## PROJECT DESCRIPTION
### GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC SIGNAL AT THE INTERSECTION OF BRIGGS CHANEY ROAD AT US 29 RAMP A AND B IN MONTGOMERY COUNTY.

### INTERSECTION OPERATION

A SYSTEM CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION.
THE INTERSECTION WILL OPERATE IN A FULLY ACTUATED MODE USING 4 NEMA PHASES.

### SPECIAL NOTES

1. THE FOLLOWING CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

   MR. LEE STARKLOFF, ASSISTANT DISTRICT ENGINEER-TRAFFIC
   PHONE: (301) 513-7300
   MR. RALEIGH MEDLEY, ASSISTANT DISTRICT ENGINEER-MAINTENANCE
   PHONE: (301) 513-7300
   MR. DENNIS McMAHAN, ASSISTANT DISTRICT ENGINEER-CONSTRUCTION
   PHONE: (301) 513-7345
   MR. AUGIE REBISH, UTILITY ENGINEER
   PHONE: (301) 513-7300
   MR. RICHARD L. DAFF, Sr., CHIEF TRAFFIC OPERATIONS DIVISION
   PHONE: (410) 787-7630
   MR. BOBBY GONZALES, TRAFFIC ENGINEER MCDPW&T
   PHONE: (240) 777-2190

2. MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING THE STANDARD PLATES FOR TRAFFIC CONTROL.

3. CONTACT MONTGOMERY COUNTY TMC AT LEAST 72 HOURS PRIOR TO ANY WORK TO LOCATE EXISTING EQUIPMENT.
   TMC - 240-777-2100

### EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

| CATEGORY CODE NO. | DESCRIPTION | UNITS | QUANTITY |
|---|---|---|---|
| 900000 | BASE MOUNTED (SIZE 6) CABINET (MSHA SPECIFICATIONS) WITH ECONOLITE ASC II 2100 CONTROLLER, SSM 12 E CONFLICT MONITOR, VIDEO INTERFACE EQUIPMENT, LAU PANEL AND RELAY PACKAGE WIRED TO MONTGOMERY COUNTY SPECIFICATIONS. | EA | 1 |
| 973023 | FLAT SHEET ALUMINUM SIGNS, | SF | 72 |
| | D-3(1) (VAR. X 16") | EA | 1 |
| | R3-5 (L) (30"X36") | EA | 2 |
| | R10-4C MOD (12"X9") | EA | 2 |
| | R10-11(B) (24"X24") | EA | 1 |
| | R3-6 (R) (30"X36") | EA | 1 |
| | M95-1(MOD.) (108"X36") | EA | 1 |

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

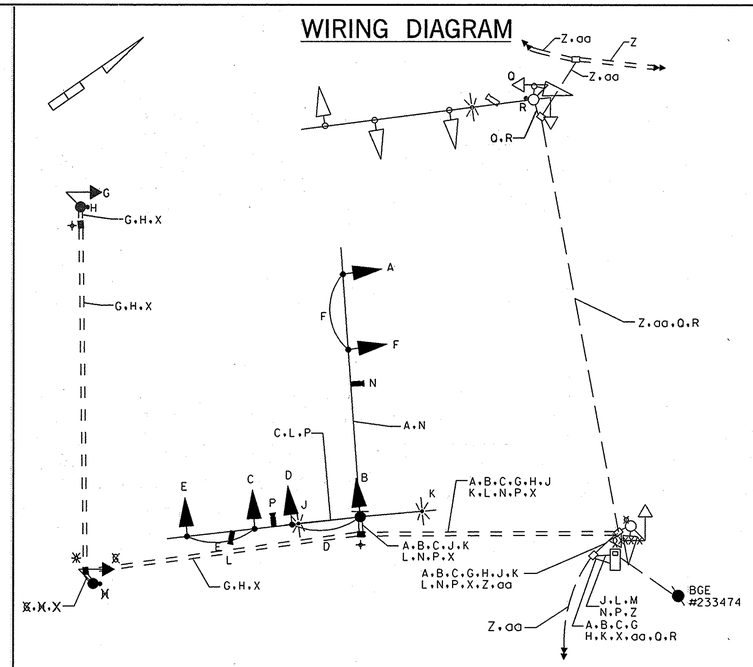
| CATEGORY CODE NO. | DESCRIPTION | UNITS | QUANTITY |
|---|---|---|---|
| 203030 | TEST PIT EXCAVATION | CY | 5 |
| 585620 | 12 INCH WHITE HEAT APPLIED PERM. PREFORMED THERMO. PAVEMENT MARKINGS | LF | 320 |
| 585624 | 24 INCH WHITE HEAT APPLIED PERM. PREFORMED THERMO. PAVEMENT MARKINGS | LF | 145 |
| 800000 | RELOCATE EXISTING VIDEO DETECTION CAMERA | EA | 3 |
| 801004 | CONCRETE FOR SIGNAL FOUNDATION | CY | ~~13~~ 15 |
| 801607 | INSTALL SHEET ALUMINUM SIGN | SF | 72 |
| 802501 | STRANDED BARE COPPER GROUND WIRE, NO. 6 AWG | LF | ~~180~~ 290 |
| 805125 | 2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED | LF | ~~10~~ 125 |
| 805135 | 3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED | LF | 10 |
| 805140 | 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED | LF | 160 |
| 807400 | ELEC. UTILITY SER. EQUIP. 120/240V 60 AMP | EA | 1 |
| 811001 | FURNISH AND INSTALL HANDHOLE | EA | ~~3~~ 4 |
| 816005 | CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER | EA | 3 |
| 818004 | 10 FOOT PEDESTAL POLE WITH BREAKAWAY BASE | EA | 1 |
| 818051 | STEEL POLE WITH A TWIN 70 AND 50 FOOT MAST ARM | EA | 1 |
| 831010 | 250 WATT HPSV LUMINAIRE W/PHOTOCELL | EA | 2 |
| 837001 | GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH | EA | ~~2~~ 3 |
| 860282 | 12 INCH PEDESTRIAN SIGNAL HEAD SECTION PED POLE MOUNT | EA | 2 |
| 860272 | 12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION | EA | 20 |
| 861117 | ELECTRICAL CABLE- 1 CONDUCTOR (NO. 4 AWG) | LF | 15 |
| 861105 | ELECTRICAL CABLE- 2 CONDUCTOR (NO. 14 AWG) | LF | ~~200~~ 700 |
| 861106 | ELECTRICAL CABLE- 3 CONDUCTOR (NO. 14 AWG) | LF | ~~200~~ 700 |
| 861107 | ELECTRICAL CABLE- 5 CONDUCTOR (NO. 14 AWG) | LF | 100 |
| 861108 | ELECTRICAL CABLE- 7 CONDUCTOR (NO. 14 AWG) | LF | 550 |
| 861116 | ELECTRICAL CABLE- 2 CONDUCTOR (NO. 12 AWG) | LF | 350 |
| 865001 | PUSH BUTTON AND SIGN | EA | 1 |
| 866103 | 15 FOOT LIGHTING ARM FOR SIGNAL STRUCTURE | EA | 2 |
| 800000 | RELOCATE SIGNS OR SIGNAL STRUCTURE | EA | 2 |
| 800000 | RELOCATE TRAFFIC SIGNAL HEAD | EA | 2 |

C. MATERIALS TO BE REMOVED BY THE CONTRACTOR.

MONTGOMERY COUNTY FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONRTRACTOR.

MONTGOMERY COUNTY SHALL REMOVE THE EXISTING VIDEO DETECTION CAMERAS. CONTACT BOBBY GONZALES, OF MCDPW&T, 72 HOURS IN ADVANCE OF REMOVAL.

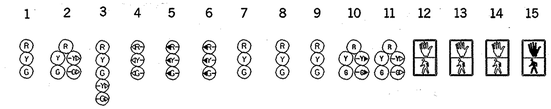
## WIRING DIAGRAM




KEY

- A, B, C } 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- aa } 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG) FOR FIREHOUSE PRE-EMPTION
- D, E, F } 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- G, Q } 3 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG) FOR PEDESTRIAN SIGNAL HEADS
- H, R } 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- J, K } 2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) TRAY CABLE
- L, N, P } VIDEO DETECTION CABLE (250 FT LEAD-IN CABLE)
- Z } 12 PAIR JELLY FILLED INTERCONNECT (SEE INTERCONNECT PLAN)
- X } 1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
- ✦ GROUND ROD

## PHASE CHART




| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PHASE 2 AND 5 | R | R | R | ←G− | ←G− | ←G− | G | G | R | -R/G→ | -R/G→ | DW | DW | DW | DW |
| 2 AND 5 CHANGE TO 2 AND 6, OR ~~X~~ | | | | | | | | | | -R/~~Y~~→ | -R/~~Y~~→ | | | | |
| PHASE 2 AND 6 | G | G | G | ←R− | ←R− | ←R− | G | G | R | R | R | WK | WK | DW | DW |
| PED CLEARANCE | G | G | G | ←R− | ←R− | ←R− | G | G | R | R | R | FL/DW | FL/DW | DW | DW |
| 2 AND 6 CHANGE | Y | Y | Y | ←R− | ←R− | ←R− | Y | Y | R | R | R | DW | DW | DW | DW |
| PHASE 4 | R | -R/G→ | R, -G→ | ←R− | ←R− | ←R− | R | R | G | -G/~~G~~← | -G/~~G~~← | DW | DW | DW | DW |
| 4 CHANGE | R | -Y/Y→ | Y, -Y→ | ←R− | ←R− | ←R− | R | R | Y | -Y/~~Y~~← | -Y/~~Y~~← | DW | DW | DW | DW |
| PHASE 4 ALT | R | R | R, G | ←R− | ←R− | ←R− | R | R | G | -G/~~G~~← | -G/~~G~~← | DW | DW | WK | WK |
| PED CLEARANCE | R | R | R, G | ←R− | ←R− | ←R− | R | R | G | -G/~~G~~← | -G/~~G~~← | DW | DW | FL/DW | FL/DW |
| 4 CHANGE | R | R | R, Y | ←R− | ←R− | ←R− | R | R | Y | -Y/~~Y~~← | -Y/~~Y~~← | DW | DW | DW | DW |
| FLASHING OPERATION | FL /Y | FL /Y | FL /Y | FL /R | FL /R | FL /R | FL /Y | FL /Y | FL /R | FL /R | FL /R | DARK | DARK | DARK | DARK |

FIREHOUSE PRE-EMPTION

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FIRE HOUSE PRE-EMPTION PHASE 2 AND 5 | R | R | R | ←G− | ←G− | ←G− | G | G | R | R | R | DW | DW | DW | DW |
| PRE-EMPTION CLEARANCE | R | R | R | ←Y− | ←Y− | ←Y− | G | G | R | R | R | DW | DW | DW | DW |
| PHASE 2 AND 6 NORMAL OPERATION | G | G | G | ←R− | ←R− | ←R− | G | G | R | R | R | WK | WK | DW | DW |

GP-06

GREENLINE No. 1 05/07

SABRA, WANG & ASSOCIATES, INC.
1504 JOH AVENUE
SUITE 160
BALTIMORE, MD 21227
WWW.SABRA-WANG.COM

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
*Office of Traffic & Safety*
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION PLAN

# BRIGGS CHANEY ROAD AT US 29 RAMP A & B INTERCHANGE IMPROVEMENTS

| | | | | | |
|---|---|---|---|---|---|
| DRAWN BY: | S. SMITH | F.A.P. NO. | SEE TITLE SHEET | TS NO. 1485C | SHEET NO. |
| CHECKED BY: | | S.H.A. NO. | M0868510 | | |
| SCALE: | NTS | COUNTY: | MONTGOMERY | T.I.M.S. NO. F-357 | 441 OF 504 |
| DATE: | FEBRUARY, 2003 | LOG MILE: | 15CBRI03.25 | | |

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