

FILE NAME: G:\P\WORK\JESSICA.GOODWIN\DM528756\02-QUANTITY SHEET (SU).DGN

USER: jessica.goodwin  
DATE PLOTTED: August 29, 2023

E-SHEET NAME:

Power JnRoads v8.11.3.397  
3-15-2023

TRAFFIC SIGNAL ESTIMATE OF QUANTITIES

TOTAL	UNITS	CODE	ITEM DESCRIPTION
60	SO FT	2562	SIGNS
1	LP SUM	2569	DEMOBILIZATION (1.5%)
1	LP SUM	2650	MAINTAIN & CONTROL TRAFFIC (5%)
4	EACH	2775	FLASHING ARROW
638	LIN FT	4790	CONDUIT 1/2 INCH
775	LIN FT	4791	CONDUIT 3/4 INCH
70	LIN FT	4792	CONDUIT 1 INCH
470	LIN FT	4793	CONDUIT 1 1/4 INCH
40	LIN FT	4794	CONDUIT 1 1/2 INCH
259	LIN FT	4795	CONDUIT 2 INCH
35	LIN FT	4796	CONDUIT 2 1/2 INCH
78	LIN FT	4797	CONDUIT 3 INCH
40	LIN FT	4798	CONDUIT 3 1/2 INCH
20	LIN FT	4799	CONDUIT 4 INCH
10	EACH	4810	ELECTRICAL JUNCTION BOX
2	EACH	4811	ELECTRICAL JUNCTION BOX TYPE B
125	LIN FT	4820	TRENCHING AND BACKFILLING
44	LIN FT	4821	OPEN CUT ROADWAY
125	LIN FT	4830	LOOP WIRE
	LIN FT	4840	CABLE-INTERCONNECT
	LIN FT	4841	CABLE-NO. 14/2C
	LIN FT	4842	CABLE-NO. 14/3C
	LIN FT	4843	CABLE-NO. 14/4C
	LIN FT	4844	CABLE-NO. 14/5C
	LIN FT	4845	CABLE-NO. 14/7C
	LIN FT	4850	CABLE-NO. 14/1 PAIR
	LIN FT	4851	CABLE-NO. 14/2 PAIR
	LIN FT	4852	CABLE-NO. 14/3 PAIR
	EACH	4871	POLE 35' WOODEN
	EACH	4872	POLE 40' WOODEN
	EACH	4873	POLE 45' WOODEN
	EACH	4880	STEEL STRAIN POLE
	EACH	4881	MAST ARM POLE
	EACH	4882	SIGNAL PEDESTAL
	EACH	4883	POST
	EACH	4884	ANCHOR
	LIN FT	4885	MESSENGER-10800 LB
	LIN FT	4886	MESSENGER-15400 LB
	EACH	4887	INSTALL SIGNAL-8" LED
	LIN FT	4894	PREFORMED LOOP/LEAD-IN
	LIN FT	4895	LOOP SAW SLOT AND FILL
	EACH	4900	PEDESTRIAN DETECTOR
	EACH	4905	BLANKOUT SIGN
	EACH	4910	SIGNAL-8"
	EACH	4911	SIGNAL-12"
	EACH	4912	SIGNAL-3 SECTION 12"
	EACH	4913	SIGNAL-4 SECTION 12"
	EACH	4914	SIGNAL-5 SECTION 12"
	EACH	4915	SIGNAL-PROGRAMMED
	EACH	4916	SIGNAL-PEDESTRIAN
	EACH	4920	SIGNAL CONTROLLER-TYPE 170
	EACH	4930	BEACON CONTROLLER-2 CIRCUIT
	EACH	4931	INSTALL SIG CONTROLLER-TYPE 170
	LP SUM	4932	INSTALL STEEL STRAIN POLE
	EACH	4950	REMOVE SIGNAL EQUIPMENT
	SO YD	4960	REMOVE AND REPLACE SIDEWALK
	EACH	6472	INSTALL SPAN MOUNTED SIGN
	EACH	20093NS835	INSTALL PEDESTRIAN HEAD LED
	EACH	20188NS835	INSTALL SIGNAL-3 SECTION LED
	EACH	20189NS835	INSTALL SIGNAL-5 SECTION LED
	EACH	20266ES835	INSTALL SIGNAL-4 SECTION LED
	EACH	20275EC	VIDEO DETECTION-INSTALL
	EACH	20390NS835	INSTALL COORDINATING UNIT
	EACH	20391NS835	ELECTRICAL JUNCTION BOX TYPE A
	EACH	20392NS835	ELECTRICAL JUNCTION BOX TYPE C
	EACH	20408NS835	INSTALL SIGNAL-12" LED
	LIN FT	20452NS835	PREFORMED LOOPS
	LIN FT	20453NS835	PREFORMED QUADRAPOLE LOOPS

AT KYTC'S DIVISION OF EQUIPMENT WAREHOUSE (1239 WILKINSON BOULEVARD, FRANKFORT, KY 40622). THE FOLLOWING PROCEDURES SHALL BE FOLLOWED FOR MATERIAL RELEASE. FAILURE TO FOLLOW THESE PROCEDURES MAY RESULT IN LONG DELAYS OR REFUSAL TO DISTRIBUTE MATERIALS UPON ARRIVAL.

1. CONTRACTOR SHALL SECURE THE SIGNATURES OF KYTC'S PROJECT ENGINEER AND THE ELECTRICAL CONTRACTOR'S FOREMAN ON THE PROJECT MATERIALS RELEASE FORM. IF THE RELEASE FORM IS NOT IN THE PROPOSAL, CONTACT KIM STAMPER OR KERRY DECKER WITH THE DIVISION OF TRAFFIC OPERATIONS BY PHONE (502-782-8994/502-782-5536) OR EMAIL (KIM.STAMPER@KY.GOV/KERRY.DECKER@KY.GOV) .  
2. CONTRACTOR SHALL CONTACT THE WAREHOUSE TO PREARRANGE PICK UP OF MATERIALS. CONTRACTOR SHALL EMAIL THE PROJECT MATERIALS RELEASE FORM WITH REQUIRED SIGNATURES TO THE WAREHOUSE AT KIM.STAMPER@KY.GOV AND SHALL NOTIFY THE WAREHOUSE BY PHONE (502-782-8994/502-330-8153) OR EMAIL KIM.STAMPER@KY.GOV AT LEAST TWO (2) WORKING DAYS PRIOR TO ARRIVAL.  
3. CONTRACTOR SHALL ALSO CONTACT THE SYSTEM OPERATIONS BRANCH OF THE DIVISION OF TRAFFIC OPERATIONS BY PHONE (502-782-5543/502-782-5547) OR EMAIL (JOE.THOMPSON@KY.GOV/LARRY.IRISH@KY.GOV) AT LEAST TWO (2) WORKING DAYS PRIOR TO ARRIVAL TO FACILITATE PROGRAMMING OF ROUTERS.  
4. CONTRACTOR SHALL ARRIVE AT THE KYTC'S DIVISION OF EQUIPMENT WAREHOUSE (1239 WILKINSON BOULEVARD, FRANKFORT, KY 40622) AT THE PREARRANGED DATE/TIME FOR MATERIAL PICK UP. TO FACILITATE THIS PROCESS, ENSURE CONTRACTOR'S DELIVERY DRIVER HAS A COPY OF THE PROJECT MATERIALS RELEASE FORM WITH THE REQUIRED SIGNATURES.

ADD SENTENCE TO SECTION 835.17: ALL WIRE SHALL HAVE WORDING ADDED TO THE OUTER JACKET THAT STATES : "PROPERTY OF KENTUCKY TRANSPORTATION CABINET 502 564 0501".

MEASUREMENT NOTES THAT ARE IN ADDITION TO SECTION 723

BLANKOUT SIGN - DEPARTMENT WILL MEASURE THE QUANTITY AS EACH INDIVIDUAL UNIT FURNISHED AND INSTALLED. THE DEPARTMENT WILL NOT MEASURE CONNECTION TO SIGNAL CONDUCTORS OR SPAN WIRE HANGER ASSEMBLY (PELCO SE-3019 OR APPROVED EQUAL) AND WILL CONSIDER THESE INCIDENTAL TO THIS ITEM OF WORK.

ADVANCE WARNING FLASHER - DEPARTMENT WILL MEASURE THE QUANTITY AS EACH INDIVIDUAL UNIT FURNISHED AND INSTALLED. THE DEPARTMENT WILL NOT MEASURE 48X48 INCH SIGN WITH CHANNEL POSTS, 72X44 INCH SPAN MOUNTED SIGN, CONDUIT FROM STEEL STRAIN POLE TO SIGNAL HEADS ON SIDE MOUNTED SIGN, CONDUIT FITTINGS AND STRAPS, OR ANY ASSOCIATED SIGN MOUNTING HARDWARE AND WILL CONSIDER THESE INCIDENTAL TO THIS ITEM OF WORK.

INSTALL VIDEO CAMERA - DEPARTMENT WILL MEASURE THE QUANTITY AS EACH INDIVIDUAL UNIT INSTALLED. THE DEPARTMENT WILL NOT MEASURE INSTALLATION OF SPECIFIED VIDEO CAMERA, VIDEO MODULES, OR MOUNTING BRACKET AS SHOWN ON THE DETAIL SHEET AND WILL CONSIDER THESE INCIDENTAL TO THIS ITEM OF WORK. THE DEPARTMENT WILL NOT MEASURE FURNISHING AND INSTALLING TRUSS TYPE ARM (IF NECESSARY), POWER CABLE, COAXIAL CABLE, OR ANY HARDWARE NECESSARY FOR PROPER INSTALLATION AND WILL CONSIDER THESE INCIDENTAL TO THIS ITEM OF WORK. CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER WHEN INSTALLATION IS COMPLETE FOR PLACEMENT OF LOOPS.

INSTALL TEMPORARY VIDEO CAMERA - DEPARTMENT WILL MEASURE THE QUANTITY AS EACH INDIVIDUAL UNIT INSTALLED. THE DEPARTMENT WILL NOT MEASURE INSTALLING AND MAINTAINING SPECIFIED VIDEO CAMERA, VIDEO MODULES, OR MOUNTING BRACKET AS SHOWN ON THE DETAIL SHEET AND WILL CONSIDER THESE INCIDENTAL TO THIS ITEM OF WORK. THE DEPARTMENT WILL NOT MEASURE FURNISHING AND INSTALLING TRUSS TYPE ARM (IF NECESSARY), POWER CABLE, COAXIAL CABLE, OR ANY HARDWARE NECESSARY FOR PROPER INSTALLATION AND WILL CONSIDER THESE INCIDENTAL TO THIS ITEM OF WORK. UP TO TWO RELOCATIONS OF THE VIDEO CAMERA TO A TRAFFIC POLE AND ANY CAMERA MODIFICATIONS DUE TO LANE SHIFTS OR CLOSURES WILL NOT BE MEASURED BY THE DEPARTMENT AND WILL BE CONSIDERED INCIDENTAL TO THIS ITEM OF WORK. THE DEPARTMENT WILL NOT MEASURE THE REMOVAL OF VIDEO CAMERA EQUIPMENT, MOUNTING BRACKET, WIRES, OR ANY OTHER ASSOCIATED HARDWARE AND WILL CONSIDER THEIR REMOVAL INCIDENTAL TO THIS ITEM OF WORK. THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER WHEN VIDEO LOOPS ARE TO BE INSTALLED. UPON COMPLETION OF SIGNAL WORK ALL UNUSED EQUIPMENT SHALL BE RETURNED TO THE DIVISION OF TRAFFIC OPERATIONS IN FRANKFORT, KY. THE CONTRACTOR SHALL NOTIFY DISTRICT TRAFFIC TWO WEEKS IN ADVANCE OF ANY MODIFICATIONS OR RELOCATIONS OF VIDEO CAMERAS.

INSTALL SIGNAL CONTROLLER TYPE ATC. THE DEPARTMENT WILL MEASURE THE QUANTITY AS EACH INDIVIDUAL UNIT INSTALLED. THE DEPARTMENT WILL NOT MEASURE THE CONCRETE BASE, MOUNTING THE CABINET, CONNECTING THE SIGNAL AND DETECTORS, EXCAVATION, BACKFILLING, RESTORATION, ANY NECESSARY POLE MOUNTING HARDWARE, ELECTRIC SERVICE, ELECTRICAL INSPECTION FEES, AND REQUIRED BUILDING FEES INVOLVING UTILITY SECONDARY/PRIMARY SERVICE FOR PAYMENT AND WILL CONSIDER THEM INCIDENTAL TO THIS ITEM OF WORK. THE DEPARTMENT WILL ALSO NOT MEASURE CONNECTING THE INDUCTION LOOP AMPLIFIERS, PEDESTRIAN ISOLATORS, LOAD SWITCHES, MODEL 400 MODEM CARD FOR PAYMENT AND WILL CONSIDER THEM INCIDENTAL TO THIS ITEM OF WORK. THE DEPARTMENT WILL ALSO NOT MEASURE FURNISHING AND INSTALLING ELECTRICAL SERVICE CONDUCTORS, CONDUITS, ANCHORS, METER BASE, FUSED CUTOUT, FUSES, GROUND RODS, GROUND LUGS, AND GROUND WIRES FOR PAYMENT AND WILL CONSIDER THEM INCIDENTAL TO THIS ITEM OF WORK.

INSTALL RADAR PRESENCE DETECTOR TYPE A SHALL CONSIST OF INSTALLATION OF A POLE MOUNTED RADAR PRESENCE SENSOR, SENSOR MOUNTING BRACKET, SENSOR CABLES,

CONSTRUCTION AND MEASUREMENT NOTES THAT ARE CONTRARY TO SECTION 723

SUBSECTION: 03.02 POLES AND BASES INSTALLATION. B)  
REVISION: REPLACE ENTIRE TABLE WITH THE FOLLOWING:

MAXIMUM SERVICE FORCES		DRILLED SHAFT DATA						TIES OR SPIRAL	
MAX SERVICE MOMENT (FT-KIPS)	DIAMETER (IN.)	DEPTH (FEET)				VERTICAL BARS			
		< 2:1 GROUND SLOPE		2:1 GROUND SLOPE"		SIZE	TOTAL	BAR SIZE	SPACING OR PITCH (IN.)
		SOIL	ROCK	SOIL	ROCK				
0-9.9	36	6	6	6.5	6	13	8	#4	12
10-19.9	36	6	6	6.5	6	13	8	#4	12
20-29.9	36	6	6	6.5	6	13	8	#4	12
30-39.9	36	6	6	6.5	6	13	8	#4	12
40-49.9	36	6	6	6.5	6	13	8	#4	12
50-59.9	36	6	6	6.5	6	13	8	#4	12
60-69.9	36	6	6	6.5	6	13	8	#4	12
70-79.9	36	6	6	6.5	6	13	8	#4	12
80-89.9	36	6	6	6.5	6	13	8	#4	12
90-99.9	36	6	6	6.5	6	13	8	#4	12
100-149.9	48	10.5	10.5	10.5	10.5	13	8	#4	12
150-199.9	48	10.5	10.5	10.5	10.5	13	8	#4	12
200-249.9	48	10.5	10.5	10.5	10.5	13	8	#4	12
250-299.9	48	10.5	10.5	10.5	10.5	13	8	#4	12
300-349.9	48	10.5	10.5	10.5	10.5	13	8	#4	12
350-399.9	48	10.5	10.5	10.5	10.5	13	8	#4	12
400-449.9	48	10.5	10.5	10.5	10.5	13	8	#4	12
450-499.9	48	10.5	10.5	10.5	10.5	13	8	#4	12
500-600	48	22.5	22.5	22.5	22.5	13	8	#4	12

SUBSECTION: 03.13 LOOP INSTALLATION.  
REVISION: REPLACE FIRST SENTENCE NOTE WITH THE FOLLOWING:  
TWIST UNSHIELDED LOOP WIRES (1MSA 51-7) WITH 3 TO 5 TURNS PER FOOT FROM THE START OF THE HOMERUN TO THE JUNCTION BOX, CABINET, OR POLE. SLOT CAN BE WIDEN TO 1/2" to 5/8" TO HELP WITH THE INSTALLATION OF THE TWISTED WIRE.

SUBSECTION: 03.17 A) TESTING.  
REVISION: REPLACE FIFTH SENTENCE WITH THE FOLLOWING:  
THE CONTRACTOR SHALL VERIFY THAT THE LOOPS (BOTH EXISITNG AND REPLACEMENT LOOPS) MEETS THE REQUIREMENTS BEFORE THE FINAL SURFACE IS LAID.  
ADD FOLLOWING SENTENCE AT END OF PARAGRAPH:  
IF THE ENGINEER DECIDES TO REPLACE ANY LOOPS BEFORE TESTING, BID ITEM LOOP TEST WILL NOT BE USED FOR THAT LOOP LOCATION.

SUBSECTION: 03.12 WIRING INSTALLATION.  
REVISION: SEE TRAFFIC OPERATIONS WEBSITE FOR WORD DOCUMENT TO REPLACE ALL CHARTS FOR WIRING TO SHOW CHANCES FOR EQUIPMENT GROUNDING.

SUBSECTION: 04.22 REMOVE SIGNAL EQUIPMENT. (PERMIT ONLY)  
REVISION: REPLACE ENTIRE NOTE WITH THE FOLLOWING:  
THE DEPARTMENT WILL MEASURE THE QUANTITY AS A EACH REMOVAL OF SIGNAL EQUIPMENT. THE CONTRACTOR SHALL DISPOSE ALL MATERIALS REMOVED FROM THE PROJECT IN ACCORDANCE WITH CABINET POLICY. THE CONTRACTOR SHALL TAKE ALL STEEL AND ALUMINUM POLES TO THE EQUIPMENT WAREHOUSE IN FRANKFORT, KENTUCKY. ALL OTHER MATERIALS (WITH EXCEPTION OF PLASTIC ITEMS AND WOOD POLES) SHALL BE TAKEN TO LOCATIONS IDENTIFIED BY THE DISTRICT TRAFFIC ENGINEER. THE CONTRACTOR SHALL CONTACT THE DIVISION OF EQUIPMENT (502-564-3916) TO SCHEDULE A TIME TO DELIVER STEEL AND ALUMINUM POLES TO THE EQUIPMENT WAREHOUSE. THE TRANSPORTATION OF THE MATERIALS WILL CONSIDER THEM INCIDENTAL TO THIS ITEM OF WORK.

SUBSECTION: 04.22 REMOVE SIGNAL EQUIPMENT. (CONSTRUCTION ONLY)  
REVISION: REPLACE THE PARAGRAPH WITH THE FOLLOWING:  
THE DEPARTMENT WILL MEASURE THE QUANTITY BY EACH. THE DEPARTMENT WILL NOT MEASURE BACKFILLING AND THE DISPOSAL OR TRANSPORTATION OF EQUIPMENT AND MATERIALS ASSOCIATED WITH ANY STRUCTURAL OR ELECTRICAL COMPONENT OF THE SIGNAL SYSTEM INCLUDING, BUT NOT LIMITED TO POLE BASES, POLES, JUNCTION BOXES, CABINETS, AND WOOD POLES FOR PAYMENT AND WILL CONSIDER THEM INCIDENTAL TO THIS ITEM OF WORK.

DESIGNED BY:	
DATE SUBMITTED:	
<b>Commonwealth of Kentucky</b> <b>DEPARTMENT OF HIGHWAYS</b> COUNTY OF _____	
PROJECT _____ NUMBERS: _____	
<b>TRAFFIC SIGNAL ESTIMATE OF QUANTITIES MEASUREMENT, CONST, AND MISC NOTES</b>	