

**PROJECT DESCRIPTION**

THIS PROJECT INVOLVES THE INSTALLATION OF LED COUNTDOWN PEDESTRIAN SIGNAL HEADS, APS PUSHBUTTONS, AND SIGNS AT THE INTERSECTION OF US 1 (WASHINGTON BOULEVARD) AND WHISKEY BOTTOM ROAD IN HOWARD COUNTY. US 1 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

**INTERSECTION OPERATION**

THIS INTERSECTION CURRENTLY OPERATES IN A NEMA EIGHT-PHASE FULL-TRAFFIC-ACTUATED MODE WITH EXCLUSIVE-PERMISSIVE LEFT TURNS ON ALL APPROACHES. A PEDESTRIAN PHASE FOR THE SOUTH LEG AND AN EMERGENCY VEHICLE PRE-EMPTION PHASE FOR SOUTHBOUND US 1. A CONCURRENT PEDESTRIAN PHASE IS ADDED TO THE EAST LEG OF THE INTERSECTION.

**CONTROLLER REQUIREMENTS**

THE EXISTING FULL-TRAFFIC-ACTUATED EIGHT PHASE TRAFFIC SIGNAL CONTROLLER HOUSED IN A BASE MOUNTED CABINET WILL BE USED. A 2-WIRE APS CENTRAL CONTROL UNIT WILL BE FURNISHED BY THE CONTRACTOR AND INSTALLED BY THE SHA.

**SPECIAL NOTE**

APS WILL FUNCTION AS FOLLOWS:

FOR WASHINGTON BOULEVARD:

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS WASHINGTON BLVD AT WHISKEY BOTTOM".
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

FOR WHISKEY BOTTOM ROAD:

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS WHISKEY BOTTOM AT WASHINGTON BLVD. CROSSWALK ANGLES LEFT".
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

**CONTACT PERSONS FOR DISTRICT #7 ARE AS FOLLOWS:**

MR. JOHN CONCANNON ASSISTANT DISTRICT ENGINEER-TRAFFIC PHONE: (301)624-8140  
 MS. ANDREA ABEND UTILITY ENGINEER PHONE: (301)624-8115

MR. RAYMOND JOHNSON ASSISTANT DISTRICT ENGINEER-MAINTENANCE PHONE: (301)624-8105

**CONTACT PERSONS FOR OOTS ARE AS FOLLOWS:**

MR. RICHARD L. DAFF, SR. CHIEF, TRAFFIC OPERATIONS DIVISION PHONE: (410)787-7630  
 MR. ROBERT SNYDER ASSISTANT DIVISION CHIEF TRAFFIC OPERATIONS (410)787-7630  
 MR. ED RODENHIZER CHIEF, SIGNAL OPERATIONS (410)787-7650  
 MR. EUGENE BAILEY CHIEF, SIGN OPERATIONS (410)787-7676

**EQUIPMENT LIST "A"**

A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

NONE

**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 TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.

**EQUIPMENT LIST "B"**

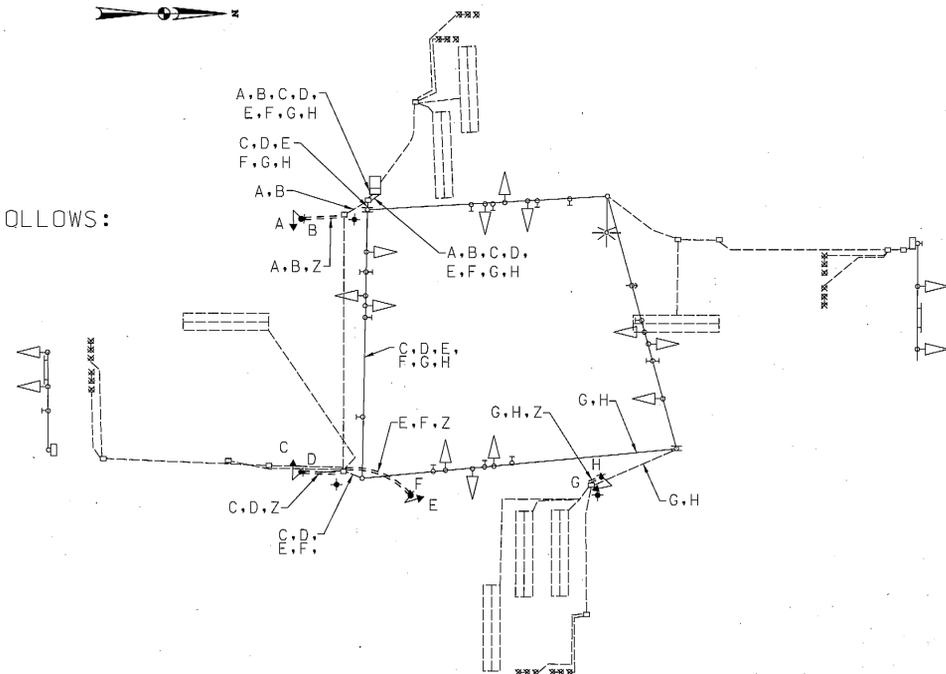
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1001	REMOVAL OF EXISTING PAVEMENT LINE MARKINGS, ANY WIDTH	LF	220
2002	TEST PIT EXCAVATION	CY	3
5005	12 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS	LF	170
8001	AUDIBLE / TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS	EA	4
8002	BREAKAWAY PEDESTAL POLE - ANY SIZE	EA	4
8003	FURNISH AND INSTALL 2 WIRE CONTROL UNIT	EA	1
8004	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEADS	EA	4
8005	PEDESTRIAN EDUCATION SIGN	EA	4
8007	REMOVE AND DISPOSE PER ASSIGNMENT	EA	1
8011	ADJUST EXISTING HANDHOLE	EA	1
8012	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	100
8013	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	90
8020	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	820
8021	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	840

**EQUIPMENT LIST "C"**

C. EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND RETURNED TO SHA.

ALL MATERIALS AND EQUIPMENT REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.



**WIRING KEY**

A, C, E, G	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
B, D, F, H	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
Z	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
+	PROPOSED GROUND ROD

**PHASING CHART**

**GENERAL NOTES (CONTINUED)**

6. ACCESSIBLE PEDESTRIAN CONTROL EQUIPMENT SHALL BE DELIVERED TO THE SHA SIGNAL SHOP FOR TESTING AND PROGRAMMING PRIOR TO INSTALLATION. CONTACT MR. EDWARD RODENHIZER AT 410-787-7652 TO COORDINATE.
7. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SECTION 4E.09 AND FIGURE 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.
8. 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%.
9. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
10. PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.

**SHA** STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF TRAFFIC & SAFETY  
 TRAFFIC ENGINEERING DESIGN DIVISION  
 U.S. 1 @ WHISKEY BOTTOM ROAD  
 LAUREL, MARYLAND

REVISIONS		GENERAL INFORMATION SHEET	
SCALE	NONE	DATE	08/2009
DESIGNED BY	SK	COUNTY	HOWARD
DRAWN BY	SK	LOGMILE	I3000100.97
CHECKED BY	DAE	TMS NO.	J825
FAP NO.		TOD NO.	
TS NO.	79 L-GI	DRAWING	SG - 2 OF 2
		SHEET NO.	2 OF 2

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