinet, the compensation for the minor repair services shall be for fixed fee (unit rate) amount of the master device if the repair work at the master device cabinet rectifies the issue and all connected devices are back to operational status. The Department will pay separate minor repair fixed fee (unit rate) for individual devices, if the Contractor has to perform individual minor repair services to each of the other connected devices, in addition to the Master device.

Certain equipment may require power to be recycled in order to resume normal operation. This includes restarting the field equipment power reset (turning power off/on) remotely

using SunGuide software or third-party Contractor software. The Contractor shall be responsible for performing the power reset procedures in the field. The Contractor shall evaluate such devices that frequently (more than once every two months) require power recycle in order to restore operation and provide a recommendation to the Department to rectify the problem.

MOT/Lane closures costs shall be included in this fixed fee (unit rate).

4.1.4.5.2 Device Replacement Services

For failures that are not rectified by the troubleshooting, reset and reboot procedures, the Contractor shall replace the failed device/component with a new device/component from the parts inventory. This work includes but not limited to, troubleshooting, removal of existing device, installation of new device, integration, testing and calibration where applicable. The Contractor shall not be paid separately for troubleshoot, reset and reboot services when device replacement services are performed at a site. All troubleshoot costs shall be included in the device replacement fixed fee (unit rate).

Repairs involving replacing an existing MVDS unit or adjusting an existing MVDS unit aiming shall be accompanied with MVDS calibration using District Four MVDS calibration procedure. All such repairs are considered major repairs and are not part of the minor repair services. For all such repairs, the Contractor shall complete MVDS calibration within 7 calendar days of failure notification.

MOT/Lane closures costs shall be included in this fixed fee (unit rate).

4.1.4.5.3 Testing Repair Work

Before departure from the field site, the Contractor shall notify the RTMC immediately upon completion of the repair work to verify that the operation of failed component(s) has been restored. The Contractor shall follow the post-repair operations verification steps in the ITS Maintenance SOPs document for repairs verification and closing. Upon completion of the repair work, the Contractor shall perform diagnostic testing to ensure the System is fully functional and operational. The Contractor shall document the test results and provide them to the Department's Project Manager (or his/her designee) for inspection upon request. The Contractor shall include all testing costs within the fixed fee (unit rate) for minor repair services. The Department conducts random review of the Contractor's repair work. Any work that is deemed unacceptable by the Department shall be re-done by the Contractor at the Contractor's expense. The Contractor shall rectify any deficiencies identified by the Department within 5 business days of initial notification.

4.1.4.6 Major Repair

Major repairs for this Contract are defined as non-typical repairs that need extensive diagnostic services to identify the problem and perform extensive repair services. Typically, major repairs may require maintenance of traffic (MOT) and lane closures, utility coordination and regional agency coordination. Major repairs can be damages caused by crashes, vandalism, theft, weather events and third-party Contractors; fiber cuts; power loss from the utility service point; etc. Typical major repairs and parts replacement consist of, but are not limited to, repair or replacement of damaged, missing, or malfunctioning equipment in order to maintain the ITS operation and functionality. Major repairs are generally considered to be repairs that require more than 4 hours of labor and more than $3,500 in materials. For repairs that need manufacturer's expertise, the Contractor shall contact the manufacturer to rectify the deficiency.

For major fiber backbone cuts, the Contractor shall coordinate with the RTMC to investigate alternate redundant fiber paths and perform all necessary work to temporarily reroute the communications path. Following the necessary work to temporarily restore communications, the Contractor shall provide an immediate corrective action to permanently repair the fiber cuts. For fiber repair services, the Contractor shall have the necessary equipment and personnel capable of performing various types of fiber optic repair needed in the field including, but not limited to: mid-span fusion fiber splicing, fiber trunk splicing, Optical Time Domain Reflectometer (OTDR) testing, fiber enclosure/fiber distribution panel installations, and terminations. The Contractor shall have the capability to install both open trench and directional bored conduit for new installation and replacement of damaged conduit. For fiber optic cable backbone cuts that are between two end-to-end splice boxes, the Contractor shall replace and splice the entire segment of the fiber optic cable backbone from one splice box to the other splice box. The Contractor shall not introduce any new splice points on the fiber optic cable backbone without approval from the Department. It shall be the responsibility of the Contractor to perform all sub-surface utility engineering (SUE) and obtain any permits required by the Department before the Contractor commences any work.

4.1.4.6.1 Miscellaneous Work

If requested by the Department, the Contractor shall be responsible for deployment, security, maintenance, and re-fueling of portable generators during power outages. Typical reasons for deployments may include loss of power service to a critical device, loss of power to a hub location or a master cabinet that acts as an aggregate point for a group of devices, loss of power to a single or multiple locations due to vandalism, hurricane and/or other acts of nature. The Contractor shall provide all necessary back-up power using generator(s) to ensure that the system is operational until utility power is restored.

If the Contractor determines that a major system downtime is the result of a utility outage, the Contractor shall immediately notify the Department's Project Manager (or his/her

designee) of the outage. The Contractor shall coordinate and fully cooperate with all utility owners during diagnostics and restoration of utilities to the site. The Contractor shall deploy generator(s) as necessary to maintain the communication links and devices operational until utility power is restored. The Contractor is responsible for fueling the generator(s) until power is restored. It shall be the responsibility of the Contractor to secure the generator at the site to prevent theft. The Contractor shall be responsible for maintaining the generators according to the manufacturer's operating manual. The Contractor shall only use manufacturer trained/certified technicians to provide all maintenance services required to maintain the portable generators.

4.1.4.6.2 Testing of Repair Work

Before departure from the field site, the Contractor shall notify the RTMC Operations/IT staff immediately upon completion of the repair work to verify that the operation of failed component(s) has been restored. The Contractor shall follow the post-repair operations verification steps in the ITS Maintenance SOPs document for repairs verification and closing. Upon completion of the repair work, the Contractor shall perform diagnostic testing to ensure the System is fully operational and functional. The Contractor shall document the test results and provide them to the Department's Project Manager (or his/her designee) for inspection upon request. The Contractor shall be compensated for testing costs based on the time expended using the fixed fee (unit rate) per hour for major repair services. The Department conducts random review of the Contractor's repair work. Any work that is deemed unacceptable by the Department shall be re-done by the Contractor at the Contractor's expense. The Contractor shall rectify any deficiencies identified by the Department within 5 business days of initial notification.

4.1.4.7 Repair Response Time

The Contractor shall comply with the following response time requirements for performing repair services

Table 4.1.4-1 Emergency Failures Response Times

Type of Failure	Type of Repair	Requirement	Response time
Emergency	Minor Repair	Initial Acknowledgement Time	Response within 15 minutes from time of initial failure notification
		On-site Arrival	On-site within 1 hour from time of initial failure notification for locations in Broward County; On-site within 2 hours from time of initial failure notification for locations in other counties.

Table 4.1.4-1 Emergency Failures Response Times			
Type of Failure	**Type of Repair**	**Requirement**	**Response time**
		Repair Time	Repair within 5 hours from time of initial failure notification for locations in Broward County; Repair within 6 hours from time of initial failure notification for locations in other counties;
	Major Repair	Initial Acknowledgement Time	Response within 15 minutes from time of initial failure notification
		On-site Arrival	On-site within 1 hour from time of initial failure notification for locations in Broward County; On-site within 2 hours from time of initial failure notification for locations in other counties.
		Repair Time	Repair or eliminate instant danger within 5 hours from time of initial failure notification for locations in Broward County; Repair or eliminate instant danger within 6 hours from time of initial failure notification for locations in other counties;

Table 4.1.4-2 Urgent Failures Response Times			
Type of Failure	**Type of Repair**	**Requirement**	**Response time**
Urgent	Minor Repair	Initial Acknowledgement Time	Response within 15 minutes from time of initial failure notification

Table 4.1.4-2 Urgent Failures Response Times			
Type of Failure	**Type of Repair**	**Requirement**	**Response time**
		On-site Arrival	On-site within 2 hours from time of initial failure notification for locations in Broward County; On-site within 4 hours from time of initial failure notification for locations in other counties.
		Repair Time	Repair within 6 hours from time of initial failure notification for locations in Broward County; Repair within 8 hours from time of initial failure notification for locations in other counties;
	Major Repair	Initial Acknowledgement Time	Response within 15 minutes from time of initial failure notification
		On-site Arrival	On-site within 2 hours from time of initial failure notification for locations in Broward County; On-site within 4 hours from time of initial failure notification for locations in other counties.
		Repair Time	Repair within 16 hours from time of initial failure notification

Table 4.1.4-3 Priority Failures Response Times			
Type of Failure	**Type of Repair**	**Requirement**	**Response time**
Priority	Minor Repair	Initial Acknowledgement Time	Response within 6 hours from time of initial failure notification

Table 4.1.4-3 Priority Failures Response Times			
Type of Failure	**Type of Repair**	**Requirement**	**Response time**
		On-site Arrival	On-site within 12 hours from time of initial failure notification.
		Repair Time	Repair within 24 hours from time of initial failure notification.
	Major Repair	Initial Acknowledgement Time	Response within 6 hours from time of initial failure notification
		On-site Arrival	On-site within 12 hours from time of initial failure notification.
		Repair Time	Repair within 48 hours from time of initial failure notification.

Table 4.1.4-4 Routine Failures Response Times			
Type of Failure	**Type of Repair**	**Requirement**	**Response time**
Routine	Minor Repair	Initial Acknowledgement Time	Response within 12 hours from time of initial failure notification
		On-site Arrival	On-site within 24 hours from time of initial failure notification.
		Repair Time	Repair within 96 hours from time of initial failure notification.
	Major Repair	Initial Acknowledgement Time	Response within 12 hours from time of initial failure notification
		On-site Arrival	On-site within 24 hours from time of initial failure notification.

Table 4.1.4-4 Routine Failures Response Times			
Type of Failure	**Type of Repair**	**Requirement**	**Response time**
		Repair Time	Repair within 168 hours from time of initial failure notification.

Note 1: On a case-by-case basis, the Department may allow additional time to perform repair services.

Note 2: For locations where Maintenance of Traffic (MOT) and lane closures are required to perform the repair work, the Contractor shall identify and submit the MOT/Lane Closure requests to the Department for approval prior to performing the work. The Contractor shall refer to the MOT requirements and approval procedures as defined in the MOT section of this Contract document. All such repairs shall be performed within the time approved by the Department on a case-by-case basis.

4.1.4.8 Assignment of Repair Services Work for Failures

The Department shall assign Minor Repair Services work for all failure types to the Contractor based on minor repair fixed fee (unit rate) as identified in the Exhibit "C" Contract Price Proposal.

The Department shall assign Major Repair Services work for all failure types to the Contractor based on fixed fee (unit rate) per hour as identified in the Exhibit "C" Contract Price Proposal.

4.1.4.9 Compensation for Repair Services

The Department shall compensate the Contractor based on the fixed fee (unit rate) amounts established under Minor Repair Services section of the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation. The Contractor's Minor Repair Services fixed fee (unit rate) shall include all labor required to perform the service, mobilization costs, MOT costs including both materials and labor, equipment, tools, ITSFM update, vehicles, machinery necessary to perform the work, travel time to the site, overhead, profits, insurance, contractor's warranty, operating margin, administrative costs, and all other incidentals necessary to perform the required services. The Contractor shall use components or parts from the spare parts inventory for performing these services.

The Contractor shall provide fixed fee (unit rate) per hour for the major repair services. The Department shall compensate the Contractor based on the fixed fee (unit rate) per hour established under Staffing Rates section of the Exhibit "C", Contract Price Proposal and in

the manner described under Exhibit "B", Method of Compensation. The Contractor shall use components or parts from the spare parts inventory for performing these services. The Contractor shall be compensated separately for all MOT related costs based on MOT Services section of the Exhibit "C", Contract Price Proposal and upon Department's approval.

4.1.5 Express Lanes (EL) ITS Maintenance Services

The Contractor shall provide preventive maintenance services, diagnostic and troubleshooting services, and repair services for District Four Express Lanes ITS equipment, 24 hours a day, 7 days a week, and year-round for the term of the Contract. The District Four Express Lanes system currently consists of the 95 Express Lanes and the I-75 Express Lanes. Within the District Four limits, the 95 Express Lanes System is approximately 32 miles in total, from the Miami Dade/Broward County Line to north of Yamato Road. The I-75 Express Lanes System is approximately 15 miles from the Miami Dade/Broward County Line to I-595.

For this Contract, the following ITS devices shall be considered EL ITS devices:

- Lane Status DMS;
- Toll Amount DMS;
- Incident management DMS located exclusively over the Express Lanes;
- Confirmation cameras dedicated for the DMS types listed above;
- MVDS with EL links;
- Ramp Signaling System (RSS).

The Express lanes projects also installed overhead toll gantry structures, and associated toll equipment buildings housing toll communications equipment. The maintenance of these structures is not part of this Contract. The tolling equipment is operated and maintained by the Florida's Turnpike Enterprise (FTE). Some of the toll equipment buildings have two sides; one side that houses tolling equipment, and one side that functions as an ITS hub housing ITS equipment. The Contractor shall only maintain the ITS communications hubs, and other ITS equipment located within the ITS communications hub. If a hub is a shared hub between Tolls and ITS, the Contractor shall only be responsible for maintaining the ITS part of the hub.

Table below shows ITS infrastructure quantities for the currently operational EL. These ITS device quantities are not intended to be exhaustive and are provided for general reference only. Ongoing and future construction projects may add additional EL devices. The Contractor shall field verify all devices independently.

Table 4.1.5-1 EL ITS Device Quantity

ITS Infrastructure	Quantity
Lane Status DMS	45
Toll Amount DMS	90
Incident Management DMS	18
CCTV Cameras	115
MVDS	351
RSS	60

The project plans for completed and ongoing Express Lanes construction projects (attached in Appendix "3" of the Contract). The Contractor shall refer to those plans for ITS infrastructure information.

4.1.5.1 EL Preventive Maintenance Services

All Preventive Maintenance requirements described previously under the Preventive Maintenance Services section shall apply for the Express Lanes Preventive Maintenance Services.

4.1.5.2 EL Diagnostic, Troubleshooting, and Repair Services

All Diagnostic, Troubleshooting, and Repair Services requirements described in previous sections shall apply for EL devices.

4.1.5.3 EL Response Times

Based on criteria listed in Section 4.1.4 – Repair Services, all EL device failures or failures that will impact EL operations are considered Urgent Failures. The Contractor shall comply with urgent failure response times defined in previous sections when performing Diagnostic, Troubleshooting, and Repair Services for EL devices.

4.1.5.4 EL MOT Requirements

For all Express Lanes preventive maintenance MOT requirements, refer to the MOT section in 4.3.3.

4.1.5.5 Compensation for EL Maintenance Services

The Contractor shall provide fixed fee (unit rate) for EL ITS equipment preventive maintenance services. The Department shall compensate the Contractor based on the fixed fee (unit rate) amounts established under the EL ITS Maintenance Services section of the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation. The Contractor's Preventive Maintenance Services fixed fee (unit rate) shall include all labor required to perform the service, mobilization costs, equipment/tools/vehicles/machinery necessary to perform the work, travel time to the site, MOT costs including both materials and labor, overhead, profits, insurance, contractor's warranty, operating margin, administrative costs, and all other incidentals necessary to perform the required services. The Contractor shall use components or parts from the spare parts inventory for performing these services.

The Contractor shall provide fixed fee (unit rate) for the Minor Repair Services. The Department shall compensate the Contractor the amounts established under the EL ITS Maintenance Services of the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation. The Contractor's Minor Repair Services fixed fee (unit rate) shall include all labor required to perform the service, mobilization costs, equipment/tools/vehicles/machinery necessary to perform the work, travel time to the site, MOT costs including both materials and labor, overhead, profits, insurance, contractor's warranty, operating margin, administrative costs, diagnostic and troubleshooting services and all other incidentals necessary to perform the required services. The Contractor shall use components or parts from the spare parts inventory for performing these services.

The Contractor shall provide fixed fee (unit rate) per hour for the Major Repair Services. The Department shall compensate the Contractor the amounts established under Staffing Rates section of the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation.

4.1.6 Special Projects

Special projects to better the System may be assigned based on needs and available funding. During this Contract, special projects such as minor installations, technical analysis, system integrations, testing and other support systems may be assigned. If requested, the Contractor shall provide special project services. The Department shall assign all Special Projects work to the Contractor using LOA based on fixed fee (unit rate)

per hour under Optional Services Staffing Rates section as identified in the Exhibit "C" Contract Price Proposal.

Some of the other services that have been identified as a potential need of the Department are:

- Representing FDOT and Coordination with Third Party Contractors;
    - Providing access to existing ITS equipment to third party contractors;
    - Providing inspection support for final acceptance;
    - Providing other technical support as requested by the Department.
- ITS Reports and Analyses Services
    - Prepare before-and-after studies to evaluate the effectiveness of ITS infrastructure;
    - Prepare cost effectiveness analyses of existing or proposed equipment and any other initiatives related to ITS infrastructure and maintenance.
- Any other Services as requested by the Department.

The Contractor shall provide cost estimates based on fixed fee (unit rate) per hour under Optional Services Staffing Rates section from Exhibit "C", Contract Price Proposal, for Department's review and approval for all work performed under Special Projects. No work shall be performed without written authorization from the Department. Compensation shall be based on fixed fee (unit rate) per hour under Optional Services Staffing Rates section from Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation.

4.2 Control of Materials

4.2.1 District Four RTMC and Field Site Device Inventory

The Contractor shall be responsible for the maintenance of all existing and future ITS devices in District Four. Table below showing ITS device quantities are not intended to be an exhaustive list and are provided for general reference only. Ongoing and future construction projects may add additional ITS infrastructure. The Contractor shall field verify all devices independently.

Table 4.2.1-1 ITS Infrastructure in District Four

ITS Infrastructure	Quantity
Incident Management DMS	171
Lane Status DMS	45
Toll Amount DMS	90
EDMS	10
CCTV Cameras	700
MVDS	751
Other Vehicle Detectors	105
Ramp Signals	60
Wrong Way Vehicle Detection System	37
Wireless Access Points	43
Variable Speed Limit Signs (VSLS)	28
Road Weather Information System (RWIS)	4
Highway Advisory Radio	35
Inductive Loops	15
Fiber Optic Cable Backbone Miles	282 centerline miles
PFB	25
Communication Hub Buildings	18
Communication Hub Cabinets	9

District Four ITS device maps (attached in Appendix "4" of the Contract) and District Four ITS device lists (attached in Appendix "5" of the Contract) are for general reference only.

4.2.2 Parts Procurement

The Contractor shall coordinate and assist the Department in purchasing the parts. The Contractor shall be responsible for recommending to the Department, the parts that need replenishment along with anticipated dates when these parts will become depleted, if the inventory is not replenished. When requested by the Department, the Contractor shall purchase and furnish the parts as needed to maintain and repair the System with minimal equipment downtime. All parts purchased by the Contractor shall be approved by the Department prior to the Contractor furnishing any part. All parts shall be new, equal to or better in function and quality than the component, device or equipment being replaced. The Contractor shall submit cut sheets (when necessary) of all new parts for Department approval prior to furnishing the part. The proposed part shall be the latest compatible technology, equal to or better in function and quality to the existing System component or equipment.

The Contractor shall procure parts on an as-needed basis and as directed by the Department to maintain at a minimum 10% stock level for each part type to minimize equipment downtime. The Contractor shall evaluate the stock level periodically, at a minimum once a month, and increase or decrease the stock levels when approved by the Department. The Contractor shall obtain approval from the Department, prior to changing the minimum stock levels.

The ITS Maintenance Contractor shall develop and submit a Monthly Parts Purchase Projection Report **(official deliverable)** as part of every other Bi-Weekly Status Report each month to the Department for review and approval. The Parts Projection Report shall at a minimum include:

- parts to be purchased
- purchase schedule
- cost estimate

Such projection shall be developed based on current stock level, project needs and schedule, Department's funding availability and schedule, parts delivery time, and other Department needs. When developing the parts purchase projection, the Contractor shall take into consideration approval time for purchasing parts using Department's funds. The intent of this projection is to make sure that most of the parts, if not all, will be procured using Department's funds and the 10% minimum stock level will be always maintained.

Any item with a unit cost of $1,000.00 or more, shall require three quotes from three vendors. If an item being obtained from the APL cannot have three quotes, a justification shall be submitted to the Department in writing as to why there are not three quotes and there is no other option.

The Contractor shall include all Monthly Parts Purchase Projection Report development costs within the on-site and operations staffing fixed price (lump sum) section of the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation.

4.2.3 Parts Inventory

Contractor shall be responsible for storing all ITS related parts. For this Contract, Department may provide below five storage facilities for use by Contractor:

- FDOT Broward Operations (5548 NW 9th Avenue, Fort Lauderdale, FL 33309)
    - This location is an outdoor gated storage facility within the Operation Center grounds. The Department may provide two storage containers,

approximately 40 feet long x 8 feet wide each with rollup doors. There may be additional limited outdoor space for storage.

- FDOT Palm Beach Operations (7900 Forest Hill Boulevard, West Palm Beach, FL 33413)
    - This location is an outdoor gated storage facility within the Operation Center grounds. The Department may provide two storage containers, approximately 40 feet long x 8 feet wide each with rollup doors. There may be additional limited outdoor space for storage.
- Palm Beach Vista Center (2300 Jog Road, West Palm Beach, FL 33411)
    - This location is a secure indoor air-conditioned office space within the Center building. The Department may provide two storage rooms, approximately 200 square feet each.
- Palm Beach Fire Station (1030 N Florida Mango Road, West Palm Beach, FL 33409)
    - This location is an outdoor gated storage facility. The Department may provide two storage containers, approximately 20 feet long x 8 feet wide each. There may be additional limited outdoor space for storage.
- FDOT TIMSO Center (3601 Oleander Avenue, Fort Pierce, FL 34982)
    - This location is both a gated outdoor area and a secure indoor space. The Department may provide three 40 feet long x 8 feet wide containers, and one indoor air-conditioned storage room. The Department may also allow the Contractor to utilize an area of an adjacent gated outdoor yard located east of this storage location for storage.

Storage facilities provided by the Department do not suffice storage needs for this Contract. The Contractor shall supplement existing FDOT storage facilities with additional storage facilities to maintain the minimum stock levels and meet other contractual requirements. All such additional storage facilities shall have proper insurance coverage for the parts stored and shall be approved by the Department before storing parts. All such additional storage facilities shall be suitable for storing ITS equipment, shall be marked specifically for this Contract and shall not be used for any other purposes. All such additional storage facilities shall be within a 15-mile radius of the RTMC (2300 West Commercial Boulevard, Fort Lauderdale, FL 33309), or within a 15-mile radius of the existing storage facilities in Palm Beach County. The Contractor shall not be compensated for any storage facilities separately. All storage facility related cost shall be included in the various bid items in Exhibit “C”, Contract Price Proposal.

All spare parts shall be stored and secured in a manner that will ensure parts are not damaged or prematurely degraded because of exposure to weather, excess moisture or heat or any inappropriate conditions not suitable for safe storage of the ITS equipment. The Contractor shall always be responsible for all spare equipment in their possession. For any lost or destroyed spare parts, the Contractor shall replenish the inventory with a new item of the same type, manufacturer, and model at Contractor’s own expense. For cases when

the Contractor fails to replenish, the Department may choose to assess at its discretion an invoice payment reduction based on the unit price of the lost/destroyed item.

The Contractor shall maintain and have readily available, an up-to-date inventory of all the Department's equipment and/or parts throughout the Contract. The inventory shall contain at a minimum the following information:

- Manufacturer
- Model number
- FDOT Asset Management ID (MIMS and others)
- Descriptive name
- Manufacturer serial number
- APL number if applicable
- Current location
- Condition (new, used, damaged, etc.)
- Available for use
- Date of purchase
- Date of retirement
- Warranty status if applicable

The Contractor shall develop and submit a Monthly Spare Parts Report **(official deliverable)** as part of every other Bi-Weekly Status Report each month to the Department for review and approval. The monthly spare parts report shall include at a minimum the following information:

- Manufacturer, model number and descriptive name of each spare part;
- Stock quantity at each storage facility;
- RMA quantity;
- Surplus quantity;
- Baseline quantity; and

- Procurement status.

The Contractor shall include all Monthly Spare Parts Report development costs within the on-site and operations staffing fixed price (lump sum) section of the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation.

4.2.4 Parts Tracking

The Contractor shall maintain complete records of the location and status of all ITS assets and spare equipment utilizing the Department's Maintenance and Inventory Management System (MIMS) software. It is the responsibility of the Contractor to ensure that the exact location of all parts is constantly updated in MIMS. If the parts location in MIMS is shown as field, the Contractor shall supplement that with corresponding device SunGuide ID and actual field location description in MIMS. The ITS Maintenance Contractor shall provide a unique MIMS identification number to existing parts which do not have one, except for bulk items with less than $1,000 in value or other items deemed not needed by the Department. Additions, deletions and modifications of items due to construction projects must be reflected in MIMS within four months of project final acceptance. The Contractor shall follow any additional steps detailed in the latest ITS Maintenance SOP document on parts tracking and inventory.

4.2.5 Parts Repair Process and Warranty Tracking

The ITS Maintenance Contractor shall assess the cost feasibility for repairing a failed part and advise the Department on the repair process. All parts are to be tested before sending in for a repair or if discontinue before sending to be retired. Upon the Department Project Manager's (or his/her designee) approval, the ITS Maintenance Contractor shall ship all failed parts to the manufacturer's Return Material/Merchandise Authorization (RMA) facilities for repair. During this process, the ITS Maintenance Contractor will also verify the warranty and inform the manufacturer's RMA facility, if the warranty is applicable. The Contractor shall use MIMS software for tracking equipment sent to RMA facilities and for tracking the warranty information. The ITS Maintenance Contractor shall follow any additional steps detailed in the latest ITS Maintenance SOPs document on parts repair process and warranty tracking.

4.2.6 Inventory Database/Facilities Management System

The Department is using the ITS Facility Management (ITSFM) system to support the long-term ITS asset and configuration management needs of the ITS Program statewide. The ITSFM compiles System asset information in a single, web-accessible repository, allowing the Department to collectively manage the entire system in a coordinated manner. The ITSFM is hosted/provided by the FDOT's Central Office to the Districts and other regional partners.

The ITS Maintenance Contractor shall use the ITSFM for inventory and facilities management purposes. The Contractor shall update ITSFM data used to inventory the ITS field equipment including, but not limited to, outside plant cabling, duct, splice points, terminations, field devices, and other field installed assets.

The information contained within the ITSFM is confidential material; therefore, the Contractor must ensure that staff working under this Contract has passed the Florida Department of Law Enforcement (FDLE) or the State Law Enforcement Radio System (SLERS) background check and other necessary background checks as determined by the Department so the Department can issue user login credentials to the ITSFM.

The Contractor shall ensure all ITS maintenance staff who will have access to ITSFM receive at a minimum ITSFM maintainer-level training within 1 month of Contract Start Date. For any new staff added to this Contract during the Contract's term who will need access to ITSFM, the new Contractor staff shall receive at a minimum, the ITSFM maintainer-level training within 1 month of employees' start work on this Contract. During this time, the Contractor shall continue to use other staff to perform the required ITSFM updates.

The Contractor shall provide staff with an ITSFM-compatible laptop computer with direct Internet access from the equipment site to ensure that the maximum benefit from the ITSFM is available to the user. Asset changes to the system shall be updated to the database in real-time or as otherwise directed by the Department. The Contractor will be responsible for recurring usage cost including computer hardware, connection to the Internet, etc.

The Contractor shall include the resources required to populate the database and routinely update the database as maintenance work changes the inventory and configuration. Information populated in the ITSFM shall meet requirements from ITSFM Functional Requirements for the District Four District-wide Implementation, (attached in Appendix "6" of the Contract).

4.2.7 Utility Locating Services

The Contractor shall provide all necessary services to designate and locate existing surface and subsurface utilities to support the maintenance and operations of the System as indicated by the Department. The Contractor must register with the Sunshine 811 System within 30 days of Contract NTP.

The Contractor shall provide locations of the System underground facilities as required by the Department or others and shall accommodate schedules of other agencies requesting such locations. The Contractor shall be responsive to all requests received from the Sunshine 811 System, and if deemed necessary by the Department, more accurate location information may be required than required by Sunshine 811 standards. A file will be maintained on all calls and their respective reference numbers, date, time of arrival, and

personnel conducting locates. This shall be in a spreadsheet format. If the Contractor damages System underground facilities, either directly or indirectly, by incorrect locates, the Contractor shall repair the System underground facilities at the sole cost of the Contractor. In this case, the Contractor shall make any temporary repairs within 24 hours and any permanent repairs within 60 days of the damage unless the damage is classified as an Emergency by the Department which will then require repair within the response time defined for Emergency Failures of this Contract.

The Contractor shall be available for the location and verification services during construction of other roadway projects which could impact the System, if required:

- Designate, record, and mark the approximate horizontal location of the existing utilities and their major laterals by a method approved by the Department. The horizontal designating of the underground utility line shall be within two feet of either side of the underground utility line as shown on the plan sheets.

- Determine and provide the Department with the approximate depth of all existing utilities. This depth indication is understood by both the Contractor and the Department to be approximate only and is not intended to be used in designing the right-of-way and construction plans.

The Department shall compensate the Contractor fixed fee (unit rate) per hour under Staffing Rates section of the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation.

4.2.8 Utility Coordination

The Contractor shall fully cooperate with all utility owners during construction, installation or repair associated with this Contract. The Contractor shall call the Sunshine 811 System a minimum of 48 hours and a maximum of 96 hours before any excavation work. The Contractor shall furnish and install all equipment and materials and perform all work in accordance with all applicable utility owner standards and procedures. The Contractor is responsible for ascertaining the exact location of all utilities prior to the beginning of work in an area. Utility locations shown on Department plans are approximate and may not include all utilities.

The Contractor shall be responsible for coordinating and meeting with all utility companies having overhead or underground facilities in proximity with the Contractor installations. A file shall be kept with a list of all utility contacts and a coordination log detailing the history of correspondence in spreadsheet format.

The Contractor shall be responsible for determining and performing any needed subsurface utility engineering (SUE) work. The Contractor shall be responsible for all damages incurred when performing work under this contract.

The Department shall compensate the Contractor fixed fee (unit rate) per hour under Staffing Rates section of the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation.

4.3 General Requirements for Execution of Work

The Contractor shall be responsible for all labor, materials, and incidentals required to execute and complete the requirements of this Contract including, but not limited to, the following:

1. Project management and contract administration;
2. Communications and coordination between the Department and the Contractor;
3. Communications and coordination with other Contractors and Consultants;
4. Staffing services and Personnel requirements;
5. Project documentation and recordkeeping;
6. Progress reports and Invoicing;
7. Contract Status meetings, including meeting minutes and agendas;
8. Preventive maintenance and diagnostic and troubleshooting services;
9. Repair services;
10. Mobilization and MOT services;
11. Special Projects services;
12. Inventory and Asset Management services;
13. Warranty services
14. Utility coordination;
15. Emergency power support; and
16. Hurricane Response Services and Disaster reporting.

Device failures can be described as Emergency, Urgent, Priority, and Routine. Each failure type has specific requirements for response times. Non-performance penalties shall be assessed for failure to meet those response times as described in this Contract. The Contractor shall fully cooperate with all utility owners during activities such as, but not limited to, construction, installation, or repair associated with this Contract. The Contractor shall call Sunshine 811 a minimum of 48 hours and a maximum of 96 hours before any excavation work requiring locate services from member operators of Sunshine 811.

The Contractor shall furnish and install all equipment and materials and perform all work in accordance with all applicable standards and procedures. The Contractor is responsible for ascertaining the exact location of all utilities prior to beginning work in an area. Utility

locations as shown on Department plans are approximate and may not include all utilities. If any utility damages are incurred as a result of Contractor's operations, it shall be the Contractor's sole responsibility to repair such damages or bear the cost of repairs performed by others.

The Contractor shall be responsible for coordinating and meeting with all utility companies having overhead or underground facilities in proximity with work performed under this Contract. The Contractor shall be responsible for determining and performing any needed SUE work.

The Contractor shall be responsible for providing the Department with a detailed damage report after the occurrence of a disaster, natural or otherwise when notified and requested by the Department. This report shall include an individual site analysis including but not limited to:

- Device ID
- Device location,
- Date and time of visit,
- Description of failure or issue and system impacts,
- Site conditions noted, i.e. submerged, structure down, no power,
- Photo documentation (digital only),
- Damaged parts list: type, model, and serial and control numbers,
- Needed parts list,
- Repair cost breakdown,
- General notes, and
- Schedule of repair duration.

The damage report by the Contractor shall be per site and include all devices connected to the cabinet location. The Contractor shall develop a mutually agreed schedule with the Department for submittal of damage reports for disasters depending on the severity of the disaster. The Department shall compensate the Contractor based on the fixed fee (unit rate) per hour established under Staffing Rates section of the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation.

4.3.1 Scheduling and Execution of Work

All work shall be scheduled with and approved by the Department's Project Manager (or his/her designee). The Contractor shall work with the Department's Project Manager (or his/her designee) under this Contract to establish normally scheduled activities. Work not covered under the scope of agreed upon scheduled activities must be authorized in writing by the Department's Project Manager (or his/her designee).

4.3.2 Mobilization

Work under this contract will require movement of personnel, equipment, supplies, and incidentals. The Contractor shall include all mobilization cost into respective bid items under Exhibit "C" Contract Price Proposal. The Contractor will not be compensated for any additional and separate mobilization costs.

4.3.3 Maintenance of Traffic

Maintenance of Traffic (MOT) shall include the planning, furnishing, installing, maintaining, and removing of traffic control and safety devices. The Contractor shall utilize the applicable Traffic Control Plans as approved by the Department for all maintenance and repair activities for equipment on the highway and arterials. The Contractor is responsible for identifying all MOT requirements necessary to perform preventive maintenance, diagnostic and repair services. MOT plans and procedures shall be in accordance with current FDOT standards.

The need for lane closures shall be determined on a case-by-case basis as requested by the Contractor. The Contractor shall submit all required lane closure requests via Department's portal, such as the Lane Closure Information System (LCIS), Lane Closure Notification System (LCNS), or other system designated by the Department. Approval for all lane closures, mobile operations, and traffic pacing operations is required. Submit non-emergency requests 14 calendar days in advance of planned lane closures, mobile operations, and traffic pacing operations. Confirm at least once every two weeks that information entered reflects current planned operations and update as necessary. For unforeseen events that require cancelling or rescheduling lane closures, mobile operations, and traffic pacing operations, revise the lane closure request as soon as possible.

For Emergency Closures, the Contractor still needs to submit the request on LCIS or other systems but will choose "Emergency Lane Closure" from the drop-down menu. The system will grant instant approval and the Contractor shall proceed with immediate MOT deployment without any delay regardless of system approval status.

For Urgent Failures during the Department's regular working hours (8:00 AM to 5:00 PM), the Contractor shall seek approvals from the FDOT Project Manager (or his/her designee) prior to performing any work. For Urgent Failures during holidays and after hours, the Contractor shall input all lane closure information into LCIS or other portals and perform emergency MOT request.

The Contractor shall have at least one individual on its staff throughout the term of this Contract with a Florida Advanced Maintenance of Traffic certification.

Because of the unique nature of this contract and the work specified herein, MOT shall be paid for according to the work level assigned unless otherwise noted. The level shall be

determined by the Contractor and approved by FDOT Project Manager (or his/her designee) and assigned with each work order. In instances where no MOT operations are anticipated, there will be no MOT level assigned. The level shall be determined according to the following criteria:

Level 1: Where at least a portion of the work assigned on the work order is to be performed off the roadway, but in close enough proximity to the traveled way to require signing, but does not require lane closure.

Level 2: Where at least a portion of the work assigned on the work order is to be performed within the paved surface of a rural or low volume urban two-lane, two-way roadway (day work, flagging).

Level 3: Where at least a portion of the work assigned on the work order is to be performed within the paved surface of a non-limited access, multi-lane divided or undivided roadway, such as a rural or urban state or United States (US) route (day or night work, off-duty law enforcement not required).

Level 4: Where at least a portion of the work assigned on the work order is to be performed within the paved surface of a non-limited access, multi-lane divided or undivided roadway such as a rural or urban state or US route (day or night work, off-duty law enforcement required).

Level 5: Where at least a portion of the work assigned on the work order is to be performed within the paved surface of a limited-access facility, rural or lower volume urban (day or night work, off-duty law enforcement not required).

Level 6: Where at least a portion of the work assigned on the work order is to be performed within the paved surface of one or more lanes of a multi-lane, divided or undivided roadway, daylight or nighttime hours where off-duty law enforcement is required.

Level 7: This level may be used in conjunction with any of the above levels where additional signage or additional law enforcement are required to detour traffic around work zones to alternate roadways or for short-term traffic diversions.

4.3.3.1 Compensation for Maintenance of Traffic Services

The Contractor shall include all MOT costs for preventive maintenance and minor repair visits within the fixed fee (unit rate) established under preventive maintenance services section and minor repair services section of the Exhibit "C", Contract Price Proposal. No separate MOT costs shall be paid for any preventive maintenance visits or minor repair service visits.

The Contractor shall prepare and submit cost estimates for MOT costs for all major failure repair services to the Department for review and approval, based on fixed fee (unit rate)

established under MOT Services section of the Exhibit "C", Contract Price Proposal and in a manner described under Exhibit "B", Method of Compensation.

4.3.4 Warranty for Contractor Services and Materials

The Contractor warrants to the Department that all services, materials, parts, and supplies furnished under this Contract shall be free from defects in material or workmanship and in accordance with good trade practices and local, state, and federal codes.

The Contractor guarantees that upon completion of the services required by the Contract, the work areas shall be left in a clean, sanitary, and safe condition.

The Contractor agrees that each job assignment performed will be reviewed and approved by the Contractor's Project Manager before the Department's Project Manager (or his/her designee) is requested to approve and process invoices for payment.

The Contractor will correct deficient work and replace defective material provided and supplied or credit the Department for the inadequate services and materials. The Department's Project Manager (or his/her designee) shall have the right to determine which course of correction must be taken.

Upon completion of a repair/installation, the Contractor shall warranty the labor for a period of 90 calendar days from the date of acceptance by the Department for all repairs. Within the warranty period, if the device/equipment fails for the same reason, the Contractor shall make all necessary repairs at the Contractor's expense. As part of Department's oversight, the Department performs monthly field inspections to ensure repairs are done per contractual requirements. Any discrepancies identified shall be rectified by the Contractor within 5 business days of notification from Department at no additional cost to the Department.

The Contractor shall assure the Department that device equipment manufacturer warranties are not voided by repair services or other actions of the Contractor at any point during the Contract. If a device warranty expires, the Contractor shall notify the Department's Project Manager (or his/her designee) for the option to renew and/or replace the device if the unit is non-operational.

The Contractor shall act on behalf of the Department to track manufacturer warranties and pursue warranty repairs from device manufacturers when failures are covered by the manufacturer's warranty. The Contractor is responsible for coordinating warranty repairs with the Department's Project Manager (or his/her designee) and the device manufacturer/reseller. In the event warranty or insurance coverage is applicable, the Contractor shall identify the proper procedure for contacting the entity responsible for coverage, secure the proper forms used for claim notification, and coordinate the repair, return, and disposition of equipment. Repaired Department equipment returned from the

manufacturer shall be held in inventory as spare parts if it is not to be immediately reinstalled. The Contractor shall support the Department in pursuing claims until each claim is resolved to the satisfaction of the Department.

4.3.5 Lost, Stolen, or Damaged Department Owned Resources

The Department's Project Manager will provide a list of Department owned resources for the Contractor. The Contractor shall acknowledge receipt and responsibility of the Department owned resources by executing a State of Florida Department of Transportation "Property Transfer Receipt" form.

In the event Department owned resources have been lost, stolen, or damaged, and had been in exclusive possession and control of the Contractor, the Contractor shall replace the Department owned resources at its own expense within 15 calendar days of the time when the item(s) was known to be lost, stolen, or damaged. If property cannot be located, the Contractor shall complete and submit a Notification of Missing Property (NOMP) form (Form No. 350-010-63) along with a process improvement statement with each NOMP form. If the item is not directly replaceable due to non-availability of identical models, the Contractor will replace the item with a functionally equal or better item or directly compensate the Department. The risk of loss to any equipment being repaired or replaced shall be the responsibility of the Contractor having possession or control of the equipment at the time of the loss.

4.3.6 Use of Subcontractor(s) or Subconsultant(s)

The support of the System may require a multi-disciplinary team made up of a prime Contractor and subcontractors to successfully fulfill the obligations of this Contract. The Contractor must provide contact information for all subcontractors and indicate their areas of expertise and responsibility. Use of subcontractors must be coordinated with, and approved by, the Department's Project Manager.

4.4 Working Hours, On-call Responsibilities, Response Times, and Limitations

4.4.1 Standard Hours of Operation

The Contractor shall have maintenance personnel available 24 hours a day, 7 days a week, year-round, for the duration of the Contract. The Department's business hours are Monday through Friday from 8:00 a.m. – 5:00 p.m. The Department's offices are typically closed at 5:00 pm on weekdays, on holidays and weekends.

The following holidays are observed by the Department. The Department may have other holidays issued by the State of Florida. If any of these holidays fall on a Saturday, the preceding Friday is observed. If any fall on a Sunday, the following Monday is observed:

- New Year's Day

- Martin Luther King Day
- Memorial Day
- Independence Day
- Labor Day
- Veteran's Day
- Thanksgiving Day and the following day
- Christmas Day

4.4.2 On-call Responsibilities

The Contractor shall provide on-call staff with vehicles, equipment, tools, materials, supplies, cellular phones and other incidentals required to respond to any repair work issued by the Department at all times. On-call staff assignments shall be coordinated with the Department's Project Manager and clearly communicated to staff responsible for RTMC operation. Qualified maintenance staff shall be on-call during afterhours, weekends, Department-observed holidays and at all times for the term of this Contract to respond to failures, calls and issues. The Contractor shall perform repairs and maintenance activities 24 hours a day, 7 days a week, year-round.

The Contractor shall provide the Department's Project Manager (or his/her designee) with a list of telephone numbers that will be answered 24 hours a day, 7 days a week by the Contractor's personnel to satisfy this Contract requirement. The Contractor shall also provide the Department with a list of e-mail addresses to which all the Department's electronic correspondence shall be sent.

4.4.3 Response Times

The Contractor shall respond to Department's notifications, mobilize and be present at the work site within the time frames established under this Contract.

Failure by the Contractor to meet the required response time shall result in the Contractor being assessed a Non-Performance invoice reduction, receive a poor performance evaluation and/or may cause the Department to terminate the Contract.

4.5 Security and Safety Requirements

The Contractor shall utilize proper safety measures to ensure the proper protection for persons and property at all times.

The Contractor shall be responsible for ensuring that all equipment used is maintained in a safe and efficient manner in accordance with all local, state, and federal laws, safety organizations, regulations, and guidelines pertaining to providing the required services.

The Contractor shall follow all safety requirements outlined in the National Electric Safety Code, OSHA, and any standards or practices for safe installation or maintenance of required equipment per this Contract.

The Contractor shall be responsible for any injury to person(s) or damage to property that occurs as a result of Contractor activities under this Contract. The Contractor shall notify the Department immediately after any injury incurred by person(s) working under this Contract.

At the conclusion of a workday, the Contractor's personnel must leave the work area free of safety hazards. The Department assumes no liability for any equipment or personal belongings or effects left unattended on Department property.

The Contractor shall be solely responsible for the safety of all its personnel.

The Contractor shall be solely responsible for maintaining the safety required and providing safety equipment and procedures for the protection of employees and the public throughout the area(s) where work is performed under this Contract.

If any deficiency may cause harm to life or property, or violate any rules or regulations such as, but not limited to, Americans with Disabilities Act, OSHA, or otherwise contained herein, the Department may take immediate corrective action(s), and the Contractor shall be responsible for the burden of any associated direct and/or indirect costs.

4.6 License and Insurance Qualifications

The Contractor shall hold the licenses and certifications necessary to provide the services described in this Contract in the counties specified and be required to submit proof of licenses and certifications prior to work being performed.

The Contractor shall certify that skilled employees and/or subcontractor(s), who possess the necessary specialty licenses, as required by law to perform the work, shall provide the services being performed and provided by the Contractor as described in this Contract.

All records, insurance, and licenses must be current. The Contractor must provide the Department's Project Manager with evidence of current records, insurance, and licenses and copies must be kept on file in the RTMC for the duration of this Contract and all renewals, and will be provided within 24 hours upon request by the Department.

At a minimum, the Contractor shall hold below licensure and certifications and submit proof of the following licenses and certifications along with Technical Proposal:

- Low and High Voltage Electrical Contracting License;
- CISCO network certifications e.g. CCNA Certification (Cisco Certified Network Associate Certification);
- COMPTIA Network Plus Certification (Computing Technology Industry Association Certification)
- MOT Certifications: FDOT Advanced Maintenance of Traffic certification
- Fiber Optic Cable Certifications: Technicians should have fiber training from at least one of the fiber optic cable manufacturers e.g. Corning Fiber training, Light Brigade Fiber training, BICSI Fiber training, etc.

The Contractor shall certify that skilled employees and/or Sub-Contractor(s)/Sub-Consultant(s) who possess the necessary specialty licenses, as required by law to perform the work. The Contractor shall be required to provide the Department with the required types of insurance in the limits as stated in the Contract. The Contractor shall carry and keep in force during the period of the Contract and any subsequent renewals, a current general liability insurance policy or policies with a company or companies authorized to do business in the State of Florida, affording public liability insurance with combined bodily injury limits of at least $1,000,000.00 per person and $5,000,000.00 each occurrence, and property damage insurance of at least $1,000,000.00 each occurrence.

4.7 Location of the Work

The Contractor shall be responsible for maintenance of all existing, under-construction, and future Department owned and operated ITS infrastructure located in Broward, Palm Beach, Martin, St. Lucie, and Indian River Counties.

4.7.1 Field Sites

The Contractor shall provide maintenance services for ITS infrastructure located at existing and future field sites throughout the geographic coverage area of the Contract.

4.8 Required Qualifications

4.8.1 Staffing Requirements

Support of the System will require a multi-disciplinary team. The following areas of expertise are considered to be the minimum necessary to successfully fulfill the obligations of this Contract. Subcontractors submitted with the response are allowed.

- Project management / administration;

- Electrical trades;
- Electronic and electro-mechanical component diagnostics, troubleshooting, and repair;
- Computer hardware troubleshooting and repair;
- Local area network and wide area network design, operation, and maintenance;
- Ethernet, serial, and wireless communications;
- Networking and network protocols, including switching, routing, VLANs, OSPF, PIM, SNMP, IGMP, IGRP, DVMRP, DNS, etc.;
- Computer applications / database management;
- Analog and digital video transmission;
- Fiber optic network configuration and administration;
- Fiber Optic Cable termination, splicing, testing, and management;
- Installation, configuration, troubleshooting, and maintenance of analog and digital video equipment, network devices, DMSs, WWVDS, RSS, HAR systems, RWIS, and VDS;
- Installation, configuration, troubleshooting, and maintenance of emerging technologies such as Connected Vehicle (CV) deployments, Smart Work Zone (SWZ) devices, moveable bridge notification system, etc.;
- Programming and operation of traffic controllers;
- Grounding and surge protection systems and related equipment;
- Configuration management;
- Security devices for System installations;
- Installation of ITS poles and structural supports according to Department procedures; and
- MOT.

The Contractor shall keep a staff of the required levels to respond to all requirements of this Contract at all times during the term of the Contract. The Contractor shall provide on-

site maintenance staff in the Department's designated location(s). The Contractor shall develop a staffing plan indicating how absences and vacations will be covered, and the expected activities of each proposed staff member. The Contractor shall provide suitable replacement staff during vacations or sick periods of primary staff.

The Contractor must provide resumes for all personnel proposed for this Contract in their bid package. Any changes to staff identified in the bid package submitted by the Contractor shall be subject to review and approval by the Department in writing before any billable services are authorized. Requests to add or change staff must be accompanied with accurate and current resumes for proposed individuals, including information on their licenses and certifications as well as a description of their expected duties.

The Department will conduct Contractor performance reviews on a quarterly basis. When deficiencies are identified with Contractor employees assigned to the Contract, the Contractor will immediately implement remedial action. Remedial actions may include further training of the employee, subdivision or reassignment of the employee, addition of staff, and removal of the employee from the Contract. All Contractor employees working on this Contract are understood to be working under the direction and at the will of the Department's Project Manager.

4.8.1.1 Maintenance Staff Location and Availability

Contractor staff whose primary function is performing work associated with this Contract shall be located within the geographic coverage area designated by the Department. The Contractor shall supply additional skilled staff from other locations, as requested by the Department. The Department may provide workspace at the Department's Regional Transportation Management Center (RTMC), located at 2300 West Commercial Boulevard, Fort Lauderdale, Florida or any other Department locations within the geographic coverage area at no cost for on-site staff. The Contractor must coordinate staff locations and schedules with the Department's Project Manager. The office space for Contractor staff whose primary function is performing work associated with this Contract shall be located within a 15-mile radius of the RTMC. The Contractor shall not be compensated for any office space separately. All office space related cost shall be included in the various bid items in Exhibit "C", Contract Price Proposal.

4.8.1.2 On-site Staffing

At a minimum, the Contractor shall provide 1 full-time Contractor Project Manager, 1 full-time Lead Operations Supervisor, 1 full-time Inventory and Warehouse Supervisor (either at RTMC or at the main storage facility proposed by the Contractor), and 1 full-time Document Control Specialist on-site at the RTMC for the duration of this Contract. The Contractor may provide additional full-time staff on-site at RTMC or other Department designated locations as needed to perform the services as described within this Scope of Services document and as space becomes available at the RTMC or other Department

designated locations. The Contractor shall include all full-time on-site staffing costs within the on-site and operations staffing fixed price (lump sum) section of the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation. Full-time on-site staff shall not be allowed for any additional billing in other sections or categories of the Contract Price Proposal.

When requested by the Department, the Contractor shall provide additional on-site maintenance staff to be collocated at the RTMC or any other locations designated by the Department. The on-site staff shall adhere to all FDOT rules and regulations when working at the RTMC. The Contractor shall provide the on-site staff with all necessary computers, printers, phones, and other office supplies that enable them to perform their job at the RTMC. The on-site staff shall report to the RTMC during the Department's regular working hours (8:00 am to 5:00 pm, Monday through Friday). The Contractor shall not replace proposed on-site staff from the proposal without prior approval from the Department. The Contractor shall always adhere to on-site staffing arrangement from the proposal. The Contractor shall provide suitable backup for on-site staff during time-off periods. The Contractor shall give advance notice to the Department for on-site staff that will take time off and any substitute shall be at or above the same level.

4.8.1.3 Position Descriptions

The Contractor-provided maintenance staff shall have the minimum qualifications as described in the Contract documents. The final quantities of each position shall be determined during the Contract negotiations and agreed upon by the Contractor and the Department's Project Manager. The Contractor and/or Department shall have the ability to add staff that is not defined herein, at any time under the term of this Contract, as requested by the project requirement and staffing needs change.

Full Time On-Site Contractor Project Manager

The Contractor shall designate a full-time on-site Contractor Project Manager who shall respond to all authorizations for services under this Contract and serve as Contractor's point-of-contact. The Contractor's Project Manager shall be responsible for all work necessary to provide for the general management, oversight, quality control, and administration of all Contract activities and support personnel. The Contractor's Project Manager ensures that the requirements of the Contract are met on a daily basis at all times. The Contractor's Project Manager is responsible for ensuring that maintenance activities are in accordance with this Contract, Standard Operating Procedure (SOP), protocols, and policies.

The responsibilities include, but are not limited to, the following:

- Provide oversight of all work performed under this Contract;
- Follow direction set by the Department's Project Manager (and/or his Designee);

- Perform project-related assignments to include the planning, organizing, and developing of maintenance tasks as assigned by the Department;
- Direct oversight of project professionals and staff;
- Direct training of workers to improve performance and acquaint workers with Contract requirements, policies, and procedures;
- Recommend changes, review progress, and approve work products for the Maintenance Program;
- Recommend ITS equipment specifications and assist in developing operating procedures for ITS devices;
- Requisition tools, spare parts, equipment, and supplies required for maintenance operations;
- Train assigned staff in proper work methods and techniques and in the set up and use of equipment;
- Monitor allocated budget for spare parts and supplies and manage spare parts consumption and usage to ensure that budget levels are met;
- Track project budget, inventory, and tasks assigned, and provide monthly updates, status of work, and cost summaries;
- Prepare and submit monthly invoices, progress reports and other documents;
- Provide sufficient staff and resources for all tasks and activities throughout the duration of the Contract;
- Ensure that maintenance staff have the required qualifications and background check documentation before being employed by the Contractor;
- Meet with the Department's Project Manager when requested to review and discuss tasks completed during the previous week, task assignments for the current week, and two-week "look ahead" schedule;
- Provide summary minutes within 5 business days after each meeting for review and approval by the Department;
- Coordinate activities of workers repairing, upgrading, modifying, or installing equipment or systems in order to improve existing equipment;
- Interact with the Department's staff, equipment manufacturers, and consultants to review issues pertaining to equipment or systems performance and status;
- Attend meetings as directed by the Department to ongoing phase(s) of ITS construction meeting, utility coordination meeting, and others as directed; and
- Perform other tasks as assigned by the Department.

Knowledge, Skills, and Abilities

The Contractor's Project Manager shall have a 4-year college degree in a related field such as engineering and/or construction, and at a minimum 5 years of hands-on experience in

managing projects or programs related ITS Maintenance, Asset Maintenance, Infrastructure/Facility Maintenance, or other related areas. The Contractor's Project Manager shall possess but not limited to, the following qualifications:

- Understanding of ITS, construction and maintenance principles;
- Good leadership and interpersonal skills;
- Have an excellent understanding of key management concepts;
- Ability to clearly communicate technical information in layman's terms;
- Ability to be on-call 24 hours/day;
- Create project schedules using Microsoft Windows applications;
- Create project related presentations using Microsoft Powerpoint application;
- Provide presentations to the Department's staff and others, when requested by the Department;
- Skill in the use of all Windows operating system;
- Ability to write technical reports and correspondence;
- Certified in FDOT Advanced Maintenance of Traffic (MOT);
- Obtain ITSFM maintainer-level training within 1 month of Contract Start Date;
- Ability to coordinate real time activities and priorities;
- Direct experience with the day-to-day operations of an ITS maintenance, Asset Maintenance, Infrastructure/Facility Maintenance, or other relevant programs;
- Knowledge and ability to create monthly invoice and all project related reports;
- Knowledge and ability to create and document procedures for timely completion of preventive maintenance activities; and
- Knowledge and ability to evaluate the performance of equipment and systems, and make recommendations.

Full Time On-Site Lead Operations Supervisor

The Contractor shall designate a full-time on-site Lead Operations Supervisor who shall supervise all ITS Maintenance activities including preventive maintenance, troubleshooting and repairs for all roadway facilities under this Contract. The Lead Operations Supervisor shall be responsible for all work necessary to provide for the general management, oversight, quality control, and administration of all ITS Maintenance activities and support personnel. The Lead Operations Supervisor shall ensure that the ITS Maintenance requirements of the Contract are met on a daily basis at all times. The Lead Operations Supervisor shall be responsible for ensuring that the ITS maintenance activities are in accordance with this Contract, Standard Operating Procedure (SOP), protocols, and policies.

The responsibilities include, but are not limited to, the following:

- Provide technical oversight of ITS Maintenance work performed under this Contract;
- Provide oversight of field technicians;
- Provide oversight to MIMS tickets responses and coordination with RTMC Operations/IT staff for ITS failures;
- Follow direction set by the Department's Project Manager (and/or his Designee);
- Provide oversight of diagnostic reports, final repair reports, progress reports and other technical submittals;
- Provide oversight of utility coordination and locating activities;
- Provide oversight of MOT activities;
- Perform project-related assignments to include the planning, organizing, and developing of maintenance tasks as assigned by the Department;
- Dispatch field and/or office staff for repairs;
- Provide oversight of preventive maintenance, minor and major repairs;
- Recommend ITS equipment specifications and assist the Contractor's Project Manager in developing operating procedures;
- Verify proper device and system operation;
- Conduct inspections and schedule periodic preventive maintenance;
- Monitor ITS device operations;
- Provide oversight to the use of ITS software, both proprietary and non-proprietary;
- Requisition tools, spare parts, equipment, and supplies required for maintenance operations;
- Train assigned staff in proper work methods and techniques and in the set up and use of equipment;
- Track devices, inventory, and tasks assigned, and provide monthly updates, status of work, and cost summaries;
- Participate in recurring contract meetings and other meetings as requested by the Department's Project Manager (and/or his Designee);
- Coordinate activities of workers repairing, upgrading, modifying, or installing equipment or systems in order to improve existing equipment;
- Interact with the Department's staff, equipment manufacturers, and consultants to review issues pertaining to equipment or systems performance and status;
- Attend meetings as directed by the Department to ongoing phase(s) of ITS construction meeting, utility coordination meeting, and others as directed; and
- Perform other tasks as assigned by the Department.

Knowledge, Skills, and Abilities

The Lead Operations Supervisor shall have a college degree in a related field such as engineering and/or construction, and/or 5 years of hands-on experience in related ITS Maintenance. The Lead Operations Supervisor shall possess but not limited to, the following qualifications:

- Understanding of ITS, construction and maintenance principles;
- Good leadership and interpersonal skills;
- Have an excellent understanding of key management concepts;
- Ability to clearly communicate technical information in layman's terms;
- Ability to be on-call 24 hours/day;
- Create project schedules using Microsoft Windows applications;
- Create project related presentations using Microsoft PowerPoint application;
- Provide presentations to the Department's staff and others, when requested by the Department;
- Skill in the use of all Windows operating system;
- Ability to write technical reports and correspondence;
- Certified in FDOT Advanced Maintenance of Traffic (MOT);
- Obtain ITSFM maintainer-level training within 1 month of Contract Start Date;
- Ability to coordinate real time activities and priorities;
- Direct experience with the day-to-day operations of an ITS maintenance program;
- Knowledge and ability to create and document procedures for timely completion of preventive maintenance activities; and
- Knowledge and ability to evaluate the performance of equipment and systems, and make recommendations.

Full Time On-Site Inventory and Warehouse Supervisor

The Contractor shall designate a full-time on-site Inventory and Warehouse Supervisor at RTMC or at the storage facility proposed by the Contractor who shall be responsible for all inventory and warehouse activities for all ITS storage locations under this Contract.

The responsibilities include, but are not limited to, the following:

- Perform regular visits to all ITS storage locations under this Contract;
- Monitor stock level at all storage locations;
- Ensure all storage locations are well kept and organized;
- Be responsible for ITS inventory in MIMS;

- Support the Contractor's Project Manager, Lead Operations Supervisor and technicians with inventory and warehouse duties including but not limited to spare parts inventory, MIMS ID/barcode assignment, parts procurement, parts tracking and replenishing, Return Material/Merchandise Authorization (RMA) processing; and
- Perform other tasks assigned by the Department.

Knowledge, Skills, and Abilities

The Inventory and Warehouse Supervisor shall possess but not limited to the following qualifications:

- Warehouse organization and maintenance skills;
- Computer knowledge and ability to use Department's MIMS or any other parts tracking/inventory software used on this Contract;
- Good interpersonal skills;
- Communicate in English clearly and concisely, both verbal and in writing;
- Good report writing skills for inventory and procurement related reports;
- Maintaining physical condition necessary for light to heavy lifting, bending, stooping, kneeling, climbing, and standing for prolonged periods of time;
- Proficiency with all office related equipment.

Full Time On-Site Document Control Specialist

The Contractor shall designate a full time on-site Document Control Specialist who shall be responsible for all deliverables and record keeping duties under this Contract.

The responsibilities include, but are not limited to, the following:

- Provide oversight to and be responsible for all official deliverables under this Contract;
- Support the Contractor Project Manager in tracking due dates for contractual submittals and deliverables;
- Support the Contractor Project Manager in ensuring contractual requirements are met for deliverables, submittals, and any other documentation;
- Support the Contractor Project Manager in preparing invoices, progress reports and required backup documentation;
- Support the Inventory and Warehouse Supervisor in preparing inventory and parts related documentation;
- Perform other tasks assigned by the Department.

Knowledge, Skills and Abilities

The Document Control Specialist shall possess but not limited to the following qualifications:

- Communicate in English clearly and concisely, both verbal and in writing;
- Professional report writing and document control skills;
- Possesses a high level of skills in using Microsoft Windows Office suite.
- Computer knowledge and ability to use Department's MIMS or any other parts tracking/inventory software used on this Contract;
- Good interpersonal skills;
- Proficiency with all office related equipment.

ITS Maintenance Technician and Electrician

Depending on the level of expertise needed for the Contract, type of work, complexity of the work, and availability of the staff, the Contractor Project Manager, or the Lead Operations Supervisor shall determine the actual assignment of work to one of the following job classifications or a combination as approved by the Department's Project Manager (or his/her designee).

- **ITS Maintenance Technician** must have a high school diploma or GED, or Military Electronic training, and with at a minimum of 1 year of experience in ITS, traffic control system or related fields in the areas of device installation, repair, and maintenance;

- **Senior ITS Maintenance Technician** must have a high school diploma or GED, or Military Electronic training, and with at a minimum of 5 years of experience in ITS, traffic control system or related fields in the areas of device installation, repair, and maintenance;

- **Electrician** must have a high school diploma or GED, supplemented by vocational/technical training which includes an electrical apprenticeship; supplemented by a minimum of 3 years previous ITS experience and/or training as a journeyman electrician or electrical inspector; or any equivalent combination of education, training, and experience which provides the requisite knowledge, skills, and abilities.

The technicians and electricians are responsible for installing, maintaining, and repairing all ITS components and associated equipment; and performing a variety of technical tasks related to assigned area of responsibility. The ITS Maintenance technicians and electricians shall receive general supervision from the Contractor Project Manager, Lead Operations Supervisor, and Department's Project Manager (or his/her designee).

The responsibilities and duties of the technicians and electricians include, but not limited to the following:

- Install and maintain a wide variety of ITS devices such as CCTV cameras, vehicle detection systems, DMS, RSS, WWVDS, HAR, communications and network equipment, fiber optic equipment, cables, and other ITS devices and equipment to be maintained under this Contract;
- Troubleshoot malfunctions, isolate defects, and repair devices;
- Use bucket trucks on high speed, high volume roads and freeways, and arterials;
- Plan, set up, and remove all traffic control devices as per MOT requirements;
- Verify proper device and system operation; conduct inspections and periodic preventive maintenance;
- Perform work in environments with exposure to electrical energy, high voltage, heat, cold, noise, dust, fumes, and inclement weather conditions;
- Monitor ITS device operation through the use of a laptop computer in the field, a smartphone application, or a desktop computer in the RTMC; use ITS software, both proprietary and nonproprietary;
- Perform repair, removal, and replacement of poles, cabinets, controllers, and other equipment; repair conduit and pull wires and cable, as needed; perform emergency repairs as needed;
- Read plans, as-builts, diagrams, blueprints, manuals, and specifications for new installations and continual maintenance of ITS devices; make corrections to schematics and as-builts when discrepancies are noted;
- Be able to learn quickly and maintain emerging technology deployments such as CV, SWZ, and movable bridge notification system;
- Perform field and bench testing procedures on a ITS equipment;
- Test, troubleshoot, and repair ITS equipment;
- Perform a wide range of functional electrical tasks on ITS components;
- Take before and after photos of the ITS equipment; and
- Perform other tasks assigned by Department.

Knowledge, Skills, and Abilities

- Knowledge of principles and practices of the use of diagnostic and utility software to locate problems and repair system equipment;
- Knowledge of cable and component color coding, ability to distinguish color;
- Tools, equipment, practices, and methods used in installing, maintaining, and repairing electronic ITS devices and associated equipment;

- Practices and techniques of field and bench testing of electronic devices and components;
- Knowledge of relationship of the various components of each ITS component sub-system;
- Obtain ITSFM maintainer-level training within 1 month of Contract Start Date;
- Able to interpret plans, design schematics, site plans, maps, engineering drawings and fiber optic diagrams;
- All applicable manufacturer certifications for installation and maintenance;
- Knowledge of integrating field ITS devices into the RTMC;
- Familiar with various communication methods and protocols, including Ethernet, Internet Protocol, Point to Point and Wireless Communications Support, Layer 2 Switching, working knowledge of Layer 3 Routing and VLAN configuration, cellular and wireless communications, Serial and Video Communications;
- Maintenance technicians shall have training in climbing poles for maintaining the wireless system;
- Certifications from traffic signal control equipment vendors as applicable;
- Other certifications in the future, as necessary for providing the required services on future ITS devices/components;
- Familiar with fiber optic installation procedures; certified to perform the fiber optic installation, splicing, terminations and OTDR testing;
- Maintaining physical condition necessary for light to heavy lifting, bending, stooping, kneeling, climbing, and standing for prolonged periods of time;
- Operating motorized equipment and vehicles;
- Electricians shall maintain a valid Electrical Journeyman License. Experience to include all aspects of power distribution systems, both high and low voltage systems, transformers, generators, automatic transfer switch, electrical wiring, bending conduit, pulling wire, changing breakers, working on motors and gear boxes, preventative maintenance, assisting operational maintenance of automated systems or Programmable Logic Circuits (PLC's), distributed electrical systems and electrical control systems;
- Soldering skills;
- Familiarity with standard tools and equipment required for this Contract;
- Work independently with minimal supervision;
- Communicate in English clearly and concisely, both orally and in writing; and
- Establish and maintain effective working relationships with those contacted in the course of work.

Utility Technicians

The Contractor shall provide Utility Technicians for utility coordination and locating services. The duties and responsibilities of Utility Technicians include, but are not limited to:

- Be responsible for identifying the underground location and delineating and marking on the ground of existing utilities, per the requests from Sunshine State One Call, Contractor Project Manager, Lead Operations Supervisor, or FDOT Project Manager or designee. The utility locates shall include, but not limited to, fiber optic cables, power cables, composite cables that constitute Department's ITS underground utilities.
- Perform field visits with Utility Locates Requesting Party and others as necessary to supplement marking ITS utilities.
- Respond to emergency utility locate ticket(s) if requested.
- Assist with ITS maintenance activities if needed.
- Develop reports and photologs documenting work performed on utility locating and coordination activities.
- Perform other tasks as requested by the Department.

Knowledge, Skills, and Abilities

- High school diploma or GED, 2 years of experience in a position of similar requirements or equivalents;
- Principles and practices of the use of diagnostic tools to locate utility problems;
- Interpretation of site plans, maps, and engineering drawings;
- Working knowledge of utility theory;
- Use and operation of various scopes, meters, and counters;
- Familiar with Department's Utility Accommodation Manual 2017 version and subsequent revisions (FDOT Rule 14-46.001 F.A.C.)
- Familiar with Florida State Sunshine One Call policies and procedures;
- Basic principles and practices of computer operations;
- Basic interpretation of site plans, maps, and engineering drawings;
- Communicate in English clearly and concisely, both verbal and in writing;
- Good interpersonal skills;
- Maintain physical condition appropriate to the performance of assigned duties and responsibilities which may include the following:
    - Operating assigned equipment and utility vehicles;

- Walking, sitting, and standing for extended periods of time.

Compensation for staff other than full-time on-site shall be based on the actual hours spent, using the fixed fee (unit rate) per hour established under the Staffing Rates section of the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation.

4.8.1.4 General Appearance and Conduct

Contractor staff shall exercise good judgment in carrying out their duties and conduct themselves in such a manner that will reflect favorably upon the Department. The Department reserves the right to require removal of any Contractor employee from this Contract who cannot perform their duties to the satisfaction of the Department or damages the reputation of the Department and/or the Contractor.

Contractor staff shall wear clean and neat uniforms. Contractor staff shall be required to wear a picture ID issued or approved by the Department. Uniforms are required for all Contractor staff. The Contractor shall provide uniforms for all personnel working on-site at the RTMC and in the field under this Contract. The Department shall approve uniforms prior to Contractor usage. All personnel shall be well groomed.

The Contractor shall continuously monitor personnel performance as part of its own management activity. The Contractor shall ensure that its personnel restrict their access to only those Department areas they are authorized to have access to as part of their work duties. The Contractor shall guarantee to the Department that its personnel shall not spend excessive time at any Department location socializing during work hours or when they are off the clock.

4.8.1.5 Training

The Contractor shall provide qualified instructors and all materials for training Contractor staff in the maintenance, operation, and troubleshooting of equipment, hardware, software, and firmware for all System devices. Department staff may participate in training with Contractor staff. Training shall be conducted on an as-needed basis and shall consist of formal classroom lectures as well as "hands-on" training that consists of working with actual equipment and testing of ITS devices and the entire system. Per Department's request, the Contractor shall also attend all internal and external trainings such as trainings from Construction Office or external equipment manufacturers.

4.8.2 Personnel Vetting

During the term of the Contract, the Contractor shall provide resumes of all proposed primary maintenance staff and all new hires along with certification or documentation of the following: drug test results, criminal background check, drivers' licenses, and other information for approval prior to hiring. The Contractor shall be responsible for any costs associated with personnel vetting, background checks, criminal record checks, drug-free workplace certifications and other certifications required per the Contract documents for the term of the Contract.

4.8.2.1 Background Check

Each of the Contractor's staff assigned to service this Contract must pass an FDLE background check to access the RTMC for repair and coordination/progress meetings. The Contractor shall provide the Department's Project Manager with proper documentation, and the Department will coordinate the FDLE background check with the Florida Highway Patrol.

All staff assigned to work on-site at the RTMC shall complete and submit to the Joint Task Force Manager of the FHP, the Joint Task Force (JTF) for Law Enforcement communications application for security clearance to the State Law Enforcement Radio System (SLERS) prior to providing on-site services under the terms of this Contract. The Contractor shall submit to the Department the application results for all staff. Contractor's staff not receiving security clearance to the SLERS system by the JTF shall not provide on-site services under this Contract.

It shall be the responsibility of the Contractor's Project Manager to ensure coordination of the background checks for the term of this Contract.

The Department and Contractor reserve the right to reject any staff prior to being assigned duties.

4.8.2.2 Criminal Record Check

Individuals with felony conviction records shall not be hired. A criminal history record check shall be conducted by an approved Department agency and shall be provided by the Contractor to the Department for each employee before hire or access to the RTMC. These criminal record checks shall go back 10 years. The Contractor shall perform criminal checks annually for all Contractor staff. Additionally, the Department may elect to have Contractor perform periodic criminal record checks on Contractor staff.

4.8.2.3 Drug-Free Workplace Certification

The Contractor shall provide proof, by a licensed medical practitioner or technician, that all Contractor staff is drug-free in accordance with Section 112.0455, *Florida Statutes*, prior to beginning operations. The Contractor shall submit the proof described above for staff every year thereafter.

4.9 Materials to be Furnished

4.9.1 Contractor Facilities

The Contractor shall provide office space and additional warehouse storage locations per requirements from the RFP.

4.9.2 RTMC Devices, Field Devices, and other Hardware

All equipment and component parts that are furnished will be new, unused, will meet all requirements of this Contract, and will be in operable condition at the time of delivery. All parts will be of high-quality workmanship and no part or attachment will be applied contrary to the manufacturer's recommendations or standard practice. If authorized by the Department, working parts recovered from damaged Department equipment may be used if such use does not negatively impact the warranty of equipment in which it is installed.

The Contractor shall follow the ITS Maintenance SOPs for additional information.

4.9.3 Software

For the performance of work described in the contract, the Contractor is expected to use, purchase, or have available computer software including, but not limited to:

- SunGuide software (to be provided by the Department);
- MIMS software (to be provided by the Department);
- ITSFM software (to be provided by the Department);
- SolarWinds (to be provided by the Department);
- ITS device manufacturer/vendor software;
- Various Microsoft Office Products and software required to perform ITS Maintenance services; and
- Other software as requested by the Department.

4.9.4 Incidental Materials

The Contractor shall be responsible for providing incidental materials that are necessary to perform the general nature of work described in this Contract at no cost to the Department unless otherwise noted.

4.9.5 Equipment, Machinery, Tools, and Vehicles

The Contractor shall provide on-site equipment including, but not limited to, bucket trucks, cranes, inspection/maintenance trucks/vehicles, field engineering equipment, air compressor, machinery, tools, materials, cellular phones, and other equipment necessary to perform the services required under this Contract. The Contractor shall provide all the machinery, equipment, tools and vehicles necessary to provide the Preventive Maintenance, Diagnostic and Repair Services described in this Scope of Services document.

The Contractor shall have at a minimum 3 on-site (at the Contractor's Primary Office Space see requirements from Section 4.8.1.1) bucket truck capable of reaching 40 feet in height exclusively for use under this Contract. In addition, the Contractor shall provide a bucket truck capable of reaching 60 feet in height within 24 hours of the request by the Department's Project Manager (or his/her designee). The Contractor shall also provide a bucket truck capable of reaching 100 feet in height within 10 calendar days of the request by the Department's Project Manager (or his/her designee).

The Contractor shall provide maintenance and inspection vehicles for the ITS Maintenance Contractor staff who perform field services. The Contractor shall provide 1 on-site (at the Contractor's Primary Office Space see requirements from Section 4.8.1.1) environmentally controlled van or trailer accustomed for conducting fiber optic fusing splicing and other similar type of work inside the van or trailer. All vehicle(s) shall have sufficient towing and hauling capabilities to carry out the tasks specified in this Contract.

Contractor logos shall be required on vehicles and equipment dedicated for use and performance of work under this Contract. Contractor vehicles that are regularly used to perform work under the Contract must have the following markings: Contractor logo, SunGuide logo, and any other safety messages required for vehicles stopping on limited-access facilities to conform to all safety agency regulations. Vehicles shall be outfitted with the appropriate strobe and safety lights required to perform their field duties.

The Contractor shall be responsible to provide a new laptop computer with docking station for each primary maintenance staff. The laptop shall be compatible with the RTMC network. Computers and individuals using Department technology resources shall comply with the Security and Use of Information Technology Resources policy of the Department.

The cost of all typical machinery, equipment tools, and vehicles including, but not limited to pliers, multi-meters, crimp tools, Ethernet packet sniffers, hammers, shovels, battery or electrical power tools, laptop computers, video monitors, vehicles and other equipment necessary to perform the services required under this Contract shall be the Contractor's responsibility and will not be compensated separately. The Contractor shall be responsible for maintaining their equipment, machinery, tools, and vehicles, and all fixed and recurring costs for these items throughout the term of this Contract.

The cost of consumable parts required for maintenance, such as but not limited to: electrical tape, paint, cat 5 cables, fiber optic cable jumpers, markers, screws, steel bands, weed killer chemicals, pesticide, degreasers, rain-X ®, etc., will not be compensated separately and shall be included in various bid items in the Contract Price Proposal.

The Contractor's individual personnel communication devices (i.e. Cellular phones, beepers, wireless internet access devices etc.) and recurring cost shall already be included in the Contractor's Billing Rates as overhead. This cost is not an allowable Contract charge and shall not be billed as direct expenses to the Department.

All measurement equipment and tools shall be calibrated by the manufacturer's certified calibrator and be calibrated on the frequency required by the manufacturer. These equipment and tools include, but are not limited to:

- OTDR,
- Oscilloscopes,
- Waveform and video generators,
- Multi-meters,
- Inductance Meters;
- Power Meters;
- Earth ground testers,
- Spectrum Analyzers;
- Fiber splicing equipment; and
- Network Analyzers.

The Department may, at its sole discretion, provide certain maintenance and measurement tools/equipment for the Contractor to use under this Contract.

The Contractor shall maintain and inventory all equipment and tools associated with this Contract, including items provided by the Department. The Contractor shall ensure that all warranties remain valid on all equipment and that they are properly calibrated for the duration of the Contract.

4.9.6 Special Tools

When the Contractor encounters a repair or for any installation project that requires a special tool or machinery, the Contractor shall request approval from the Department to purchase the required tool or rent the tool/machinery, which shall then be compensated by the Department as an expense, using an LOA. If purchased using the Department's funds, after the completion of the repair, the tool shall be tagged and turned over to the Department for storage.

4.9.6.1 Control of Equipment

The Contractor shall maintain, and store equipment associated with this Contract at the ITS parts storage facilities or other location(s) approved by Department's Project Manager. ITS devices and parts in storage areas must be secured with access limited to appropriate personnel. Storage locations shall be marked specifically for this Contract and shall not be used for any other purposes. Parts or equipment to be stored outside the storage facilities from this Contract shall be authorized by Department's Project Manager; by default, all spare parts or equipment not installed and operating shall be stored at the storage facilities dedicated to this project as approved by Department's Project Manager.

The Department may elect for the Contractor to pick-up and deliver parts as needed to locations in the geographic coverage area of this Contract.

4.9.7 Parts Procured by Contractor

It is not the intent of the Department to primarily procure parts using this Contract. At times, the Department may request the Contractor to purchase parts needed for performing the Services stated in the Contract. For all such purchases, the Contractor shall prepare and submit a cost estimate of all anticipated parts to the Department for review and approval, prior to the actual purchase.

The Contractor shall submit to the Department, the original or copy of the manufacturer/vendor invoice to receive reimbursement for parts purchased for this Contract. Reimbursement for such expenses may be made for the invoiced cost of parts, plus a mark-up of 1%. The Contractor will not be allowed to charge a mark-up on any rental equipment, tools, machinery or vehicles. The Contractor will not be compensated separately for any incidental or consumable parts, the cost of which shall be included in various bid items in the Contract Price Proposal.

All parts purchased by the Contractor shall be tied to a specific LOA. Failure to adhere to this framework shall result in non-payment or reimbursement to the Contractor. In addition, the Contractor may be assessed a Non-Performance invoice reduction, receive a poor performance evaluation and/or may cause the Department to terminate the Contract.

4.10 Performance Evaluation/Performance Measures

Throughout the term of the Contract, the Department will conduct reviews of various phases of the Contractor's operations to determine compliance with the Contract and the sufficiency with which control procedures are applied to assure activities are in conformity with Contract provisions and Department procedures. Performance will be reviewed at various levels and in various categories, including but not limited to ITS device availability, failure responses, preventive maintenance, deliverables and submittals, parts inventory, and general performance measures. The frequency of the Contractor performance review shall be on a quarterly basis.

Immediate remedial action is required for deficiencies to correct work that is not at the level of accepted performance. Failures to correct deficiencies shall result in assessment of non-performance penalties.

4.10.1 Staff Performance

Contractor staff performance shall be reviewed regarding work quality, professionalism, reliability, and punctuality, and other performance assessments consistent with Department policy.

4.10.2 Contractor Staff Availability and Responsiveness

The Contractor shall be evaluated with respect to overall responsiveness to Department's requests, adherence to on-site staffing requirements and proposed staffing plan from Contractor's Proposal. Contractor staff assigned to this Contract shall be evaluated with respect to reliability and responsiveness. Response times longer than those agreed upon between the Contractor and the Department or instances when the Department is unable to reach the Contractor to request services under this Contract will negatively impact the performance evaluation.

4.10.3 ITS Device Availability/Device Uptime

ITS device availability is an important Contract performance indicator. The ITS device availability shall be calculated using the Department's MIMS software. At a minimum, the ITS device availability percentages shall be monitored and reported for the following:

- CCTV Cameras
- DMS
- VDS
- RSS

- WWVDS
- VSLS

The Contractor shall ensure that the ITS device availabilities meet or exceed the goals in the tables below for both Express Lanes and Non-Express Lanes devices.

Table 4.10.3-1: Express Lanes ITS Device Availability Goals	
ITS Device	**ITS Device Availability Goal**
CCTV Cameras	99%
DMS	99%
VDS	97.0%
RSS	99.0%

Table 4.10.3-2: Non-Express Lanes ITS Device Availability Goals	
ITS Device	**ITS Device Availability Goal**
CCTV Cameras	98.0%
DMS	98.0%
VDS	95.0%
WWVDS	98.0%
VSLS	95.0%

The ITS device availability shall be categorized separately for Express Lanes and Non-Express Lanes facilities.

Anything less than 100 percent functional is considered “down.” For example, a DMS with a pixel failure or incorrect color display is considered “down”; a CCTV camera without proper pan-tilt-zoom (PTZ) function is considered “down” even if there is still video; a vehicle detector not collecting data at the required accuracy level is considered “down”. The Contractor shall be responsible for developing an availability report and submit it for approval to the Department’s Project Manager monthly. Availability reports using a tabular

format with line charts that display average monthly ITS device availability are acceptable. The Contractor shall coordinate the final format of reports with the Department's Project Manager. The Contractor shall develop the report using data from MIMS and in conjunction with information collected through RTMC operations and the Department's Project Manager.

4.10.4 Response and Repair Times

The Contractor shall be evaluated with respect to both response and repair times specified in this Contract.

4.10.5 General Performance Measures

General performance measures shall be used to indicate how well the Contractor is adhering to their proposal for this Contract and complying with the requirements of this Contract. General performance measures include, but not limited to:

- Quality of the work performed by the ITS Maintenance Contractor;
- Adherence to proposed staffing plan;
- Adherence to operating hours and Contract schedules;
- On-time contract deliverables, submittals, and invoices submittals;
- Adherence to parts procurement, inventory, and tracking requirements;
- Prompt response to Emergency and Urgent failures;
- Adherence to Preventive Maintenance Plan;
- High upkeep of the ITS Device Availability metrics;
- Overall adherence to Contract requirements;
- Flexibility and adaptability of the ITS Maintenance Contractor to Department's needs;
- Other measurements as deemed necessary by the Department.

5 SERVICES AND MATERIALS PROVIDED BY THE DEPARTMENT

5.1 Contract Management

The Department will assign a Project Manager to be responsible for coordination with the Contractor and the direct management of their personnel as required performing work on behalf of the Department under this Contract.

The Department's Project Manager (or his/her designee) will administer this Contract to assure the Contractor is complying with the work described in the Contract. The Department's Project Manager (or his/her designee) will enforce the terms of the Contract.

The Department's Project Manager (or his/her designee) will assess penalties/invoice reductions based on Contractor's performance as per the Contract terms. The Department's Project Manager (or his/her designee) will perform Contractor Performance Evaluations on recurring basis for the term of the Contract.

5.2 Coordination

The Department's Project Manager will assist the Contractor with coordination of activities and maintenance activities with other stakeholders and work performed on behalf of the Department under this Contract.

5.3 Access to Facilities

The Department will provide access to Department facilities and resources in accordance with Department policies and procedures.

5.4 Spare Parts and incidental materials

The Department may choose to directly purchase ITS devices, parts, and other materials. The Contractor will take full responsibility for safeguarding materials provided by the Department in accordance with the requirements of this Contract.

5.5 Property of the Department

All work performed by the Contractor pursuant to this Contract, including, but not limited to, the preparation of all plans, specifications, maps, schedules, estimates, software products, electronic computer files, reports prepared or obtained under this Contract, as well as all data collected, together with summaries and charts derived there from, shall be considered works made for hire and shall become the property of the Department upon completion or termination without restriction or limitation on their use and shall be made available, upon request, to the Department or the Department's Project Manager (or his/her designee) at any time during the performance of such services and/or upon completion or termination of this Contract. Upon delivery to the Department or the Department's Project Manager (or his/her designee) of said document(s), the Department shall become the custodian thereof in accordance with *Chapter 119, Florida Statutes*. The Contractor shall not copyright any material and products or patent any invention developed under this Contract.

The Contractor guarantees that upon termination of any personnel under this Contract that they shall bear the responsibility of immediately returning all Department property (if applicable) to the Department or the Department's Project Manager (or his/her designee). In the event that the Contractor is unable to return the said items, they shall notify the Department or the Department's Project Manager (or his/her designee) and bear any costs associated with ensuring the security of the Department.

5.5.1 Intellectual Property

All hardware, software, firmware, source codes, compilers, tools, operations manuals and documentation developed, procured or used on this Contract will become the property of the Department after final acceptance. Ownership of the software by the Department shall include the right to reproduce, install, use, and distribute any and all materials to any entity or individual within the Department or representatives thereof, as determined by the Department, without any additional compensation to the Contractor, suppliers, or vendors.

Works for Hire

The Department shall retain all rights and interests in, and title to, all intellectual property and products which are developed in whole, or in part, under this Contract. The Department reserves the right to waive all rights and interests in, and title to, any and all intellectual property and products which are developed in whole, or in part, under this Contract if it is deemed by the Department to be in the best interest of the Department.

Escrow of Source Code (If applicable)

The Contractor shall maintain in escrow a copy of the source code for the licensed software. With each new release of the software provided to the Department, the Contractor shall maintain the updated source code in escrow.

In the event the Contractor files for bankruptcy or ceases operations for any reason, the Department shall promptly be provided the current source code in escrow. The Department will only use the source code to support the licensed software subject to the same nondisclosure provisions of this Contract.

Machines or Computer Hardware/Software

The Contractor, without exception, shall save, defend and hold harmless the Department and its employees from liability of any nature or kind, including cost and expenses, for or on account of any copyrighted, patented or unpatented invention, process, or article manufactured or supplied by the Contractor. The Contractor has no liability when such claim is solely and exclusively due to the combination, operation or use of articles supplied hereunder with equipment or data not supplied by Contractor or is based solely and exclusively upon the Department's alteration of the article. The Department will provide prompt written notification of a claim of copyright or patent infringement. Further, if such a claim is made or is pending, the Contractor may, at its option and expense, procure for the Department the right to continued use of, or replace or modify the article to render it non-infringing. If none of the alternatives are reasonably available, the Department agrees to return the article on request to the Contractor and receive reimbursement, if any, as may be determined by a court of competent jurisdiction. If the Contractor uses any design, device or materials covered by letters, patent or copyright, it is mutually agreed and

understood that, without exception, the contract price shall include all royalties or other costs arising from the use of such design, device, or materials in any way involved in the work.

6 CONTRACT MONITORING, PROGRESS REPORTING, COORDINATION AND SUBMITTALS

The Department will use Contractor reports and periodic contact with the Contractor to monitor the Contract and Contractor compliance with agreement terms and conditions, applicable laws, and regulations. Contract monitoring will also be used to verify that activities are being or have been performed in accordance with this agreement; that deliverables have been completed; that funds have been accounted for and used appropriately; and that the goals and objectives of this Contract are being met by the Contractor.

The Contractor is required to develop and maintain a two-week "look ahead" schedule to assist with coordination and monitoring of work performed under the Contract. Coordinate the format of the schedule and the frequency of updates with the Department Project Manager.

Every month, the Contractor shall prepare and attend at a minimum, 2 contract progress reporting meetings. The Contractor shall also attend other meetings as requested by the Department.

6.1 Status Meetings and Reports

The Contractor shall maintain complete and accurate records, in hard copy and electronic file acceptable to and approved by the Department for all System maintenance activities and any other events relating to the Contract. All documentation shall be kept in RTMC or other Department-designated location(s) as per ISO 9001 Standards or other similar standards.

Upon the completion or termination of the Contract, all project records and files shall be delivered to the Department within 30 calendar days prior to submittal of the final invoice to the Contractor. Final payment shall not be rendered by the Department until all of the conditions of the Contract have been met. The Contractor shall provide all reports and information as stated in this Scope of Services document and as determined by the Department during the term of the Contract.

It shall be the Contractor's responsibility to maintain complete and accurate records of all work activities and all other events relating to this Contract. Project records shall include, but not be limited to, such items as status reports, meeting notes, cost proposals, invoices, current and historical inventory records, updated as-built plans, timesheets, and Contractor's staff records. Project files shall contain all correspondence to and from the Contractor and subcontractors; consultants; manufacturers; equipment Contractors; local,

state, and federal agencies; etc., as related to this Contract. These files shall also include all materials information obtained by or given to the Contractor. All records shall be categorized and organized by date, activity, and subject. Paper documentation shall be scanned into an electronic format and become part of an electronic document repository for the Contract.

The project files shall be established such that they can be delivered to the Department's Project Manager.

6.1.1 Bi-Weekly Meeting and Report

The Contractor shall schedule a bi-weekly contract status meeting every two weeks for the term of this Contract. The reporting period shall be the previous 2 weeks in the reporting month. The time and schedule of the recurring meetings shall be coordinated with the Department. On occasions, when the Department is closed for a holiday, the Contractor shall reschedule the meeting to the next business day. The Contractor shall supply a Bi-weekly Status Report **(official deliverable)** describing all activities to the Department's Project Manager. The bi-weekly status report along with Meeting Agenda **(official deliverable)** shall be submitted to the Department for review at a minimum 2 business days prior to the bi-weekly meeting to ensure sufficient review time for the Department staff. The Contractor shall provide preliminary Meeting Minutes **(official deliverable)** within 2 business days of the bi-weekly meeting for review and approval by the Department. The Contractor shall provide final Meeting Minutes **(official deliverable)** within 5 business days of the bi-weekly meeting incorporating all comments made by the Department. The bi-weekly status reports, meeting agendas and minutes shall commence at Contract Start Date and shall continue for the duration of the Contract. The bi-weekly status report shall include descriptions of all services performed and results of testing conducted during the reporting period. The report format shall be coordinated with the Department's Project Manager. Samples of the bi-weekly status report, meeting agenda and summary minutes (attached in Appendix "7" of the Contract) are for the Contractor's reference only.

Every other bi-weekly meeting of the reporting month, the Bi-Weekly Status Report **(official deliverable)** reporting period shall cover the entire previous month.

The bi-weekly status report shall include at a minimum, but not be limited to, the following information:

- All repair services information including the location, date and time of each failure;
- Description of failure or issue and impacts;
- Failure reporting time;
- Failure priority;
- Failure reporting source i.e. RTMC operations or IT staff;
- Technician responding;

- Ticket acknowledgement time;
- Arrival time at device location;
- Repair completion time;
- Major or minor repair;
- Actions taken (successful or otherwise);
- Parts used: type, model, serial and inventory control number;
- Action for replaced parts i.e. in-house repair, return to factory;
- MOT submittal and deployment information;
- Photo documentation with date and time picture taken shown when requested by the Department;
- General system status and/or potential issues;
- General notes;
- Preventive maintenance related reports and work details;
- Miscellaneous work details;
- Special Projects if any;
- ITSFM updates;
- Vandalism or theft activity updates;
- Contractor Staffing and personnel updates;
- Parts and Inventory related reports and updates (every other bi-weekly meeting);
- Average ITS device availability for ITS subsystems (every other bi-weekly meeting);
- Non-performance penalties and invoice payment reductions if any (every other bi-weekly meeting);
- Test results for work performed; and
- Any other information as deemed necessary by the Department.

The Contractor shall upload up-to-date bi-weekly meeting schedules into MIMS or other designated system by the Department. The Contractor shall also upload all bi-weekly meeting documents such as meeting agendas, minutes, and status reports into MIMS or other system designated by the Department. The Contractor shall include all meeting documents development and meeting scheduling and attendance costs within the on-site and operations staffing fixed price (lump sum) section of the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation.

6.1.2 Annual Report

The development of RTMC annual report will be led by RTMC Operations Staff. A separate ITS Maintenance annual report is not required for this Contract. However, the

Contractor shall contribute to the development of the RTMC annual report and provide ITS maintenance related information including but not limited to an overall summary of the ITS maintenance activities within the reporting period; major accomplishments and lessons learned during the reporting period, as well as planned activities for the upcoming year. The format shall be coordinated with the Department's Project Manager. The Contractor shall include all documents development and meeting scheduling and attendance costs within the on-site and operations staffing fixed price (lump sum) section of the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation.

6.2 ITS Maintenance SOP Update

The Contractor shall review and provide annual updates to the FDOT District Four ITS Maintenance Standard Operating Procedure (SOP) document. The current SOP document is attached to this RFP in Appendix "1". During the Contract's Year 1, the Contractor shall update and submit the ITS Maintenance SOP document **(official deliverable)** on or before April 1, 2025 to the Department for review and approval. Thereafter, the Contractor shall perform annual updates for new device/component additions, changes in maintenance procedures and other updates as directed by the Department. The Contractor shall submit the draft updated Annual ITS Maintenance SOP document **(official deliverable)** on or before July 31 each subsequent year for Department's review. The Contractor shall submit the final updated Annual ITS Maintenance SOP document **(official deliverable)** on or before October 1 each subsequent year incorporating all comments made by the Department. As a part of the SOP update, the Contractor shall keep and maintain a log of changes requested and made in the SOP and their implementation status at all times. The Contractor shall include all ITS Maintenance SOP initial update and annual update development costs within the on-site and operations staffing fixed price (lump sum) section of the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation.

6.3 Six-Month Status Report

The Contractor shall develop and submit a Six-Month Status Report (**official deliverable**) to the Department for review and approval semi-annually. There shall be 2 Six-Month Status Reports per year, each covering a 6-month reporting period. The first Six-Month Status Report shall be submitted on or before June 15 each year. The second Six-Month Status Report shall be submitted on or before December 15 each year. In each Six-Month Status Report, the Contractor shall summarize major issues encountered in the previous 6 months, lessons learned, preventive maintenance and parts inventory and procurement status, contract performance and compliance status, recommendations and look-ahead for the next 6 months, and other information as needed to give the Department a complete overview and recap of maintenance activities in the previous 6 months. The Contractor shall coordinate with the Department on the content and format of the Six-Month Status Report. The Contractor shall include all Six-Month Status Report development costs within the on-site and operations staffing fixed price (lump sum) section of the Exhibit "C",

Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation.

6.4 ITS Device Communications Network Diagram

The Contractor shall develop and submit an ITS Device Communications Network Diagram **(official deliverable)** to the Department for review and approval on an annual basis. At a minimum, the ITS Device Communications Network Diagram shall show the relationship and dependency of each ITS device with respect to other devices along the corridor (e.g. communications and network architecture dependency, electrical dependency, device co-location, etc.) and each device connections to the fiber optic cable backbone, communication hubs and the RTMC. The Contractor shall coordinate with RTMC IT staff who is responsible for Layer 3 Communications on the development of this diagram. The Contractor shall coordinate with the Department on the format and content of the ITS Device Communications Network Diagram. The Contractor shall develop and submit the draft Initial ITS Device Communications Network Diagram **(official deliverable)** on or before April 1, 2025 to the Department for review and approval. The Contractor shall develop and submit the final Initial ITS Device Communications Network Diagram **(official deliverable)** on or before July 1, 2025 to the Department. Thereafter, the Contractor shall field verify all devices with regard to the diagram, update or develop the missing portions for new device/component additions, changes in configuration, and other updates as directed by the Department and submit the diagram to the Department for review and approval. The Contractor shall submit the draft Annual ITS Device Communications Network Diagram **(official deliverable)** on or before March 31 each subsequent year for Department's review. The Contractor shall submit the final ITS Device Communications Network Diagram **(official deliverable)** on or before May 1 each subsequent year incorporating all comments made by the Department. The Contractor shall include all diagram development costs within the on-site and operations staffing fixed price (lump sum) section of the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation.

6.5 Monthly Invoicing and Progress Reports

The Contractor shall prepare and submit monthly invoices and progress reports **(official deliverables)** to the Department for review and approval. The invoice and progress reports shall be prepared and organized with all necessary backup information as requested by the Department. The Invoice and Progress Report shall contain at a minimum, but not limited to, the following:

- Contract number;
- LOA number;
- Purchase order number if applicable;

- MIMS ticket information for repairs;
    - For major repairs, include pre-approved cost from diagnostic report, actual cost, etc.
- Labor hours and reimbursable expenses will need to be backed up at ticket/request level;
- Employee timesheets (if applicable);
- Utility coordination and locating backup materials including utility locate tickets;
- Subconsultant invoices;
- Vendor invoices;
- All receipts of all materials purchased; and,
- Others as requested by the Department.

In addition, the Department's Project Manager (or his/her designee) may require other back-up information from the Contractor to justify the services provided and invoiced to the Department e.g. hours being invoiced, materials purchased, clarification in taxes paid, etc. The Department shall assess a lower grade in the monthly performance evaluations for late invoice submittals. Invoice period shall be for a month and invoices shall be submitted to the Department by the Contractor within 30 calendar days from the end of the previous invoice period.

When the Contractor's invoice includes billing of the Contractors' staff hours for any services performed, the Contractor shall submit the timesheets for all staff including Sub-Contractor staff. The Contractor shall ensure that the hours submitted on the timesheets include a description for the work performed i.e. approved LOA number so that when the Contractor and Sub-Contractor staff work on various LOA's can be tracked via the timesheets. The Contractor shall be responsible for all back-up information submitted with each invoice including information provided by their Sub-Contractor.

Within 15 calendar days of Contract Start Date, the Contractor shall coordinate and seek approval of the invoice and progress report format from the Department's Project Manager. However, during the term of the Contract, the Department may request the Contractor to adjust or modify the invoice and progress report formats and the Contractor shall accommodate all such requests.

6.6 Transition Plan

The Contractor shall be responsible for developing a Transition Plan **(official deliverable)** and submitting it for approval to the Department's Project Manager within 7 calendar days after Contract NTP. The transition plan shall detail how the Contractor will work with the incumbent ITS Maintenance Contractor to ensure a seamless transfer of maintenance service and to ensure continuous 24 hours a day, 7 days a week system operation and functionality of all components of the System. The transition period is approximately 2 months (anticipated start date: 10/19/2024 and end date: 12/19/2024). The Contractor shall assume full ITS maintenance responsibilities starting from 12:00 AM on 12/20/2024. During the transition period, all ITS Maintenance tickets will be responded by the existing Contractor and all ITS Maintenance activities will be conducted by the existing Contractor. However, it is expected that the new ITS Maintenance Contractor will begin the required transition services including completing any pending training and provide staffing resources including on-site and field personnel to gradually take over maintenance responsibilities and learn the intricacies of the existing System.

At a minimum, below proposed staff from the Contractor shall be full time on-site at either RTMC or other Department designated location during the transition period:

- Contractor Project Manager
- Lead Operations Supervisor
- Inventory and Warehouse Supervisor

Upon successful completion of the required transition services, the Contractor shall be paid a fixed price (lump sum) in the amount of $75,000 for all costs associated with transition, less invoice payment reductions due to non-performance penalties. Upon the completion of the transition period, the Contractor will assume all responsibilities of District Four ITS Maintenance and provide services as per the Contract documents. The Transition Plan development shall not be paid for separately but shall be part of the fixed price (lump sum) for Transition Services of the Exhibit "C", Contract Price Proposal and compensated in the manner described under Exhibit "B", Method of Compensation.

6.7 Project Management Plan

The Contractor shall be responsible for developing a Project Management Plan **(official deliverable)** and submitting it for review and approval to the Department's Project Manager within 7 calendar days after Contract NTP. The Project Management Plan shall include, but not be limited to, the Contractor's staffing plan, hiring plan, tiered staff support plan, hurricane evacuation plan, emergency response plan, generator maintenance and refuelling plan, field and office staff internet access, cellular phones, computer and vehicle maintenance plan, and other topics as requested by the Department. The Project Management Plan development shall not be paid for separately but shall be part of the fixed price (lump sum) for Transition Services of the Exhibit "C", Contract Price Proposal and compensated in the manner described under Exhibit "B", Method of Compensation.

7 HURRICANE RESPONSE SUPPORT SERVICES

The ITS Maintenance Contractor shall be knowledgeable of the latest FDOT District Four Strategic Hurricane Emergency Management Plan (SHEMP) and shall work with the Department to provide the information related to the ITS maintenance prior to, during and after the hurricane event as called for in the SHEMP. The District Four ITS Maintenance hurricane response requirements are detailed in the ITS Maintenance SOP document. The Contractor shall review and provide all required support to the Department as stated in the SOP and as directed by the Department. The Contractor shall be compensated based on the fixed fee (unit rate) per hour and other fixed fee (unit rate) established in the Exhibit "C", Contract Price Proposal and in the manner described under Exhibit "B", Method of Compensation.

8 WORK AUTHORIZATION AND COMPENSATION

Work authorization and compensation is described in the attached Exhibit "B", Method of Compensation.

9 FINANCIAL CONSEQUENCES

9.1 Non-Performance Penalties

This Contract contains non-performance penalties. The Contractor acknowledges that failure to complete the services by the completion date designated on the Contract document or LOA, or failure to meet the requirements and performance metrics established in the Contract shall cause the Department to incur damages and seek compensation. Therefore, the Department shall reserve the right to assess the Contractor penalties that shall be deducted from the monthly Contractor invoice. Application of this non-performance reduction in payment will not waive the Department's right to terminate this Contract in the interest of the Department.

The infractions that shall activate the invoice payment reductions for Non-Performance shall include, but not limited to:

Table 9.1-1 Contract Progress Reporting and Submittal Penalties

Performance Measure	Criterion	Requirement	Penalties
Bi-weekly meeting scheduling and attendance	Biweekly	Two meetings per month based on Department approved meeting time and date	$500 per meeting

Table 9.1-1 Contract Progress Reporting and Submittal Penalties			
Performance Measure	**Criterion**	**Requirement**	**Penalties**
Bi-weekly Status Report and Agenda	Biweekly	Greater than or equal to 2 business days prior to the bi-weekly meeting	$250 per occurrence per day
Draft bi-weekly meeting minutes	Biweekly	within 2 business days after the bi-weekly meeting	$100 per occurrence per day
Final bi-weekly meeting minutes	Biweekly	within 5 business days after the bi-weekly meeting	$100 per occurrence per day
1st Six-Month Status Report	Yearly	On or before June 15 each year	$500 per occurrence per day
2nd Six-Month Status Report	Yearly	On or before December 15 each year	$500 per occurrence per day
Initial ITS Maintenance SOP update	Once	On or before April 1, 2025	$500 per day
Draft annual ITS Maintenance SOP update	Yearly	On or before July 31 each year	$500 per occurrence per day
Final annual ITS Maintenance SOP update	Yearly	On or before October 1 each year	$500 per occurrence per day
Draft Initial ITS Device Communications Network Diagram	Once	On or before April 1, 2025	$500 per occurrence per day

Table 9.1-1 Contract Progress Reporting and Submittal Penalties			
Performance Measure	**Criterion**	**Requirement**	**Penalties**
Final Initial ITS Device Communications Network Diagram	Once	On or before July 1, 2025	$500 per occurrence per day
Draft ITS Device Communications Network Diagram	Yearly	On or before March 31 each year	$500 per occurrence per day
Final ITS Device Communications Network Diagram	Yearly	On or before May 1 each year	$500 per occurrence per day
Transition Plan	Once	Within 7 calendar days from Contract NTP	$500 per occurrence per day
Project Management Plan	Once	Within 7 calendar days from Contract NTP	$500 per occurrence per day

Table 9.1-2 Preventive Maintenance Services Penalties			
Performance Measure	**Criterion**	**Requirement**	**Penalties**
Draft Preventive Maintenance Plan	Yearly	On or before November 1 each year	$500 per occurrence per day
Final Preventive Maintenance Plan	Yearly	On or before December 15 each year	$500 per occurrence per day

Table 9.1-2 Preventive Maintenance Services Penalties			
Performance Measure	**Criterion**	**Requirement**	**Penalties**
1st Preventive Maintenance Six-Month Status Report	Yearly	On or before June 15 each year	$500 per occurrence per day
2nd Preventive Maintenance Six-Month Status Report	Yearly	On or before December 15 each year	$500 per occurrence per day

Table 9.1-3 Diagnostic and Troubleshooting Services Penalties			
Performance Measure	**Criterion**	**Requirement**	**Penalties**
Diagnostic report submittal	For each Emergency failure major repair	Diagnostic report within 4 hours of failure notification for repairs in Broward County; Diagnostic report within 6 hours of failure notification for repairs in other counties.	$50 per occurrence per hour
Diagnostic report submittal	For each Urgent failure major repair	Diagnostic report within 6 hours of failure notification for repairs in Broward County; Diagnostic report within 8 hours of failure notification for repairs in other counties.	$50 per occurrence per hour

Table 9.1-3 Diagnostic and Troubleshooting Services Penalties			
Performance Measure	**Criterion**	**Requirement**	**Penalties**
Diagnostic report submittal	For each Priority failure major repair	Diagnostic report within 24 hours of failure notification for repairs in Broward County; Diagnostic report within 24 hours of failure notification for repairs in other counties.	$50 per occurrence per hour
Diagnostic report submittal	For each Routine failure major repair	Diagnostic report within 48 hours of failure notification for repairs in Broward County; Diagnostic report within 48 hours of failure notification for repairs in other counties.	$50 per occurrence per hour
Final repair report submittal	For each Emergency failure major repair	Final Repair Report within 24 hours of completion of the repair.	$50 per occurrence per hour
Final repair report submittal	For each Urgent failure major repair	Final Repair Report within 48 hours of completion of the repair.	$50 per occurrence per hour
Final repair report submittal	For each Priority failure major repair	Final Repair Report within 48 hours of completion of the repair.	$50 per occurrence per hour
Final repair report submittal	For each Routine failure major repair	Final Repair Report within 72 hours of completion of the repair.	$50 per occurrence per hour

Table 9.1-4 Emergency Failure Repair Services Penalties				
Type of Failure	**Type of Repair**	**Requirement**	**Response time**	**Penalties**
Emergency	Minor Repair	Initial Acknowledgement Time	Response within 15 minutes from time of initial failure notification	$100 per occurrence
		On-site Arrival	On-site within 1 hour from time of initial failure notification for locations in Broward County; On-site within 2 hours from time of initial failure notification for locations in other counties.	$500 per occurrence
		Repair Time	Repair within 5 hours from time of initial failure notification for locations in Broward County; Repair within 6 hours from time of initial failure notification for locations in other counties;	$1,000 per occurrence
	Major Repair	Initial Acknowledgement Time	Response within 15 minutes from time of initial failure notification	$100 per occurrence

Table 9.1-4 Emergency Failure Repair Services Penalties				
Type of Failure	**Type of Repair**	**Requirement**	**Response time**	**Penalties**
		On-site Arrival	On-site within 1 hour from time of initial failure notification for locations in Broward County; On-site within 2 hours from time of initial failure notification for locations in other counties.	$500 per occurrence
		Repair Time	Repair within 5 hours from time of initial failure notification for locations in Broward County; Repair within 6 hours from time of initial failure notification for locations in other counties;	$1,000 per occurrence

Table 9.1-5 Urgent Failure Repair Services Penalties				
Type of Failure	**Type of Repair**	**Requirement**	**Response time**	**Penalties**
Urgent	Minor Repair	Initial Acknowledgement Time	Response within 15 minutes from time of initial failure notification	$100 per occurrence

Table 9.1-5 Urgent Failure Repair Services Penalties				
Type of Failure	**Type of Repair**	**Requirement**	**Response time**	**Penalties**
		On-site Arrival	On-site within 2 hours from time of initial failure notification for locations in Broward County; On-site within 4 hours from time of initial failure notification for locations in other counties.	$500 per occurrence
		Repair Time	Repair within 6 hours from time of initial failure notification for locations in Broward County; Repair within 8 hours from time of initial failure notification for locations in other counties;	$500 per occurrence
	Major Repair	Initial Acknowledgement Time	Response within 15 minutes from time of initial failure notification	$100 per occurrence

Table 9.1-5 Urgent Failure Repair Services Penalties				
Type of Failure	**Type of Repair**	**Requirement**	**Response time**	**Penalties**
		On-site Arrival	On-site within 2 hours from time of initial failure notification for locations in Broward County; On-site within 4 hours from time of initial failure notification for locations in other counties.	$500 per occurrence
		Repair Time	Repair within 16 hours from time of initial failure notification	$500 per occurrence

Table 9.1-6 Priority Failure Repair Services Penalties				
Type of Failure	**Type of Repair**	**Requirement**	**Response time**	**Penalties**
Priority	Minor Repair	Initial Acknowledgement Time	Response within 6 hours from time of initial failure notification	$100 per occurrence
		On-site Arrival	On-site within 12 hours from time of initial failure notification.	$200 per occurrence
		Repair Time	Repair within 24 hours from time of initial failure notification.	$300 per occurrence

Table 9.1-6 Priority Failure Repair Services Penalties				
Type of Failure	**Type of Repair**	**Requirement**	**Response time**	**Penalties**
	Major Repair	Initial Acknowledgement Time	Response within 6 hours from time of initial failure notification	$100 per occurrence
		On-site Arrival	On-site within 12 hours from time of initial failure notification.	$200 per occurrence
		Repair Time	Repair within 48 hours from time of initial failure notification.	$300 per occurrence

Table 9.1-7 Routine Failure Repair Services Penalties				
Type of Failure	**Type of Repair**	**Requirement**	**Response time**	**Penalties**
Routine	Minor Repair	Initial Acknowledgement Time	Response within 12 hours from time of initial failure notification	$100 per occurrence
		On-site Arrival	On-site within 24 hours from time of initial failure notification.	$200 per occurrence
		Repair Time	Repair within 96 hours from time of initial failure notification.	$300 per occurrence
	Major Repair	Initial Acknowledgement Time	Response within 12 hours from time of initial failure notification	$100 per occurrence
		On-site Arrival	On-site within 24 hours from time of initial failure notification.	$200 per occurrence

Table 9.1-7 Routine Failure Repair Services Penalties				
Type of Failure	**Type of Repair**	**Requirement**	**Response time**	**Penalties**
		Repair Time	Repair within 168 hours from time of initial failure notification.	$300 per occurrence

Table 9.1-8 ITS Device Availability Penalties			
Performance Measure	**Criterion**	**Requirement**	**Penalties**
Average Monthly ITS Device Availability	Each occurrence	Not meeting EL DMS Availability Goal	$2,000 per occurrence per month
Average Monthly ITS Device Availability	Each occurrence	Not meeting EL CCTV Cameras Availability Goal	$2,000 per occurrence per month
Average Monthly ITS Device Availability	Each occurrence	Not meeting EL VDS Availability Goal	$2,000 per occurrence per month
Average Monthly ITS Device Availability	Each occurrence	Not meeting EL RSS Availability Goal	$2,000 per occurrence per month
Average Monthly ITS Device Availability	Each occurrence	Not meeting Non-EL DMS Availability Goal	$1,000 per occurrence per month
Average Monthly ITS Device Availability	Each occurrence	Not meeting Non-EL CCTV Cameras Availability Goal	$1,000 per occurrence per month
Average Monthly ITS Device Availability	Each occurrence	Not meeting Non-EL VDS Availability Goal	$1,000 per occurrence per month

Table 9.1-8 ITS Device Availability Penalties			
Performance Measure	**Criterion**	**Requirement**	**Penalties**
Average Monthly ITS Device Availability	Each occurrence	Not meeting Non-EL WWVDS Availability Goal	$1,000 per occurrence per month

Table 9.1-9 Other Penalties			
Performance Measure	**Criterion**	**Requirement**	**Penalties**
Warranty for Contractor Services and Materials – rectify issues identified by the Department	Each occurrence	Within 5 business days upon notification from the Department	$500 per occurrence per day
Complete MVDS calibration for qualifying repairs and per Department's request	Each occurrence	Within 7 calendar days upon failure notification	$500 per occurrence
Bucket truck (40 feet)	Each occurrence	Not on-site	$100 per day
Bucket truck (60 feet)	Each occurrence	Within 24 hours of Department's request	$100 per day
Bucket truck (100 feet)	Each occurrence	Within 10 calendar days of Department's request	$100 per day

Table 9.1-9 Other Penalties			
Performance Measure	**Criterion**	**Requirement**	**Penalties**
Replace lost, stolen, or damaged Department owned equipment	Each occurrence	Within 15 calendar days of the time when the item is known to be lost, stolen or damaged	$100 per day
Parts Inventory	Each occurrence	Failure to locate an item during a parts inventory audit or inspection	$100 per item, per occurrence, per calendar day up to the cost of the item
Parts Inventory	Each occurrence	Additions, deletions and modifications of items due to construction projects must be reflected in MIMS within four months of project final acceptance	$100 per item, per occurrence, per calendar day up to the cost of the item
Invoicing	Each occurrence	Not submitting monthly invoice or progress reports within 30 calendar days from the end of the previous invoicing period	$250 per occurrence, per day
Utility Locating	Each occurrence	Failure to respond to utility locating requests/tickets within 2 business days of receiving the tickets/requests	$100 per occurrence, per day

Table 9.1-9 Other Penalties			
Performance Measure	**Criterion**	**Requirement**	**Penalties**
On-Site Staffing	Each occurrence	Failure to meet on-site staffing requirements	$100 per occurrence, per day, per position

9.2 Invoice Payment Reductions

The Department will reduce invoice payments in order to assess penalties as a result of poor Contractor performance.

10 OPTIONAL SERVICES

At the Department's option, the Contractor may be requested to provide optional services such as Special Projects described in section 4.1.6 of this document. Typically, the fee for these optional services is negotiated in accordance with the terms detailed in Exhibit "B", Method of Compensation, for a fair, competitive and reasonable cost, considering the scope and complexity of the service(s). A supplemental agreement adding the additional services shall be executed to the Contract.

APPENDIX

APPENDIX 1: DISTRICT FOUR ITS MAINTENANCE STANDARD OPERATING PROCEDURE (SOP)

APPENDIX 2: DISTRICT FOUR MVDS CALIBRATION PROCEDURES

APPENDIX 3: 95 EXPRESS LANES and I-75 EXPRESS LANES PROJECT PLANS

APPENDIX 4: DISTRICT FOUR ITS DEVICE MAPS

APPENDIX 5: DISTRICT FOUR ITS DEVICE LISTS

APPENDIX 6: ITSFM FUNCTIONAL REQUIREMENTS FOR THE DISTRICT FOUR DISTRICT-WIDE IMPLEMENTATION

APPENDIX 7: SAMPLES OF THE BI-WEEKLY STATUS REPORTS, MEETING AGENDA AND SUMMARY MINUTES

APPENDIX 8: IT SERVICES STANDARD OPERATING PROCEDURE (SOP)

APPENDIX 9: TMC OPERATIONS STANDARD OPERATING PROCEDURE (SOP)