

PROJECT DESCRIPTION

GENERAL
 THIS PROJECT INVOLVES THE INSTALLATION OF ACCESSIBLE PEDESTRIAN SIGNALS AND COUNTDOWN PEDESTRIAN SIGNALS AT THE INTERSECTION OF MD 191 (BRADLEY BOULEVARD) AND SEVEN LOCKS ROAD IN MONTGOMERY COUNTY. MD 191 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION
 THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA SIX-PHASE, FULL TRAFFIC-ACTUATED MODE. THE MAINLINE PEDESTRIAN AND SB E/P LEFT TURN PHASES WILL REMAIN. THE EXISTING EB E/P LEFT TURN AND WB ALTERNATIVE PEDESTRIAN PHASES WILL REMAIN. AN EB ALTERNATIVE PEDESTRIAN PHASE IS PROPOSED.

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 WITHIN THE CABINET.

APS WILL FUNCTION AS FOLLOWS:

- TO CROSS SEVEN LOCKS ROAD:
- A. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS SEVEN LOCKS AT BRADLEY, 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 BRADLEY BLVD:
- A. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS BRADLEY AT SEVEN LOCKS, 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
 301-279-1291

Pepeco Contact:
 Ms. Cheryl Hunt
 Distribution Representative
 201 W. Gude Drive
 Rockville, MD 20850
 Phone: 301-548-4329

EQUIPMENT LIST 'A'

EQUIPMENT TO BE FURNISHED BY THE SHA.

ITEM NO	QUANTITY	DESCRIPTION
9570	127 SF	[UPDATED] SHEET ALUMINIUM GROUND MOUNTED SIGN:
		3 EA - M3-4 (24 IN. x 12 IN.)
		3 EA - M3-2 (24 IN. x 12 IN.)
		7 EA - M5-1 (30 IN. x 24 IN.) "MD 191"
		2 EA - M6-1(L) (21 IN. x 15 IN.)
		2 EA - M6-1(R) (21 IN. x 15 IN.)
		6 EA - S1-1 (36 IN. x 36 IN.)
		3 EA - W16-7p(L) F.Y.G. (24 IN. x 12 IN.)
		3 EA - W16-7p(R) F.Y.G. (24 IN. x 12 IN.)
		2 EA - M2-1 (21 IN. x 15 IN.)
9571	30 SF	[UPDATED] SHEET ALUMINIUM MAST ARM/POLE MOUNTED SIGN:
		4 EA - R10-3(I) (9 IN. x 15 IN.)
		"PUSH BUTTON TO CROSS SEVEN LOCKS ROAD"
		4 EA - R10-3(O) (9 IN. x 15 IN.)
		"PUSH BUTTON TO CROSS BRADLEY BLVD"
		2 EA - S1-1 (36 IN. x 36 IN.)
		1 EA - W16-7p(L) F.Y.G. (24 IN. x 12 IN.)
		1 EA - W16-7p(R) F.Y.G. (24 IN. x 12 IN.)

EQUIPMENT LIST 'B'

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

ITEM NO	QUANTITY	DESCRIPTION
1001	2 EA	MAINTENANCE OF TRAFFIC
2002	5 CY	TEST PIT EXCAVATION
5003	600 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS
5004	835 LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
5005	120 LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
6001	200 LF	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	1,200 SF	5 INCH CONCRETE SIDEWALK
6003	80 SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
8002	1 EA	2-WIRE CENTRAL CONTROL UNIT
8008	8 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
8009	8 EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8011	1 EA	CONDUIT BEND IN EXISTING FOUNDATION BASE (ANY SIZE)
8015	8 EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
8023	1 EA	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
8029	5 LF	1 INCH DETECTOR SLEEVE GALVANIZED OR FLEXIBLE LIQUID TIGHT CONDUIT
8037	265 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED
8039	250 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
8040	155 LF	WOOD SIGN SUPPORTS UP TO 4' X 6'
8041	157 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8043	515 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8047	4 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8054	1,400 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8056	1,450 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8058	450 LF	LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
8059	135 LF	SAW CUT FOR SIGNAL (LOOP DETECTOR)

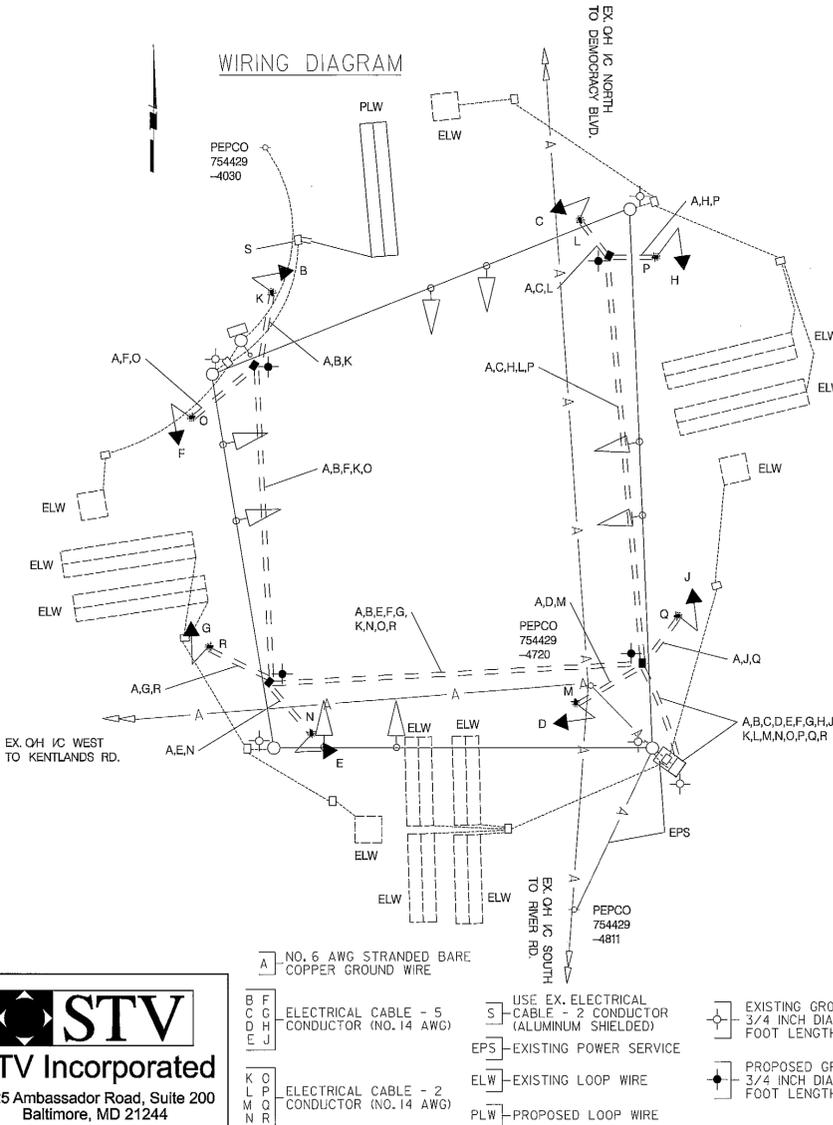
EQUIPMENT LIST 'C'

EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.

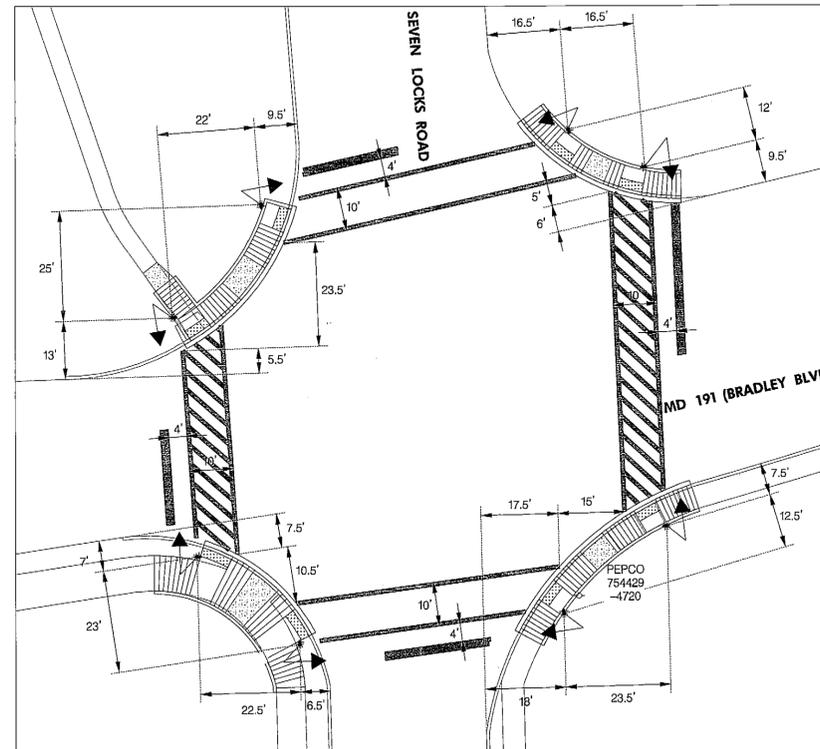
ITEM NO	QUANTITY	DESCRIPTION
NONE		ALL REMOVED EQUIPMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR

TOD NO: XX655-03
 SHA NO: M0972B53
 MD 191 @ Seven Locks Road

WIRING DIAGRAM



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	15	16
PHASE 1 AND 6	R	R	R	R	R	R	+GG	G	DW	DW	DW	DW	WK	WK	DW	DW
PHASE 1 CHANGE	R	R	R	R	R	R	+YG	G	DW	DW	DW	DW	WK	WK	DW	DW
PHASE 2 AND 6	R	R	R	R	G	G	G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEARANCE	R	R	R	R	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
PHASE 2 AND 6 CHANGE	R	R	R	R	Y	Y	Y	Y	DW							
PHASE 3 AND 8	+GG	G	R	R	R	R	R	R	DW							
PHASE 3 CHANGE	+YG	G	R	R	R	R	R	R	DW							
PHASE 4 AND 8	G	G	G	G	R	R	R	R	DW							
PHASE 4 AND 8 CHANGE	Y	Y	Y	Y	R	R	R	R	DW							
PHASE 4 AND 8 ALT	G	G	G	G	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEARANCE	G	G	G	G	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
PHASE 4 AND 8 ALT CHANGE	Y	Y	Y	Y	R	R	R	R	DW							
FLASHING OPERATION	FL/R	FL/R	FL/R	FL/R	FL/Y	FL/Y	FL/Y	FL/Y	DARK							

SHA STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 OFFICE OF TRAFFIC & SAFETY
 TRAFFIC ENGINEERING DESIGN DIVISION
 MD 191 (BRADLEY BOULEVARD)
 AT SEVEN LOCKS ROAD
 POTOMAC, MARYLAND

GENERAL INFORMATION

SCALE NONE ADVERTISED DATE 8/2011 CONTRACT NO. XX655185

DESIGNED BY MCG COUNTY MONTGOMERY
 DRAWN BY MCG LOGMILE 15019101.35
 CHECKED BY MTS TMS NO. K522
 F.A.P. NO. TOD NO.

TS NO. 1788B-GI DRAWING 5G-02 OF 02 SHEET NO. 02 OF 02

STV
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