

TRAFFIC SIGNAL ESTIMATE OF QUANTITIES

ITEM CODE	ITEM	UNIT				TOTAL
2562	SIGNS	SO FT				-
2569	DEMOLITION (L52)	LP SUM				-
2650	MAINTAIN & CONTROL TRAFFIC (52)	LP SUM				-
2775	FLASHING ARROW	EACH				-
4790	CONDUIT - 1/2 INCH	LIN FT				-
4791	CONDUIT - 3/4 INCH	LIN FT				-
4792	CONDUIT - 1 INCH	LIN FT				-
4793	CONDUIT - 1 1/4 INCH	LIN FT				-
4794	CONDUIT - 1 1/2 INCH	LIN FT				-
4795	CONDUIT - 2 INCH	LIN FT				-
4796	CONDUIT - 2 1/2 INCH	LIN FT				-
4797	CONDUIT - 3 INCH	LIN FT				-
4798	CONDUIT - 3 1/2 INCH	LIN FT				-
4799	CONDUIT - 4 INCH	LIN FT				-
4810	ELECTRICAL JUNCTION BOX	EACH				-
4811	ELECTRICAL JUNCTION BOX TYPE B	EACH				-
4820	TRENCHING AND BACKFILLING	LIN FT				-
4821	OPEN CUT ROADWAY	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	LIN FT				-
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	EACH				-
4885	MESSANGER - 10800 LB	LIN FT				-
4886	MESSANGER - 15400 LB	LIN FT				-
4887	INSTALL SIGNAL - 8" LED	EACH				-
4894	PREFORMED LOOP/LEAD-IN	LIN FT				-
4895	LOOP SAW SLOT AND FILL	LIN FT				-
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	EACH				-
4932	INSTALL STEEL STRAIN POLE	EACH				-
4950	REMOVE SIGNAL EQUIPMENT	EACH				-
4960	REMOVE AND REPLACE SIDEWALK	SO YD				-
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				-
2040NS835	INSTALL SIGNAL - 12" LED	EACH				-
20452NS835	PREFORMED LOOPS	LIN FT				-
20453NS835	PREFORMED QUADRAPOLE LOOPS	LIN FT				-
2045NS835	VIDEO CAMERA	EACH				-
20456NS835	INSTALL TEMP VIDEO CAMERA	EACH				-
20457NS835	INSTALL PED DETECTOR AUDIBLE	EACH				-
2049NS835	AUDIBLE PEDESTRIAN SIGNAL	EACH				-
2063ND	INSTALL POLE MOUNTED SIGN	EACH				-
21543EN	BORE AND JACK CONDUIT	LIN FT				-
21659NN	RELOCATE SIGNAL HEAD	EACH				-
21684NN	PHOTOVOLTAIC POWERED SCHOOL BEACON	LP SUM				-
21734NN	PEDESTAL CONTROL EQUIPMENT	LP SUM				-
21743NN	INSTALL PEDESTRIAN DETECTOR	EACH				-
2263NN	INSTALL MAST ARM POLE	EACH				-
23051NN	PEDESTAL POST	EACH				-
23052NN	SPAN MOUNTED SIGN	EACH				-
23053NN	ADVANCE BEACON CONTROL	EACH				-
23068NN	REMOVE & REINSTALL COORDINATING UNIT	EACH				-
23157EN	TRAFFIC SIGNAL POLE BASE	CU YD				-
23230EC	ILLUMINATED STREET SIGN	EACH				-
23222EC	INSTALL SIGNAL PEDESTAL	EACH				-
23235EC	INSTALL PEDESTAL POST	EACH				-
23982EC	INSTALL ANTENNA	EACH				-
24525EC	ADVANCE WARNING FLASHER	EACH				-
2460EC	INSTALL -	EACH				-

TRAFFIC SIGNAL ESTIMATE OF QUANTITIES

TOTAL UNITS	CODE	ITEM DESCRIPTION
60	SO FT	2562 SIGNS
1	LP SUM	2569 DEMOLITION (L52)
1	LP SUM	2650 MAINTAIN & CONTROL TRAFFIC (52)
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	MESSANGER-10800 LB
LIN FT	4886	MESSANGER-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	2040NS835	INSTALL SIGNAL-12" LED
LIN FT	20452NS835	PREFORMED LOOPS
LIN FT	20453NS835	PREFORMED QUADRAPOLE LOOPS
EACH	2045NS835	VIDEO CAMERA
EACH	20456NS835	INSTALL TEMP VIDEO CAMERA
EACH	20457NS835	INSTALL PED DETECTOR AUDIBLE
EACH	2049NS835	AUDIBLE PEDESTRIAN SIGNAL
EACH	2063ND	INSTALL POLE MOUNTED SIGN
LIN FT	21543EN	BORE AND JACK CONDUIT
EACH	21659NN	RELOCATE SIGNAL HEAD
LP SUM	21684NN	PHOTOVOLTAIC POWERED SCHOOL BEACON
LP SUM	21734NN	PEDESTAL CONTROL EQUIPMENT
EACH	21743NN	INSTALL PEDESTRIAN DETECTOR
EACH	2263NN	INSTALL MAST ARM POLE
EACH	23051NN	PEDESTAL POST
EACH	23052NN	SPAN MOUNTED SIGN
EACH	23053NN	ADVANCE BEACON CONTROL
EACH	23068NN	REMOVE & REINSTALL COORDINATING UNIT
CU YD	23157EN	TRAFFIC SIGNAL POLE BASE
EACH	23230EC	ILLUMINATED STREET SIGN
EACH	23222EC	INSTALL SIGNAL PEDESTAL
EACH	23235EC	INSTALL PEDESTAL POST
EACH	23982EC	INSTALL ANTENNA
EACH	24525EC	ADVANCE WARNING FLASHER
EACH	2460EC	INSTALL -

THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION, AND OTHER SPECIAL NOTES AND SPECIFICATIONS WILL APPLY ON THIS PROJECT. SEE SECTION 706, 723, AND 112 FOR MEASUREMENT AND OTHER DETAILS. SEE SECTION 602 FOR SPECIAL REINFORCEMENT SPLICING.

THE CONTRACTOR SHALL MAKE AN INSPECTION OF THE PROJECT SITE PRIOR TO SUBMITTING A BID AND SHALL BE THOROUGHLY FAMILIARIZED WITH EXISTING CONDITIONS. SUBMISSIONS OF A BID WILL BE CONSIDERED AN AFFIRMATION OF THIS INSPECTION HAVING BEEN COMPLETED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PICKING UP INSTALL ITEMS FROM THE FRANKFORT POLE YARD AND DELIVERING THESE ITEMS TO THE SITE. THE CONTRACTOR SHALL CONTACT FRANKFORT POLE YARD PERSONNEL (502-782-8994/ 502-330-8953 OR EMAIL: KIM.STAMPER@KY.GOV) AND ARRANGE TO PICK UP INSTALL ITEMS A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO ARRIVAL. THE CONTRACTOR SHALL ALSO CONTACT THE SIGNAL SYSTEM BRANCH (502-782-5541/502-782-5547 OR EMAIL: JOE.THOMPSON@KY.GOV, LARRY.JRIS@KY.GOV) TO ARRANGE PROGRAMMING OF THE ROUTER USED FOR COMMUNICATION IN THE TRAFFIC SIGNAL A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO ARRIVAL. FAILURE TO PROVIDE POLE YARD PERSONNEL/ SIGNAL SYSTEM BRANCH THIS ADVANCE NOTICE COULD RESULT IN LONG DELAYS OR REFUSAL TO DISTRIBUTE EQUIPMENT UPON ARRIVAL.

ADD SENTENCE TO SECTION 835.19: ALL WIRE SHALL HAVE BONDING 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-309 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, 12X44 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, ELECTRICAL 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 MODERN 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 CUTOUTS, FUSES, GROUND RODS, GROUND LUGS, AND GROUND WIRES FOR PAYMENT AND WILL CONSIDER THEM INCIDENTAL TO THIS ITEM OF WORK.

CONSTRUCTION AND MEASUREMENT NOTES THAT ARE CONTRARY TO SECTION 723

SUBSECTION REVISION: 04.22 REMOVE SIGNAL EQUIPMENT, (PERMIT ONLY) REPLACE ENTIRE NOTE WITH THE FOLLOWING: THE DEPARTMENT WILL MEASURE THE QUANTITY AS 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 REVISION: 04.22 REMOVE SIGNAL EQUIPMENT, (CONSTRUCTION ONLY) 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.

MATERIAL NOTES THAT ARE CONTRARY TO SECTION 835

SUBSECTION REVISION: 07.02 MAST ARM POLES REPLACE ENTIRE 9) NOTE FOR "THE DETAIL ANALYSIS SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING CALCULATIONS: WITH THE FOLLOWING: LIMIT VERTICAL DEFLECTION TO 8 INCHES FOR GALLING FOR ALL ARMS .

COUNTY OF	ITEM NO.	SHEET NO.
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DESIGNED BY: _____
 DATE SUBMITTED: _____

Commonwealth of Kentucky
 DEPARTMENT OF HIGHWAYS
 COUNTY OF _____

PROJECT NUMBER: _____

TRAFFIC SIGNAL ESTIMATE OF QUANTITIES
 MEASUREMENT, CONST, AND MISC NOTES