

I. GENERAL

This project involves the installation of a temporary traffic signal for Stage 3 MOT at the intersection of MD 144 (Frederick Road) and I-695 SB Ramps in Baltimore county. The temporary signal for this stage will involve the installation of APS/CPS pedestrian signals for the east leg.

II. INTERSECTION OPERATION

- The existing base mounted controller cabinet will be utilized at this location. This intersection will continue to operate in a fully actuated mode using 4 NEMA phases. Eastbound and Westbound MD 144 (Frederick Road) operates concurrently, while the side street movement operates with split phasing. An alternate pedestrian phase will be provided for the east of the intersection.

NOTES

- For final pavement markings, refer to MOT and/or pavement marking plans, as applicable; other than those detailed on the plan. All pavement markings shall be installed in accordance with Administration standards.
- The contractor shall be responsible for terminating all signal cable to the appropriate terminals and properly labeling each cable.
- All underground and overhead 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.
- The contractor shall maintain the continuous operation of all vehicular detectors, and lighting devices. If any device is damaged by the contractor, it shall be repaired within 72 hours by the contractor at no cost to the Administration after notification by the Engineer.
- The contractor shall contact the SHA Signal Shop at (410)-787-7650 at least 72 hours prior to starting construction for this phase.

APS NOTES

- The APS Push Buttons shall be delivered to SHA Signal Shop at least two (2) weeks prior to beginning work, so that the programming may be checked.
- APS will function as follows:
To cross Frederick Road
a. When pedestrian locates and presses pushbutton for an extended time, the message will be "Wait to cross Frederick at Ramps and Woodlawn. Wait." at first.
b. When WALK phase begins, the message will be a rapid tick which will last for the duration of the WALK phase.
- 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 two percent (2%).
- The 10' separation between pushbuttons is to be measured from face of pushbutton to face of pushbutton, not from center of pole to center of pole.
- Pushbutton arrows are to be parallel to the crossing for which they are intended.
- Location of accessible pedestrian signal pushbuttons must meet location requirements of MUTCD Sec. 4E.09 and Fig. 4E.2 and the 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.

CONTACTS

DISTRICT FOUR

MS. ERIN KUHN
ASSISTANT DISTRICT ENGINEER - TRAFFIC
410-229-2381
MR. DONALD SCHAEFER
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
410-229-2421
MR. ANDRE FUTRELL
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
410-229-2361
MR. MICHAEL PASQUARIELLO
UTILITY ENGINEER
410-229-2341

OFFICE OF TRAFFIC AND SAFETY

MR. RICHARD DAFF SR.
CHIEF, TRAFFIC OPERATIONS
410-787-7630
MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF,
TRAFFIC OPERATIONS
410-787-7630
MR. ED RODENHIZER
TEAM LEADER SIGNAL OPERATIONS
410-787-7650
MR. EUGENE BAILEY
TEAM LEADER SIGNAL OPERATIONS
410-787-7670
MS. DARLENE EIDE
SUPPLY OFFICER IV
(SIGNAL SHOP WAREHOUSE)
410-787-7668

EQUIPMENT LIST

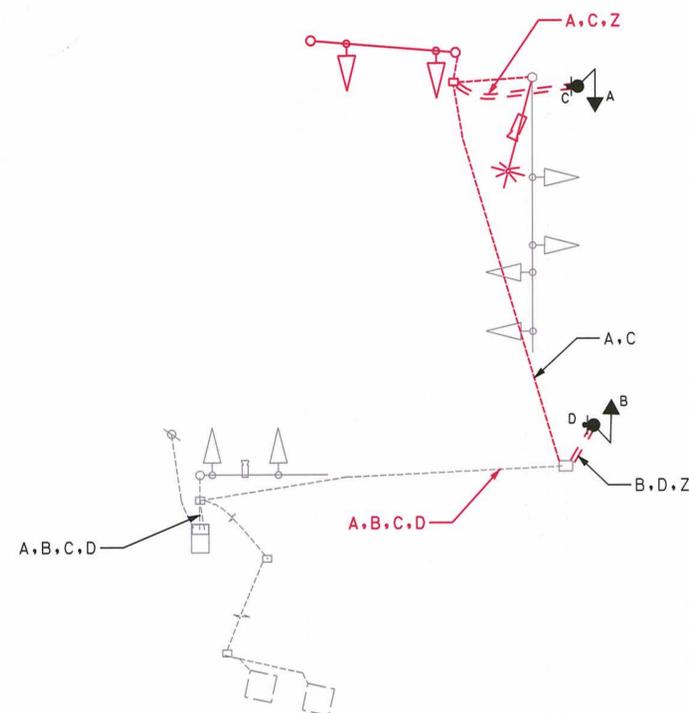
A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

ITEM NO./CAT CODE	QUANTITY	UNIT	DESCRIPTION
973023	2	SF	SHEET ALUMINUM SIGNS CONSISTING OF:
	2	EA	R10-3 (9"x15") POLE MOUNT SIGN TO READ "PUSH BUTTON TO CROSS FREDERICK RD"

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

CAT CODE	QUANTITY	UNITS	DESCRIPTION
114235	170	LF	12 IN WHITE REMOVEABLE PAVEMENT LINE MARKINGS
114245	60	LF	24 IN WHITE REMOVEABLE PAVEMENT LINE MARKINGS
114280	50	LF	REMOVAL OF EXISTING PAVEMENT LINE MARKINGS, ANY WIDTH
203030	1	CY	TEST PIT EXCAVATION
800000	2	EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD SECTION
800000	1	EA	2-WIRE CENTRAL CONTROL UNIT
800000	2	EA	AUDIBLE TACTILE PEDESTRIAN PUSH BUTTON STATION
801004	2	CY	CONCRETE FOR SIGNAL FOUNDATION
802501	50	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805135	50	LF	3 IN PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED
813015	2	SF	INSTALL OVERHEAD SIGN
818004	2	EA	10 FOOT BREAKAWAY PEDESTAL POLE
861105	370	LF	ELECTRICAL CABLE - 2 CONDUCTOR NO. 14 AWG.
861107	370	LF	ELECTRICAL CABLE - 5 CONDUCTOR NO. 14 AWG.

WIRING DIAGRAM



KEY

- A/B } 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- C/D } 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- Z } 1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	
	R	R	R	R	R	R	R	R	R	R	
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
	G	G	G	G	G	G	G	G	G	G	
					G						
PHASE 2 AND 6	G	G	G	G	R	R	R	R	DW	DW	
2 AND 6 CHANGE	Y	Y	Y	Y	R	R	R	R	DW	DW	
PHASE 3	R	R	R	R	R	R	G	G	DW	DW	
3 CHANGE	R	R	R	R	R	R	Y	Y	DW	DW	
PHASE 4	R	R	R	R	G	G	R	R	DW	DW	
4 CHANGE	R	R	R	R	Y	Y	R	R	DW	DW	
PHASE 4 ALT	R	R	R	R	G	G	R	R	WK	WK	
4 ALT PED CLEARANCE	R	R	R	R	G	G	R	R	FL/DW	FL/DW	
4 ALT CHANGE	R	R	R	R	Y	Y	R	R	DW	DW	
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	

MOT STAGE 3

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 144 (FREDERICK RD) AT I-695 NB RAMPSWOODLAWN AVE
INTERCHANGE RECONSTRUCTION

GENERAL INFORMATION SHEET

SCALE	NTS	DATE	SEPTEMBER 2010	CONTRACT NO.	BA7275380
DESIGNED BY	J. PALADUGU	COUNTY	BALTIMORE		
DRAWN BY	J. PALADUGU	LOGMILE	003144004.14		
CHECKED BY	K. RINKER	T.I.M.S. NO.			
F.A.P. NO.	SEE TITLE SHEET	TOD NO.			
TS NO.	3901B	DRAWING NO.	pSG OF N005	SHEET NO.	193 OF 235

SABRA, WANG & ASSOCIATES, INC.
1504 JOH AVENUE
SUITE 160
BALTIMORE, MD 21227
(410) 737-8564
WWW.SABRA-WANG.COM

REDLINE REVISION NO. 3
REPLACE SHEET, DECEMBER 16, 2011