

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE INSTALLATION OF LED SIGNAL HEADS, COUNTDOWN PEDESTRIAN SIGNAL HEADS, ACCESSIBLE PEDESTRIAN PUSHBUTTONS AND SIGNS AT THE INTERSECTION OF MD 185 (CONNECTICUT AVENUE) AT LAWRENCE AVENUE. MD 185 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA THREE-PHASE FULL-TRAFFIC-ACTUATED MODE. A PEDESTRIAN PHASE IS PROVIDED FOR THE NORTH APPROACH OF THE INTERSECTION. THE LAWRENCE AVENUE APPROACHES ARE NOT CONTROLLED BY THE TRAFFIC SIGNAL.

CONTROLLER REQUIREMENTS

THE EXISTING FULL-TRAFFIC-ACTUATED EIGHT-PHASE TRAFFIC SIGNAL CONTROLLER HOUSED IN A POLE MOUNTED CABINET SHALL REMAIN. A 2-WIRE APS CENTRAL CONTROL UNIT SHALL BE FURNISHED BY THE CONTRACTOR AND INSTALLED BY MONTGOMERY COUNTY FORCES:

SPECIAL NOTES

APS WILL FUNCTION AS FOLLOWS:

TO CROSS MD 185 (CONNECTICUT AVENUE):

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

EQUIPMENT LIST "A, B & C"

A. EQUIPMENT TO BE SUPPLIED BY SHA.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
9750	SHEET ALUMINUM GROUND MOUNTED SIGN 4 - W11-2 FY (36"x36") 2 - M6-2(1)R FY (30"x24")	SF	56
9751	SHEET ALUMINUM MAST ARM/POLE MOUNTED SIGN 2 - M6-2(1)L FY (30"x24") 3 - R10-3(1) (9"x15") 2 - D-3(1) (90"x16") DUAL FACE	SF	43

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

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1001	MAINTENANCE OF TRAFFIC	EA	1
2001	CLASS 2 EXCAVATION	CY	3
5003	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS	LF	400
5004	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	455
5005	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	115
6001	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH	LF	389
6002	5 INCH CONCRETE SIDEWALK	SF	1140
6003	DETECTABLE WARNING SURFACE FOR CURB RAMPS	SF	103
8001	12 INCH LED SIGNAL HEAD SECTION	EA	12
8002	2-WIRE CENTRAL CONTROL UNIT	EA	1
8008	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS	EA	3
8009	BREAKAWAY PEDESTAL POLE (ANY SIZE)	EA	3
8016	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD	EA	2
8024	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)	EA	1
8036	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED	LF	110
8038	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	30
8039	WOOD SIGN SUPPORTS UP TO 4' X 6'	LF	148
8040	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)	SF	99
8042	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	150
8051	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE	EA	2
8053	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	215
8055	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	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
	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)
PHASE 2 AND 6	G	G	G	G	DW	DW
2 AND 6 CHANGE	Y	Y	Y	Y	DW	DW
PHASE 4	R	R	R	R	WK	WK
PED CLEARANCE	R	R	R	R	FL/DW	FL/DW
4 CHANGE	R	R	R	R	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	DARK	DARK

GENERAL NOTES

- THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE LOCATIONS PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABELING EACH CABLE.
- ALL UNUSED CABLE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
- 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.
- ALL PEDESTAL FOUNDATION TOPS SHALL BE INSTALLED FLUSH WITH SIDEWALK GRADE.
- MONTGOMERY COUNTY SIGNAL SHOP SHALL INSTALL APS CENTRAL CONTROL UNIT INTO CONTROLLER CABINET. APS PUSHBUTTONS SHALL BE PROGRAMMED BY THE MANUFACTURER.
- 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.
- 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%.
- 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.
- PUSHBUTTON ARROWS AND SIGNS ARE TO BE ORIENTED PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
- THE CONTRACTOR SHALL CAP AND ABANDON CONDUIT FEEDING SIGNAL EQUIPMENT THAT IS REMOVED.
- ALL CONTROLLER CABINET WIRING WILL BE PERFORMED BY MONTGOMERY COUNTY FORCES. CONTACT KAMAL HAMUD AT (240) 777-8761, 72 HOURS IN ADVANCE OF INTENDED WORK.

CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS:

MR. CEDRIC WARD
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7498

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

MR. KEVIN NOWAK
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
(301) 513-7385

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

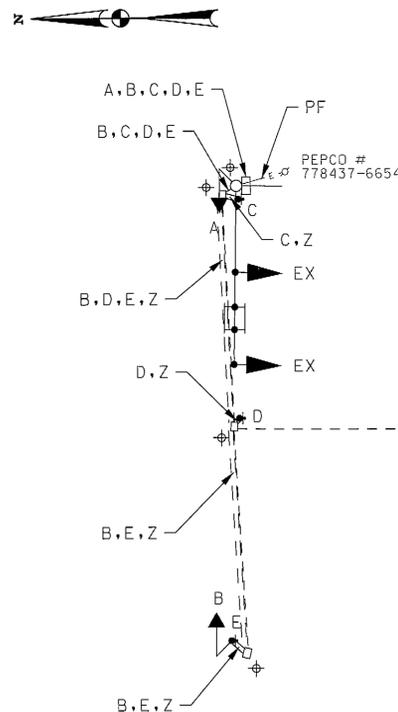
MR. ED RODENHIZER
CHIEF, SIGNAL OPERATIONS
(410)787-7650

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

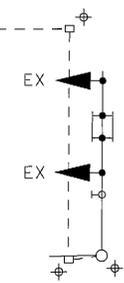
CONTACT PERSONS FOR MONTGOMERY COUNTY ARE AS FOLLOWS:

MR. KAMAL HAMUD
TRAFFIC ENGINEER
PHONE: (240) 777-8761

MR. ROBERT RICKETTS
(240) 876-3681



WIRING KEY	
A, B	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
C, D, E	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
EX	EXISTING CABLES
Z	STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
PF	EXISTING OVERHEAD POWER FEED
⊕	EXISTING GROUND ROD



TOD NO: XY224-14
SHA NO: MO145854
MD 185 @ Lawrence Avenue

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 185 (CONNECTICUT AVE) AT
LAWRENCE AVE
GARRETT PARK, MARYLAND

RK&K
Rummel, Klepper & Kahl, LLP
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Engineers Construction Managers Planners Scientists
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REVISIONS		GENERAL INFORMATION SHEET	
SCALE	NONE	DATE	JUNE 2012
CONTRACT NO.	XY2245185	DESIGNED BY	WFW
COUNTY	MONTGOMERY	DRAWN BY	WFW
LOGMILE	15018504.76	CHECKED BY	BJG
TMS NO.	L-301	FAP NO.	
TOD NO.		TS NO.	820C-G1
DRAWING	SP-2	OF	2
SHEET NO.	2	OF	4

BY: WFW