PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of an existing traffic control signal at the intersection of US 1 (Washington Blvd) and Amberton Drive / Hillside Drive in Howard County, Maryland. US 1 is considered to run in a north/south direction.

Intersection modifications consist of widening along the median on Amberton Drive for a left turn lane. The existing steel pole and mast arm will need to be removed in the median on Amberton Drive and replace on the east leg of the intersection.

II. INTERSECTION OPERATION

The intersection shall be modified to operate in a NEMA six (6) phase, full-traffic-actuated mode. There is an exclusive/permissive left turn phase for both the north and southbound movement of US 1. The US 1 through movements will operate concurrently. The Amberton Drive/Hillside Drive movements will be modified to operate in a side street split mode.

The existing cabinet with controller are to be utilized.

EQUIPMENT LIST

A. S.H.A. furnished equipment material.

None.

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

Quantity	Units	Specification Section	Description
Lump Sum	LS	108	Mobilization.
Lump Sum	LS	104	Maintenance of traffic.
1	EA	818	27 ft. steel mast arm pole with a 60 ft. mast arm
2	EA	814	12 in., one-way, three section L.E.D. (R,Y,G) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
3	EA	814	12 in., one-way, four section L.E.D. (R,Y,G,GA) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
1	EA	813	30 in. x 36 in. R 3-6(L) sign with mast arm mounting hardware.
1	EA	813	30 in. x 36 in. R 3-5(L) sign with mast arm mounting hardware.
1	EA	813	24 in. x 51 in. Shield Assembly with pole mounting hardware.
1	EA	813	36 in. x 75 in. Shield Assembly with pole mounting hardware.
1	EA	----	Detector amplifier 4-channel rack mounted.
1	CY	205	Test pit excavation.
190	LF	815	Sawcut for signal loop detector.
630	LF	810	Loop detector wire (No. 14 A.W.G.) encased in flexible tubing.
385	LF	810	2-conductor (aluminum shielded) electrical cable (No. 14 A.W.G.).
50	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
745	LF	810	7-conductor electrical cable (No. 14 A.W.G.).
235	LF	804	Bare copper stranded ground wire (No. 6 A.W.G.).
5	LF	805	1 in. liquid tight flexible non-metallic conduit for loop detector sleeve.
20	LF	805	3 in. polyvinyl chloride (Schedule 80) electrical conduit - trenched.
4.65	CY	801	Concrete foundation for traffic signal equipment.
1	EA	804	Ground rod - 5/8 in. diameter x 10 ft. length.
34	LF	549	24 in. wide HAPPTPM - white for stop line.
4	EA.	----	Remove existing R10-12 mast arm sign
Lump Sum	LS	----	Remove and dispose of existing signal equipment.
Lump Sum	LS	----	As-built for S.H.A. (on CADD).

CONTACT LIST

The contact persons for District #7 are as follows:

Mr. John Concannon
Assistant District Engineer - Traffic
301-624-8140

Ms. Andrea Abend
Assistant District Engineer - Utility
301-624-8115

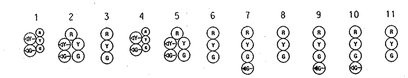
Mr. Raymond Johnson
Assistant District Engineer - Maintenance
301-624-8105

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

Mr. Ed Radenhizer
Supervisor, Signal Shop
410-787-7650

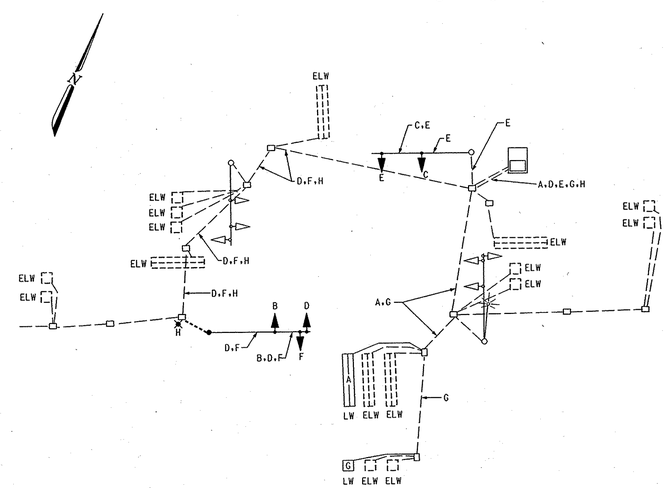
The Power Company Representative is:
Baltimore Gas and Electric Company
Mr. Keith Moyle
7317 Parkway Drive South
Hanover, Maryland 21076
410-859-9070

Phase Chart



	1	2	3	4	5	6	7	8	9	10	11
Phase 1 & 5	R G	R G	R	R G	R G	R	R	R	R	R	R
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	R
1 Change	G Y	G Y	G	R	R	R	R	R	R	R	R
Phase 2 & 5	R	R	R	G G	G G	G	R	R	R	R	R
5 Change	R	R	R	G Y	G Y	G	R	R	R	R	R
Phase 2 & 6	G	G	G	G	G	G	R	R	R	R	R
2 & 6 Change	Y	Y	Y	Y	Y	Y	R	R	R	R	R
Phase 3	R	R	R	R	R	R	G G	G	R	R	R
3 Change	R	R	R	R	R	R	Y	Y	R	R	R
Phase 4	R	R	R	R	R	R	R	R	G G	G G	G
4 Change	R	R	R	R	R	R	R	R	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	FL/R

Wiring Diagram



A, G } 2-Conductor Cable (Aluminum Shielded)

B, C } 5-Conductor Electrical Cable (No. 14 A.W.G.)

D, E, F } 7-Conductor Electrical Cable (No. 14 A.W.G.)

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

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

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

✱— Proposed Grounding Rod

Revision " C"

The Traffic Group

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

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
(General Information Plan)
US 1 at Amberton Drive / Hillside Drive

DRAWN BY: B. Kilian	F.A.P. NO. N/A	TS NO. 1873CGI	SHEET NO.
CHECKED BY:	S.H.A. NO. BW996M82		
SCALE: N/A	COUNTY: Howard	T.I.M.S. NO. H967	2 OF 2
DATE: October, 25, 2006	LOG MILE: 13000107.78		

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