January 29, 2021

TRAFFIC SIGNAL AND ITS UPGRADES ALONG GOVERNMENT STREET (US HIGHWAY 98)
WITHIN THE CITY OF MOBILE
STPMB-HSIP-0016(525)
PROJECT NO: 2018-2060-06

ADDENDUM NO. 2

BID DATE: FEBRUARY 17, 2021
2:30 p.m.

A copy of this Addendum No. 2, signed by an authorized representative of this contractor, must be attached or bound in the front of the Contract Documents and Specifications. **Contract Documents and Specifications along with Addendum No. 2 must be submitted together to the City of Mobile or the contractors bid shall be declared invalid.**

I, the undersigned, hereby acknowledge receipt of this addendum and certify to the City of Mobile that I understand the information attached hereto and have made the appropriate adjustment to the bid proposal.

_____

Authorized Representative of Contractor Date

_____

Contractor

The bid documents for Project No. 2018-2060-06 Traffic Signal and ITS Upgrades along Government Street (US Highway 98) within the City of Mobile are hereby revised as follows:

CHANGE BID OPENING

- **From:** 2:30 p.m. Wednesday February 10, 2021
- **To:** 2:30 p.m. **Wednesday February 17, 2021**

No questions, whether oral or written, will be addressed after 12:00pm on February 12, 2021.

PLAN SHEET 2 – Traffic Signal Plan Notes

Add notes 530, 531, 532 and 533.

530. PAY ITEMS NO. 730A-*** ARE PROVIDED TO REMOVE THE EXISTING SIGNAL CABINET AND ALL SIGNAL CONDUCTORS FOR EACH TRAFFIC SIGNAL ALONG GOVERNMENT STREET FROM SCOTT STREET TO CONCEPTION STREET AS

SPECIFIED BY THE PLANS. NEW SIGNAL CONDUCTORS ARE TO BE INSTALLED FOR EACH OF THESE SIGNALS AS A SUBSIDIARY OBLIGATION OF PAY ITEMS 730C-***.

531. ALL TRAFFIC SIGNAL CONTROLLERS SHALL BE ECONOLITE COBALT COBS22100120000.
532. ALL RADAR DETECTION SHALL BE WAVETRONIX SMARTSENSOR MATRIX.
533. ALL UPS, TRAFFIC SIGNAL SHALL BE ALPHA FXM 1100.
534. ALL TRAFFIC SIGNAL CABINETS SHALL BE NEMA TS-2 TYPE 1.
535. ALL PEDESTRIAN PUSH BUTTONS SHALL HAVE THE FOLLOWING FEATURES:
    - A PUSH BUTTON LOCATOR TONE
    - A TACTILE ARROW
    - A SPEECH WALK MESSAGE TO COMMUNICATE THE WALK INDICATIONS AND TO WHICH CROSSING IT APPLIES
    - A SPEECH PUSHBUTTON INFORMATION MESSAGE

PLAN SHEET 2A – ITS Plan Notes

Add notes 1143 and 1144.

1143. ALL ETHERNET FIELD SWITCHES SHALL BE RUGGEDCOM RS-900G-HI-D-2SFP-XX.
1144. ALL CCTV SHALL BE COHU 4260HD RISE II 4261-1100-02.

PLAN SHEET 3 – Summary of Quantities

Add Pay Item 654A-000 SOLID SODDING.

Add Pay Item 665E-000 POLYETHYLENE

Add Pay Item 665Q-002 WATTLE

Amend Pay Item 729D-101 CCTV CAMERA, POSITIONER (TYPE B) to Pay Item 729D-100 CAMERA, POSITIONER (TYPE A)

Delete Pay Items 730U-403 and 730U-404.

Project Notes have also been added for Pay Items 729D, 730A, 730C, 730R, 730T, 730U and 734N.

PLAN SHEET 3A – Summary of Quantities

Delete Pay Items 730U-403 and 730U-404 RADAR DETECTION in the Required Traffic Signal Pay Items (Lump Sum) table.

Amend Pay Item 729D-101 CCTV CAMERA, POSITIONER (TYPE B) to Pay Item 729D-100 CAMERA, POSITIONER (TYPE A) in the Required ITS Pay Items table.

Add Erosion Control Pay Items summary table.

Contract Document – Cover
Amend cover page to change bid date to February 17, 2021 as amended by this addendum.

Contract Document – Contents Page i
Amend table of contents to add City of Mobile Special Provision 890.

Contract Document – Item IV Proposal (Bid)
Amend last paragraph on Page 20 to change the last date for questions to February 12, 2021.

Contract Document – Schedule of Items for Bid
On Page 22 amend Pay Item 729D-101 CCTV Camera, Positioner (Type B) to Pay Item 72D-100 Camera, Positioner (Type A).

On Page 28 delete Pay Items 730U403 and 730U404 Radar Detection.

Contract Document – City of Mobile Special Provision 890
Insert City of Mobile Special Provision within the contract documents between the City of Mobile Special Provisions #1 - #65 and 18-LPA3 General Provisions for Projects let by LPA (with prequalifications).

TRAFFIC SIGNAL AND ITS UPGRADES ALONG GOVERNMENT STREET (US HIGHWAY 98) WITHIN THE CITY OF MOBILE

STPMB-HSIP-0016(525)

PROJECT NUMBER 2018-2060-06

BID DATE – FEBRUARY 17, 2021

CONTENTS

ITEM IV
PROPOSAL (BID)

TO: Honorable Mayor
City of Mobile
Mobile, Alabama

Date: _____

The undersigned, as Bidder, hereby declares that he has examined the site of the work and is fully aware of conditions pertaining to the place where the work is to be done. The Bidder also declares that he has carefully examined the Instructions to Bidders, the General Conditions of the Specifications and the drawings, as prepared by Kimley-Horn Associates, Inc. on the behalf of the City of Mobile, as well as the premises

Project No.: **2018-2060-06**
Project: **Traffic Signal and ITS Upgrades along Government Street (US Highway 98) within the City of Mobile; STPMB-HSIP-0016(525)**
Project Description: **Traffic Signals and ITS Systems**

The Bidder further agrees to construct the improvements in **120 working days.**

The Bidder proposes and accepts the Articles of Agreement with the City of Mobile, Mobile, Alabama to furnish all necessary materials, equipment, tools, machinery, and means of transportation, and labor to complete the construction of the project.

All work performed under this contract shall be in accordance with the State of Alabama Highway Department Standard Specifications for Highway Construction, 2018 Edition, with all latest additions and modifications by the Engineering Department for the City of Mobile, or as amended herein.

The quantities for bid items listed on the proposal sheets are estimated quantities. Payment to the Contractor will be made only for the actual quantities of work performed and accepted on materials furnished in accordance with the contract. The scheduled quantities of work to be done and materials to be furnished may each be increased, decreased or omitted as herein provided.

No interpretations of the meaning of the plans, specifications or other bid documents will be made to any bidder orally. Any request for such interpretation should be in writing, addressed to City of Mobile Traffic Engineering Department, trafficengineering@cityofmobile.org. In order to receive consideration, the request must be received before 12:00 p.m., on February 12, 2021. Any such interpretation, any supplemental instructions will be mailed or delivered to all prospective bidders.

Item Number	Bid Quantity	Item with Unit Price Written in Words	Unit Price	Amount Bid
729C110	6	NETWORK DEVICE, UNLICENSED WMES For _____Dollars And _____ Cents Per Each	$	$
729D100	6	CAMERA, POSITIONER (TYPE A) For _____Dollars And _____ Cents Per Each	$	$
729I101	425	CONDUIT, UNDERGROUND, NON-METALIC, 2-INCH For _____Dollars And _____ Cents Per Linear Foot	$	$
729N000	94	MISC INFRASTRUCTURE, FUSION SPLICING For _____Dollars And _____ Cents Per Each	$	$
729N114	12	MISC INFRASTRUCTURE, SPLICE ENCLOSURE, UNDERGROUND 48F For _____Dollars And _____ Cents Per Each	$	$
729N302	32	MISC INFRASTRUCTURE, COMM BOX, TYPE F2 For _____Dollars And _____ Cents Per Each	$	$
729N500	8	MISC INFRASTRUCTURE, FIBER MARKER POST For _____Dollars And _____ Cents Per Each	$	$

Item Number	Bid Quantity	Item with Unit Price Written in Words	Unit Price	Amount Bid
734N053	11	ETHERNET FIELD SWITCH, TYPE C For _____Dollars And _____ Cents Per Each	$	$
740B000	600	CONSTRUCTION SIGNS For _____Dollars And _____ Cents Per Square Foot	$	$
740D000	50	CHANNELIZING DRUMS For _____Dollars And _____ Cents Per Each	$	$
740E000	30	CONES (36 INCHES HIGH) For _____Dollars And _____ Cents Per Each	$	$
740F002	2	BARRICADES, TYPE III For _____Dollars And _____ Cents Per Each	$	$

CITY OF MOBILE

SPECIAL PROVISION NO. 890

DATE: 1/26/21

SUBJECT: Traffic Signal Equipment

Section 890, Traffic Signal Equipment, of the 2018 Alabama Standard Specifications for Highway Construction is hereby amended as follow.

890.01—General. Delete paragraph two on page 796 and substitute the following.

> Requirements specified in these specifications shall comply with the latest editions of the NEC and NESC. All equipment shall conform to the requirements in the NEMA Standards Publication No. TS 2-2016 or latest revisions and shall conform to the requirements specified within these specifications. Where cited Standard Publication and these specifications differ, the requirements of these specifications shall govern.

Delete the last paragraph on page 797 and substitute the following.

> Descriptions and definitions of the equipment, words and terminology used in these specifications are given in the MUTCD, the NEMA TS 2-2016 Standards Publication, ITE publications and the NEC.

890.02 Controller Assembly. Delete subsection 890.02(a) Description on page 797 and substitute the following.

> A controller assembly shall consist of a controller unit, malfunction management unit (MMU), auxiliary devices, electrical devices and other equipment as specified in these specifications, plans, or proposal mounted and wired into a cabinet to make a complete operational traffic controller assembly.
>
> The controller assembly shall be NEMA TS 2 Type 1 and shall meet as a minimum, all applicable sections of NEMA Standards Publication TS 2-2016, latest version. Where differences occur, this specification shall govern.

Delete subsection 890.02(b) Cabinet Design on pages 797 thru 799 and substitute the following.

> The cabinet shall be an approved weatherproof enclosure. It shall be designed for base mount or pole mount as shown on the plans. The cabinet shall be clean-cut in design and appearance and conform to NEMA Standard TS 2-2016, latest version, and these specifications. Where difference occur, this specification shall govern.

1. Fabrication Material.

The cabinet shall be fabricated from shaped sheet aluminum.

2. Cabinet Dimensions.

Unless otherwise indicated in the plans or proposal, pole mounted controller cabinets shall meet the dimensional requirements for a Size 5 cabinet (approx. 48”x30”x16”) and base mounted controller cabinets shall meet the dimensional requirements for a Size 6 cabinet (approx. 52”x44”x24”) per NEMA Standard TS 2-2016 or later. The cabinet shall be large enough to provide ample space to house the controller unit, MMU, auxiliary devices, electrical devices, and other equipment as specified in these specifications, plans or proposals.

3. Doors.

Doors shall comply with NEMA Standard TS 2-2016, latest version. For base mounted cabinets in addition to the main cabinet door and the auxiliary cabinet door, a secondary access door shall be provided which allows access to the back side of the equipment.

4. Gasketing.

Gasketing shall comply with NEMA Standard TS 2-2016, latest version. Gaskets shall be supported in a channel to prevent gasket fatigue and/or sagging.

5. Locks and Keys.

Locks and keys shall comply with NEMA Standard TS 2-2016, latest version. The main cabinet door and secondary access door locks shall be a traffic industry conventional lock and operate with a No. 2 key. The locks shall be permanently lubricated and shall be covered with a weatherproof tab. The small auxiliary door shall be equipped with a lock that uses a standard skeleton key. Two keys shall be furnished for each lock.

6. Shelves.

The cabinet shall be supplied with at least two mounting shelves. The shelves shall comply with the requirements of NEMA TS 2-2016, latest version. For base mounted cabinets, a drawer with a lid shall be mounted below the bottom shelf for the storage of documents and to provide a work surface suitable for a laptop. For pole mounted cabinets a folding shelf mounted to the door shall be provided with a document storage compartment and a work surface suitable for a laptop.

7. Finish Surface Preparation.

Unless otherwise shown on the plans, the cabinet shall be aluminum finish and comply with the requirements of NEMA TS 2-2016, latest version.

8. Cabinet Mounting.

Cabinets shall be pole, base or pedestal mounted as indicated in the plans and cabinet mounting shall comply with the requirements of NEMA TS 2-2016, latest version.

9. Cabinet Ventilation.

Cabinet ventilation shall satisfy the requirements of NEMA TS 2-2016. Louvered vents shall be located on the main cabinet door. A cabinet vent air filter shall be mounted on door and held firmly in place by a spring.

10. Cabinet Configuration

Unless otherwise specified, all cabinets shall be configured for 16 output channels. Where detection is required, a minimum of one 16 Channel Detector Rack shall be required. Additional 16 Channel Detector Racks shall be required as needed up to 64 channels of detection. Only load switches and detector cards needed to provide the required signalization and detection shall be required.

Detector Racks shall be mounted to the top shelf of the cabinet when possible. Where shelf space is inadequate, compact components may be utilized such as detector racks which support half width BIUs (approx. 1.2" wide) and half width 4 channel detector cards (approx. 1.2" wide).

The controller, MMU, and cabinet power supply (CPS) shall be placed on the bottom shelf.

Required equipment shall be neatly arranged within the cabinet.

Output facilities shall be mounted on the back of the cabinet near the bottom.

Power distribution components shall be mounted on the right side of the cabinet near the bottom.

The power strip shall be mounted on the right side of the cabinet near the top.

Input termination facilities shall be mounted on the left side of the cabinet.

Terminals and Facilities shall not be mounted less than 6" from the bottom of standard base mount cabinets. Terminals and Facilities shall not be mounted less than 3" from the bottom of standard pole mount cabinets.

Delete subsection 890.02(c) Auxiliary Devices on page 799 and substitute the following.

Auxiliary devices including, but not limited to flashers, flash transfer relays, load switches, and detector test switches, shall conform to the requirements of NEMA Standard Publication TS 2-2016, latest version.

Delete subsection 890.02(d) Terminals and Facilities on pages 799 through 802 and substitute the following.

Cabinet terminals and facilities shall meet TS 2 Type 1 requirements as specified in NEMA TS 2-2016, latest version, with the following additional requirements as listed below.

1. Power Strip.

A metal power strip shall be installed within the cabinet to provide clean 120 VAC. This power strip shall be in addition to the convenience receptacle. The power strip shall contain a minimum of 4 NEMA 5-15R receptacles spaced approximately 2.5 inches center to center.

The sockets shall be arranged along a single axis with the blade sockets oriented perpendicular to that axis.

2. Light Fixture.

Cabinet lighting shall be LED and meet the requirements of NEMA TS 2-2016, latest version. The light on/off switch shall be a door actuated switch that turns the light on when the door is open and off when the door is closed.

3. Police Panel Switches.

The police panel shall contain only two switches, a SIGNAL ON/OFF switch, and an AUTO/FLASH switch.

Switches shall be clearly and permanently labeled.

The SIGNAL ON/OFF switch shall disconnect flasher and load switch outputs to the field and set Stop Time when switched to the OFF position. The signal shall follow the programmed startup sequence when returning from a dark condition.

The AUTO/FLASH switch shall operate in accordance with NEMA TS 2-2016. The signal shall return from flashing operation in accordance with the MUTCD.

There shall be no remote plug-in or manual control enable switch contained within the police panel area, unless specified in the plans and proposal.

4. Maintenance Panel Switches.

These switches shall be located inside the main cabinet door on the back side of the police compartment. All switches shall be clearly and permanently labeled. The following switches shall be provided: STOP TIME, AUTO/FLASH, SIGNAL ON/OFF.

The STOP TIME switch shall be a two-position switch. The ON position shall manually set Stop Time in the controller. In the OFF position, Stop Time shall be enabled in the monitor.

The AUTO/FLASH switch shall meet the requirements of NEMA TS 2-2016. The signal shall return from flashing operation in accordance with the MUTCD.

The SIGNAL ON/OFF switch shall disconnect flasher and load switch outputs to the field and set Stop Time when switched to the OFF position. The signal shall follow the programmed startup sequence when returning from a dark condition.

A 24VDC override switch shall be provided, as described in NEMA TS 2-2016, to manually apply 24VDC to the load switches for diagnostic purposes during flash transfer operations. The switch shall be a spring-loaded push button.

5. Cabinet Main and Auxiliary Circuit Breakers.

The main circuit breaker shall turn off all power to the cabinet.

The main breaker shall be rated at 30 A. Incoming power shall be routed through the main breaker and cabinet suppressor-filter before powering any equipment or devices.

The AC service shall follow a short path to the main breaker and cabinet suppressor-filter. The wiring shall be routed such that no severe bends shall occur along the path to the cabinet suppressor.

The auxiliary breaker shall be rated at 15 A and be located beyond the main breaker and cabinet suppressor. A secondary auxiliary breaker rated at 15 A shall be provided and located beyond the main breaker and cabinet suppression to protect a cabinet mounted power strip.

6. Cabinet Suppressor-Filter.

The cabinet shall be supplied with a suppressor, HESCO HE1750R or approved equal.

7. Signal Bus Contactor.

The signal bus contactor shall be a solid state relay, Struthers-Dunn Model 418AXXL-120VAC, or approved equal.

8. Cabinet Power Supply.

The Cabinet Power Supply (CPS) shall be a shelf mountable unit meeting the requirements of NEMA TS 2-2016, latest version.

9. Signal Load Switch Arrestors.

Signal load switch arrestors shall be HESCO HE103C-9 or approved equal.

10.Protection of Loop Detectors (External Surge Protection).

The cabinet shall be equipped with three terminal vehicle loop detector surge protection, HESCO VLP7 or approved equal, or a pluggable device. If pluggable detection suppression is used it shall be HESCO HE6LC-6 or approved equal.

11. Transient Protection Replacement.

All transient protection devices shall be replaceable without removing any panels.

12. SDLC Bus.

A synchronous data link control (SDLC) Bus shall be provided with a minimum of seven SDLC connectors.

13. Detector Rack (16 Channel).

Detector Racks provided shall house one Bus Interface Unit (BIU) and be capable of providing 16 channels of detection. Racks shall have eight positions for combinations of 2 and 4 channel detector cards up to 16 channels of detection or may have four positions which allow for up to 16 channels of detection utilizing half width 4 channel detector cards (approx. 1.12” wide).

The rack shall utilize SDLC to interface with the controller.

The detector rack shall be connectorized to accept an input termination panel harness.

14. Input Termination Panel (16 Channel).

A 16 Channel Input Termination Panel shall be provided for each detector rack. The termination panel shall come with a pre-wired harness which connects to the detector rack.

15. Output Facility (16 Channel).

The Output Facility shall be configured for 16 output channels. It shall house 2 BBIUs and utilize SDLC to interface with the controller and MMU. The field output wires shall terminate at the bottom of the facility and signal load switch arrestors shall be located directly above the field output terminals.

Delete subsection 890.02(e) Conflict Monitor on pages 802 and 803 and substitute the following.

(e) Malfunction Management Unit.

The MMU shall meet MMU2 requirements outlined in NEMA TS 2-2016, latest version.

Delete subsection 890.02(f) Wiring Diagram on page 803 and substitute the following.

(f) Controller Assembly Documentation.

1. Serial Number.

A serial number shall be engraved or stenciled on the cabinet. The serial number shall be the same number as the controller unit serial number.

2. Data Label.

A data label shall be placed on the inside of the cabinet door to provide the following information:

Manufacturer's name – All equipment installed cabinet
Date of Manufacture
Wiring Schematics Number
Controller Model Number
Controller Serial Number
MMU Model Number
MMU Serial Number
Time Clock Model Number (If applicable)
Time Clock Serial Number (If applicable)
Communication Device Model Numbers (If applicable)
Communication Device Serial Numbers (If applicable)
Project Number or Transportation Department P.O. Number.

3. Wiring Diagram.

One copy of the cabinet wiring diagram shall be supplied as well as a copy of the following:

Operations Manuals for all equipment
Base Mounting Template (if required)

Additional prints, diagrams, and manuals shall be available upon request at no additional charge.

Cabinet prints shall include flash color change instructions for all phases and all overlaps.

Cabinet prints shall be keyed to show every input and every output from every terminal. If prints use multiple ground and neutral busses, busses shall be numbered. All grounds and neutrals shall be keyed to the busses that they are connected to.

Cabinet prints shall show every connector.

Delete subsection 890.02(g) Controller Unit on pages 803 and 804 and substitute the following.

Regardless of controller assembly type, all controller units shall be Advanced Transportation Controllers (ATC) conforming to this specification.

(a) General Requirements.

Advanced Transportation Controller (ATC) shall conform to the controller standard ATC 5201 v06.25 or later and requirements outlined in this specification. Where this specification and cited standards differ the requirements of this specification shall govern. Advanced Transportation Controllers used by the Alabama Department of Transportation (ALDOT) shall be on the MSDSAR.

(b) Functional Requirements.

The controller shall be NTCIP conformant for its application, conforming to the mandatory functional requirements of the latest NTCIP standards, unless otherwise specified. For the controller to be compliant with these specifications, the controller shall comply with the Protocol Requirement List (PRL) for the project. The PRL will indicate which mandatory and optional NTCIP functional requirements shall be required. A Protocol Implementation Conformance Statement (PICS) shall be supplied by the manufacturer with the material submittal to verify compliance with this specification and to indicate NTCIP functional requirements supported by the controller.

The controller Application Programming Interface (API) shall conform to the API standard ATC 5401 v02.17 or later.

The controller shall be supplied with a printed and bound operations manual/maintenance manual containing circuit component schematics and programing instructions. A second copy of this information shall be provided on a thumb drive, CD or DVD ROM.

All other functional requirements of the controller shall fully comply with the mandated requirements of the ATC Controller Standard 5201 V06.25 or later.

(c) Engine Board Details.

The SD Card socket referenced in ATC 5201 v06.25 shall be provided on the Engine Board. Any suitable electrical interface may be used. Physical access to this socket external to the controller is not required but is permitted.

All other Engine Board details shall fully comply with the mandated requirements of ATC 5201 V06.25 or later.

(d) Communication Interface Details.

ATC shall have a minimum of one communication interface slot conforming to ATC 5201 v06.25 or later.

ATC communications cards shall be available for the following protocols:

Public line, dial-up
Single Mode Fiber
License Free Radio
Ethernet

All other communication shall fully comply with the mandated requirements of the ATC Controller Standard 5201 V06.25 or later.

(e) User Interface, Power Supply and Mechanical Details.

All controllers shall be the keyboard entry type. The front panel keypad shall facilitate the entry of interval timing. All controllers shall be capable of timing entries via the keypad and via computer download, without need to open the unit and without special tools.

The controller shall have a power switch.

Power supplies, cables, and connectors shall be required as needed to provide power to the controller unit in the controller assembly.

All other User Interface, Power Supply and Mechanical Details shall fully comply with the mandated requirements of the ATC Controller Standard 5201 V06.25 or later.

(f) Parallel and Serial I/O Details.

Parallel and Serial I/O details shall conform to ATC 5201 v06.25 or later based on the cabinet type.

Parallel and Serial Input/output connections shall be supplied as required to support the cabinet environment and provide a fully functional controller assembly.

(g) Environmental and Test Procedures.

Environmental and Test Procedures shall fully comply with the mandated requirements of ATC 5201 V06.25 or later.

ATC communications cards shall be available for environmental testing for the following protocols:

Public line, dial-up
Single Mode Fiber
License Free Radio
Ethernet

890.04 Surge Protection for Controller Assembly. Delete the first sentence of the first paragraph of subsection 890.04(c) Protection of Controller Unit and Conflict Monitor on page 806 and substitute the following.

Power and neutral for controller and malfunction monitor unit shall be wired through a high-speed approved suppressor.

890.05 Vehicle Loop Detector. Add the following sentence to the beginning of subsection 890.05(a) General on pages 806.

> Vehicle loop detector units shall be card rack units meeting the requirements of NEMA TS 2-2016, latest version.

Delete subsection 890.05(b) Single Channel Vehicular Loop Detector on page 807.

Delete paragraph 5, paragraph 6, and the table in subsection 890.05(c) Two Channel Vehicular Loop Detector on page 808.

Delete paragraph 5 and paragraph 6 in subsection 890.05(d) Four Channel Vehicular Loop Detector on page 808.

890.09 Interconnect Cable. Delete subsection 890.09(b) Materials on page 808 and substitute the following.

> Interconnect cable shall conform to the requirements of this specification unless otherwise specified on the plans or in the proposal. If in such case that the plans designate fiber optic cable material be used for the interconnect cable then Section 729 shall apply.

890.21—Video Detection System. Delete subsection (g) Two Channel and Four Channel Detector Unit on page 823 and substitute the following.

> All detector units shall be card rack units, suitable for mounting in a detector unit as specified in NEMA Standard Publication TS-2-2016.

TRAFFIC SIGNAL PLAN NOTES

CITY OF MOBILE PROJECT NO	FISCAL YEAR	SHEET NO
2018-2060-06	2020	2

TRAFFIC SIGNAL PLAN NOTES

IN THE EVENT CONFLICTS OCCUR BETWEEN THE PROJECT TRAFFIC SIGNAL NOTES AND THE MUTCD, THE MUTCD WILL GOVERN.

( ) NOTES THAT APPLY TO THIS PROJECT.

(500.) WHEN THE CONTROLLER IS IN THE FLASHING MODE, THE VEHICULAR SIGNAL HEADS SHALL FLASH YELLOW ON GOVERNMENT STREET, RED ON CROSS STREETS, AND RED ON PROTECTED LEFT TURNS. THE INTERSECTION OF GOVERNMENT STREET AND BROAD STREET SHALL FLASH ALL RED ON ALL APPROACHES.

501. ALL EXISTING TRAFFIC CONTROL EQUIPMENT WHICH IS THE PROPERTY OF THE STATE INCLUDING SIGNAL HEADS, CONTROLLERS, POLES, AND MISCELLANEOUS HARDWARE SHALL BE REMOVED UPON COMPLETION OF THE NEW TRAFFIC CONTROL UNIT (TEMPORARY OR PERMANENT) AND STORED TO COMPLY WITH SECTION 730.03 OF THE STANDARD SPECIFICATIONS. THE SAME SHALL BE DELIVERED TO THE ALABAMA DEPARTMENT OF TRANSPORTATION AS DIRECTED BY THE ENGINEER.

(502.) ALL EXISTING TRAFFIC CONTROL EQUIPMENT WHICH IS THE PROPERTY OF THE CITY OF MOBILE INCLUDING SIGNAL HEADS, CONTROLLERS, POLES, AND MISCELLANEOUS HARDWARE SHALL BE REMOVED UPON COMPLETION OF THE NEW TRAFFIC CONTROL UNIT (TEMPORARY OR PERMANENT) AND STORED TO COMPLY WITH SECTION 730.03 OF THE STANDARD SPECIFICATIONS. THE SAME SHALL BE DELIVERED TO THE CITY OF MOBILE AS DIRECTED BY THE ENGINEER.

503. THE LOCATION OF THE POWER SOURCE AS SHOWN IN THE PLANS IS APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF THE POWER SOURCE AND THE SHORTEST ROUTE TO SERVE THE TRAFFIC SIGNAL CONTROLLER CABINET AND LUMINAIRES.

(504.) FROM THE DATE TIME CHARGE BEGINS THE CONTRACTOR SHALL ASSUME TOTAL RESPONSIBILITY FOR ALL EXISTING, TEMPORARY, AND NEW TRAFFIC CONTROL UNIT(S) ON THE PROJECT. THE CONTRACTOR SHALL CONTINUE THE OPERATION AND MAINTENANCE OF THE EXISTING TRAFFIC CONTROL UNIT(S) UNTIL THE ENTIRE NEW PERMANENT TRAFFIC CONTROL UNIT(S) IS(ARE) OPERATIONAL AND ACCEPTED BY THE CITY OF MOBILE.

(505.) THE CONTRACTOR, WITHOUT EXTRA COMPENSATION, SHALL BE RESPONSIBLE TO ENSURE THE CONTINUAL OPERATION AND MAINTENANCE OF THE EXISTING AND TEMPORARY TRAFFIC CONTROL UNIT(S) DURING THE PERIOD OF CONSTRUCTION. MAINTAINING CONTINUAL OPERATION SHALL INCLUDE THE RELOCATION OF VEHICULAR SIGNAL HEADS DURING CONSTRUCTION AND THE MATERIALS AND LABOR NECESSARY TO ENSURE THE CONTINUAL OPERATION OF THE TRAFFIC CONTROL UNIT(S) EQUIPMENT AT ALL TIMES.

(506.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES TO LOCATE ALL OVERHEAD AND UNDERGROUND UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT. DAMAGE TO UTILITIES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE UTILITY COMPANY AND THE ENGINEER. THE CONTRACTOR SHALL BEAR ALL COST TO REPAIR ANY AND ALL DAMAGES TO THE UTILITIES CAUSED BY THE CONTRACTOR.

(507.) THE CITY OF MOBILE RESERVES THE RIGHT TO RESPOND TO TRAFFIC CONTROL UNIT(S) MALFUNCTIONS IN AN EMERGENCY OR NATURAL DISASTER. IN DOING SO THE CONTRACTOR'S LIABILITY AND RESPONSIBILITY RELATED TO MAINTAINING THE TRAFFIC UNIT(S) OR SYSTEM REMAINS IN EFFECT.

(508.) THE CONTRACTOR SHALL HAVE THE APPROVAL OF THE ENGINEER PRIOR TO THE REMOVAL OF ANY EXISTING TRAFFIC CONTROL UNIT. THE CONTRACTOR SHALL NOT REMOVE AN EXISTING TRAFFIC CONTROL UNIT UNTIL THE REQUIRED TRAFFIC CONTROL UNIT IS INSTALLED AND COMPLETELY OPERATIONAL.

509. EACH REQUIRED TRAFFIC SIGNAL STRAIN POLE AND MAST ARM POLE MAY VARY IN LENGTH AND SIZE. THE CONTRACTOR SHALL ASCERTAIN THAT THE POLE HEIGHTS ARE SUFFICIENT TO PROVIDE THE REQUIRED VEHICULAR TRAFFIC SIGNAL CLEARANCE. EXTENSIONS FOR MOUNTING SIGNALS SHALL BE PROVIDED WHEN NECESSARY.

510. EACH MAST ARM MAY VARY IN LENGTH. THE CONTRACTOR SHALL ASCERTAIN THAT ALL ARM LENGTHS ARE SUFFICIENT SO THAT EACH VEHICULAR SIGNAL HEAD POSITION CONFORMS TO THE MUTCD.

511. THE TRAFFIC SIGNAL POLE LOCATION(S) AS SHOWN IN THE PLANS IS(ARE) APPROXIMATE. THE CONTRACTOR SHALL COORDINATE THE POLE LOCATION(S) WITH THE ENGINEER. THE CONTRACTOR SHALL ASCERTAIN THAT THE FINAL POLE LOCATION(S) PROVIDE FOR THE VEHICULAR TRAFFIC SIGNAL HEADS TO MEET THE DISTANCE REQUIREMENTS TO THE STOP LINE AS REQUIRED BY THE MUTCD. WHEN PEDESTRIAN SIGNAL HEADS AND/OR PEDESTRIAN CROSSWALKS ARE INVOLVED THE SAME SAID POLE LOCATION(S) SHALL ALSO CONFORM TO THE RELATIVE SECTIONS OF THE MUTCD.

(512.) THE CONTRACTOR SHALL LOCATE EACH REQUIRED AND RELOCATED VEHICULAR TRAFFIC SIGNAL HEAD ON THE SPAN WIRE OR MAST ARM SO THAT EACH HEAD IS LOCATED IN THE APPROACH LANE FOR WHICH IT APPLIES. LOCATION OF SIGNAL HEADS SHALL CONFORM TO THE MUTCD.

513. THE TRAFFIC SIGNAL STRAIN POLE LOCATION(S) AS SHOWN IN THE PLANS IS(ARE) APPROXIMATE. THE ENGINEER SHALL APPROVE ALL FOUNDATION LOCATIONS PRIOR TO THE CONTRACTOR EXCAVATING FOR EACH FOUNDATION.

(514.) BALANCE ADJUSTERS SHALL BE INSTALLED ON TRAFFIC SIGNAL HEADS FOR PROPER AIM. THE CONTRACTOR SHALL ALIGN THE SIGNAL HEADS IN ACCORDANCE WITH THE MUTCD AND TO THE SATISFACTION OF THE ENGINEER.

515. A 12 INCH DRIP COIL WITH 3 LOOPS SHALL BE PROVIDED TO THE RIGHTS OF EACH VEHICULAR TRAFFIC SIGNAL HEAD. A DRIP LOOP SHALL BE FORMED SO THAT WATER CANNOT ENTER THE ENTRANCE CLAMP. THE WIRE SHALL ENTER THE CLAMP FROM THE BOTTOM OF THE DRIP LOOP.

516. WHEN PVC CONDUIT IS USED FROM THE CONTROLLER TO THE STEEL STRAIN POLE OR MAST ARM POLE, THE CONTRACTOR SHALL BOND THE CONTROLLER TO THE POLE WITH A #6-1C BONDING CABLE.

517. MARKING TAPE SHALL BE BURIED OVER CONDUIT. THE TAPE SHALL BE 4 INCH POLYETHYLENE, RED IN COLOR WITH BLACK LETTERING.

(518.) WHEN EXISTING LOOP WIRE AND VEHICLE LOOP DETECTORS ARE TO BE RETAINED AND REUSED, OR RELOCATED IN A NEW CONTROLLER CABINET, THE CONTRACTOR SHALL ASCERTAIN THE MANUFACTURER AND MODEL NUMBER OF EACH EXISTING DETECTOR AMPLIFIER AND PROVIDE A NEW WIRING HARNESS COMPLETELY WIRED IN THE CONTROLLER CABINET FOR EACH EXISTING DETECTOR AMPLIFIER.

519. WHEN SYSTEM TIMINGS ARE NOT INCLUDED IN THE PLANS FOR TIME BASE OR CLOSED LOOP SYSTEMS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HIRE A LICENSED PROFESSIONAL ENGINEER TO CALCULATE SYSTEM TIMINGS. THE COST OF CALCULATING SYSTEM TIMINGS SHALL BE A SUBSIDIARY OBLIGATION OF 730C.

520. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HIRE A LICENSED PROFESSIONAL ENGINEER TO INPUT THE TIMINGS AND FINE TUNE THE TIMINGS. THE COST OF INPUTTING AND FINE TUNING TIMINGS SHALL BE A SUBSIDIARY OBLIGATION OF 730C.

(521.) THE CONSULTING ENGINEER SHALL BE RESPONSIBLE FOR INPUTTING AND FINE TUNING THE TIMINGS.

522. WHEN EXISTING SPAN WIRE THAT IS TO BE RETAINED HAS SAGGED, THE CONTRACTOR SHALL ADJUST THE SPAN WIRE SO THAT SIGNAL HEADS COMPLY WITH THE CLEARANCE SHOWN ON THE STANDARD DETAIL DRAWING.

523. A NOTICE OF INTENT FOR NPDES PERMIT COVERAGE HAS BEEN FILED WITH ADEM FOR THIS PROJECT. A COPY OF THE CONSTRUCTION BEST MANAGEMENT PRACTICES PLAN (CBMPP) IS AVAILABLE THROUGH OFFICE ENGINEER PRIOR TO BIDDING.

(524.) THE CONTRACTOR SHALL PROVIDE A SET OF AS-BUILT PLANS TO THE CITY TRAFFIC ENGINEER.

525. THE CONTRACTOR SHALL INSTALL BACKPLATES WITH A 1INCH TO 3 INCH FLUORESCENT YELLOW REFLECTIVE BORDER ON ALL SIGNAL HEADS (EXISTING AND REQUIRED).

(526.) THE CONTRACTOR SHALL MAINTAIN EXISTING SIGNAL TIMINGS.

(527.) ALL EQUIPMENT MUST HAVE THE MOST CURRENT STABLE FIRMWARE AS OF THE DATE OF INSTALL.

(528.) SIGNAL OUTAGES (PERIODS WHERE THE SIGNAL IS DARK) SHALL BE LIMITED TO 9 PM TO 4 AM AND POLICE ARE REQUIRED TO DIRECT TRAFFIC.

(529.) PAY ITEM NO. 730T-000 IS PROVIDED TO UTILIZE AT CRITICAL INTERSECTIONS, AS DEFINED BY ALDOT, TO AIDE IN THE CONDUCTOR SWAPPING OPERATIONS. POLE LOCATIONS WILL BE IDENTIFIED BY THE CONTRACTOR AND APPROVED BY ALDOT PRIOR TO INSTALLATION. ADDITIONAL WORK ASSOCIATED WITH THE UTILIZATION OF TEMPORARY WOODEN POLES IS A SUBSIDIARY OBLIGATION OF 730T-000.

(530.) PAY ITEMS NO. 730A-### ARE PROVIDED TO REMOVE THE EXISTING SIGNAL CABINET AND ALL SIGNAL CONDUCTORS FOR EACH TRAFFIC SIGNAL ALONG GOVERNMENT STREET FROM SCOTT STREET TO CONCEPTION STREET AS SPECIFIED BY THE PLANS. NEW SIGNAL CONDUCTORS ARE TO BE INSTALLED FOR EACH OF THESE SIGNALS AS A SUBSIDIARY OBLIGATION OF PAY ITEMS 730C-###.

(531.) ALL TRAFFIC SIGNAL CONTROLLERS SHALL BE ECONOLITE COBALT COBS22I00I20000.

(532.) ALL RADAR DETECTION SHALL BE WAVETRONIX SMARTSENSOR MATRIX.

(533.) ALL UPS, TRAFFIC SIGNAL SHALL BE ALPHA FXM 1100.

(534.) ALL TRAFFIC SIGNAL CABINETS SHALL BE NEMA TS-2 TYPE 1.

(535.) ALL PEDESTRIAN PUSHBUTTONS SHALL HAVE THE FOLLOWING FEATURES:
- A PUSHBUTTON LOCATOR TONE
- A TACTILE ARROW
- A SPEECH WALK MESSAGE TO COMMUNICATE THE WALK INDICATIONS AND TO WHICH CROSSING IT APPLIES
- A SPEECH PUSHBUTTON INFORMATION MESSAGE

ALABAMA LICENSED No. 36897 PROFESSIONAL 1/26/2021 ENGINEER LANCE D. BALLARD

	RESPONSIBLE PE: LANCE D. BALLARD		DESIGNER: KIMLEY-HORN AND ASSOCIATES, INC.	PLAN SUBMITTAL	CITY OF MOBILE	NOT TO SCALE	SHEET TITLE: TRAFFIC SIGNAL PLAN NOTES / ROUTE: GOVERNMENT STREET
	DATE: 1/26/2021						

INTELLIGENT TRANSPORTATION SYSTEMS (ITS) PLAN NOTES

CITY OF MOBILE PROJECT NO	FISCAL YEAR	SHEET NO
2018-2060-06	2020	2A

INTELLIGENT TRANSPORTATION SYSTEMS (ITS) PLAN NOTES

IN THE EVENT CONFLICTS OCCUR BETWEEN THE ITS PLAN NOTES AND THE MUTCD, THE MUTCD WILL GOVERN.

( ) NOTES THAT APPLY TO THIS PROJECT.

(931.) NO NPDES PERMIT REQUIRED.

1100. THE LOCATION OF THE POWER SERVICE AS SHOWN IN THE PLANS IS APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF THE POWER SERVICE AND THE SHORTEST ROUTE TO SERVE THE ITS CABINET AND DEVICES. THE CONTRACTOR SHALL HAVE THE POWER SERVICE LOCATION(S) APPROVED BY THE ENGINEER PRIOR TO INSTALLING POWER POWER SERVICE.

(1101.) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY OWNERS OR LINE LOCATION SERVICE TO DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES ON THIS PROJECT, WHETHER SHOWN ON PLANS OR NOT. DAMAGE TO UTILITIES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE UTILITY COMPANY AND THE ENGINEER. THE COST OF SUCH REPAIRS SHALL BE BORNE BY THE CONTRACTOR.

(1102.) THE LOCATION OF ANY REQUIRED COMMBOXES AND/OR ELECTRICAL/FIBER CABLE CONDUITS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO PREVENT ANY CONFLICTS WITH THE EXISTING UTILITIES.

(1103.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY ROADWAY, LIGHTING, OR BRIDGE ELEMENTS THAT OCCUR DURING THE CONSTRUCTION OF THIS PROJECT DUE TO HIS OPERATIONS. THE METHOD OF REPAIR SHALL BE APPROVED BY THE ENGINEER PRIOR TO REPAIRS BEING DONE. ANY COST OF SUCH REPAIRS SHALL BE BORNE BY THE CONTRACTOR.

(1104.) THIS PROJECT SHALL BE LIMITED TO TWO (2) END-TO-END SPLICES OF THE 48 FIBER SINGLE MODE FIBER OPTIC CABLE AT LOCATIONS SELECTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. "END-OF-DAY" CABLE CUTS AND SPLICING ARE NOT PERMITTED.

(1105.) AT FIBER OPTIC CABLE END-TO-END SPLICE LOCATION(S) AND AT FIBER OPTIC CABLE END-OF-RUN LOCATION(S), THE CONTRACTOR SHALL PROVIDE A COMPLETE FUSION SPLICE INSTALLATION. FUSION SPLICE INSTALLATION SHALL BE EQUIPPED WITH SPLICE CLOSURE AND SPLICE TRAY (AND F2 COMMBOX IF CABLE IS BURIED AT SPLICE LOCATION).

(1106.) CONTRACTOR SHALL PROVIDE ACCURATE 'AS-BUILT' PLAN SET AND SPLICE CHARTS (HARD COPY AND DIGITAL) AS PART OF THE PROJECT ACCEPTANCE PROCESS. THE ENGINEER SHALL VERIFY THE ACCURACY OF THE DRAWINGS PRIOR TO ACCEPTANCE.

(1107.) PRIOR TO INSTALLATION OF FIBER OPTIC CABLE, THE CONTRACTOR SHALL COORDINATE FIBER ALLOCATIONS WITH THE ENGINEER. THE CONTRACTOR SHALL HAVE ALL SPLICE CHARTS APPROVED BY THE ENGINEER PRIOR TO INSTALLING FIBER OPTIC CABLE. IF THE CONTRACTOR INSTALLS FIBER OPTIC CABLE PRIOR TO THE ENGINEER'S APPROVAL OF SPLICE CHARTS, THE CONTRACTOR SHALL BEAR ALL COSTS AND ANY COSTS OF CHANGES RELATED TO FIBER OPTIC INSTALLATION AND SPLICING THAT MAY BE REQUESTED BY ALDOT.

(1108.) THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL ALL ANCHORS, MOUNTING BRACKETS, CLAMPS AND STRAPS PRIOR TO ANY INSTALLATION OF PRODUCT.

1109. ALL ANCHORS PLACED IN BRIDGE DECKS SHALL PENETRATE THE DECK A MAXIMUM OF 1-1/4 INCHES.

1110. ALL CONDUIT MOUNTED UNDER THE BRIDGE DECK SHALL BE STRAPPED TO THE BRIDGE DECK IN FIVE (5) FEET MAXIMUM INTERVALS.

1111. CONDUIT EXPANSION JOINTS SHALL BE INSTALLED EVERY 50 FEET MAXIMUM WHERE CONDUIT IS ATTACHED TO BRIDGE DECK.

1112. ALL UNDERGROUND CONDUIT RUNS SHALL CONTAIN TWO (2) EACH 2-INCH DIAMETER HDPE CONDUITS, UNLESS OTHERWISE SHOWN ON PLANS. ALL ENCASEMENT RUNS SHALL CONTAIN ONE (1) EACH 6-INCH DIAMETER ELECTRICAL CONDUIT, I LINE, TYPE 5 INSTALLATION, UNLESS OTHERWISE SHOWN ON PLANS.

(1113.) PRECAUTIONS SHALL BE TAKEN TO ENSURE THAT ALL UNDERGROUND CONDUIT RUNS WILL BE LOCATED TO AVOID CONFLICT WITH PROPOSED OR EXISTING GUARDRAIL, SIGNPOST, ETC.

(1114.) DURING THE INSTALLATION OF 756-A, UPHEAVAL IN EXISTING PAVEMENT WILL NOT BE ALLOWED.

(1115.) ACCESS TO ALL OPEN BUSINESSES SHALL BE MAINTAINED DURING INSTALLATION OF THE 756-A CONDUIT WHERE MORE THAN ONE ACCESS DRIVE IS AVAILABLE.

(1116.) ANY TRENCHES REQUIRED FOR CONSTRUCTION SHALL BE BACKFILLED THE SAME DAY.

1117. ANY HOLES EXCAVATED FOR STRUCTURE AND POLE FOUNDATIONS SHALL BE COVERED IF LEFT OVERNIGHT. THE COVERING SHALL BE SUFFICIENTLY SECURED TO AVOID UNINTENTIONAL DISPLACEMENT BY PERSONS, WIND OR VEHICLES AS APPROVED BY THE ENGINEER. THIS SHALL BE A SUBSIDIARY OBLIGATION OF THE STRUCTURE AND POLE FOUNDATIONS.

1118. THE CONTRACTOR SHALL CONNECT EACH POLE GROUND SYSTEM IMMEDIATELY AFTER THE POLE HAS BEEN PLACED ON ITS FOUNDATION. NO METAL POLE SHALL BE LEFT UNGROUNDED AFTER IT HAS BEEN PLACED ON ITS FOUNDATION.

1119. THE COMMBOXES THAT ARE TO BE PLACED ALONG ROADWAYS SHALL HAVE A MINIMUM CLEARANCE OF TEN (10) FEET FROM THE EDGE OF THE PAVED SHOULDER AND FIFTEEN (15) FEET FROM THE EDGE OF PAVEMENT WHERE NO PAVED SHOULDER IS PRESENT, UNLESS OTHERWISE APPROVED BY THE PROJECT ENGINEER.

(1120.) THE VERTICAL SEPARATION BETWEEN FIBER CABLE AND ELECTRICAL LINES AT POLE ATTACHMENT SHALL MEET ALL PROVISIONS OF THE NATIONAL ELECTRIC SAFETY CODE (NESC), CURRENT EDITION, REGARDING CLEARANCE FROM ELECTRIC LINES.

1121. AERIAL DROPS SHALL HAVE ADEQUATE SLACK IN THE TRUNK SERVICE LOOP WITH AMPLE LENGTH OF THE DROP CABLE. THIS SHALL ALLOW FOR THE DETACHMENT OF THE AERIAL CLOSURE FROM THE TRUNK CABLE AND THE ABILITY TO LOWER SAID CLOSURE, TRUNK, AND DROP WITHOUT HAVING TO WORK IN A BUCKET TRUCK.

1122. REQUIRED STRAPPING OF FIBER OPTIC CABLE TO MESSENGER CABLE SHALL BE STAINLESS STEEL LOCATED MAXIMUM FIVE (5) FEET ON CENTER.

(1123.) THE LOCATION, HEIGHT, AND MOUNTING METHOD OF REQUIRED F1 AND F2 COMMBOXES SHALL BE COORDINATED WITH THE ENGINEER PRIOR TO INSTALLATION.

1124. FINAL LOCATION OF REQUIRED CCTV AND RVD POLES SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

1125. ALL REQUIRED CCTV AND RVD POLES LOCATED BEHIND GUARDRAIL SHALL BE A MINIMUM OF FOUR (4) FEET BEHIND BACK OF GUARDRAIL POST.

(1126.) THE CONTRACTOR SHALL COORDINATE WITH ALDOT PRIOR TO AND DURING ANY WORK ON ACTIVE FIBERS.

(1127.) THE CONTRACTOR SHALL PROVIDE AND INSTALL FIBER OPTIC DROP CABLE FROM THE REQUIRED SPLICE CLOSURE TO THE REQUIRED SWITCH, FIBER DISTRIBUTION UNIT, OR UPS CABINET AT EACH SIGNALIZED INTERSECTION.

(1128.) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL COMPONENTS (INCLUDING, BUT NOT LIMITED TO, CAMERAS AND CAMERA CONTROLS, VEHICLE DETECTION DEVICES, WIRELESS DEVICES, ETHERNET FIELD SWITCHES, DYNAMIC MESSAGE SIGNS, AND VIDEO ENCODERS) ARE COMPATIBILE TO ALDOT'S AUTOMATED TRAFFIC MANAGEMENT SYSTEM (ATMS) AND THAT THEY FUNCTION AS A COMPLETE SYSTEM.

(1129.) ALL STRUCTURES SHALL BE INSTALLED FREE OF ANY APPURTENANCES. THE INSTALLATION OF DEVICES, CABINETS, OR OTHER APPURTENANCES WILL BE ALLOWED FOLLOWING INSPECTION OF THE STRUCTURE BY THE ENGINEER.

(1130.) THE CONTRACTOR SHALL COORDINATE WITH ALDOT REGARDING THE SEQUENCING OF EQUIPMENT INSTALLATIONS. THE CONTRACTOR SHALL VERIFY OPERATIONS OF THE EXISTING INTERCONNECT PRIOR TO INSTALLATION OF ANY NEW EQUIPMENT. THE CONTRACTOR SHALL ENSURE THAT THE EXISTING INTERCONNECT IS MAINTAINED THROUGHOUT AND UPON COMPLETION OF THE PROJECT.

(1131.) IN ADDITION TO AS-BUILTS, TRUNK FIBER AND ALL DROP CABLES ARE TO BE SURVEYED AND MAPPED IN GIS TO PROVIDE EXACT LOCATIONS OF FIBER CABLE ROUTING AND PULL BOXES.

(1132.) CONTRACTOR TO ENSURE NEWLY INSTALLED CABINETS MEET CABINET GROUNDING SPECIFICATION REQUIREMENTS.

(1133.) SIGNAL OUTAGES (PERIODS WHERE THE SIGNAL IS DARK) SHALL BE LIMITED TO 9 PM TO 4 AM AND POLICE ARE REQUIRED TO DIRECT TRAFFIC.

(1134.) CITY OF MOBILE SHALL COORDINATE WITH ALDOT REGARDING ANY ONGOING WORK.

(1135.) INTERCONNECT CONDUIT SHALL BE INSTALLED AT A MINIMUM DEPTH OF 3 FEET.

(1136.) DATA CABLES AND CONDUCTOR CABLES SHALL BE INSTALLED IN SEPARATE CONDUIT.

(1137.) CONTRACTOR SHALL ENSURE THAT ALL DEVICES WILL BE CONFIGURED TO WORK ON THE NETWORK BEFORE THE CLOSE OF THE PROJECT.

(1138.) CONTRACTOR SHALL BENCH TEST ALL ITS EQUIPMENT.

(1139.) CITY OF MOBILE FIBER CABLE SHALL BE LABELED AS "CITY OF MOBILE" AND ALDOT FIBER CABLE SHALL BE LABELED AS "ALDOT."

(1140.) MULTIDUCT SHALL BE THE PREFERRED METHOD OF INSTALLATION FOR FIBER INTERCONNECT CABLE. INSTALLATION SHALL BE PERFORMED WITH MAXCELL INNERDUCT OR APPROVED EQUIVALENT. SEE SECTION 729.03(J)(3) OF THE ALDOT STANDARD SPECIFICATIONS.
CITY OF MOBILE AND ALDOT FIBER CABLES SHALL BE INSTALLED IN SEPARATE DUCTS WITHIN THE MULTIDUCT.

(1141.) ALL EQUIPMENT MUST HAVE THE MOST CURRENT STABLE FIRMWARE AS OF THE DATE OF INSTALL.

(1142.) FIBER MARKER POSTS ONLY TO BE INSTALLED FOR FIBER TRUNKLINE ALONG CANAL STREET AND BROAD STREET.

(1143.) ALL ETHERNET FIELD SWITCHES SHALL BE RUGGEDCOMM RS-900G-HI-D-2SFP-XX.

(1144.) ALL CCTV SHALL BE COHU 4260HD RISE II 4261-1100-02.

ALABAMA LICENSED No. 36897 PROFESSIONAL ENGINEER LANCE D. BALLARD 2021.01.26

	RESPONSIBLE PE: LANCE D. BALLARD		DESIGNER: KIMLEY-HORN AND ASSOCIATES, INC.	PLAN SUBMITTAL	CITY OF MOBILE	NOT TO SCALE	SHEET TITLE: ITS PLAN NOTES
	DATE: 1/26/2021						ROUTE: GOVERNMENT STREET

SUMMARY OF QUANTITIES

CITY OF MOBILE PROJECT NO	FISCAL YEAR	SHEET NO
2018-2060-06	2020	3

PAY ITEM NO.	DESCRIPTION	UNIT	TOTAL	PROJECT NOTES
600A-000	MOBILIZATION	LS	1	
654A-000	SOLID SODDING	SQYD	500	
665E-000	POLYETHYLENE	SQYD	1500	
665Q-002	WATTLE	LF	100	
729A-002	CABLE OSP, LOOSE TUBE, 48F SMF	LF	24375	1139
729A-101	FIBER OPTIC DROP CABLE OSP 12 SMF	LF	1285	
729B-010	FIBER DISTRIBUTION UNIT,SECONDARY(SFDU) 12 SMF	EA	11	
729C-110	NETWORK DEVICE, UNLICENSED WMES	EA	6	
729D-100	CAMERA, POSITIONER (TYPE A)	EA	6	1144
729I-101	CONDUIT, UNDERGROUND, NON-METALLIC, 2-INCH	LF	425	
729N-000	MISC. INFRA-STRUCTURE,FUSION SPLICING	EA	94	
729N-114	MISC. INFRA-STRUCTURE,SPLICE ENCLOSURE, UNDERGROUND 48F	EA	12	
729N-302	MISC. INFRA-STRUCTURE,COMM BOX,TYPE F2	EA	32	
729N-500	MISCELLANEOUS INFRASTRUCTURE, FIBER MARKER POST	EA	8	1142
729N-600	UPS, ELECTRONICS	EA	1	
730A-012	REMOVAL OF EXISTING TRAFFIC CONTROL UNIT (PARTIAL)	LS	1	528, 529, 530, 1133
730A-013	REMOVAL OF EXISTING TRAFFIC CONTROL UNIT (PARTIAL)	LS	1	528, 529, 530, 1133
730A-014	REMOVAL OF EXISTING TRAFFIC CONTROL UNIT (PARTIAL)	LS	1	528, 529, 530, 1133
730A-015	REMOVAL OF EXISTING TRAFFIC CONTROL UNIT (PARTIAL)	LS	1	528, 529, 530, 1133
730A-016	REMOVAL OF EXISTING TRAFFIC CONTROL UNIT (PARTIAL)	LS	1	528, 529, 530, 1133
730A-017	REMOVAL OF EXISTING TRAFFIC CONTROL UNIT (PARTIAL)	LS	1	528, 529, 530, 1133
730A-018	REMOVAL OF EXISTING TRAFFIC CONTROL UNIT (PARTIAL)	LS	1	528, 529, 530, 1133
730A-019	REMOVAL OF EXISTING TRAFFIC CONTROL UNIT (PARTIAL)	LS	1	528, 529, 530, 1133
730A-020	REMOVAL OF EXISTING TRAFFIC CONTROL UNIT (PARTIAL)	LS	1	528, 529, 530, 1133
730C-000	FURNISHING AND INSTALLING TRAFFIC CONTROL UNIT	LS	1	528, 529, 530, 531, 533, 534, 535
730C-001	FURNISHING AND INSTALLING TRAFFIC CONTROL UNIT	LS	1	528, 529, 530, 531, 533, 534, 535
730C-002	FURNISHING AND INSTALLING TRAFFIC CONTROL UNIT	LS	1	528, 529, 530, 531, 533, 534, 535
730C-003	FURNISHING AND INSTALLING TRAFFIC CONTROL UNIT	LS	1	528, 529, 530, 531, 533, 534, 535
730C-004	FURNISHING AND INSTALLING TRAFFIC CONTROL UNIT	LS	1	528, 529, 530, 531, 533, 534, 535
730C-005	FURNISHING AND INSTALLING TRAFFIC CONTROL UNIT	LS	1	528, 529, 530, 531, 533, 534, 535
730C-006	FURNISHING AND INSTALLING TRAFFIC CONTROL UNIT	LS	1	528, 529, 530, 531, 533, 534, 535
730C-007	FURNISHING AND INSTALLING TRAFFIC CONTROL UNIT	LS	1	528, 529, 530, 531, 533, 534, 535
730C-008	FURNISHING AND INSTALLING TRAFFIC CONTROL UNIT	LS	1	528, 529, 530, 531, 533, 534, 535
730C-009	FURNISHING AND INSTALLING TRAFFIC CONTROL UNIT	LS	1	528, 529, 530, 531, 533, 534, 535
730H-001	LOOP WIRE	LF	4110	
730I-001	LOOP DETECTOR LEAD-IN-CABLE	LF	2680	
730J-010	VEHICLE LOOP DETECTOR	EA	14	
730K-000	TRAFFIC SIGNAL JUNCTION BOX	EA	23	
730L-005	2", NON-METALLIC, CONDUIT	LF	535	
730P-023	VEHICULAR SIGNAL HEAD, 12 INCH, 4 SECTION, TYPE LED	EA	1	
730Q-011	PEDESTRIAN SIGNAL HEAD, TYPE LED	EA	2	
730R-022	CONTROLLER ASSEMBLY, TYPE III, 8 PHASE	EA	9	531, 534
730R-150	CONTROLLER UNIT, TYPE III, 8 PHASE	EA	1	531
730T-000	WOOD POLE	EA	3	529
730U-400	RADAR DETECTION	LS	1	532
730U-401	RADAR DETECTION	LS	1	532
730U-402	RADAR DETECTION	LS	1	532
734N-053	ETHERNET FIELD SWITCH, TYPE C	EA	11	1143
740B-000	CONSTRUCTION SIGNS	SF	518	
740D-000	CHANNELIZING DRUMS	EA	50	
740E-000	CONES (36 INCHES HIGH)	EA	50	
740F-002	BARRICADES, TYPE III	EA	2	
741C-010	PORTABLE SEQUENTIAL ARROW AND CHEVRON SIGN UNIT	EA	2	
740M-001	BALLAST FOR CONE	EA	50	
745A-000	UNIFORMED POLICE OFFICER	HR	180	
756A-020	2" ELECTRICAL CONDUIT, 1 LINE, TYPE 5 INSTALLATION	LF	9820	1135, 1140

ALABAMA LICENSED No. 36897 PROFESSIONAL 2021.01.26 ENGINEER LANCE D. BALLARD

RESPONSIBLE PE: LANCE D. BALLARD		DESIGNER: KIMLEY-HORN AND ASSOCIATES, INC.	PLAN SUBMITTAL	CITY OF MOBILE		SHEET TITLE	ROUTE
DATE: 1/26/2021						SUMMARY OF QUANTITIES	GOVERNMENT STREET

SUMMARY OF QUANTITIES

CITY OF MOBILE PROJECT NO	FISCAL YEAR	SHEET NO
2018-2060-06	2020	3A

REQUIRED TRAFFIC SIGNAL PAY ITEMS

DESCRIPTION	LOOP WIRE	LOOP DETECTOR LEAD-IN-CABLE	VEHICLE LOOP DETECTOR	TRAFFIC SIGNAL JUNCTION BOX	2", NON-METALLIC, CONDUIT	VEHICULAR SIGNAL HEAD, 12 INCH, 4 SECTION, TYPE LED	PEDESTRIAN SIGNAL HEAD, TYPE LED	CONTROLLER ASSEMBLY, TYPE III, 8 PHASE	CONTROLLER UNIT, TYPE III, 8 PHASE	2" ELECTRICAL CONDUIT, 1 LINE, TYPE 5 INSTALLATION	DRAWING NUMBERS
	730H-001	730I-001	730J-010	730K-000	730L-005	730P-023	730Q-011	730R-022	730R-150	756A-020	
SHEET NUMBER	LF	LF	EA	EACH	LF	EACH	EACH	EACH	EACH	LF	
SIGNAL LAYOUT 1					60			1			B, D
SIGNAL LAYOUT 2	3020	1710	9	11	130		2	2		735	B, C, D, E, F, G
SIGNAL LAYOUT 3	540	960	4	8	130			2		470	D, E, F, G, H
SIGNAL LAYOUT 4	550	10	1	2	130	1		2			A, B, D, E, F, H, I
SIGNAL LAYOUT 5				2	85			2		180	D, F, G, H
ITS LAYOUT 11									1		
TOTAL	**4110**	**2680**	**14**	**23**	**535**	**1**	**2**	**9**	**1**	**1385**	

REQUIRED TRAFFIC SIGNAL PAY ITEMS (LUMP SUM)

DESCRIPTION	MOBILIZATION	REMOVAL OF EXISTING TRAFFIC CONTROL UNIT (PARTIAL)									FURNISHING AND INSTALLING TRAFFIC CONTROL UNIT									RADAR DETECTION		
SHEET NUMBER	600A-000	730A-012	730A-013	730A-014	730A-015	730A-016	730A-017	730A-018	730A-019	730A-020	730C-000	730C-001	730C-002	730C-003	730C-004	730C-005	730C-006	730C-007	730C-008	730U-400	730U-401	730U-402
	LUMP SUM	LUMP SUM									LUMP SUM									LUMP SUM		
SIGNAL LAYOUT 1	1	1									1											
SIGNAL LAYOUT 2			1	1								1	1									
SIGNAL LAYOUT 3					1	1								1	1					1		
SIGNAL LAYOUT 4							1	1								1	1				1	
SIGNAL LAYOUT 5									1	1								1	1			1

TCP PAY ITEMS

ITEM	NUMBER	AMOUNT	UNIT
WOOD POLE	730T-000	3	EA
CONSTRUCTION SIGNS	740B-000	518	SF
CHANNELIZING DRUMS	740D-000	50	EA
CONES (36 INCHES HIGH)	740E-000	50	EA
BARRICADES, TYPE III	740F-002	2	EA
PORTABLE SEQUENTIAL ARROW AND CHEVRON SIGN UNIT	741C-010	2	EA
BALLAST FOR CONE	740M-001	50	EA
UNIFORMED POLICE OFFICER	745A-000	180	HR

TRAFFIC SIGNAL STANDARD DRAWINGS

A	TSD-730-2B
B	TSD-730-6
C	TSD-730-9
D	TSD-730-10
E	TSD-730-11
F	TSD-730-13
G	TSD-730-14
H	TSD-730-17
I	TSD-730-18

REQUIRED ITS PAY ITEMS

DESCRIPTION	CABLE OSP, LOOSE TUBE, 48F SMF	FIBER OPTIC DROP CABLE OSP 12 SMF	FIBER DISTRIBUTION UNIT, SECONDARY (SFDU) 12 SMF	NETWORK DEVICE, UNLICENSED WMES	CAMERA, POSITIONER (TYPE A)	CONDUIT, UNDERGROUND, NON-METALLIC, 2-INCH	MISC. INFRA-STRUCTURE, FUSION SPLICING	MISC. INFRA-STRUCTURE, SPLICE ENCLOSURE, UNDERGROUND 48F	MISC. INFRA-STRUCTURE, COMM BOX, TYPE F2	MISCELLANEOUS INFRASTRUCTURE, FIBER MARKER POST	MISCELLANEOUS INFRASTRUCTURE, POWER OVER ETHERNET (POE) EXTENDER - OUTDOOR	MISCELLANEOUS INFRASTRUCTURE, UPS, ELECTRONICS	SPLICE CLOSURE, UNDERGRADE, 12 FIBER	ETHERNET FIELD SWITCH, TYPE C	2" ELECTRICAL CONDUIT, 1 LINE, TYPE 5 INSTALLATION
	729A-002	729A-101	729B-010	729C-110	729D-100	729I-101	729N-000	729N-114	729N-302	729N-500	729N-550	729N-600	734G-100	734N-053	756A-020
SHEET NUMBER	LF	LF	EACH	EACH	EACH	LF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	LF
ITS LAYOUT 1	2540	115	1			35	8	2	4	1			2		970
ITS LAYOUT 2	2080					0			2	2					840
ITS LAYOUT 3	1790	110	1			20	4	1	2	2			1		795
ITS LAYOUT 4	1670					0			1	2					735
ITS LAYOUT 5	1430					0			1	1					615
ITS LAYOUT 6	2090	115	1		1	40	50	1	3				1	1	845
ITS LAYOUT 7	5460	220	2		1	60	8	2	5				2	2	1030
ITS LAYOUT 8	2220	220	2		1	40	8	2	4				2	2	910
ITS LAYOUT 9	2770	260	2		1	130	8	2	6				2	2	985
ITS LAYOUT 10	2325	245	2	1	1	100	8	2	4				2	2	710
ITS LAYOUT 11				5	1						2	1		2	
TOTAL	**24375**	**1285**	**11**	**6**	**6**	**425**	**94**	**12**	**32**	**8**	**2**	**1**	**12**	**11**	**8435**

*FIBER MARKER POST ONLY FOR FIBER TRUNKLINE RUNNING ALONG CANAL STREET AND BROAD STREET

EROSION CONTROL PAY ITEMS

ITEM	NUMBER	AMOUNT	UNIT
SOLID SODDING	654A-000	500	SQYD
POLYETHYLENE	665E-000	1500	SQYD
WATTLE	665Q-002	100	LF

ALABAMA LICENSED No. 36897 PROFESSIONAL ENGINEER LANCE D. BALLARD 2021.01.26

RESPONSIBLE PE: LANCE D. BALLARD		DESIGNER: KIMLEY-HORN AND ASSOCIATES, INC.	PLAN SUBMITTAL	CITY OF MOBILE		SHEET TITLE	ROUTE
DATE: 1/26/2021						SUMMARY OF QUANTITIES	GOVERNMENT STREET