

City of
SHELBYVILLE
Tennessee

DATE: November 2, 2017

NOTICE TO BIDDERS

Notice is hereby given that the CITY OF SHELBYVILLE, TENNESSEE is advertising for sealed bids on:

**FLASHING SIGNAL UPGRADE @ U.S. 231N
AND AIRPORT BUSINESS PARK ROAD**

Bids will be accepted by the City of Shelbyville Purchasing Office, 201 N. Spring Street, Shelbyville, TN 37160 or may be mailed to P.O. Box 185, Shelbyville, TN 37162 **until 2:00 p.m. on November 28, 2017**. Any bids received after the scheduled closing time for receipt of bids will be returned to the bidder unopened.

The bids shall be opened and read aloud during a public meeting of the City Council appointed BID COMMITTEE on November 28, 2017 at 2:00 p.m. at CITY HALL, 201 N. Spring Street. Award of the bid will be made at the next scheduled City Council meeting at the Shelbyville City Hall Annex. (December 14, 2017)

GENERAL INFORMATION

It will be the sole responsibility of the Bidder to deliver personally or by mail the bid submission to the City of Shelbyville Purchasing Office, 201 N. Spring Street, Shelbyville, TN 37160 on or before the closing hour and date announced for the receipt of the bids. **The envelope must be sealed and marked on the outside “Scaled Bid - FLASHING SIGNAL UPGRADE @ U.S. 231N AND AIRPORT BUSINESS PARK ROAD”.**

The City is exempt from taxes imposed by State and/or Federal Government. Exemption certificate, if required, will be furnished by the successful bidder and will be completed by the City.

The City Council reserves the right to reject any or all bids, to waive informalities and to accept all or any part of any bid as described therein, as they deem necessary to be in the best interest of the City.

City of Shelbyville

Bidders guarantee that the prices quoted in the bid will remain firm from the date of the bid opening until the completion of delivery.

All bids shall be made on forms furnished by the CITY. Supporting information shall be on the bidder's stationery.

Successful bidder must furnish Certificate of Liability insurance and Workers Compensation insurance to City upon request.

Each bid submission must be accompanied by a bidder's bond, or Cashier's Check, or Certified Check made payable to the City of Shelbyville in an amount equaling not less than five percent of the amount bid. If the bidder's bond is offered as guaranty, the bond must be made by a surety company, qualified and authorized to transact business in the State of Tennessee and must be acceptable to the City of Shelbyville. If a check is offered as guaranty, the check of the successful bidder will be cashable at the discretion of the City of Shelbyville, pending the satisfactory execution and acceptance of the contract and the contract bond.

A current business license must also be furnished upon request.

All bids must indicate the firm's name and address and be signed in ink by an officer or employee having authority to bind the company or firm.

The proposed construction shall be performed in accordance with the **Standard Specifications for Road and Bridge Construction of the Tennessee Department of Transportation, dated January 1, 2015**, which are incorporated herein by reference and made a part hereof. In addition, only those Special Provisions contained within this notice will be considered binding. Any reference to the Standard Specifications dated prior to March 1, 2006 shall be disregarded. In addition, any reference to any Special Provision not contained within this notice shall be disregarded.

All questions related to the notice or project drawings shall be directed to the attention of Mr. Eric Pierce at the City of Shelbyville at 931-684-2644, located at Public Works, 714 Industrial Pkwy., Shelbyville, TN 37160.

If a digital format of project drawings is needed, or to view a larger drawing please contact Lori Saddler at City Hall, 931-684-2691 or Eric Pierce, as listed above.

Supplemental Specifications to The Standard Specifications

	Revision Date
Supplemental Specification to Section 100-----	05/15/17
Supplemental Specification to Section 200-----	05/15/17
Supplemental Specification to Section 300-----	05/15/17

Supplemental Specification to Section 400-----	05/15/17
Supplemental Specification to Section 500-----	05/15/17
Supplemental Specification to Section 600-----	05/15/17
Supplemental Specification to Section 700-----	05/15/17
Supplemental Specification to Section 900-----	05/15/17

The above Supplemental Specifications, revised as noted, are incorporated by reference but are considered part of Standard Specifications for Road and Bridge Construction of the Tennessee Department of Transportation, dated January 1, 2015. The proposed construction shall be performed in accordance with the Supplemental Specifications. Both these Standard Specifications and Supplemental Specifications may be obtained from the Department at Suite 700, James K. Polk Bldg., Nashville, Tennessee or viewed on the Department’s website at <http://www.tdot.state.tn.us/construction>.

The proposed construction of this project must be compliant with the following special provision(s):

Special Provision Regarding:	Special Provision No.	Rev. Date
Highway Signs, Luminaires, and Traffic Signals -----	700SIG	02/03/07
Video Detection for Traffic Signals-----	-----730V	N/A

The intent of these specifications is to insure delivery of a new complete unit for operation. Omission of any essential detail from these specifications does not relieve the supplier from furnishing such unit. All bids must be on new models. This provision excludes surplus, used or demonstrators.

The bidder, by executing a contract or bid proposal on the terms of the invitation to bid, warrants the product that is supplied to be buyer shall remain fully in accord with the specifications and to be of the highest quality. In the event the product, as supplied to the buyer, is found to be defective or does not conform to the specifications, the buyer reserves the right to cancel the order upon written notice to the supplier and return such product to the supplier at the supplier’s expense.

Payments will commence or be made in full after delivery and acceptance of the product. All documents, invoices, title and exemption certificate shall be presented to the City of Shelbyville Purchasing Office.

All Bidders must comply with A.D.A. guidelines if required.

All Bidders must be in compliance with Title VI, Civil Rights Act of 1964, which specifies that: No person in the United States shall, on the grounds of race, color or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under a program or activity receiving federal financial assistance from the Department of Transportation or the U. S. Department of Justice.

The City of Shelbyville is subject to the Open Records Act, TCA 10-7-501, et. Seq. Bidders are advised that all documents submitted on behalf of this invitation to bid shall be open to the public for viewing and inspection. The City of Shelbyville will fulfill Public Records Requests in compliance with Tennessee Open Records Act.

Failure on the part of the bidder to comply with all instructions herein may result in bid rejection.

BID FORM

TO: City of Shelbyville
201 N. Spring St.
Shelbyville, TN 37160

Date: _____

In accordance with your invitation to bid on:

FLASHING SIGNAL UPGRADE @ U.S. 231N AND AIRPORT BUSINESS PARK ROAD

We hereby submit the following bid:

Specifications:

- **Standard Specifications for Road and Bridge Construction of the Tennessee Department of Transportation, dated January 1, 2015**
- **Supplemental Specifications to The Standard Specifications**

	Revision Date
Supplemental Specification to Section 100-----	05/15/17
Supplemental Specification to Section 200-----	05/15/17
Supplemental Specification to Section 300-----	05/15/17
Supplemental Specification to Section 400-----	05/15/17
Supplemental Specification to Section 500-----	05/15/17
Supplemental Specification to Section 600-----	05/15/17
Supplemental Specification to Section 700-----	05/15/17
Supplemental Specification to Section 900-----	05/15/17

- **Special Provisions:**
 - 700SIG Highway Signs, Luminaires, and Traffic Signals 02/03/07
 - 730V Video Detection for Traffic Signals N/A

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
712-01	TRAFFIC CONTROL	1	LS
716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	120	L.F.
716-02.06	PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	8	EACH
717-01	MOBILIZATION	1	LS
730-02.07	SIGNAL HEAD ASSEMBLY (130)	3	EACH
730-02.16	SIGNAL HEAD ASSEMBLY (150 A2)	1	EACH
730-02.30	SIGNAL HEAD ASSEMBLY (130 A3)	2	EACH
730-03.20	INSTALL PULL BOX (TYPE A)	4	EACH
730-12.02	CONDUIT 2" DIAMETER (PVC)	900	L.F.
730-12.13	CONDUIT 2" DIAMETER (JACK AND BORE)	160	L.F.
730-13.02	VEHICLE DETECTOR (VIDEO)	3	EACH
730-14.01	SHIELDED DETECTOR CABLE	1300	L.F.
730-14.02	SAW SLOT	110	L.F.
730-14.03	LOOP WIRE	330	L.F.

See plan sheet quantities for footnotes concerning items.

Project to be completed by February 15, 2018

Delivered and installed product must meet on-site approval by Public Works representative.

Any questions may be directed to Eric Pierce, Public Works Director, at 931-684-2644 or Lori Saddler, Purchasing/IT Director, at 931-684-2691.

We hereby submit the following price for your consideration:

_____ \$ _____
TOTAL BID WRITTEN IN WORDS

Signed: _____

Title: _____

Date: _____

Company name and address:

Phone number:

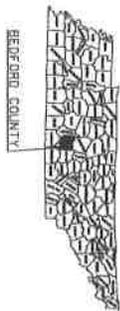
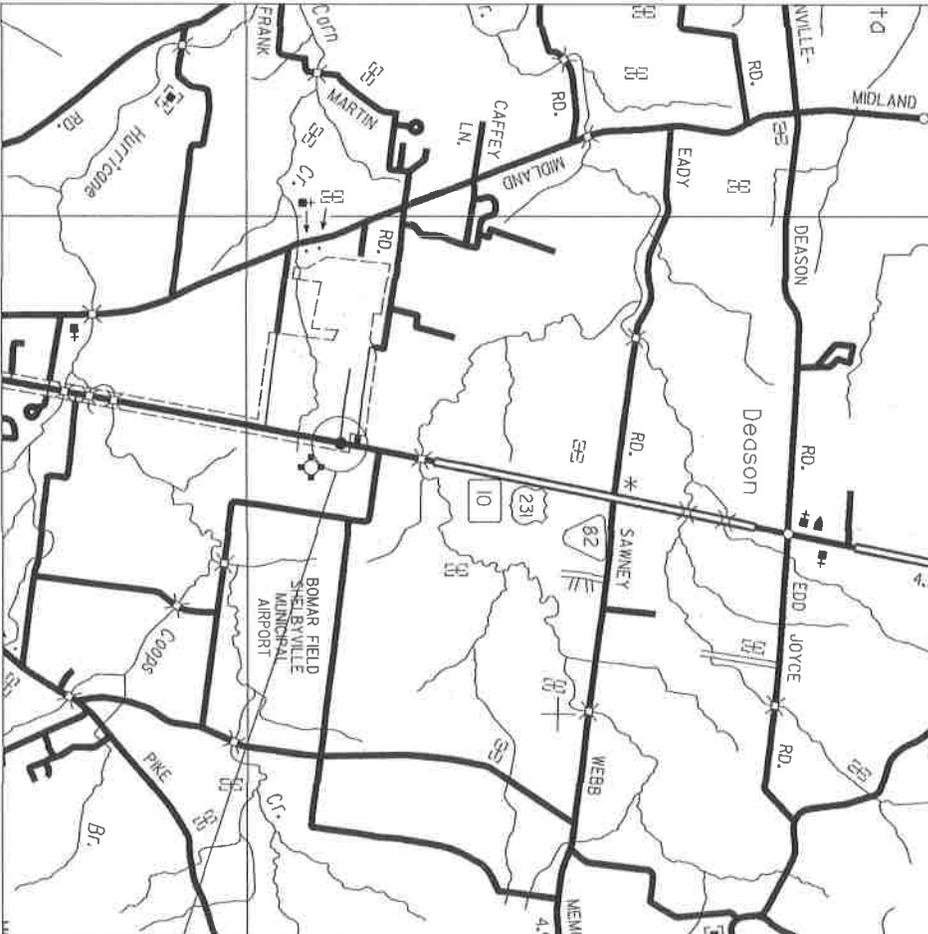
Email:

Bid quote good for _____ days.

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	EST. QUANTITIES & STD. DRAWINGS
3	SIGNAL NOTES
4	SIGNAL LAYOUT

**SIGNAL UPGRADE FOR
CITY OF SHELBYVILLE
US 231 AT
AIRPORT BUSINESS PARK ROAD**



**NO EXCLUSIONS
NO EQUATIONS**

- NOTES:**
1. THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED JANUARY 1, 2015 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.
 2. CONTRACTOR TO OBTAIN TENNESSEE DEPARTMENT OF TRANSPORTATION (TDOT) STANDARD DRAWINGS. ALL STANDARD DRAWINGS LISTED IN THIS PROJECT ARE TDOT STANDARD DRAWINGS.

**INTERSECTION OF US 231 AND
AIRPORT BUSINESS PARK ROAD**



**CIVIL ENGINEER-
GRESHAM, SMITH AND PARTNERS**
1400 NASHVILLE CITY CENTER 511 UNION STREET
NASHVILLE, TENNESSEE 37219
(615)770-8100 TEL/FAX
(866)539-7192 FAX
CONTACT: MEREDITH CEBELAK, PH.D., P.E.



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**GRESHAM
SMITH AND
PARTNERS**
1400 NASHVILLE CITY CENTER
NASHVILLE, TENNESSEE 37219
NEW ORLEANS, LA 70112
NEW ORLEANS, LA

**U.S. HIGHWAY 231 AT
AIRPORT BUSINESS PARK ROAD**

SHELBYVILLE, TENNESSEE

NO.	DATE	REVISION

132311
AIRPORT BUSINESS PARK
1
1/15/2015

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
712-01	TRAFFIC CONTROL	1	L.S.
716-02-05	PLASTIC PAVEMENT MARKING (STOP LINE)	120	L.F.
716-02-06	PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	8	EACH
717-01	MOBILIZATION	1	L.S.
730-02-07	SIGNAL HEAD ASSEMBLY (130)	3	EACH
730-02-16	SIGNAL HEAD ASSEMBLY (150 A2)	1	EACH
730-02-30	SIGNAL HEAD ASSEMBLY (130 A3)	2	EACH
730-03-20	INSTALL PULL BOX (TYPE A)	4	EACH
730-12-02	CONDUIT 2" DIAMETER (PVC)	900	L.F.
730-12-13	CONDUIT 2" DIAMETER (BLACK AND BROWN)	180	L.F.
730-13-02	VEHICLE DETECTOR (VIDEO)	3	EACH
730-14-01	SHIELDED DETECTOR CABLE	2800	L.F.
730-14-02	SAW SLOT	110	L.F.
730-14-03	LOOP WIRE	330	L.F.

1 CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL PLAN. PLAN SHALL BE IN ACCORDANCE WITH ALL T.C.D. STANDARDS.

DETECTION TABLE

LOOP NO.	SIZE	TYPE	FUNCTION	CONTROLLER PHASE TERMINALS	DISTANCE TO STOPLINE
V1	N/A	VIDEO	PRESENCE	1	0
V2-2	N/A	VIDEO	PRESENCE	2	0
V2-3	N/A	VIDEO	PRESENCE	2	0
02-4	6X6	LOOP	ADVANCED	2	405
02-5	6X6	LOOP	ADVANCED	2	405
V3	N/A	VIDEO	PRESENCE	3	0
V5-1	N/A	VIDEO	PRESENCE	6	0
V5-2	N/A	VIDEO	PRESENCE	6	0
06-3	6X6	LOOP	ADVANCED	6	405
06-4	6X6	LOOP	ADVANCED	6	405
V8	N/A	VIDEO	PRESENCE	8	0

T.D.O.T. STANDARD DRAWINGS

- T-56-2 LOOP LEAD-INS, CONDUIT AND PULL BOXES
- T-56-3 STANDARD NOTES AND DETAILS OF INDUCTIVE LOOPS
- T-56-5 ALTERNATE DETECTION DETAILS
- T-56-7 SIGNAL HEAD ASSEMBLIES AND PEDESTRIAN PUSH BUTTON SIGNS
- T-56-7A TYPICAL SIGNAL HEAD PLACEMENT
- T-56-7E TYPICAL SIGNAL HEAD PLACEMENT
- T-56-7F TYPICAL SIGNAL HEAD PLACEMENT
- T-56-9A MISCELLANEOUS SIGNAL DETAILS
- T-56-12 TYPICAL WIRING FOR SIGNAL HEADS AND DETECTION LOOPS
- T-M-4 STANDARD INTERSECTION PAVEMENT MARKINGS
- T-WZ-40 RIGHT LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
- T-WZ-41 LEFT LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
- T-WZ-42 CENTER LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
- T-WZ-52 TRAFFIC CONTROL FOR SIGNALS ONLY PROJECTS ON 4 OR 5 LANE MAJOR AND MINOR ROUTES



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CASE HAM
SMITH AND
PARTNERS
1406 Shelbyville Court
Nashville, TN 37210
615.259.1100
www.caseham.com

U.S. HIGHWAY 231 AT
AIRPORT BUSINESS PARK ROAD
SHELBYVILLE, TENNESSEE

REVISION	DATE	REVISION



2
SHELBYVILLE, TENNESSEE
DATE: 08/11/08

GENERAL

(1) EQUIPMENT AND INSTALLATION SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE FOLLOWING TENNESSEE DEPARTMENT OF TRANSPORTATION PUBLICATIONS:

- "SPECIAL PROVISIONS" SECTION 720 - TRAFFIC SIGNALS
- "SPECIAL SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (JANUARY 1, 2015)
- "STANDARD ROADWAYS AND STRUCTURE DRAWINGS"

(2) ALL PAVEMENT MARKINGS SHOWN ON THE PLANS, E.G., STOP MARK, LANE LINES, ETC. SHALL BE IN PLACE PRIOR TO ACTIVATION OF THE TRAFFIC SIGNAL FLASH FLASHING.

(3) AN ADVANCE FLASH OPERATION PERIOD IS REQUIRED TO MAKE MOTORISTS AWARE OF THE PRESENCE OF NEW SIGNAL HEADS. NEW SIGNAL HEADS SHALL BE PUT IN FLASH OPERATION FOR A MINIMUM OF SEVEN (7) CALENDAR DAYS UP TO FOURTEEN (14) CALENDAR DAYS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE ADVANCE FLASH OPERATION PERIODS MAY BE CONSIDERED UPON WRITTEN APPROVAL FROM THE REGIONAL TRAFFIC ENGINEER.

(4) SALVAGEABLE EQUIPMENT SHALL BECOME THE PROPERTY OF THE CITY OF SHELBYVILLE AND SHALL BE STORED AT A LOCATION DESIGNATED BY THE ENGINEER FOR PICKUP BY THE CITY.

(5) THE CONTRACTOR SHALL SUBMIT A MATERIAL LIST TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO START OF CONSTRUCTION.

(6) THESE PLANS REFLECT CONDITIONS KNOWN DURING THEIR DEVELOPMENT. ALL SCALES ARE APPROXIMATE. ACTUAL PHYSICAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR THE APPLICATION OF WORK SHOWN IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ALL WORK SHOWN IN THE PLANS.

(7) THE PROPOSED LOCATION OF CONDUIT AND PULL/JUNCTION BOXES SHOWN ON THESE PLANS MAY BE ADJUSTED TO CLEAR EXISTING TREES, SIGNS, LIGHTING, UTILITIES, STRUCTURES, OR OTHER FIELD OBSTRUCTIONS. SIGNIFICANT ADJUSTMENTS SHALL BE APPROVED BY THE ENGINEER. SIGNIFICANT ADJUSTMENTS SHALL BE DEFINED AS DEVIATION FROM PROPOSED ROUTES GREATER THAN 5 FEET IN OFFSET.

(8) NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA SIGNALIZATION.

TRAFFIC SIGNAL

(9) SIGNALS SHALL BE INSTALLED AS PER TDOT STANDARD DRAWINGS T-56-7, T-56-7A, T-56-7E, T-56-7F, T-56-9, T-56-10, T-56-12 AND T-56-13.

SIGNAL HEADS

(10) ANY SIGNAL HEADS WHEN VISIBLE TO DRIVERS BUT NOT OPERATIONAL SHALL BE COMPLETELY COVERED.

(11) ALL CIRCULAR AND ARROW INDICATIONS WITHIN ALL VEHICULAR SIGNAL HEADS PROPOSED FOR THIS PROJECT SHALL CONSIST OF AN LED LIGHT EMITTING DIODE SIGNAL MODULE UNLESS OTHERWISE NOTED IN THE PLANS.

(12) CIRCULAR INDICATIONS SHALL MEET THE VCSHED CIRCULAR SIGNAL SUPPLEMENT FOR EXPANDED EXTENDED VIEW.

(13) LED SIGNAL MODULES SHALL HAVE "NON-REFLECTIVE LOOK".

(14) NON-REFLECTIVE OR SCREEN-LED MODULES ARE NOT ACCEPTABLE.

(15) MANUFACTURER SHALL PROVIDE A MINIMUM TEN YEAR WARRANTY FOR OPERATION OF THE UNIT.

(16) SIGNAL HEAD PLACEMENT SHALL BE PER TDOT STANDARD T-56-7A, T-56-7E AND T-56-7F.

(17) SIGNAL HEADS SHALL BE YELLOW WITH BLACK ALUMINUM BACK PLATES.

(18) SIGNAL HEAD EQUIPMENT (I.E. FRAME AND ILLUMINATION TYPE) SHALL BE APPROVED BY THE CITY PRIOR TO ORDERING AND INSTALLATION.

(19) BACKPLATES SHALL BE ALUMINUM, POLISHED, DULL, NON-REFLECTIVE BLACK FINISH WITH YELLOW RAISED REFLECTIVE STRIPE SIGNAL HEADS SHALL INCLUDE COVERED BACKPLATES WITH A 1" MINIMUM YELLOW RETRO REFLECTIVE BORDER AROUND THE PERIMETER OF THE FRONT FACE OF THE BACKPLATE. THE RETRO REFLECTIVE BORDER TO BE MADE OF A TYPE III PPSMAIOL OR BETTER MATERIAL.

CONTROLLER

(20) THE CONTROLLER SHALL BE PHASE NEMA TS2 COMPLIANT.

(21) THE TRAFFIC SIGNAL CONTROLLER FINISHED BY THE CONTRACTOR SHALL BE COMPLETE WITH ALL INCIDENTAL AND AUXILIARY EQUIPMENT (COMPACT MONITOR, HARDWARE AND CABINET) NECESSARY FOR INSTALLATION AND OPERATION EITHER AS INSTALLED LOCATION OR AS SPECIFIED IN THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION AND INSTALLATION OF THE TRAFFIC SIGNAL AS SPECIFIED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR.

VIDEO DETECTION

(22) VIDEO DETECTION CAMERAS SHALL BE INSTALLED PER T.O.T. STANDARD DRAWING T-56-3A. ALL EQUIPMENT NECESSARY FOR VIDEO DETECTION SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION AND INSTALLATION OF THE VIDEO DETECTION SYSTEM INCLUDING SUPPORT ETHERNET COMMUNICATIONS TO ALL VIDEO PROCESSOR UNITS. PAYMENT FOR ITEM 720-13.02 INCLUDES THE COME ETIP INSTALLATION OF A VIDEO DETECTION SYSTEM INCLUDING CAMERAS FOR ALL APPROACHES AS SHOWN ON THESE PLANS ALL WIRING AND EQUIPMENT SHALL BE NECESSARY FOR A FULLY OPERATIONAL DETECTION SYSTEM AND SHALL BE INCLUDED IN COST.

(23) THE CONTRACTOR SHALL SUBMIT VIDEO DETECTION SYSTEM CABLE SHEETS FOR APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION. VIDEO DETECTION LEASING CABLE SHALL BE ONE CONTROLLER LEASING AND SPLICED SHALL BE PERMITTED ONLY IN THE PULL BOXES AND/OR AT THE CONTROLLER CABINET. EACH CAMERA SHALL HAVE A SEPARATE LEASING TO THE CONTROLLER CABINET. ALL CAMERA LEASINGS SHALL BE LABELED WITH THE APPROPRIATE

PHASE AND APPROACH TO WHICH THEY ARE ATTACHED BOTH IN THE PULL BOX AND CONTROLLER CABINET.

(24) VIDEO DETECTION CAMERAS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

PULL BOXES

(25) ALL PULL BOXES SHALL MEET THE SPECIFICATIONS REFERENCED IN THESE PLANS AND TDOT STANDARD DRAWING T-56-5 AND HAVE A TRAFFIC LOGO ON COVER.

(26) PULL BOXES SHALL NOT BE LOCATED IN DRAINAGE SWALES, DITCHES, DRIVEWAYS, SURFACE WATER, WYED SHOULDERS OR OTHER DRAINAGE AREAS.

(27) INSTALLED PULL BOX COVERS FLUSH WITH SURROUNDING GRADE. TO THE EXTENT EXISTING CONDITIONS ALLOW.

CONDUIT

(28) ALL CONDUIT SHALL BE SCHEDULE 40 PVC UNLESS NOTED OTHERWISE. CONDUIT SHALL BE LAD AT A MINIMUM DEPTH OF 24 INCHES BELOW FINISHED GRADE AND SHALL COMPLY WITH ALL REQUIREMENTS OF THE PLANS AND TDOT STANDARD DRAWING T-56-10. CONDUIT SHALL BE LAD AT A MINIMUM DEPTH OF 24 INCHES BELOW FINISHED GRADE AND SHALL COMPLY WITH ALL REQUIREMENTS OF THE PLANS AND TDOT STANDARD DRAWING T-56-10. CONDUIT SHALL BE LAD AT A MINIMUM DEPTH OF 24 INCHES BELOW FINISHED GRADE AND SHALL COMPLY WITH ALL REQUIREMENTS OF THE PLANS AND TDOT STANDARD DRAWING T-56-10.

(29) AT THE CONTRACTOR'S DISCRETION, DIRECTIONAL BENDING METHOD MAY BE USED FOR CONDUIT BENDING. ALL BENDING SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. PROPOSED CONDUIT ROUTES ARE AERIAL BASED. FIELD VERIFICATION OF MECHANICAL VERSUS HAND BENDING REQUIREMENTS OF THE PROPOSED ROUTES HAVE NOT BEEN EVALUATED. CONTRACTOR ASSUMES ALL RISKS ASSOCIATED WITH THE PROPOSED ROUTES.

(30) ALL CONDUIT TRENCHES AND BORE PITS SHALL BE BACK FILLED COMPLETELY TO PROVIDE SAFE CROSSING BY THE END OF EACH WORKING DAY OR WHENEVER THE WORK ZONE BECOMES INACTIVE. DO NOT OPEN ANY AREA THAT CANNOT BE COMPLETED AND BACK FILLED IN THE SAME WORK OPERATION, OR THE END OF THE WORK DAY, WHICHEVER IS LESS.

SIGNAL TIMING

(31) THE CONTRACTOR SHALL CONTACT THE CITY OF SHELBYVILLE A MINIMUM OF THIRTY (30) DAYS PRIOR TO ACTIVATION OF THE SIGNAL TO OBTAIN THE FINAL SIGNAL TIMINGS.

(32) THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE SIGNAL TIMING INCLUDING CONSULTATION AND TIME-SAVE PROGRAMMING IN THE TRAFFIC SIGNAL CONTROLLER.

(33) ALL EQUIPMENT OUT SHEETS SHALL BE SUBMITTED TO THE CITY OF SHELBYVILLE FOR REVIEW AND ACCEPTANCE PRIOR TO INSTALLATION.

SUBMITTALS

(34) ALL EQUIPMENT OUT SHEETS SHALL BE SUBMITTED TO THE CITY OF SHELBYVILLE FOR REVIEW AND ACCEPTANCE PRIOR TO INSTALLATION.

LOOP DETECTORS

(35) DETECTOR LOOPS SHALL BE INSTALLED IN ACCORDANCE WITH T.O.T. STANDARD DRAWING T-56-11 UNLESS OTHERWISE NOTED. DETECTOR LOOPS SHALL BE INSTALLED WITH APPROVED LOOP SPACING AND INSTALLED WITHOUT FEASIBLE TIRE OR BANNER RISK.

(36) ADVANCE DETECTOR LOOPS SHALL MEASURE 8' X 6' WITH THREE TURNS OF WIRE UNLESS OTHERWISE NOTED. LOOP SPACING SHALL BE CONTINUOUS LENGTH. SPLICED SHALL BE PERMITTED ONLY IN PULL BOXES OR CONTROLLER CABINETS.

(37) LOOPS AND LEAD-IN CABLE SHALL BE CONTINUOUS LENGTH. SPLICED SHALL BE PERMITTED ONLY IN PULL BOXES OR CONTROLLER CABINETS.

(38) LOOP DETECTOR AMP WIRE SHALL BE FOUR CHANNEL FOR CARD BACK PLACEMENT. EACH LOOP SHALL HAVE ITS OWN DISTINGUISHING CIRCUIT (CABLE).

UTILITIES

(39) THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM INC. AT 1-800-351-1111 IS REQUIRED BY 05-31-106 WILL BE REQUIRED.

(40) THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT OF DAMAGE TO UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION AND INSTALLATION OF THE PROTECTIVE UTILITIES FROM DAMAGE AND FINISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

CONSTRUCTION WORK ZONE AND TRAFFIC CONTROL

(41) ADVANCE WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERRECTED UP TO ONE WEEK BEFORE THE START OF CONSTRUCTION IF THE SIGN FACE IS FULLY COVERED.

(42) IF THE CONTRACTOR MOVES OFF THE PROJECT HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION AND INSTALLATION OF THE SIGNS. SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO. 17-28. SIGNS CONSTRUCTION PER SQUARE FOOT.

(43) TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERRECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.

(44) THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL BRIDGE OR OTHER STRUCTURE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION AND INSTALLATION OF ALL TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION AND INSTALLATION OF ALL TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION AND INSTALLATION OF ALL TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION AND INSTALLATION OF ALL TRAFFIC CONTROL DEVICES.

(45) THE CONTRACTOR SHALL SUBMIT A FINAL TRAFFIC CONTROL PLAN TO THE ENGINEER PRIOR TO BEGINNING WORK. THE TRAFFIC CONTROL PLAN SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.

(46) ALL DETOURS AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.



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U.S. HIGHWAY 231 AT
AIRPORT BUSINESS PARK ROAD

SHELBYVILLE, TENNESSEE

REVISION	DATE	DESCRIPTION

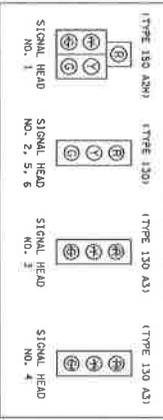


10/28/2017
10/28/2017

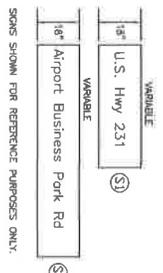
TRAFFIC SIGNAL LEGEND

- EXISTING MAST ARM POLE
- ⊗ PROPOSED SIGNAL HEAD
- ⊠ EXISTING PAD MOUNTED CABINET
- ⊡ PROPOSED PULL BOX
- ⊞ EXISTING PULL BOX
- ⊞ PROPOSED JACK & BORE CONDUIT
- ⊞ EXISTING CONDUIT
- ⊞ PROPOSED CONDUIT
- VD VIDEO DETECTOR CABLE

SIGNAL DISPLAYS



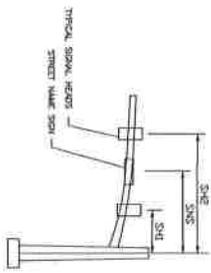
SIGN DETAILS



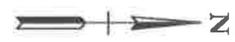
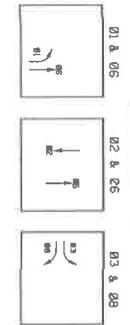
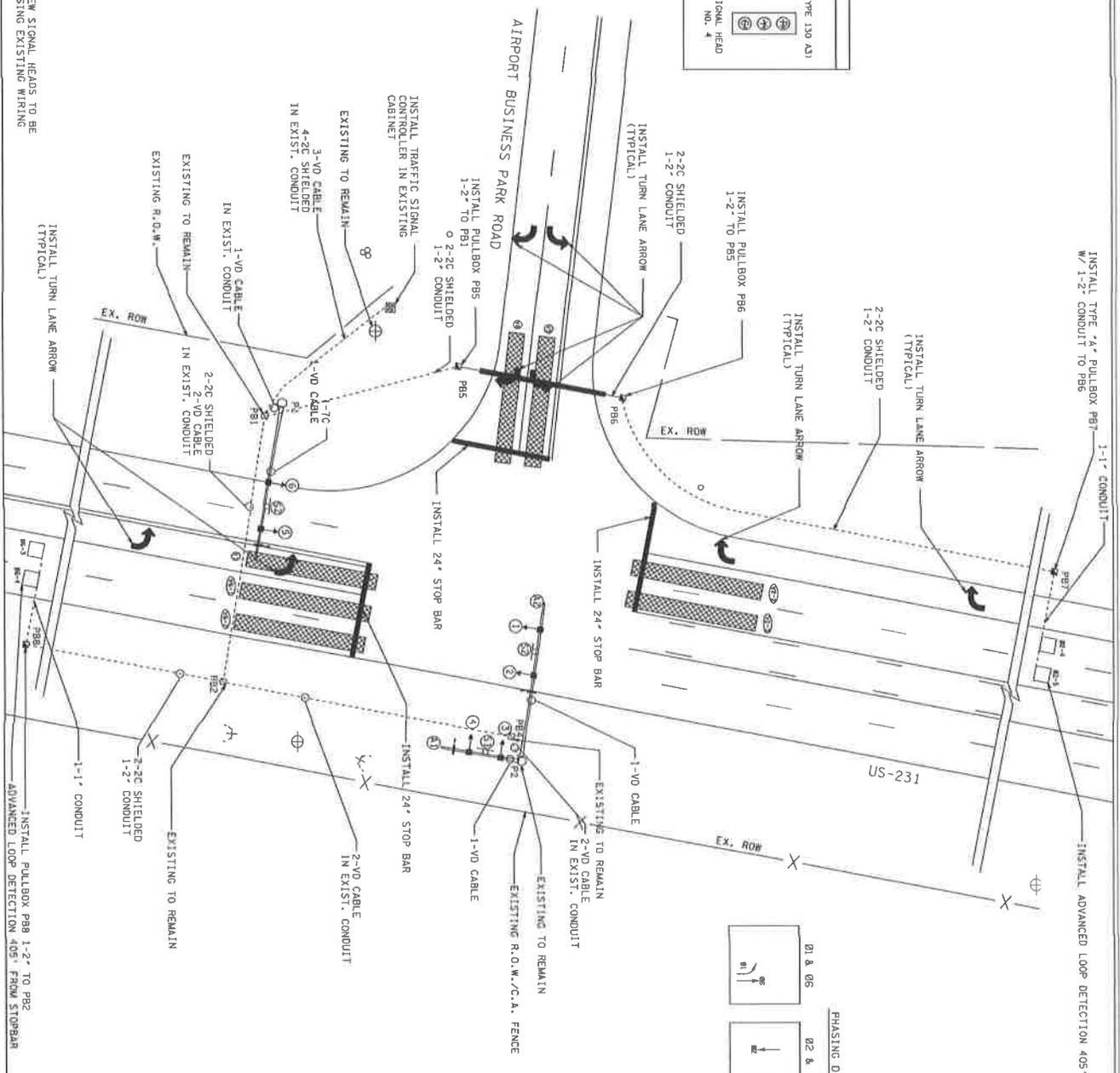
SIGNS SHOWN FOR REFERENCE PURPOSES ONLY.

MAST ARM DETAILS

POLE	SIZE	SH1	SH2
P1	48\"/>		



NOTE: NEW SIGNAL HEADS TO BE WIRED USING EXISTING WIRING



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**U.S. HIGHWAY 231 AT
AIRPORT BUSINESS PARK ROAD**

SHELBYVILLE, TENNESSEE

NO.	DATE	REVISION
1		
2		
3		
4		

SHELBYVILLE, TENNESSEE
10/20/2017