Project Description

This project involves the installation of new pedestrian push button activated signal indicators for the south east and west legs of at the intersection of MD 351 and Crestwood Boulevard in Frederick County.

Controller Operation

An eight-phase fully actuated, solid state digital NEMA controller with intersection monitor and harness, battery back-up, and four-channel rack mounted time delay output loop detector amplifiers housed in a base mounted cabinet is existing at this location.

The intersection operates in a NEMA six(6) phase, full-traffic-actuated mode. An exclusive/permisive left turn phase is provided for the northbound and southbound approaches of MD 351. The eastbound and westbound Creastwood approaches shall operate in split phase. A pedestrian phase with pushbutton activation existing for the north leg of the intersection. Pedestrian phase with pushbutton activation shall be provided for the south, east and west leg of the intersection.

CONTACT PERSONS FOR DISTRICT 7 ARE AS FOLLOWS

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DISTRICT ENGINEER
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ASSISTANT DISTRICT ENGINEER - TRAFFIC
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MR. MARK FLACK
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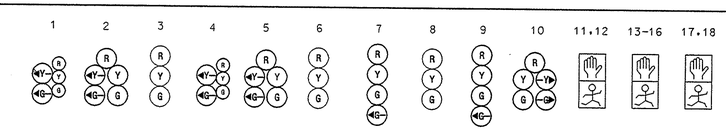
MR. EUGENE BAILEY
TEAM LEADER SIGN OPERATIONS
410-787-7676

MR. DAVE SCHWARTZ
SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE)
410-787-7668

Phase Chart



	1	2	3	4	5	6	7	8	9	10	11,12	13-16	17,18
Phase 1 & 5	◄G-R	◄G-R	R	◄G-R	◄G-R	R	R	R	R	R-G►	DW	DW	DW
1 & 5 Change	THE CONTROLLER MAY SKIP TO PHASES 1 & 6 OR 2 & 5 OR 2 & 6												
Phase 1 & 6	◄G-G	◄G-G	G	R	R	R	R	R	R	R	DW	DW	DW
1 & 6 Change	◄Y-G	◄Y-G	G	R	R	R	R	R	R	R	DW	DW	DW
Phase 2 & 5	R	R	R	◄G-G	◄G-G	G	R	R	R	R	DW	DW	DW
2 & 5 Change	R	R	R	◄Y-G	◄Y-G	G	R	R	R	R	DW	DW	DW
Phase 2 & 6	G	G	G	G	G	G	R	R	R	R	DW	DW	DW
2 & 6 Change	Y	Y	Y	Y	Y	Y	R	R	R	R	DW	DW	DW
2 & 6 Alt.	G	G	G	G	G	G	R	R	R	R	DW	WK	DW
Ped. Clear	G	G	G	G	G	G	R	R	R	R	DW	FL/DW	DW
2 & 6 Alt. Change	Y	Y	Y	Y	Y	Y	R	R	R	R	DW	DW	DW
Phase 3	R	R	R	R	R	R	◄G-G	G	R	R	DW	DW	DW
3 Change	R	R	R	R	R	R	Y	Y	R	R	DW	DW	DW
3 Alt.	R	R	R	R	R	R	◄G-G	G	R	R	DW	DW	WK
Ped. Clear	R	R	R	R	R	R	◄G-G	G	R	R	DW	DW	FL/DW
3 Alt. Change	R	R	R	R	R	R	Y	Y	R	R	DW	DW	DW
Phase 4	R	R	R	R	R	R	R	R	◄G-G	G	DW	DW	DW
4 Change	R	R	R	R	R	R	R	R	Y	Y	DW	DW	DW
4 Alt.	R	R	R	R	R	R	R	R	◄G-G	G	WK	DW	DW
Ped. Clear	R	R	R	R	R	R	R	R	◄G-G	G	FL/DW	DW	DW
4 Alt. Change	R	R	R	R	R	R	R	R	Y	Y	DW	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	DARK

EQUIPMENT LIST

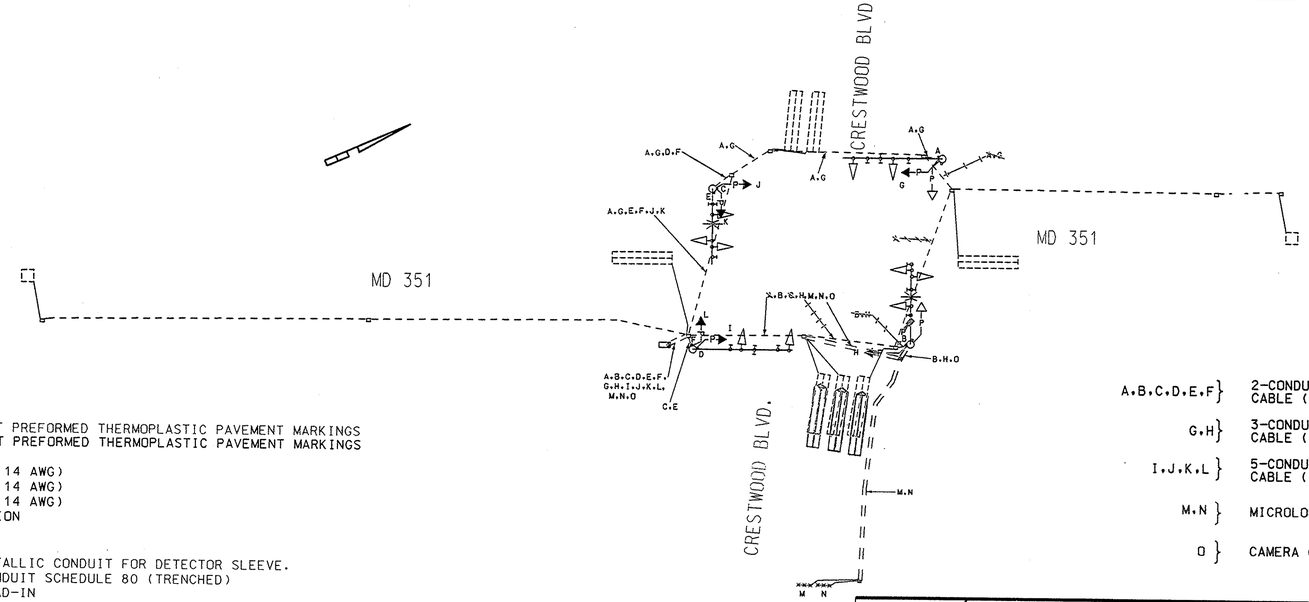
A. MATERIAL SUPPLIED BY SHA

CATEGORY CODE NO.	QUANTITY		DESCRIPTION
900000	1	EA.	VIDEO TRAFFIC DETECTION INTERFACE

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

CATEGORY CODE NO.	QUANTITY		DESCRIPTION
110320	1	LS	MAINTENANCE OF TRAFFIC
130850	1	LS	MOBILIZATION
203030	1	C.Y.	TEST PIT EXCAVATION
585624	34	L.F.	FURNISH AND INSTALL 24 INCH WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
585414	800	L.F.	FURNISH AND INSTALL 12 INCH WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
802145	2	EA.	ADJUST EXISTING HANDHOLE TO FINAL GRADE
861105	675	LF.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861106	375	LF.	FURNISH AND INSTALL ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 AWG)
861107	150	L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
860272	12	EA.	FURNISH AND INSTALL 12 INCH PEDESTRIAN SIGNAL HEAD SECTION
865001	2	EA.	FURNISH AND INSTALL PUSH BUTTON AND SIGN
811001	2	EA.	FURNISH AND INSTALL HANDHOLE (FRAME AND COVER).
805160	5	LF.	FURNISH AND INSTALL 1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE.
805125	200	L.F.	FURNISH AND INSTALL 2" POLYVINYL CHLORIDE ELECTRICAL CONDUIT SCHEDULE 80 (TRENCHED)
810550	2	EA.	FURNISH AND INSTALL MICROLOOP PROBE SET WITH 500 FT. LEAD-IN
800000	1	LS.	REMOVE AND DISPOSE OF EXISTING EQUIPMENT.
800000	1	EA.	FURNISH AND INSTALL VIDEO CAMERA
800000	1	EA.	FURNISH AND INSTALL 250 CAMERA TO CONTROL CABINET CABLE. ASSEMBLY.
805105	50	LF.	FURNICH AND INSTALL 2" POLYVINYL CHLORIDE ELECTRICAL CONDUIT (BORED).
800000	1	EA.	FURNISH AND INSTALL 3 " SCHEDULE 80 POLYVINYL CHLORIDE ELBOW.
800000	1	LS	REWIRE EXISTING EQUIPMENT
861108	1000	L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
861116	250	L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TRAY CABLE
837001	1	EA.	FURNISH AND INSTALL GROUND ROD
862102	45	L.F.	FURNISH AND INSTALL SAWCUT

C. MATERIAL TO BE REMOVED AND RETURNED TO SHA.
ALL REMOVED SIGNAL MATERIALS ARE TO BECOME THE PROPERTY OF THE CONTRACTOR.



REVISIONS
1 REDLINE #1
05/30/03

CENTURY ENGINEERING, INC.
CONSULTING ENGINEERS - PLANNERS
32 WEST ROAD
TOWSON, MARYLAND 21204

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION
MD 351 AND CRESTWOOD BOULEVARD
FREDERICK, MARYLAND

DRAWN BY: K.HUGHS	F.A.P. NO.		TS NO. 3488 A	SHEET NO. 42 OF 46
CHECKED BY: D.DICKERSON	S.H.A. NO.	BW-780-802-712		
SCALE: Not to Scale	COUNTY:	FREDERICK	T.I.P.S. NO. 0434	
DATE: MARCH, 1995	LOG MILE:	10035100.61		

o:*TRANSDWG*20053.06*351@Crestwood*e434gd02.dgn 05/15/03