

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF ACCESSIBLE PEDESTRIAN SIGNALS, COUNTDOWN PEDESTRIAN SIGNALS AND ADA SIDEWALK RAMPS AT THE INTERSECTION OF MD 28 (DARNESTOWN ROAD) AND THE POTOMAC VALLEY SHOPPING CENTER ENTRANCE IN MONTGOMERY COUNTY. MD 28 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA SIX-PHASE, FULL TRAFFIC-ACTUATED MODE. THE EXISTING MAINLINE E/P LEFT TURN, MAINLINE PEDESTRIAN AND SIDE-STREET ALTERNATIVE PEDESTRIAN PHASES SHALL REMAIN. THE EXISTING WB PUSHBUTTON ACTIVATED PRE-EMPTION PHASE SHALL ALSO REMAIN.

CONTROLLER REQUIREMENTS

THE EXISTING BASE MOUNTED CABINET, CONTROLLER AND ASSOCIATED HARNESSES SHALL REMAIN. THE MONTGOMERY COUNTY SIGNAL SHOP WILL INSTALL ONE (1) 2 WIRE CENTRAL CONTROL UNIT WITHIN THE CABINET.

APS WILL FUNCTION AS FOLLOWS:

TO CROSS DARNESTOWN ROAD

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

TO CROSS POTOMAC VALLEY SHOPPING CENTER ENTRANCE

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

SPECIAL NOTES

- MONTGOMERY COUNTY SIGNAL SHOP SHALL INSTALL APS CONTROL UNIT INTO CONTROLLER CABINET. THE APS PUSH BUTTONS SHALL BE PROGRAMMED BY THE MANUFACTURER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES TO THE APPROPRIATE TERMINALS AND SHALL PROPERLY LABEL EACH CABLE.
- 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.

THE CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS:

Mr. Cedric Ward
Assistant District Engineer - Traffic
Phone: 301-513-7498

Mr. Victor Grafton
District Utility Engineer
Phone: 301-513-7351

Mr. Vernon Stinnett
Assistant District Engineer - Maintenance
Phone: 301-513-7304

OFFICE OF TRAFFIC AND SAFETY:

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. Edward Rodenhizer
Chief Signal Operations
Phone: 410-787-7650

Mr. Eugene Bailey
Chief 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
8300 Old Marlboro Pike
Upper Marlboro, MD 20442
Phone: 301-961-5325

EQUIPMENT LIST 'A'

EQUIPMENT TO BE FURNISHED BY THE SHA.

| ITEM NO | QUANTITY | DESCRIPTION |
|---------|----------|--|
| 9570 | 108 SF | [UPDATED] SHEET ALUMINIUM GROUND MOUNTED SIGN 13 EA - SI-1 (30 IN. X 30 IN.) 6 EA - W16-7p(R) FYG (24 IN. X 12 IN.) 7 EA - W16-7p(L) FYG (24 IN. X 12 IN.) |
| 9571 | 27 SF | [UPDATED] SHEET ALUMINIUM MAST ARM/POLE MOUNTED SIGN: 4 EA - R10-3(I) (9 IN. X 15 IN.) "PUSH BUTTON TO CROSS DARNESTOWN ROAD" 4 EA - R10-3(I) (9 IN. X 15 IN.) "PUSH BUTTON TO CROSS SHOPPING CENTER ENTRANCE" 1 EA - W16-7p(L) FYG (24 IN. X 12 IN.) 1 EA - SI-1 (30 IN. X 30 IN.) 1 EA - D-3(I) (96 IN. X 16 IN.) DUAL FACED "DARNESTOWN ROAD" |

EQUIPMENT LIST 'C'

EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.

ITEM NO QUANTITY DESCRIPTION

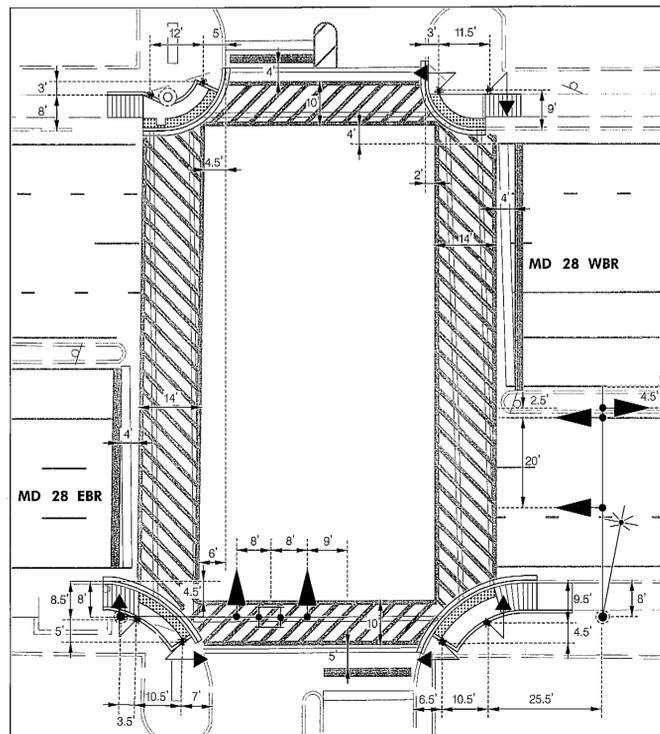
NONE - ALL REMOVED EQUIPMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR

EQUIPMENT LIST 'B'

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

| ITEM NO | QUANTITY | DESCRIPTION |
|---------|----------|--|
| 1001 | 3 EA | MAINTENANCE OF TRAFFIC |
| 2002 | 6 CY | TEST PIT EXCAVATION |
| 5003 | 840 LF | REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS |
| 5004 | 1,700 LF | 12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES |
| 5005 | 155 LF | 24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES |
| 6001 | 175 LF | STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH |
| 6002 | 640 SF | 5 INCH CONCRETE SIDEWALK |
| 6003 | 100 SF | DETECTABLE WARNING SURFACE FOR CURB RAMPS |
| 8001 | 19 EA | 12 INCH LED SIGNAL HEAD SECTION |
| 8002 | 1 EA | 2-WIRE CENTRAL CONTROL UNIT |
| 8005 | 1 EA | ADJUST HANDHOLE TO GRADE WITH NEW FRAME AND COVER |
| 8008 | 8 EA | AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS |
| 8015 | 8 EA | LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD |
| 8023 | 1 EA | REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT) |
| 8033 | 220 LF | DISCONNECT, PULL-BACK & REROUTE CABLES |
| 8034 | 80 LF | ELECTRICAL CABLE - 2-CONDUCTOR (NO. 12 AWG) TYPE T/C |
| 8039 | 140 LF | UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED |
| 8040 | 144 LF | WOOD SIGN SUPPORTS UP TO 4" X 6" |
| 8041 | 135 SF | INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE) |
| 8043 | 140 LF | NO. 6 AWG STRANDED BARE COPPER GROUND WIRE |
| 8044 | 1 EA | WEATHER HEAD, 3 INCH |
| 8047 | 1 EA | FURNISH AND INSTALL ELECTRICAL HANDHOLE |
| 8052 | 2 EA | CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE |
| 8054 | 1,125 LF | ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG) |
| 8056 | 1,230 LF | ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG) |
| 8057 | 360 LF | ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG) |
| 8064 | 1 EA | FURNISH AND INSTALL 21' POLE WITH 50' MAST ARM, PAINTED BROWN |
| 8065 | 1 EA | FURNISH AND INSTALL 27' POLE WITH 50' MAST ARM, PAINTED BROWN |
| 8066 | 8 EA | FURNISH AND INSTALL PEDESTAL POLE, PAINTED BROWN |
| 8067 | 1 EA | FURNISH AND INSTALL 20' LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP AND LUMINAIRE |

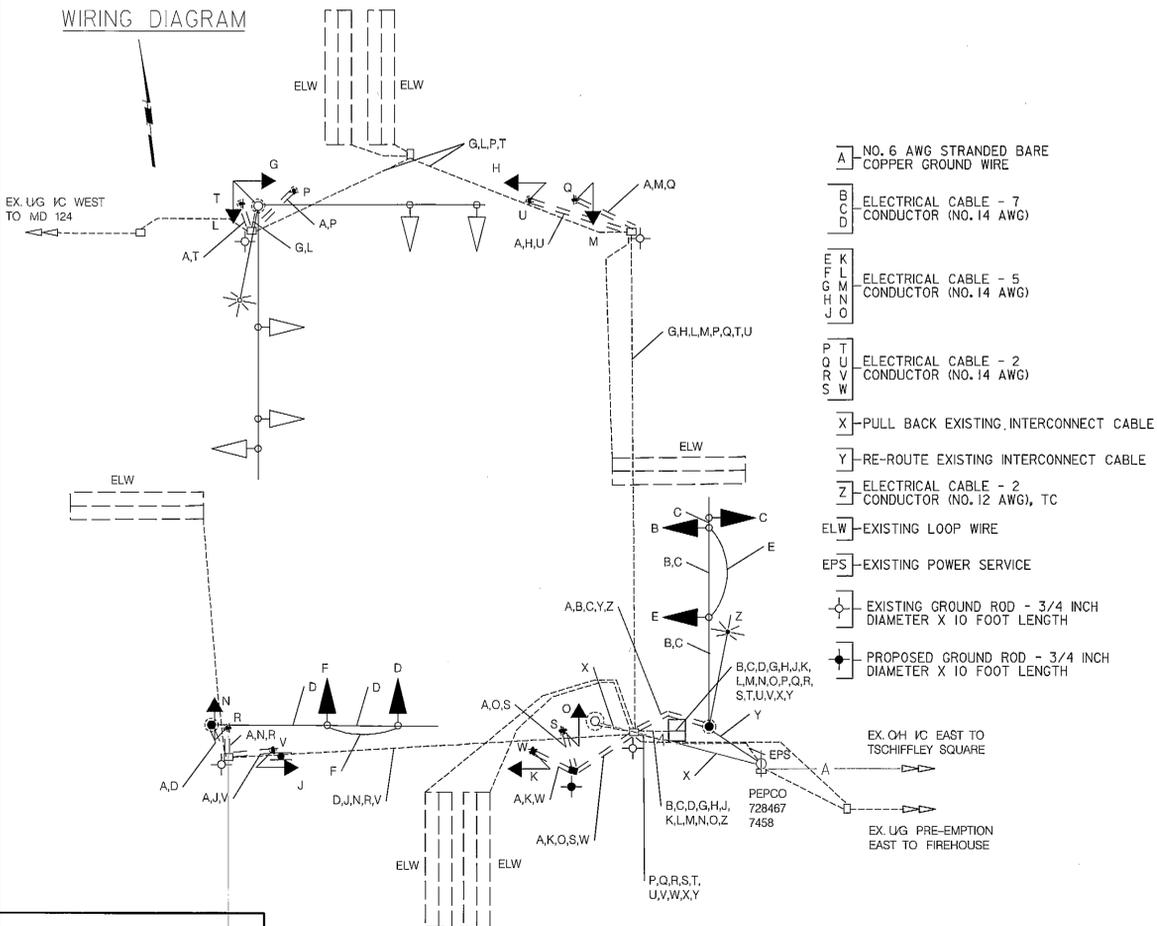
PROPOSED SIGNAL EQUIPMENT AND PAVEMENT MARKING LAYOUT NOT TO SCALE



PHASE CHART

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|--|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|
| PHASE 1 AND 5 | +GR | +GR | R | +GR | +GR | R | R | R | R | R | R | DW |
| PHASE 1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6 | | | | | | | | | | | | | | | | | | |
| PHASE 1 AND 6 | +GG | +GG | G | R | R | R | R | R | R | R | R | DW | WK | WK | DW | DW | DW | DW |
| PHASE 1 CHANGE | +YG | +YG | G | R | R | R | R | R | R | R | R | DW | WK | WK | DW | DW | DW | DW |
| PHASE 2 AND 5 | R | R | R | +GG | +GG | G | R | R | R | R | R | WK | DW | DW | WK | DW | DW | DW |
| PHASE 5 CHANGE | R | R | R | +YG | +YG | G | R | R | R | R | R | WK | DW | DW | WK | DW | DW | DW |
| PHASE 2 AND 6 | G | G | G | G | G | G | R | R | R | R | R | WK | WK | WK | WK | DW | DW | DW |
| PED CLEARANCE | G | G | G | G | G | G | R | R | R | R | R | FLDW | FLDW | FLDW | FLDW | DW | DW | DW |
| PHASE 2 AND 6 CHANGE | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | DW |
| PHASE 4 AND 8 | R | R | R | R | R | R | G | G | G | G | G | DW |
| PHASE 4 AND 8 CHANGE | R | R | R | R | R | R | Y | Y | Y | Y | Y | DW |
| PHASE 4 AND 8 ALT | R | R | R | R | R | R | G | G | G | G | G | DW | DW | DW | DW | WK | WK | WK |
| PED CLEARANCE | R | R | R | R | R | R | G | G | G | G | G | DW | DW | DW | DW | FLDW | FLDW | FLDW |
| PHASE 4 AND 8 ALT CHANGE | R | R | R | R | R | R | Y | Y | Y | Y | Y | DW |
| PRE-EMPTION PHASE 1 | R | R | R | +GG | +GG | G | R | R | R | R | R | DW |
| PRE-EMPTION PHASE CHANGE | R | R | R | +YG | +YG | G | R | R | R | R | R | DW |
| FLASHING OPERATION | FLY | FLY | FLY | FLY | FLY | FLY | FL/R | FL/R | FL/R | FL/R | FL/R | DARK |

WIRING DIAGRAM



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

TOD NO: XX655-07
SHA NO: M0972855
MD 28 @ Quince Orchard HS, Potomac Valley Shopping Ctr, Tschiffely Square

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 28 (DARNESTOWN ROAD) AT
POTOMAC VALLEY SHOPPING CENTER
GANTHERSBURG, MD

GENERAL INFORMATION SHEET

SCALE NONE ADVERTISED DATE 05/2011 CONTRACT NO. XX655185

DESIGNED BY MCG COUNTY MONTGOMERY
DRAWN BY MCG LOGMILE 15002815.78
CHECKED BY MTS TMS NO. K542
F.A.P. NO. TOD NO.

TS NO. 3474B-GI DRAWING SG-04 OF 06 SHEET NO. 04 OF 06