

**PROJECT DESCRIPTION**

**GENERAL**

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 144 (FREDERICK ROAD) AND PARADISE AVE IN BALTIMORE COUNTY, MARYLAND. MD 144 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

**INTERSECTION OPERATION**

THE INTERSECTION WILL OPERATE IN A NEMA FOUR-PHASE, SEMI-TRAFFIC-ACTUATED MODE WITH THE MD 144 APPROACHES OPERATING CONCURRENTLY AND THE N PROSPECT AVE APPROACHES OPERATING CONCURRENTLY.

AN ALTERNATE PEDESTRIAN PHASE IS PROVIDED ACROSS THE EAST LEG OF MD 144.

**APS NOTES**

APS WILL FUNCTION AS FOLLOWS:

1. MD 144 (FREDERICK ROAD)

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE MESSAGE WILL BE "FREDERICK ROAD".
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

**CONTROLLER REQUIREMENTS**

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH VIDEO INTERFACE EQUIPMENT (1-4 CAMERAS), ONE (1) FOUR CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIER, INTERSECTION MONITOR WITH BATTERY BACKUP FOR PHONE DROP AND ASSOCIATED HARNESSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

**PHONE DROP**

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410) 787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER THE NEAREST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

**MAINTENANCE OF TRAFFIC**

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

STANDARD NO. MD-104.02-01 (SHOULDER WORK)

STANDARD NO. MD-104.02-03 (LANE SHIFT)

STANDARD NO. MD-104.02-14 (INTERSECTION FLAGGING OPERATION)

**PROJECT CONTACTS**

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MS. ERIN KUHN  
ASSISTANT DISTRICT ENGINEER - TRAFFIC  
PHONE: (410) 321-2781/2785

MR. MIKE PASQUARIELLO  
ASST. DISTRICT UTILITY ENGINEER  
PHONE: (410) 321-2841

MR. STEVE MARCISZEWSKI  
ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
PHONE: (410) 321-2761

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

**WIRING KEY**

**WIRING DIAGRAM**

A, B, C, D } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

F, G, H, J, K } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

L, M } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

N, O } VIDEO DETECTION LEAD-IN CABLE

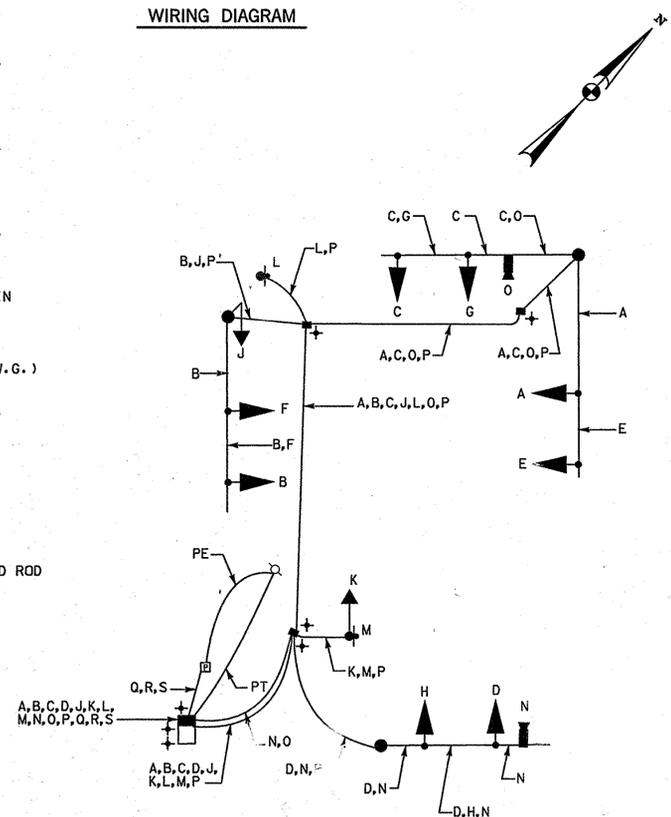
P } STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

Q, R, S } 1-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)

PE - PROPOSED UNDERGROUND ELECTRICAL SERVICE

PT - PROPOSED UNDERGROUND TELEPHONE SERVICE

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



**EQUIPMENT LIST "A"**

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9044	1 EACH	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED CONTROLLER WITH SYSTEM PACKAGE HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
9086	1 EACH	VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS
9571	24 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF : - 2 EACH D-3(1) SIGN (VARIABLE IN. x 16 IN.) - MAST ARM MOUNT - 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS FREDERICK ROAD"

**EQUIPMENT LIST "C"**

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

**PHASE CHART**

	1	2	3	4	5	6	7	8	9	10	
	(R)	(R)									
	(Y)	(Y)									
	(G)	(G)									
PHASE 2 + 6	G	G	G	G	R	R	R	R	DW	DW	←
2 + 6 CHANGE	Y	Y	Y	Y	R	R	R	R	DW	DW	→
PHASE 4 + 8	R	R	R	R	G	G	G	G	DW	DW	↑
4 + 8 CHANGE	R	R	R	R	Y	Y	Y	Y	DW	DW	↓
PHASE 4 + 8 ALT	R	R	R	R	G	G	G	G	WK	WK	↑
PED. CLEARANCE	R	R	R	R	G	G	G	G	FL/DW	FL/DW	↑
4 + 8 ALT CHANGE	R	R	R	R	Y	Y	Y	Y	DW	DW	↓
FLASHING OPERATION	FLY	FLY	FLY	FLY	FLR	FLR	FLR	FLR	DARK	DARK	↔

**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	10 C.Y.	CLASS 2 EXCAVATION
2002	5 C.Y.	TEST PIT EXCAVATION
5004	95 L.F.	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5005	40 L.F.	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
6001	35 L.F.	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	750 S.F.	4 INCH CONCRETE SIDEWALK
8001	24 EACH	12 INCH LED SIGNAL HEAD SECTION
8002	1 EACH	2 WIRE CENTRAL CONTROL UNIT
8008	2 EACH	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS
8009	2 EACH	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8014	2 EACH	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEADS
8016	1 EACH	MAST ARM POLE & 38 FT. MAST ARM
8017	1 EACH	MAST ARM POLE & 50 FT. MAST ARM
8022	1 EACH	REM & DISPOSE MAT & EQUIP PER ASSIGN
8023	1 EACH	TWIN MAST ARM POLE & 50 FT. / 50 FT. MAST ARMS
8026	2 EACH	VIDEO DETECTION CAMERA & CABLE UP TO 500 FT
8033	75 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - SLOTTED
8034	225 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED
8037	24 S.F.	DETECTABLE WARNING SURFACES
8038	24 S.F.	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8040	230 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8042	1 EACH	METERED SERVICE PEDESTAL EMBEDDED
8044	55 L.F.	ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG-THHN/THWN
8046	4 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8051	2 EACH	CUT, CLEAN, GALVANIZE & CAP TRAFFIC SIGNAL STRUCTURE
8053	210 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8055	275 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8056	845 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8064	1 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT

TOD NO: AT912-15  
SHA NO: BA633ASB/B5B  
MD144@PARADISE/PROSPECT

**SHA** STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
MD 144 (FREDERICK ROAD) AND  
PARADISE AVENUE

**WR&A**  
Whitman, Reardon  
and Associates, LLP  
801 South Caroline Street  
Baltimore, Maryland 21231  
(410) 235-3450

**GENERAL INFORMATION SHEET**

SCALE	NONE	DATE	11/07	CONTRACT NO.	AT9125185
DESIGNED BY	B. DONOWAY	COUNTY	BALTIMORE		
DRAWN BY	B. DONOWAY	LOGMILE			
CHECKED BY	N. LEARY	TMS NO.	G518		
FAP NO.	SEE TITLE SHEET	TOD NO.			
TS NO.	-	DRAWING	TSP - 4	OF	5
		SHEET NO.	4	OF	5