PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF ACCESSIBLE PEDESTRIAN SIGNALS AND COUNTDOWN PEDESTRIAN SIGNALS AT THE INTERSECTION OF MD 117 (CLOPPER ROAD) AND W. WATKINS MILL ROAD / PHEASANT RUN DRIVE IN MONTGOMERY COUNTY. MD 117 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA FOUR-PHASE, FULL TRAFFIC-ACTUATED MODE. THE MAINLINE PEDESTRIAN AND SB SIDE STREET ALTERNATIVE PEDESTRIAN PHASES WILL REMAIN. THE EXISTING NB SIDE STREET ALTERNATIVE PEDESTRIAN PHASE WILL BE REMOVED.

CONTROLLER REQUIREMENTS

THE EXISTING BASE MOUNTED CABINET, CONTROLLER AND ASSOCIATED HARNESSES SHALL REMAIN. THE MONTGOMERY COUNTY SIGNAL SHOP WILL INSTALL ONE (1) 2 WIRE CENTRAL CONTROL UNIT AND ONE (1) VIDEO DETECTION INTERFACE EQUIPMENT: 5-8 CAMERAS WITHIN THE CABINET.

APS WILL FUNCTION AS FOLLOWS:

TO CROSS CLOPPER RD:

A. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS CLOPPER AT WATKINS MILL AND PHEASANT RUN, WAIT".

B. WHEN THE "WALK" PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE "WALK" PHASE.

TO CROSS PHEASANT RUN DR:

A. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS PHEASANT RUN AT CLOPPER, WAIT".

B. WHEN THE "WALK" PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE "WALK" PHASE.

TO CROSS WATKINS MILL RD:

A. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS WATKINS MILL AT CLOPPER, WAIT".

B. WHEN THE "WALK" PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE "WALK" PHASE.

SPECIAL NOTES

1. MONTGOMERY COUNTY SIGNAL SHOP SHALL INSTALL APS CONTROL UNIT INTO CONTROLLER CABINET. THE APS PUSH BUTTONS SHALL BE PROGRAMMED BY THE MANUFACTURER.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES TO THE APPROPRIATE TERMINALS AND SHALL PROPERLY LABEL EACH CABLE.
3. ALL CONTROLLER CABINET WIRING WILL BE PERFORMED BY MONTGOMERY COUNTY FORCES. CONTACT MR. KAMAL HAMUD AT (240) 777-8761 72 HOURS IN ADVANCE OF INTENDED WORK.

THE CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS:

Mr. Cedric Ward
Assistant District Engineer - Traffic
Phone: 301-513-7498

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

Mr. Vernon Stinnett
Assistant District Engineer - Maintenance
Phone: 301-513-7304

OFFICE OF TRAFFIC AND SAFETY:

Mr. Richard L. Daff Sr.
Chief, Traffic Operations Division
Phone: 410-787-7630

Mr. Robert Snyder
Assistant Division Chief, Traffic Operations
410-787-7630

Mr. Edward Rodenhizer
Chief Signal Operations
Phone: 410-787-7650

Mr. Eugene Bailey
Chief Sign Operations
410-787-7670

MONTGOMERY COUNTY:

Mr. Kamal Hamud
Traffic Engineering
240-777-8761

Mr. Bob Ricketts
Signal Shop
301-279-1975

The Power Company is:
Pepco
8300 Old Marlboro Pike
Upper Marlboro, MD 20442
Phone: 301-961-5325

EQUIPMENT LIST 'A'

EQUIPMENT TO BE FURNISHED BY THE SHA.

ITEM NO	QUANTITY	DESCRIPTION
9046	1 EA	[UPDATED] DETECTOR RACK RETROFIT
9087	1 EA	[UPDATED] VIDEO DETECTION INTERFACE EQUIPMENT: 5-8 CAMERAS
9571	110 SF	[UPDATED] SHEET ALUMINUM MAST ARM/POLE MOUNTED SIGN: 2 EA - R10-3(1) (9 IN. X 15 IN.) "PUSH BUTTON TO CROSS CLOPPER ROAD" 2 EA - R10-3(1) (9 IN. X 15 IN.) "PUSH BUTTON TO CROSS PHEASANT RUN DR" 2 EA - R10-3(1) (9 IN. X 15 IN.) "PUSH BUTTON TO CROSS W. WATKINS MILL RD" 2 EA - D-3(1) (96 IN. X 16 IN.) "CLOPPER RD", DUAL FACED 1 EA - M1-5(6) (30 IN. x 48 IN.) "EAST, MD 117, RIGHT ARROW" 1 EA - M1-5(6) (48 IN. x 72 IN.) "WEST, MD 117, LEFT ARROW" 1 EA - M1-5(6) (30 IN. x 48 IN.) "WEST, MD 117, RIGHT ARROW" 1 EA - M1-5(6) (48 IN. x 72 IN.) "EAST, MD 117, LEFT ARROW" 1 EA - R3-5(L) (30 IN. x 36 IN.) 1 EA - R3-5(R) (30 IN. x 36 IN.)

EQUIPMENT LIST 'C'

EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.

ITEM NO	QUANTITY	DESCRIPTION

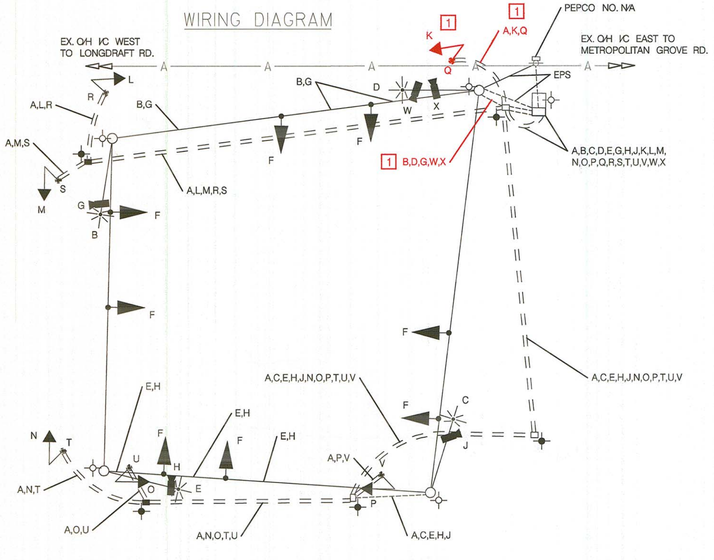
NONE - ALL REMOVED EQUIPMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR

EQUIPMENT LIST 'B'

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

	ITEM NO	QUANTITY	DESCRIPTION
	1003	3 EA	MAINTENANCE OF TRAFFIC
	2001	2 CY	CLASS 2 EXCAVATION
	2002	4 CY	TEST PIT EXCAVATION
	5003	665 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS
	5004	430 LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
	5005	170 LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
1	6001	400 LF ~~275 LF~~	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
1	6002	1,750 SF ~~1,515 SF~~	5 INCH CONCRETE SIDEWALK
	6003	80 SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
	7000	10 SY	TURFGRASS ESTABLISHMENT
	8001	24 EA	12 INCH LED SIGNAL HEAD SECTION
	8002	1 EA	2-WIRE CENTRAL CONTROL UNIT
	8007	4 EA	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP AND LUMINAIRE
	8008	6 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
	8009	6 EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
	8016	6 EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
	8024	1 EA	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
	8028	5 EA	VIDEO DETECTION CAMERA AND CABLE ANY LENGTH
	8034	325 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED
	8036	200 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
	8038	110 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
	8040	550 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
	8044	2 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
	8051	1,135 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
	8053	1,225 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
	8055	880 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG), TC

WIRING DIAGRAM



A — NO. 6 AWG STRANDED BARE COPPER GROUND WIRE

B C D E — ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG), TC

F — USE EXISTING CABLE

K L M N O P — ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)

Q R S T U V — ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)

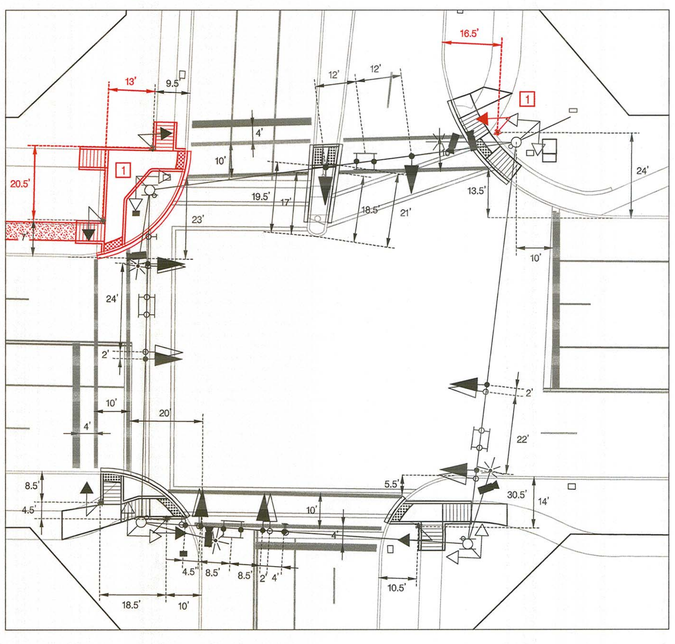
G H J W X — CONTROL CABLE - VIDEO DETECTION CAMERA TO CONTROLLER

EPS — EXISTING POWER SERVICE

EXISTING GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH

PROPOSED GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH

PROPOSED SIGNAL EQUIPMENT AND PAVEMENT MARKING LAYOUT NOT TO SCALE



PHASE CHART	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	WALK	WALK	WALK	WALK	DON'T WALK	DON'T WALK	
PHASE 2 AND 6	G	G	G	G	R	R	R	R	W/K	W/K	W/K	W/K	DW	DW	
PED CLEARANCE	G	G	G	G	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	
2 AND 6 CHANGE	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW	
PHASE 4 AND 8	R	R	R	R	G	G	G	G	DW	DW	DW	DW	DW	DW	
4 AND 8 CHANGE	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	
PHASE 4 ALT AND 8	R	R	R	R	G	G	G	G	DW	DW	DW	DW	W/K	W/K	
PED CLEARANCE	R	R	R	R	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	
4 ALT AND 8 CHANGE	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	

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Baltimore, MD 21244
www.stvinc.com

BY: guiliamc -

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

MD 117 (CLOPPER ROAD) AT
W. WATKINS MILL ROAD /PHEASANT RUN DRIVE
GAITHERSBURG, MARYLAND

GENERAL INFORMATION

SCALE NONE ADVERTISED DATE 5/20111 CONTRACT NO. XX3545168R

DESIGNED BY MCG
DRAWN BY MCG
CHECKED BY MTS
F.A.P. NO.

COUNTY MONTGOMERY
LOGMILE 15011710.50
TIMS NO. K366
TOD NO.

1 REDLINE REVISION NO. 1 AUGUST 2011
TEDD APPROVAL 8/31/2011 SHA NO. XX3545168R

TS NO. 2457-A-GI | DRAWING SG-02 OF 02 | SHEET NO. 02 OF 02

PLOTTED: Wednesday, August 24, 2011 AT 05:03 PM
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