PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of the existing traffic control signal at the intersection of MD 28 and Diamondback Dr./Broschart Rd. in Montgomery County, Maryland. MD 28 is considered to run in a east/west direction.

II. INTERSECTION OPERATION

The intersection will be modified to operate in a NEMA six (6) phase, semi-traffic-actuated mode. There will be an exclusive left turn phase for the westbound movement of MD 28. The MD 28 through movements will operate concurrently with a concurrent pedestrian movement across the north and south legs of the intersection. There will be an exclusive/permissive left turn phase for the southbound movement of Diamondback Dr. The Diamondback Dr./Broschart Rd. through movements will operate concurrently with an actuated pedestrian movement across the west leg of the intersection.

The existing cabinet/controller will be utilized.

Two additional 2-channel loop detector amplifiers are to be installed into the existing cabinet.

EQUIPMENT LIST

A. Approved S.H.A. equipment to be purchased by the Developer 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
1	EA	818	12 in. x 32 ft. steel strain pole (Note: four 2-1/4 in. x 96 in. anchor bolts).
8	EA	814	12 in., one-way, three section (R,Y,G) black faced adjustable traffic signal head with span wire mounting hardware and tunnel visors.
2	EA	814	12 in., one-way, three section (RA,YA,GA) black faced adjustable traffic signal head with span wire mounting hardware and tunnel visors.
1	EA	814	12 in. one-way, five section (R,Y,YA,G,GA) black faced adjustable traffic signal head with span wire mounting hardware and tunnel visors.
1	EA	814	12 in./8 in. one-way, five section (12 in. YA,GA/8 in. R,Y,G) black faced adjustable traffic signal head with span wire mounting hardware and tunnel visors.
1	EA	814	12 in., two-way, two section (symbolic DW, WK) adjustable pedestrian signal head with pole mounting hardware and cut-away visors.
2	EA	813	30 in. x 36 in. R 3-5(L) sign with span wire mounting hardware.
1	EA	813	36 in. x 42 in. R 10-12 sign with span wire mounting hardware.
1	EA	813	9 in. x 12 in. R 10-3C sign with post mounting hardware.
1	EA	817	Pedestrian pushbutton assembly.
2	EA	---	2-channel shelf mounted loop detector amplifier.

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.

Quantity	Units	Specification Section	Description
Lump Sum	LS	108	Mobilization.
Lump Sum	LS	104	Maintenance of traffic.
2	CY	205	Test pit excavation.
6	EA	811	Handhole.
1250	LF	815	Sawcut for signal loop detector.
4500	LF	810	Loop detector wire (No. 14 A.W.G.) encased in flexible tubing.
1840	LF	810	2-conductor (aluminum shielded) electrical cable (No. 14 A.W.G.).
200	LF	810	2-conductor electrical cable (No. 14 A.W.G.).
1100	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
475	LF	810	7-conductor electrical cable (No. 14 A.W.G.).
180	LF	804	Bare copper stranded ground wire (No. 6 A.W.G.).
350	LF	819	3/8 in. steel span wire.
60	LF	805	1 in. liquid tight flexible non-metalic conduit for loop detector sleeve.
80	LF	805	2 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
120	LF	805	4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
180	LF	805	4 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
4.65	CY	801	Concrete foundation for traffic signal equipment.
1	EA	804	Ground rod - 3/4 in. diameter x 10 ft. length.
320	LF	556	12 in. wide HAPPTPM - white for crosswalk.
200	LF	556	24 in. wide HAPPTPM - white for stop line.
6	EA	813	Relocate existing overhead mounted signs.
1	EA	---	Elbow into existing foundation.
440	LF	---	Remove existing pavement markings by grinding.
Lump Sum	LS	---	Removal of existing traffic signal equipment.
Lump Sum	LS	---	Relocation of existing I/C cable.
Lump Sum	LS	---	As-built for S.H.A. [on CADD].

CONTACT LIST

The contact persons for District #3 are as follows:

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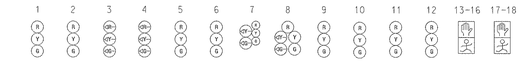
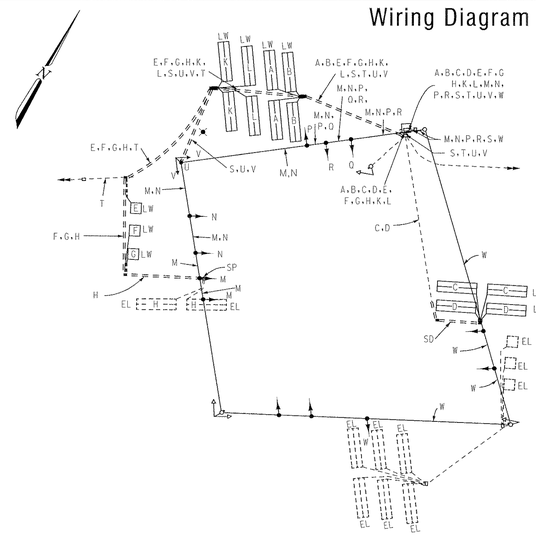
410-787-7630

Phase Chart



	1	2	3	4	5	6	7	8	9	10	11	12	13-16	17-18	
Phase 2 & 5	R	R	◄G—	◄G—	G	G	R	R	R	R	R	R	DW	DW	
5 Change	R	R	◄Y—	◄Y—	G	G	R	R	R	R	R	R	DW	DW	
Phase 2 & 6	G	G	◄R—	◄R—	G	G	R	R	R	R	R	R	WK	DW	
Ped Clearance	G	G	◄R—	◄R—	G	G	R	R	R	R	R	R	FL/DW	DW	
2 & 6 Change	Y	Y	◄R—	◄R—	Y	Y	R	R	R	R	R	R	DW	DW	
Phase 4 & 7	R	R	◄R—	◄R—	R	R	G ◄G—	G ◄G—	G	R	R	R	DW	DW	
7 Change	R	R	◄R—	◄R—	R	R	G ◄Y—	G ◄Y—	G	R	R	R	DW	DW	
Phase 4 & 8	R	R	◄R—	◄R—	R	R	G	G	G	G	G	G	DW	DW	
4 & 8 Change	R	R	◄R—	◄R—	R	R	Y	Y	Y	Y	Y	Y	DW	DW	
Phase Alt 4 & 8	R	R	◄R—	◄R—	R	R	G	G	G	G	G	G	DW	WK	
Ped Clearance	R	R	◄R—	◄R—	R	R	G	G	G	G	G	G	DW	FL/DW	
Alt 4 & 8 Change	R	R	◄R—	◄R—	R	R	Y	Y	Y	Y	Y	Y	DW	DW	
Flashing Operation	FL/Y	FL/Y	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	

Wiring Diagram



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

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

R, W — 7-Conductor Electrical Cable (No. 14 A.W.G.)

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

T — Existing Interconnect Cable (Diamondback Dr./Broschart Rd. - Great Senenca Highway Run)

U — 2-Conductor Electrical Cable (No. 14 A.W.G.)

EL — Existing Loop Detector Wire

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

SP — Splice Aluminum Shielded Cable To Existing Loop Wire

✱ — Proposed Grounding Rod

The Traffic Group
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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 28 at Diamondback Drive/Broschart Road

DRAWN BY:	Frank Hoeckel	F.A.P. NO.	N/A	TS NO. 4058-GI	SHEET NO. 2 OF 2
CHECKED BY:	[illegible]	S.H.A. NO.	BW996M82		
SCALE:	N/A	COUNTY:	Montgomery	T.I.M.S. NO. E127	
DATE:	December 13, 2000	LOG MILE:			

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