PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE USE OF THE EXISTING TRAFFIC SIGNAL AS A TEMPORARY TRAFFIC SIGNAL IN PHASE 1 AND THE INSTALLATION OF A NEW TEMPORARY SIGNAL IN PHASE 2 AT THE INTERSECTION OF MD 193 AND LOTTSFORD ROAD/WOODMORE ROAD IN PRINCE GEORGES COUNTY. THIS INVOLVES RELOCATING EXISTING SIGNAL HEADS ON THE EXISTING SPAN WIRE AND THE INSTALLATION OF NEW SIGNAL HEADS ON THE NEW TEMPORARY SPAN WIRE. THE PHASE ONE TEMPORARY SIGNAL WILL BE WIRED TO THE EXISTING CONTROLLER AND THE PHASE 2 TEMPORARY SIGNAL WILL BE WIRED TO THE CONTROLLER THAT IS INSTALLED AT THE ULTIMATE LOCATION.

INTERSECTION OPERATION

A SYSTEM CONTROLLER HOUSED IN AN EXISTING BASE MOUNTED CABINET WAS INSTALLED AT THIS LOCATION. THE INTERSECTION WILL OPERATE IN A FULLY ACTUATED MODE USING 6 NEMA PHASES. VIDEO DETECTION CAMERAS ARE INSTALLED AT THIS LOCATION FOR BOTH PHASES FOR ACTUATION OF THE LEFT TURNS AND SAMPLING OF THE MAINLINE (MD 193). THE MAINLINE SHALL OPERATE USING EXCLUSIVE/PERMISSIVE LEFT TURN SIGNALS.

SPECIAL NOTES

1. THE FOLLOWING CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

PROJECT CONTACTS:

MR. BRIAN YOUNG, ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7318
MR. KEVIN NOWAK, ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
PHONE: (301) 513-7336
MR. AUGIE REBISH, DISTRICT UTILITIES ENGINEER
PHONE: (301) 513-7350
MR. VERNON STINNET Jr., ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 513-7304
MR. RICHARD DAFF SR. CHIEF TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630
MR. ROBERT SNYDER.
ASSISTANT DIVISION CHIEF. TRAFFIC OPERATIONS
PHONE: (410) 787-7630
MR. ED RODENHIZER, TEAM LEADER SIGNAL OPERATIONS
PHONE: (410) 787-7650
MR. EUGENE BAILEY, TEAM LEADER SIGN OPERATIONS
PHONE: (410) 787-7670
MS. DARLENE ELIDE, SUPPLY OFFICER IV
(SIGANL SHOP WAREHOUSE) PHONE: (410) 787-7668

2. MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING STANDARD PLATES FOR TRAFFIC CONTROL.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
900000	ECONOLITE ASC II CONTROLLER WITH TELEMETRY AND RACK MOUNTED	EA	1
	AMPLIFIERS BASE MOUNTED (SIZE-6) CABINET WITH VIDEO INTERFACE EQUIPMENT 1-4 CAMERAS.		
900000	VIDEO DETECTION INTERFACE EUIPMENT RACK FOR 5-8 CAMERAS	EA	1
973023	FLAT SHEET ALUMINUM SIGNS CONSISTING OF:	SF	238
	D-3(1)(VAR.x16") SPAN WIRE MOUNT	EA	6
	R3-5(L)(30"x36") SPAN WIRE MOUNT	EA	2
	SHIELD ASSEMBLY - POLE MOUNTED	EA	3
	SHIELD ASSEMBLY - GROUND MOUNTED	EA	5
	M3-1 (24"x12")		
	M3-1 (30"x15")		
	M3-3 (24"x12")		
	M3-3 (30"x15")		
	M1-5 (30"x24")		
	M1-5 (48"x36")		
	M7-1 (9"x12")		

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

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
203030	TEST PIT EXCAVATION	CY	5
585624	24 INCH HEAT APPL. WHITE PERMANENT PREFORMED THERMO. PAVEMENT MARKING	LF	400
800000	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEADS SECTIONS AND SIGNS	EA	3
800000	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION	EA	3
800000	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON BASE UNIT	EA	3
800000	NAVIGATOR CENTRAL CONTROL UNIT	EA	1
800000	REMOVE AND DISPOSE OF EXISTING EQUIPMENT	LS	1
800000	REALIGN VIDEO DETECTION CAMERA	EA	1
800000	RELOCATE AND REALIGN EXISTING SIGNS	EA	5
800000	BACK GUY ANCHOR ASSEMBLY	EA	8
800000	PEDESTRIAN SIGN R10(e) (9"x15") - POLE MOUNT	EA	3
800000	INSTALL OVERHEAD SIGNS (INCLUDING ALL HARDWARE)	EA	65
800000	3 WIRE, 1 CONDUCTOR NO. 250 KCMIL	LF	50
800000	CONTROL CABLE FOR VIDEO DETECTION CAMERA	LF	2550
801004	CONCRETE FOR SIGNAL FOUNDATIONS	CY	30
801606	WOOD SIGN SUPPORT 4 INCH * 6 INCH	LF	33.5
801607	INSTALL SHEET ALUMINUM SIGNS	SF	38.5
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	2100
805125	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	65
805135	3 INCH SCHED. 80 PVC CONDUIT-TRENCHED	LF	190
805135	3 INCH SCHED. 80 PVC CONDUIT-SLOTTED	LF	300
805140	4 INCH SCHED. 80 PVC CONDUIT-TRENCHED	LF	110
805155	4 INCH SCHED. 80 PVC CONDUIT-SLOTTED	LF	700
805160	1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE	LF	150
801711	REMOVE EXISTING GROUND MOUNTED SIGN AND SUPPORT	SF	21.3
807202	METER SERVICE PEDESTAL	EA	1
810010	CABLE 1 CONDUCTOR NO.4 AWG-THHN/THWN	LF	50
811001	FURNISH AND INSTALL ELECTRICAL HANDHOLE	EA	12
811002	REMOVE EXISTING ELECTRICAL HANDHOLE	EA	14
816001	VIDEO DETECTION CAMERA - TERRA	EA	5
818004	10 FOOT BREAKAWAY BASE PEDESTAL POLE	EA	3
818009	14" X 32" STRAIN POLE (2 PLY)	EA	4
831010	250 WATT HPS LAMP AND LUMINAIRE	EA	4
837001	GROUND ROD - 3/4 INCH DIA. X 10 FOOT LENGTH	EA	10
860200	INSTALL SIGNAL HEADS - SPAN MOUNT	EA	18
860265	RELOCATE EXISTING SIGNAL HEADS	EA	6
860270	8 INCH/12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION	EA	2
860284	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION	EA	16
860292	CUT, CLEAN, GLAVANIZED AND CAP TRAFFIC SIGNAL STRUCTURE	EA	1
861116	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	1300
861104	2 CONDUCTOR ALUMINUM ELECTRICAL CABLE ALUMINUM SHIELDED	LF	1300
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	1050
861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	900
861116	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)	LF	750
862101	LOOP WIRE ENCASED (NO. 4 AWG) ENCASED IN 1/4 INCH FLEXIBLE TUBING	LF	48
866104	20 FOOT LIGHTING ARM ON SIGNAL STRUCTURE	EA	4
869101	STEEL SPAN WIRE - 1/4 INCH DIAMETER	LF	1000
869102	STEEL SPAN WIRE - 3/8 INCH DIAMETER	LF	1000
871202	INSTALL CONTROLLER AND CABINET - BASE MOUNT	EA	1

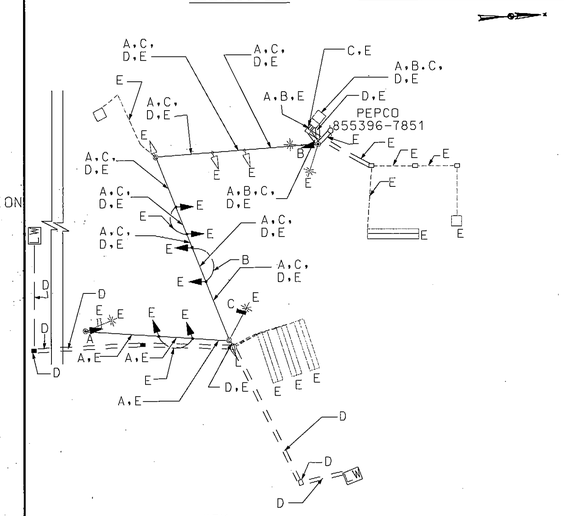
NOTE:
THE CONTRACTOR SHALL DELIVER APS UNIT TO SHA SIGNAL SHOP, PRIOR TO LOCATION INSTALLATION, FOR PROGRAMMING. SHA FORCES SHALL INSTALL CENTRAL CONTROL UNIT IN THE CABINET.

C. 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.

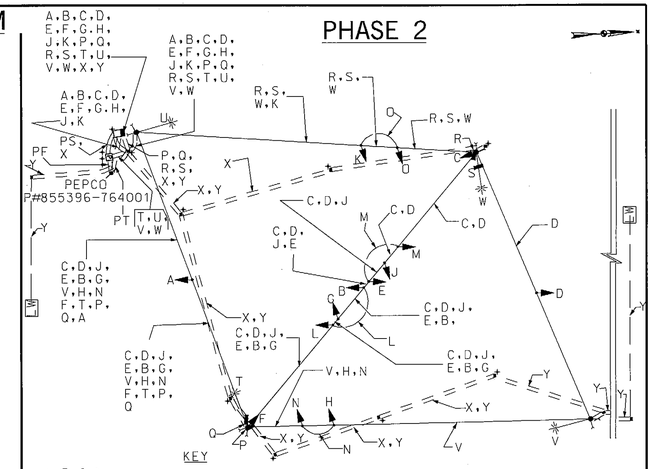
CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
	CONTROLLER	EA	1
	VIDEO DETECTION CAMERA	EA	5

WIRING DIAGRAM

PHASE 1



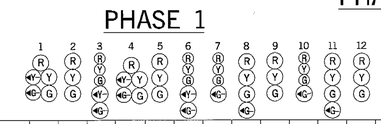
PHASE 2



SHA No: BW650M84
MD 193 @ Lottsford Road/Moodmore Road

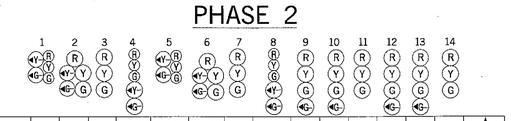
PHASE CHART

PHASE 1



	1	2	3	4	5	6	7	8	9	10	11	12
PHASE 1 AND 5	←G/R	R	←G/R	←G/R	R	←G/R	R	R	R	R	R	R
1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6												
PHASE 1 AND 6	G ←G	G	←G	R	R	R	R	R	R	R	R	R
1 AND 6 CHANGE	G ←Y	Y	←Y	R	R	R	R	R	R	R	R	R
PHASE 2 AND 5	R	R	R	←G	G	←G	R	R	R	R	R	R
2 AND 5 CHANGE	R	R	R	←Y	Y	←Y	R	R	R	R	R	R
PHASE 2 AND 6	G	G	G	G	G	G	R	R	R	R	R	R
2 AND 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R
PHASE 3	R	R	R	R	R	R	R	R	R	←G	←G	G
3 CHANGE	R	R	R	R	R	R	R	R	R	←Y	←Y	G
PHASE 4	R	R	R	R	R	←G	←G	G	R	R	R	R
4 CHANGE	R	R	R	R	R	←Y	←Y	Y	R	R	R	R
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R

PHASE 2



	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PHASE 1 AND 5	←G/R	←G/R	R	←G/R	←G/R	←G/R	R	←G/R	R	R	R	R	R	R
1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6														
PHASE 1 AND 6	←G	←G	G	←G	R	R	R	R	R	R	R	R	R	R
1 AND 6 CHANGE	←Y	←Y	Y	←Y	R	R	R	R	R	R	R	R	R	R
PHASE 2 AND 5	R	R	R	R	←G	←G	G	←G	R	R	R	R	R	R
2 AND 5 CHANGE	R	R	R	R	←Y	←Y	Y	←Y	R	R	R	R	R	R
PHASE 2 AND 6	G	G	G	G	G	G	G	G	R	R	R	R	R	R
2 AND 6 CHANGE	Y	Y	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R
PHASE 3	R	R	R	R	R	R	R	R	R	R	R	←G	←G	G
3 CHANGE	R	R	R	R	R	R	R	R	R	R	R	←Y	←Y	G
PHASE 4	R	R	R	R	R	R	R	R	←G	←G	G	R	R	R
4 CHANGE	R	R	R	R	R	R	R	R	←Y	←Y	Y	R	R	R
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R

GENERAL NOTES (PHASE 1)

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL UNUSED CABLES FROM ALL CONDUITS AND HANDHOLES.
8. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD. 816.03, MD 818.01, MD 818.02 & MD 818.40. THE CONTRACTOR SHALL VERIFY ULITIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
9. "PUSHBUTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEEL-CH AIR FROM A 60" x 60" LEVEL LANDING AREA. A LEVEL LANDING AREA IS AN AREA WITH A CROSS SLPOE OF LES THAN OR EQUAL TO 2%".
10. "LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09 AND FIG. 4E.2 AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE'. IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY."
11. REFER TO ROADWAY PLAN SHEET PS-3 FOR ALL ADA RAMP LOCATIONS AND INSTALLATION.

GENERAL NOTES (PHASE 2)

7. ALL PROPOSED LUMINAIRE SHALL BE SUPPLIED WITH A PHOTOCELL.
8. THE 10 FT. SEPARATION BETWEEN THE PUSHBUTTON IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER OF POLE. PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
9. WOOD SIGN SUPPORTS INSTALLED IN CONCRETE SHALL BE INSTALLED WITH SLEEVED FOUNDATIONS AS PER STANDARDS MD-812.05-01 AND MD-812.05.02.

MOT PHASE 1 AND 2: N001

SABRA, WANG & ASSOCIATES, INC.
1504 JOH AVENUE
SUITE 160
BALTIMORE, MD 21227
(410) 737-6564
WWW.SABRA-WANG.COM

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

LOTTDFORD, WOODMORE AND ENTERPRISE ROADS (MD 193) IMPROVEMENT PROJECT
MD 193 AT LOOTSFORD ROAD /WOODMORE ROAD

PRINCE GEORGES, MARYLAND

GENERAL INFORMATION PLAN

SCALE N/A DATE FEBRUARY, 2009 CONTRACT NO. 822-H(D)

DESIGNED BY RLA
DRAWN BY JAW
CHECKED BY PS CJW
FAP NO.
COUNTY PRINCE GEORGES
LOGMILE 16019316.58
TIMS NO. I-952
TOD NO.

TS NO. 2672 F | DRAWING pSG-N001 OF NOO2 | SHEET NO. 127 OF 147

PLOTTED: Monday, April 06, 2009 AT 10:11 AM
FILE: R:\2006\13 PG County_DM\M Harris 804-015\Task 1_MD 193_Lottsford\dwg\PS&E Submission\Signal Design\pSG-N001_MD 193.dgn

BY:RATTIVOR