PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES INSTALLING APS (ACCESIBLE PEDESTRIAN SIGNALS) AT THE INTERSECTION OF MD 210 AND MD 227 IN CHARLES COUNTY, MARYLAND.MD 210 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION OPERATION WILL REMAIN THE SAME.

CONTROLLER REQUIREMENTS

THE EXISTING BASE MOUNTED CABINET AND CONTROLLER WILL BE USED.

TYPICAL MESSAGES FOR ACCESSIBLE PED SIGNALS

SOUTH LEG - MD 210 (INDIAN HEAD HIGHWAY) AND MD 227 (LIVINGSTON ROAD AND MARSHALL HALL ROAD)

WAIT: "WAIT TO CROSS INDIAN HEAD AT LIVINGSTON AND MARSHALL HALL."*

WALK: RAPID TICK

EAST LEG - MD 227 (LIVINGSTON ROAD) AND MD 210 (INDIAN HEAD HIGHWAY)

WAIT: "WAIT TO CROSS LIVINGSTON AT INDIAN HEAD." *

WALK: RAPID TICK

WEST LEG - MD 227 (MARSHALL HALL ROAD) AND MD 210 (INDIAN HEAD HIGHWAY)

WAIT: "WAIT TO CROSS MARSHALL HALL AT INDIAN HEAD."*

WALK: RAPID TICK

* MESSAGE USED IF DISTANCE FROM NEAREST PUSHBUTTON FOR PERPIDICULAR 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.

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-104.04-01 (SHOULDER WORK)
STANDARD NO. MD-104.04-03 (LEFT LANE CLOSURE)
STANDARD NO. MD-104.04-05 (RIGHT LANE CLOSURE)
STANDARD NO. MD-104.04-07 (CENTER LANE CLOSURE)
STANDARD NO. MD-104.04-13 (LEFT TURN BAY CLOSURE)
STANDARD NO. MD-104.04-15 (INTERSECTION LEFT LANE, TURN BAY)

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MS. KIMBERLY TRAN
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (410) 841-1019

MR. JOHN S. MAYS
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (410) 841-1013

MR. MIKE HUBER
DISTRICT UTILITY ENGINEER
PHONE: (410) 841-1039

MR. RICHARD L. DAFF, SR.
CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

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

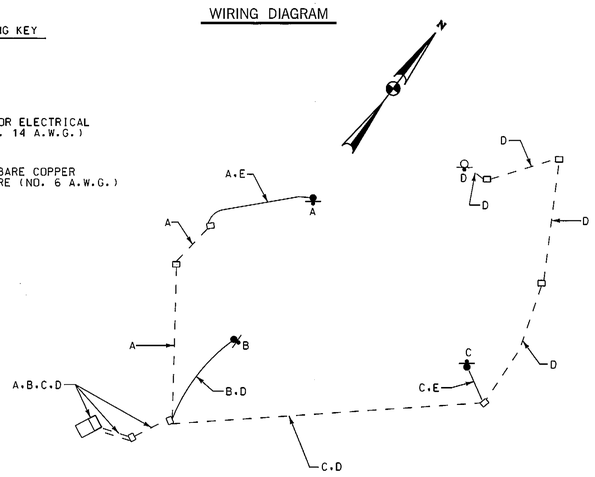
MR. ED RODENHIZER
CHIEF, SIGNAL OPERATION SECTION
PHONE: (410) 787-7652

WIRING DIAGRAM

WIRING KEY

A, B, C, D — 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

E — STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)



EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9571	26 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF :
		- 1 EACH M4-5 SIGN (24 IN. x 12 IN.) - GROUND MOUNT
		- 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS LIVINGSTON ROAD"
		- 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS MARSHALL HALL ROAD"
		- 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS INDIAN HEAD HIGHWAY"
		- 2 EACH W11-2 SIGN (30 IN. x 30 IN.) B / FYG - GROUND MOUNT
		- 2 EACH W16-7p SIGN (24 IN. x 12 IN.) B / FYG - GROUND MOUNT

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

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
1003	740 L.F.	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
2001	8 C.Y.	CLASS 2 EXCAVATION
2002	3 C.Y.	TEST PIT EXCAVATION
5002	940 L.F.	12 INCH WHITE LEAD FREE RELECTIVE THERMOPLASTIC PAVEMENT MARKINGS
6001	230 L.F.	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	1100 S.F.	5 INCH CONCRETE SIDEWALK
8003	1 EACH	2 WIRE CENTRAL CONTROL UNIT
8009	2 EACH	ADJ EXISTING HANDHOLE TO GRADE INCLUDING COLLAR
8010	6 EACH	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS
8011	3 EACH	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8017	1 EACH	REM & DISPOSE MAT & EQUIP PER ASSIGN
8028	55 L.F.	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8029	115 S.F.	DETECTABLE WARNING SURFACES
8030	156 S.F.	RELOCATE EXISTING SIGN
8032	51 L.F.	WOOD SIGN SUPPORTS 4 X 4 INCH
8033	76 L.F.	WOOD SIGN SUPPORTS 4 X 6 INCH
8034	85 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8046	20 SF	INSTALL GROUND MOUNTED SIGN
8047	6 SF	INSTALL OVERHEAD SIGN
8054	3 EACH	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8056	1050 L.F.	ELECTRICAL CABLE - 2 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	21
PHASE 1 + 5	←G—	←G—	R	R	←G—	←G—	←G—	R	R	R	—R→G	R	R	R	R	DW	DW	DW	DW	DW	DW
1 + 5 CHANGE	PHASE 1 + 5 MAY CHANGE TO PHASE 1 + 6, PHASE 2 + 5 OR PHASE 2 + 6																				
PHASE 1 + 6	←G—	←G—	G	G	←R—	←R—	←R—	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 + 6 CHANGE	←Y—	←Y—	G	G	←R—	←R—	←R—	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 + 5	←R—	←R—	R	R	←G—	←G—	←G—	G	G	R	—G→	R	R	R	R	DW	DW	DW	DW	DW	DW
5 CHANGE	←R—	←R—	R	R	←Y—	←Y—	←Y—	G	G	R	—Y→	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 + 6	←R—	←R—	G	G	←R—	←R—	←R—	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW
PED CLEARANCE	←R—	←R—	G	G	←R—	←R—	←R—	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW
2 + 6 CHANGE	←R—	←R—	Y	Y	←R—	←R—	←R—	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3 AND 7	←R—	←R—	R	R	←R—	←R—	←R—	R	R	←R G—	R	←R G—	←R G—	R	←R G—	DW	DW	DW	DW	DW	DW
3 AND 7 CHANGE	PHASE 3 + 7 MAY CHANGE TO PHASE 3 + 8, PHASE 4 + 7 OR PHASE 4 + 8																				
PHASE 3 AND 8	←R—	←R—	R	R	←R—	←R—	←R—	R	R	←G G—	G	←G G—	R	R	R	DW	DW	DW	DW	DW	DW
3 CHANGE	←R—	←R—	R	R	←R—	←R—	←R—	R	R	←Y G—	G	←Y G—	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4 AND 7	←R—	←R—	R	R	←R—	←R—	←R—	R	R	R	R	R	←G G—	G	←G G—	DW	DW	DW	DW	DW	DW
7 CHANGE	←R—	←R—	R	R	←R—	←R—	←R—	R	R	R	R	R	←Y G—	G	←Y G—	DW	DW	DW	DW	DW	DW
PHASE 4 AND 8	←R—	←R—	R	R	←R—	←R—	←R—	R	R	G	G	G	G	G	G	DW	DW	DW	DW	DW	DW
4 AND 8 CHANGE	←R—	←R—	R	R	←R—	←R—	←R—	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 4 ALT. AND 8	←R—	←R—	R	R	←R—	←R—	←R—	R	R	G	G	G	G	G	G	DW	DW	DW	DW	WK	WK
PED CLEARANCE	←R—	←R—	R	R	←R—	←R—	←R—	R	R	G	G	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW
4 ALT.+ 8 CHANGE	←R—	←R—	R	R	←R—	←R—	←R—	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	← FL/R —	← FL/R —	FL/Y	FL/Y	← FL/R —	← FL/R —	← FL/R —	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK

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

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

MD 210 (Indian Head Highway) and MD 227 (Livingston Rd/Marshall Hall Rd)
Bryans Road, Maryland

GENERAL INFORMATION SHEET

SCALE NONE DATE 4/1/2010 CONTRACT NO. XX4485185

DESIGNED BY B. DONOWAY COUNTY Charles
DRAWN BY B. DONOWAY LOGMILE 02021005.33
CHECKED BY N. Leary TIMS NO. K093
F.A.P. NO. SEE TITLE SHEET TOD NO.

TS NO. DRAWING TSP-3 OF 3 SHEET NO. 3 OF 3

PLOTTED: Wednesday, October 27, 2010 AT 09:59 AM
FILE: C:\Documents and Settings\jhenkel\Local Settings\Temporary Internet Files\OLKEF\K093G003.dgn

BY: jhenkel