PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF APS (ACCESSIBLE PEDESTRIAN SIGNALS)/CPS (COUNTDOWN PEDESTRIAN SIGNALS) AND INSTALLATION OF ADA COMPLIANT CURB RAMPS AT THE INTERSECTION OF MD 924 (EMMORTON ROAD) AND BEL AIR SOUTH PARKWAY/LAUREL BUSH ROAD IN HARFORD COUNTY, MARYLAND.

MD 924 IS ASSUMED TO RUN IN A NORTH/SOUTH DIRECTION.

INTERSECTION OPERATION

THE EXISTING INTERSECTION OPERATION WILL REMAIN THE SAME.

TYPICAL MESSAGES FOR ACCESSIBLE PED SIGNALS

MD 924 (EMMORTON ROAD) AND BEL AIR SOUTH PARKWAY/LAUREL BUSH ROAD - NORTH LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS EMMORTON ROAD, WAIT" *

WALK: RAPID TICK

MD 924 (EMMORTON ROAD) AND BEL AIR SOUTH PARKWAY/LAUREL BUSH ROAD - SOUTH LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS EMMORTON ROAD, WAIT" *

WALK: RAPID TICK

BEL AIR SOUTH PARKWAY AND MD 924 (EMMORTON ROAD) - WEST LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO BEL AIR SOUTH PARKWAY AT EMMORTON ROAD, WAIT" *

WALK: RAPID TICK

LAUREL BUSH ROAD AND MD 924 (EMMORTON ROAD) - EAST LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO LAUREL BUSH ROAD AT EMMORTON ROAD, 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

THE EXISTING BASE MOUNTED CABINET AND CONTROLLER WILL BE USED. THE CONTROLLER WILL BE RETROFITTED TO OPERATE APS EQUIPMENT.

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9571	8 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF :
		- 4 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS EMMORTON ROAD"
		- 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS LAUREL BUSH RD"
		- 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS BEL AIR S PKWY"

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

ALL REMOVED SIGNAL MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR

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-104.02-02 (SHOULDER WORK)

STANDARD NO. MD-104.04-06 (RIGHT LANE CLOSURE)

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

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

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

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

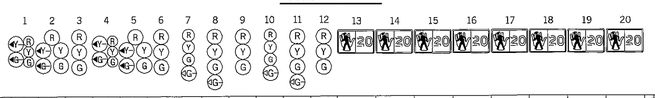
MR. ROBERT SNYDER
ASSISTANT CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7631

EQUIPMENT LIST "B"

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

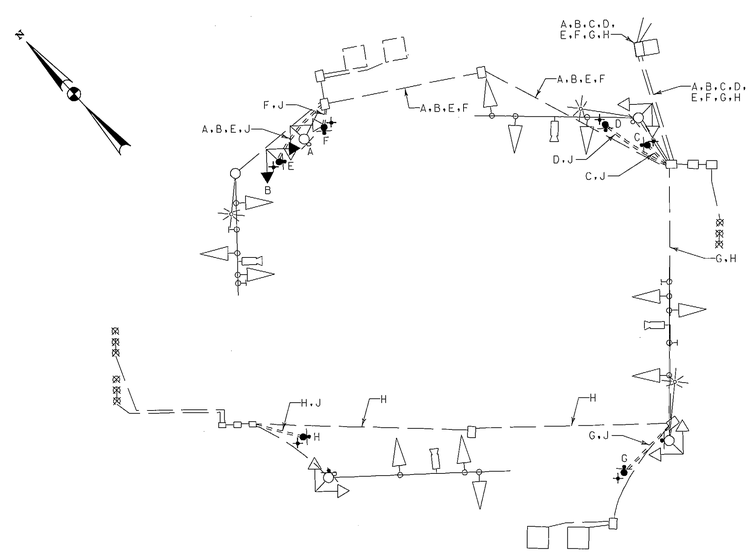
ITEM NO.	QUANTITY	DESCRIPTION
2001	6 CY	CLASS 2 EXCAVATION
2002	6 CY	TEST PIT EXCAVATION
5003	240 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS
5004	355 LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
5005	45 LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
6001	315 LF	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	860 SF	5 INCH CONCRETE SIDEWALK
6003	100 SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS (TYPE 3 BRICK PAVERS)
8002	1 EACH	2-WIRE CENTRAL CONTROL UNIT
8008	8 EACH	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
8009	6 EACH	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8016	2 EACH	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
8040	90 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
8042	8 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8044	90 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8055	900 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8057	375 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PHASE 1 AND 5	R ←G—	R ←G—	R	R ←G—	R ←G—	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
1 AND 5 CHANGE	PHASE 1 + 5 MAY CHANGE TO PHASE 1 + 6, PHASE 2 + 5 OR PHASE 2 + 6																			
PHASE 1 AND 6	R	R	R	G ←G—	G ←G—	G	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW
1 AND 6 CHANGE	R	R	R	G ←Y—	G ←Y—	G	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW
PHASE 2 AND 5	G ←G—	G ←G—	G	R	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
2 AND 5 CHANGE	G ←Y—	G ←Y—	G	R	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
PHASE 2 AND 6	G	G	G	G	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEARANCE	G	G	G	G	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 AND 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3	R	R	R	R	R	R	R	R	R	G ←G—	G ←G—	G	DW	DW	DW	DW	DW	DW	DW	DW
3 CHANGE	R	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4	R	R	R	R	R	R	G ←G—	G ←G—	G	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
4 CHANGE	R	R	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3 ALT	R	R	R	R	R	R	R	R	R	G ←G—	G ←G—	G	DW	DW	DW	DW	WK	DW	DW	WK
PED CLEARANCE	R	R	R	R	R	R	R	R	R	G ←G—	G ←G—	G	DW	DW	DW	DW	FL/DW	DW	DW	FL/DW
3 ALT CHANGE	R	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 ALT	R	R	R	R	R	R	G ←G—	G ←G—	G	R	R	R	DW	DW	DW	DW	DW	WK	WK	DW
PED CLEARANCE	R	R	R	R	R	R	G ←G—	G ←G—	G	R	R	R	DW	DW	DW	DW	DW	FL/DW	FL/DW	DW
4 ALT CHANGE	R	R	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	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	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING KEY

A, B } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

C, D, E, F, G, H } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

J } STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

+ - 3/4 IN. X 10 FT. GROUND ROD

TOD NO: XY125-14
SHA NO: HA400B56
US 1 Bus. @ MD 924, MD 24 @ Marketplace Dr./MD 924 @ Ring Factory Rd/Bel Air/Laurel Bush Rd/Holly Wreath

TSP-12

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 924 (EMMORTON ROAD) AND BEL AIR SOUTH PKWY/LAUREL BUSH RD

Bel Air, MD

GENERAL INFORMATION SHEET

SCALE N.T.S. DATE 10/3/2012 CONTRACT NO. XY1255185

DESIGNED BY J.D.C.
DRAWN BY S.M.D.
CHECKED BY N.M.L.
F.A.P. NO.

COUNTY HARFORD
LOGMILE 12092402.6
TIMS NO. L646
TOD NO.

TS NO. 2520E | DRAWING TSP-12 OF 15 | SHEET NO. 12 OF 15

WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, Maryland 21231

BY: jcheng

PLOTTED: October 02, 2012
FILE: N:\31669-238\CADD\pSG-P003_MD924_LaurelBush.dgn