

| REVISIONS | | |
|-----------|-------------|--------|
| REV. NO. | DESCRIPTION | DATE |
| △ | ADDED NOTES | 9/5/17 |

GENERAL CONSTRUCTION NOTES

ANY DAMAGE CAUSED BY THE CONTRACTOR TO ANY STRUCTURES, ROADWAY SURFACES, STRIPING, RAISED PAVEMENT MARKERS, GUARDRAIL, SLOPES, AND SIGNS SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER.

THIS PROJECT SHALL BE CONSTRUCTED WITHOUT CLOSING TRAFFIC ON CROSS STREETS. A MINIMUM OF ONE LANE IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES. SEE O.D.O.T. STANDARDS AND DETAIL DRAWINGS FOR MAINTENANCE OF LOCAL AND THROUGH TRAFFIC.

SYMBOLS AND LEGENDS ARE DIAGRAMMATIC ONLY AND LOCATIONS SHALL BE ADJUSTED FOR EXISTING FIELD CONDITIONS, BUT NO MAJOR ALTERATIONS OR RELOCATIONS WILL BE MADE WITHOUT FIRST CONSULTING WITH THE TRAFFIC ENGINEER DIVISION AT (405) 521-2861.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE HE MAY INFLICT TO THE EXISTING UNDERGROUND UTILITIES WITHIN THE PROJECT AREA AS A RESULT OF HIS DIGGING, TRENCHING, BORING, ETC... PRIOR TO DIGGING NEAR THE UTILITIES, THE CONTRACTOR SHALL CALL FOR A LIST OF ALL UNDERGROUND FACILITIES REGISTERED IN THE AREA OF CONSTRUCTION LISTED WITH THE FOLLOWING AGENCIES: THE "OKIE" NOTIFICATION CENTER 811 OR 1-800-522-6543 OR WWW.CALLOKIE.COM

THE ITEMS THAT ARE TO BE REMOVED AND/OR RESET SHALL BE HANDLED WITH CARE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OCCURRING DURING THESE OPERATIONS.

THE STATIONS AND LOCATIONS OF THE SIGN PLACEMENT, AS SHOWN ON THE PLAN SHEETS, ARE APPROXIMATE. EXACT STATIONS AND LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR SO THAT THE SIGN IS INSTALLED IN ACCORDANCE WITH DEPARTMENT STANDARDS AND THE MUTCD IN ORDER TO PROVIDE OPTIMUM VISIBILITY TO THE ONCOMING/APPROACHING MOTORIST. IF A PROPOSED LOCATION CONFLICTS WITH OTHER SIGNS, UTILITIES OR OTHER ROADWAY FEATURES, THE ENGINEER SHALL BE NOTIFIED.

TRAFFIC PAY QUANTITY NOTES

(TL-24) 3- ROADWAY LUMINAIRES SHALL BE 250 WATT HIGH PRESSURE SODIUM, WITH CLEAR LAMP OF 28,000 LUMENS, ILLUMINATION ENGINEERING SOCIETY DISTRIBUTION AS FOLLOWS: VERTICAL = M; LATERAL = TYPE III; CONTROL = S; O.D.O.T. FIXTURE STYLE = A1. SEE STD. HLD1-1-(LATEST REVISION).

(TL-35) SEE SERVICE POLE SCHEDULE; FOR ADDITIONAL INFORMATION CONCERNING THE SERVICE POLE, CONTACT THE FOLLOWING PRIOR TO INSTALLATION: PERSON'S NAME... JERAMEY MACK WITH THE COMPANY/CITY OF ... ODOT COMPANY'S/CITY'S TELEPHONE NO. (580) 298-3371

(TR-6) THE CONTROLLERS TO BE FURNISHED ON THIS PROJECT SHALL BE 8 PHASE VEHICLE ACTUATED SOLID STATE DIGITAL TRAFFIC SIGNAL CONTROLLERS. A MINIMUM OF 16 LOAD SWITCH RECEPTACLES SHALL BE FURNISHED AND WIRED TO THE MOUNTING FRAMES. ALL WIRING FROM THE FIELD TERMINALS SHALL BE WIRED TO THE MOUNTING FRAME FOR AN 8 PHASE OPERATION. NO CABINET OR CONTROLLER WIRING SHALL BE REQUIRED EXCEPT FOR ADDITIONAL DETECTOR CONNECTING CABLES WHEN CONTROLLER IS EXPANDED FOR AN 8 PHASE OPERATION. THE CONTROLLER SHALL BE CAPABLE OF PERFORMING AS SHOWN ON THE PHASE AND SEQUENCE DIAGRAM.

PEDESTRIAN ISOLATION SHALL BE PROVIDED IN THE CONTROLLER CABINET. ALL N.E.M.A. FUNCTIONS SHALL TERMINATE IN THE CONTROLLER CABINET.

(TS-6) SHOP DRAWINGS FOR ATTACHING SIGNS TO LIGHT AND/OR SIGNAL POLES AND MAST ARMS SHALL BE SUBMITTED TO THE TRAFFIC ENGINEER FOR APPROVAL BEFORE FABRICATION. NO HOLES SHALL BE PERMITTED IN ANY LIGHT AND/OR SIGNAL POLE OR MAST ARM. THE PRICE BID SHALL INCLUDE ALL MATERIALS, LABOR, HARDWARE AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS DESCRIBED.

SPECIAL PAY QUANTITY NOTES

(SP-1) INSTALLING PEEK E3000 TRAFFIC SIGNAL CONTROLLERS IN THE CABINET. WORK SHALL INCLUDE THE INITIAL PROGRAMMING OF EACH OF THE LOCAL CONTROLLERS FOR THREE DAILY TIMING PLANS TO BE SUPPLIED BY THE ENGINEER. THE PROGRAMMING OF THE MASTER CONTROLLER TO COORDINATE THE SIGNAL SYSTEM FOR TWO PERIODS OF THE DAY.

(SP-2) THE CABINET SHALL BE P44 TS-1 TYPE OR AN APPROVED EQUAL. A MINIMUM OF 16 LOAD SWITCH RECEPTACLES SHALL BE FURNISHED AND WIRED TO THE MOUNTING FRAMES. ALL WIRING FROM THE FIELD TERMINALS SHALL BE CONNECTED TO THE MOUNTING FRAME FOR AN EIGHT (8) PHASE OPERATION. ALL CORRESPONDING RECEPTACLE WIRING IN THE CABINET AND FIELD WIRING SHALL BE INSTALLED FOR THE CONTROLLER AS REQUIRED. NEW CONFLICT MONITORS SHALL BE PROVIDED THAT ARE COMPATIBLE WITH THE SIGNAL CONTROLLER AND OPERATION OF THE INTERSECTION CONTROL. CONFLICT MONITORS SHALL BE AN EDI SSM12LE OR APPROVED EQUAL.

(SP-3) INCLUDED IN THIS ITEM IS A TRAFFIC SIGNAL BATTERY BACK-UP SYSTEM IN ACCORDANCE WITH ODOT STANDARD SPECIFICATIONS SECTION 825.02.

(SP-4) THIS PROJECT INVOLVES THE INSTALLATION OF FOUR (4) VIDEO DETECTION SYSTEMS. THEREFORE, THE CONTRACTOR SHALL FURNISH AND INSTALL THE FOLLOWING:
 A. A PEEK VIDEO TRAK, 8 CHANNEL PROCESSOR (OR APPROVED EQUAL) VEHICLE DETECTOR SYSTEM UNIT INCLUDING A LAPTOP COMPUTER, ALL NECESSARY CABLES, HARNESSSES, MATERIALS, FITTINGS AND MISCELLANEOUS COMPONENTS, NECESSARY TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM AT ONE (1) INTERSECTION. MINIMUM SPECIFICATIONS FOR THE COMPUTER SYSTEM - PENTIUM IV, 850 MHZ PROCESSOR, 524 MB RAM, 200 GB HARD DRIVE, USB PORTS, AND A 48X CDR-RW.
 B. FOUR (4) CAMERAS WITH ZOOM LENSES CAPABILITY.
 C. MODEMS AND CABLES SHALL BE FURNISHED AND INSTALLED TO ALLOW REMOTE DETECTOR SET UP AND RETRIEVAL OF DATA IN THE DETECTION UNIT.
 D. HARNESSSES TO CONNECT AND OPERATE THE NEW SYSTEM IN THE LOCAL MAINTAINING AGENCY OFFICE.
 E. VIDEO POWER CABLE SHALL BE AS PER THE MANUFACTURER SPECIFICATIONS.
 F. VIDEO COAXLE CABLE SHALL BE LOW LOSS PRECISION CABLE SUITED TO OUTDOOR APPLICATION. VIDEO CABLE SHALL BE BELDON 8281, WEST PENN P 806, OR APPROVED EQUAL.
 G. THE VIDEO FEEDBACK TO THE LOCAL MAINTAINING AGENCY OFFICE SHALL OCCUR OVER LOCAL TELEPHONE LINES.
 H. ALL SOFTWARE NECESSARY TO OPERATE THIS SYSTEM SHALL BE INCLUDED. DELIVER ALL SOFTWARE TO A LOCATION TO BE DETERMINED BY THE ENGINEER.
 I. ONE DAY OF TRAINING FOR CITY PERSONNEL IN THE USE OF THE SYSTEM SHALL BE PROVIDED BY A MANUFACTURER'S REPRESENTATIVE. DOCUMENTATION OF THE TRAINING PROVIDED SHALL BE PROVIDED FOR THE ENGINEER. THE TRAINING LOCATION SHALL BE APPROVED BY THE ENGINEER.

(SP-5) WORK SHALL INCLUDE PROGRAMMING THE DETECTION ZONES SHOWN ON THE PLANS.

(SP-6) RED, YELLOW, AND GREEN LIGHT EMITTING DIODE (LED) TRAFFIC SIGNAL HEADS, MODULES, LENSES, AND ALL ASSOCIATED MATERIAL AND EQUIPMENT FURNISHED AND INSTALLED ON THIS PROJECT SHALL CONFORM TO I.T.E. VEHICLE TRAFFIC CONTROL SIGNAL HEAD (VTC SH) STANDARDS IN EFFECT AT THE TIME THAT THE ORDER IS PLACED. LED HEADS SHALL BE CAPABLE OF OPERATING WITHOUT A REFLECTOR.

(SP-7) CIRCULAR AND ARROW LED SIGNAL MODULES SHALL HAVE A UNIFORM APPEARANCE.

(SP-8) INCLUDED IN THIS PAY ITEM IS THE COST OF APPLYING 2" YELLOW RETROREFLECTIVE TAPE (TYPE VIII) ONTO BACKPLATES. (SEE STANDARD SA1-1-01 LATEST REVISION)

(SP-9) TRAFFIC SIGNAL HEAD FACES ARE TO COMPLETELY COVERED FROM THE TIME THEY ARE INSTALLED UNTIL PLACED IN FLASHING OR FULL OPERATION. COVERING THE LENSES ONLY IS NOT ACCEPTABLE.

(SP-10) A PART OF THIS PAY QUANTITY INCLUDES MAST ARM MOUNTED TRAFFIC SIGNAL SIGNS. SEE STANDARD TSSSI-1-(LATEST REVISION).

(SP-11) PRICE BID FOR THIS PAY ITEM TO INCLUDE DEFROST DEVICE FOR FROST, SNOW, ICE, OR LENS FOG REMOVAL.

(SP-12) CABINET SHALL BE MANUFACTURED WITH TWO DOORS. SEE STANDARD ON SHEET CC1-1-00.

(SP-13) POLYMER CONCRETE PULL BOXES SHALL BE USED.

(SP-14) OPTICAL PREEMPTION EMITTERS WILL BE TOMAR OR AN APPROVED EQUAL.

PAY QUANTITY SCHEDULE

0305 TRAFFIC SIGNAL

| PAY ITEM | CODE NO. | DESCRIPTION | UNIT | QUANTITY |
|----------|----------|---|----------------------------|----------|
| 802(B) | 8342 | 2" PVC SCH. 40 PLASTIC CONDUIT TRENCHED | LF | 75.00 |
| 802(B) | 8344 | 3" PVC SCH. 40 PLASTIC CONDUIT BORED | LF | 200.00 |
| 802(B) | 8346 | 3" PVC SCH. 40 PLASTIC CONDUIT TRENCHED | LF | 110.00 |
| 803(A) | 8065 | PULL BOX (SIZE I) | (SP-13) EA | 2.00 |
| 803(A) | 8066 | PULL BOX (SIZE II) | (SP-13) EA | 1.00 |
| 804(A) | 2915 | STRUCTURAL CONCRETE | CY | 21.70 |
| 804(B) | 2916 | REINFORCING STEEL | LB | 3,175.00 |
| 806(A) | 8314 | 32' MH POLE, 50' TS & 10' LMA (G.STL.) | EA | 1.00 |
| 806(A) | 8353 | 32' MH POLE, 55' TS & 10' LMA (G.STL.) | EA | 1.00 |
| 806(A) | 8355 | 32' MH POLE, TWIN TS & 10' LMA (G.STL.) | EA | 1.00 |
| 809(A) | 8090 | ROADWAY LUMINAIRE | (TL-24) EA | 3.00 |
| 810(A) | 3118 | SERVICE POLE | (TL-35) EA | 1.00 |
| 811 | 8040 | 1/C NO.6 ELECTRICAL CONDUCTOR | LF | 50.00 |
| 811 | 8044 | 1/C NO.10 ELECTRICAL CONDUCTOR | LF | 1,190.00 |
| 825 | 8550 | TRAFFIC SIGNAL CONTROLLER ASSEMBLY | (SP-1,2,3,4,5,12)(TR-6) EA | 1.00 |
| 828 | 8132 | (PL) DETECTION SYSTEM (VIDEO) | (SP-4,5,11) LSUM | 1.00 |
| 831 | 8231 | 1WAY 3SEC. ADJ. SIG. HD. S-6 | (SP-6,7,9) EA | 6.00 |
| 831 | 8252 | 1WAY 3SEC. ADJ. SIG. HD. S-9 | (SP-6,7,9) EA | 2.00 |
| 831 | 8274 | 1WAY 4SEC. ADJ. SIG. HD. S-16 | (SP-6,7,9) EA | 2.00 |
| 833 | 3030 | BACKPLATE | (SP-8) EA | 10.00 |
| 834(A) | 8207 | 5/C TRAFFIC SIGNAL ELECTRICAL CABLE | LF | 650.00 |
| 834(A) | 8208 | 7/C TRAFFIC SIGNAL ELECTRICAL CABLE | LF | 400.00 |
| 834(A) | 8209 | 9/C TRAFFIC SIGNAL ELECTRICAL CABLE | LF | 60.00 |
| 834(A) | 8212 | 18/C TRAFFIC SIGNAL ELECTRICAL CABLE | LF | 220.00 |
| 840(A) | 8592 | E.P.S. OPTICAL EMITTER | (SP-14) EA | 2.00 |
| 840(B) | 8593 | E.P.S. OPTICAL DETECTOR | EA | 4.00 |
| 840(C) | 8594 | E.P.S. OPTICAL DETECTOR CABLE | LF | 870.00 |
| 840(D) | 8595 | E.P.S. 2 CHANNEL PHASE SELECTOR | EA | 2.00 |
| 850(C) | 8118 | MAST ARM MOUNTED SIGNS (ALUMINUM) | (SP-10)(TS-6) SF | 155.00 |

PAY QUANTITY SCHEDULE

0640 CONSTRUCTION

| PAY ITEM | CODE NO. | DESCRIPTION | UNIT | QUANTITY |
|----------|----------|--------------|------|----------|
| 641 | 1552 | MOBILIZATION | LSUM | 1.00 |

△ ENVIRONMENTAL MITIGATION NOTES

AMERICAN BURYING BEETLE NOTE:
 THE AMERICAN BURYING BEETLE IS A LARGE CARRION BURYING BEETLE THAT OCCURS WITHIN THE ACTION AREA. NO ARTIFICIAL LIGHTING SHALL BE USED DURING CONSTRUCTION. CARCASSES AND ALL FOOD TRASH SHALL BE REMOVED FROM THE PERMANENT AND TEMPORARY RIGHT-OF-WAY THROUGHOUT PROJECT ACTIVITIES. FOLLOWING CONSTRUCTION, TOPSOIL SHALL BE PLACED ON TOP OF ALL AREAS OF GROUND DISTURBANCE, PRIOR TO RE-VEGETATION.

BAT LIGHTING NOTE:
 THE NORTHERN LONG-EARED BAT IS A LISTED BAT SPECIES THAT OCCURS WITHIN THE PROJECT'S ACTION AREA. IN ORDER TO AVOID AND MINIMIZE ADVERSE IMPACTS TO LISTED BAT SPECIES, IF ANY PERMANENT LIGHTING IS INSTALLED OR REPLACED, DOWNWARD-FACING FULL CUT-OFF LENS LIGHTS SHALL BE INSTALLED AND DIRECTED AWAY FROM WOODED AREAS AND STREAMS.

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|---|--|------------------------------|--|-----------|-----|------|
| DIVISION 2 US-70B | | MCCURTAIN COUNTY | | DETAIL: | JF | 8/16 |
| SUMMARY OF PAY QUANTITIES & NOTES (SIGNAL) | | | | CHECK: | GF | 8/16 |
| | | | | ENGINEER: | KCD | 8/16 |
| GROUP: ABRAHAM EM: MAAROUF | | | | | | |
| STATE OF OKLAHOMA | | DEPARTMENT OF TRANSPORTATION | | | | |
| JOB/PIECE NO. 33075(56) | | SHEET NO. AT01 | | | | |