

FOOTNOTES

CONGESTION MANAGEMENT PROGRAM (SIGNAL SYSTEM SET #7)			
ITEM NUMBER	ITEM	QUANTITY	AMOUNT
	105-01 CONSTRUCTION STAKES, LINES, AND GRADES	LS	1
①	209-09.43 CLEARING AND GRUBBING	L.S.	1
②	209-01.10 EROSION AND SILTATION CONTROL (SIGNALIZATION PROJECT)	LS	1
③	701-01.01 CONCRETE SIDEWALK (4")	S.F.	5400
④	702-03 CONCRETE COMBINED CURB AND GUTTER	C.Y.	40
	712-01 TRAFFIC CONTROL	LS	1
	713-16.09 RAILROAD ADVANCE WARNING SIGN AND SUPPORT	EACH	1
⑤	714-25.09 ELECTRICAL CONNECTION (FOR MLGW COST ONLY)	ALLOW	20000
	716-02.05 PLASTIC PAVEMENT MARKING (STOP LINE)	L.F.	130
	716-03.02 PLASTIC WORD PAVEMENT MARKING (RXR)	EACH	2
	717-01 MOBILIZATION	LS	1
⑥	725-02.79 FIBER SPLICE ENCLOSURE (WEATHERPROOF)	EACH	10
⑦	725-03.09 ETHERNET SWITCH (TYPE A)	EACH	10
	725-03.28 RAILROAD FLAGMAN	DAY	10
	725-21.22 TERMINAL SERVER (SERIAL DEVICE SERVER)	EACH	6
⑧	725-24.01 CABINET (TYPE A)	EACH	4
⑨	725-21.88 BLUETOOTH DETECTION SYSTEM	EACH	4
⑩	725-21.91 RADAR DETECTION SYSTEM	EACH	4
⑪	725-21.96 RDS CABLE (POWER, CAT5E, AND RS232/RS485 COMPOSITE)	EACH	4
	730-01.03 MODIFICATION OF EXISTING SIGNAL EQUIPMENT	EACH	7
⑫	730-01.10 OVERHEAD UTILITY RELOCATION (UTILITY FEE)	L.S.	1
⑬	730-03.23 INSTALL PULL BOX (FIBER OPTIC-TYPE A)	EACH	62
	730-03.24 INSTALL PULL BOX (FIBER OPTIC-TYPE B)	EACH	22
	730-03.31 FIBER DISTRIBUTION BOX	EACH	6
⑭	730-05.01 ELECTRICAL SERVICE CONNECTION	EACH	4
⑮	730-08.40 INTERCONNECT CABLE -- FIBER OPTIC (36 FIBER SINGLE MODE)	L.F.	54025
⑯	730-08.43 INTERCONNECT CABLE -- FIBER OPTIC (DROP CABLE, 6 FIBER, SINGLE MODE)	L.F.	1279
	730-12.02 CONDUIT 2" DIAMETER (PVC)	L.F.	650
	730-12.13 CONDUIT 2" DIAMETER (JACK AND BORE)	L.F.	33213
	730-12.14 CONDUIT 3" DIAMETER (JACK AND BORE)	L.F.	280
⑰	730-12.42 CURB MOUNTED CABLE MARKER	EACH	369
	730-15.13 MODIFY CABINET (BASE-MOUNT ENTRANCE)	EACH	6
	730-16.02 EIGHT PHASE ACTUATED CONTROLLER	EACH	2
	730-23.30 PEDESTAL POLE (ALUMINUM, 20' LENGTH)	EACH	4
	801-03 WATER (SEEDING AND SODDING)	M.G.	2
	803-01 SODDING (NEW SOD)	S.Y.	1231

- ① FOR TREE TRIMMING AS DIRECTED BY THE ENGINEER.
- ② THE CONTRACTOR IS REQUIRED TO PREVENT EROSION ON THE WORK SITE AND TO CONTAIN ALL SEDIMENT. EXCAVATED MATERIALS ARE TO BE REMOVED AND DISPOSED OF ACCORDING TO THE NOTES. THE CONTRACTOR MUST COMPLY WITH THE PROVISIONS OF TDOT AND TDEC AS EXPLAINED IN THE NOTES. THE COSTS OF MULCH, BLANKETS, SILT FENCE, CATCH BASIN PROTECTION, SEDIMENT REMOVAL, AND ANY OTHER NEEDED MEASURES ARE TO BE INCLUDED IN THE PRICE BID FOR ITEM 209-01.10.
- ③ THESE PAY ITEMS WILL BE USED AS DETERMINED BY THE ENGINEER BASED ON THE FINAL FIELD LOCATION CONDITIONS.
- ④ THE CONTRACTOR IS REQUIRED TO PROVIDE TRAFFIC CONTROL DEVICES AS NECESSARY TO PROTECT THE WORKZONE AND PROVIDE SAFE PASSAGEWAYS FOR VEHICLES AND PEDESTRIANS. THE LUMP SUM PRICE BID FOR ITEM 712-01 IS TO INCLUDE ALL NEEDED DEVICES AND LABOR TO COMPLY WITH THE TDOT STANDARD DRAWINGS.
- ⑤ ALLOWANCE TO COVER THE COST ASSOCIATED WITH POWER CONNECTION FOR THE TRAFFIC SIGNAL OR RDS UNIT FROM THE TRANSFORMER TO THE DEMARCATION POINT. THE UNIT PRICE BID FOR THIS ITEM WILL BE ADJUSTED BY SHELBY COUNTY TO MATCH THE FEE CHARGED BY MLGW FOR PROVIDING THE ELECTRICAL SERVICE CONNECTION.
- ⑥ SEE THE LATEST 'CITY OF MEMPHIS -- STANDARD CONSTRUCTION SPECIFICATIONS' FOR TECHNICAL REQUIREMENTS.
- ⑦ SEE CITY OF MEMPHIS SPECIFICATIONS FOR A 'RUGGEDIZED ETHERNET CABINET SWITCH.'
- ⑧ SEE PROJECT SPECIAL PROVISIONS FOR UTILITY CABINETS. TYPE A CABINETS ARE FOR PRIMARY CABINETS. TYPE D CABINETS ARE FOR SECONDARY CABINETS. TYPE D CABINETS TO INCLUDE ALL NECESSARY CABLES TO CONNECT TO THE TYPE A CABINET.
- ⑨ THE INSTALLATION AT EACH LOCATION SHALL INCLUDE BLUETOOTH SENSOR, NEMA ENCLOSURE, CONDUIT AND RISER FROM CONTROLLER CABINET TO SIGNAL POLE, POWER OVER ETHERNET SUBSYSTEM, ANTENNA, ETHERNET CABLE, AND ALL OTHER CABLING, CONNECTIONS AND HARDWARE TO COMPLETE THE INSTALLATION OF A FULLY FUNCTIONAL BLUETOOTH DETECTION SYSTEM ON THE EXISTING SIGNAL POLE WHICH IS DENOTED ON THE PLANS. THIS LUMP SUM ITEM ALSO INCLUDES THE BLUETOOTH SOFTWARE LICENSE FEE FOR ALL INSTALLED UNITS. THE LUMP SUM PRICE INCLUDES ALL SOFTWARE AND HARDWARE INSTALLATION AND INTEGRATION WORK TO PROVIDE A FULLY FUNCTIONAL BLUETOOTH SYSTEM THAT ALLOWS MONITORING AND RETRIEVAL OF TRAVEL TIME AND SPEED DATA REMOTELY.
- ⑩ SEE PROJECT SPECIAL PROVISIONS FOR RADAR DETECTION EQUIPMENT.
- ⑪ ALLOWANCE FOR ADJUSTMENT TO OVERHEAD UTILITES ONLY. THE UNIT PRICE BID FOR THIS ITEM WILL BE ADJUSTED BY SHELBY COUNTY TO MATCH THE ACTUAL FEE CHARGED BY UTILITY COMPANIES FOR ADJUSTMENT OF OVERHEAD LINES.
- ⑫ QUAZITE BRAND (MODEL NO. PG2436BB24 WITH PG2436HH6L COVER) OR APPROVED EQUIVALENT. COST INCLUDES ALL LABOR AND MATERIALS (REMOVING NECESSARY SIDE WALK PANELS, REPAIR LANDSCAPING, REMOVING EXISTING PULL BOX, AND OTHER MISCELLANEOUS MATERIALS) TO COMPLETE PULL BOX INSTALLATION.
- ⑬ QUAZITE BRAND (MODEL NO. PG3048BB36 WITH PG3048HS6L COVER) OR APPROVED EQUIVALENT. COST INCLUDES ALL LABOR AND MATERIALS (REMOVING NECESSARY SIDE WALK PANELS, REPAIR LANDSCAPING, REMOVING EXISTING PULL BOX, AND OTHER MISCELLANEOUS MATERIALS) TO COMPLETE PULL BOX INSTALLATION.
- ⑭ CONTRACTOR RESPONSIBLE FOR ALL COST ASSOCIATED WITH POWER CONNECTION FOR TRAFFIC SIGNAL OR RDS UNIT FROM THE DEMARCATION POINT TO THE CABINET.
- ⑮ CONTRACTOR SHALL INSTALL A TRACER WIRE WITH THE FIBER OPTIC CABLE FOR ALL CONDUIT ROUTING. TRACER WIRE SHALL BE 10 AWG STRANDED COPPER CONDUCTOR CABLE WITH BOTH THHN AND THWN RATINGS AND YELLOW IN COLOR.
- ⑯ PLASTIC DISK MARKERS ARE TO BE ATTACHED TO THE FACE OF THE CURB OVER EACH LOCATION WHERE CONDUIT OR SIGNAL CABLES CROSS UNDERNEATH. MARKERS ARE ALSO TO BE ATTACHED TO THE CURB AT 100-FOOT INTERVALS WHERE CONDUIT RUNS UNDER OR BEHIND AND PARALLEL TO THE CURB. MARKERS ARE TO BE ATTACHED BY THE CONTRACTOR USING AN ADHESIVE THAT MEETS THE REQUIREMENTS OF THE MANUFACTURER. BOTH F-26 CONSTRUCTION ADHESIVE AND SB-12 SUREBOND METAL SEALANT ARE ACCEPTABLE FOR THIS APPLICATION.
- ⑰ THE TRAFFIC SIGNAL CONTROLLER SHALL BE AN EAGLE EPAC M52 KEYBOARD UNIT OR APPROVED EQUIVALENT WITH NTCIP COMPLIANT SOFTWARE AND SEPAC, BUILT-IN ETHERNET PORT AND BUILT-IN STRETCH AND DELAY FEATURES FOR EACH PHASE. THE TRAFFIC CONTROLLER INSTALLATION ALONG WITH ALL AUXILIARY EQUIPMENT TO BE INSTALLED IN THE CABINET SHALL BE MANUFACTURED, SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE LATEST CITY OF MEMPHIS TRAFFIC SIGNAL CONTROLLER AND CABINET SPECIFICATIONS. THE INSTALLATION SHALL HAVE A 12-CHANNEL MALFUNCTION MONITOR UNIT INSTALLED AS MODEL ED1SSM2LE1P.

REVISIONS			ENGINEER'S SEAL	
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE		
			DIVISION OF PUBLIC WORKS CONGESTION MANAGEMENT PROGRAM INTERSECTION IMPROVEMENTS SHELBY COUNTY, TN QUANTITIES	
SURVEY BY: N/A DATE: BOOK: DRAFTED BY: JJC DATE: 07/16 SCALE: 1"=50' DESIGNED BY: MJB DATE: 07/16 CHECKED: KLA DATE: 7/16			SHEET 4 OF 52	