

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF APS (ACCESSIBLE PEDESTRIAN SIGNALS)/CPS (COUNTDOWN PEDESTRIAN SIGNALS), ADA COMPLIANT SIDEWALK RAMPS AND SIGNAL UPGRADES AT THE INTERSECTION OF MD 924 (MAIN STREET) AND U.S. 1 BUSINESS (BROADWAY) IN HARFORD COUNTY, MARYLAND. MD 924 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION OPERATION WILL REMAIN THE SAME. AN ALTERNATE PEDESTRIAN PHASE WILL BE PROVIDED ACROSS THE NORTH LEG OF MD 924. PEDESTRIAN INDICATIONS WILL BE PROVIDED ACROSS THE EAST LEG OF U.S. 1.

TYPICAL MESSAGES FOR ACCESSIBLE PED SIGNALS

MD 924 (MAIN STREET) AND U.S. 1 (BROADWAY) - NORTH LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS MAIN AT BROADWAY, WAIT." *
WALK: RAPID TICK

U.S. 1 (BROADWAY) AND MD 924 (MAIN STREET) - EAST LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS BROADWAY AT MAIN, WAIT." *
WALK: RAPID TICK

* MESSAGE USED IF DISTANCE FROM NEAREST PUSHBUTTON FOR PERPENDICULAR CROSSING IS < 10'
** MESSAGE USED IF CROSSWALK DIVERGES FROM OR CONVERGES WITH PARALLEL TRAFFIC

NOTE: MESSAGES FOR INTERSECTION CONFIGURATIONS, VARYING FROM THE ABOVE ARE TO BE APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH VIDEO INTERFACE EQUIPMENT (1-8 CAMERAS), INTERSECTION MONITOR WITH BATTERY BACKUP FOR PHONE DROP AND ASSOCIATED HARNESSES HOUSED IN A NEMA SIZE "S" BASE MOUNTED CABINET.

MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT. ADDITIONAL TRAFFIC CONTROL STANDARDS MAY BE USED AS DIRECTED BY THE ENGINEER.

STANDARD NO. MD-104.02-13 (INTERSECTION FLAGGING OPERATION)

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

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

MR. MIKE PASQUARIELLO
DISTRICT UTILITY ENGINEER
PHONE: (410) 229-2341

MR. ANDRE FUTRELL
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (410) 229-2361

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

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9104	1 EACH	CONTROLLER CABINET, SIZE "S" WITH CONTROLLER, VIDEO INTERFACE EQUIPMENT (1-8 CAMERAS).
9571	41 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF (POLE MOUNT) : - 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS BROADWAY" - 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS MAIN STREET" - 1 EACH M1-5(3) MOD. SIGN (78 IN. x 24 IN.) - MAST ARM MOUNT - 1 EACH M1-5(6) MOD. SIGN (48 IN. x 72 IN.) - POLE MOUNT

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

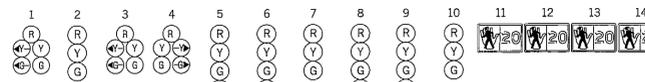
1. AT THE TIME OF SIGNAL TURN ON, THE EXISTING VIDEO DETECTION CAMERAS AND INTERFACE EQUIPMENT SHALL BECOME PROPERTY OF SHA.
2. ALL REMOVED SIGNAL MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR

EQUIPMENT LIST "B"

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EACH	MAINTENANCE OF TRAFFIC
2001	1 C.Y.	CLASS 2 EXCAVATION
2002	6 C.Y.	TEST PIT EXCAVATION
5002	100 L.F.	5 INCH HEAT APPLIED WHT OR YEL PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING
5003	260 L.F.	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
5004	230 L.F.	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
6001	210 L.F.	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	925 S.F.	5 INCH CONCRETE SIDEWALK
6003	45 S.F.	DETECTABLE WARNING SURFACES
8001	22 EACH	12 INCH LED SIGNAL HEAD SECTION
8002	1 EACH	2 WIRE CENTRAL CONTROL UNIT
8008	4 EACH	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS
8009	4 EACH	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8011	1 EACH	CONDUIT BEND IN EXISTING FOUNDATION - ANY SIZE
8012	1 EACH	EMBEDDED METERED SERVICE PEDESTAL
8014	1 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT (ANY SIZE)
8016	4 EACH	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEADS
8024	1 EACH	REM & DISPOSE MAT & EQUIP PER ASSIGN
8029	5 EACH	VIDEO DETECTION CAMERA & CABLE UP TO 500 FT
8039	130 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - SLOTTED
8040	150 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED
8041	14 L.F.	WOOD SIGN SUPPORTS UP TO 4 X 6
8042	65 S.F.	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8044	65 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8047	85 L.F.	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
8048	3 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8055	560 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8057	610 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8058	1425 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)

PHASE CHART



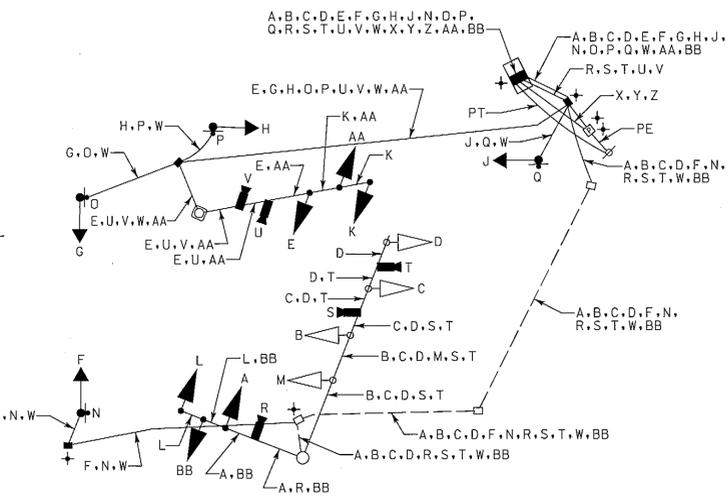
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PHASE 1 + 5	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
1 + 5 CHANGE	G	G	G	G	G	G	G	G	G	G	DW	DW	DW	DW
PHASE 1 + 6	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
1 + 6 CHANGE	G	G	G	G	G	G	G	G	G	G	DW	DW	DW	DW
PHASE 2 + 5	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
2 + 5 CHANGE	G	G	G	G	G	G	G	G	G	G	DW	DW	DW	DW
PHASE 2 + 6	R	R	R	R	R	R	R	R	R	R	W	W	DW	DW
2 + 6 CHANGE	G	G	G	G	G	G	G	G	G	G	DW	DW	DW	DW
PHASE 3	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
3 CHANGE	G	G	G	G	G	G	G	G	G	G	DW	DW	DW	DW
PHASE 3 ALT	R	R	R	R	R	R	R	R	R	R	DW	DW	W	W
3 ALT CHANGE	G	G	G	G	G	G	G	G	G	G	DW	DW	DW	DW
PHASE 4	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
4 CHANGE	G	G	G	G	G	G	G	G	G	G	DW	DW	DW	DW
FLASHING OPERATION	FLY	FLY	FLY	FLY	FLR	FLR	FLR	FLR	FLR	FLR	DARK	DARK	DARK	DARK

TOD NO: XY125-25
SHA NO: HA400B58
MD 924 @ Bus. US 1

WIRING DIAGRAM

WIRING KEY

- A, B, C, D, E, F, G, H, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z
- 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- EXISTING 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- VIDEO CAMERA DETECTION LEAD-IN CABLE
- STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- 1-CONDUCTOR ELECTRICAL CABLE (NO. 8 A.W.G.)
- PT - PROPOSED UNDERGROUND TELEPHONE SERVICE
- PE - PROPOSED UNDERGROUND ELECTRICAL SERVICE
- + - 3/4 IN. X 10 FT. GROUND ROD



SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 924 (Main Street) and US 1 Business (Broadway)
Bel Air, MD

GENERAL INFORMATION SHEET

SCALE: NONE	ADVERTISED DATE: 4/11/2013	CONTRACT NO.: XY125185
DESIGNED BY: S. Bloss	COUNTY: Harford	
DRAWN BY: S. Bloss	LOGMILE: 12092406.02	
CHECKED BY: N. Leary	TIMS NO.: L277	
F.A.P. NO.:	TOD NO.:	
TS NO. 1481C	DRAWING TSP-3 OF 3	SHEET NO. 3 OF 3

WR&A
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