PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 355 (FREDERICK RD) AND ODENDHAL AVE IN MONTGOMERY COUNTY, MARYLAND. MD 355 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FIVE-PHASE, SEMI-TRAFFIC-ACTUATED MODE WITH MD 355 APPROACHES OPERATING CONCURRENTLY AND GAS STATION AND ODENDHAL AVE APPROACHES OPERATING AS SPLIT PHASE. THERE IS A LEADING EXCLUSIVE/PERMISSIVE LEFT TURN PHASE FOR THE SOUTHBOUND APPROACH OF MD 355.

ALTERNATE PEDESTRIAN PHASES ARE PROVIDED ACROSS BOTH LEGS OF MD 355 AND PEDESTRIAN INDICATIONS ARE PROVIDED ACROSS THE EAST LEG OF ODENDHAL AVE.

EQUIPMENT LIST FOR CONTRACT NO. XY2245185

A. EQUIPMENT TO BE FURNISHED BY THE STATE HIGHWAY ADMINISTRATION

ITEM	QUANTITY	UNIT	DESCRIPTION
9104	1	EA	CONTROLLER CABINET, SIZE "S" W/CTRL, VIDEO INT. 1-8 CAM.
9110	1	EA	UPS EQUIPMENT FOR "S" CABINET
9570	13	SF	[UPDATED] SHEET ALUMINUM GROUND MOUNTED SIGN
	1	EA	R4-7 (24"x 30")
	1	EA	R7-1(1) (12"x18")
	1	EA	R5-1 (30"x30")
9571	117	SF	[UPDATED] SHEET ALUMINUM MAST ARM/POLE MOUNTED SIGN
	6	EA	R10-3(1) (9"x15") POLE MOUNTED
	2	EA	D-3(1) (VAR.x16") MAST ARM MOUNTED (DUAL FACE)
	2	EA	M1-5(4) (78"x36") MAST ARM MOUNTED
	1	EA	D4-2(L) (30"x36") POLE MOUNTED
	1	EA	D4-2(R) (30"x36") POLE MOUNTED
	1	EA	R3-5(L) (30"x36") MAST ARM MOUNTED
	1	EA	R3-6(1) (30"x30") MAST ARM MOUNTED

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

ITEM	QUANTITY	UNIT	DESCRIPTION
1001	3	EA	MAINTENANCE OF TRAFFIC
2001	4	CY	CLASS 2 EXCAVATION
2002	5	CY	TEST PIT EXCAVATION
5003	600	LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS
5002	35	LF	5" HEAT APPLIED WHITE OR YELLOW PERMANENT PAVEMENT MARKINGS
5004	490	LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MAKING LINES
5005	145	LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MAKING LINES
6001	440	LF	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	2600	SF	5 INCH CONCRETE SIDEWALK
6003	84	SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
8001	40	EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8002	1	EA	2-WIRE CENTRAL CONTROL UNIT
8008	6	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS
8009	~~4~~ 5 [2]	EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8012	1	EA	EMBEDDED METERED SERVICE PEDESTAL
8016	6	EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
8019	~~2~~ 3 [2]	EA	MAST ARM POLE & 50' MAST ARM ANY 'T' DIMENSION
8020	~~2~~ 1	EA	MAST ARM POLE & 60' MAST ARM ANY 'T' DIMENSION
8024	1	EA	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
8028	3	EA	VIDEO DETECTION CAMERA AND CABLE ANY LENGTH
8030	150	LF	1-CONDUCTOR ELECTRICAL CABLE, NO. 2 AWG/THHN
8031	60	LF	12-PAIR COMMUNICATION CABLE, SELF-SUPPORTING, JELLY-FILLED/UNDERGROUND
8036	115	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED
8037	210	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED
8038	~~125~~ 135 [2]	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
8039	45	LF	WOOD SIGN SUPPORTS UP TO 4' X 6'
8040	130	SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8042	425	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8045	15	LF	ELECTRICAL CABLE-1 CONDUCTOR NO. 8 AWG-THHN/THWN
8046	5	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8051	1	EA	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8053	875	LF	ELECTRICAL CABLE-2 CONDUCTOR (NO. 14 AWG)
8055	1025	LF	ELECTRICAL CABLE-5 CONDUCTOR (NO. 14 AWG)
8056	1575	LF	ELECTRICAL CABLE-7 CONDUCTOR (NO. 14 AWG)
8063	1	EA	INSTALL CONTROLLER AND CABINET-BASE MOUNT

C. EQUIPMENT TO BE REMOVED.

MONTGOMERY COUNTY FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. ALL OTHER EXISTING SIGNAL EQUIPMENT REMOVED SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE SIGNAL.

CONTACTS

The contact persons for this project are as follows:

Ms. Felecia Murphy (Mont.)
Assistant District Engineer – Traffic
Phone: (301) 513-7404

Mr. Tom Fountain
Assistant District Engineer – Maintenance
Phone: (301) 513-7304

Mr. Victor Grafton
Utility Engineer
Phone: (301) 513-7350

Mr. Avijit Maji
Chief, Traffic Operations Division
Phone: (410) 787-7630

Mr. Ed Rodenhizer
Supervisor, Signal Operations
Phone: (410) 787-7650

Mr. Sonny Bailey
Supervisor, Sign Shop
Phone: (410) 787-7676

Mr. Mike Stocker
Supervisor, Signal Warehouse
Phone: (410) 787-7668

Mr. Robert Ricketts
Phone: (301) 279-1291

Mr. Kamal Hamud
Phone: (240) 777-8761

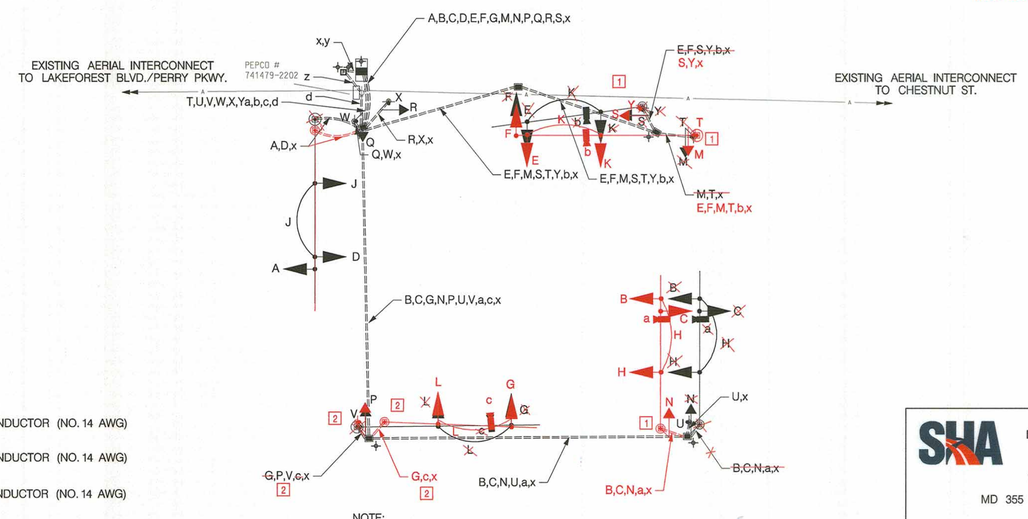
Power Company Representative – PEPCO (MONT)
Ms. Cheryl Hunt, Service Associate
PEPCO Engineering
201 West Gude Drive
Rockville, MD 20850-0850
Phone: (301) 548-4329

MD 355 IS ASSUMED TO RUN IN A NORTH/SOUTH DIRECTION

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
PHASE 2 AND 5	R	R	R	←G/G	←G/G	G	R	R	R	R	R	DW	DW	DW	DW	DW	DW
5 CHANGE	R	R	R	←Y/G	←Y/G	G	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 AND 6	G	G	G	G	G	G	R	R	R	R	R	DW	DW	DW	DW	WK	WK
PED CLEARANCE	G	G	G	G	G	G	R	R	R	R	R	DW	DW	DW	DW	FL/DW	FL/DW
2 AND 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3	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	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3 ALT.	R	R	R	R	R	R	←G/G	G	R	R	R	DW	DW	WK	WK	DW	DW
PED CLEARANCE	R	R	R	R	R	R	←G/G	G	R	R	R	DW	DW	FL/DW	FL/DW	DW	DW
3 ALT. CHANGE	R	R	R	R	R	R	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4	R	R	R	R	R	R	R	R	←G/G	←G/G	G	DW	DW	DW	DW	DW	DW
4 CHANGE	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	←G/G	←G/G	G	WK	WK	DW	DW	DW	DW
PED CLEARANCE	R	R	R	R	R	R	R	R	←G/G	←G/G	G	FL/DW	FL/DW	DW	DW	DW	DW
4 ALT. CHANGE	R	R	R	R	R	R	R	R	Y	Y	Y	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	FL/R	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



NOTE:

THE CONTRACTOR WILL "WORK WITH" PEPCO ON THE INSTALLATION OF THE 3 WIRES, 1 CONDUCTOR ELECTRICAL CABLE (NO. 2 AWG/THHN). IT HAS BEEN ASSUMED THAT DURING THE "WORK WITH" ADDITIONAL CABLE WILL BE COILED AND ATTACHED (TO THE WOOD POLE) TO PEPCO STANDARDS.

WIRING KEY

A,B,C,D E,F,G	ELECTRICAL CABLE – 7 CONDUCTOR (NO. 14 AWG)
H,J,K,L,M N,P,Q,R,S	ELECTRICAL CABLE – 5 CONDUCTOR (NO. 14 AWG)
T,U,V W,X,Y	ELECTRICAL CABLE – 2 CONDUCTOR (NO. 14 AWG)
a,b,c	VIDEO CAMERA CABLE
d	12-PAIR COMMUNICATION, JELLY-FILLED
x	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
y	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN (3-1 CONDUCTOR)
z	1-CONDUCTOR ELECTRICAL CABLE, NO. 2 AWG/THHN (3-1 CONDUCTOR)
+	GROUND ROD

[2] RED LINE REVISION NO. 2 01/02/2013

TEDD APPROVAL 1/7/13

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

MD 355 (FREDERICK ROAD) AT ODENDHAL AVENUE

GAITHERSBURG, MD

GENERAL INFORMATION PLAN SHEET

SCALE NONE ADVERTISED DATE 09/2012 CONTRACT NO. XY2245185

DESIGNED BY DM COUNTY MONTGOMERY
DRAWN BY DM LOGMILE 15035515.03
CHECKED BY RM TIMS NO. L022
F.A.P. NO. TOD NO.

TS NO. 486C DRAWING GN-1 OF 1 SHEET NO. 3 OF 3

BRUDIS & ASSOCIATES, INC.
Consulting Engineers
5240 Rumsey Road; Suite C
Columbia, Maryland 21045
Phone 410-884-3607
www.brudis.com

PLOTTED: Thursday, January 03, 2013 AT 08:56 AM
FILE: P:\09-006 TEDD\Task 71 MD 355 @ Odenhal Rd\Drawings\CADD\Working\pGG-P003_M355@Odendhal.dgn

BY: fanyong –