PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW FULL-TRAFFIC-ACTUATED SIGNAL AND STREET LIGHTING AT MD 2 AND 8TH AVENUE IN ANNE ARUNDEL COUNTY. MD 2 IS ASSUMED TO RUN IN AN NORTH-SOUTH DIRECTION.

THIS SIGNAL WILL BE HARDWARE INTERCONNECTED TO THE MD 2 SYSTEM AND MD 3 BUS. AT 8TH AVENUE TRAFFIC SIGNAL.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FIVE-PHASE, FULL-TRAFFIC ACTUATED MODE, WITH THE MD 2 APPROACHES RUNNING CONCURRENTLY AND THE 8TH AVENUE APPROACH RUNNING ALONE.

EXCLUSIVE LEFT TURN PHASES WILL BE PROVIDED FOR NORTHBOUND AND SOUTHBOUND MD 2.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH THREE (3) FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS, INTERSECTION MONITOR WITH BATTERY BACK-UP FOR PHONE DROP, AND ASSOCIATED HARNESSES HOUSED IN A "SYSTEM READY" NEMA SIZE "6" BASE MOUNTED CABINET.

SPECIAL NOTE

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 WITH THE NEAREST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

MAINTENANCE OF TRAFFIC

THE TRAFFIC CONTROL STANDARD NUMBERS SHALL BE REFERENCED FOR THE PROJECT.

STANDARD NO. MD-105.00
STANDARD NO. MD-105.01
STANDARD NO. MD-105.02
STANDARD NO. MD-105.101 (FLAGGING OPERATION)
STANDARD NO. MD-105.311 (SHOULDER WORK)
STANDARD NO. MD-105.301 (LEFT LANE CLOSURE)
STANDARD NO. MD-105.303 (RIGHT LANE CLOSURE)
STANDARD NO. MD-105.305 (CENTER LANE CLOSURE)

NOTE: STANDARDS TO BE MODIFIED, BY REPLACING W21-5 SIGN (ROAD CONSTRUCTION) WITH A W20-1 SIGN (ROAD WORK AHEAD).

PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT #5 ARE AS FOLLOWS:

MR. PAUL ARMSTRONG
DISTRICT ENGINEER
PHONE: (410) 841-5450

MR. LAWRENCE E. ELLIOTT
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (410) 841-5450

MR. RAYMOND HUTZLER
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (410) 841-5450

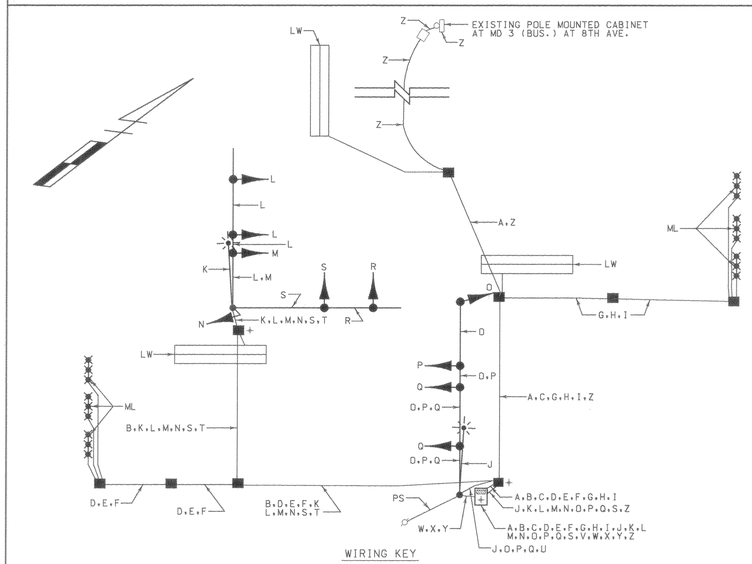
MR. JOHN MAYS
ASSISTANT DISTRICT ENGINEER - UTILITY
PHONE: (410) 841-5450

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

THE POWER COMPANY REPRESENTATIVE IS:

MR. JOE HALSTONE
DELMARVA POWER COMPANY
8403 COASTAL HIGHWAY
P.O. BOX 799
OCEAN CITY, MARYLAND 21842
(410) 524-9565

MR. BILL JOHNSON
BALTIMORE GAS AND ELECTRIC CO.
7317 PARKWAY DRIVE SOUTH
PARKWAY INDUSTRIAL CENTER
HANOVER, MARYLAND 21076
(410) 859-9040



WIRING KEY

- A, B, C — 2-CONDUCTOR ELECTRICAL CABLE (ALUMINUM SHIELDED)
- D, E, F, G, H, I — MICRO-LOOP PROBE LEAD-IN
- J, K — 2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)
- L, M, N, O, P, Q, R — 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- S — 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- T, U, V — STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- W, X, Y — 1-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
- Z — 12 PAIR VOICE GRADE COMMUNICATION CABLE

LW - LOOP WIRE (NO. 14 A.W.G.)
ML - MICRO-LOOP PROBE
PS - PROPOSED ELECTRICAL SERVICE
+ - 3/4 IN. X 10 FT. GROUND ROD

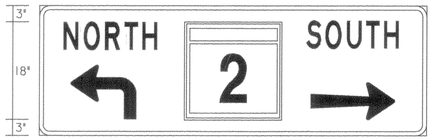
EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9001	6 EACH	12 IN., ONE-WAY, THREE-SECTION (R,Y,G) TRAFFIC SIGNAL HEAD WITH ADJUSTABLE BRACKET FOR MAST ARM MOUNTING AND TUNNEL VISORS.
9001	3 EACH	12 IN., ONE-WAY, THREE-SECTION (RA,YA,GA) TRAFFIC SIGNAL HEAD WITH ADJUSTABLE BRACKET FOR MAST ARM MOUNTING AND TUNNEL VISORS.
9001	1 EACH	12 IN., ONE-WAY, THREE-SECTION (RA,YA,GA) TRAFFIC SIGNAL HEAD WITH ADJUSTABLE BRACKET FOR POLE MOUNTING AND TUNNEL VISORS.
9007	1 EACH	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED, SOLID STATE DIGITAL CONTROLLER WITH INTERSECTION MONITOR WITH BATTERY BACK-UP FOR PHONE DROP, HOUSED IN A "SYSTEM READY" NEMA SIZE "6" BASE MOUNTED CABINET.
9010	3 EACH	FOUR-CHANNEL, TIME DELAY OUTPUT, LOOP DETECTOR AMPLIFIER.
9011	6 EACH	MICRO-LOOP PROBE SET WITH 1000 FT. LEAD-IN.
9012	172 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF : - 4 EACH W3-3 SIGN (48 IN. X 48 IN.) WITH "NEW" PANEL (30 IN. X 30 IN.) AND FLAGS - GROUND MOUNT. - 1 EACH "MD 2, NORTH-SOUTH" SIGN (72 IN. X 24 IN.) - MAST ARM MOUNT. - 4 EACH D3-2 SIGN (VARIABLE X 16 IN.) - MAST ARM MOUNT - 2 EACH D3-2 SIGN (72 IN. X 24 IN.) - GROUND MOUNT

SIGN LAYOUT

SIGN NO. 21

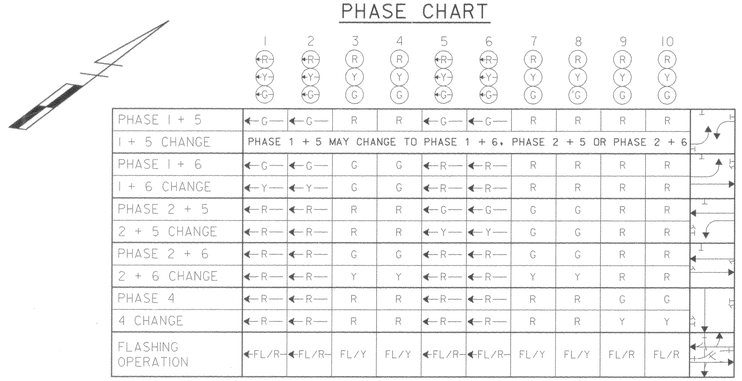


WIDTH	HEIGHT	COLOR LEG.	COLOR BKGD	BORDER WIDTH	BORDER RADIUS	ARROW	SHIELD
6'-0"	2'-0"	B	W	3/4"	2"	6" AROTAIL	MI-6A

SIGN NO. 11

WIDTH	HEIGHT	COLOR LEG.	COLOR BKGD	BORDER WIDTH	BORDER RADIUS	ARROW	SHIELD
6'-0"	2'-0"	W	G	3/4"	2"	6" AROTAIL	---

PHASE CHART



EQUIPMENT LIST "B"

F.H.W.A. REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	MD			

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EACH	MAINTENANCE OF TRAFFIC
2001	3 C.Y.	TEST PIT EXCAVATION
5005	120 L.F.	24 IN. WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE
8001	12 C.Y.	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8011	10 EACH	INSTALL SIGNAL HEAD
8015	6 EACH	INSTALL MICRO-LOOP PROBE SET
8019	1 EACH	INSTALL CONTROLLER AND CABINET-BASE MOUNT
8022	360 L.F.	FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)
8024	50 L.F.	FURNISH AND INSTALL 1 IN. LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
8025	730 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 40 RIGID PVC CONDUIT-TRENCHED
8026	300 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED
8027	60 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT-BORED
8031	110 L.F.	FURNISH AND INSTALL 4 IN. SCHEDULE 40 RIGID PVC CONDUIT-TRENCHED
8033	140 L.F.	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT-BORED
8035	9 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8037	3 EACH	FURNISH AND INSTALL GROUND ROD - 3/4 IN. DIAMETER X 10 FT. LENGTH
8041	500 L.F.	FURNISH AND INSTALL 12-PAIR COMMUNICATION CABLE-SELF SUPPORTING (OVERHEAD)
8043	1370 L.F.	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 A.W.G.)
8044	420 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE-2 CONDUCTOR ALUMINUM SHIELDED (NO. 14 A.W.G.)
8047	850 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE-5 CONDUCTOR (NO. 14 A.W.G.)
8048	230 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE-7 CONDUCTOR (NO. 14 A.W.G.)
8049	320 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE-2 CONDUCTOR (NO. 12 A.W.G.)
8052	200 L.F.	FURNISH AND INSTALL STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
8053	45 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE-1 CONDUCTOR (NO. 4 A.W.G. - THHN/THWN)
8054	144 L.F.	FURNISH AND INSTALL WOOD SIGN SUPPORTS (4 IN. X 4 IN.)
8055	64 L.F.	FURNISH AND INSTALL WOOD SIGN SUPPORTS (4 IN. X 6 IN.)
8056	116 S.F.	INSTALL GROUND MOUNTED SIGN
8057	56 S.F.	INSTALL OVERHEAD SIGN
8059	2 EACH	FURNISH AND INSTALL 250 WATT HPS LUMINAIRE WITH PHOTOCELL
8060	2 EACH	FURNISH AND INSTALL 20 FT. LIGHTING BRACKET FOR TRAFFIC SIGNAL STRUCTURE
8067	1 EACH	USE EXISTING DISK AND AS-BUILT TRAFFIC CONTROL DEVICES
8070	10 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8076	1 EACH	CONTROL AND DISTRIBUTION EQUIPMENT
8100	1 EACH	FURNISH AND INSTALL MAST ARM POLE AND 70 FT. MAST ARM
8101	1 EACH	FURNISH AND INSTALL MAST ARM POLE AND TWIN 50 FT./60 FT. MAST ARMS

SIGNAL NO.

REVISIONS	APPROVALS	REVISIONS
	ASSISTANT DIVISION CHIEF	
	ASST. DISTRICT ENGINEER, TRAFFIC	
	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION	
	DIRECTOR, OFFICE OF TRAFFIC & SAFETY	

WR&A
Whitman, Requardt and Associates
Engineers and Planners
2315 Saint Paul Street
Baltimore, Maryland 21218
(410) 235-3450

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION SHEET
MD 2 AND 8TH AVENUE

DATE: 6-27-96	DRAWN BY: S. BLOSS	F.A.P. NO.		PLAN SHEET NO.:	SHEET NO.
SCALE: NONE	DESIGNED BY: T. ZAYDEL	S.H.A. NO.S:	AW101A65 AW101B65 AW101C65	3606 GI	2 OF 2
APPROVED BY:	CHECKED BY: T. HANNAN	COUNTY	ANNE ARUNDEL		