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 Naylors Lane 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 three (3) phase, full-traffic-actuated mode. The MD 140 through movements operate concurrently. The Naylors Lane movement operates alone.

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. base mounted cabinet, and two 4-channel rack mounted loop detector amplifiers.
900000	16	SF	Sheet aluminum sign with mast arm mounting hardware: [2 each 16 in. x Var. D-3(1)].

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 Code No.	Quantity	Units	Description
203030	3	CY	Test pit excavation.
500000	95	LF	24 in. wide HAPPTPM - white for stop line.
818041	2	EA	21 ft. steel mast arm pole with 60 ft. mast arm [Note: four 2 in. x 90 in. anchor bolts].
800000	18	EA	12 in. black faced traffic signal head section with mast arm mounting hardware.
800000	3	EA	8 in. black faced traffic signal head section with mast arm mounting hardware.
800000	16	SF	Install sign - mast arm mount.
871202	1	EA	Install base mounted cabinet/controller.
811001	7	EA	Handhole.
862102	400	LF	Sawcut for signal loop detector.
862101	990	LF	Loop detector wire (No. 14 A.W.G.) encased in flexible tubing.
861104	20	LF	2-conductor (aluminum shielded) electrical cable (No. 14 A.W.G.).
861107	90	LF	5-conductor electrical cable (No. 14 A.W.G.).
861108	570	LF	7-conductor electrical cable (No. 14 A.W.G.).
861117	40	LF	3-wire (No. 4 A.W.G.) electrical cable.
802501	140	LF	Bare copper stranded ground wire (No. 6 A.W.G.).
805160	35	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.
805105	5	LF	2 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
805145	60	LF	2 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
800000	15	LF	3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
805115	55	LF	3 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
805150	425	LF	3 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
800000	10	LF	4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
805155	85	LF	4 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
801004	10.55	CY	Concrete foundation for traffic signal equipment.
837001	3	EA	Ground rod - ¾in. 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	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.

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

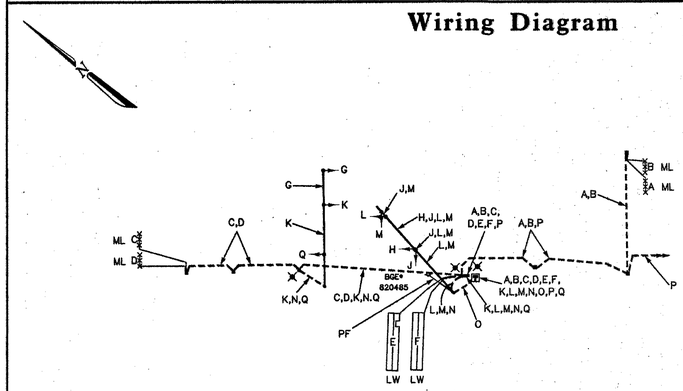
Mr. Richard L. Daff
Chief, Traffic Operations Division
410-787-7630

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

Phase Chart

	1	2	3	4	5	6	7	
	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	R	R	G	←
2 & 6 Change	Y	Y	Y	Y	R	R	Y	→
Phase 4	R	R	R	R	G	G	R	↑
4 Change	R	R	R	R	Y	Y	R	↑
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/Y	↑ ↓

Wiring Diagram



A, B, C, D — Microloop Probe Lead-in cable

E, F — 2-Conductor Cable (Aluminum Shielded)

G, H, J — 5-Conductor Electrical Cable (No. 14 A.W.G.)

K, L, M, Q — 7-Conductor Electrical Cable (No. 14 A.W.G.)

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

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

P — 12-Pair Voice Grade Telemetry Interconnect Cable (No. 19 A.W.G.) (Naylors La. - Old Court Rd. Run)

ML — Microloop Probe

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

PF — Proposed Overhead Electrical Service By BGE

X — Proposed Grounding Rod

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SIG1.DGN

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

MD 140 at Naylors Lane

DATE: December 7, 1999				LOG MILE • 03014001.52	
DRAWN BY: JES/FJH	F.A.P. NO.	SEE TITLE SHEET	PLAN SHEET NO.:	SHEET NO.	
CHK. BY:	S.H.A. NO.	BA3035183	2345A-GI	31 of 81.	
SCALE: N/A	COUNTY:	Baltimore			

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