PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL WITH PEDESTRAIN SIGNALS AND STREET LIGHTING AT THE INTERSECTION OF MD 24 AND DELLCREST DRIVE/SPENCEOLA PARKWAY IN HARFORD COUNTY. MD 24 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 24 APPROACHES OPERATING CONCURRENTLY AND THE DELLCREST DRIVE/SPENCEOLA PARKWAY APPROACHES RUNNING CONCURRENTLY. CONCURRENT PEDESTRIAN PHASES WILL BE INSTALLED FOR SOUTHBOUND MD 24 ACROSS DELLCREST DRIVE AND WESTBOUND DELCREST DRIVE ACROSS MD 24. EXCLUSIVE/PERMISSIVE LEFT-TURN PHASES FOR NORTHBOUND AND SOUTHBOUND MD 24 WILL BE PROVIDED.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH TWO (2) FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS AND INTERSECTION MONITOR WITH BATTERY BACK-UP FOR PHONE DROP HOUSED IN A 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.

EQUIPMENT LISTS

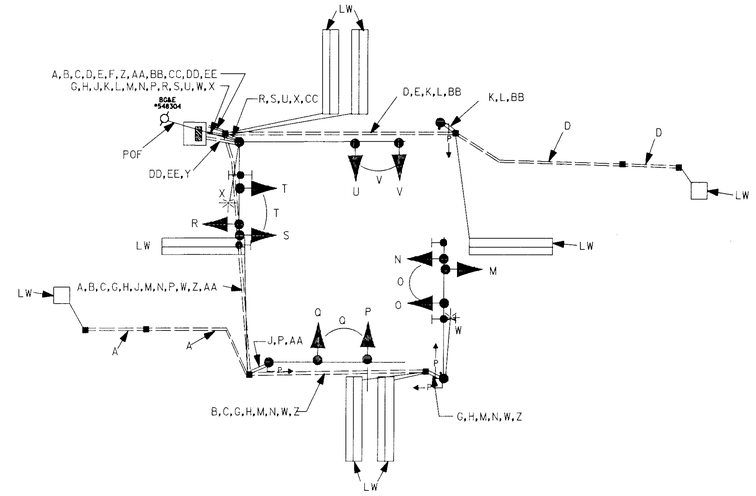
A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

ITEM NO.	QUANTITY	DESCRIPTION
9000	1 EA	12 INCH 1 WAY 2 SECTION SIGNAL PEDESTAL MOUNT
9000	1 EA	12 INCH 1 WAY 2 SECTION SIGNAL SIDE OF POLE MOUNT
9000	1 EA	12 INCH 2 WAY 2 SECTION SIGNAL SIDE OF POLE MOUNT
9002	2 EA	(CONT/CAB/ADD) DETECTOR AMPLIFIER 4-CH RACK MT
9014	6 EA	(MAST ARM MT) 12" 1-WAY, 3-SECTION SIGNAL (ALUMINUM)
9016	2 EA	(MAST ARM MT) 12" 1-WAY, 5-SECTION SIGNAL (ALUMINUM)
9019	2 EA	(MAST ARM MT) 8" & 12" COMBO SIGNAL (ALUMINUM)
9081	1 EA	CABINET INTERSECTION MONITOR, SIZE 6
9089	183 SF	FLAT SHEET ALUM SIGN-YELLOW, ORANGE, & SILVER (SF)
		- 2 EACH R10-12 SIGN (36 IN. X 42 IN.) - MAST ARM MOUNTED.
		- 2 EACH D3-2 SIGN "DELLCREST DR./SPENCEOLA PKWY." (VARIABLE X 32 IN.) BACK TO BACK
		- 2 EACH W3-3 SIGN (48 IN. X 48 IN.) WITH "NEW" PANEL (30 IN. X 30 IN.) - GROUND MOUNT
		- 2 EACH W3-3 SIGN (36 IN. X 36 IN.) WITH "NEW" PANEL (30 IN. X 30 IN.) AND FLAGS - GROUND MOUNT
		- 2 EACH M95-1 SIGN "MD 24"(24" x 72") MAST ARM MOUNTED (DUAL - FACE).

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EA	MAINTENANCE OF TRAFFIC PER ASSIGNMENT
2001	1 CY	TEST PIT EXCAVATION
5001	330 LF	6 INCH YELLOW PERMANENT PREFORMED PAVEMENT MARKING TAPE
5002	170 LF	6 INCH WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE
5003	300 LF	12 INCH WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE
5004	150 LF	24 INCH WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE
6001	250 SF	4 INCH CONCRETE SIDEWALK
8000	2 SF	TO BE NEGOTIATED - REMOVE EXISTING GROUND MOUNT SIGNS
8001	12 CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8003	1 EA	FURNISH AND INSTALL BREAKAWAY PEDESTAL POLE (ANY SIZE)
8006	1 EA	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8011	14 EA	INSTALL SIGNAL HEAD (ANY TYPE)
8018	2 EA	INSTALL PUSHBUTTON AND SIGN
8020	1 EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT
8021	1540 LF	FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)
8022	110 LF	FURNISH AND INSTALL 1 INCH ELECTRICAL CONDUIT - GALVANIZED SLEEVE
8024	750 LF	FURNISH AND INSTALL 2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8027	30 LF	FURNISH AND INSTALL 3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8030	30 LF	FURNISH AND INSTALL 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8031	270 LF	FURNISH AND INSTALL 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8033	8 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8034	5 EA	FURNISH AND INSTALL GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
8040	2600 LF	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO 14 AWG)
8041	1650 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
8042	370 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO 14 AWG)
8043	300 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 3 CONDUCTOR (NO 14 AWG)
8044	320 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO 14 AWG)
8045	1200 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO 14 AWG)
8046	400 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO 12 AWG)
8049	425 LF	FURNISH AND INSTALL NO 6 AWG STRANDED BARE COPPER GROUND WIRE
8050	260 LF	FURNISH AND INSTALL ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG - THHN/THWN
8051	68 LF	FURNISH AND INSTALL WOOD SIGN SUPPORTS 4 INCH X 4 INCH
8053	50 SF	INSTALL GROUND MOUNTED SIGN
8054	133 SF	INSTALL OVERHEAD SIGN
8056	2 EA	FURNISH AND INSTALL 250 WATT HPS LUMINAIRE WITH PHOTOCELL
8057	2 EA	FURNISH AND INSTALL LIGHTING BRACKET ARM FOR TRAFFIC SIGNAL STRUCTURE
8069	30 LF	FURNISH AND INSTALL 1 INCH ELECTRICAL CONDUIT - GALVANIZED RISER
8070	1 EA	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIP (120/240V, 1 PHASE 3 WIRE SYST)
8082	2 EA	FURNISH AND INSTALL MAST ARM POLE AND 50 FOOT MAST ARM
8085	1 EA	FURNISH AND INSTALL MAST ARM POLE AND TWIN (50 FT/60 FT) OR (60 FT/50 FT) MAST ARMS

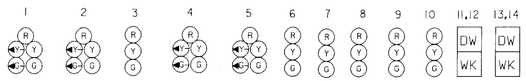
WIRING DIAGRAM



A,B,C,D,E,F,DD,EE	2-CONDUCTOR ELECTRICAL CABLE ALUMINUM SHIELDED (NO.14 A.W.G.)
G,K	2-CONDUCTOR ELECTRICAL CABLE (NO.14 A.W.G.)
J,L	3-CONDUCTOR ELECTRICAL CABLE (NO.14 A.W.G.)
H,O,Q,T,V	5-CONDUCTOR ELECTRICAL CABLE (NO.14 A.W.G.)
M,N,P,R,S,U	7-CONDUCTOR ELECTRICAL CABLE (NO.14 A.W.G.)
W,X	2-CONDUCTOR ELECTRICAL CABLE (NO.12 A.W.G.)
DD,EE,Y	1-CONDUCTOR ELECTRICAL CABLE (NO.4 A.W.G.)
Z,AA,BB,CC	STRANDED BARE COPPER GROUND WIRE (NO.6 A.W.G.)

LW - LOOP WIRE (NO.14 A.W.G.)
POF - PROPOSED OVERHEAD FEED BY BG & E

PHASE CHART



Phase 1 & 5	◀G-R	◀G-R	R	◀G-R	◀G-R	R	R	R	R	R	DW	DW	
1 & 5 Change	THE CONTROLLER MAY SKIP TO PHASES 1 & 6 OR 2 & 5 OR 2 & 6												
Phase 1 & 6	R	R	R	◀G-G	◀G-G	G	R	R	R	R	DW	DW	
1 Change	R	R	R	◀Y-G	◀Y-G	G	R	R	R	R	DW	DW	
Phase 2 & 5	◀G-G	◀G-G	G	R	R	R	R	R	R	R	DW	DW	
5 Change	◀Y-G	◀Y-G	G	R	R	R	R	R	R	R	DW	DW	
Phase 2 & 6	G	G	G	G	G	G	R	R	R	R	WK	DW	
Ped. Clear	G	G	G	G	G	G	R	R	R	R	FL/DW	DW	
2 & 6 Change	Y	Y	Y	Y	Y	Y	R	R	R	R	DW	DW	
Phase 4 & 8	R	R	R	R	R	R	G	G	G	G	DW	WK	
4 & 8 Change	R	R	R	R	R	R	Y	Y	Y	Y	DW	FL/DW	
4 & 8 Alt.	R	R	R	R	R	R	G	G	G	G	DW	WK	
Ped. Clear	R	R	R	R	R	R	G	G	G	G	DW	FL/DW	
4 & 8 Alt. Change	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	

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
MD 24 @ DELLCREST DRIVE/SPENCEOLA PKWY.
GENERAL INFORMATION SHEET

DRAWN BY: KIM WINKLER	F.A.P. NO. AC-STPG-0005(589)E	TS NO. 3782	SHEET NO.
CHECKED BY:	S.H.A. NO. AW2785N/B5N		
SCALE: 1"=20'	COUNTY: HARFORD	T.I.M.S. NO. C 901	2 OF 2
DATE: JUNE 1, 1998	LOG MILE: 12024011.87		