

**PROJECT DESCRIPTION**

**GENERAL**

THIS PORTION OF THE PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF U.S. 40 AND MARTIN STREET IN CLEAR SPRING, WASHINGTON COUNTY, U.S. 40 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 U.S. 40 APPROACHES OPERATING CONCURRENTLY AND THE MARTIN STREET APPROACHES OPERATING CONCURRENTLY.

AN ALTERNATE PEDESTRIAN PHASE WILL BE PROVIDED ACROSS THE EAST AND WEST LEG OF U.S. 40.

**CONTROLLER REQUIREMENTS**

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH ONE (1), FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIER, INTERSECTION MONITOR II WITH BATTERY BACK-UP FOR PHONE DROP AND ASSOCIATED HARNESSES HOUSED IN A NEMA SIZE "5" POLE 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 FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT.

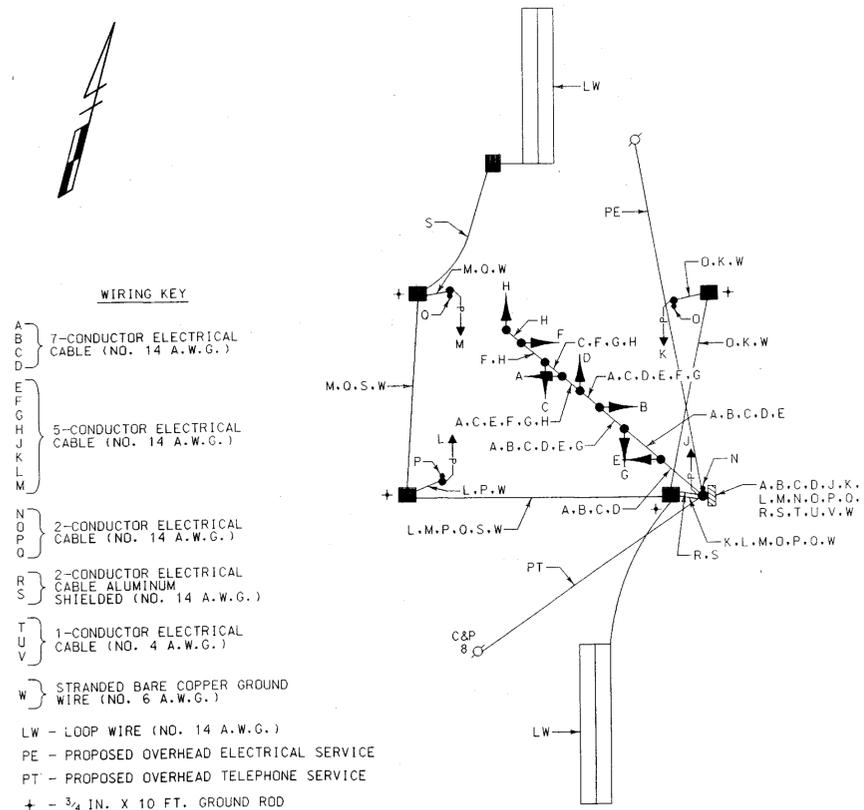
- STANDARD NO. MD-104.00 - 104.00-12 STANDARD NO. MD-104.32-02 (INTERSECTION FLAGGING OPERATION)
- STANDARD NO. MD-104.31-02 (FLAGGING OPERATION)
- STANDARD NO. MD-104.35-02 (LANE SHIFT)
- STANDARD NO. MD-104.33-02 (SHOULDER WORK)

**PROJECT CONTACTS**

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

- MR. FRED CROZIER, DISTRICT ENGINEER, PHONE: (301) 729-8400
- MR. LARRY HUMBERTSON, DISTRICT UTILITIES ENGINEER, PHONE: (301) 729-8400
- MR. GEORGE SMALL, ASSISTANT DISTRICT ENGINEER - TRAFFIC, PHONE: (301) 729-8400
- MR. RICHARD L. DAFF, SR., CHIEF, TRAFFIC OPERATIONS DIVISION, PHONE: (410) 787-7630
- MR. GEORGE FRANKENBERRY, ASSISTANT DISTRICT ENGINEER - MAINTENANCE, PHONE: (301) 729-8400

**WIRING DIAGRAM**



**EQUIPMENT LIST "A"**

A. EQUIPMENT TO BE SUPPLIED BY SHA

CATEGORY CODE	QUANTITY	DESCRIPTION
960021	4 EACH	8 IN., ONE-WAY, THREE-SECTION (R.Y.G) TRAFFIC SIGNAL HEAD - MAST ARM MOUNT.
960022	4 EACH	12 IN., ONE-WAY, THREE-SECTION (R.Y.G) TRAFFIC SIGNAL HEAD - MAST ARM MOUNT.
960048	3 EACH	12 IN., ONE-WAY, TWO-SECTION PEDESTRIAN SIGNAL HEAD - PEDESTAL MOUNT.
960068	1 EACH	12 IN., ONE-WAY, TWO-SECTION PEDESTRIAN SIGNAL HEAD - POLE MOUNT.
965001	4 EACH	PEDESTRIAN PUSHBUTTON AND SIGN (NOTE: SIGN TO READ "PUSHBUTTON TO CROSS CUMBERLAND STREET")
971016	1 EACH	EIGHT PHASE, FULL-TRAFFIC-ACTUATED CONTROLLER AND INTERSECTION MONITOR II WITH BACK-UP FOR PHONE DROP HOUSED IN A NEMA SIZE "5" POLE MOUNTED CABINET.
973023	27 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF : - 4 EACH R10-11b (24 IN. X 24 IN.) - MAST ARM MOUNT. - 1 EACH D-3(1) SIGN "MARTIN ST" (VARIABLE X 16 IN.) DUAL FACED - MAST ARM MOUNT.
900000	1 EACH	FOUR-CHANNEL, LOOP DETECTOR AMPLIFIER (DELAY OUTPUT)

**EQUIPMENT LIST "B"**

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

CATEGORY CODE	QUANTITY	DESCRIPTION
120500	LUMP SUM	MAINTENANCE OF TRAFFIC
120610	7 U.D.	ARROW PANEL
120625	300 S.F.	TEMPORARY TRAFFIC SIGNS
130850	LUMP SUM	MOBILIZATION
203030	4 C.Y.	TEST PIT EXCAVATION
585414	250 L.F.	12 IN. WHITE THERMOPLASTIC PAVEMENT MARKING TAPE
585416	60 L.F.	24 IN. WHITE THERMOPLASTIC PAVEMENT MARKING TAPE
801004	6 C.Y.	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
802501	220 L.F.	FURNISH AND INSTALL NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
805010	30 L.F.	FURNISH AND INSTALL 1 IN. ELECTRICAL CONDUIT - GALVANIZED RISER
805011	20 L.F.	FURNISH AND INSTALL 1 IN. ELECTRICAL CONDUIT - GALVANIZED SLEEVE
805155	140 L.F.	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
805160	20 L.F.	FURNISH AND INSTALL 1 IN. LIQUID-TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
810010	45 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE 1-CONDUCTOR NO. 4 A.W.G. - THHN/THWN
811001	5 EACH	FURNISH AND INSTALL HANDHOLE
813015	27 S.F.	INSTALL OVERHEAD SIGN
837001	4 EACH	FURNISH AND INSTALL GROUND ROD - 3/4 IN. DIAMETER X 10 FT. LENGTH
838003	1 EACH	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT (120/240 V. 1 PHASE 3 WIRE SYST)
861104	220 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR ALUMINUM SHIELDED (NO. 14 A.W.G.)
861105	360 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 A.W.G.)
861107	450 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G.)
861108	250 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 A.W.G.)
862101	1020 L.F.	FURNISH AND INSTALL LOOP WIRE ENCASED IN 1/4 IN. FLEXIBLE TUBING (NO. 14 A.W.G.)
862102	270 L.F.	SAWCUT FOR SIGNAL (LOOP DETECTOR)
865201	4 EACH	INSTALL PUSHBUTTON AND SIGN
871201	1 EACH	INSTALL CONTROLLER AND CABINET - POLE MOUNT
800000	12 EACH	INSTALL SIGNAL HEAD (ANY TYPE)
800000	1 EACH	FURNISH AND INSTALL 27 FT. STEEL POLE AND 50 FT. MAST ARM
800000	3 EACH	FURNISH AND INSTALL 10 FT. BREAKAWAY PEDESTAL POLE
800000	60 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
800000	30 L.F.	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
800000	1 EACH	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT
800000	1 EACH	DELIVERY OF REMOVED CONTROLLER AND CABINET

**PHASE CHART**

	1	2	3	4	5	6	7	8	9	10	11	12
PHASE 2 + 6	G	G	G	G	R	R	R	R	DW	DW	DW	DW
2 + 6 CHANGE	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW
PHASE 4 + 8	R	R	R	R	G	G	G	G	DW	DW	DW	DW
4 + 8 CHANGE	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW
PHASE 4 + 8 ALT	R	R	R	R	G	G	G	G	WK	WK	WK	WK
PED. CLEARANCE	R	R	R	R	G	G	G	G	FL/DW	FL/DW	FL/DW	FL/DW
4 + 8 ALT. CHANGE	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK

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

REVISIONS	APPROVALS
	ASST. TRAFFIC ENGINEERING DESIGN DIVISION
	ASST. DISTRICT ENGINEER, TRAFFIC
	CHEF, TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR, TRAFFIC & SAFETY

**MARYLAND DOT - STATE HIGHWAY ADMINISTRATION**  
Office of Traffic & Safety  
TRAFFIC ENGINEERING DESIGN DIVISION  
GENERAL INFORMATION SHEET  
U.S. ROUTE 40 AND MARTIN STREET  
(CLEAR SPRING, MD)

DRAWN BY: S. BLOSS	F.A.P. NO. WA9295183	TS NO. 3845B	SHEET NO.
CHECKED BY: N. LEARY	S.H.A. NO. WASHINGTON	T.I.M.S. NO. D087	OF
SCALE: NONE	COUNTY: WASHINGTON	LOG MILE: 21040024.42	
DATE: 10-12-98			