PROJECT DESCRIPTION

GENERAL

This project involves the modification of the traffic signal at the intersection of MD 146 (Dulaney Valley Road) at Dulaney Plaza/Towsontown Center in Baltimore County.

INTERSECTION OPERATION

The intersection is to operate in a NEMA 6 phase, full-traffic-actuated mode. There will be an exclusive left turn phase for the north and southbound movement of MD 146 (Dulaney Valley road. The through movements will operate concurrently with a actuated audible pedestrian movement across the south leg of the intersection. The Dulaney Plaza and Towsontown Center through movements will operate concurrently with an actuated pedestrian movement across the east leg of the intersection.

[1] Existing ~~cabinet~~/controller to be utilized.
APS 2-wire central control unit to be installed in cabinet.

Existing cabinet to be exchanged with new cabinet, equipment to be installed include video detection interface, telemetry interface equipment, and two (4) four-channel loop detector amplifiers.

EQUIPMENT LIST

A. Equipment to be supplied by the administration.
None.

B. Equipment to be furnished and/or installed by the contractor.

Quantity	Units	Specification Section	Description
Lump Sum	LS	108	Mobilization.
Lump Sum	LS	104	Maintenance of traffic.
[2] 3 ~~4~~	EA	818	5 ft. steel pedestal pole with break away transformer base.
2	EA	814	16 in., one-way, one section L.E.D. (Countdown Indications) adjustable pedestrian signal head with pole mounting hardware and cut-away visors.
1	EA	814	16 in., two-way, one section L.E.D. (Countdown Indications) adjustable pedestrian signal head with pole mounting hardware and cut-away visors.
1	EA	817	Central Control Unit for audible pedestrian pushbutton.
4	EA	817	Audible pedestrian pushbutton assembly with a 9 in. x 15 in. R10-3(I) pushbutton sign.
4	CY	205	Test pit excavation.
[1] 130 ~~450~~	LF	815	Sawcut for signal loop detector.
[1] 450 ~~1545~~	LF	810	Loop detector wire (No. 14 A.W.G.) encased in flexible tubing.
~~200~~	~~LF~~	~~810~~	~~2-conductor (aluminum shielded) electrical cable (No. 14 A.W.G.).~~
700	LF	810	2-conductor electrical cable (No. 14 A.W.G.).
400	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
60	LF	804	Bare copper stranded ground wire (No. 6 A.W.G.).
[1] 5 ~~15~~	LF	805	1 in. liquid tight flexible non-metallic conduit for loop detector sleeve.
60	LF	805	2 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
4	CY	801	Concrete foundation for traffic signal equipment.
[2] 520 ~~310~~	LF	549	12 in. wide HAPPTPM - white for crosswalk.
135	LF	549	24 in. wide HAPPTPM - white for stop line.
[2] 375 ~~175~~	LF	---	Remove existing pavement marking by grinding.
1	LS	---	Remove and dispose of existing signal equipment.
[1] 1	EA	816	Standard S.H.A. NEMA 5 pole mounted cabinet, with video detection interface, telemetry interface equipment, and two (4) four-channel loop detector amplifiers [Note: Cabinet shall be purchased from Econolite and delivered to the S.H.A. signal shop for wiring and testing. Contact Mr. Ed Rodenhizer (410) 787-7650].
[1] 1	EA	---	Video Detection Camera and cable, with side pole mounting bracket. (1 - 100 LF.)
[1] LUMP SUM	LS	---	Police Control during cabinet swap.
[2] 1	EA	805	Handhole.
[2] 45	LF	810	4 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted.
[2] 1	EA	818	Pushbutton pedestrian pole per MD Standard No. 801.01-01.
[2] LUMP SUM	LS	---	Relocated existing interconnect cable (approx. 100 LF).

SPECIAL NOTES

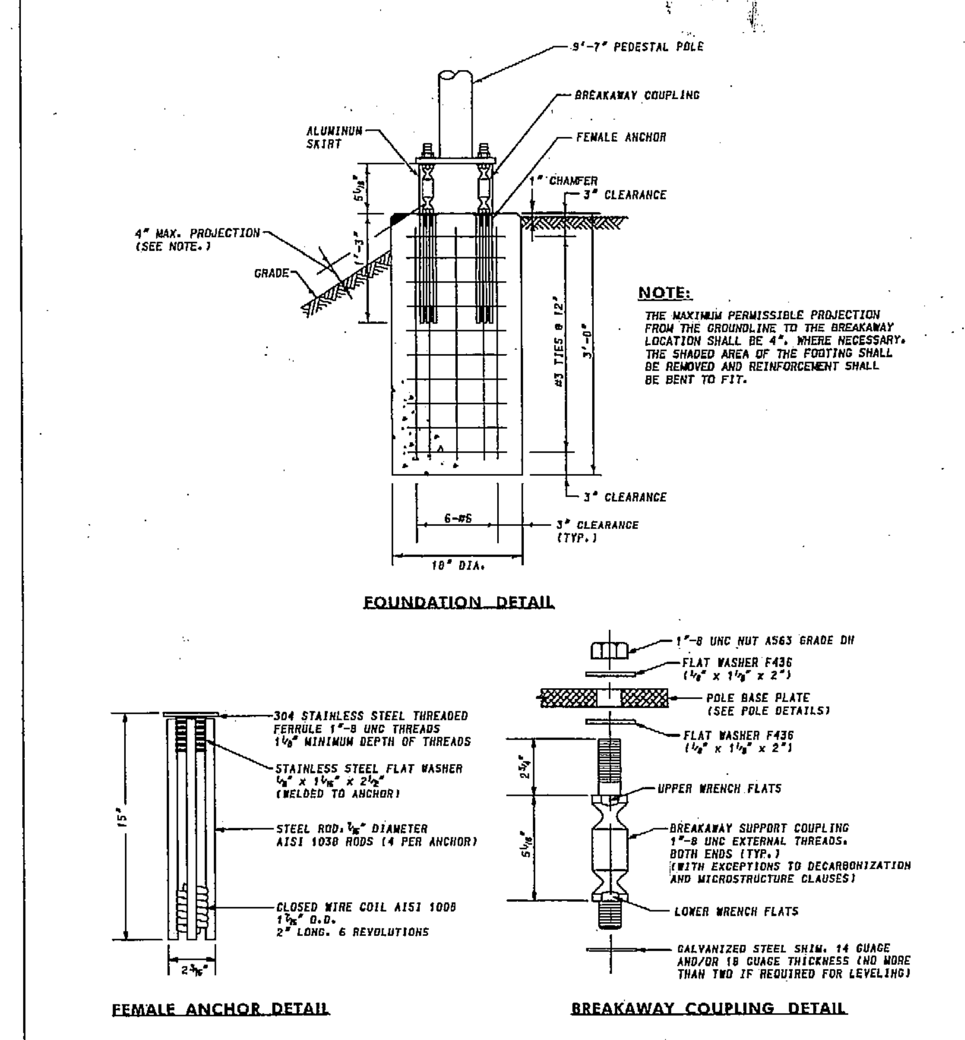
PROJECT CONTACTS:

1. The following contact persons for this project are as follows:
Randall Scott, Assistant District Engineer - Traffic
Phone: (410)-321-2781
David Creighton, Assistant District Engineer - Construction
Phone: (410)-321-2821
Steven Marciszewski, Assistant District Engineer - Maintenance
Phone: (410)-321-2761
Michael Pasquariello, Utility Engineer
Phone: (410)-321-2841
Richard Daff, Chief - Traffic Operations
Phone: 410-788-7630
Edward Rodenhizer, Signal Operations
Phone: (410)-787-7652

Phase Chart

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE 1 AND 5	←G–	←G–	R	R	←G–	←G–	R	R	R	R	R	R	DW	DW	DW	DW
1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6																
PHASE 1 AND 6	←G–	←G–	G	G	←R–	←R–	R	R	R	R	R	R	DW	DW	DW	DW
1 AND 6 CHANGE	←Y–	←Y–	G	G	←R–	←R–	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 AND 5	←R–	←R–	R	R	←G–	←G–	G	G	R	R	R	R	DW	DW	DW	DW
5 CHANGE	←R–	←R–	R	R	←Y–	←Y–	G	G	R	R	R	R	DW	DW	DW	DW
PHASE 2 AND 6	R	R	G	G	R	R	G	G	R	R	R	R	WK	WK	DW	DW
PED CLEARENCE	←R–	←R–	G	G	←R–	←R–	G	G	R	R	R	R	FL/DW	FL/DW	DW	DW
2 AND 6 CHANGE	←R–	←R–	Y	Y	←R–	←R–	Y	Y	R	R	R	R	DW	DW	DW	DW
PHASE 4 AND 8	←R–	←R–	R	R	←R–	←R–	R	R	G	G	G	G	DW	DW	DW	DW
4 AND 8 CHANGE	←R–	←R–	R	R	←R–	←R–	R	R	Y	Y	Y	Y	DW	DW	DW	DW
PHASE 4 ALT AND 8 ALT	←R–	←R–	R	R	←R–	←R–	R	R	G	G	G	G	DW	DW	WK	WK
PED CLEARANCE	←R–	←R–	R	R	←R–	←R–	R	R	G	G	G	G	DW	DW	FL/DW	FL/DW
4 ALT AND 8 ALT CHANGE	←R–	←R–	R	R	←R–	←R–	R	R	Y	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/ ←R–	FL/ ←R–	FL/Y	FL/Y	FL/ ←R–	FL/ ←R–	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK

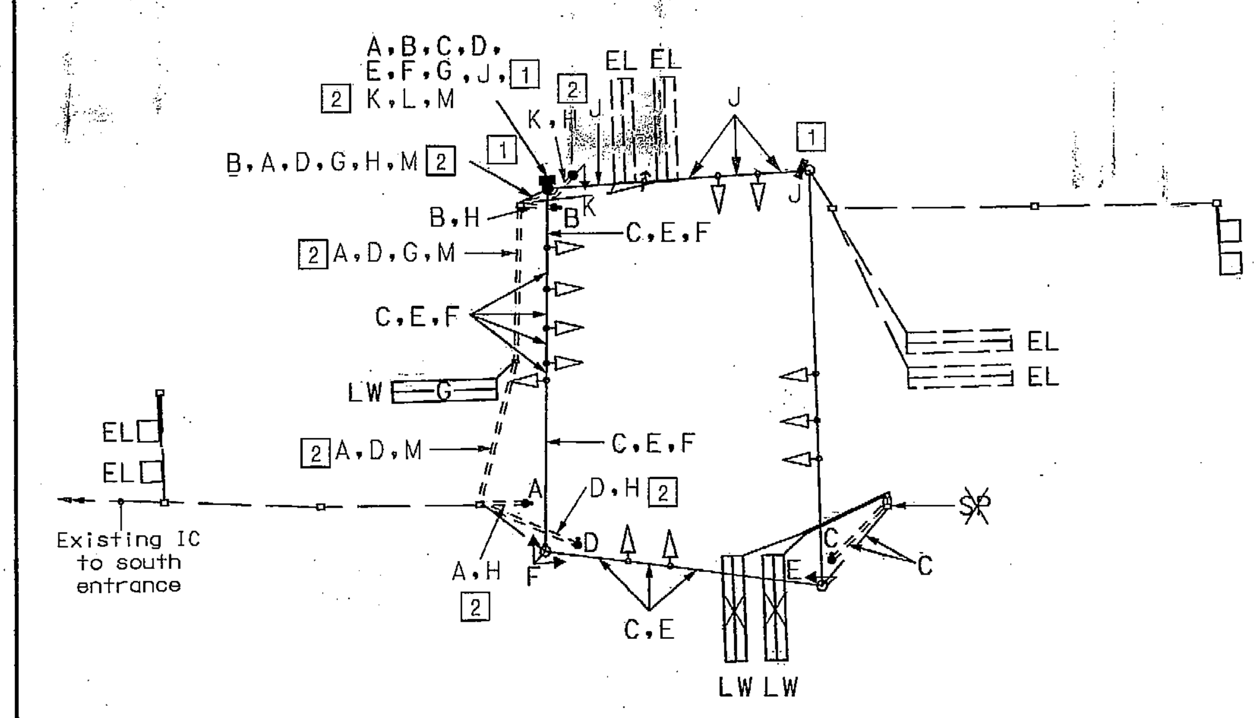
DETAIL



SPECIFICATION 818	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAY AND INCIDENTAL STRUCTURES
APPROVED ______ DEPUTY CHIEF ENGINEER - TRAFFIC DATE		SIGNAL STRUCTURE FOUNDATIONS FOR PUSHBUTTON AND PEDESTRIAN SIGNAL POLE
APPROVAL - SHA REVISIONS: APPROVAL 5-17-07, REVISED, REVISED, REVISED	APPROVAL - FEDERAL HIGHWAY ADMINISTRATION: APPROVAL 5-2-07, REVISED, REVISED, REVISED	STANDARD NO. MD 801.01-01

REFERENCED ON: MD 818.16-01

Wiring Diagram



A, B, C, D — 2-Conductor Electrical Cable (No. 14 A.W.G.)

E, F, [2] K — 5-Conductor Electrical Cable (No. 14 A.W.G.)

G — 2-Conductor Cable (Aluminum Shielded)

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

[1] J — Video Detector Cable

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

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

[1] ✱ — ~~Splice Loop Wire To Existing Aluminum Shielded Cable~~

[2] M — Existing Interconnect Cable (North Entrance - South Entrance Run)

NOTE: Use existing 5-conductor for pedestrian signal heads to be replaced

Red-Line Revision [2]

SHA State Highway — MDOT-SHA O.O.T.S.

1-14-09

S.H.A. Approval Date

T.S.- 4574A-GI Log Mile-03014600.25

T.I.M.S. No.- 1533

The Traffic Group, Inc.
Suite H
9900 Franklin Square Drive
Baltimore, Maryland 21236
410-931-6600
1-800-583-8411
Fax 410-931-6601

BY: FBrownley

GEOMETRIC LEGEND
- EXISTING
- PROPOSED

UTILITY LEGEND
- SD — STORM DRAIN
- G — GAS MAIN
- W — WATER MAIN
- S — SEWER MAIN
- E — ELECTRIC CABLES
- A — AERIAL CABLES
- T — TELEPHONE CABLES
- F — FIBER-OPTIC

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 146 (Dulaney Valley Rd) @ Dulaney Plaza and Towson Town Centre North Entrance

GENERAL INFORMATION PLAN

SCALE N/A DATE Jaunary 14, 2009 CONTRACT NO. BW996M82

DESIGNED BY	F. Brownley	COUNTY	Baltimore
DRAWN BY	F. Brownley	LOGMILE	03014600.25
CHECKED BY		TIMS NO.	1533
FAP NO.	N/A	TOD NO.	

TS NO. 4574A-GI | DRAWING – OF | SHEET NO. 4 OF 4

PLOTTED: Tuesday, January 13, 2009 AT 02:49 PM
FILE: F:\2007\2007-0220\Dcs\Traffic Signal\Redline_pGI-MD146-Mall North Entr.dgn