DRILL HOLES

BORDER REV: DATE: June 1, 2004

PROJECT DESCRIPTION

I. GENERAL

This project involves the replacement of vehicle detection along MD 201 (Kenilworth Ave) from Md 410 to Goodluck Rd / Paint Branch Pkwy in Prince George's County. This section of roadway shall be resurfaced as part of roadway maintenance. MD 201 (Kenilworth Ave) is assumed to run a north-section direction.

The effected intersections are:

MD 201 at MD 410 (EAST WEST HWY)
MD 201 at RITTENHOUSE STREET
MD 201 at TUCKERMAN ST / RIVER RD
MD 201 at SARVIS AVENUE
MD 201 at GOODLUCK RD / PAINT BRANCH RD

II. INTERSECTION OPERATION

1. The intersection operation shall remain unchanged at all of the above locations.

2. At the following intersections, the existing full-traffic-actuated, eight-phase controller with all necessary equipment housed in a NEMA base-mounted cabinet shall be utilized:

MD 201 at MD 410 (EAST WEST HWY)
MD 201 at GOODLUCK RD / PAINT BRANCH RD

3. At the following intersections, a new full-traffic-actuated, eight-phase controller with video interface and all necessary equipment housed in a NEMA size "6" base-mounted shall be installed:

MD 201 at RITTENHOUSE STREET
MD 201 at TUCKERMAN ST / RIVER RD
MD 201 at SARVIS AVENUE

III. SPECIAL NOTES

1. The Contractor shall be responsible for terminating all signal cables, except interconnect, 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) 787-7650 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 (Prince George's County) are as follows:

Mr. Majid Shakib
Assistant District Engineer - Traffic
Phone: (301 513-7358

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
Signal Shop
410-787-7652

Mr. Sonny Bailey
Sign Shop
410-787-7670

The power company representative is:

Mr. Richard Chilcoat
PEPCO
8300 Old Marlboro Pike
Upper Marlboro, MD 20772
301-967-5805

EQUIPMENT LIST

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

ITEM NO.	DESCRIPTION	QUANTITY
971017	Eight phase (fully actuated) controller and cabinet - base mount. (Note: Video interface equipment shall be installed into each of the cabinets)	3 EA
973023	SHEET ALUMINUM SIGNS	350 SF
	GUIDE SHIELD ASSEMBLY (48"x75") pole mounted. M3-3 "SOUTH"(30"X15") M1-5 "MD 201"(48"X36") M6-1 "left arrow "(30"X24")	4 EA
	GUIDE SHIELD ASSEMBLY (30"x51") pole mounted. M3-1 "NORTH"(24"X12") M1-5 "MD 201"(30"X24") M6-1 "right arrow "(21"X15")	5 EA
	GUIDE SHIELD ASSEMBLY (48"x75") pole mounted. M3-1 "NORTH"(30"X15") M1-5 "MD 201"(48"X36") M6-1 "left arrow "(30"X24")	3 EA
	GUIDE SHIELD ASSEMBLY (30"x51") pole mounted. M3-3 "SOUTH"(24"X12") M1-5 "MD 201"(30"X24") M6-1 "right arrow "(21"X15")	3 EA

EQUIPMENT LIST

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

ITEM NO.	DESCRIPTION	QUANTITY
	GUIDE SHIELD ASSEMBLY (48"x75") pole mounted. M3-3 "SOUTH"(30"X15") M1-5 "MD 201"(48"X36") M4-5A "TO" (30"X15") M1-1Y "IS 95" (36"X36") M6-1 "left arrow "(30"X24")	1 EA
	GUIDE SHIELD ASSEMBLY (48"x75") pole mounted. M3-2 "EAST"(30"X15") M1-5 "MD 410"(48"X36") M6-1 "left arrow "(30"X24")	1 EA
	GUIDE SHIELD ASSEMBLY (30"x51") pole mounted. M3-4 "WEST"(24"X12") M1-5 "MD 410"(30"X24") M6-1 "right arrow "(21"X15")	1 EA
	GUIDE SHIELD ASSEMBLY (48"x75") pole mounted. M3-4 "WEST"(30"X15") M1-5 "MD 410"(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 410"(30"X24") M6-1 "right arrow "(21"X15")	1 EA

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

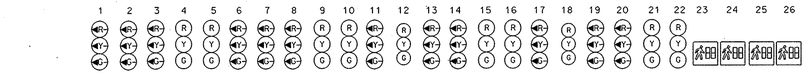
ITEM NO.	DESCRIPTION	QUANTITY
203030	TEST PIT EXCAVATION	7 CY
585618	5 INCH HEAT APPLIED YELLOW PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS	200 LF
800000	REMOVE EXISTING OVERHEAD SIGN.	1 EA
800000	F&I 1 CONDUCTOR (NO 250 KCMIL) CABLE	490 LF
800000	DISCONNECT, PULLBACK AND REROUTE CABLE	990 LF
800000	16" LED COUNTDOWN PEDESTRIAN SIGNAL	8 EA
800000	8 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION	18 EA
801004	CONCRETE FOR SIGNAL FOUNDATION	10 CY
801607	INSTALL SHEET ALUMINUM SIGN	350 SF
802145	ADJUST EXISTING HANDHOLE	1 EA
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	870 LF
805125	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	65 LF
805135	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	110 LF
805140	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	125 LF
805155	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED	105 LF
805160	1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE	115 LF
807202	METERED SERVICE PEDESTAL	3 EA
810010	ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG-THHN/THWN	85 LF
810555	MICROLOOP PROBE, 1000 FOOT LEAD IN CABLE	3 EA
811001	FURNISH AND INSTALL ELECTRICAL HANDHOLE	2 EA
813022	REMOVE EXISTING GROUND MOUNTED SIGNS	37 SF
816001	VIDEO DETECTION CAMERA	9 EA
816005	CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER	6 EA
816010	CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER	3 EA
818004	10 FOOT BREAKAWAY PEDESTAL POLE	1 EA
822001	12-PAIR COMMUNICATION CABLE, SELF-SUPPORTING (OVERHEAD)	2680 LF
837001	GROUND ROD -3/4INCH DIAMETER X 10 FOOT LENGTH	18 EA
860284	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION	144 EA
861104	ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)	1290 LF
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	155 LF
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	625 LF
861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	2975 LF
862101	LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)	2970 LF
862102	SAW CUT FOR SIGNAL (LOOP DETECTOR)	995 LF
865001	PUSHBUTTON AND SIGN	2 EA
871202	INSTALL CONTROLLER AND CABINET - BASE MOUNT	3 EA

C. EQUIPMENT TO BE REMOVED

SHA Forces shall remove the controllers. All other equipment to be removed shall become the property of the contractor.

PHASE CHARTS

MD 201 AT GOOD LUCK RD / PAINT BRANCH RD



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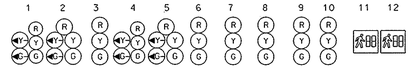
PHASE 1 & 5	◄G-	◄G-	◄G-	R	R	◄G-	◄G-	◄G-	R	R	◄R-	R	◄R-	◄R-	R	R	◄R-	R	◄R-	◄R-	R	R	DW	DW	DW	DW
CHANGES TO PHASES 1 & 6, 2 & 5 OR 2 & 6																										
PHASE 1 & 6	◄G-	◄G-	◄G-	G	G	◄R-	◄R-	◄R-	R	R	◄R-	R	◄R-	◄R-	R	R	◄R-	R	◄R-	◄R-	R	R	DW	DW	DW	DW
1 & 6 CHANGE	◄Y-	◄Y-	◄Y-	G	G	◄R-	◄R-	◄R-	R	R	◄R-	R	◄R-	◄R-	R	R	◄R-	R	◄R-	◄R-	R	R	DW	DW	DW	DW
PHASE 2 & 5	◄R-	◄R-	◄R-	R	R	◄G-	◄G-	◄G-	G	G	◄R-	R	◄R-	◄R-	R	R	◄R-	R	◄R-	◄R-	R	R	WK	WK	DW	DW
2 & 5 CHANGE	◄R-	◄R-	◄R-	R	R	◄Y-	◄Y-	◄Y-	G	G	◄R-	R	◄R-	◄R-	R	R	◄R-	R	◄R-	◄R-	R	R	WK	WK	DW	DW
PHASE 2 & 6	◄R-	◄R-	◄R-	G	G	◄R-	◄R-	◄R-	G	G	◄R-	R	◄R-	◄R-	R	R	◄R-	R	◄R-	◄R-	R	R	WK	WK	DW	DW
PED CLEAR	◄R-	◄R-	◄R-	G	G	◄R-	◄R-	◄R-	G	G	◄R-	R	◄R-	◄R-	R	R	◄R-	R	◄R-	◄R-	R	R	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	◄R-	R	◄R-	◄R-	R	R	DW	DW	DW	DW
PHASE 3	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	◄R-	R	R	◄R-	R	◄R-	◄R-	R	R	◄G-	G	◄G-	◄G-	G	G	DW	DW	DW	DW
3 CHANGE	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	◄R-	R	R	◄R-	R	◄R-	◄R-	R	R	◄Y-	Y	◄Y-	◄Y-	Y	Y	DW	DW	DW	DW
PHASE 4	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	◄R-	R	R	◄G-	G	◄G-	◄G-	G	G	◄R-	R	◄R-	◄R-	R	R	DW	DW	DW	DW
4 CHANGE	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	◄R-	R	R	◄Y-	Y	◄Y-	◄Y-	Y	Y	◄R-	R	◄R-	◄R-	R	R	DW	DW	DW	DW
PHASE 4 ALT	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	◄R-	R	R	◄G-	G	◄G-	◄G-	G	G	◄R-	R	◄R-	◄R-	R	R	DW	DW	WK	WK
PED CLEAR	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	◄R-	R	R	◄G-	G	◄G-	◄G-	G	G	◄R-	R	◄R-	◄R-	R	R	DW	DW	FL/DW	FL/DW
4 ALT CHANGE	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	◄R-	R	R	◄Y-	Y	◄Y-	◄Y-	Y	Y	◄R-	R	◄R-	◄R-	R	R	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	FL/◄R-	FL/R	FL/◄R-	FL/◄R-	FL/R	FL/R	DARK	DARK	DARK	DARK

MD 201 AT RITTENHOUSE ST



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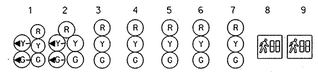
PHASE 1 & 5	◄G-/R	◄G-/R	R	◄G-/R	◄G-/R	R	R	R	R	R	DW	DW
CHANGES TO PHASES 1 & 6, 2 & 5 OR 2 & 6												
PHASE 1 & 6	R	R	R	◄G-/G	◄G-/G	G	R	R	R	R	DW	DW
1 & 6 CHANGE	R	R	R	◄Y-/G	◄Y-/G	G	R	R	R	R	DW	DW
PHASE 2 & 5	◄G-/G	◄G-/G	G	R	R	R	R	R	R	R	DW	DW
2 & 5 CHANGE	◄Y-/G	◄Y-/G	G	R	R	R	R	R	R	R	DW	DW
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	DW	DW
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	DW	DW
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW
PHASE 4 & 8 ALT	R	R	R	R	R	R	G	G	G	G	WK	WK
PED CLEARANCE	R	R	R	R	R	R	G	G	G	G	FL/DW	FL/DW
4 & 8 CHANGE ALT	R	R	R	R	R	R	Y	Y	Y	Y	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

MD 201 AT SARVIS AVENUE



	1	2	3	4	5	6	7	8	9
PHASE 2 & 5	◄G-/G	◄G-/G	G	R	R	R	R	DW	DW
2 & 5 CHANGE	◄Y-/G	◄Y-/G	G	R	R	R	R	DW	DW
PHASE 2 & 6	G	G	G	G	G	R	R	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	R	R	DW	DW
PHASE 4	R	R	R	R	R	G	G	DW	DW
4 CHANGE	R	R	R	R	R	Y	Y	DW	DW
PHASE 4 ALT	R	R	R	R	R	G	G	WK	WK
PED CLEARANCE	R	R	R	R	R	G	G	FL/DW	FL/DW
4 CHANGE ALT	R	R	R	R	R	Y	Y	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	DARK	DARK

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MD 410 (EAST WEST HWY) AND MD 201 (KENILWORTH AVE)

SCALE NONE DATE 6-20-05 CONTRACT NO. PG661A21

DESIGNED BY JA
DRAWN BY RC
CHECKED BY
F.A.P. NO.

COUNTY PRINCE GEORGE'S
LOGMILE
TIMS NO. G936
TOD NO.

TS NO. | DRAWING NO. OF | SHEET NO. 6 OF 7

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

2868520.dgn 06-29

PLOTTED: $DATETIME$
FILE: $FILE$