

PROJECT DESCRIPTION

EQUIPMENT LIST (cont.)

I. GENERAL

This project involves the modification of an existing mast arm Traffic Control Signal with street lighting and interconnect of the intersection of US 29 (Colesville Rd) and MD 193 (University Blvd East) in Montgomery County. The existing traffic signal heads shall be upgraded to LED traffic signal heads. Additionally, the existing pedestrian equipment shall be upgraded to Countdown pedestrian signal heads with audible pushbuttons. US 29 (Colesville Rd) is assumed to run in a north-south direction.

II. INTERSECTION OPERATION

- The intersection shall continue to operate in a NEMA three-phase, semi-actuated mode, with the US 29 (Colesville Rd) approaches running concurrently. The pedestrian phases across US 29 (Colesville Rd) shall now be Countdown pedestrian phases with audible pushbutton actuation. The pedestrian phases across MD 193 (University Blvd East) shall now be Countdown pedestrian phases with audible pushbuttons on recall. Farside sampling stations on the north leg of US 29 (Colesville Rd) shall remain in operation at this intersection. The MD 193 (University Blvd East) approach shall also continue to run in its own phase.
- The existing full-traffic-actuated, eight-phase controller with video interface and all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be utilized at this intersection.
- Montgomery County signal shop shall install APS control unit into controller cabinet. The Contractor shall deliver the Control Unit and audible pushbuttons to the Montgomery County Signal Shop for testing and programming.

III. SPECIAL NOTES

- The Contractor shall be responsible for terminating all signal cables, to the appropriate terminals and shall properly label each cable.
- All controller cabinet wiring will be performed by Montgomery County Forces. Contact Kamal Hamud at (240) 777-8761 seventy-two hours in advance of intended work.
- 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.
- APS will function as follows:
 TO CROSS US 29 (COLESVILLE RD) (NORTH-SOUTH)
 a. When pedestrian locates and presses the pushbutton for an extended time, the pushbutton unit will announce the following message "Wait to cross Colesville at University."
 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 MD 193 (UNIVERSITY BLVD) (EAST-WEST)
 a. When pedestrian locates and presses the pushbutton for an extended time, the pushbutton unit will announce the following message "Wait to cross University at Colesville."
 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 (Montgomery County) are as follows:

- | | |
|---|---|
| Mr. Jeff Wentz
Assistant District Engineer - Traffic
Phone: (301) 513-7358 | 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. Keith Lord
Montgomery County Signal Shop
(301) 674-8965 |
| Mr. Augie Rebish
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
9570	Sheet aluminum signs to consist of: (ground mount)	133 SF
	S1-1 "SCHOOL" sign, (36" x 36") ground mounted.	11 EA
	W16-7p(R) "arrow" sign, (24" x 12")	6 EA
	W16-7p(L) "arrow" sign, (24" x 12")	6 EA
	R4-7 "KEEP RIGHT (symbolic)" sign, (24" x 30")	2 EA
9571	Sheet aluminum signs to consist of: (mast arm or pole mount)	20.5 SF
	R3-3(2) "No left or U-Turn (Symbolic)" sign, (30" x 30") mast arm mounted	2 EA
	Pedestrian education R10-4(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS COLESVILLE RD".)	4 EA
	Pedestrian education R10-4(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS UNIVERSITY BLVD".)	4 EA

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of traffic per assignment.	1 EA
1002	Removal of existing permanent pavement line markings	1665 L.F.
2002	Test Pit Excavation	8 C.Y.
5002	12" white heat applied permanent preformed thermoplastic pavement marking.	1645 L.F.
5003	24" white heat applied permanent preformed thermoplastic pavement marking.	160 L.F.
6001	Standard type A combination curb and gutter 12" gutter pan 8" depth.	200 L.F.
6002	5" concrete sidewalk.	1880 S.F.
8001	12" LED vehicular traffic signal head section.	21 EA
8003	2 wire Central Control unit	1 EA
8009	Adjust existing handhole to grade.	4 EA
8010	Audible/tactile pedestrian pushbutton station & signs.	8 EA
8011	Breakaway Pedestal pole (10')	8 EA
8014	LED 16" countdown pedestrian signal head.	8 EA
8016	Remove and dispose of existing material and equipment per assignment.	1 EA
8027	Schedule 80 rigid PVC conduit up to 4" - trenched.	110 L.F.
8028	Detectable warning surfaces	80 S.F.
8031	Wood sign supports 4"x4".	32 L.F.
8032	Wood sign supports 4"x6".	112 L.F.
8033	No. 6 AWG stranded bare copper ground wire.	145 L.F.
8044	Furnish and install electrical handhole.	1 EA
8045	Install ground mounted sign.	133 SF
8046	Install overhead sign.	20.5 SF
8047	Video detection camera & cable up to 500'	1 EA
8055	Electrical cable - 2 conductor (No. 14 AWG).	1515 L.F.
8057	Electrical cable - 5 conductor (No. 14 AWG).	1560 L.F.

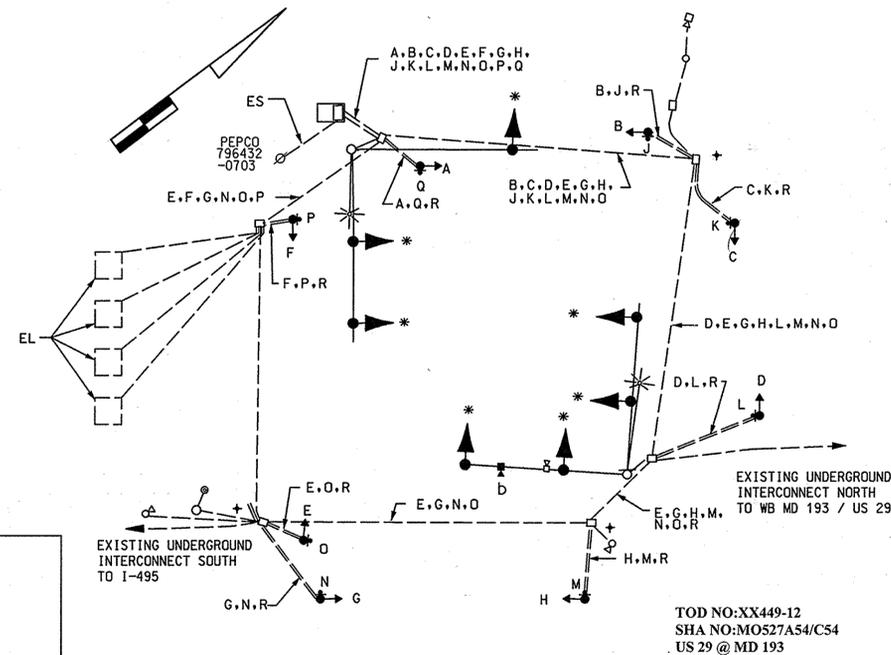
C. EQUIPMENT TO BE REMOVED

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
PHASE 2 & 6	G	G	G	G	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEAR / COUNTDOWN	G	G	G	G	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	R	R	R	DW							
PHASE 4	R	R	R	R	G	G	G	DW							
4 CHANGE	R	R	R	R	Y	Y	Y	DW							
PHASE 4 ALT	R	R	R	R	G	G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEAR / COUNTDOWN	R	R	R	R	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 ALT CHANGE	R	R	R	R	Y	Y	Y	DW							
PRE EMT #2	R	R	G	G	R	R	R	DW							
PRE EMT 2 CHANGE	R	R	Y	Y	R	R	R	DW							
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	DARK							

WIRING DIAGRAM



WIRING KEY

- 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- R - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- * - USE EXISTING CABLE
- EL - LOOP WIRE (NO. 14 A.W.G.) EXISTING
- ES - EXISTING UNDERGROUND SERVICE TO BE MAINTAINED BY PEPCO
- + - GROUND ROD

STTS
STREET TRAFFIC STUDIES, LTD.
400 Crain Hwy., N.W.
Glen Burnie, MD 21061
Ph (410) 590-5500
Fax (410) 590-6637
556801.DGN T-177

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

SHA

US 29 (COLESVILLE ROAD) AND EB MD 193 (UNIVERSITY BOULEVARD EAST)
FOUR CORNERS, MARYLAND

GENERAL INFORMATION SHEET

SCALE NONE DATE 8/7/08 CONTRACT NO. XX4495185

DESIGNED BY J.W.A. COUNTY MONTGOMERY
DRAWN BY R.C. LOGMILE 15002902.69
CHECKED BY _____ TIMS NO. 1939
F.A.P. NO. _____ TOD NO. _____

TS NO. 3535E DRAWING NO. 2 OF 2 SHEET NO. OF