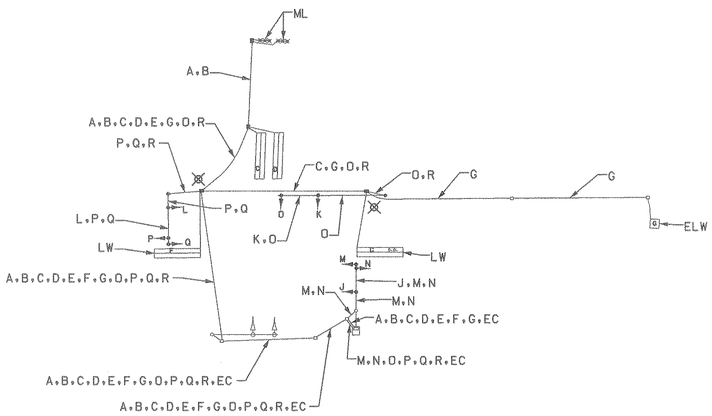
PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF MD 213 AND WHITEHALL RD. IN CECIL COUNTY.
MD 213 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION. THIS WORK IS NECESSITATED BY GEOMETRIC IMPROVEMENTS AND WILL INVOLVE THE REPLACEMENT OF THE SIGNAL STRUCTURE ON THE WEST SIDE OF MD 213, DETECTORS ON THE WEST LEG OF THE INTERSECTION AND THE INSTALLATION OF EXCLUSIVE-PERMISSIVE LEFT TURN PHASES FOR NORTHBOUND AND SOUTHBOUND MD 213.

CONTROLLER OPERATION

THE EXISTING EIGHT-PHASE, FULLY ACTUATED NEMA CONTROLLER HOUSED IN A BASE MOUNTED CABINET WILL BE USED. THE CONTROLLER CURRENTLY OPERATES AS A FOUR PHASE FULL-TRAFFIC-ACTUATED CONTROLLER
THIS OPERATION WILL BE CHANGED TO PROVIDE EXCLUSIVE-PERMISSIVE LEFT TURN PHASES FOR NORTHBOUND AND SOUTHBOUND MD 213

WIRING DIAGRAM



WIRING KEY

A-B	MICRO-LOOP PROBE
C-G	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) ALUMINUM SHIELDED
H	NOT USED
J-L	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
M-Q	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
R	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
LW	LOOP WIRE (NO. 14 A.W.G.)
ELW	EXISTING LOOP WIRE
EC	EXISTING CABLE
ML	MICRO-LOOP PROBE
⊗	GROUND ROD

EQUIPMENT LIST

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EA	MAINTENANCE OF TRAFFIC
2001	2 CY	TEST PIT EXCAVATION
5004	90 LF	FURNISH AND INSTALL 24 IN. HEAT APPLIED PERMANENT PREFORM THERMOPLASTIC PAVEMENT MARKING
5005	4 EA	FURNISH AND INSTALL PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING LETTER
5006	2 EA	FURNISH AND INSTALL PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING ARROWS
8001	10 CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8006	3 EA	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8016	2 EA	FURNISH AND INSTALL MICRO-LOOP PROBE WITH 500 FT. LEAD-IN
8021	530 LF	FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)
8023	50 LF	FURNISH AND INSTALL 1 IN. LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
8024	110 LF	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
8027	270 LF	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
8029	210 LF	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT-BORED

PHASE CHART

	1	2	3	4	5	6	7	8	9	10
PHASE 1 & 5	R <G-	R <G-	R	R <G-	R <G-	R	R	R	R	R
1 & 5 CHANGE	PHASE 1 & 5 CHANGE MAY CHANGE TO PHASE 1 & 6, 2 & 5 OR 2 & 6									
PHASE 1 & 6	G <G-	G <G-	G	R	R	R	R	R	R	R
1 & 6 CHANGE	G <Y-	G <Y-	G	R	R	R	R	R	R	R
PHASE 2 & 5	R	R	R	G <G-	G <G-	G	R	R	R	R
2 & 5 CHANGE	R	R	R	G <Y-	G <Y-	G	R	R	R	R
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R

EQUIPMENT LIST CONTINUED

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

ITEM NO.	QUANTITY	DESCRIPTION
8033	3 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8034	2 EA	FURNISH AND INSTALL GROUND ROD -3/4" X 10'
8040	1820 LF	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 A.W.G.)
8041	1800 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
8044	80 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G.)
8045	1250 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 A.W.G.)
8048	440 LF	FURNISH AND INSTALL NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
8060	1 EA	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT
8077	1 EA	FURNISH AND INSTALL MAST ARM POLE AND 50 FT. MAST ARM
8079	1 EA	FURNISH AND INSTALL MAST ARM POLE AND 70 FT. MAST ARM
----	4 EA	FURNISH AND INSTALL 12 IN., ONE-WAY, THREE-SECTION (R,Y,G) VEHICLE TRAFFIC SIGNAL HEAD - MAST ARM MOUNT
----	2 EA	FURNISH AND INSTALL 8 IN/12 IN., ONE-WAY, FIVE-SECTION (R,Y,YA,G,GA) VEHICLE TRAFFIC SIGNAL HEAD - MAST ARM MOUNT
----	2 EA	FURNISH AND INSTALL 12 IN., ONE-WAY, FIVE-SECTION (R,Y,YA, G,GA) VEHICLE TRAFFIC SIGNAL HEAD - MAST ARM MOUNT
----	2 EA	FURNISH AND INSTALL R10-12 SIGN (36 IN. X 42 IN.) MAST ARM MOUNT
----	1 EA	FURNISH AND INSTALL R3-5L SIGN (30 IN. X 36 IN.) MAST ARM MOUNT
----	4 EA	RELOCATE EXISTING SIGN
----	1 EA	FURNISH AND INSTALL FOUR CHANNEL TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIER
----	1 EA	FURNISH AND INSTALL SHIELD ASSEMBLY "NORTH/MD 213/ RT. ARROW" (36" X 75") GROUND MOUNT
----	1 EA	FURNISH AND INSTALL SHIELD ASSEMBLY "NORTH/MD 213/ LT. ARROW" (24" X 51") GROUND MOUNT

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION SHEET
MD 213 AND WHITEHALL ROAD

DRAWN BY: T.M.Z	F.A.P. NO.		TS NO. 3323 D	SHEET NO. 2 OF 2
CHECKED BY: K.W.S	S.H.A. NO.			
SCALE: NONE	COUNTY:	CECIL	T.I.M.S. NO. E 455	
DATE: 8-8-01	LOG MILE:	0702131 7.85		