PROJECT DESCRIPTION

I. GENERAL

This portion of the project involves the installation of a new traffic control signal at the intersection of MD 235 and First Colony Blvd. in St. Mary's County, Maryland. MD 235 is considered to run in a north/south direction.

II. INTERSECTION OPERATION

The intersection is to operate in a NEMA five (5) phase, full-traffic-actuated mode. There will be exclusive turn phases for both the north and southbound movements of MD 235. The MD 235 through movements will operate concurrently along with a non-actuated pedestrian movement across the west leg of the intersection. The First Colony Blvd. movements will operate alone. There will be a firehouse pre-emption phase for both the north and southbound movements of MD 235.

An eight phase, full-traffic-actuated, solid state digital controller with intersection monitor and harness, battery back-up, and four 4-channel rack mounted time delay output loop detector amplifiers housed in a base mounted cabinet are to be installed at this location.

The existing interconnect cable shall be run through the new conduit to the new cabinet.

CONTACT LIST

The contact persons for District #5 are as follows:

Mr. Paul D. Armstrong
District Engineer
410-841-5450

Mr. Larry Elliott
Assistant District Engineer - Traffic
410-841-5450

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

Mr. Charles George
Assistant District Engineer - Maintenance
410-841-5450

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

The Power Company Representative is:
Southern Maryland Electric Cooperative
Mr. Jay Bushell
District Manager
P.O. Box 128
Leonardtown, Maryland 20650
301-475-5831

EQUIPMENT LIST

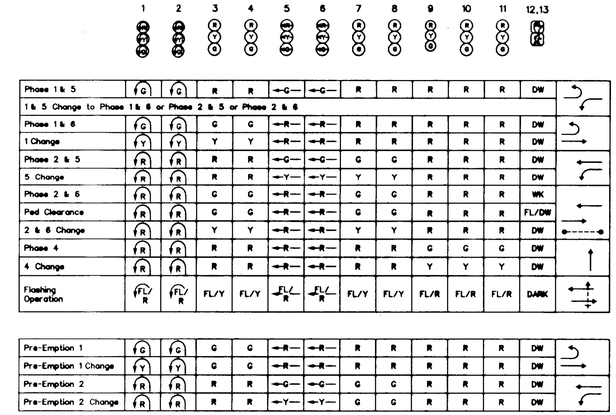
A. Equipment to be supplied by MD-S.H.A.

Category Code *	Quantity	Units	Specification Section	Description
971017	1	EA	816	Standard S.H.A. traffic signal controller, base mounted cabinet, and four 4-channel loop detector amplifiers [Note: Controller and cabinet shall be supplied by Econolite and delivered to the S.H.A. signal shop for wiring and testing. Contact Mr. Ed Rodenhizer (410) 787-7650].
960022	6	EA	814	12 in., one-way, three section (R,Y,G) adjustable traffic signal head with mast arm mounting hardware and tunnel visors.
960023	4	EA	814	12 in., one-way, three section (RA,YA,GA) adjustable traffic signal head with mast arm mounting hardware and tunnel visors.
960021	1	EA	814	8 in., one-way, three section (R,Y,G) adjustable traffic signal head with mast arm mounting hardware and tunnel visors.
960068	1	EA	814	12 in., one-way, two section (Symbolic DW,WK) adjustable pedestrian signal head with pole mounting hardware and cut-away visor.
960048	1	EA	814	12 in, one-way, two section (Symbolic DW,WK) adjustable pedestrain signal head with post top mounting hardware and cut-away visor.
973023				
	7.5	SF	813	30 in. x 36 in. R 3-5(M) sign with mast arm mounting hardware.
	30	SF	813	30 in. x 36 in. R 3-5(L) sign with mast arm mounting hardware.
	7.5	SF	813	30 in. x 36 in. R 3-5(R) sign with mast arm mounting hardware.
	5	SF	813	24 in. x 30 in. R 4-7 sign for ground mounting.
	21.33	SF	813	16 in. x 96 in. D 3-(1) (Dual Faced) sign with mast arm mounting hardware.
	10.625	SF	813	30 in. x 51 in. Shield Assembly for pole mounting.
	50	SF	813	48 in. x 75 in. Shield Assembly for pole mounting.
	64	SF	813	48 in. x 48 in. W 3-3 "NEW" sign for ground mounting.

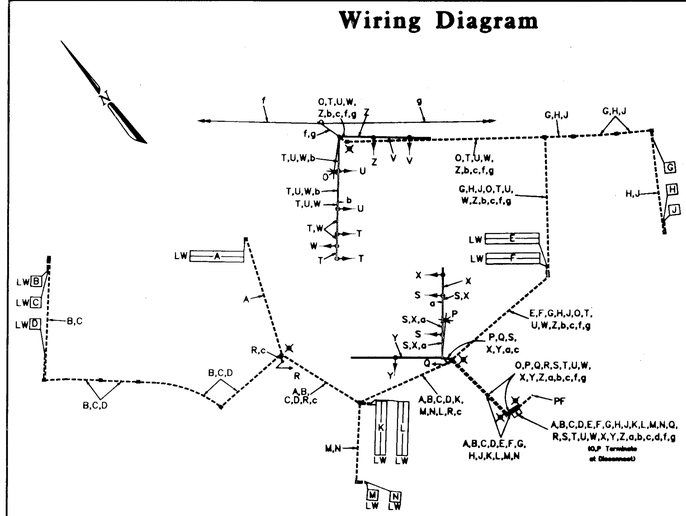
B. Equipment to be furnished and/or installed by the Contractor.
All equipment in this list shall have catalog cuts submitted for approval prior to installation.

Category Code *	Quantity	Units	Specification Section	Description
203030	4	CY	205	Test pit excavation.
585445	155	LF	500	24 in. wide HAPPTPM - white for stop line.
585443	225	LF	500	12 in. wide HAPPTPM - white for crosswalk.
811001	18	EA	811	Handhole.
862102	825	LF	815	Sawcut for signal loop detector.
862101	3325	LF	810	Loop detector wire (No. 14 A.W.G.) encased in flexible tubing.
861104	5200	LF	810	2-conductor (aluminum shielded) electrical cable (No. 14 A.W.G.).
861116	510	LF	810	2-conductor electrical cable (No. 12 A.W.G.).
861106	275	LF	810	3-conductor electrical cable (No, 14 A.W.G.).
861107	1025	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
861108	1105	LF	810	7-conductor electrical cable (No. 14 A.W.G.).
861117	25	LF	810	3-wire (No. 4 A.W.G.) electrical cable.
802501	465	LF	804	Bare copper stranded ground wire (No. 6 A.W.G.).
805160	60	LF	805	1 in. liquid tight flexible non-metalic conduit for loop detector sleeve.
805011	30	LF	805	1 in. galvanized steel electrical conduit for loop detector sleeve.
870116	875	LF	805	2 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
870118	185	LF	805	2 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
870119	275	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
870122	90	LF	805	4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
870124	150	LF	805	4 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
800000	1	EA	805	2 in. weatherhead.
801004	9.25	CY	801	Concrete foundation for traffic signal equipment.
837001	5	EA	804	Ground rod -5/8in. diameter x 10 ft. length.
838003	1	EA	807	Control and distribution equipment (120/240 V, one phase, three wire system) for a type B-13 underground electrical service.
801104	12	LF	812	4 in. x 4 in. wood sign support.
801106	164	LF	812	4 in. x 6 in. wood sign support.
800000	770	LF	---	Relocate existing interconnect cable.
818021	1	EA	818	27 ft. steel twin mast arm pole with two 50 ft. mast arms [Note: four 1 3/4in. x 90 in. anchor bolts].
866202	1	EA	818	27 ft. steel twin mast arm pole with 50 ft. and 70 ft. mast arms [Note: four 2 in. x 90 in. anchor bolts].
868003	1	EA	818	10 ft. steel pedestal pole with break away transformer base [Note: four 1 in. x 40 in. anchor bolts].
866104	2	EA	806	20 ft. luminaire arm.
831010	2	EA	806	250 W H.P.S. lamp and luminaire.
800000	495	LF	---	4-conductor electrical cable (No. 20 A.W.G.) (opticom detector).
800000	2	EA	---	3-M Opticom detector eye.
800000	196	SF	813	Install sheet aluminum sign - any type.
800000	14	EA	814	Install signal head - any type.
871117	1	EA	816	Install base mounted cabinet.

Phase Chart



Wiring Diagram



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

O P — 2-Conductor Tray Cable (No. 12 A.W.G.)

Q R — 3-Conductor Electrical Cable (No. 14 A.W.G.)

S T U V — 5-Conductor Electrical Cable (No. 14 A.W.G.)

W X Y Z — 7-Conductor Electrical Cable (No. 14 A.W.G.)

a b — 3-M Opticom Detector Cable

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

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

f — Existing Interconnect Cable ([Street Name] - First Colony Blvd. Run)

g — Existing Interconnect Cable (First Colony Blvd. - [Street Name] Run)

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

PF — Proposed Electrical Service By SMECO (To be determined in the field)

X — Proposed Grounding Rod

The Traffic Group
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Towson, Maryland 21204
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SIGPLAN.DGN

REDLINE REVISION ☐ DATE:

SD 10 of SD 10

MDOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
(General Information)

MD 235 at First Colony Blvd.

DATE: June 17, 1999				LOG MILE •	
DRAWN BY: J.E.S./FH	F.A.P. NO.	N/A	PLAN SHEET NO.:	SHEET NO.	
CHK. BY: M. Rook 6-24-99	S.H.A. NO.	SM768A23	(ts###)-GI	2 of 2	
SCALE: N/A	COUNTY:	St. Mary's			