

I. GENERAL

PROJECT DESCRIPTION

This project involves the reconstruction of the existing traffic control signal at the intersection of MD 173 and Marley Neck Boulevard in Anne Arundel County. New mast arm signal poles and cabinet will be installed and video detection will be implemented. MD 173 is assumed to run in a north-south direction.

II. INTERSECTION OPERATION

1. The intersection will operate in a fully-actuated mode using five phases. Both MD 173 approaches will operate with exclusive/permissive left turn/u-turn phasing.

2. A new NEMA full-traffic-actuated, eight (8) phase controller housed in a Type S base mounted cabinet shall be installed at this intersection under this project.

NOTES

- All pavement markings shall be installed in accordance with Administration standards.
- The contractor shall be responsible for terminating all signal cable to the appropriate terminals and properly labeling each cable.
- All traffic signal foundations shall be installed at the final sidewalk or curb grade for closed sections, highest roadway profile grade for open sections, to meet clearances as specified in the appropriate 800 series Standard Plates. The contractor shall verify ultimate grades prior to the installation of all signal equipment.
- Disconnecting and splicing of interconnect cable shall be performed by SHA Forces. The contractor shall run the interconnect cable into the base of each cabinet and properly tag the cable. Contact Mr. Ed Rodenhizer at (410) 787-7650 seventy-two hours in advance of intended work.
- All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.
- The contractor shall maintain the continuous operation of all interconnect, vehicular, pedestrian detectors, and lighting devices. If any device is damaged by the contractor, it shall be repaired within 72 hours by the contractor at no cost to the Administration after notification by the Engineer.
- The Contractor shall verify cabinet location prior to installation.
- Video camera location and aligning shall be coordinated with the SHA Engineer.
- All proposed luminaires shall be provided with a photocell.

CONTACTS

DISTRICT	OFFICE OF TRAFFIC AND SAFETY
MS. KIMBERLY TRAN ASSISTANT DISTRICT ENGINEER - TRAFFIC 410-841-1019	MR. RICHARD DAFF SR. CHIEF, TRAFFIC OPERATIONS 410-787-7630
MR. MIKE HUBER UTILITY ENGINEER 410-841-1039	MR. ROBERT SNYDER ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS 410-787-7630
MR. JAMES FOLDEN ASSISTANT DISTRICT ENGINEER - CONSTRUCTION 410-841-1031	MR. ED RODENHIZER TEAM LEADER SIGNAL OPERATIONS 410-787-7650
MR. JOHN MAYS ASSISTANT DISTRICT ENGINEER - MAINTENANCE 410-841-1013	MR. EUGENE BAILEY TEAM LEADER SIGN OPERATIONS 410-787-7670
	MR. MIKE STOCKER SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE) 410-787-7668

EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY THE ADMINISTRATION

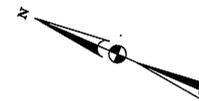
ITEM NO.	DESCRIPTION	UNITS	QUANTITY
9104	CONTROLLER CABINET, SIZE "S" WITH CONTROLLER & VIDEO DETECTION INTERFACE FOR 1-8 CAMERAS	EA	1
9110	UPS EQUIPMENT FOR "S" CABINET	EA	1
9570	SHEET ALUMINUM GROUND MOUNTED SIGNS CONSISTING OF:	SF	22.2
	M3-3 (24" X 12") GROUND MOUNT	EA	1
	M1-5 (30" X 24") GROUND MOUNT	EA	1
	M6-1 (21" X 15") GROUND MOUNT	EA	1
	R4-7 (24" X 30") GROUND MOUNT	EA	1
	W1-7 (48" X 24") GROUND MOUNT	EA	1
9571	SHEET ALUMINUM POLE MOUNTED SIGNS CONSISTING OF:	SF	99.8
	M1-5(6) (48" X 72") POLE MOUNT	EA	1
	R3-5(L) (30" X 36") MAST ARM MOUNT	EA	2
	R3-5(R) (30" X 36") MAST ARM MOUNT	EA	1
	D-3(1) (VAR. X 16") MAST ARM MOUNT	EA	5

EQUIPMENT LIST (CONT.)

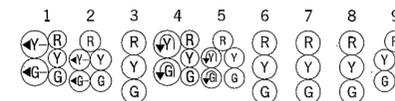
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
1001	MAINTENANCE OF TRAFFIC	EA	SEE SHEET 2 OF 15
2002	TEST PIT EXCAVATION	CY	2
5001	REMOVAL OF EXISTING PERMANENT PAVEMENT MARKINGS SYMBOLS OR LEGENDS	EA	8
5002	5" HEAT APPLIED WHITE OR YELLOW PERMANENT PAVEMENT MARKINGS	LF	170
5003	REMOVAL OF EXISTING PERMANENT PAVEMENT MARKING LINES	LF	135
5005	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	135
5006	WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS	SF	31
6004	TRAFFIC BARRIER W BEAM USING 6 FOOT POST	LF	55
6006	TYPE K TRAFFIC BARRIER END TREATMENT, ANY OPTION	EA	2
6007	W BEAM BARRIER REFLECTIVE DELINEATORS	EA	2
8001	12 INCH LED SIGNAL HEAD SECTION	EA	31
8004	8 INCH LED SIGNAL HEAD SECTION	EA	6
8007	ANY SIZE LIGHTING ARM ON SIGNAL STRUCTURE WITH 250 WATT HPS LAMP AND LUMINAIRE	EA	1
8012	EMBEDDED METERED SERVICE PEDESTAL	EA	1
8019	MAST ARM POLE & 60' MAST ARM ANY 'T' DIMENSION	EA	1
8022	NON-INVASIVE DETECTOR (ANY LENGTH) LEAD-IN CABLE UP TO 1000'	EA	6
8023	REMOVE AND DISPOSE OF EQUIPMENT (PER ASSIGNMENT)	EA	1
8024	TWIN MAST ARM POLE & 50'/50' MAST ARMS ANY 'T' DIMENSION	EA	1
8028	VIDEO DETECTION CAMERA AND CABLE ANY LENGTH	EA	3
8034	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TYPE T/C	LF	330
8036	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED	LF	280
8037	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED	LF	250
8038	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	1090
8039	WOOD SIGN SUPPORTS UP TO 4" X 6"	LF	56
8040	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)	SF	122
8042	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	475
8045	ELECTRICAL CABLE - 1 CONDUCTOR NO. 8 AWG-THHN/THWN	LF	30
8046	FURNISH AND INSTALL ELECTRICAL HANDHOLE	EA	14
8055	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	80
8056	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	1750
8062	INSTALL CONTROLLER AND CABINET - BASE MOUNT (ANY SIZE)	EA	1

C. 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.

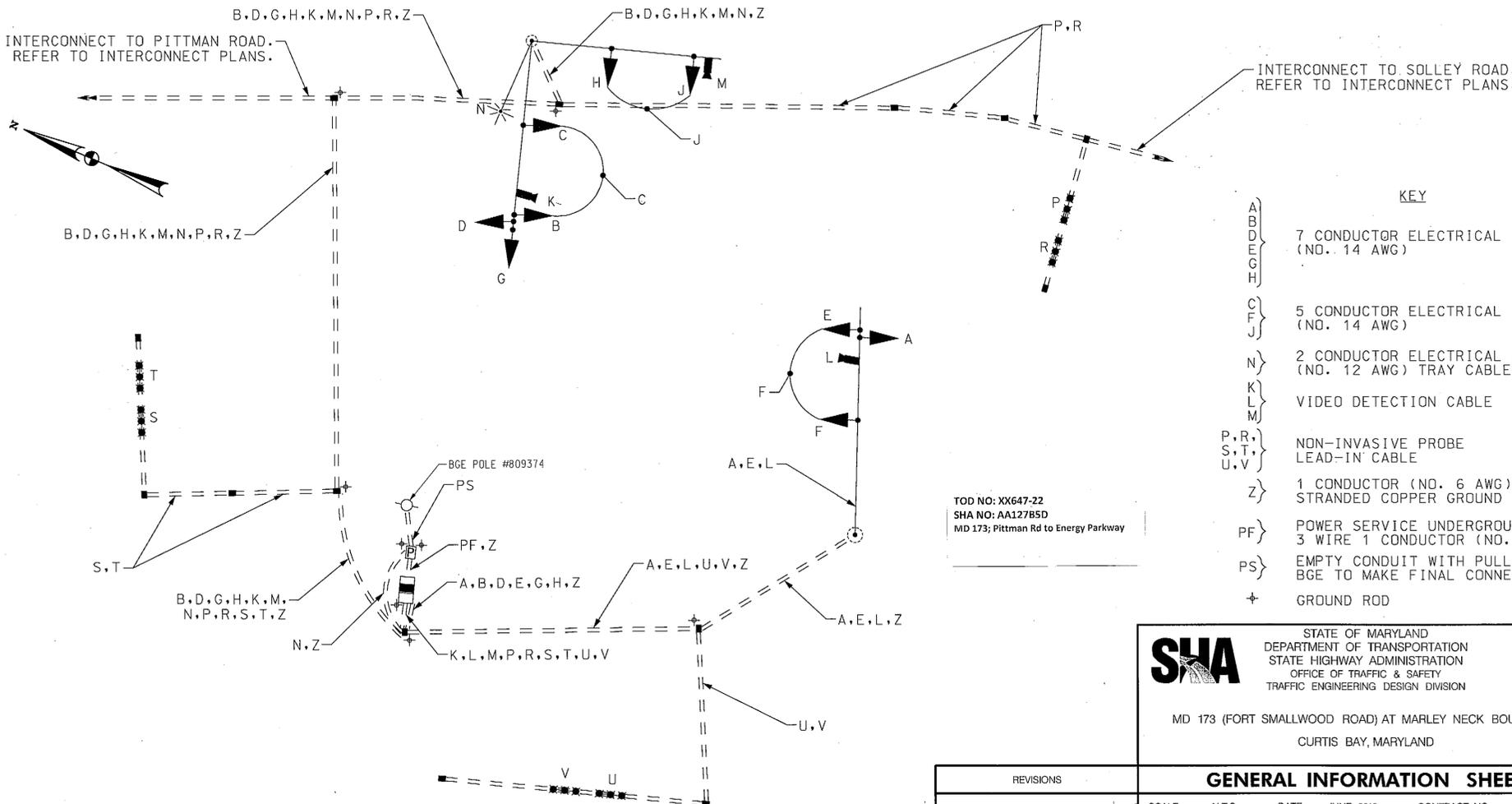


PHASE CHART



PHASE 1 AND 5	←GR	←GR	R	←GR	←GR	R	R	R	RG→
1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6									
PHASE 1 AND 6	←GG	←GG	G	R	R	R	R	R	RG→
1 CHANGE									
PHASE 2 AND 5	←YG	←YG	G	R	R	R	R	R	RY→
5 CHANGE									
PHASE 2 AND 6	G	G	G	G	G	G	R	R	R
2 AND 6 CHANGE									
PHASE 4	R	R	R	R	R	R	G	G	G
4 CHANGE									
FLASHING OPERATION	FLY	FLY	FLY	FLY	FLY	FLY	FL/R	FL/R	FL/R

WIRING DIAGRAM



KEY

A, B, D, E, G, H	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
C, F, J	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
N	2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) TRAY CABLE
K, L, M	VIDEO DETECTION CABLE
P, R, S, T, U, V	NON-INVASIVE PROBE LEAD-IN CABLE
Z	1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
PF	POWER SERVICE UNDERGROUND 3 WIRE 1 CONDUCTOR (NO. 8 AWG)
PS	EMPTY CONDUIT WITH PULLSTRING, BGE TO MAKE FINAL CONNECTION
+	GROUND ROD

TOD NO: XX647-22
SHA NO: AA12785D
MD 173; Pittman Rd to Energy Parkway

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 173 (FORT SMALLWOOD ROAD) AT MARLEY NECK BOULEVARD
CURTIS BAY, MARYLAND

REVISIONS			

GENERAL INFORMATION SHEET			
SCALE	N.T.S.	DATE	JUNE 2012
CONTRACT NO.	XX6475185	DESIGNED BY	A. GRIFFIN
COUNTY	ANNE ARUNDEL	DRAWN BY	A. GRIFFIN
LOGMILE	02017308.10	CHECKED BY	S. DU
TMS NO.	H408	FAP NO.	
TOD NO.		TS NO.	1645B
DRAWING	SG-04	OF 15	
SHEET NO.	4	OF 15	

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