PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE INSTALLATION OF COUNTDOWN PEDESTRIAN SIGNAL HEADS AND APS PUSHBUTTONS AND SIGNS AT THE INTERSECTION OF MD 140 (REISTERSTOWN RD) AT HOOKS LN.
MD 140 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA SIX-PHASE FULL-TRAFFIC-ACTUATED MODE WITH AN ALTERNATE PEDESTRIAN PHASE FOR THE SOUTH LEG OF THE INTERSECTION. THE MD 140 NORTHBOUND AND SOUTHBOUND LEFT TURNS OPERATE IN EXCLUSIVE PHASING. A RIGHT TURN OVERLAP IS PROVIDED FOR THE WESTBOUND HOOKS LN APPROACH.

CONTROLLER REQUIREMENTS

THE EXISTING FULL-TRAFFIC-ACTUATED EIGHT-PHASE TRAFFIC SIGNAL CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL REMAIN. THE EXISTING IP-BASED VIDEO DETECTION INTERFACE EQUIPMENT SHALL REMAIN. A 2-WIRE APS CENTRAL CONTROL UNIT SHALL BE FURNISHED BY THE CONTRACTOR AND INSTALLED BY SHA.

SPECIAL NOTES

APS WILL FUNCTION AS FOLLOWS:

TO CROSS MD 140 (REISTERSTOWN RD):

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS REISTERSTOWN AT HOOKS AND WOODHOLME. WAIT."

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

EQUIPMENT LIST "A, B & C"

A. EQUIPMENT TO BE SUPPLIED BY SHA.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
900000	SHEET ALUMINUM GROUND MOUNTED SIGN 1 - OM1-3 FY 18"X18 1 - R4-7(1) 18"X30"	SF	6
900000	SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN 2 - R10-3(1) 9"X15"	SF	2

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

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
100000	MAINTENANCE OF TRAFFIC (PER INTERSECTION)	EA	1
585621	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	180
585625	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	25
585700	REMOVAL OF EXISTING PAVEMENT MARKING LINES, ANY WIDTH	LF	320
600000	TYPE A COMBINATION CURB AND GUTTER ANY HEIGHT OR DEPTH	LF	171
600000	TYPE A CURB ANY HEIGHT OR DEPTH	LF	44
600000	DETECTABLE WARNING SURFACE FOR CURB RAMPS (TYPE 3 BRICK PAVERS)	SF	49
655105	5 INCH CONCRETE SIDEWALK	SF	868
800000	2-WIRE APS CENTRAL CONTROL UNIT	EA	1
800000	ADJUST HANDHOLE TO GRADE AND REPLACE FRAME AND COVER	EA	1
800000	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS	EA	2
800000	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD	EA	1
800000	5 FOOT OR 10 FOOT PEDESTAL POLE WITH BREAKAWAY COUPLINGS, FOUNDATION & GROUND ROD	EA	2
800000	REMOVE & DISPOSE OF EXISTING SIGNAL EQUIPMENT (PER SIGNALIZED INTERSECTION LOCATION)	EA	1
800000	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	35
800000	WOOD SIGN SUPPORTS UP TO 4 INCH X 6 INCH	LF	40
800000	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)	SF	8
800000	THIRD PARTY CONCRETE TESTING (PER INTERSECTION)	EA	1
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	40
813023	RELOCATE EXISTING GROUND MOUNTED SIGNS	SF	40
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	210
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	40

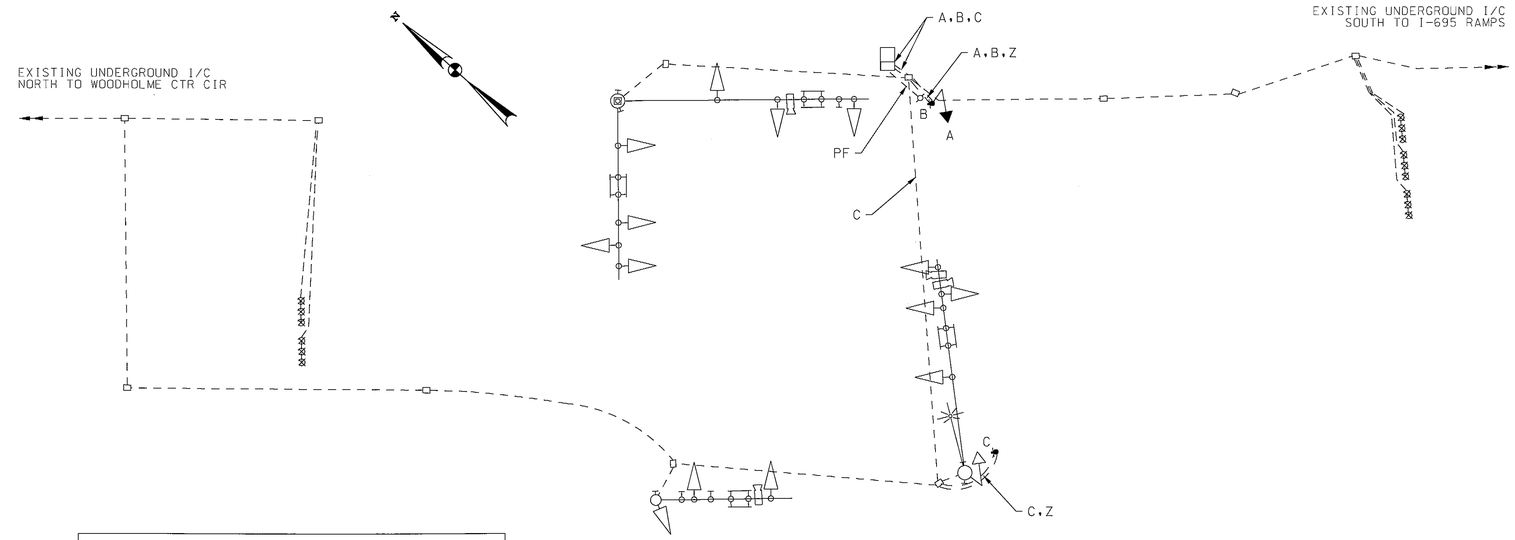
C. ALL MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

PHASING CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE 1 AND 5	G	G	R	R	G	G	R	R	R	R	R	R G	R	R G	DW	DW
1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6																
PHASE 1 AND 6	G	G	G	G	R	R	R	R	R	R	R	R	R	R	DW	DW
1 AND 6 CHANGE	Y	Y	G	G	R	R	R	R	R	R	R	R	R	R	DW	DW
PHASE 2 AND 5	R	R	R	R	G	G	G	G	R	R	R	R G	R	R G	DW	DW
2 AND 5 CHANGE	R	R	R	R	Y	Y	G	G	R	R	R	R Y	R	R Y	DW	DW
PHASE 2 AND 6	R	R	G	G	R	R	G	G	R	R	R	R	R	R	DW	DW
2 AND 6 CHANGE	R	R	Y	Y	R	R	Y	Y	R	R	R	R	R	R	DW	DW
PHASE 4 AND 8	R	R	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW
4 AND 8 CHANGE	R	R	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW
PHASE 4 AND 8 ALT	R	R	R	R	R	R	R	R	G	G	G	G	G	G	WK	WK
PED CLEARANCE	R	R	R	R	R	R	R	R	G	G	G	G	G	G	FL/DW	FL/DW
4 AND 8 ALT CHANGE	R	R	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE LOCATIONS PRIOR TO INSTALLATION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABELING EACH CABLE.
3. ALL UNUSED CABLE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
4. UNDERGROUND 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.
5. ALL PEDESTAL FOUNDATION TOPS SHALL BE INSTALLED FLUSH WITH SIDEWALK GRADE.
6. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MDMUTCD CHAPTER 4E "PEDESTRIAN CONTROL FEATURES" AND FIGURES 4E-3 AND 4E-4, AND THE LATEST NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS GUIDE TO BEST PRACTICE." IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
7. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" X 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
8. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER OF POLE TO CENTER OF POLE.
9. PUSHBUTTON ARROWS AND SIGNS ARE TO BE ORIENTED PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
10. VIDEO DETECTION CAMERA ALIGNMENT SHALL BE COORDINATED WITH THE ENGINEER.
11. THE CONTRACTOR SHALL CAP AND ABANDON CONDUITS FEEDING EXISTING SIGNAL EQUIPMENT THAT IS REMOVED.
12. THE CONTRACTOR SHALL CONTACT ED RODENHIZER AT THE SIGNAL SHOP (410-787-7652) TO DELIVER APS EQUIPMENT FOR TESTING.



WIRING KEY

A	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
B,C	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
Z	STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
PF	EXISTING UNDERGROUND POWER FEED
⏚	EXISTING GROUND ROD

CONTACT PERSONS FOR DISTRICT #4 ARE AS FOLLOWS:

MS. ERIN KUHN
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: 410-229-2381

MR. ANDRE FUTRELL
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
410-229-2361

MR. JESSE FREE
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
410-229-2421

CONTACT PERSONS FOR OOTS ARE AS FOLLOWS:

MS. CORREN JOHNSON
DIVISION CHIEF,
TRAFFIC OPERATIONS
PHONE: 410-787-7630

MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF
TRAFFIC OPERATIONS
410-787-7631

MR. ED RODENHIZER
CHIEF, SIGNAL OPERATIONS
410-787-7650

MR. EUGENE BAILEY
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410-787-7676

BY: WFW

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

MD 140 (REISTERSTOWN ROAD) AT HOOKS LANE / WOODHOLME AVENUE
PIKESVILLE, MARYLAND

REVISIONS

GENERAL INFORMATION SHEET

SCALE NONE DATE MARCH 2013 CONTRACT NO. XY1515185

DESIGNED BY WFW COUNTY BALTIMORE
DRAWN BY WFW LOGMILE 03014002.14
CHECKED BY BJG TIMS NO. L825
FAP NO. TOD NO.

TS NO. 1813D-GI DRAWING SP-2 OF 4 SHEET NO. 2 OF 3

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