

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES REMOVING EXISTING PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS, AND INSTALLING ACCESSIBLE PEDESTRIAN SIGNALS AND COUNTDOWN PEDESTRIAN SIGNAL HEADS AT THE INTERSECTION OF MD 97 (GEORGIA AVE.) AND BEL PRE ROAD.

MD 97 IS ASSUMED TO RUN IN A NORTH/SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA 8 PHASE, FULL TRAFFIC ACTUATED MODE. THE INSTALLATION OF ACCESSIBLE PEDESTRIAN SIGNALS AND COUNTDOWN PEDESTRIAN SIGNALS IS PROPOSED ACROSS THE SOUTH, EAST AND WEST LEGS OF THE INTERSECTION.

CONTROLLER REQUIREMENTS

THE EXISTING BASE MOUNTED CABINET AND CONTROLLER WILL BE UTILIZED. MONTGOMERY COUNTY FORCES SHALL INSTALL A 2-WIRE CENTRAL CONTROL UNIT.

APS OPERATION

FOR MD 97 (GEORGIA AVE.)

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

FOR BEL PRE RD.

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

GENERAL NOTES:

- CONTRACTOR SHALL DELIVER APS PUSHBUTTON AND CENTRAL CONTROL UNIT TO MR. ROBERT RICKETTS AT MONTGOMERY COUNTY TECHNICAL CENTER AT LEAST 3 WEEKS PRIOR TO BEGINNING WORK.
- CONTRACTOR SHALL HAVE THE APS MESSAGES PROGRAMMED FROM THE FACTORY AND DELIVER THE APS WAVE FILES TO MR. ROBERT RICKETTS.
- CONTRACTOR SHALL NOTIFY MR. KAMAL HAMUD AND MR. ROBERT RICKETTS 72 HOURS IN ADVANCE OF INTENDED WORK.

THE CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS:

Ms. Anyesha Mookherjee
Assistant District Engineer - Traffic (Montgomery County)
Phone: 301-513-7358

Mr. Victor Grafton
District Utility Engineer
Phone: 301-513-7350

Mr. Tom Fountain
Assistant District Engineer - Maintenance
Phone: 301-513-7304

Mr. Kevin Nowak
Assistant District Engineer - Construction
Phone: 301-513-7385

THE CONTACT PERSONS FOR OFFICE OF TRAFFIC AND SAFETY ARE AS FOLLOWS:

Mr. Edward Rodenhizer
SHA Signal Operations Manager
Phone: 410-787-7652

Vacant
Chief, Traffic Operations Division
Phone: 410-787-7630

The Power Company Representative Is:
Paul Wilson
Potomac Electric Power Company
201 W. Gude Drive
Rockville, MD 20850
Phone: 301-548-4332

THE CONTACT PERSONS FOR MONTGOMERY COUNTY ARE AS FOLLOWS:

MONTGOMERY COUNTY TECHNICAL CENTER
1263 SEVEN LOCKS ROAD
ROCKVILLE, MD 20854

MCDOT TRANSPORTATION MANAGEMENT CENTER
Phone: 240-777-2100

Mr. Kamal Hamud
Traffic Engineer
Phone: 240-777-8761

Mr. Robert Ricketts
Montgomery Co. Signal Shop
Phone: 301-279-1291

EQUIPMENT LIST 'A'

EQUIPMENT TO BE FURNISHED BY THE SHA.

CATEGORY CODE NO.	QUANTITY	DESCRIPTION
900000	69	SHEET ALUMINUM GROUND MOUNTED SIGNS: 3 EACH: RI-2 (36"x36") 5 EACH: WII-2 (36"x36") 3 EACH: W16-7pR (24"x12") 2 EACH: W16-7pL (24"x12")
900000	6 SF	SHEET ALUMINUM POLE MOUNTED SIGNS: 6 EACH: RIO-310 (9"x15")

EQUIPMENT LIST B

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

CONTRACT NO: XY1515185

CATEGORY CODE NO.	QUANTITY	DESCRIPTION
100000	1 EA	MAINTENANCE OF TRAFFIC (PER INTERSECTION)
203030	3 CY	TEST PIT EXCAVATION
600000	30 LF	TYPE A CURB ANY HEIGHT OR DEPTH
655105	420 SF	5 INCH CONCRETE SIDEWALK
655120	60 SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
800000	1 EA	2-WIRE APS CENTRAL CONTROL UNIT
800000	6 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
800000	6 EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	5 EA	5 FOOT OR 10 FOOT PEDESTAL POLE WITH BREAKAWAY COUPLINGS, FOUNDATION & GROUND ROD
800000	1 EA	REMOVE & DISPOSE OF EXISTING SIGNAL EQUIPMENT (PER SIGNALIZED INTERSECTION LOCATION)
800000	75 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
800000	75 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
800000	1 EA	THIRD PARTY CONCRETE TESTING (PER INTERSECTION)
800000	80 LF	WOOD SIGN SUPPORTS UP TO 4 INCH X 6 INCH
801130	3 EA	SQUARE PERFORATED TUBULAR STEEL SIGN POSTS
801135	3 EA	SQUARE TUBULAR STEEL ANCHOR BASE
802501	105 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
813023	18 SF	RELOCATE EXISTING GROUND MOUNTED SIGNS
860284	16 EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
861105	1040 LF	ELECTRICAL CABLE-2 CONDUCTOR (NO. 14 AWG)
861107	1075 LF	ELECTRICAL CABLE-5 CONDUCTOR (NO. 14 AWG)
900000	69 SF	SHEET ALUMINUM GROUND MOUNTED SIGN
861107	6 SF	SHEET ALUMINUM MAST ARM/POLE MOUNTED SIGN

EQUIPMENT LIST 'C'

EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.

CATEGORY CODE NO.	QUANTITY	DESCRIPTION
NONE	NONE	NONE

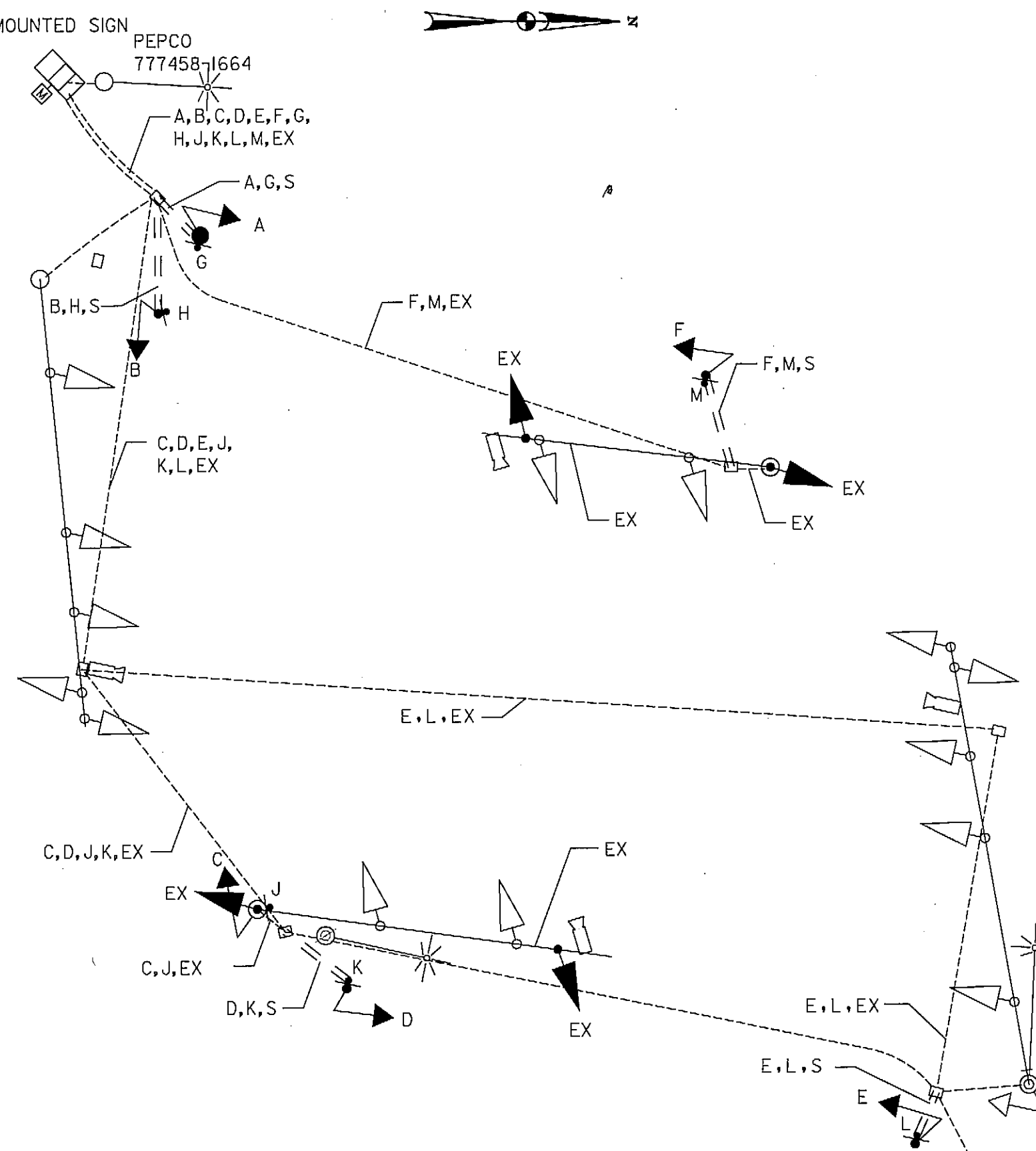
ALL OTHER REMOVED MATERIALS ARE TO BECOME THE PROPERTY OF THE CONTRACTOR

A,B,C,D,E,F	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
G,H,J,K,L,M	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
S	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
EX	EXISTING ELECTRICAL CABLE TO BE UTILIZED

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	24
PHASE 1 + 5	←G→	←G→	←G→	R	R	R	←G→	←G→	←G→	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 + 5 CHANGE	←G→	←G→	←G→	R	R	R	←G→	←G→	←G→	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 1 + 6	←G→	←G→	←G→	G	G	G	←R→	←R→	←R→	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 CHANGE	←Y→	←Y→	←Y→	G	G	G	←R→	←R→	←R→	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 + 5	←R→	←R→	←R→	R	R	R	←G→	←G→	←G→	G	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
5 CHANGE	←R→	←R→	←R→	R	R	R	←Y→	←Y→	←Y→	G	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 + 6	←R→	←R→	←R→	G	G	G	←R→	←R→	←R→	G	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW
PED CLEARANCE	←R→	←R→	←R→	G	G	G	←R→	←R→	←R→	G	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW
2 + 6 CHANGE	←R→	←R→	←R→	Y	Y	Y	←R→	←R→	←R→	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3 + 7	←R→	←R→	←R→	R	R	R	←R→	←R→	←R→	R	R	R	←G→	←G→	←G→	←G→	←G→	←G→	DW	DW	DW	DW	DW	DW
3 + 7 CHANGE	←R→	←R→	←R→	R	R	R	←R→	←R→	←R→	R	R	R	←G→	←G→	←G→	←G→	←G→	←G→	DW	DW	DW	DW	DW	DW
PHASE 3 + 8	←R→	←R→	←R→	R	R	R	←R→	←R→	←R→	R	R	R	R	R	R	R	R	R	←G→	←G→	←G→	←G→	←G→	←G→
3 CHANGE	←R→	←R→	←R→	R	R	R	←R→	←R→	←R→	R	R	R	←G→	←G→	←G→	←G→	←G→	←G→	DW	DW	DW	DW	DW	DW
PHASE 4 + 7	←R→	←R→	←R→	R	R	R	←R→	←R→	←R→	R	R	R	←G→	←G→	←G→	←G→	←G→	←G→	DW	DW	DW	DW	DW	DW
7 CHANGE	←R→	←R→	←R→	R	R	R	←R→	←R→	←R→	R	R	R	←G→	←G→	←G→	←G→	←G→	←G→	DW	DW	DW	DW	DW	DW
PHASE 4 + 8	←R→	←R→	←R→	R	R	R	←R→	←R→	←R→	R	R	R	←G→	←G→	←G→	←G→	←G→	←G→	DW	DW	DW	DW	DW	DW
4 + 8 CHANGE	←R→	←R→	←R→	R	R	R	←R→	←R→	←R→	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 4 + 8 ALT	←R→	←R→	←R→	R	R	R	←R→	←R→	←R→	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	WK	WK
PED CLEARANCE	←R→	←R→	←R→	R	R	R	←R→	←R→	←R→	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW
4 + 8 ALT CHANGE	←R→	←R→	←R→	R	R	R	←R→	←R→	←R→	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/RA	FL/RA	FL/RA	FL/Y	FL/Y	FL/Y	FL/RA	FL/RA	FL/RA	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 97 (GEORGIA AVE.) AT BEL PRE ROAD
TRAFFIC SIGNAL MODIFICATION

GENERAL INFORMATION SHEET

SCALE	N.T.S.	DATE	MAR 2013	CONTRACT NO.	XY1515185
DESIGNED BY	C. STRAYER	COUNTY	MONTGOMERY		
DRAWN BY	C. STRAYER	LOGMILE	15009707.67		
CHECKED BY	P. WESTCOTT	TMS NO.	L803		
F.A.P. NO.		TOD NO.			
TS NO.	3337D	DRAWING	SG-02	OF 02	SHEET NO. 2 OF 2

RJM
RJM ENGINEERING, INC.
CONSULTING ENGINEERS
COLUMBIA, MARYLAND

PLOTTED: Tuesday, March 26, 2013 AT 02:28 PM
FILE: P:\SHA\MD 97 Signal\MD 97 at Bel Pre\2013-03\p553-N000_MD 97 BEL PRE.dgn