

**PROJECT DESCRIPTION
GENERAL**

THIS PROJECT INVOLVES THE MODIFICATION OF A TRAFFIC SIGNAL AT THE INTERSECTION OF MD 118 (GERMANTOWN ROAD) AND CRYSTAL ROCK DRIVE IN MONTGOMERY COUNTY. NEW ACTUATED PEDESTRIAN SIGNALS SHALL BE INSTALLED ACROSS THE WEST LEG OF THE INTERSECTION. CONCURRENT PEDESTRIAN SIGNALS SHALL BE INSTALLED CROSSING THE NORTH AND SOUTH LEGS OF THE INTERSECTION. THE EXISTING CONCRETE CHANNELIZED ISLAND IN THE NORTHEAST CORNER AND THE TAR MEDIAN DEPRESSION ON THE WEST BOUND APPROACH OF MD 118 SHALL BE REMOVED. THE EXISTING E/P LEFT TURN PHASE ON MD 118 NORTH BOUND SHALL BE CHANGED TO AN EXCLUSIVE LEFT TURN MOVEMENT.

INTERSECTION OPERATION

THE INTERSECTION SHALL OPERATE USING 6 NEMA PHASES THE INTERSECTION WILL BE MODIFIED TO INCLUDE ACTUATED PEDESTRIAN PHASING FOR THE WEST LEG OF MD 118 (GERMANTOWN ROAD), AND CONCURRENT PEDESTRIAN CROSSING FOR THE NORTH AND SOUTH LEGS.

SPECIAL NOTES

1. THE 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 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
MR. BOBBY GONZALES, TRAFFIC ENGINEER - MCDPW&T
PHONE: (240) 777-8761

2. MONTGOMERY COUNTY DPW&T SHALL SUPPLY AND INSTALL A NEW CONTROLLER AND CABINET AT THE INTERSECTION THE CONTRACTOR SHALL CONTACT MR. BOBBY GONZALES OF MCDPW&T PRIOR TO ANY SIGNAL MODIFICATION TO ASSURE CABINET UPGRADE HAS BEEN COMPLETED.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
9571	FLAT SHEET ALUMINUM SIGNS (MAST ARM OR POLE MOUNT): R10-4C MOD (12"x9") POLE MOUNT GUIDE SHIELD ASSEMBLY (30"x51") POLE MOUNT GUIDE SHIELD ASSEMBLY (48"x75") POLE MOUNT	SF EA EA EA	75 4 2 2
9572	FLAT SHEET ALUMINUM SIGNS (SPAN MOUNT): D-3(1) (VAR. X 16") SPAN WIRE MOUNT (DUAL FACED) R10-12 (36" X 42") SPAN WIRE MOUNT	SF EA EA	37 2 1

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

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
1001	MAINTENANCE OF TRAFFIC	EA	1
2001	CLASS 2 EXCAVATION	CY	20
2002	TEST PIT EXCAVATION	CY	3
5003	12 INCH WHITE LEAD FREE THERMOPLASTIC PAVEMENT MARKINGS	LF	445
5005	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH	LF	150
8001	12 INCH PEDESTRIAN SIGNAL HEAD	EA	12
8003	15 FOOT LIGHTING ARM ON EXISTING STRUCTURE	EA	1
8009	BREAKAWAY PEDESTAL POLE (ANY SIZE)	EA	5
8011	PUSHBUTTON AND SIGN	EA	2
8013	REMOVE & DISPOSE OF EQUIPMENT	EA	1
8016	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	45
8019	ELECTRICAL CABLE-2 CONDUCTOR (NO. 12 AWG)-TRAY CABLE	LF	245
8023	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	30
8042	INSTALL GROUND MOUNTED SIGN	SF	3
8043	INSTALL OVERHEAD SIGN	SF	109
8048	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE	EA	1
8050	GROUND ROD - 3/4 INCH DIA. X 10 FT. LENGTH	EA	3
8053	12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION	EA	12
8056	ELECTRICAL CABLE-2 CONDUCTOR (NO. 14 AWG)	LF	500
8057	ELECTRICAL CABLE-3 CONDUCTOR (NO. 14 AWG)	LF	500
8058	ELECTRICAL CABLE-5 CONDUCTOR (NO. 14 AWG)	LF	605
8059	ELECTRICAL CABLE-7 CONDUCTOR (NO. 14 AWG)	LF	320
8070	F&I DEPRESSED CURB & GUTTER	LF	110
8088	DETECTABLE WARNING SURFACE	SF	30
NEG.	2.0 INCH HOT-MIX ASPHALT SUPERPAVE 12.5 MM FOR SURFACE-PG76-22 LEVEL 4	TON	3
NEG.	2.5 INCH HOT-MIX ASPHALT SUPERPAVE 19.0 MM FOR BASE-PG64-22 LEVEL 4	TON	4
NEG.	7 INCH PLAIN CEMENT CONCRETE MIX NO. 2	CY	20
NEG.	6.0 INCH GRADED AGGREGATE BASE (GAB)	SY	30

B1. EQUIPMENT TO BE SUPPLIED BY THE DEVELOPER.

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
9572	FLAT SHEET ALUMINUM SIGNS CONSISTING OF: R3-5(L) (30"x36") SPAN WIRE MOUNT R3-5(R) (30"x36") SPAN WIRE MOUNT R3-6 (30"x36") SPAN WIRE MOUNT	SF EA EA EA	23 1 1 1

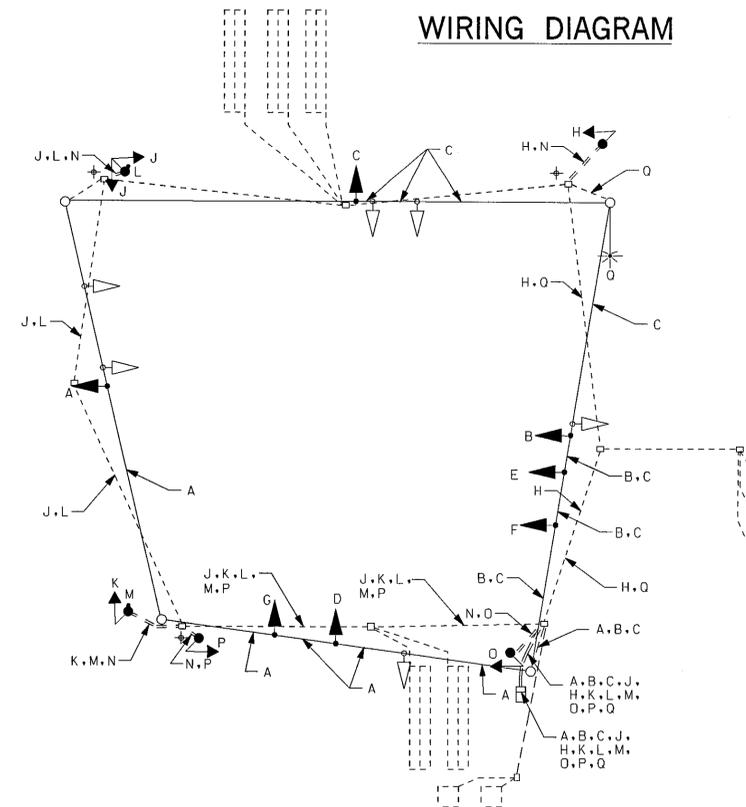
B2. EQUIPMENT TO BE SUPPLIED BY THE DEVELOPER AND INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
5006	REMOVAL OF EXISTING PERM. PVMT. MAR. LETTERS, SYM., ARROWS AND NO.	EA	4
5008	HEAT APPLIED WHITE PERM. PREFORMED THERMO. PVMNT MARK ARROWS	EA	6
8043	INSTALL OVERHEAD SIGN	SF	23
8053	12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION	EA	11

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
	NONE		

WIRING DIAGRAM



WIRING KEY

- A } 7 CONDUCTOR CABLE (NO. 14)
- B } 7 CONDUCTOR CABLE (NO. 14)
- C } 7 CONDUCTOR CABLE (NO. 14)
- D } EXISTING 7 CONDUCTOR CABLE (NO. 14) TO BE REUSED
- E } EXISTING 7 CONDUCTOR CABLE (NO. 14) TO BE REUSED
- J } 5 CONDUCTOR CABLE (NO. 14)
- F } EXISTING 5 CONDUCTOR CABLE (NO. 14) TO BE REUSED
- G } EXISTING 5 CONDUCTOR CABLE (NO. 14) TO BE REUSED
- H } 3 CONDUCTOR CABLE (NO. 14)
- K } 3 CONDUCTOR CABLE (NO. 14)
- L } 3 CONDUCTOR CABLE (NO. 14)
- O } 2 CONDUCTOR (NO. 12 AWG) TRAY CABLE
- M } 2 CONDUCTOR CABLE (NO. 14 AWG)
- N } 1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
- + } GROUND ROD

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
PHASE 1 AND 5	+G-	+G-	R	R	+GR	+GR	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6	+G-	+G-	G	G	R	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW
PHASE 1 AND 6	+Y-	+Y-	G	G	R	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW
1 AND 6 CHANGE	+R-	+R-	R	R	+GG	+GG	G	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW
PHASE 2 AND 5	+R-	+R-	R	R	+VG	+VG	G	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW
2 AND 5 CHANGE	+R-	+R-	R	R	+VG	+VG	G	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW
PHASE 2 AND 6	+R-	+R-	G	G	G	G	R	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW
PED CLEARANCE	+R-	+R-	G	G	G	G	R	R	R	R	R	R	R	FLOW	FLOW	FLOW	FLOW	DW	DW
2 AND 6 CHANGE	+R-	+R-	Y	Y	Y	Y	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3	+R-	+R-	R	R	R	R	R	G	G	G	R	R	R	DW	DW	DW	DW	DW	DW
3 CHANGE	+R-	+R-	R	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4	+R-	+R-	R	R	R	R	R	R	R	R	+GG	+GG	G	DW	DW	DW	DW	DW	DW
4 CHANGE	+R-	+R-	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 4 ALT	+R-	+R-	R	R	R	R	R	R	R	R	+GG	+GG	G	DW	DW	DW	DW	WK	WK
PED CLEARANCE	+R-	+R-	R	R	R	R	R	R	R	R	+GG	+GG	G	DW	DW	DW	DW	FLOW	FLOW
4 ALT CHANGE	+R-	+R-	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/R	FL/R	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	DARK	DARK	DARK	DARK	DARK	DARK						

SHA #: MD325A5R1B8R/M8R JOB#: AT288-791M

SHA MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION PLAN
**MD 118 (GERMANTOWN ROAD) AT
CRYSTAL ROCK DRIVE**

SABRA, WANG & ASSOCIATES, INC.
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WWW.SABRA-WANG.COM

DRAWN BY: L.YEH	F.A.P. NO. S.J.H.A. NO. AT2885185	TS NO. 2004B-G1	SHEET NO.
CHECKED BY: S.SMITH	COUNTY: MONTGOMERY	T.I.M.S. NO. F725/G210	2 OF 2
SCALE: 1" = 20'	LOG MILE: 15011805.73		
DATE: JULY 1, 2004			

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