

PROJECT DESCRIPTION

I. GENERAL

This project involves the installation of a new mast arm Traffic Control Signal with street lighting, audible pushbuttons and interconnect at the intersection of MD 182 (Doctor Bird Rd) / MD 182 (Norwood Rd) and Norwood Road in Montgomery County. Video interface shall be installed for the MD 182 (Norwood Rd) and Norwood Road approaches. MD 182 (Doctor Bird Rd) / MD 182 (Norwood Rd) is assumed to run north-south direction.

II. INTERSECTION OPERATION

- The intersection is to operate in a NEMA four-phase, semi-actuated mode, with the MD 182 (Doctor Bird Rd) / MD 182 (Norwood Rd) approaches running concurrently. An Exclusive/Permissive left turn phase shall be provided for the southbound approach of MD 182 (Doctor Bird Rd). A Countdown pedestrian phase with audible pushbuttons on recall shall be provided across the east leg of Norwood Road. The Norwood Road approach shall run in its own phase.
- A full-traffic-actuated, eight-phase controller with video interface and all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.

III. SPECIAL NOTES

- The Contractor shall be responsible for terminating all signal cables, excluding interconnect, to the appropriate terminals and shall properly label each cable.
- All controller cabinet wiring will be performed by Montgomery County Forces. Contact Kamal Hamud at (240) 777-8761 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.
- APS will function as follows:
TO CROSS NORWOOD ROAD
 - When pedestrian locates and presses the pushbutton for an extended time, the pushbutton unit will announce the following message "Wait to cross Norwood at Doctor Bird Road."
 - When the WALK phase begins, the pushbutton unit will provide a rapid tick which will last for the duration of the WALK phase.

The contacts for Montgomery County and SHA are as follows:

Mr. Jeff Wentz Assistant District Engineer - Traffic Phone: (301) 513-7358	Mr. Richard L. Daff, Sr. Chief, Traffic Operations Division Phone: (410) 787-7630
Mr. Vernon Stinnett Assistant District Engineer - Maintenance Phone: (301) 513-7304	Mr. Keith Lord Signal Shop (Mont Co.) 301-674-8965
Mr. Augie Rebish District Engineer - Utility Phone: (301) 513-7350	Mr. Sonny Bailey Manager, Sign Shop Operations 410-787-7670
Mr. Mike Kinney Mont. County Traffic 240-777-8760	The power company representative is: Mr. Steve Custer PEPCO Customer Design 201 W Gude Dr. Roakville, MD 20850 Phone: 301 548-4333
Mr. Kamal Hamud Mont. County TMC Center 240-777-8761	

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

CAT NO.	DESCRIPTION	QUANTITY
203030	TEST PIT EXCAVATION	6 CY
585600	5 INCH WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS	6200 LF
585604	5 INCH YELLOW PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS	3000 LF
585606	10 INCH YELLOW PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS	150 LF
585621	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	170 LF
585625	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	150 LF
800000A	16" COUNTDOWN PEDESTRIAN SIGNAL HEAD	2 EA
800000A	1 CONDUCTOR (No. 250 KCMIL) ELECTRICAL CABLE	300 LF
800000EA	APS PUSHBUTTON STATION AND SIGN	2 EA
801004	CONCRETE FOR SIGNAL FOUNDATION	10 CY
801130	SQUARE PERFORATED TUBULAR STEEL SIGN POSTS	8 EA
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	630 LF
805118	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED	450 LF
805125	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	150 LF
805135	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	1900 LF
805140	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	200 LF
807202	METERED SERVICE PEDESTAL	1 EA
810010	ELECTRICAL CABLE - 1 CONDUCTOR (NO. 4 AWG-THHN/THWN)	70 LF
811001	FURNISH AND INSTALL ELECTRICAL HANDHOLE	10 EA
813014	INSTALL GROUND MOUNTED SIGN	24 SF
813015	INSTALL OVERHEAD SIGN	56 SF
816001	VIDEO DETECTION CAMERA	2 EA
816010	CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER	2 EA
800000	10 FOOT BREAKAWAY PEDESTAL POLE WITH MODIFIED BASE	2 EA
818021	STEEL POLE WITH A TWIN 50 FOOT MAST ARMS	1 EA
818036	STEEL POLE WITH A SINGLE 50 FT MAST ARM	1 EA
822002	12-PAIR COMMUNICATION CABLE, JELLYFILLED (UNDERGROUND)	1200 LF
837001	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH	6 EA
860284	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION	25 EA
860292	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE	1 EA
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	390 LF
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	575 LF
861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	375 LF
861116	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG TC)	375 LF
871202	INSTALL CONTROLLER CABINET - BASE MOUNT	1 EA
800000A	INSTALL SPLICE CABINET	1 EA

C. EQUIPMENT TO SUPPLIED BY MONTGOMERY COUNTY

Montgomery County splice cabinet 1 EA

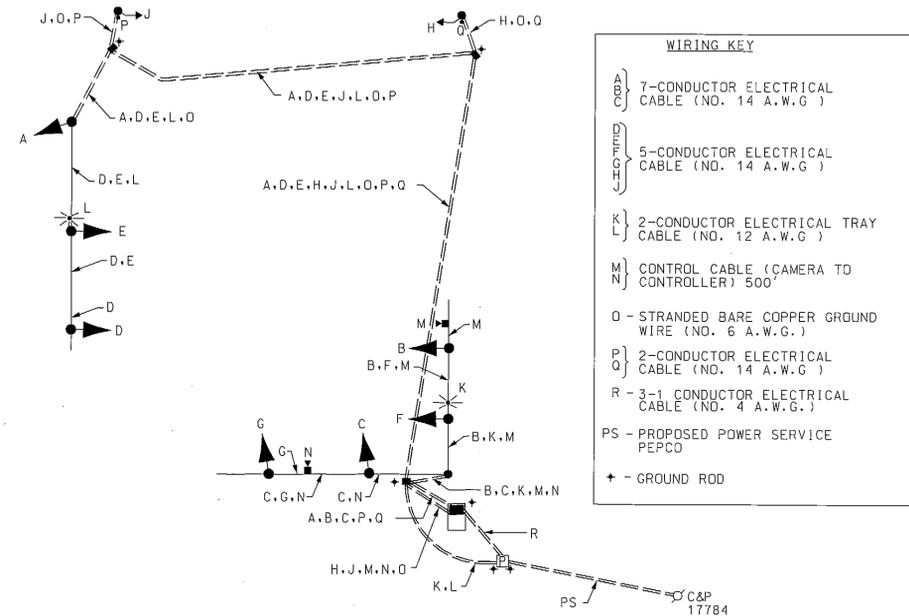
EQUIPMENT LIST

A. CAT NO.	EQUIPMENT TO BE FURNISHED BY S.H.A. DESCRIPTION	QUANTITY
900000	VIDEO INTERFACE EQUIPMENT	1 EA
971017	EIGHT PHASE (FULLY ACTUATED) CONTROLLER AND CABINET - BASE MOUNT	1 EA
973023	SHEET ALUMINIUM SIGNS	80 SF
	D-3(1) "Norwood Rd (17400 / Doctor Bird Rd (17400) sign, (dual faced) (variable x 32").	1 EA
	D-3(1) "Norwood Rd (17400/ Norwood Rd (17400) sign, (Dual Face) (variable x 16").	2 EA
	M95-1 - NORTH (arrow) MD 182 SOUTH (arrow) sign (78"x24")	1 EA
	"TEMPORARY SIGN "W3-3 NEW 36"x36"	2 EA
	"TEMPORARY SIGN "W3-3 NEW 30"x30"	1 EA
	Pedestrian education R10-3(1) sign (9"x15"). (Note: Sign to read "PUSHBUTTON TO CROSS NORWOOD ROAD".)	2 EA

PHASE CHART

	1	2	3	4	5	6	7	8	9
PHASE 2 & 5	R	R	←G-←G	←G-←G	G	R	R	DW	DW
2 & 5 CHANGE	R	R	←Y-←G	←Y-←G	G	R	R	DW	DW
PHASE 2 & 6	G	G	G	G	G	R	R	WK	WK
PED CLEAR / COUNTDOWN	G	G	G	G	G	R	R	FL/DW	FL/DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	R	R	DW	DW
PHASE 4	R	R	R	R	R	G	G	DW	DW
4 CHANGE	R	R	R	R	R	Y	Y	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	DARK	DARK

WIRING DIAGRAM



SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MD 182 (NORWOOD RD) / MD 182 (DOCTOR BIRD RD) AND NORWOOD RD
OLNEY, MARYLAND

GENERAL INFORMATION SHEET

SCALE: NONE DATE: 1/13/2010 CONTRACT NO. M05625176

DESIGNED BY: James Allen Jr. COUNTY: MONTGOMERY
DRAWN BY: James Allen Jr. LOGMILE: 15018205.90
CHECKED BY: _____ TMS NO.: 1567
F.A.P. NO.: _____ TOD NO.: _____

TS NO. 4706 DRAWING NO. 2 OF 5 SHEET NO. OF

STS
STREET TRAFFIC STUDIES, LTD.
400 Crain Hwy. NW
Gaithersburg, MD 20878
Ph (410) 590-5500
Fax (410) 590-6637

DRILL HOLES

BORDER REV. DATE: June 1, 2004