PROJECT DESCRIPTION

GENERAL

This project involves the installation of a temporary traffic control signal with intersection street lighting at the intersection of MD 170 and the I-195 On Ramp in Anne Arundel County.

INTERSECTION OPERATION

This intersection is proposed to operate in a fully actuated mode with MD 170 southbound left turn lane operating in an exclusive / permissive phase.

A NEMA (3 phase) fully actuated controller housed in a base mounted cabinet with two- 4 channel rack mounted loop detector amplifiers shall be installed at this location.

SPECIAL NOTES

1. The following contact persons for District #5 are as follows:

   Mr. Paul D. Armstrong, District Engineer
   Phone: (410) 841-1000
   Mr. Lawrence E. Elliott, Assistant District Engineer-Traffic
   Phone: (410) 841-1000
   Mr. Chuck E. George, Assistant District Engineer-Maintenance
   Phone: (410) 841-1000
   Mr. John S. Mays, Assistant District Engineer-Utility
   Phone: (410) 841-1000
   Mr. Richard L. Daff, Sr., Chief Traffic Operations Division
   Phone: (410) 787-7630

2. Maintenance of traffic will be handled by the Contractor utilizing the following standard plates for traffic control: 105.00, 105.01, 105.02, 105.3, 105.101, 105.103, 105.105, 105.107, 105.109

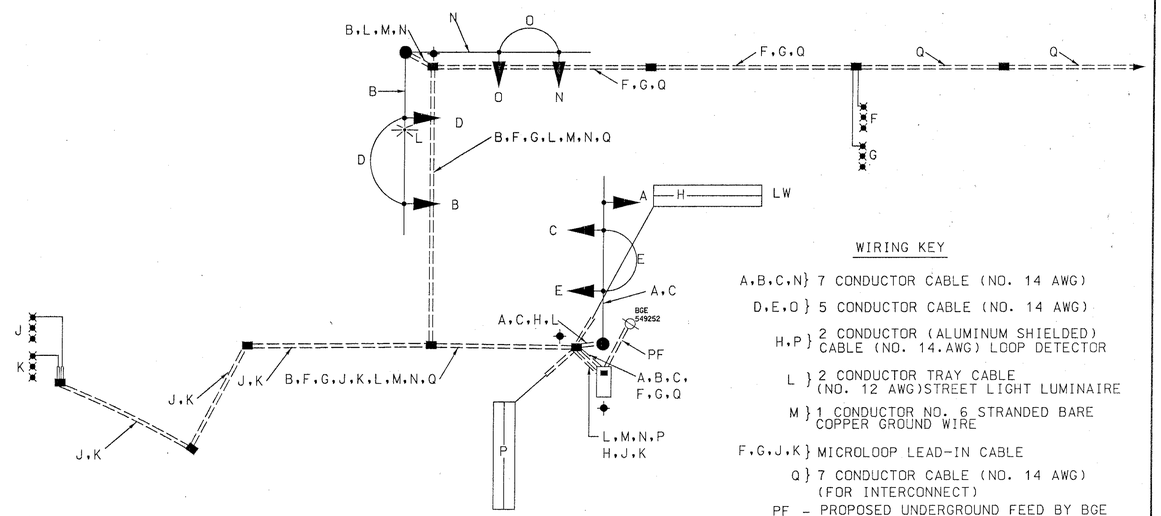
A. Equipment to be supplied by MD-SHA.

Item No.	Quantity	Unit	Specification Section	Description
9710017	1	EA	816	Eight phase (fully actuated) controller and cabinet - base mount
900000	2	EA	817	Four channel rack mounted loop detector amplifier
973023	102	EA	813	Sheet aluminum signs consisting of: 1 EA R10 - 12 (36" x 42") 2 EA W3 - 3 (36" x 36") 1 EA R10-6a (24" x 36") 2 EA R5-1 (36" x 36") 2 EA R1-2 (48" x 48"x48") 2 EA R5-1a (36" x 36") 1 EA R4-7 (30" x 36")

B. Equipment to be furnished and installed by the Contractor.

Item No.	Quantity	Unit	Specification Section	Description
203030	3	CY	205	Test pit excavation
585624	80	LF	556	Furnish and install 24 in. white Heat Applied Perm. Pref. Thermoplastic pavement markings
801004	7	CY	801	Furnish and install concrete for signal foundation
837001	3	EA	804	Furnish and install ground rod -3/4in. diameter x 10 ft.
800000	20	LF	805	Furnish and install 4 in. schedule 80 rigid PVC conduit - trenched
805118	150	LF	805	Furnish and install 3 in. schedule 80 rigid PVC conduit - bored
800000	30	LF	805	Furnish and install 3 in. schedule 80 rigid PVC conduit - trenched
800000	1000	LF	805	Furnish and install 2 in. schedule 80 rigid PVC conduit - trenched
800000	45	LF	805	Furnish and install 2 in. schedule 80 rigid PVC conduit - bored
805160	45	LF	805	Furnish and install 1 in. liquid tight flexible non-metallic conduit for detector wire sleeve
831010	1	EA	806	Furnish and install 250-watt high pressure sodium lamp and luminaire with photocell (Full Cutoff)
807205	1	EA	807	Furnish and install Control & Distribution Equipment
802501	160	LF	810	Furnish and install No. 6 AWG standard bare copper ground wire
861104	1650	LF	810	Furnish and install electrical cable - 2 conductor (aluminum shielded)
861107	60	LF	810	Furnish and install electrical cable - 5 conductor (No. 14 AWG)
861108	1550	LF	810	Furnish and install electrical cable - 7 conductor (No. 14 AWG)
862101	1039	LF	810	Furnish and install loop wire encased in flexible tubing (No. 14 AWG)
861116	270	LF	810	Furnish and install 2-conductor - tray cable (No. 12 AWG)
811001	9	EA	811	Furnish and install electrical handhole
801106	200	EA	812	Furnish and install wooden sign support 4" x 6" drilled
813014	91.5	SF	813	Install ground mounted signs
813015	10.5	SF	813	Install overhead sign for signals
800000	22	EA	814	Furnish and install 12 in. standard aluminum traffic signal head section
800000	3	EA	814	Furnish and install 8 in. standard aluminum traffic signal head section
862102	430	LF	815	Furnish and install sawcut for signal
871117	1	EA	816	Install eight phase (fully activated) controlles and cabinet - base mount.
800000	1	EA	818	Furnish and install a 27 ft. steel pole with twin 50 ft. mast arms
800000	1	EA	818	Furnish and install a 21 ft. steel pole with single 38 ft. mast arm
866103	1	EA	818	Furnish and install 20 ft. lighting arm on signal structure
800000	1	LS	SP	Removal and dispose of traffic signal equipment
800000	1	LS	SP	Removal and salvage of traffic signal equipment
800000	1	LS	SP	Delivery and salvage of traffic signal equipment
800000	4	EA	815	Furnish and install microloop probe set with 500 ft. lead-in cable.

WIRING DIAGRAM



WIRING KEY

A,B,C,N } 7 CONDUCTOR CABLE (NO. 14 AWG)

D,E,O } 5 CONDUCTOR CABLE (NO. 14 AWG)

H,P } 2 CONDUCTOR (ALUMINUM SHIELDED) CABLE (NO. 14.AWG) LOOP DETECTOR

L } 2 CONDUCTOR TRAY CABLE (NO. 12 AWG)STREET LIGHT LUMINAIRE

M } 1 CONDUCTOR NO. 6 STRANDED BARE COPPER GROUND WIRE

F,G,J,K } MICROLOOP LEAD-IN CABLE

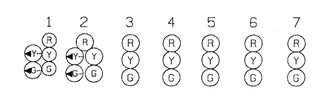
Q } 7 CONDUCTOR CABLE (NO. 14 AWG) (FOR INTERCONNECT)

PF - PROPOSED UNDERGROUND FEED BY BGE

LW - LOOP DETECTOR WIRE (NO. 14 AWG) IN FLEXIBLE TUBING

✦ - GROUND ROD

PHASE SEQUENCE CHART



	1	2	3	4	5	6	7
PHASE 2 AND 5	G ◄G-	G ◄G-	G	R	R	R	R
5 CHANGE	G ◄Y-	G ◄Y-	G	R	R	R	R
PHASE 2 AND 6	G	G	G	G	G	R	R
2 AND 6 CHANGE	G	G	G	Y	Y	R	R
PHASE 4	R	R	R	R	R	G	G
4 CHANGE	R	R	R	R	R	Y	Y
FLASHING OPERATION	FL /Y	FL /Y	FL /Y	FL /Y	FL /Y	FL /R	FL /R

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MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION SHEET

MD 170 AT I-195 NORTHBOUND ON RAMP

DRAWN BY: JAMES ALLEN Jr.	F.A.P. NO.		TS NO. 4032	SHEET NO.
CHECKED BY: D.PETERS	S.H.A. NO.			
SCALE: 1"=20'	COUNTY:	ANNE ARUNDEL	T.I.M.S. NO. F 204	OF
DATE: JUNE, 2000	LOG MILE:	0201/7007.40		