

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE INSTALLATION OF COUNTDOWN PEDESTRIAN SIGNAL HEADS AND ACCESSIBLE PEDESTRIAN PUSHBUTTONS AND SIGNS AT THE INTERSECTION OF MD 197 AT MUIRKIRK ROAD. MD 197 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX-PHASE FULL-TRAFFIC-ACTUATED MODE WITH AN ALTERNATE PEDESTRIAN PHASE FOR THE SOUTH LEG AND CONCURRENT PEDESTRIAN PHASES FOR THE EAST AND WEST LEGS OF THE INTERSECTION. THE MD 197 NORTHBOUND AND SOUTHBOUND LEFT TURNS OPERATE IN EXCLUSIVE PHASING. THE MUIRKIRK ROAD AND SHOPPING CENTER APPROACHES OPERATE IN SPLIT PHASING.

CONTROLLER REQUIREMENTS

THE EXISTING FULL-TRAFFIC-ACTUATED EIGHT-PHASE TRAFFIC SIGNAL CONTROLLER HOUSED IN A BASE MOUNTED CABINET WITH VIDEO DETECTION INTERFACE EQUIPMENT SHALL REMAIN. A NEW 2-WIRE APS CENTRAL CONTROL UNIT SHALL BE FURNISHED BY THE CONTRACTOR AND INSTALLED BY SHA.

SPECIAL NOTES

APS WILL FUNCTION AS FOLLOWS:

TO CROSS MD 197 (LAUREL BOWIE ROAD):

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS LAUREL BOWIE AT MUIRKIRK. 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 MUIRKIRK ROAD:

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS MUIRKIRK AT LAUREL BOWIE. 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 CRYSTAL PLAZA DRIVEWAY:

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS CRYSTAL PLAZA AT LAUREL BOWIE. 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 ARE AS FOLLOWS:

MR. DUANE BERNARD
ASSISTANT DISTRICT ENGINEER-TRAFFIC
PHONE: (301) 513-7404

MR. DUANE BERNARD
ASSISTANT DISTRICT ENGINEER-CONSTRUCTION
(301) 513-7385

MR. AUGUSTINE REBISH
DEPUTY DISTRICT ENGINEER
(301) 513-7350

CONTACT PERSONS FOR OOTS ARE AS FOLLOWS:

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

MR. ED RODENHIZER
CHIEF, SIGNAL OPERATIONS
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WIRING KEY

- A,B,S 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- C,D,T,W,X 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- H,L,O,P,Q 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- R 2-CONDUCTOR ELECTRICAL CABLE, TYPE TC (NO. 12 AWG)
- E,F,G NON-INVASIVE MICROPROBE SET WITH 500 FT. LEAD-IN CABLE
- I,J,K NON-INVASIVE MICROPROBE SET WITH 1000 FT. LEAD-IN CABLE
- M DISCONNECT, PULLBACK AND REROUTE EXISTING INTERCONNECT CABLES
- N 12-PAIR COMMUNICATION CABLE, JELLYFILLED (SEE INTERCONNECT PLANS)
- U,V DISCONNECT, PULLBACK AND REROUTE EXISTING VIDEO DETECTION CAMERA CABLE
- Z STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
- PF EXISTING OVERHEAD POWER FEED
- EX USE EXISTING CABLES
- ⊕ EXISTING GROUND ROD

EQUIPMENT LIST "A, B & C"

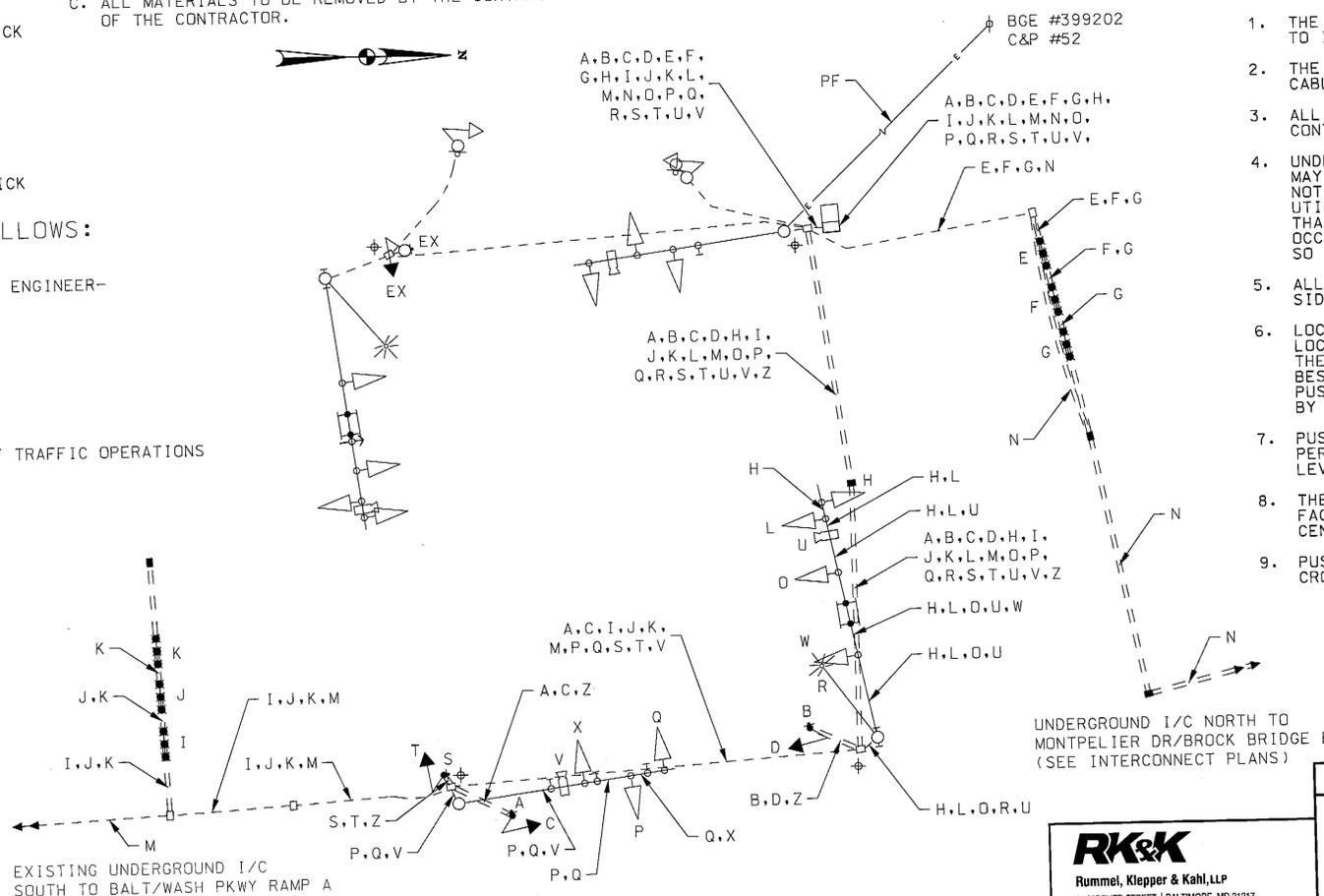
A. EQUIPMENT TO BE SUPPLIED BY SHA.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
973023	SHEET ALUMINUM SIGNS (MAST ARM/POLE MOUNTED) 4 - D-3(1) 78"x16" (DUAL FACE) 4 - D-3(1) 90"x16" (DUAL FACE) 4 - R10-3(1) 9"x15"	SF	79

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

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
585621	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	380
585625	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	85
585700	REMOVAL OF EXISTING PAVEMENT MARKINGS, ANY WIDTH	LF	370
800000	AUDIBLE / TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGN	EA	4
800000	REMOVE AND DISPOSAL OF EXISTING SIGNAL EQUIPMENT	EA	1
800000	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD	EA	4
800000	DISCONNECT, PULLBACK & REROUTE CABLES	LF	485
800000	2-WIRE APS CENTRAL CONTROL UNIT	EA	1
801004	CONCRETE FOR SIGNAL FOUNDATION	CY	3
802145	ADJUST EXISTING HANDHOLE & REPLACE FRAME AND COVER	EA	3
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	190
805115	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED	LF	120
805118	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED	LF	130
805125	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	40
810601	NONINVASIVE DETECTOR, 500 FOOT LEAD IN CABLE	EA	3
810605	NONINVASIVE DETECTOR, 1000 FOOT LEAD IN CABLE	EA	3
811001	FURNISH AND INSTALL ELECTRICAL HANDHOLE	EA	3
813014	INSTALL GROUND MOUNTED SIGN	SF	4
813015	INSTALL OVERHEAD SIGN	SF	75
818004	10 FOOT BREAKAWAY PEDESTAL POLE	EA	3
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	710
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	775
861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	1305
861116	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)	LF	210

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	14	15	16	17	18	19	20
PHASE 1 AND 5	←G-	←G-	R	R	←G-	←G-	R	R	R	R	R/G→	R	R	R	DW	DW	DW	DW	DW	DW
1 AND 5 CHANGE	TO PHASE 1 AND 6, PHASE 2 AND 5, OR PHASE 2 AND 6																			
PHASE 1 AND 6	←G-	←G-	G	G	←R-	←R-	R	R	R	R	R/Y→	R	R	R	DW	DW	DW	DW	DW	DW
1 AND 6 CHANGE	←Y-	←Y-	G	G	←R-	←R-	R	R	R	R	R/Y→	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 AND 5	←R-	←R-	R	R	←G-	←G-	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
2 AND 5 CHANGE	←R-	←R-	R	R	←Y-	←Y-	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 AND 6	←R-	←R-	G	G	←R-	←R-	G	G	R	R	R	R	R	R	DW	DW	WK	WK	WK	WK
PED CLEARANCE/COUNTDOWN	←R-	←R-	G	G	←R-	←R-	G	G	R	R	R	R	R	R	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
2 AND 6 CHANGE	←R-	←R-	Y	Y	←R-	←R-	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3	←R-	←R-	R	R	←R-	←R-	R	R	R	R	R	←G/G	←G/G	G	DW	DW	DW	DW	DW	DW
3 CHANGE	←R-	←R-	R	R	←R-	←R-	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 4	←R-	←R-	R	R	←R-	←R-	R	R	←G/G	←G/G	G	R	R	R	DW	DW	DW	DW	DW	DW
4 CHANGE	←R-	←R-	R	R	←R-	←R-	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4 ALT.	←R-	←R-	R	R	←R-	←R-	R	R	←G/G	←G/G	G	R	R	R	FL/DW	FL/DW	DW	DW	DW	DW
PED CLEARANCE/COUNTDOWN	←R-	←R-	R	R	←R-	←R-	R	R	←G/G	←G/G	G	R	R	R	DW	DW	DW	DW	DW	DW
4 ALT. CHANGE	←R-	←R-	R	R	←R-	←R-	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW
PRE-EMPTION	←R-	←R-	R	R	←G-	←G-	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PRE-EMPTION CHANGE	←R-	←R-	R	R	←Y-	←Y-	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/←R-	FL/←R-	FL/Y	FL/Y	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

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE LOCATIONS PRIOR TO INSTALLATION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABELING EACH CABLE.
3. ALL UNUSED CABLE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
4. 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 PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
5. ALL PEDESTAL FOUNDATION TOPS SHALL BE INSTALLED FLUSH WITH SIDEWALK GRADE.
6. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SECTION 4E.09 AND FIGURE 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.
7. 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%.
8. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER OF POLE TO CENTER OF POLE.
9. PUSHBUTTON ARROWS AND SIGNS ARE TO BE ORIENTED PARELLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 197 (LAUREL BOWIE ROAD)
AT MUIRKIRK ROAD
LAUREL, MARYLAND

GENERAL INFORMATION SHEET

REVISIONS	SCALE NONE	DATE OCTOBER 2012	CONTRACT NO. PG3655176
DESIGNED BY WFW	COUNTY PRINCE GEORGE'S	DRAWN BY WFW	LOGMILE 16019712.28
CHECKED BY BJC	TMS NO. L508	FAP NO.	TOD NO.
TS NO. 902J-G1	DRAWING SP-2	OF 4	SHEET NO. OF

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PLOTTED: Monday, October 08, 2012 AT 03:51 PM
FILE: \\rkem\y2008\2008\08148_codes\Task 73_MD 197 (MD 295 to Brock Bridge)\CADD\p66-002_MD197@Muirkirk-G1.dgn

BY: WFW