PROJECT DESCRIPTION

I. GENERAL

This project involves the installation of a new traffic control signal at the intersection of MD 710 (Ordnance Road) and George Bachman Park Entr./Home Depot Entr. and Interconnect cable along MD 710 from Bay Meadow Dr./Costco Entr. to George Bachman Park Entr. /Home Depot Entr. in Anne Arundel County, Maryland. MD 710 (Ordnance Road) is considered to run in an east/west direction.

II. INTERSECTION OPERATION

The intersection is to operate in a NEMA six (6) phase, full-traffic-actuated mode. There will be an exclusive/permissive left turn phase for both the east and westbound movements of MD 710. The MD 710 through movements will operate concurrently. The George Bachman Park/Home Depot Entr. movements will operate concurrently.

An eight phase, full-traffic-actuated, solid state digital controller with telemetry for I/C, and three 4-channel rack mounted time delay output loop detector amplifiers housed in a base mounted cabinet are to 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
9086	1	EA	Cabinet with telemetry (system cabinet), size 6.
9089	44.75	SF	Flat sheet aluminum sign - yellow,orange, or silver. 2 Ea - 36 in. x 42 in. R 10-12 sign with mast arm mounting hardware. 1 Ea - 42 in. x 30 in. W9-2(4) sign with mast arm mounting hardware. 1 Ea - 30 in. x 36 in R 3-5 (L) sign with mast arm mounting hardware. 1 Ea - 30 in. x 36 in. R 3-5(R) sign with mast arm mounting hardware.
9090	56.0	SF	Flat sheet aluminum sign - blue or green. 2 Ea - 48 in. x 48 in. W 3-3 "NEW" sign for ground mounting. 2 Ea - 24 in. x 72 in. M 95-1 sign with mast arm mounting hardware.
9097	4	EA	Sign hardware - 24 in. form tube.
9098	5	EA	Sign hardware - 30 in. form tube.

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
1001	2	EA	Maintenance of traffic per assignment.
2001	3	CY	Test pit excavation.
5001	120	LF	5 in. yellow HAPPTPM.
5002	90	LF	5 in. white HAPPTPM.
5004	155	LF	24 in. wide HAPPTPM.
5005	1	LF	HAPPTPM letter - "ONLY".
5006	2	EA	HAPPTPM arrow - Left.
5007	430	LF	Remove existing pavement markings - any width
5008	1	EA	Remove existing pavement marking arrow.
8016	4	EA	Microloop probe set with 500 ft. lead-in.
8020	1	EA	Install controller and cabinet - base mount.
8021	740	LF	Sawcut for signal loop detector.
8023	45	LF	1 in. liquid tight flexible non-metic conduit - sleeve.
8024	505	LF	2 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
8026	40	LF	2 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
8027	30	LF	3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
8029	40	LF	3 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
8030	20	LF	4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
8031	295	LF	4 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
8033	12	EA	Electrical handhole.
8034	3	EA	Ground rod -3/4in. diameter x 10 ft. length.
8040	2225	LF	Loop detector wire encased in flexible tubing (No. 14 A.W.G.)
8041	545	LF	Electrical cable - 2-conductor (aluminum Shielded).
8044	120	LF	Electrical cable - 5-conductor (No. 14 A.W.G.).
8045	1325	LF	Electrical cable - 7-conductor (No. 14 A.W.G.).
8046	360	LF	Electrical cable - 2-conductor (No.12 A.W.G.).
8048	20	LF	Electrical cable - 1-conductor No. 4 A.W.G. - THHN/THWN.
8049	200	LF	Stranded bare copper ground wire (No. 6 A.W.G.).
8051	81	LF	Wood sign supports 4 in. x 6 in.
8052	32.0	SF	Install ground mounted sign.
8053	68.75	SF	Install overhead sign.
8055	2	EA	250 watt HPS luminaire with photo cell.
8056	2	EA	20 ft. light bracket arm for traffic signal structure.
8060	1	EA	Remove/dispose of existing material per assignment.
8066	1	EA	Control and distribution equipment (120/240 V, one phase, three wire system) for a type B-6 underground electrical service.
8080	1	EA	Mast arm pole and twin 50 ft. mast arms with anchor bolts.
8082	1	EA	Mast arm pole and 70 ft. and 50 ft. mast arms with anchor bolts.
8084	30	EA	12 in vehicular traffic black faced signal head section. (mast arm mount).
8085	6	EA	8 in. vehicular traffic black faced signal head section. (mast arm mount).
8087	2	EA	Cut, clean, and cap mast arm.
Neg.	Lump Sum	LS	Selective tree trimming.

CONTACT LIST

The contact persons for District #5 are as follows:

Mr. Paul Armstrong
District Engineer
410-481-5450

Mr. Lawerance Elliot
Assistant District Engineer - Traffic
410-841-5450 Ext. 41

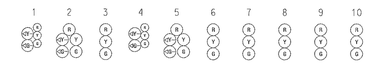
Mr. John Mays
Assistant District Engineer - Utility
410-841-5450 Ext. 30

Mr. Chuck George
Assistant District Engineer - Maintenance
410-841-5461

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

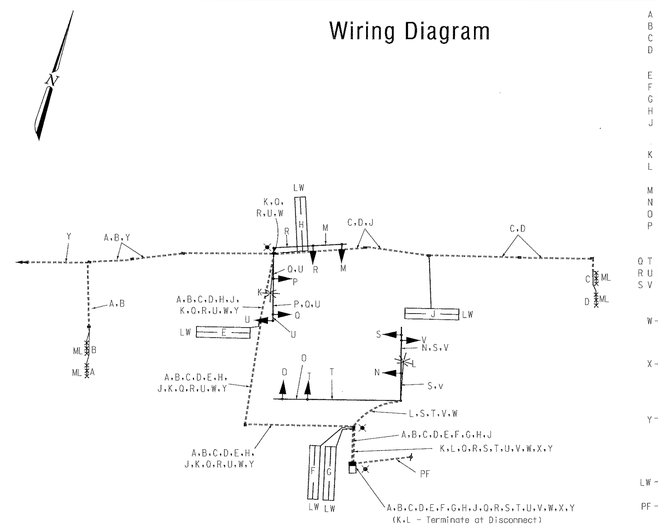
The Power Company Representative is:
Baltimore Gas and Electric Company
Mr. Bernie Thurman
7317 Parkway Drive South
Hanover, Maryland 21076
410-859-9070

Phase Chart



Phase 1 & 5	R ◄G—	R ◄G—	R	R ◄G—	R ◄G—	R	R	R	DW	DW
1 & 5 Change to Phase 1 & 6 or Phase 2 & 5 or Phase 2 & 6										
Phase 1 & 6	G ◄G—	G ◄G—	G	R	R	R	R	R	R	R
1 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 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

Wiring Diagram



A, B, C, D — Micro-loop Detector Lead-in Cable

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

K, L — 2-Conductor Tray Cable (No. 12 A.W.G.)

M, N, O, P — 5-Conductor Electrical Cable (No. 14 A.W.G.)

Q, T, R, U, S, V — 7-Conductor Electrical Cable (No. 14 A.W.G.)

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

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

Y — 12-Pair Voice Grade Telemetry Interconnect Cable (No. 19 A.W.G.) (George Bachman Park/Home Depot - Bay Meadow Drive/Costco Run)

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

PF — Proposed Underground Electrical Service By BGE

ML — Micro-loop Detector

Proposed Grounding Rod

The Traffic Group
The Traffic Group, Inc.
410-931-6600
Fax 410-931-6601

APPROVALS

TEAM LEADER, TRAFFIC ENGINEERING DESIGN DIVISION

ASST. CHIEF TRAFFIC ENGINEERING DESIGN DIVISION

CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION

DIRECTOR, TRAFFIC & SAFETY

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
(General Information Plan)
MD 710 (Ordnance Road) at George Bachman Park Entr./Home Depot Entr.

DRAWN BY: Frank Hoeckel	F.A.P. NO. N/A	TS NO. 4013	SHEET NO. 2 OF 3
CHECKED BY:	S.H.A. NO. AH083E010,B500		
SCALE: N/A	COUNTY: Anne Arundel	T.I.M.S. NO. D780	
DATE: June 21, 2000	LOG MILE:		

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