PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REPLACEMENT OF EXISTING VEHICULAR SIGNAL HEADS WITH LED SIGNAL HEADS, INSTALLATION OF LED SIGNAL HEADS FOR THE SOUTHBOUND LEFT TURN LANE ON MD 650, INSTALLATION OF LED COUNTDOWN PEDESTRIAN SIGNAL HEADS, APS PUSHBUTTONS, AND SIGNS FOR THE NORTH AND EAST LEGS OF THE INTERSECTION OF MD 650 (NEW HAMPSHIRE AVE) AT RAY ROAD AND POPLAR AVE. MD 650 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THIS INTERSECTION WILL OPERATE IN A NEMA FIVE-PHASE FULL-TRAFFIC-ACTUATED MODE WITH AN ALTERNATE PEDESTRIAN PHASE FOR THE NORTH LEG AND A CONCURRENT PEDESTRIAN PHASE FOR THE EAST LEG OF THE INTERSECTION. THE MD 650 SOUTHBOUND LEFT TURN WILL OPERATE IN AN EXCLUSIVE-PERMISSIVE PHASING.

CONTROLLER REQUIREMENTS

THE EXISTING FULL-TRAFFIC-ACTUATED EIGHT PHASE TRAFFIC SIGNAL CONTROLLER HOUSED IN POLE MOUNTED CABINET WILL BE USED. IP BASED VIDEO DETECTION INTERFACE EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THE SHA. AN APS CENTRAL CONTROL UNIT WILL BE FURNISHED BY THE CONTRACTOR AND INSTALLED BY THE SHA.

SPECIAL NOTE

APS WILL FUNCTION AS FOLLOWS:

TO CROSS NEW HAMPSHIRE AVE:

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS NEW HAMPSHIRE AT RAY AND POPLAR. WAIT."
B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

TO CROSS RAY ROAD:

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS RAY AT NEW HAMPSHIRE. WAIT."
B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

CONTACT PERSONS FOR DISTRICT #3 (PRINCE GEORGE'S COUNTY) ARE AS FOLLOWS:

MS. FELECIA MURPHY
ASSISTANT DISTRICT ENGINEER-TRAFFIC
PHONE: (301)513-7358

MR. VICTOR GRAFTON
UTILITY ENGINEER
PHONE: (301)513-7350

MR. VERNON STINNETT
ASSISTANT DISTRICT ENGINEER-MAINTENANCE
PHONE: (301)513-7304

CONTACT PERSONS FOR OOTS ARE AS FOLLOWS:

MR. RICHARD L. DAFF, SR.
CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410)787-7630

MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF
TRAFFIC OPERATIONS
(410)787-7630

MR. ED RODENHEIZER
CHIEF, SIGNAL OPERATIONS
(410)787-7650

MR. EUGENE BAILEY
CHIEF, SIGN OPERATIONS
(410)787-7676

EQUIPMENT LIST "A,B & C"

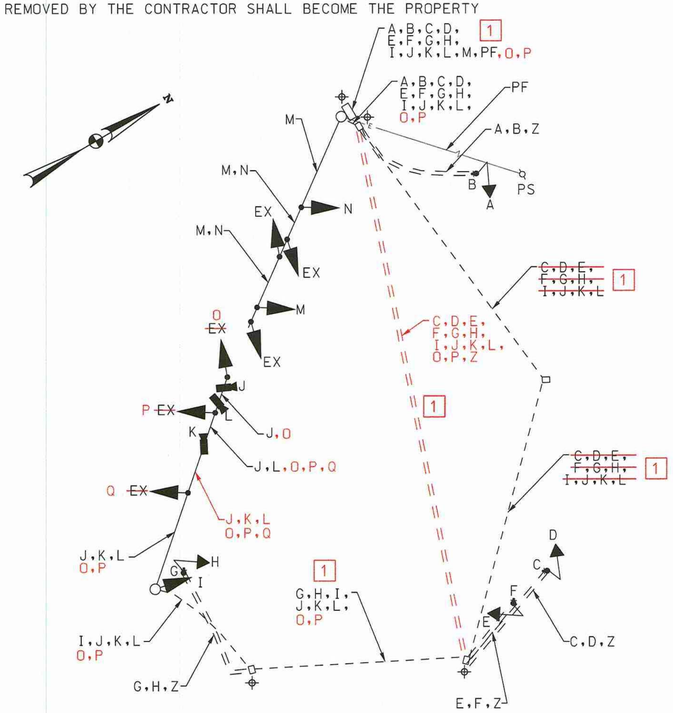
A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
9000	IP-BASED VIDEO DETECTION INTERFACE EQUIPMENT	EA	1
9570	SHEET ALUMINUM SIGNS - GROUND MOUNTED 8 - S1-1 (36"X36") FYG 4 - M6-2(L) (21"X15") FYG 4 - M6-2(R) (21"X15") FYG 2 - M1-5(6) (30"X48") 2 - M1-5(6) (48"X72")	SF	158
9571	SHEET ALUMINUM SIGNS - MAST ARM/POLE MOUNTED 2 - D-3(1) (VAR.X16") - DUAL FACED	SF	22

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

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1003	MAINTENANCE OF TRAFFIC	EA	2
2002	TEST PIT EXCAVATION	CY	1
5004	F & I 12" WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	400
6001	F & I STANDARD TYPE A COMBINATION CURB AND GUTTER 12" GUTTER PAN 8" DEPTH	LF	56
6002	F & I 5" CONCRETE SIDEWALK	SF	320
6003	F & I DETECTABLE WARNING SURFACE FOR CURB RAMPS	SF	25
8001	F & I 12" LED SIGNAL HEAD	EA	31
8002	F & I 2-WIRE CENTRAL CONTROL UNIT	EA	1
8008	F & I AUDIBLE / TACTILE PEDESTRIAN PUSHBUTTON	EA	4
8009	F & I BREAKAWAY PEDESTAL POLE (ANY SIZE)	EA	4
8016	F & I LED 16" COUNTDOWN PEDESTRIAN	EA	4
8024	REMOVE & DISPOSE OF EQUIPMENT	EA	1
8028	F & I VIDEO DETECTION CAMERA AND CABLE	EA	3
8036	F & I UP TO 4" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	150
8037	F & I WOOD SIGN SUPPORTS UP TO 4' X 6'	LF	214
8038	INSTALL OVERHEAD OR GROUND MOUNTED SIGN	SF	180
[1] 8040	F & I NO.6 AWG STRANDED BARE COPPER GROUND WIRE	LF	~~150~~ 300
8051	F & I ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	850
[1] 8053	F & I ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	~~920~~ 950
[1] 8054	F & I ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	~~480~~ 1260
[1] 8034	F & I UP TO 4" SCHEDULE 80 RIGID PVC CONDUIT - BORED	LF	150

C. ALL MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.



PHASING CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13
	R Y G	R Y G	R Y G B	R Y G B	R Y G	R Y G	R Y G	R Y G	R Y G				
PHASE 2 & 5	R	R	G ←G–	G ←G–	G	R	R	R	R	DW	DW	DW	DW
2 & 5 CHANGE	R	R	G ←Y–	G ←Y–	G	R	R	R	R	DW	DW	DW	DW
PHASE 2 & 6	G	G	G	G	G	R	R	R	R	DW	DW	WK	WK
PED CLEARANCE/ COUNTDOWN	G	G	G	G	G	R	R	R	R	DW	DW	FL/DW	FL/DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW
4 & 8 CHANGE	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW
PHASE 4 & 8 ALT	R	R	R	R	R	G	G	G	G	WK	WK	DW	DW
PED CLEARANCE/ COUNTDOWN	R	R	R	R	R	G	G	G	G	FL/DW	FL/DW	DW	DW
4 & 8 ALT CHANGE	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK

GENERAL NOTES

1. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SECTION 4E.09 AND FIGURE 4E.3 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.
2. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" X 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
3. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
4. PUSHBUTTON ARROWS AND SIGNS ARE TO BE ORIENTED PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
6. ALL UNUSED CABLE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
7. UNDERGROUND 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 ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
8. THE CONTRACTOR SHALL VERIFY ALL POLE LOCATIONS PRIOR TO INSTALLATION.
9. VIDEO DETECTION CAMERA LOCATION/ALIGNMENT SHALL BE COORDINATED WITH THE ENGINEER.
10. THE CONTRACTOR SHALL CAP AND ABANDON CONDUIT FEEDING SIGNAL EQUIPMENT THAT IS REMOVED.
11. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK GRADE.
12. ACCESSIBLE PEDESTRIAN CONTROL EQUIPMENT SHALL BE DELIVERED TO THE SHA SIGNAL SHOP FOR TESTING AND PROGRAMMING PRIOR TO INSTALLATION. CONTACT MR. EDWARD RODENHIZER AT 410-787-7652 TO COORDINATE.
13. PEDESTAL POLE FOUNDATIONS INSTALLED BEHIND PROPOSED SIDEWALK SHALL BE POURED INTEGRAL WITH PROPOSED CURB.

WIRING KEY [1]

PS	POWER SOURCE	A,D,E,H,N, Q	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
EX	USE EXISTING CABLE	I,M,O,P	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
B,C,F,G	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)	J,K,L	VIDEO DETECTION CAMERA CABLE
Z	STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)	PF	OVERHEAD POWER FEED
⌖	EXISTING GROUND ROD		

BY: BJG

RK&K
Rummel, Klepper & Kahl, LLP
81 MOSHER STREET | BALTIMORE, MD 21217
PH: (410) 728-2900 FAX: (410) 728-3160
Engineers Construction Managers Planners Scientists
www.rkk.com

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

MD 650 (NEW HAMPSHIRE AVE) AT RAY ROAD & POPLAR AVE
CHILLUM, MARYLAND

REVISIONS
[1] REDLINE NO. 1 04/01/2011 MODIFY CONDUIT

GENERAL INFORMATION SHEET

SCALE NONE DATE MARCH 2011 CONTRACT NO. XX3545168

DESIGNED BY BJG
DRAWN BY AMR
CHECKED BY BLB
FAP NO.

COUNTY PRINCE GEORGE'S COUNTY
LOGMILE 16065000.43
TIMS NO. K-820
TOD NO.

TS NO. 713B-GI | DRAWING SP-2 OF 3 | SHEET NO. 2 OF 3

PLOTTED: Thursday, March 31, 2011 AT 12:28 PM
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