DRILL HOLES

BORDER REV: DATE: June 1, 2004

PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of an existing Traffic Control Signal with street lighting at the intersection of MD 235 (Three Notch Rd) and MD 4 (St Andrews church Rd) / MD 4 (Patuxent Beach Rd) in St. Mary's County. The existing pedestrian signal heads shall be replaced by Countdown pedestrian signal heads with audible pushbuttons. MD 235 (Three Notch Rd) is assumed to run a north-south direction.

II. INTERSECTION OPERATION

1. The intersection shall continue to operate in a NEMA six-phase. fully-actuated mode. with the MD 235 (Three Notch Rd) approaches running concurrently. The Exclusive left turn phases shall remain in operation for both approaches of MD 235 (Three Notch Rd) . The pedestrian phase on actuation across the north leg of MD 235 (Three Notch Rd) shall now be a Countdown pedestrian phase with audible pushbuttons The pedestrian phases across the MD 4 (St Andrews Church Rd) / MD 4 (Patuxent Beach Rd) approaches on recall shall now be Countdown pedestrian phases with audible pushbuttons. Farside sampling stations shall continue to be provided on the south leg of MD 235 (Three Notch Rd) at this intersection. The pre emption phase for the northbound approach of MD 235 (Three Notch Rd) shall continue to operate. The MD 4 (St Andrews Church Rd) / MD 4 (Patuxent Beach Rd) approaches shall continue to operate as a side street split phase.

2. The existing full-traffic-actuated, eight-phase controller with all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be maintained at this intersection.

3. SHA signal shop shall install APS control unit into controller cabinet. The Contractor shall deliver the Control Unit and audible pushbuttons to the SHA Signal Shop for testing and programming. Contact Mr. Ed Rodenhizer (410) 787-7652.

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) 787-7652 seventy-two hours in advance of intended work.

3. All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur. the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.

4. APS will function as follows:

FOR THREE NOTCH ROAD

a When pedestrian locates and presses pushbutton for an extended time. the pushbutton unit will be " Wait to cross Three Notch Road at Patuxent Beach and Saint Andrews Church Rd."

b. When WALK phase begins. the message will be a rapid tick which will last for the duration of the WALK phase.

FOR ST. ANDREWS CHURCH ROAD

a When pedestrian locates and presses pushbutton for an extended time. the pushbutton unit will be " Wait to cross St. Andrews Church Road at Three Notch Rd."

b. When WALK phase begins. the message will be a rapid tick which will last for the duration of the WALK phase.

FOR PATUXENT BEACH ROAD

a When pedestrian locates and presses pushbutton for an extended time. the pushbutton unit will be " Wait to cross Patuxen Beach Road at Three Notch Rd."

b. When WALK phase begins. the message will be a rapid tick which will last for the duration of the WALK phase.

The contact persons for District #5 are as follows:

Ms. Kim Tran
Assistant District Engineer - Traffic
Phone: (410) 841-1003

Mr. John Mays
Assistant District Engineer - Maintenance
Phone: (410) 841-1002

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
Signal Shop
410-787-7652

Mr. Sonny Bailey
Sign Shop
410-787-7670

EQUIPMENT LIST

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

ITEM NO.	DESCRIPTION	QUANTITY
9571	Sheet aluminum signs to consist of: (mast arm or pole mount)	4.5 SF
	Pedestrian education R10-4(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS THREE NOTCH RD")	2 EA
	Pedestrian education R10-4(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS PATUXENT BEACH RD)	2 EA
	Pedestrian education R10-4(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS ST ANDREWS CHURCH RD)	2 EA

EQUIPMENT LIST (cont.)

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of traffic per assignment.	2 EA
2002	Test Pit Excavation	6 C.Y.
6002	Standard type A combination curb and gutter 12" gutter pan 8" depth.	20 L.F.
6004	4" concrete sidewalk.	230 S.F.
6005	Detectable warning surfaces	112 S.F.
8001	Install 12" LED signal head.	52 EA
8002	Audible/tactile pedestrian pushbutton station & signs.	6 EA
8007	2 wire Central Control unit	1 EA
8012	Breakaway pedestal pole (10').	6 EA
8014	LED 16" countdown pedestrian signal heads.	6 EA
8022	Remove and dispose of existing material & equipment per assignment.	1 EA
8034	Schedule 80 rigid PVC conduit up tp 4" - trenched.	115 L.F.
8038	No. 6 AWG stranded bare copper ground wire.	140 L.F.
8046	Install overhead sign.	4.5 S.F.
8056	Electrical cable - 2 conductor (No. 14 AWG).	1460 L.F.
8058	Electrical cable - 5 conductor (No. 14 AWG).	1500 L.F.

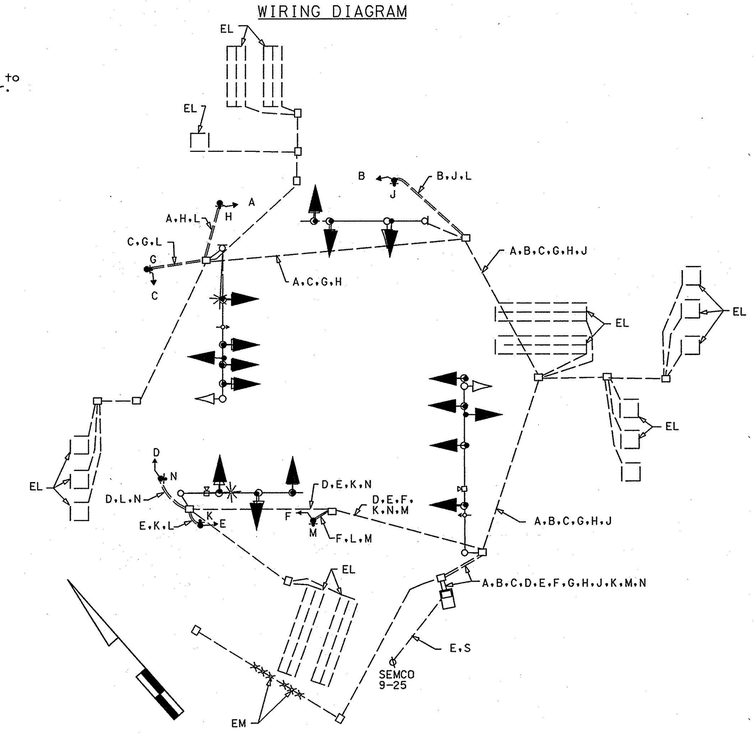
C. EQUIPMENT TO BE REMOVED

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

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	◄R- ◄Y- ◄G-	◄R- ◄Y- ◄G-	◄R- ◄Y- ◄G-	R Y G	R Y G	◄R- ◄Y- ◄G-	◄R- ◄Y- ◄G-	◄R- ◄Y- ◄G-	R Y G	R Y G	R Y G ◄G-	R Y G ◄G-	R Y G	R Y G ◄G-	R Y G ◄G-	R Y G	⇧DB	⇧DB	⇧DB	⇧DB	⇧DB	⇧DB
PHASE 1 & 5	◄G-	◄G-	◄G-	R	R	◄G-	◄G-	◄G-	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
CHANGES TO PHASES 1 & 6, 2 & 5 OR 2 & 6																						
PHASE 1 & 6	◄R-	◄R-	◄R-	R	R	◄G-	◄G-	◄G-	G	G	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW
1 & 6 CHANGE	◄R-	◄R-	◄R-	R	R	◄Y-	◄Y-	◄Y-	G	G	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW
PHASE 2 & 5	◄G-	◄G-	◄G-	G	G	◄R-	◄R-	◄R-	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW
2 & 5 CHANGE	◄Y-	◄Y-	◄Y-	G	G	◄R-	◄R-	◄R-	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW
PHASE 2 & 6	◄R-	◄R-	◄R-	G	G	◄R-	◄R-	◄R-	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW
PED CLEAR / COUNTDOWN	◄R-	◄R-	◄R-	G	G	◄R-	◄R-	◄R-	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW
2 & 6 CHANGE	◄R-	◄R-	◄R-	Y	Y	◄R-	◄R-	◄R-	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	◄R-	R	R	G ◄G-	G ◄G-	G	R	R	R	DW	DW	DW	DW	DW	DW
3 CHANGE	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	◄R-	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	◄R-	R	R	R	R	R	G ◄G-	G ◄G-	G	DW	DW	DW	DW	DW	DW
4 CHANGE	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	◄R-	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 4 ALT	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	◄R-	R	R	R	R	R	G ◄G-	G ◄G-	G	DW	DW	DW	DW	WK	WK
PED CLEAR / COUNTDOWN	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	◄R-	R	R	R	R	R	G ◄G-	G ◄G-	G	DW	DW	DW	DW	FL/DW	FL/DW
4 ALT CHANGE	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	◄R-	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW
PRE EMPT 1	◄R-	◄R-	◄R-	R	R	◄G-	◄G-	◄G-	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PRE EMPT 1 CHANGE	◄R-	◄R-	◄R-	R	R	◄Y-	◄Y-	◄Y-	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/◄R-	FL/◄R-	FL/◄R-	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	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING KEY

A B C D E } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)

G H J K M N } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)

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

✳ - USE EXISTING CABLE

EM- EXISTING MICROLOOP LEAD-IN CABLE

EL- LOOP WIRE (NO. 14 A.W.G.) EXISTING

ES- EXISTING UNDERGROUND SERVICE TO BE MAINTAINED BY SMECO

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MD 235 (THREE NOTCH ROAD) AND
MD 4 (ST. ANDREWS CHURCH RD) /
MD 4 (PATUXENT BEACH RD)

CALIFORNIA, MARYLAND

GENERAL INFORMATION SHEET

SCALE NONE DATE 6/05/07 01/09/2008 CONTRACT NO. AT9365185

DESIGNED BY JIMMY ALLEN COUNTY ST. MARY'S
DRAWN BY ROB CICCHINI LOGMILE 18023516.67
CHECKED BY TIMS NO. I969
F.A.P. NO. NHG-265-1 (7) E TOD NO.

TS NO.1637-I2 | DRAWING NO. 2 OF 2 | SHEET NO. OF

PLOTTED: WEDNESDAY, JANUARY 09, 2008 AT 9:36:25 AM
FILE: 50420_MD4GI.DGN