PROJECT DESCRIPTION
GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF A TRAFFIC SIGNAL AT THE INTERSECTION OF MD 410 (PHILADELPHIA AVENUE) AND MAPLE AVENUE 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 4 NEMA PHASES. EASTBOUND AND WESTBOUND MD 410 SHALL OPERATE AS SPLIT PHASING, WHILE THE MAPLE AVENUE SIDE STREETS SHALL OPERATE CONCURRENTLY. VIDEO DETECTION SHALL BE INSTALLED FOR ACTUATION OF MAPLE AVENUE PHASES.

SPECIAL NOTES

1. THE FOLLOWING CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

PROJECT CONTACTS:

MR. LEE STARKLOFF, ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7318
MR. DENNIS MCMAHON, ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
PHONE: (301) 513-7336
MR. WAYNE A. MOWDY, ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 513-7304
MR. AUGIE REBISH, UTILITY ENGINEER
PHONE: (301) 513-7350
MR. RICHARD L. DAFF, SR. CHIEF TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

2. MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR FOLLOWING MSHA STANDARD PLATES FOR TRAFFIC CONTROL.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
9044	CONTROLLER CABINET, SIZE 6	EA	1
9570	SHEET ALUMINUM GROUND MOUNT SIGNS CONSISTING OF:	SF	90
	S1-1 (36"x36")	EA	4
	M6-2 (21"x15")	EA	4
9571	SHEET ALUMINUM MAST / ARM POLE MOUNTED SIGNS CONSISTING OF:	SF	132
	R10-11b (24"x24") MAST ARM MOUNT	EA	2
	R3-5(R) (30"x36") MAST ARM MOUNT	EA	1
	D-3(1) (VAR.x16") MAST ARM MOUNT	EA	8
	S1-1 (36"x36")	EA	4
	M6-2 (21"x15")	EA	4

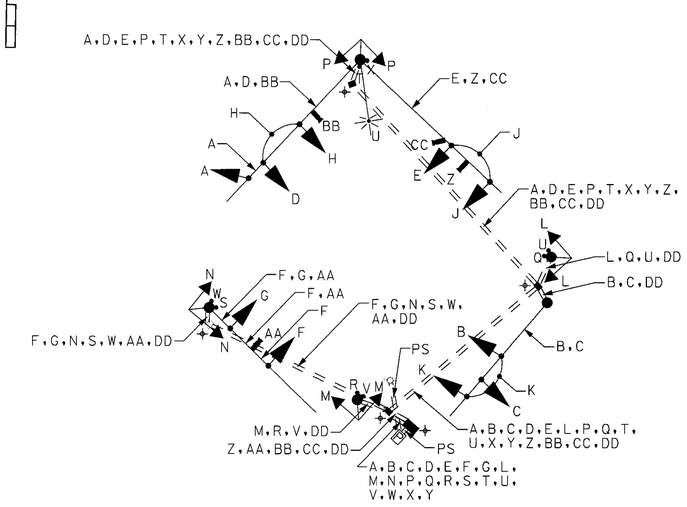
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
1001	MAINTENANCE OF TRAFFIC	EA	3
2001	CLASS 2 EXCAVATION	CY	32
2002	TEST PIT EXCAVATION	CY	4
5003	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH	LF	600
5005	12 IN. HEAT APPL. WHITE PERMANENT PREFORMED THERMO. PAVE. MARK.	LF	600
5006	24 IN. HEAT APPL. WHITE PERMANENT PREFORMED THERMO. PAVE. MARK.	LF	70
6002	STANDARD TYPE A COMB. CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH	LF	175
6004	4 INCH CONCRETE SIDEWALK	SF	710
8001	CONCRETE FOUNDATION	CY	23
8002	12 IN PED SIG HEAD SECTION	EA	16
8009	CONTROL CABLE, 300 FOOT, VIDEO DETECTION	EA	4
8018	PED POLE (ANY SIZE)	EA	2
8019	REM & DISPOSE MAT & EQUIP PER ASSIGN	EA	1
8020	TWIN MAST ARM POLE (27' T) AND 50 FT / 50 FT MAST ARMS	EA	1
8026	DETECTABLE WARNING SURFACES	SF	16
8029	WOOD SIGN SUPPORTS 4 INCH X 6 INCH	LF	60
8030	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	260
8038	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	10
8039	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	35
8040	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	25
8043	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED	LF	190
8045	METERED SERVICE PEDESTAL	EA	1
8047	ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG-THHN/THWN	LF	200
8053	FURNISH AND INSTALL ELECTRICAL HANDHOLE	EA	3
8055	INSTALL GROUND MOUNTED SIGN	SF	90
8056	INSTALL OVERHEAD SIGN	SF	132
8057	VIDEO DETECTION CAMERA	EA	4
8070	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINARE	EA	1
8074	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH	EA	5
8076	12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION	EA	36
8080	PAINT INSTALLED TRAFFIC SIGNAL STRUCTURE	EA	6
8082	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	740
8084	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	420
8085	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	1175
8086	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TC	LF	215
8089	PUSHBUTTON AND SIGN	EA	8
8090	15 FOOT LIGHTING ARM ON SIGNAL STRUCTURE	EA	1
8095	INSTALL CONTROLLER AND CABINET - BASE MOUNT	EA	1
8096	REMOVE CONCRETE FOUNDATION 12 INCHES	EA	5
NEG.	MAST ARM POLE (15' T) & 38 FT MAST ARM	EA	2
NEG.	COMMON BORROW	CY	40
NEG.	HMA FOR PATCHING	TON	9
NEG.	SAW CUT	LF	175
NEG.	4 INCH GRADED AGGREGATE BASE	SY	100

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

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
	CONTROLLER	EA	1

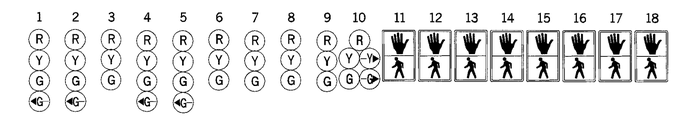
WIRING DIAGRAM



KEY

A B C D E F G	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
H J K L M N P	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
Q R S T U V W X	2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
Y	2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) TRAY CABLE
Z AA BB CC	VIDEO DETECTION CABLE
DD	1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
PS	POWER SERVICE UNDERGROUND (3 WIRE 1-CONDUCTOR NO. 4 AWG)
+	GROUND ROD

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PHASE 1	G ←G–	G ←G–	G	R	R	R	R	R	R	R/G→	DW	DW	DW	DW	DW	DW	DW	DW
1 CHANGE	Y	Y	Y	R	R	R	R	R	R	R/Y→	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 1 ALT	G ←G–	G ←G–	G	R	R	R	R	R	R	R/G→	DW	WK	WK	DW	DW	DW	DW	DW
PED CLEARANCE	G ←G–	G ←G–	G	R	R	R	R	R	R	R/G→	DW	FL/DW	FL/DW	DW	DW	DW	DW	DW
1 ALT CHANGE	Y	Y	Y	R	R	R	R	R	R	R/Y→	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2	R	R	R	G ←G–	G ←G–	G	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
2 CHANGE	R	R	R	Y	Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 ALT	R	R	R	G ←G–	G ←G–	G	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW
PED CLEARANCE	R	R	R	G ←G–	G ←G–	G	R	R	R	R	FL/DW	DW	DW	FL/DW	DW	DW	DW	DW
2 ALT CHANGE	R	R	R	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 AND 8 ALT	R	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEARANCE	R	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 AND 8 ALT CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	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 410 (PHILADELPHIA AVENUE) AT MAPLE AVENUE

DRAWN BY: J.WEAVER	F.A.P. NO.		TS NO. 1327B-GI	SHEET NO. 2 OF 2
CHECKED BY: S.RENZI	S.H.A. NO.	AT3565185		
SCALE: 1" = 20'	COUNTY:	MONTGOMERY	T.I.M.S. NO. G106	
DATE: 09/01/04	LOG MILE:	15041005.29		

FILE: r:\2000\23\task 104\dgn\gi06gd01.dgn DATE: 02-Sep-04 14:16