

PROJECT DESCRIPTION

I. GENERAL

This portion of the project involves the installation of a new traffic control signal at the intersection of MD 228 (Berry Road) and Relocated Middletown Road/Ironwood Drive in Charles County, Maryland. MD 228 is considered to run in an east/west direction.

II. INTERSECTION OPERATION

The intersection is to operate in a NEMA five (5) phase, full-traffic-actuated mode. There will be an exclusive left turn phase for the westbound movement of MD 228. The MD 228 through movements will operate concurrently (No left turns will be permitted from eastbound MD 228). The Relocated Middletown Road/Ironwood Drive through movements will operate in a side street split phase mode.

The existing controller from the MD 228 and Middletown Road/Briarwood Drive intersection shall be relocated to the new eight phase base mounted cabinet with one 4-channel rack mounted time delay output loop detector amplifiers.

EQUIPMENT LIST

A. Approved S.H.A. equipment to be purchased by the Prime Contractor and installed by the Signal Contractor. All equipment in this list shall have catalog cuts submitted for approval prior to installation.

Quantity	Units	Specification Section	Description
1	EA	818	27 ft. steel mast arm pole with a 38 ft. mast arm.
1	EA	818	27 ft. steel mast arm pole with a 70 ft. mast arm.
1	EA	818	27 ft. steel twin mast arm pole with a 50 ft. and 80 ft. mast arms.
1	EA	816	Standard S.H.A. traffic signal base mounted cabinet, and one (4) four-channel loop detector amplifier [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]. Existing controller to be utilized.
3	EA	---	Video camera detection (To include necessary cable for installation).
3	EA	814	12 in., one-way, three section (R,Y,G,A) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
6	EA	814	12 in., one-way, three section (R,Y,G) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
2	EA	814	12 in., one-way, four section (R,Y,G,G) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
2	EA	814	12 in./8 in., one-way, four section (12 in. GA/ 8 in. R,Y,G) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
1	EA	813	30 in. x 30 in. R 3-2 sign with mast arm mounting hardware.
3	EA	813	30 in. x 36 in. R 3-5(L) sign with mast arm mounting hardware.
2	EA	813	30 in. x 36 in. R 3-6(L) sign with mast arm mounting hardware.
3	EA	813	16 in. x Var. D-3(1) sign with mast arm mounting hardware.
1	EA	813	16 in. x Var. D-3(1) (Dual faced) sign with mast arm mounting hardware.
2	EA	813	24 in. x 96 in. M95-1 sign with mast arm mounting hardware.
1	EA	813	48 in. x 96 in. D-3(3) sign for ground mounting.
1	EA	813	30 in. x 96 in. D-3(3) sign for ground mounting.
4	EA	---	Non-invasive probe (set of 3) with 750 ft. lead-in cable.
2	EA	806	15 ft. luminaire arm.
2	EA	806	250 W H.P.S. lamp and luminaire.

B. Equipment to be furnished and/or installed by the Signal 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.
4	CY	205	Test pit excavation.
12	EA	811	Handhole.
375	LF	810	2-conductor electrical tray cable (No. 12 A.W.G.).
700	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
1275	LF	810	7-conductor electrical cable (No. 14 A.W.G.).
15	LF	810	3-wire (No. 4 A.W.G.) electrical cable.
375	LF	804	Bare copper stranded ground wire (No. 6 A.W.G.).
750	LF	805	2 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
25	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
120	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - bored under roadway.
45	LF	805	4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
375	LF	805	4 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
13.20	CY	801	Concrete foundation for traffic signal equipment.
4	EA	804	Ground rod - 3/4 in. diameter x 10 ft. length.
1	EA	807	Control and distribution equipment (120/240 V, one phase, three wire system) for a MD-SHA type B-13 underground electrical service.
165	LF	556	24 in. wide HAPPTPM - white for stop line.
125	LF	812	4 in. x 6 in. wood sign support.
Lump Sum	LS	---	As-built for S.H.A. (on CADD).

CONTACT LIST

The contact persons for District #5 are as follows:

Mr. Paul Armstrong
District Engineer
410-841-5450

Mr. Lawrence Elliot
Assistant District Engineer - Traffic
410-841-1003

Mr. John Moya
Assistant District Engineer - Utility
410-841-5450

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

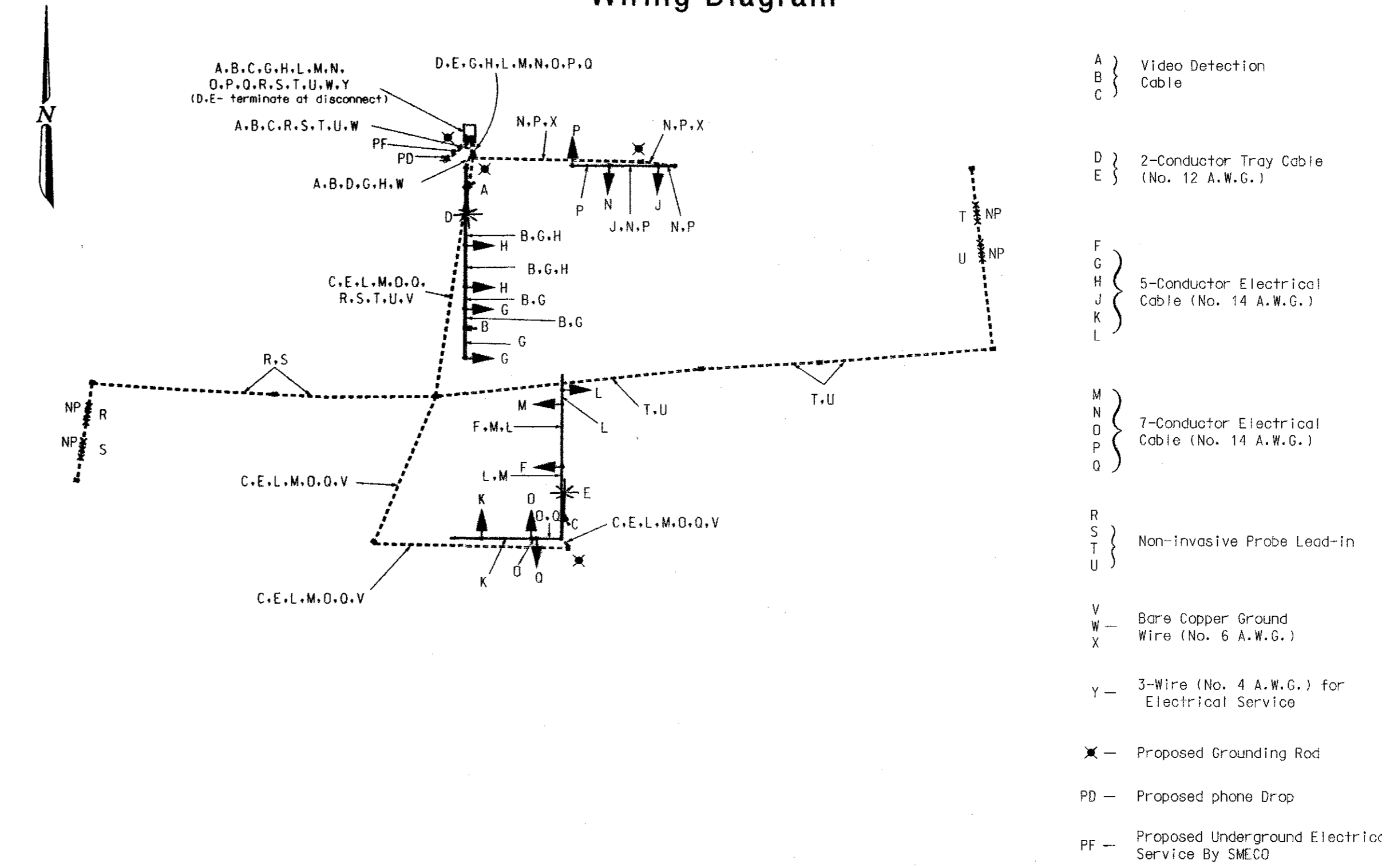
Mr. Richard L. Daff
Chief, Traffic Operations Division
410-787-7630

The Power Company Representative is:
Southern Maryland Cooperative, Inc. (SMECO)
Mr. Donnie Hopkins
P.O. Box 37
Prince Frederick, Maryland 20678
410-535-4400

Phase Chart

	1	2	3	4	5	6	7	8	9	10	11	12	13
Phase 2 & 5	R	R	←G	→G	←G	G	G	R	R	R	R	R	R
5 Change	R	R	←Y	→Y	←Y	G	G	R	R	R	R	R	R
Phase 2 & 6	G	G	←R	→R	←R	G	G	R	R	R	R	R	R
2 & 6 Change	Y	Y	←R	→R	←R	Y	Y	R	R	R	R	R	R
Phase 3	R	R	←R	→R	←R	R	R	←G	→G	G	R	R	R
3 Change	R	R	←R	→R	←R	R	R	Y	Y	Y	R	R	R
Phase 4	R	R	←R	→R	←R	R	R	R	R	R	←G	→G	G
4 Change	R	R	←R	→R	←R	R	R	R	R	R	Y	Y	Y
Flashing Operation	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R

Wiring Diagram



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)
MD 228 at Rel. Middletown Rd./Ironwood Dr.

DRAWN BY: F. Brownley	F.A.P. NO. N/A	TS NO. 3786A-GI
CHECKED BY: [Signature]	S.H.A. NO. BW996M82	SHEET NO.
SCALE: N/A	COUNTY: Charles	T.L.M.S. NO. C-588
DATE: November 27, 2001	LOG MILE: 9822007.57	2 OF 5

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