

PROJECT DESCRIPTION

GENERAL
This project involves the reconstruction of the existing traffic control signal at MD 198 and Switzer Lane in Prince George's County. As part of this project, the northbound right turn from Switzer Lane will be signalized and a third lane will be added to eastbound MD 198. MD 198 is assumed to run in an east-west orientation. Phase 1 involves the construction of the northbound right turn lanes.

INTERSECTION OPERATIONS
The intersection will operate in a NEMA six phase, semi-actuated mode with the MD 198 approaches running concurrently. The Switzer Lane approaches will operate as split phases. Exclusive left turn phasing will be provided on the MD 198 approaches. An alternate pedestrian phase will be provided across the west leg of MD 198. During phase 1, the signal will operate in fixed-time.

CONTROLLER REQUIREMENTS
Install a full-traffic-actuated, eight phase controller with four (4), four channel, time-delay-output loop detector amplifier, intersection monitor with battery back-up for phone drop, telemetry module in a NEMA size "6" base mounted cabinet. The contractor shall deliver the cabinet to Mr. Ed Rodenhizer at 7491 Connelley Drive, Hanover MD 21076 at least 72 hours prior to installation for wiring and testing.

MAINTENANCE OF TRAFFIC

THE FOLLOWING WORK ZONE TRAFFIC CONTROL STANDARDS SHALL BE USED FOR THE PROJECT:

STANDARD NO. MD-104.44-01 (LEFT LANE CLOSURE)

STANDARD NO. MD-104.45-01 (RIGHT LANE CLOSURE)

STANDARD NO. MD-104.48-01 (INTERSECTION LEFT LANE/TURN BAY CLOSURE)

STANDARD NO. MD-104.02-01 (FLAGGING OPERATION)

STANDARD NO. MD-104.03-01 (INTERSECTION FLAGGING)

PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS:

MR. CHARLIE K. WATKINS
DISTRICT ENGINEER
(301) 513-7311

MR. JOE GECKLE
ASSISTANT DISTRICT ENGINEER - UTILITY
(301) 513-7350

MR. MAJID SHAKIB
ASSISTANT DISTRICT ENGINEER - TRAFFIC
(301) 513-7358

MR. RICHARD L. DAF, SR.
CHIEF, TRAFFIC OPERATIONS DIVISION
(301) 787-7630

MR. RANDY BROWN
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
(301) 531-7304

MR. BARRY KING
CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
(410) 787-4011

POWER COMPANY REPRESENTATIVE:

BALTIMORE GAS AND ELECTRIC
MR. JOE BRAUCH
7317 PARKWAY DRIVE SOUTH
HANOVER, MD 21076

PHASE CHART

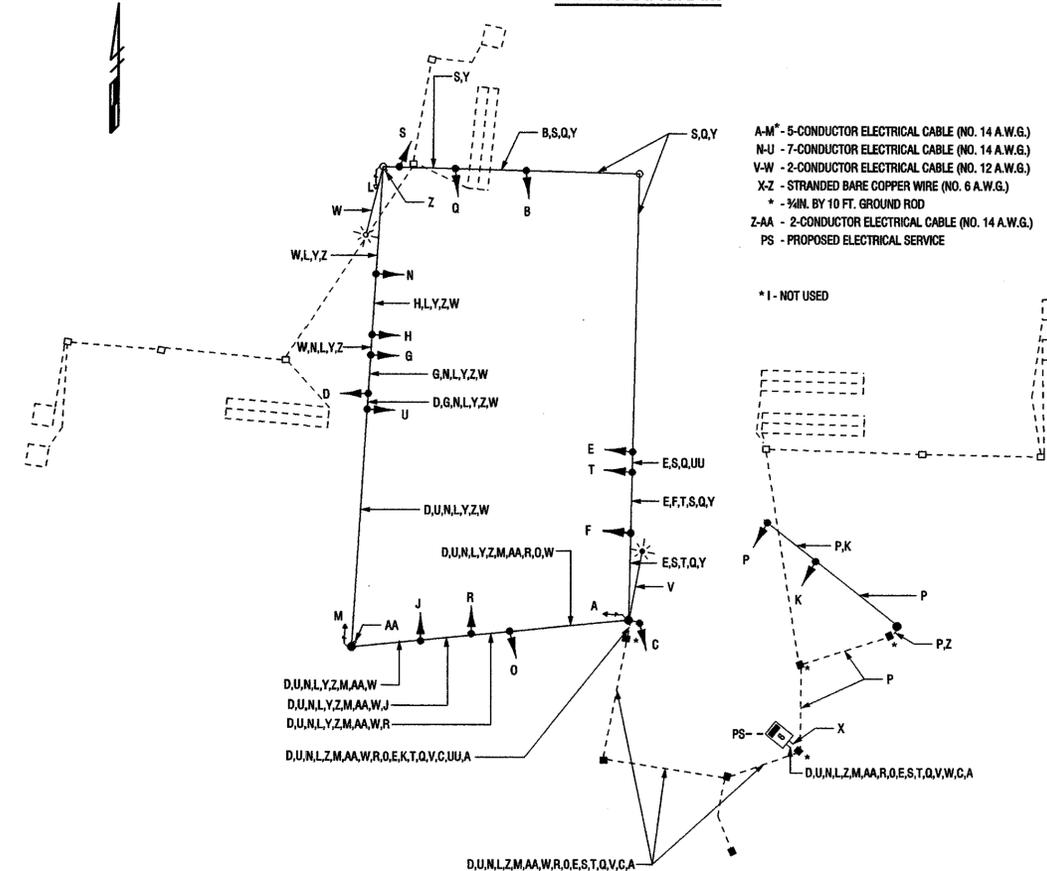
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
PHASE 1 + 5 *	G	G	R	R	G	G	R	R	R	R	R	G	G	R	R	R	R	DW	DW
1 + 5 CHANGE	Y	Y	R	R	Y	Y	R	R	R	R	R	SEE NOTE #2	SEE NOTE #2	R	R	R	R	DW	DW
PHASE 1 + 6	G	G	G	G	R	R	R	R	R	R	R	FL/R	FL/R	FL/R	R	R	R	DW	DW
1 + 6 CHANGE	Y	Y	Y	Y	R	R	R	R	R	R	R	FL/R	FL/R	FL/R	R	R	R	DW	DW
PHASE 2 + 5	R	R	R	R	G	G	G	G	R	R	R	G	G	R	R	R	R	DW	DW
2 + 5 CHANGE	R	R	R	R	Y	Y	Y	Y	R	R	R	Y	Y	Y	R	R	R	DW	DW
PHASE 2 + 6	R	R	G	G	R	R	G	G	R	R	R	FL/R	FL/R	FL/R	R	R	R	DW	DW
2 + 6 CHANGE	R	R	Y	Y	R	R	Y	Y	R	R	R	FL/R	FL/R	FL/R	R	R	R	DW	DW
PHASE 3	R	R	R	R	R	R	R	R	R	R	R	FL/R	FL/R	FL/R	G	G	G	DW	DW
3 CHANGE	R	R	R	R	R	R	R	R	R	R	R	FL/R	FL/R	FL/R	Y	Y	Y	DW	DW
PHASE 3 ALT.	R	R	R	R	R	R	R	R	R	R	R	FL/R	FL/R	FL/R	G	G	G	WALK	WALK
PED. CLEAR	R	R	R	R	R	R	R	R	R	R	R	FL/R	FL/R	FL/R	G	G	G	FL/DW	FL/DW
3 ALT. CHANGE	R	R	R	R	R	R	R	R	R	R	R	FL/R	FL/R	FL/R	Y	Y	Y	DW	DW
PHASE 4	R	R	R	R	R	R	R	R	R	R	R	G	G	R	R	R	R	DW	DW
4 CHANGE	R	R	R	R	R	R	R	R	R	R	R	Y	Y	Y	G	G	G	R	R
FLASHING OPERATION	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK

PHASING NOTES
① PHASE 1 + 5 MAY CHANGE TO PHASE 1 + 6 OR PHASE 2 + 5
② IF PHASE 1 + 5 CHANGES TO PHASE 2 + 5, THEN DISPLAY —G— FOR SIGNALS 12 AND 13 OTHERWISE DISPLAY FL/R

TIME OF DAY / DAY OF WEEK / HOLIDAY PHASING
SIGNALS 12, 13 AND 14 WILL OPERATE IN RED FLASH DURING WEEKDAY NON-PEAK HOURS, WEEKENDS AND HOLIDAYS.

THE SIGNALS WILL OPERATE AS SHOWN IN THE ABOVE PHASING CHART DURING WEEKDAY PEAK HOURS. PEAK HOURS ARE FROM 7 AM - 9 AM, AND 4 PM TO 6 PM.

WIRING DIAGRAM



EQUIPMENT LIST A

EQUIPMENT TO BE SUPPLIED BY THE SHA

900000	4 EACH	12 IN., ONE-WAY, THREE-SECTION (R,Y,G) BLACK POLYCARBIDE TRAFFIC SIGNAL HEAD - SPAN MOUNT	130850	LUMP SUM	MOBILIZATION
900000	1 EACH	12 IN., ONE-WAY, THREE SECTION (RA,YA,GA) BLACK POLYCARBIDE TRAFFIC SIGNAL HEAD - SPAN MOUNT	120500	LUMP SUM	MAINTENANCE OF TRAFFIC
900000	3 EACH	12 IN., ONE-WAY, FOUR-SECTION (R,Y,G,GA) BLACK POLYCARBIDE TRAFFIC SIGNAL HEAD - SPAN MOUNT	203030	2 CY	TEST PIT EXCAVATION
900000	2 EACH	12 IN., ONE-WAY, THREE SECTION (RA,YA,GA) BLACK TRAFFIC SIGNAL HEAD - MAST ARM MOUNT POLYCARBIDE	130840	LUMP SUM	CONSTRUCTION STAKEOUT
900000	1 EACH	12 IN., ONE-WAY, THREE SECTION (RA,YA,GA) BLACK TRAFFIC SIGNAL HEAD - POLE MOUNT POLYCARBIDE	801004	10 CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
900000	1 EACH	12 IN., ONE-WAY, TWO-SECTION (DON'T WALK, WALK) PEDESTRIAN SIGNAL HEAD WITH ADJUSTABLE BRACKET FOR STRAIN POLE MOUNTING AND CUTAWAY VISORS-POLE MOUNT	869102	212 LF	FURNISH AND INSTALL STEEL SPAN WIRE - 3/8 IN. DIAMETER
971017	1 EACH	EIGHT-PHASE FULL-TRAFFIC-ACTUATED, SOLID STATE DIGITAL CONTROLLER WITH INTERSECTION MONITOR WITH BATTERY BACK-UP FOR PHONE DROP, HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET	869101	288 LF	FURNISH AND INSTALL STEEL BOTTOM SPAN WIRE - 1/4 IN. DIAMETER
900000	4 EACH	FOUR-CHANNEL, TIME DELAY OUTPUT, LOOP DETECTOR AMPLIFIER	811001	7 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
		SHEET ALUMINUM SIGNS:	861116	182 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2-CONDUCTOR (NO. 12 A.W.G.)
		1 EACH - W9-2(4)L, "LANE ENDS MERGE LEFT", SIGN (42" X 30") - SPAN WIRE MOUNT	861104	917 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2-CONDUCTOR (NO. 14 A.W.G.)
		1 EACH - R10-6(1), "PROCEED ON FLASHING RED AFTER STOP", (60" X 36") - MAST ARM MOUNT	861107	1431 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 5-CONDUCTOR (NO. 14 A.W.G.)
		1 EACH - SHIELD ASSEMBLY (30" X 51") - POLE MOUNT	861108	1982 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 7-CONDUCTOR (NO. 14 A.W.G.)
		1 EACH - SHIELD ASSEMBLY (48" X 75") - POLE MOUNT	802501	504 LF	FURNISH AND INSTALL STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

EQUIPMENT LIST B

EQUIPMENT TO BE FURNISHED OR INSTALLED BY THE CONTRACTOR

866104	1 EACH	FURNISH AND INSTALL 20 FT. LIGHTING BRACKET FOR TRAFFIC SIGNAL STRUCTURE	805140	52 LF	FURNISH AND INSTALL 4 IN. SCHEDULE 80 PVC ELECTRICAL CONDUIT (TRENCHED)
838003	1 EACH	CONTROL AND DISTRIBUTION EQUIPMENT	837001	3 EACH	FURNISH AND INSTALL GROUND ROD - 3/4 IN. DIAMETER BY 10 FT. LENGTH
800000	1 EACH	FURNISH AND INSTALL 12 IN. BY 32 FT STRAIN POLE (TWO PLY), ANCHOR BOLTS WILL BE 2 1/4 IN. BY 96 IN.	800000	12 EACH	INSTALL SIGNAL HEAD
818036	1 EACH	FURNISH AND INSTALL MAST ARM POLE WITH 50 FT. MAST ARM	871117	1 EACH	INSTALL CONTROLLER AND CABINET BASE MOUNT
831010	1 EACH	FURNISH AND INSTALL 250 WATT HPSV LUMINAIRE WITH PHOTOCCELL	813015	62 SF	INSTALL SHEET ALUMINUM SIGNS
805125	78 LF	FURNISH AND INSTALL 2 IN. SCHEDULE 80 PVC ELECTRICAL CONDUIT (TRENCHED)	813006	1 EACH	RELOCATE EXISTING SIGN: 1 EACH - D3-2, DUAL FACED(16" X VAR.) - SPAN WIRE MOUNT
805135	32 LF	FURNISH AND INSTALL 3 IN. SCHEDULE 80 PVC ELECTRICAL CONDUIT (TRENCHED)	210030	3 EACH	REMOVE AND DISPOSE OF EXISTING FOUNDATION 12 IN. BELOW GRADE
805115	65 LF	FURNISH AND INSTALL 3 IN. SCHEDULE 80 PVC ELECTRICAL CONDUIT (BORED)	800000	LUMP SUM	REMOVE AND DISPOSE OF EXISTING EQUIPMENT
805118	34 LF	FURNISH AND INSTALL 4 IN. SCHEDULE 80 PVC ELECTRICAL CONDUIT (BORED)	800000	LUMP SUM	REMOVE AND DELIVER EXISTING CABINET, CONTROLLER AND SIGNAL POLES



GREENHORNE & O'MARA, INC.
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TAMPA, FLA - WEST PALM BEACH, FLA - RALEIGH, NC - ROCKVILLE, MD, GREENBELT, MD

REVISIONS		APPROVALS	
		ORIGINAL	
		ON	
		FILE	
Signal reconstruct due to geometric improvements KAR JMC June 1999		ASST. TRAFFIC ENGINEERING DESIGN DIVISION	
As-Built		ASST. DISTRICT ENGINEER, TRAFFIC	
February 6, 1997 Install split phase NB/SB Switzer Lane		CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION	
FJH DD BK TH		DIRECTOR, TRAFFIC & SAFETY	

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
Traffic Signal Plan - Phase 1
MD 198 at Switzer Lane

DRAWN BY: D. ANDREWS	F.A.P. NO. N/A	TS NO. 2110 C
CHECKED BY: S. RENZI	S.H.A. NO. 855-16001	SHEET NO.
SCALE: 1" = 20'	COUNTY: Prince George's	T.I.M.S. NO.
DATE: AUGUST 22, 1985	LOG MILE: 16001980.67	54 OF 65

(TSP-2)