DRILL HOLES

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SCROGER REV. DATE: June 1, 2004

PROJECT DESCRIPTION

I. GENERAL

This project involves the installation of a New Traffic Control Signal with street lighting at the intersection of MD 231 (Prince Frederick Rd) and MD 381 (Brandywine Rd) in Charles County. MD 231 (Prince Frederick Rd) is assumed to run a east-west direction.

II. INTERSECTION OPERATION

1. The intersection shall operate in a NEMA four-phase, fully-actuated mode, with the MD 231 (Prince Frederick Rd) approaches running concurrently. A Exclusive/Permissive left turn phase shall be provided for eastbound MD 231 (Prince Frederick Rd). Also Pedestal mounted HIB's will be installed for eastbound and westbound direction of MD 231 (Prince Frederick Rd). MD 381 (Brandywine Rd) approach shall operate as a standard side street phase.

III. SPECIAL NOTES

1. The Contractor shall be responsible for terminating all signal cables, to the appropriate terminals and shall properly label each cable.

2. All controller cabinet wiring will be performed by the S.H.A. Signal Shop Contact Mr. Ed Rodenhizer(at (410) 787-7650 seventy-two hours in advance of intended work.

3. Upon completion of this project, the Contractor shall notify Mr. Robert Snyder at (410) 787-7631 to arrange for the phone line installation. The Contractor is to provide Mr. Robert Snyder with the nearest street address, zip code and phone number.

The contact persons for District #5 are as follows:

Ms. Kim Tran
Assistant District Engineer - Traffic
Phone: (410) 841-1819

Mr. John Mays
Assistant District Engineer - Maintenance
Phone: (410) 841-1013

Mr. Joe Horty
Assistant District Engineer - Utility
Phone: (410) 841-1005

Mr. Richard L. Daff, Sr.
Chief, Traffic Operations Division
Phone: (410) 787-7630

Mr. Ed Rodenhizer
Chief, Traffic Signal Operations
410-787-7652

Mr. Sonny Bailey
Chief, Sign Shop
410-787-7670

The power company representative is:

Mr. Chuck Stone
SEMCO - Charles County
Phone: (301) 645-3636

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY S.H.A..

ITEM NO.	DESCRIPTION	QUANTITY
9042	Controller ASC II with telemetry	1 EA
9044	Controller cabinet, size "6"	1 EA
9086	Video detection interface equipment: 1-4 cameras (To be installed by signal shop).	1 EA
9570	Sheet aluminum signs to consist of: (ground mount)	15 S.F.
	W3-3 NEW "SIGNAL AHEAD" sign, (30" x 30") ground mounted with hardware.	1 EA
	S3-1 "SCHOOL BUS STOP AHEAD" (36" x 36") ground mounted.	1 EA
9571	Sheet aluminum signs to consist of: (mast arm or pole mount)	78 S.F.
	R3-5L "LEFT TURN ONLY" sign, (30" x 36") mast mounted	1 EA
	D-3(1) "Prince Frederick RD" sign (variable x 16") mast arm mounted.	1 EA
	D-3(1) "Brandywine RD" sign, dual faced (variable x 16") mast arm mounted.	1 EA
	GUIDE SHIELD ASSEMBLY (48"x75") pole mounted. M3-2 "EAST"(30"X15") M1-5 "MD 231"(48"X36") M6-1 "left arrow " (30" x 24")	1 EA
	GUIDE SHIELD ASSEMBLY (30'x51") pole mounted. M3-4 "WEST"(24"X12") M1-5 "MD 231"(30"X24") M6-1 "45 degree right arrow " (30" x 24")	1 EA
	W3-3 NEW "SIGNAL AHEAD" sign, (36" x 36") pole mounted with hardware.	2 EA

EQUIPMENT LIST

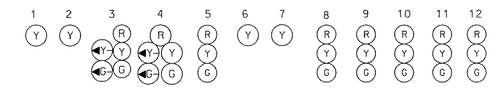
B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
1003	Maintenance of traffic per assignment.	3 EA
2002	Test Pit Excavation	5 C.Y.
5005	24" white heat applied permanent preformed thermoplastic pavement marking.	60 L.F.
5006	5" white heat applied permanent preformed thermoplastic pavement marking.	180 L.F.
5007	Removal of existing permanent pavement line markings	120 L.F.
8003	8" LED signal head section.	3 EA
8006	Any size lighting arm on signal pole.	2 EA
8008	Breakaway pedestal pole (14')	2 EA
8015	Mast arm pole & 38' mst arm. any "T" dimension.	1 EA
8019	Non-invasive microloop probe set with 1000' lead-in cable	2 EA
8021	Remove and dispose of existing material & equipment per assignment.	1 EA
8023	Twin mast arm pole & 50'/50' mast arms any "T" dimension.	1 EA
8025	Video detection camera and cable up to 500'	2 EA
8033	Schedule 80 rigid PVC conduit up to 4" - bored.	325 L.F.
8034	Schedule 80 rigid PVC conduit up to 4" (slotted).	100 L.F
8035	Schedule 80 rigid PVC conduit up to 4" - trenched.	1525 L.F.
8036	Wood sign supports up to 4"x6".	90 L.F.
8038	Install overhead or ground mounted sign.	93 SF
8040	No. 6 AWG stranded bare copper ground wire.	300 L.F.
8044	Electrical cable 1-conductor No. 4 AWG THHN/THWN.	60 L.F.
8046	Furnish and install electrical handhole.	13 EA
8050	12" LED signal head section.	29 EA
8052	Cut, clean, galvanize and cap traffic signal structure.	1 EA
8056	Electrical cable - 5 conductor (No. 14 AWG).	600 L.F.
8057	Electrical cable - 7 conductor (No. 14 AWG).	2700 L.F.
8058	Electrical cable - 2 conductor (No. 12 AWG). tray cable.	475 L.F.
8065	Install controller and cabinet base mount.	1 EA

C. EQUIPMENT TO BE REMOVED

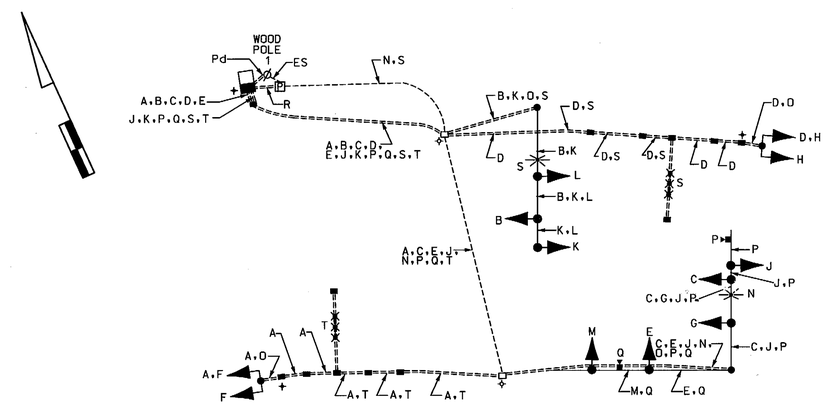
All removed signal materials are to become property of the contractor.

PHASE CHART



PHASE 1 & 6	Y	Y	◄G-/G	◄G-/G	G	Y	Y	R	R	R	R	R	
1 & 6 CHANGE	Y	Y	◄Y-/G	◄Y-/G	Y	Y	Y	R	R	R	R	R	
PHASE 2 & 6	Y	Y	G	G	G	Y	Y	G	G	G	R	R	
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	R	R	
PHASE 4	Y	Y	R	R	R	Y	Y	R	R	R	G	G	
4 CHANGE	Y	Y	R	R	R	Y	Y	R	R	R	Y	Y	
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	

WIRING DIAGRAM



WIRING KEY

A, B, C, D, E } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)

J, K, P, Q, S, T, M } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)

N, S } 2-CONDUCTOR ELECTRICAL CABLE TRAY (NO. 12 A.W.G)

O - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

P, Q } CONTROL CABLE (CAMERA TO CONTROLLER) UP TO 500'

R - 3-1 CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)

S, T } NON-INVASIVE DETECTOR 1000' LEAD-IN CABLE

ES - EXISTING UNDERGROUND SERVICE TO BE MAINTAINED BY SMECO

Pd - PROPOSED PHONE DROP

+ - PROPOSED GROUND ROD

✧ - EXISTING GROUND ROD

TOD NO:XX447-09
SHA NO:CH357A52/C52
MD 231 @ MD 381

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MD 231 (PRINCE FREDERICK RD) AND MD 381 (BRANDYWINE RD)

PATUXENT, MARYLAND

GENERAL INFORMATION SHEET

SCALE NONE DATE 6-12-2009 CONTRACT NO. XX4475185

DESIGNED BY JAMES ALLEN Jr. COUNTY CHARLES
DRAWN BY JAMES ALLEN Jr. LOGMILE 08023105.54
CHECKED BY CHECKED BY TIMS NO. J421
F.A.P. NO. TOD NO.

TS NO. 4711 | DRAWING NO. 2 OF 2 | SHEET NO. OF

STREET TRAFFIC STUDIES, LTD.
400 Crain Hwy. NW.
Glen Burnie, MD 21061
Ph (410) 590-5500
Fax (410) 590-6637

572501.dgn T-238

PLOTTED: $DATETIME$
FILE: $FILE$

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