DRILL HOLES

BORDER REV: DATE: June 1, 2004

DRILL HOLES

DRILL HOLES

PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of an existing strain pole Traffic Control Signal with street lighting and interconnect at the intersection of MD 197 (Collington Rd) and Northview Drive in Prince George's County. The Traffic signal heads shall be upgraded to LED traffic signal heads and the Pedestrian signal heads shall be upgraded to Countdown pedestrian signal heads with audible pushbuttons. Video detection shall be installed for the westbound appraoch of Northview Rd. MD 197 (Collington 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 197 (Collington Rd) approaches running concurrently. Exclusive left turn phases for both approaches of MD 197 (Collington Rd) shall remain in operation. The pedestrian phases across MD 197 (Collington Rd) shall now be Countdown pedestrian phases with audible pushbutton actuation. The pedestrian phase across the west leg of Northview Rd shall now be a Countdown pedestrian phase with aubible pushbuttons on recall. Farside sampling stations shall remain in operation on both legs of MD 197 (Collington Rd) at this intersection. The Northview Rd approaches shall continue to run 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 utilized at this intersection. SHA Forces shall install (2) 4-channel detector racks, power supply (5) 4-channel amplifiers and video interface into the cabinet. All 2-channel amplifiers shall be removed.

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.

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:

TO CROSS COLLINGTON ROAD

a. When pedestrian locates and presses the pushbutton for an extended time, the pushbutton unit will announce the following message " Wait to cross Collington at Northview."

b. When the WALK phase begins, the pushbutton unit will provide a rapid tick which will last for the duration of the WALK phase.

TO CROSS NORTHVIEW AVENUE

a. When pedestrian locates and presses the pushbutton for an extended time, the pushbutton unit will announce the following message " Wait to cross Northview at Collington."

b. When the WALK phase begins, the pushbutton unit will provide a rapid tick which will last for the duration of the WALK phase.

The contact persons for District #3 (Prince George's County) are as follows:

Mr. Brian Young
Assistant District Engineer - Traffic
Phone: (301) 513-7318

Mr. Wayne Mowdy
Assistant District Engineer - Maintenance
Phone: (301) 513-7304

Mr. Augie Rebish
Assistant District Engineer - Utility
Phone: (301) 513-7350

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

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

Mr. Sonny Bailey
Chief Sign Shop
410-787-7676

EQUIPMENT LIST

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

ITEM NO.	DESCRIPTION	QUANTITY
9001	Detector rack power supply (To be instaled by SHA forces)	1 EA
9016	Detector amplifier 4-channel rack mount (To be installed into the existing cabinet by S.H.A. Forces).	5 EA
9046	Detector rack retrofit.	2 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)	28 SF
	Pedestrian education R10-4(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS CROSS COLLINGTON RD".)	4 EA
	Pedestrian education R10-4(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS NORTHVIEW DRIVE".)	2 EA
	M4-13 "TO" sign (24x8")	2 EA
	M1-4 "US 301"sign (30"X24")	1 EA
	M1-4 "US 50" sign (24"X24")	1 EA
	M6-1 " arrow "(30"X24")	2 EA

EQUIPMENT LIST (CONT.)

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
1003	Maintenance of traffic per assignment.	3 EA
2001	Class 2 Excavation.	3 C.Y.
2002	Test Pit Excavation	6 C.Y.
5004	12" white heat applied permanent preformed thermoplastic pavement marking.	1875 L.F.
5005	24" white heat applied permanent preformed thermoplastic pavement marking.	265 L.F.
5007	Removal of existing permanent pavement line markings	1950 L.F.
6001	Standard type A combination curb and gutter 12" gutter pan 8" depth.	75 L.F.
6002	5" concrete sidewalk.	1025 S.F.
8001	2 wire Central Control unit	1 EA
8003	8" LED signal head section.	6 EA
8007	Audible/tactile pedestrian pushbutton station & signs.	6 EA
8008	Breakaway Pedestal pole (10').	6 EA
8010	Conduit bend in existng foundation.	1 EA
8013	LED 16" countdown pedestrian signal head.	6 EA
8021	Remove and dispose of material & equipment per assignment.	1 EA
8025	Video detection camera & cable up to 500'	1 EA
8033	Schedule 80 rigid PVC conduit up to 4" - bored.	120 L.F.
8035	Schedule 80 rigid PVC conduit up to 4" - trenched.	150 L.F.
8036	Wood sign supports up to 4"x6".	32 L.F.
8037	Detectable warning surfaces for curb ramps.	60 S.F.
8038	Install overhead or ground mounted sign (including hardware).	28 S.F.
8040	No. 6 AWG stranded bare copper ground wire.	290 L.F.
8046	Furnish and install electrical handhole.	2 EA
8050	12" LED signal head section.	45 EA
8054	Electrical cable - 2 conductor (No. 14 AWG).	1905 L.F.
8056	Electrical cable - 5 conductor (No. 14 AWG).	1985 L.F.
8057	Electrical cable - 7 conductor (No. 14 AWG).	480 L.F.

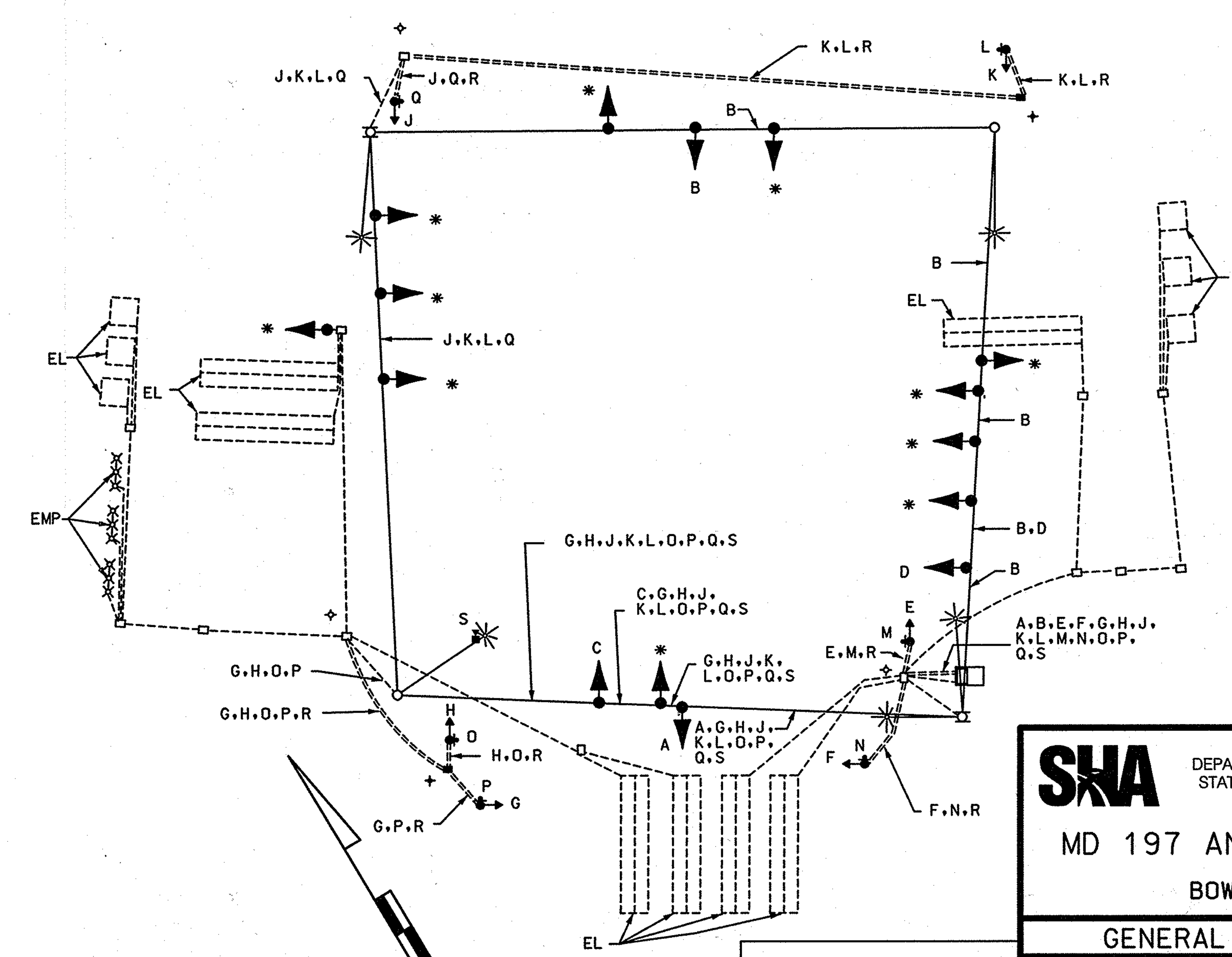
C. EQUIPMENT TO BE REMOVED

SHA Forces shall remove all 2-channel amplifiers from the cabinet.

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
PHASE 1 & 5	←G	←G	←G	R	R	←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	←G	←G	←G	G	G	←R	←R	R	R	R	R	R	R	R	R	WK	WK	DW	DW	DW	DW
1 & 6 CHANGE	←Y	←Y	←Y	G	G	←R	←R	R	R	R	R	R	R	R	R	WK	WK	DW	DW	DW	DW
PHASE 2 & 5	←R	←R	←R	R	R	←G	←G	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
2 & 5 CHANGE	←R	←R	←R	R	R	←Y	←Y	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 & 6	←R	←R	←R	G	G	←R	←R	G	G	R	R	R	R	R	R	WK	WK	DW	DW	DW	DW
PED CLEAR / COUNTDOWN	←R	←R	←R	G	G	←R	←R	G	G	R	R	R	R	R	R	FL/DW	FL/DW	DW	DW	DW	DW
2 & 6 CHANGE	←R	←R	←R	Y	Y	←R	←R	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3	←R	←R	←R	R	R/-G→	←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/-Y→	←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	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	Y	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 3 ALT	←R	←R	←R	R	R/-G→	←R	←R	R	R	G / ←G	G / ←G	G	R	R	R	DW	DW	DW	WK	WK	DW
PED CLEAR / COUNTDOWN	←R	←R	←R	R	R/-G→	←R	←R	R	R	G / ←G	G / ←G	G	R	R	R	DW	DW	DW	FL/DW	FL/DW	DW
3 ALT CHANGE	←R	←R	←R	R	R/-Y→	←R	←R	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4 ALT	←R	←R	←R	R	R	←R	←R	R	R	R	R	R	G / ←G	G / ←G	G	DW	DW	WK	DW	DW	WK
PED CLEAR / COUNTDOWN	←R	←R	←R	R	R	←R	←R	R	R	R	R	R	G / ←G	G / ←G	G	DW	DW	FL/DW	DW	DW	FL/DW
4 ALT CHANGE	←R	←R	←R	R	R	←R	←R	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/←R	FL/←R	FL/←R	FL/Y	FL/Y	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 } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)

C, D, E, F, G, H, J, K } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)

L, M, N, O, P, Q } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)

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

S - CONTROL CABLE (CAMERA TO CONTROLLER) UP TO 500'

* - USE EXISTING CABLE

EMP - EXISTING MICROPROBE

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

+ - PROPOSED GROUND ROD

✧ - EXISTING GROUND ROD

TOD NO: XX444-11
SHA NO: PG718A54/B54
MD 197@ NORTHVIEW DR

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

5570GI.DGN T-179

SHA
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MD 197 AND NORTHVIEW DRIVE

BOWIE, MARYLAND

GENERAL INFORMATION SHEET

SCALE NONE DATE 8/7/08 CONTRACT NO. XX44445185

DESIGNED BY J.W.A. COUNTY PRINCE GEORGE'S
DRAWN BY R.C. LOGMILE 16019701.22
CHECKED BY TIMS NO. I771
F A.P. NO. TOD NO.

TS NO. 2264E DRAWING NO. 2 OF 2 SHEET NO. OF

PLOTTED: $DATETIME$
FILE: $FILE$

...\5000's\5570\5570gi.dgn 8/7/2008 2:52:05 PM