DRILL HOLES

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BORDER REV: DATE: June 1, 2004

PROJECT DESCRIPTION

I. GENERAL

This project involves the reconstruction of an existing Traffic Control Signal with interconnect at the intersection of MD 187 (Old Georgetown Rd) and South Drive/ Greentree Road in Montgomery County. The existing strain pole signal shall be replaced with a new mast arm signal. Video detection shall be used for all approaches. MD 187 (Old Georgetown Rd) is assumed to run an north-south direction.

II. INTERSECTION OPERATION

1. The intersection is to operate in a NEMA six-phase, semi-actuated mode, with the MD 187 (Old Georgetown Rd) approaches continuing to run concurrently. The Exclusive/Permissive left turn phase for the northbound approach of MD 187 (Old Georgetown Rd) shall remain in operation. A new Exclusive/Permissive left turn phase for the southbound approach of MD 187 (Old Georgetown Rd) shall be provided. The pedestrian phase with pushbutton actuation across the south leg of MD 187 (Old Georgetown Rd) shall now be a Countdown pedestrian phase with audible pushbuttons. A new Countdown pedestrian phase with audible pushbuttons shall be provided across north leg of the intersection. The pedestrian phases on recall across South Drive/ Greentree Road shall now be Countdown pedestrian phases with audible pushbuttons The South Drive/ Greentree Road approaches shall continue to operate concurrently. The overlapping right turn phase for the Greentree Road approach shall remain in operation.

2. A full-traffic-actuated, eight-phase controller with video interface and all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be installed 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. Contact Keith Lord (301) 674-8965 (cell)

III. SPECIAL NOTES

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

2. Disconnecting and splicing of interconnect cable shall be performed by Montgomery County Forces. The contractor shall run the interconnect cable into the base of each cabinet and properly tag the 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.

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.

The contact persons for District #3 (Montgomery County) are as follows:

Mr. Jeff Wentz
Assistant District Engineer - Traffic
Phone: (301) 513-7318

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

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

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

Mr. Keith Lord
Signal Shop (Mont Co.)
301-674-8965 (cell)

Mr. Sonny Bailey
Sign Shop
410-787-7670

The power company representative is:
Mr. Steve Custer
PEPCO Customer Design
201 W Guide Dr.,
Rockville, MD 20850
Phone: 301 548-4333

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
9571	Sheet aluminum signs to consist of: (mast arm or pole mount)	103 SF
	D3-2 "(arrow) South Drive / Greentree Road (arrow)" sign (variable x 32")	1 EA
	D3-2 "(arrow) Greentree Road / South Drive (arrow)" sign (variable x 32")	1 EA
	R3-5R "RIGHT TURN ONLY" sign, (30" x 36")	2 EA
	R10-11b "NO TURN ON RED" sign, (24"x24").	1 EA
	GUIDE SHIELD ASSEMBLY (48"X75") pole mounted. M3-2 "WEST"(30"X15") M1-5 "MD 198"(48"X36") M6-1 "left arrow "(30"X24")	1 EA
	GUIDE SHIELD ASSEMBLY (30"X51") pole mounted. M3-2 "EAST"(24"X12") M1-5 "MD 128"(30"X24") M6-1 "right arrow "(21"X15")	1 EA
	Pedestrian education R10-4(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS OLD GEORGETOWN RD")	4 EA
	Pedestrian education R10-4(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS SOUTH DR")	2 EA
	Pedestrian education R10-4(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS GREENTREE RD")	2 EA

EQUIPMENT LIST (CONT.)

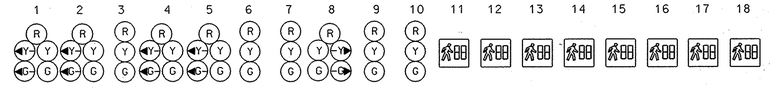
B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of traffic per assignment.	3 EA
2002	Test Pit Excavation	13 C.Y.
5002	Removal of existing permanent pavement line markings	510 L.F.
5004	12" heat applied white permanent preformed thermoplastic pavement marking.	360 L.F.
5005	24" heat applied white permanent preformed thermoplastic pavement marking.	50 L.F.
6001	Standard type A combination curb and gutter 12" gutter pan 8" depth.	65 L.F.
6002	4" concrete sidewalk.	370 S.F.
8001	12" LED signal head section.	40 EA
8002	2 wire Central Control unit	1 EA
8008	Audible/tactile pedestrian pushbutton station & signs.	8 EA
8009	Breakaway Pedestal pole (10').	4 EA
8009	Breakaway Pedestal pole (5').	3 EA
8014	LED 16" countdown pedestrian signal head.	8 EA
8016	16.5' mast arm pole and 38' mast arm any "T" dimension	2 EA
8019	16.5' mast arm pole and 50' mast arm any "T" dimension	2 EA
8022	Remove and dispose of existing material and equipment per assignment.	1 EA
8026	Video detection camera & cable up to 500'	4 EA
8029	12-pair communication cable self supporting or jelly-filled.	30 L.F.
8032	Disconnect, pull back and reroute cable.	470 L.F.
8034	Schedule 80 rigid PVC conduit up tp 4" - slotted.	280 L.F.
8035	Schedule 80 rigid PVC conduit up tp 4" - trenched. (Note: Includes 2nd conduit in same slot).	525 L.F.
8038	Detectable warning surfaces	64 S.F.
8039	Install overhead or ground mounted sign (including hardware).	103 S.F.
8041	No. 6 AWG stranded bare copper ground wire.	515 L.F.
8042	Weatherhead, 3 inch	1 EA
8043	Metered service pedestal embedded.	1 EA
8045	Electrical cable 1-conductor No. 4 AWG THHN/THWN.	20 L.F.
8047	Furnish and install electrical handhole.	4 EA
8054	Electrical cable - 2 conductor (No. 14 AWG).	1430 L.F.
8056	Electrical cable - 5 conductor (No. 14 AWG).	1560 L.F.
8057	Electrical cable - 7 conductor (No. 14 AWG).	1350 L.F.
8065	Install controller and cabinet base mount.	1 EA
Neg.	Splice box	1 EA
Neg.	Cable - 1 conductor (No. 250 KCMIL), Cu, USE	420 L.F.

C. EQUIPMENT TO BE REMOVED

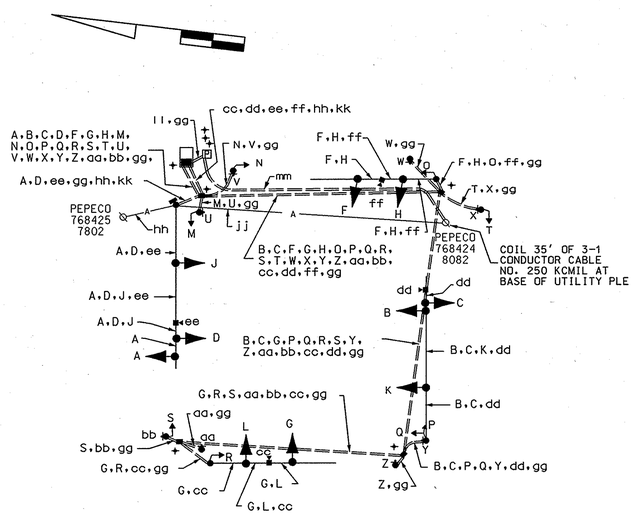
SHA Forces shall remove the controller and all auxilliary equipment from the controller cabinet. The cabinet and all other removed signal materials are to become property of the contractor.

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PHASE 1 & 5	◄G-/R	◄G-/R	R	◄G-/R	◄G-/R	R	R	R/-G►	R	R	DW	DW	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/-G►	R	R	DW	WK	WK	DW	DW	DW	DW	DW
1 & 6 CHANGE	◄Y-/G	◄Y-/G	G	R	R	R	R	R/-Y►	R	R	DW	WK	WK	DW	DW	DW	DW	DW
PHASE 2 & 5	R	R	R	◄G-/G	◄G-/G	G	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW
2 & 5 CHANGE	R	R	R	◄Y-/G	◄Y-/G	G	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEAR / COUNTDOWN	G	G	G	G	G	G	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 & 8 ALT	R	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEAR / COUNTDOWN	R	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 & 8 CHANGE ALT	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING KEY

- A,B,C,D,E,F,G,H — 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)
- J,K,L,M,N,O,P,Q,R,S,T — 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)
- U,V,W,X,Y,Z,aa,bb — 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)
- cc, dd, ee, ff — CONTROL CABLE
- gg - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- hh, jj — EXISTING 12-PAIR VOICE GRADE INTERCONNECT CABLE (SELF-SUPPORTING)
- kk - 12-PAIR VOICE GRADE INTERCONNECT CABLE (SELF-SUPPORTING)
- ll - 2-1 CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
- mm - 3-1 CONDUCTOR ELECTRICAL CABLE (NO. 250 KCMIL)
- + - GROUND ROD

TOD NO: AT910-10M
SHA No.: MO579A54/C54/M54
MD 187 @ Greentree Rd/South Drive

REVISION "B"

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

5054GI.dgn D6-78

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MD 187 (OLD GEORGETOWN ROAD) AND SOUTH DRIVE / GREENTREE ROAD

GENERAL INFORMATION SHEET

SCALE NONE DATE 10/18/06 CONTRACT NO. AT9105185

DESIGNED BY R ZACHERL
DRAWN BY ROB CICCHINI
CHECKED BY
F.A.P. NO.

COUNTY MONTGOMERY
LOGMILE 15018701.42
TIMS NO. F913
TOD NO.

TS NO. 3138B | DRAWING NO. 2 OF 2 | SHEET NO. OF

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