PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF A EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF MD 117 (CLOPPER ROAD) AT FIRSTFIELD ROAD IN MONTGOMERY COUNTY.

INTERSECTION OPERATION

A SYSTEM CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION. THE INTERSECTION WILL OPERATE IN A FULLY ACTUATED MODE USING 6 NEMA PHASES.

SPECIAL NOTES

1. THE FOLLOWING CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS:

PROJECT CONTACTS:

MR. LEE STARKLOFF, ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7318
MR. RALEIGH MEDLEY, ASSISTANT DISTRICT ENGINEER- MAINTENANCE
PHONE: (301) 513-7304
MR. DENNIS McMAHON, ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
PHONE: (301) 513-7345
MR. AUGIE REBISH, UTILITY - ACCESS ENGINEER
PHONE: (301) 513-7350
MR. RICHARD L. DAFF, SR. CHIEF TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
900000	BASE MOUNTED (SIZE 6) CABINET (MSHA SPECIFICATIONS) WITH ECONOLITE ASC II 2100 CONTROLLER, SSM 12 E CONFLICT MONITOR, POWER SUPPLY FOR RACK MOUNTED DETECTION, LAU PANEL, VIDEO DETECTION EQUIPMENT INTERFACE AND RELAY PACKAGE WIRED TO MONTGOMERY COUNTY SPECIFICATIONS.	EA	1
973023	FLAT SHEET ALUMINUM SIGNS.	SF	210
	D-3(1) (DUAL FACE) (VAR. X 16")	EA	8
	R3-5(R) (30"X36")	EA	2
	R3-5(L) (30"X36")	EA	2
	R10-12 (30"X36")	EA	2
	GUIDE SHIELD ASSEMBLY (30"X51")	EA	2
	GUIDE SHIELD ASSEMBLY (48"X75")	EA	2
	R10-4 (MOD) (12"X9")	EA	2

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

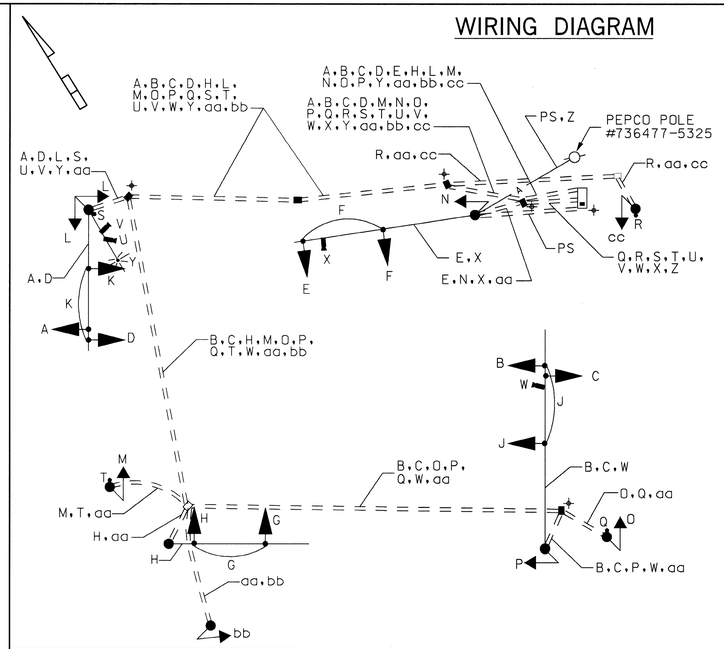
CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
203030	TEST PIT EXCAVATION	CY	4
585620	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS	LF	620
585624	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS	LF	160
801004	CONCRETE FOR SIGNAL FOUNDATION	CY	18
813015	INSTALL OVERHEAD SIGN	SF	210
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	500
805125	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	60
805135	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	400
805140	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	100
805155	4 INCH SCHEDULE 80 PVC CONDUIT-SLOTTED	LF	350
807400	ELECTRICAL UTILITY SERVICE EQUIPMENT 120/240 VOLTS 60 AMPS	EA	1
811001	FURNISH AND INSTALL ELECTRICAL HANDHOLE	EA	5
816001	VIDEO DETECTION CAMERA	EA	4
816005	CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER	EA	3
816010	CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER	EA	1
818004	10 FOOT BREAKAWAY PEDESTAL POLE	EA	5
818030	STEEL POLE WITH A SINGLE 38 FOOT MAST ARM	EA	2
818041	STEEL POLE WITH A SINGLE 60 FOOT MAST ARM	EA	1
818052	STEEL POLE WITH A SINGLE 70 FOOT MAST ARM	EA	1
831010	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE WITH PHOTOCELL	EA	1
837001	GROUND ROD - 3 /4 INCH DIA. X 10 FOOT LENGTH	EA	4
860272	12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION	EA	42
860278	12 INCH PEDESTRIAN SIGNAL HEAD SECTION POLE MOUNT	EA	8
860282	12 INCH PEDESTRIAN SIGNAL HEAD SECTION PEDESTAL POLE MOUNT	EA	8
860292	CUT, CLEAN, GALVANIZE TRAFFIC SIGNAL EQUIPMENT	EA	1
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	800
861106	ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 AWG)	LF	1000
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	1000
861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	1960
861116	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)	LF	150
861117	3 WIRE - 1 CONDUCTOR, NO. 4 AWG	LF	175
865001	PUSHBUTTON AND SIGN	EA	4
866103	15 FOOT LIGHTING ARM ON SIGNAL STRUCTURE	EA	1
871202	INSTALL CONTROLLER AND CABINET - BASE MOUNT	EA	1
800000	REMOVE AND DISPOSE OF EXISTING SIGNAL EQUIPMENT	LS	1

C. MATERIALS TO BE REMOVED BY THE CONTRACTOR.

SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY

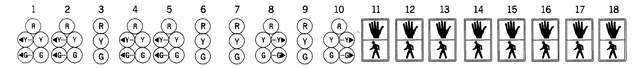
WIRING DIAGRAM



KEY

A B C D E H	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
F G J K L	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
M N O P bb cc	3 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
Q R S T	2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
Y	2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG)
W	VIDEO DETECTION CABLE (500 FT.)
U V X	VIDEO DETECTION CABLE (250 FT.)
aa	1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
Z	50 PAIR INTERCONNECT CABLE
PS	POWER SERVICE UNDERGROUND
✦	GROUND ROD

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PHASE 1 AND 5	◄G/R	◄G/R	R	◄G/R	◄G/R	R	R	R/G►	R	R/G►	DW	DW	DW	DW	DW	DW	DW	DW
1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6																		
PHASE 1 AND 6	◄G/G	◄G/G	G	R	R	R	R	R	R	R/G►	DW	DW	DW	DW	DW	DW	DW	DW
1 AND 6 CHANGE	◄Y/G	◄Y/G	Y	R	R	R	R	R	R	R/Y►	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 AND 5	R	R	R	◄G/G	◄G/G	G	R	R/G►	R	R	DW	DW	DW	DW	DW	DW	DW	DW
2 AND 5 CHANGE	R	R	R	◄Y/G	◄Y/G	Y	R	R/Y►	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 AND 6	G	G	G	G	G	G	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEARANCE	G	G	G	G	G	G	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 AND 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 AND 8	R	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 AND 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 ALT AND 8 ALT	R	R	R	R	R	R	R	R	G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEARANCE	R	R	R	R	R	R	R	R	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 ALT AND 8 ALT CHANGE	R	R	R	R	R	R	R	R	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

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MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION PLAN

MD 117 (CLOPPER ROAD) AT FIRSTFIELD ROAD

DRAWN BY: S. SMITH	F.A.P. NO. SEE TITLE SHEET	TS NO. TS-2028A	SHEET NO.
CHECKED BY: K. RINIKER	S.H.A. NO. M0813517I		
SCALE: 1" = 20'	COUNTY: MONTGOMERY	T.I.M.S. NO. E-844	60 OF 90
DATE: MARCH 2003	LOG MILE: +50117.1/.08		

150117.1/.08