# PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE FULL RECONSTRUCTION OF THE TRAFFIC SIGNAL AT THE INTERSECTION OF MD 586 (VEIRS MILL ROAD) AND ROBINDALE DRIVE. ACCESSIBLE PEDESTRIAN PUSHBUTTONS AND COUNTDOWN PEDESTRIAN SIGNALS WILL BE INSTALLED FOR THE WEST LEG CROSSING. VIDEO DETECTION IS PROPOSED FOR MAINLINE SAMPLING AND SIDE STREET PRESENCE DETECTION.

MD 586 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A FOUR PHASE, FULL-TRAFFIC-ACTUATED MODE. THE EXISTING SIDE STREET PEDESTRIAN PHASE WILL REMAIN.

CONTROLLER REQUIREMENTS

INSTALL A NEW EIGHT-PHASE FULLY ACTUATED TRAFFIC SIGNAL CONTROLLER AND ASSOCIATED HARNESSES IN A NEMA SIZE 'S' BASE MOUNTED CABINET. THE MONTGOMERY COUNTY SIGNAL SHOP WILL INSTALL ONE (1) VIDEO DETECTION INTERFACE FOR 1-8 CAMERAS, ONE (1) CENTRAL CONTROL UNIT, AND ALL OTHER NECESSARY EQUIPMENT WITHIN THE CABINET.

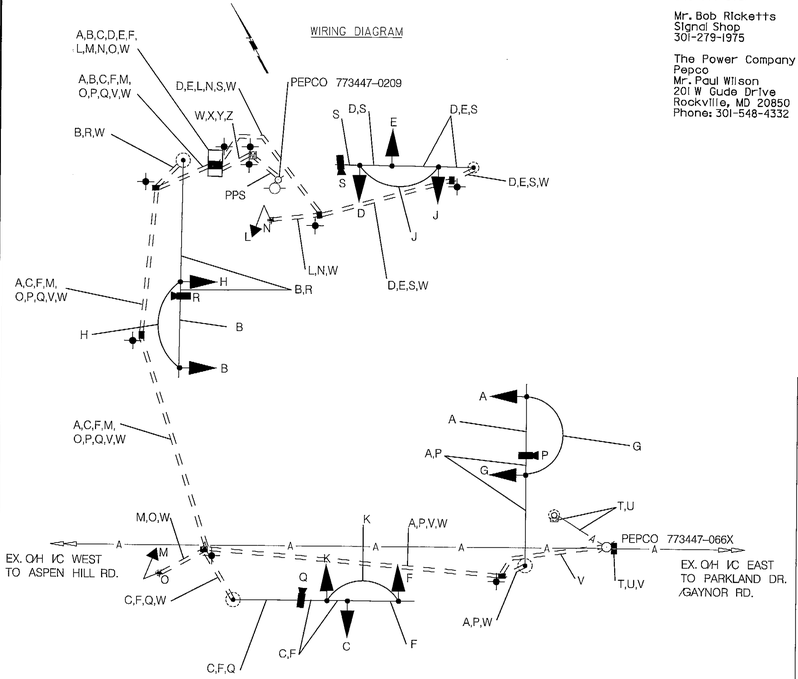
APS WILL FUNCTION AS FOLLOWS:

FOR MD 586 (VEIRS MILL ROAD)

A. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE 'WAIT TO CROSS VEIRS MILL AT ROBINDALE. CROSSWALK ANGLES RIGHT, WAIT.'

B. WHEN THE 'WALK' PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE 'WALK' PHASE.

WIRING DIAGRAM




| | |
|---|---|
| A B C D E F | ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG) |
| G H J K L M | ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG) |
| N O | ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG) |
| P Q R S | CONTROL CABLE - ANY LENGTH, VIDEO DETECTION CAMERA TO CONTROLLER |
| T | PULL BACK AND RE-ROUTE EX. INTERCONNECT CABLES FROM PARKLAND DR./GAYNOR RD. |
| U | PULL BACK AND RE-ROUTE EX. INTERCONNECT CABLES FROM ASPEN HILL RD. |
| V | 12 PAIR COMMUNICATION CABLE - JELLYFIELD |
| W | NO. 6 AWG STRANDED BARE COPPER GROUND WIRE |
| X Y Z | ELECTRICAL CABLE 1 - CONDUCTOR NO. 8 AWG-THHN/THWN |
| PPS | PROPOSED UNDERGROUND POWER SERVICE CABLE 1-CONDUCTOR, NO. 2 AWG/THHN |
| | PROPOSED GROUND ROD - 3/4 IN. DIAMETER X 10 FOOT LENGTH |


STV

STV Incorporated
7125 Ambassador Road, Suite 200
Baltimore, MD 21244
www.stvinc.com


BY: parisem -

THE CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS:

Ms. Felecia Murphy
Assistant District Engineer - Traffic
Phone: 301-513-7358

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

Mr. Mark Shaffer
Assistant District Engineer - Maintenance
Phone: 301-513-7304

OFFICE OF TRAFFIC AND SAFETY:

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

Mr. Robert Snyder
Assistant Division Chief, Traffic Operations
410-787-7630

Mr. Edward Rodenhizer
Team Leader Signal Operations
Phone: 410-787-7650

Mr. Eugene Bailey
Team Leader Sign Operations
410-787-7670

Montgomery County

Mr. Kamal Hamud
Traffic Engineering
240-777-8761

Mr. Bob Ricketts
Signal Shop
301-279-1975

The Power Company is:
Pepco
Mr. Paul Wilson
201 W Gude Drive
Rockville, MD 20850
Phone: 301-548-4332

# EQUIPMENT LIST 'A'

EQUIPMENT TO BE FURNISHED BY THE SHA.

| ITEM NO. | QUANTITY | DESCRIPTION |
|---|---|---|
| 9104 | 1 EA | SIZE 'S' CABINET WITH CONTROLLER AND VIDEO INTERFACE EQUIPMENT: 1-8 CAMERAS |
| 9570 | 10 SF | SHEET ALUMINUM GROUND MOUNTED SIGN: |
| | | 2 EA - R4-7 (24 IN. X 30 IN.) |
| 9571 | 77 SF | SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN: |
| | | 2 EA - D-3(1) (96 IN. X 16 IN.) DUAL FACED 'ROBINDALE DR' |
| | | 2 EA - M1-5(4) (78 IN. X 36 IN.) |
| | | 1 EA - R3-5(R) (30 IN. X 36 IN.) |
| | | 1 EA - R3-6(L) (30 IN. X 36 IN.) |
| | | 2 EA - R10-3(1) (9 IN. X 15 IN.) 'PUSH BUTTON TO CROSS VEIRS MILL RD' |

# EQUIPMENT LIST 'A-1'

EQUIPMENT TO BE FURNISHED BY MONTGOMERY COUNTY

| ITEM NO. | QUANTITY | DESCRIPTION |
|---|---|---|
| 9000 | 1 EA | MONTGOMERY COUNTY INTERCONNECT SPLICE CABINET |

# EQUIPMENT LIST 'C'

EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.

| ITEM NO. | QUANTITY | DESCRIPTION |
|---|---|---|

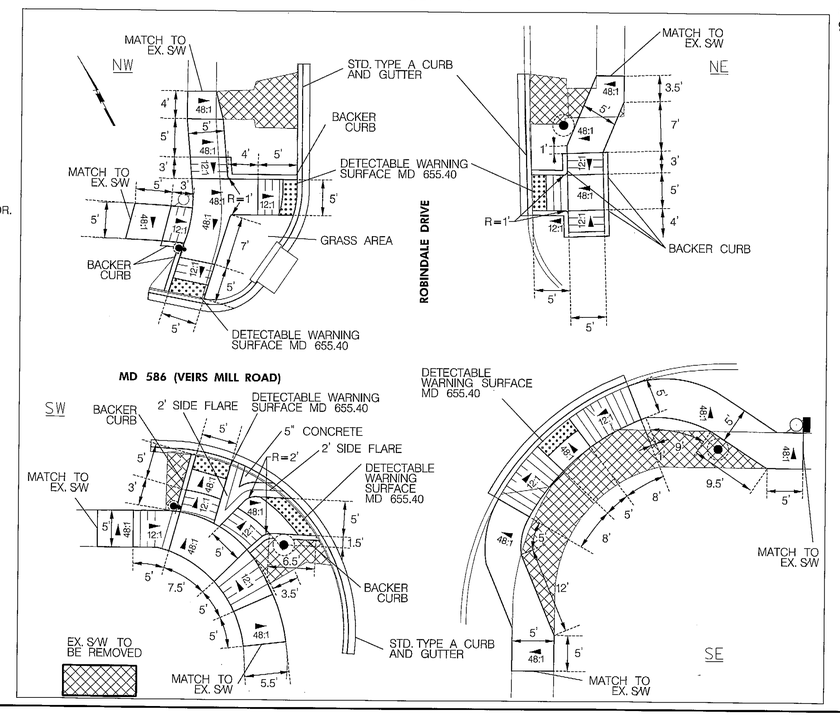
NONE - ALL EQUIPMENT TO BE REMOVED SHALL BECOME PROPERTY OF THE CONTRACTOR.

# EQUIPMENT LIST 'B'

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

| ITEM NO | QUANTITY | DESCRIPTION |
|---|---|---|
| 1001 | 2 EA | MAINTENANCE OF TRAFFIC |
| 2001 | 2 CY | CLASS 2 EXCAVATION |
| 2002 | 6 CY | TEST PIT EXCAVATION |
| 5003 | 550 LF | REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS |
| 5004 | 480 LF | 12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES |
| 5005 | 135 LF | 24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES |
| 6001 | 140 LF | STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH |
| 6002 | 810 SF | 5 INCH CONCRETE SIDEWALK |
| 6003 | 60 SF | DETECTABLE WARNING SURFACE FOR CURB RAMPS |
| 8001 | 30 EA | 12 INCH LED SIGNAL HEAD SECTION |
| 8002 | 1 EA | 2-WIRE CENTRAL CONTROL UNIT |
| 8008 | 2 EA | AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS |
| 8009 | 2 EA | BREAKAWAY PEDESTAL POLE (ANY SIZE) |
| 8012 | 1 EA | EMBEDDED METERED SERVICE PEDESTAL |
| 8016 | 2 EA | LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD SECTION |
| 8018 | 1 EA | MAST ARM POLE & 38 FT MAST ARM ANY "T" DIMENSION |
| 8019 | 2 EA | MAST ARM POLE & 50 FT MAST ARM ANY "T" DIMENSION |
| 8020 | 1 EA | MAST ARM POLE & 60 FT MAST ARM ANY "T" DIMENSION |
| 8024 | 1 EA | REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT) |
| 8028 | 4 EA | VIDEO DETECTION CAMERA AND CABLE ANY LENGTH |
| 8031 | 260 LF | 12 PAIR COMMUNICATION CABLE, SELF-SUPPORTING, JELLYFILLED/UNDERGROUND |
| 8033 | 40 LF | DISCONNECT, PULL-BACK & REROUTE CABLES |
| 8037 | 260 LF | UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED |
| 8038 | 135 LF | UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED |
| 8039 | 15 LF | WOOD SIGN SUPPORTS UP TO 4 INCH X 6 INCH |
| 8040 | 87 SF | INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE) |
| 8042 | 420 LF | NO. 6 AWG STRANDED BARE COPPER GROUND WIRE |
| 8043 | 1 EA | WEATHER HEAD, 3 INCH |
| 8045 | 165 LF | ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN |
| 8046 | 6 EA | FURNISH AND INSTALL ELECTRICAL HANDHOLE |
| 8050 | 30 LF | 3 INCH DIAMETER POLYVINYL CHLORIDE CONDUIT, SCHEDULE 80, RISER |
| 8053 | 190 LF | ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG) |
| 8055 | 290 LF | ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG) |
| 8056 | 1,100 LF | ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG) |
| 8062 | 1 EA | INSTALL CONTROLLER AND CABINET - POLE MOUNT |
| 8063 | 1 EA | INSTALL CONTROLLER AND CABINET - BASE MOUNT |
| 8030 | 155 LF | 1- CONDUCTOR ELECTRICAL CABLE, NO. 2 AWG/THHN |

SIDEWALK RAMP DETAILS
SCALE: 1"=10'




| PHASE CHART | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R Y G | R Y G | R Y G | R Y G | 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 | R | R | R | R | R | R | DW | DW | |
| PHASE 2 AND 6 CHANGE | Y | Y | Y | Y | R | R | R | R | R | R | DW | DW | |
| PHASE 4 AND 8 | R | R | R | R | G | G | G | G | G | G | DW | DW | |
| PHASE 4 AND 8 CHANGE | R | R | R | R | Y | Y | Y | Y | Y | Y | DW | DW | |
| PHASE 4 ALT. AND 8 | R | R | R | R | G | G | G | G | G | G | WK | WK | |
| PED. CLEARANCE | R | R | R | R | G | G | G | G | G | G | FL/DW | FL/DW | |
| PHASE 4 ALT. AND 8 CHANGE | R | R | R | R | Y | Y | Y | Y | Y | Y | WK | WK | |
| FLASHING OPERATION | FL/Y | FL/Y | FL/Y | FL/Y | FL/R | FL/R | FL/R | FL/R | FL/R | FL/R | DARK | DARK | |

TOD NO: XY224-25
SHA NO: MO145B5B
MD 586 @ Robindale Drive

SHA

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 586 (VEIRS MILL ROAD)

AND ROBINDALE DRIVE

ROCKVILLE, MD

## GENERAL INORMATION

SCALE 1" = 20' ADVERTISED DATE 9/2012 CONTRACT NO. XY2245185

DESIGNED BY EMP
DRAWN BY EMP
CHECKED BY BAB
F.A.P. NO.

COUNTY MONTGOMERY
LOGMILE 15058602.66
TIMS NO. K537
TOD NO.

TS NO. 450B | DRAWING SG-2 OF 2 | SHEET NO. 2 OF 2

PLOTTED: Monday, September 24, 2012 AT 05:04 PM
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