PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF AN EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF U.S. 11 AND NORTHERN AVENUE/CEMETERY ENTRANCE IN WASHINGTON COUNTY. U.S. 11 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FIVE-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE U.S. 11 APPROACHES OPERATING CONCURRENTLY AND THE NORTHERN AVENUE/CEMETERY ENTRANCE OPERATING SPLIT.

A LAG EXCLUSIVE/PERMISSIVE LEFT-TURN PHASE EXISTS FOR THE SOUTHBOUND U.S. 11 APPROACH WITH A RIGHT-TURN OVERLAP ON NORTHERN AVENUE.

AN ALTERNATE PEDESTRIAN PHASE WILL BE PROVIDED ACROSS THE SOUTH LEG OF U.S. 11. PEDESTRIAN INDICATIONS WILL BE PROVIDED TO CROSS NORTHERN AVENUE.
THE DETECTOR RACK SHALL BE RETRO-FITTED WITH TWO (2), FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS IN THE EXISTING BASE MOUNTED CABINET.

CONTROLLER REQUIREMENTS

THE EXISTING BASE MOUNTED CABINET AND CONTROLLER WILL BE USED.

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

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. FRED CROZIER
DISTRICT ENGINEER
PHONE: (301) 729-8400

MR. GEORGE SMALL
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 729-8400

MR. GEORGE FRANKENBERRY
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 729-8400

MR. LARRY HUMBERTSON
DISTRICT UTILITIES ENGINEER
PHONE: (301) 729-8400

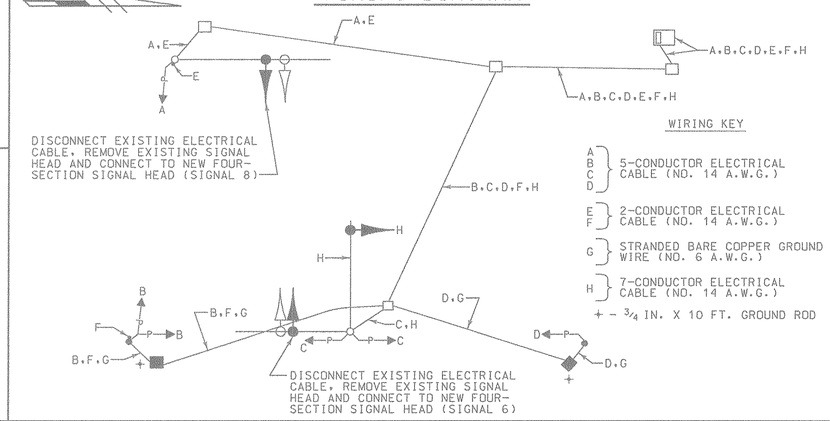
MR. RICHARD L. DAFF, SR.
CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY SHA

ITEM NO.	QUANTITY	DESCRIPTION
9000	1 EACH	DETECTOR RACK RETROFIT
9000	1 EACH	8 IN./12 IN., ONE-WAY, FIVE-SECTION (R,Y,YA,G,GA) POLYCARBONATE TRAFFIC SIGNAL HEAD- MAST ARM MOUNT.
9002	2 EACH	FOUR-CHANNEL, TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIER
9015	2 EACH	12 IN., ONE-WAY, FOUR-SECTION (R,Y,G,GA) TRAFFIC SIGNAL HEAD - MAST ARM MOUNT.
9027	1 EACH	12 IN., ONE-WAY, TWO-SECTION PEDESTRIAN SIGNAL HEAD - PEDESTAL MOUNT.
9029	1 EACH	12 IN., TWO-WAY, TWO-SECTION PEDESTRIAN SIGNAL HEAD - PEDESTAL MOUNT.
9035	1 EACH	12 IN., ONE-WAY, TWO-SECTION PEDESTRIAN SIGNAL HEAD - SIDE OF POLE MOUNT.
9037	1 EACH	12 IN., TWO-WAY, TWO-SECTION PEDESTRIAN SIGNAL HEAD - SIDE OF POLE MOUNT.
9096	2 EACH	PEDESTRIAN PUSHBUTTON AND R10-4 SIGN (NOTE: SIGN TO READ "PUSHBUTTON TO CROSS PENNSYLVANIA ROAD").

WIRING DIAGRAM



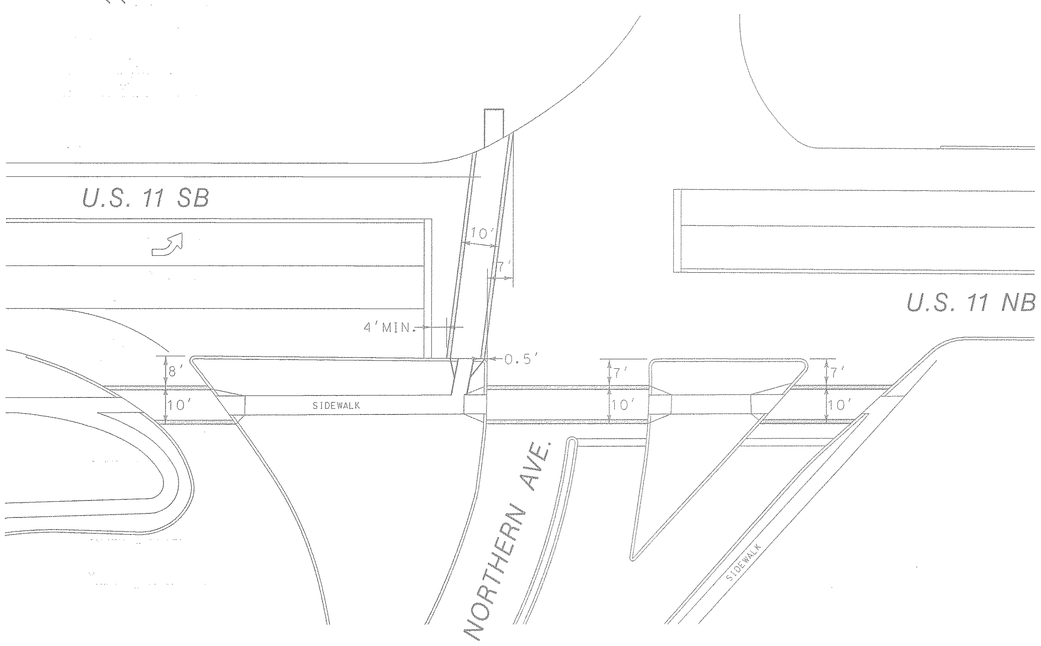
EQUIPMENT LIST "B"

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

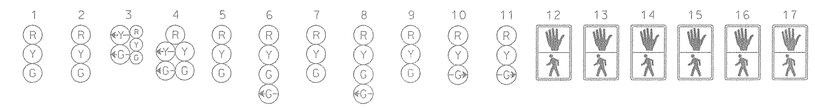
ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EACH	MAINTENANCE OF TRAFFIC PER ASSIGNMENT
1003	1 EACH	MOBILIZATION FOR ASSIGNMENTS OUT OF CONTRACT AREA
2001	2 C.Y.	TEST PIT EXCAVATION
2004	10 C.Y.	CLASS 2 EXCAVATION
5009	330 L.F.	12 IN. WHITE THERMOPLASTIC PAVEMENT MARKING TAPE
5013	150 L.F.	REMOVE EXISTING PAVEMENT MARKINGS - ANY WIDTH
6001	300 S.F.	4 IN. CONCRETE SIDEWALK
6010	20 L.F.	FURNISH AND INSTALL DEPRESSED CURB AND GUTTER
8001	2 C.Y.	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8003	2 EACH	FURNISH AND INSTALL BREAKAWAY PEDESTAL POLE (ANY SIZE)
8011	7 EACH	INSTALL SIGNAL HEAD (ANY TYPE)
8018	2 EACH	INSTALL PUSHBUTTON AND SIGN
8024	55 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8025	75 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8033	2 EACH	FURNISH AND INSTALL HANDHOLE
8034	2 EACH	FURNISH AND INSTALL GROUND ROD - 3/4 IN. DIAMETER X 10 FT. LENGTH
8042	390 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 A.W.G.)
8044	800 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G.)
8045	240 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 A.W.G.)
8049	150 L.F.	FURNISH AND INSTALL NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
8051	18 L.F.	FURNISH AND INSTALL WOOD SIGN SUPPORTS 4 IN. X 4 IN.
8061	1 EACH	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT PER ASSIGNMENT
NEG.	11 S.F.	RELOCATE EXISTING GROUND MOUNTED SIGN
NEG.	1 EACH	ADJUST HANDHOLE TO GRADE

PAVEMENT MARKING DIMENSION DETAIL

SCALE: 1"= 20'



PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
PHASE 2 + 5	G	G	G	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW
PED. CLEARANCE	G	G	G	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW
2 + 5 CHANGE	Y	Y	G	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 + 6	R	R	←G	←G	G	R	R	R	R	→G	→G	DW	DW	DW	DW	DW	DW
2 + 6 CHANGE	R	R	←Y	←Y	Y	R	R	R	R	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 3	R	R	R	R	R	R	R	←G	G	→G	→G	DW	DW	DW	DW	DW	DW
3 CHANGE	R	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 4	R	R	R	R	R	←G	G	R	R	R	R	DW	DW	DW	DW	DW	DW
4 CHANGE	R	R	R	R	R	Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4 ALT	R	R	R	R	R	←G	G	R	R	R	R	DW	DW	DW	DW	WK	WK
PED. CLEARANCE	R	R	R	R	R	←G	G	R	R	R	R	DW	DW	DW	DW	FL/DW	FL/DW
4 CHANGE	R	R	R	R	R	Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK

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

REVISIONS	APPROVALS
	ASST. TRAFFIC ENGINEERING DESIGN DIVISION
	ASST. DISTRICT ENGINEER, TRAFFIC
	CHIEF, 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. 11 & NORTHERN AVE./CEMETERY AVE.

DRAWN BY: S.BLOSS	F.A.P. NO.		TS NO. XX	SHEET NO. 2 OF 2
CHECKED BY: N.LEARY	S.H.A. NO. 23855+2507603			
SCALE: NONE	COUNTY: WASHINGTON		T.I.M.S. NO.	
DATE: 2-12-99	LOG MILE: XX			

M:\96011\3II76GIS.DGN