PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF A TRAFFIC SIGNAL AT THE INTERSECTION OF MD 212 (RIGGS ROAD) AT 410 (EAST-WEST HIGHWAY) IN PRINCE GEORGES COUNTY.

INTERSECTION OPERATION

A SYSTEM CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION. THE INTERSECTION WILL OPERATE IN A FULLY ACTUATED MODE USING 8 NEMA PHASES. THE LEFT TURN PHASES ALONG MD 212 WILL BE REVISED TO OPERATE WITH EXCLUSIVE LEFT TURN PHASING.

SPECIAL NOTES

1. THE FOLLOWING CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS:

PROJECT CONTACTS:

MR. MAJIB SHAKIB, ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7359
MR. DENNIS MCMAHAN, ASSISTANT DISTRICT ENGINEER- MAINTENANCE
PHONE: (301) 513-7300
MR. AUGI REBISH, ASSISTANT DISTRICT ENGINEER - UTILITY
PHONE: (301) 513-7300
MR. RICHARD L. DAFF, SR. CHIEF TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATOR.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
900000	MASTER LOCAL CONTROLLER AND CABINET SIZE 6 W/ VIDEO DETECTION INTERFACE EQUIP.	EA	1
900000	FLAT SHEET ALUMINUM SIGNS CONSISTING OF:	SF	244
	R10-12 (36"X42") MAST ARM MOUNT	EA	2
	R3-5 (30"x36") MAST ARM MOUNT	EA	3
	D3-2 (16" X VAR.) MAST ARM MOUNT	EA	4
	GUIDE SHIELD ASSEMBLY (30"X51")	EA	4
	GUIDE SHIELD ASSEMBLY (48"X75")	EA	4
963010	FOUR CHANNEL LOOP DETECTOR AMPLIFIER, RACK MOUNT	EA	3

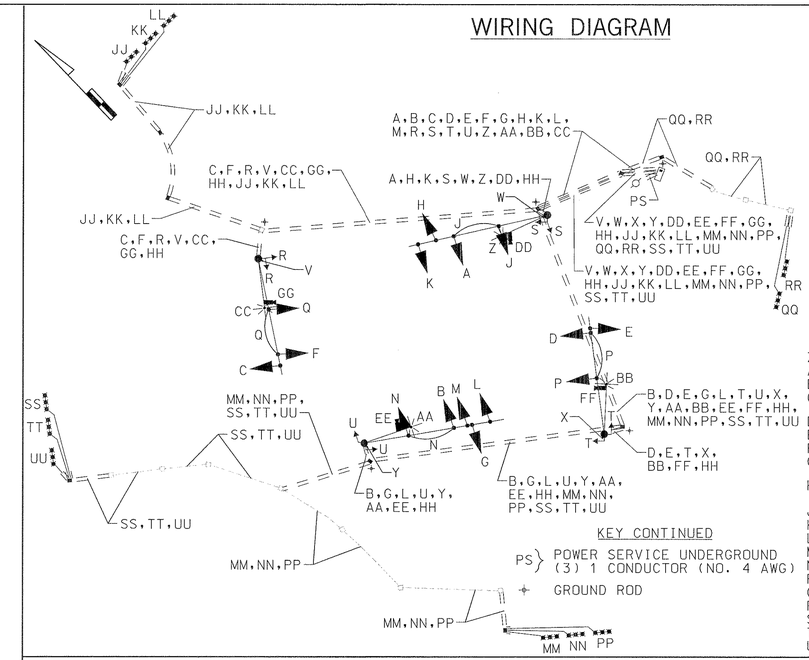
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
203030	TEST PIT EXCAVATION	CY	3
585462	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH	LF	1000
585620	12 INCH HEAT APPL. WHITE PERMANENT PREFORMED THERMO. PAVEMENT MARKING	LF	1350
585624	24 INCH HEAT APPL. WHITE PERMANENT PREFORMED THERMO. PAVEMENT MARKING	LF	250
800000	REMOVE AND DISPOSE OF EXISTING EQUIPMENT	LS	1
800000	2 INCH SCHED. 80 PVC CONDUIT-TRENCHED	LF	15
801004	CONCRETE FOR SIGNAL FOUNDATIONS	CY	21
801607	INSTALL SHEET ALUMINUM SIGN	SF	244
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	530
805135	3 INCH SCHED. 80 PVC CONDUIT-TRENCHED	LF	400
805140	4 INCH SCHED. 80 PVC CONDUIT-TRENCHED	LF	40
805155	4 INCH SCHED. 80 PVC CONDUIT-SLOTTED	LF	800
805160	1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT	LF	33
807400	ELECTRICAL UTILITY SERVICE EQUIPMENT 120/240 VOLTS, 60 AMPS	EA	1
810550	MICROLOOP PROBE, 500 FOOT LEAD IN CABLE	EA	8
810555	MICROLOOP PROBE, 1000 FOOT LEAD IN CABLE	EA	2
811001	F&I ELECTRICAL HANDHOLE	EA	10
816001	VIDEO DETECTOR CAMERA	EA	4
816005	CONTROL CABLE, 250 FOOT VIDEO DETECTION CAMERA TO CONTROLLER	EA	2
816010	CONTROL CABLE, 500 FOOT VIDEO DETECTION CAMERA TO CONTROLLER	EA	2
818036	STEEL POLE WITH A SINGLE 50 FOOT MAST ARM	EA	2
818041	STEEL POLE WITH A SINGLE 60 FOOT MAST ARM	EA	2
831010	250 WATT HPS LAMP AND LUMINAIRE	EA	4
832017	CABLE 1-CONDUCTOR, NO. 4 AWG, TYPE USE, 600V	LF	60
837001	GROUND ROD - 3/4 INCH DIA. X 10 FOOT LENGTH	EA	5
860270	8 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION	EA	6
860272	12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION	EA	47
860278	12 INCH PEDESTRIAN SIGNAL HEAD SECTION - POLE MOUNT	EA	16
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	920
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	2300
861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	1900
861116	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)	LF	1125
862102	SAW CUT FOR SIGNAL (LOOP DETECTOR)	LF	330
865001	PUSHBUTTON AND SIGN	EA	4
866104	20 FOOT LIGHTING ARM ON SIGNAL STRUCTURE	EA	4
871202	INSTALL CONTROLLER AND CABINET - BASE MOUNT	EA	1

C. SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILLIARY 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

WIRING DIAGRAM



KEY

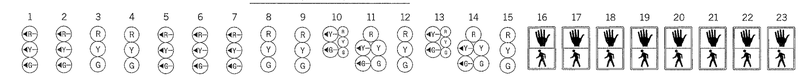
A B C D E F G H	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
J K L M N P Q R S T U	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
V W X Y	2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
Z AA BB CC	2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) TRAY CABLE
DD EE FF GG	VIDEO DETECTION CABLE
HH	1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
JJ KK LL MM NN PP QQ RR SS TT UU	MICRO LOOP DETECTOR CABLE LEAD-IN

KEY CONTINUED

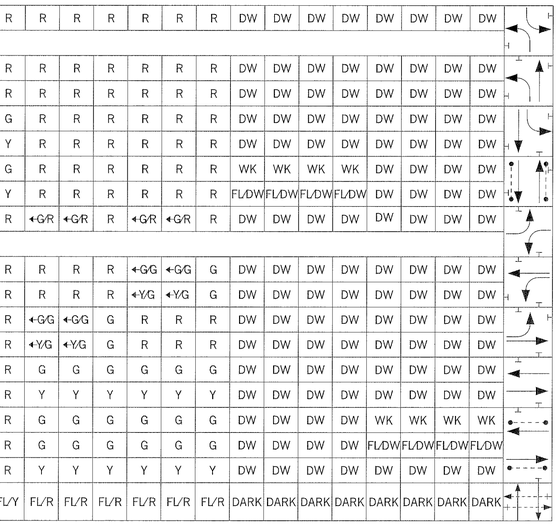
PS } POWER SERVICE UNDERGROUND (3) 1 CONDUCTOR (NO. 4 AWG)

GROUND ROD

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
PHASE 1 AND 5	←G–	←G–	R	R	←G–	←G–	←G–	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
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	R	DW	DW	DW	DW	DW	DW	DW	DW
1 AND 6 CHANGE	←Y–	←Y–	Y	Y	←R–	←R–	←R–	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 AND 5	←R–	←R–	R	R	←G–	←G–	←G–	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
2 AND 5 CHANGE	←R–	←R–	R	R	←Y–	←Y–	←Y–	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 AND 6	←R–	←R–	G	G	←R–	←R–	←R–	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
2 AND 6 CHANGE	←R–	←R–	Y	Y	←R–	←R–	←R–	Y	Y	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
PHASE 3 AND 7	←R–	←R–	R	R	←R–	←R–	←R–	R	R	←G/R	←G/R	R	←G/R	←G/R	R	DW	DW	DW	DW	DW	DW	DW	DW
3 AND 7 CHANGE TO 3 AND 8, 4 AND 7, OR 4 AND 8																							
PHASE 3 AND 8	←R–	←R–	R	R	←R–	←R–	←R–	R	R	R	R	R	←G/G	←G/G	G	DW	DW	DW	DW	DW	DW	DW	DW
3 AND 8 CHANGE	←R–	←R–	R	R	←R–	←R–	←R–	R	R	R	R	R	←Y/G	←Y/G	G	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 AND 7	←R–	←R–	R	R	←R–	←R–	←R–	R	R	←G/G	←G/G	G	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
4 AND 7 CHANGE	←R–	←R–	R	R	←R–	←R–	←R–	R	R	←Y/G	←Y/G	G	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 AND 8	←R–	←R–	R	R	←R–	←R–	←R–	R	R	G	G	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 AND 8 CHANGE	←R–	←R–	R	R	←R–	←R–	←R–	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 AND 8 ALT	←R–	←R–	R	R	←R–	←R–	←R–	R	R	G	G	G	G	G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEARANCE	←R–	←R–	R	R	←R–	←R–	←R–	R	R	G	G	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 AND 8 ALT CHANGE	←R–	←R–	R	R	←R–	←R–	←R–	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	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	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK



SABRA, WANG & ASSOCIATES, INC.
1506 JOH AVENUE
SUITE 180
BALTIMORE, MD 21227
(410) 737-6564
WWW.SABRA-WANG.COM

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION PLAN

MD 212 (RIGGS ROAD) AT MD 410 (EAST-WEST HIGHWAY)

DRAWN BY: J. WEAVER	F.A.P. NO.		TS NO. 1778 C	SHEET NO. ____ OF ____
CHECKED BY: S. RENZI	S.H.A. NO.	PG3735176		
SCALE: 1" = 20'	COUNTY:	PRINCE GEORGES	T.I.M.S. NO. D 486	
DATE: 04/18/02	LOG MILE:	16021201.26		

R:\00-482RS\DWG\212@410\0299GPN1.DGN