DRILL HOLES

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BORDER REV: DATE: June 1, 2004

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 214 (Central Ave) and North Campus Way / South Campus Way in Prince George's County. Countdown pedestrian signal heads with audible pushbuttons shall be installed across all legs of this intersection. Additionally video detection shall be installed for the North Campus Way approach and all traffic signal heads shall be upgraded to LED traffic signal heads. MD 214 (Central Ave) is assumed to run an east-west direction.

II. INTERSECTION OPERATION

1. The intersection shall continue to operate in a NEMA six-phase, fully-actuated mode, with the MD 214 (Central Ave) approaches running concurrently. Exclusive left turn phases shall remain in operation for both approaches of MD 214 (Central Ave) . The pedestrian phase with pushbutton actuation across the west leg of MD 214 (Central Ave) shall now be a Countdown pedestrian phase with audible pushbuttons. A new Countdown pedestrian phase with audible pushbutton actuation shall be installed across the east leg of MD 214 (Central Ave). The pedestrian phases across North and South Campus Way shall now be Countdown pedestrian phases with audible pushbuttons on recall. Farside sampling stations shall remain in operation on both legs of MD 214 (Central Ave) at this intersection. The North and South Campus Way approaches shall also continue to run as a side street split phase. The pre-emption phase for the North Campus Way approach shall remain in operation.

2. The exiting full-traffic-actuated, eight-phase controller with all necessary equipment shall be utilized at this intersection. A new NEMA size "6" base-mounted cabinet shall be installed. Sha Forces shall transfer existing controller equipment and install new video interface into the new cabinet.

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. The Contractor shall contact Mr. Robert Snyder at (410) 787-7631 to arrange for the transfer of the phone line from the existing controller to the new controller.

5. APS will function as follows:

TO CROSS MD 214 (CENTRAL AVENUE)

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

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

TO CROSS MD 214 (CENTRAL AVENUE)

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

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

TO CROSS CAMPUS WAY NORTH

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

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

TO CROSS CAMPUS WAY SOUTH

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

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

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

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

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

Mr. Sonny Bailey
Sign Shop
410-787-7676

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)	254 SF

EQUIPMENT LIST (cont.)

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

ITEM NO.	DESCRIPTION	QUANTITY
	R4-7 "Keep Right" sign. (24"x30") with hardware.	2 EA
	S1-1 "SCHOOL" sign. (36" x 36").with hardware.	22 EA
	S4-4(3) "AHEAD" sign. (30" x 12") with hardware.	4 EA
	W16-7P(L) "arrow (symbolic)" diagonal sign. (24" x 12") with hardware.	10 EA
	W16-7P(R) "arrow (symbolic)" diagonal sign. (24" x 12") with hardware.	8 EA
9571	Sheet aluminum signs to consist of: (mast arm or pole mount)	8 SF
	Pedestrian education R10-4(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS CENTRAL AVE".)	4 EA
	Pedestrian education R10-4(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS NORTH CAMPUS WAY".)	2 EA
	Pedestrian education R10-4(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS SOUTH CAMPUS WAY".)	2 EA

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.	5 C.Y.
2002	Test Pit Excavation	8 C.Y.
5004	12" white heat applied permanent preformed thermoplastic pavement marking.	2275 L.F.
5005	24" white heat applied permanent preformed thermoplastic pavement marking.	195 L.F.
5007	Removal of existing permanent pavement line markings	2100 L.F.
6001	Standard type A combination curb and gutter 12" gutter pan 8" depth.	500 L.F.
6002	5" concrete sidewalk.	2250 S.F.
6003	Detectable warning surfaces for curb ramps.	200 S.F.
8001	2 wire Central Control unit	1 EA
8007	Audible/tactile pedestrian pushbutton station & signs.	8 EA
8008	Breakaway Pedestal pole (14')	1 EA
8008	Breakaway Pedestal pole (5')	7 EA
8013	LED 16" countdown pedestrian signal head.	8 EA
8021	Remove and dispose of existing material and equipment per assignment.	1 EA
1 8025	Video detection camera & cable up to 500'	~~1~~ 4 EA
8029	Cable - 1 conductor, No. 250 KCMIL, Cu, Use	150 L.F.
8030	Disconnect, pull back and reroute cable.	50 L.F.
8034	Schedule 80 rigid PVC conduit up tp 4" - trenched.	260 L.F.
8035	Wood sign supports up to 4"x6".	416 L.F.
8036	Install overhead or ground mounted sign (including hardware).	262 S.F.
8038	No. 6 AWG stranded bare copper ground wire.	150 L.F.
8041	Metered service pedestal embedded.	1 EA
8043	Electrical cable 1-conductor No. 4 AWG THHN/THWN.	70 L.F.
8045	Furnish and install electrical handhole.	3 EA
8050	12" LED vehicular traffic signal head section.	46 EA
8054	Electrical cable - 2 conductor (No. 14 AWG).	2740 L.F.
8056	Electrical cable - 5 conductor (No. 14 AWG).	2380 L.F.
8065	Install controller and cabinet base mount.	1 EA

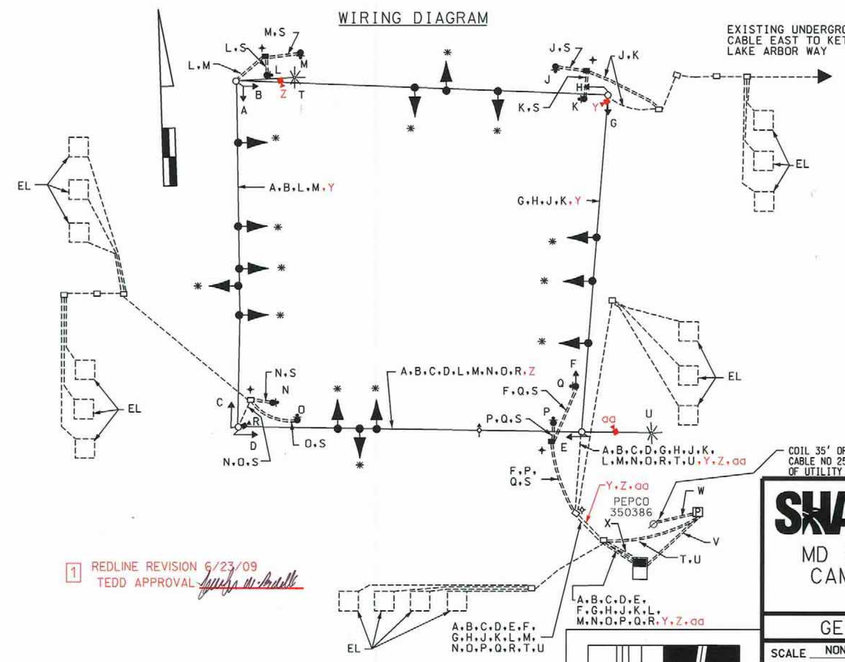
C. EQUIPMENT TO BE REMOVED

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

PHASE CHART

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

WIRING DIAGRAM



1 REDLINE REVISION 6/23/09
TEDD APPROVAL

WIRING KEY

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

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

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

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

T U } EXISTING LIGHTING CABLE

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

W - 3-1 CONDUCTOR ELECTRICAL CABLE (NO 250 KCMIL)

X - EXISTING SIGNAL CABLE REROUTED TO NEW CABINET

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

PS - PROPOSED UNDERGROUND SERVICE TO BE INSTALLED BY PEPCO

Y Z aa } CONTROL CABLE (CAMERA TO CONTROLLER) UP TO 500'

* - USE EXISTING CABLE

+ - GROUND ROD

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MD 214 (CENTRAL AVE) AND CAMPUS WAY (NORTH/SOUTH)

LARGO, MARYLAND

GENERAL INFORMATION SHEET

SCALE NONE	DATE 9/2/08	CONTRACT NO. XX4455185	
DESIGNED BY J.W.A.		COUNTY PRINCE GEORGE'S	
DRAWN BY R.C.		LOGMILE 16021405.10	
CHECKED BY		TIMS NO. I922	
F.A.P. NO.		TOD NO.	
TS NO. 1775E	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

550201.DGN T-153

PLOTTED: @DATETIME@
FILE: @FILE@