PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVLOVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL OF US 29 (GEORGIA AVE) AT SLIGO AVENUE. THE INTERSECTION WILL BE UPGRADED TO APS/CPS AND ALL HANDICAP RAMPS WILL BE RECONSTRUCTED TO ADA STANDARDS. INTERSECTION LIGHTING WILL ALSO BE ADDED. US 29 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION CURRENTLY OPERATES IN A NEMA FOUR PHASE, SEMI ACTUATED MODE. THERE IS AN EXCLUSIVE/PERMISSIVE LEFT TURN FOR THE SB GEORGIA AVENUE. THE THROUGH MOVEMENTS ALONG GEORGIA AVENUE OPERATE CONCURRENTLY WITH A PEDESTRIAN MOVEMENT TO CROSS SLIGO AVENUE. THE SIDE STREET MOVEMENTS ALLOW FOR ALTERNATE PHASING TO CROSS PEDESTRIANS ALONG THE NB APPROACH OF US 29 (GEORGIA AVENUE). THIS INTERSECTION IS PREEMPTED BY THE FIRE HOUSE LOCATED NORTHWEST OF THIS LOCATION. UPON PREEMPTION THE SOUTHBOUND THROUGH AND LEFT TURN MOVEMENTS ARE SHOWN AS GREEN, ALL OTHER APPROACHES WILL SHOW RED. DURING PREEMPTION THE FIREHOUSE INDICATIONS ARE SHOWN AS FLASHING YELLOW. DURING NORMAL OPERATION THE FIREHOUSE WILL FLASH RED.

III. SPECIAL NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES TO THE APPROPRIATE TERMINALS AND SHALL PROPERLY LABEL EACH CABLE.
THE CONTRACTOR SHALL NOTIFY MR. KAMAL HAMUD AT (240) 777-8761 72 HOURS IN ADVANCE OF ALL WORK. THE APS PUSHBUTTONS SHALL BE DELIVERED TO MR. KEITH LORD (301) 674-8965 AT THE MONTGOMERY COUNTY TECHNICAL CENTER, SIX(6) WEEKS PRIOR TO INSTALLATION.

IV. INTERCONNECT:

THIS INTERSECTION WILL BE INTERCONNECTED TO THE ADJACENT INTERSECTIONS NORTH AND SOUTH ALONG US 29. SEE INTERCONNECT PLANS FOR DETAILS.

EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADIMISTRATION

CAT. CODE	QUANTITY	UNIT	DESCRIPTION
900000	1	EA	CONTROLLER CABINET, NEMA SIZE 6 AND CONTROLLER ASC II WITH VIDEO DETECTION INTERFACE EQUIPMENT (MONTGOMERY COUNTY)
900000	115	SF	SHEET ALUMINUMN SIGN
	3	EA	D-3(1) (VAR. X 16") MAST ARM MOUNTED
	2	EA	M1-5 (30" X 24") GROUND MOUNTED
	1	EA	M3-2 (24" X 12") GROUND MOUNTED
	1	EA	M3-4 (24" X 12") GROUND MOUNTED
	2	EA	M4-5 (24" X 12") GROUND MOUNTED
	1	EA	M6-1 (21" X 15") GROUND MOUNTED
	1	EA	M6-3 (21" X 15") GROUND MOUNTED
	2	EA	R10-11B (30" X 30") MAST ARM MOUNTED
	4	EA	R10-3(1) (9" X 15") GROUND MOUNTED
	1	EA	R1-1 (36" X 36") GROUND MOUNTED
	1	EA	R3-4 (30" X 30") MAST ARM MOUNTED
	1	EA	R3-5(L) (30" X 36") MAST ARM MOUNTED
	1	EA	R3-5(MOD) (30" X 36") MAST ARM MOUNTED
	4	EA	R4-7(1) (24" X 30") GROUND MOUNTED

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

CAT. CODE	QUANTITY	UNIT	DESCRIPTION
100000	1	EA	MAINTENANCE OF TRAFFIC
201032	3	CY	CLASS 2 EXCAVATION
203030	4	CY	TEST PIT EXCAVATION
504322	5	SY	HMA SUPPAV 19.0mm FDP PG 64-22 LEV 4
585621	367	LF	12" WHITE PREF THERMO PAV'T MARKING LINES
585625	137	LF	24" WHITE PREF THERMO PAV'T MARKING LINES
585700	544	LF	REM EXIST PAVM'T MARKING LINES, ANY WIDTH
600000	160	SF	REMOVE AND RESET DECORATIVE BRICK
634300	346	LF	STD TYPE A COMB CURB AND GUTTER 12" X 8"
655105	1074	SF	5 INCH CONCRETE SIDEWALK
655120	88	SF	DETECTABLE WARNING SURFACES
800000	1	EA	FURNISH AND INSTALL 2 WIRE CENTRAL CONTROL UNIT
800000	4	EA	FURNISH AND INSTALL AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
800000	4	EA	FURNISH AND INSTALL LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	175	LF	FURNISH AND INSTALL 2 - 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED IN ONE TRENCH
800000	3	EA	FURNISH AND INSTALL 10' PEDESTAL POLE w/BREAKAWAY COUPLINGS (TIGER DRYLACK GREEN RAL 6009)
800000	1	EA	FURNISH AND INSTALL STEEL POLE WITH A SINGLE 38' MAST ARM (TIGER DRYLACK GREEN RAL 6009)
800000	1	EA	FURNISH AND INSTALL STEEL POLE WITH A SINGLE 60' MAST ARM (TIGER DRYLACK GREEN RAL 6009)
800000	1	EA	FURNISH AND INSTALL STEEL POLE WITH TWIN 50' MAST ARM (TIGER DRYLACK GREEN RAL 6009)
800000	2	EA	FURNISH AND INSTALL 15 FOOT LIGHTING ARM FOR SIGNAL STRUCTURE (TIGER DRYLACK GREEN RAL 6009)
800000	2	EA	8 INCH VEHICLE TRAFFIC SIGNAL HEAD SECTION
800000	29	EA	12 INCH (R, Y, G) LED SIGNAL HEAD SECTION
800000	115	SF	INSTALL SHEET ALUMINUMN SIGN OVERHEAD OR GROUND MOUNT
800000	2	EA	VIDEO DETECTION CAMERA AND CABLE
801130	6	EA	SO PERF TUB ST SIGN POSTS
801135	6	EA	SO TUB STEEL ANCHOR BASES
805118	209	LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED
805135	136	LF	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
805140	155	LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
805155	109	LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED
807405	1	EA	ELECTRICAL UTILITY SERVICE EQUIPMENT 120/240 VOLT 100 AMP
810022	50	LF	ELECTRICAL CABLE - 1 CONDUCTOR NO.8 AWG-THHN/THWN
811001	7	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813022	48	SF	REM EXIST GR MOUNTED SIGN & SUP
816110	1	EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT
831010	2	EA	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE (TIGER DRYLACK GREEN RAL 6009)
832020	783	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
861105	504	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861106	625	LF	ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 AWG)
861107	623	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	794	LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
861116	367	LF	ELECTRICAL CABLE - 2 CONDUCTOR (TC, NO. 12 AWG)

C. IF THE CABINET IS TO BE REMOVED SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

QUANTITY	UNIT	DESCRIPTION
1	EA	BASE CABINET SIZE 6

PROJECT CONTACTS

THE CONTACT PERSONS ARE AS FOLLOWS:

Mr. Jeffery Wentz
Assistant District Engineer - Traffic
Phone: (301 513-7358

Mr. Vernon Stinnett, Jr
Assistant District Engineer - Maintenance
Phone: (301) 513-7304

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

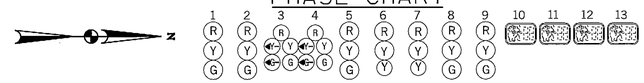
Mr. Richard L. Daff, Sr.
Chief, Traffic Operations Division
Phone: (410) 787-7630

Mr. Ed Rodenhizer
Supervisor, Signal Operations
Phone: 410-787-7650

Mr. Kamal Hamud
Montgomery County
Phone: 240-777-8761

Mr Eugene Bailey
Supervisor, Sign Shop
Phone:

PHASE CHART

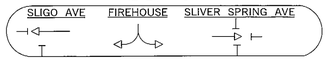


	1	2	3	4	5	6	7	8	9	10	11	12	13	
PHASE 1 AND 6	R	R	G G	G G	G	FL/R	FL/R	R	R	DW	DW	DW	DW	
PHASE 1 AND 6 CHANGE	R	R	G Y	G Y	G	FL/R	FL/R	R	R	DW	DW	DW	DW	
PHASE 2 AND 6	G	G	G	G	G	FL/R	FL/R	R	R	WK	WK	DW	DW	
PED CLEARANCE	G	G	G	G	G	FL/R	FL/R	R	R	FL/DW	FL/DW	DW	DW	
PHASE 2 AND 6 CHANGE	Y	Y	Y	Y	Y	FL/R	FL/R	R	R	DW	DW	DW	DW	
PHASE 4	R	R	R	R	R	FL/R	FL/R	G	G	DW	DW	DW	DW	
PHASE 4 CHANGE	R	R	R	R	R	FL/R	FL/R	Y	Y	DW	DW	DW	DW	
PHASE 4 ALT	R	R	R	R	R	FL/R	FL/R	G	G	DW	DW	WK	WK	
PED CLEARANCE	R	R	R	R	R	FL/R	FL/R	G	G	DW	DW	FL/DW	FL/DW	
PHASE 4 ALT CHANGE	R	R	R	R	R	FL/R	FL/R	Y	Y	DW	DW	DW	DW	
EMERGENCY PRE-EMPTION CLEAR	R	R	G G	G G	G	FL/R	FL/R	R	R	DW	DW	DW	DW	SEE BELOW
PRE-EMPTION	R	R	G G	G G	G	FL/Y	FL/Y	R	R	DW	DW	DW	DW	
PRE-EMPTION CHANGE	R	R	G Y	G Y	G	Y	Y	R	R	DW	DW	DW	DW	
FLASH OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	

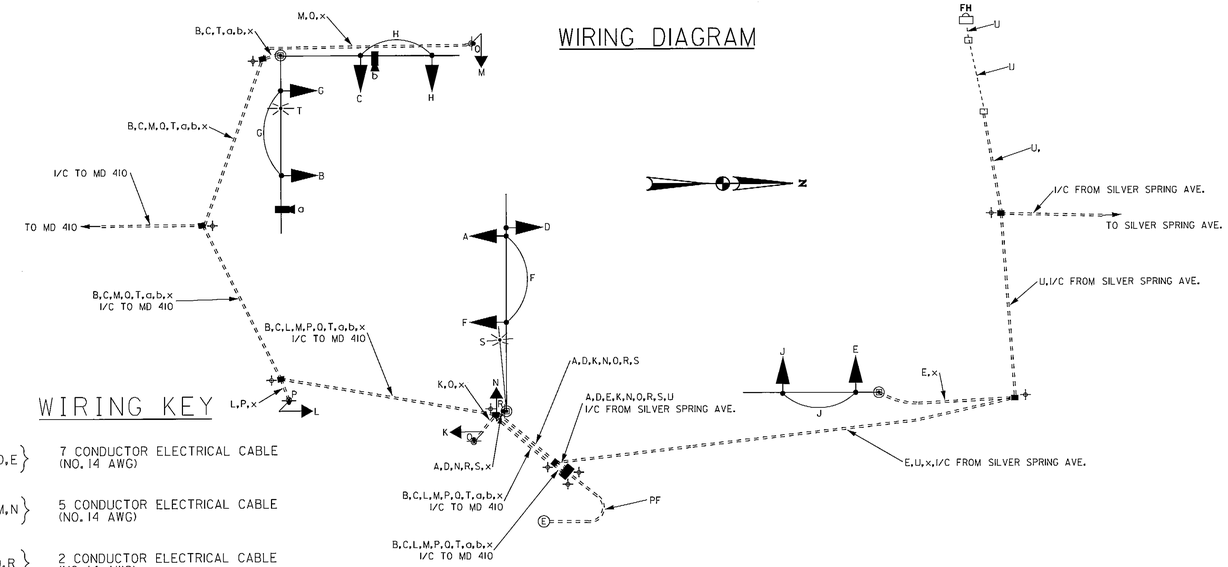
NOTE:

1. DEPENDING ON THE OPERATING PHASES AT ACTIVATION, ALL PHASES OTHER THAN 1 AND 6 WILL GO TO PHASE CHANGE.
2. IT IS ASSUMED THAT AFTER PRE-EMPTION CHANGE THE CONTROLLER WILL RETURN TO PHASE 2 AND 6.

PRE-EMPTION



WIRING DIAGRAM



WIRING KEY

A,B,C,D,E	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
F,G,H,J,K,L,M,N	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
O,P,Q,R	2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
S,T	2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) TRAY CABLE
U	3 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
a,b	VIDEO DETECTION CABLE
x	1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
I/C	12 PAIR INTERCONNECT CABLE
PF	POWER SERVICE UNDERGROUND 3 WIRE 1 CONDUCTOR (NO. 4 AWG)
+	GROUND ROD

SHA

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

US 29 (GEORGIA AVE) AT SLIGO AVE
TRAFFIC SIGNAL DESIGN
SILVER SPRING, MD

GENERAL INFORMATION PLAN SHEET

SCALE NTS DATE 07/2009 CONTRACT NO. MO2165168

DESIGNED BY MS COUNTY MONTGOMERY
DRAWN BY MS LOGMILE 15002900.39
CHECKED BY JB TIMS NO. J721
F.A.P. NO. TOD NO.

TS NO. 4285B GI | DRAWING -—- 3 OF 3 | SHEET NO. 16 OF 26

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PLOTTED: $DATETIME$
FILE: $FILE$