PROJECT DESCRIPTION

I. GENERAL

This portion of the project involves the reconstruction of the existing traffic control signal at the intersection of MD 140 and Seven Mile Lane/Colonial Road in Baltimore County, Maryland. MD 140 is considered to run in a north/south direction.

II. INTERSECTION OPERATION

The intersection is to continue to operate in a NEMA four (4) phase, full traffic-actuated mode. The MD 140 through movements operate concurrently with concurrent pedestrian phases across the east and west legs of the intersection. The Seven Mile Lane/Colonial Road through movements operate concurrently with an actuated pedestrian phase across the north and south legs of the intersection.

The existing controller shall be utilized. Two 4-channel rack mounted time delay output loop detector amplifiers housed in a base mounted cabinet shall be installed at this location.

EQUIPMENT LIST

A. Equipment to be furnished by MD-SHA and installed by the Contractor.

Category Code No.	Quantity	Units	Description
900000	1	EA	Standard S.H.A. traffic base mounted cabinet with two 4-channel rack mounted loop detector amplifiers.
900000	58.92	SF	Sheet aluminum sign with mast arm mounting hardware: [1 each 30 in. x 42 in. R 3 -2 (Mod.)] [1 each 30 in. x 36 in. R 3-5(L)] [2 each 16 in. x Var. D-3(1) (Dual Faced)].
900000	3	SF	Sheet aluminum sign with pole mounting hardware: [4 each 9 in. x 12 in. R 10-4(1)].
900000	4	EA	Pedestrian Pushbutton assembly.

B. Equipment to be furnished and/or installed by the Contractor.
All equipment in this list shall have catalog cuts submitted for approval prior to installation.

Category CodeNo.	Quantity	Units	Description
203030	5	CY	Test pit excavation.
500000	440	LF	12 in. wide HAPPTPM - white for croswalk.
500000	95	LF	24 in. wide HAPPTPM - white for stop line
818036	2	EA	21 ft. steel mast arm pole with a 50 ft. mast arm [Note: four 1-3/4 in. x 90 in. anchor bolts].
818021	1	EA	21 ft. steel twin mast arm pole with 50 ft. mast arms [Note: four 1-3/4 in. x 90 in. anchor bolts].
868003	1	EA	10 ft. steel pedestal pole with break away transformer base [Note: four 1 in. x 40 in.anchor bolts].
800000	6	EA	8 in. black faced traffic signal head section with mast arm mounting hardware.
800000	24	EA	12 in. black faced traffic signal head section with mast arm mounting hardware.
800000	12	EA	12 in. pedestrian signal head section with pole mounting hardware.
800000	4	EA	12 in. pedestrian signal head section with post top mounting hardware.
871202	1	EA	Install base mounted cabinet/controller.
800000	4	EA	Install pedestrian pushbutton assembly.
800000	58.92	SF	Install sign - mast arm mounted.
800000	3	SF	Install sign - pole mounted.
811001	9	EA	Handhole.
862102	630	LF	Sawcut for signal loop detector.
862101	1915	LF	Loop detector wire (No. 14 A.W.G.) encased in flexible tubing.
861104	430	LF	2-conductor (aluminum shielded) electrical cable (No. 14 A.W.G.).
861105	320	LF	2-conductor electrical cable (No. 14 A.W.G.).
861107	565	LF	5-conductor electrical cable (No. 14 A.W.G.).
861108	945	LF	7-conductor electrical cable (No. 14 A.W.G.).
861117	25	LF	3-wire (No. 4 A.W.G.) electrical cable.
802501	265	LF	Bare copper stranded ground wire (No. 6 A.W.G.).
805160	40	LF	1 in. liquid tight flexible non-metalic conduit for loop detector sleeve.
800000	15	LF	2 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
805145	320	LF	2 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
800000	40	LF	3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched
805150	265	LF	3 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
800000	20	LF	4 in polyvinyl chloride [Schedule 80] electrical conduit - trenched.
805155	195	LF	4 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
801004	9.9	CY	Concrete foundation for traffic signal equipment.
837001	5	EA	Ground rod -5/8in. diameter x 10 ft. length.
838003	1	EA	Control and distribution equipment (120/240 V, one phase, three wire system) for a MD-SHA (Type B-7) overhead electrical service.
800000	2	EA	Cut, clean, and cap mast arm.
800000	4	EA	Microloop probe (set of three) with 500 ft. lead-in cable.
800000	Lump Sum	LS	Remove and disposal of existing traffic signal equipment.
800000	Lump Sum	LS	Paint all mast arm poles, mast arms, and pedestal poles National Park Service (NPS) Brown.

All mast arm poles, mast arms, and pedestal poles are to be painted National Park Service (NPS) Brown.

CONTACT LIST

The contact persons for District #4 are as follows:

Mr. Dave Malkowski
District Engineer
410-321-2800

Mr. Randall Scott
Assistant District Engineer - Traffic
410-321-2800

Mr. Joseph McMahon
Assistant District Engineer - Utility
410-321-2800

Mr. Dave Ramsey
Assistant District Engineer - Maintenance
410-321-2800

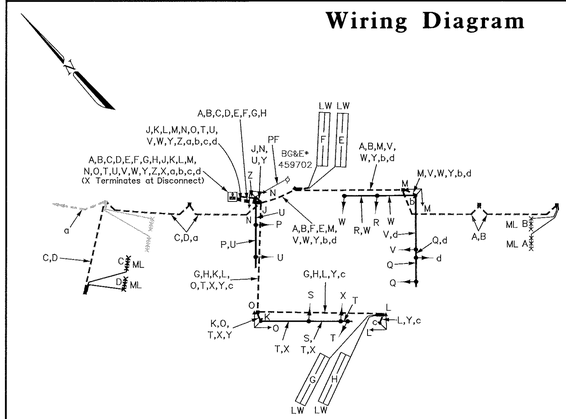
Mr. Richard L. Daff
Chief, Traffic Operations Division
410-787-7630

The Power Company Representative is:
Baltimore Gas and Electric Company
Mr. Bernie Thurman
7317 Parkway Drive South
Hanover, Maryland 21067
410-859-9030

Phase Chart

	22	1	2	3	4	5	6	7	8	9	10-13	14-15	
	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G			
Phase 2 & 6	G	G	G	G	G	R	R	R	R	R	WK	DW	
Ped Clearance	G	G	G	G	G	R	R	R	R	R	FL/DW	DW	
2 & 6 Change	Y	Y	Y	Y	Y	R	R	R	R	R	DW	DW	
Phase 4 & 8	R	R	R	R	R	G	G	G	G	G	DW	DW	
4 & 8 Change	R	R	R	R	R	Y	Y	Y	Y	Y	DW	DW	
Phase Alt 4 & Alt 8	R	R	R	R	R	G	G	G	G	G	DW	WK	
Ped Clearance	R	R	R	R	R	G	G	G	G	G	DW	FL/DW	
Alt 4 & Alt 8 Change	R	R	R	R	R	Y	Y	Y	Y	Y	DW	DW	
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	

Wiring Diagram



A E, B F, C G, D H — 2-Conductor Cable (Aluminum Shielded)

J, K, b, c — 2-Conductor Electrical Cable (No. 14 A.W.G.)

L, M, N, O, Q, R, S — 5-Conductor Electrical Cable (No. 14 A.W.G.)

T, U, V, W, X, d — 7-Conductor Electrical Cable (No. 14 A.W.G.)

Y — Bare Copper Ground Wire (No. 6 A.W.G.)

Z — 3-Wire (No. 4 A.W.G.) for Traffic Signal Electrical Service

a — 12-Pair Voice Grade Telemetry Interconnect Cable (No. 19 A.W.G.) (Old Milford Mill Rd. - Seven Mile Ln./ Colonial Rd.)

LW — Loop Detector Wire (No. 14 A.W.G.) in Flexible Tubing

PF — Proposed Overhead Electrical Service By BGE.

✕ — Proposed Grounding Rod

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MDOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
(General Information)

MD 140 at Seven Mile Lane / Colonial Road

LOG MILE • 03014000.09

DATE: December 2, 1999					
DRAWN BY: FJH/JES	F.A.P. NO.	N/A	PLAN SHEET NO.:	SHEET NO.
CHK. BY:	S.H.A. NO.	BA3035183	3020B-GI	18 of 21
SCALE: N/A	COUNTY:	Baltimore		

8/98 0.38 0.0 J:\DP\BGE\HWY\026\CZ\026\01.DGN