## PROJECT DESCRIPTION

### GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNALS AT THE INTERSECTIONS OF MD 115 (MUNCASTER MILL ROAD) AND AIRPARK ROAD/SHADY GROVE ROAD AND MD 115 AND MUNCASTER ROAD/REDLAND ROAD IN MONTGOMERY COUNTY. MD 115 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

### INTERSECTION OPERATION

NORMAL OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 115 APPROACHES OPERATING SPLIT AND THE AIRPARK ROAD/SHADY GROVE ROAD APPROACHES OPERATING CONCURRENTLY.

PERMISSIVE LEFT-TURN PHASES WILL BE PROVIDED FOR THE AIRPARK ROAD/SHADY GROVE ROAD APPROACHES.

ALTERNATE PEDESTRIAN PHASE WILL BE PROVIDED ACROSS AIRPARK ROAD APPROACH. PEDESTRIAN INDICATIONS WILL BE PROVIDED ACROSS THE EAST AND WEST LEG OF MD 115.

EMERGENCY PRE-EMPTION

THE INTERSECTION WILL OPERATE AS INDICATED ABOVE, UNLESS A PUSHBUTTON OR EMERGENCY VEHICLE PRE-EMPTS THE TRAFFIC SIGNAL AND STOPS ALL APPROACHES EXCEPT THE MD 115 WESTBOUND APPROACH.

### CONTROLLER REQUIREMENTS

1. MD 115 AND AIRPARK ROAD/SHADY GROVE ROAD

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH L.A.U., L.A.U. PANEL, BATTERY BACK-UP SYSTEM AND SEVEN (7) TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS AND ASSOCIATED HARNESSES HOUSED IN A SIZE "S" BASE MOUNTED CABINET.

## PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. BRIAN YOUNG
DISTRICT ENGINEER
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MR. CEDRIC WARD
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MR. VERNON STINNETT
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PHONE: (301) 513-7304

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MR. RICHARD L. DAFF, SR.CHIEF
TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

## EQUIPMENT LIST "A" EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY SHA

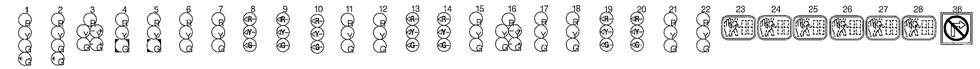
| ITEM NO. | QUANTITY | DESCRIPTION |
|---|---|---|
| 9000 | 1 EA | SIZE "S" CABINET WITH ASC III CONTROLLER AND UPS SYSTEM |
| 9000 | 1 EA | MONTGOMERY COUNTY LAU PANEL |

## EQUIPMENT LIST "B" CONT.

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

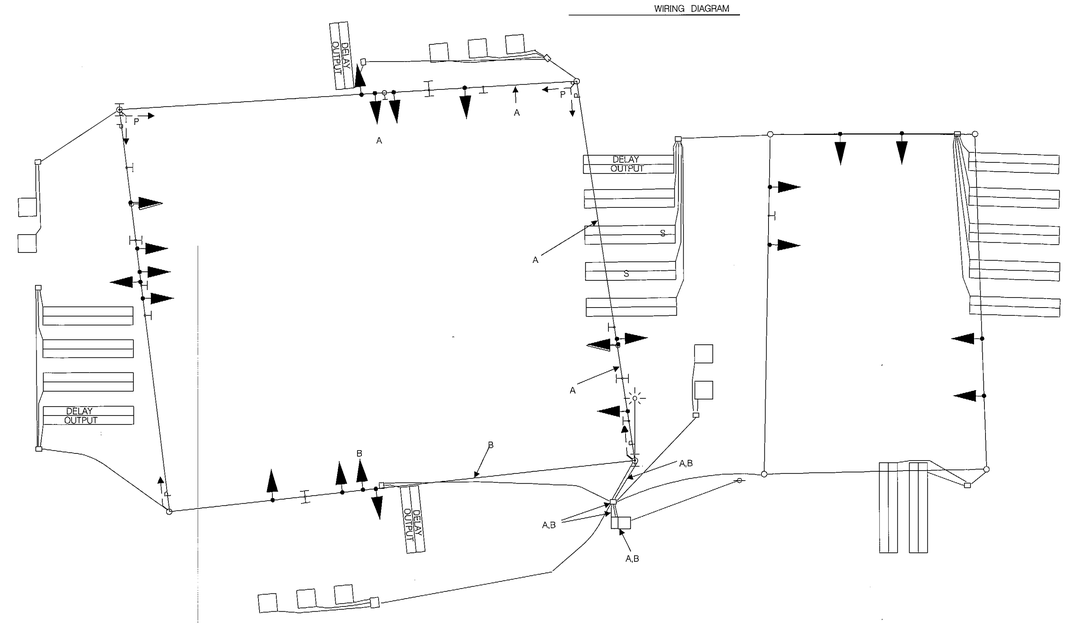
| ITEM NO. | QUANTITY | DESCRIPTION |
|---|---|---|
| 8001 | 70 EA | F&I 12" LED BLACK FACES TRAFFIC SIGNAL HEAD SECTION |
| 8005 | 1 EA | F&I CONDUIT BEND ANY SIZE IN EXISTING BASE |
| 8006 | 6 EA | F&I 16" COUNTDOWN PEDESTRIAN SIGNAL HEAD |
| 8008 | 1 EA | REMOVE AND DISPOSE OF EQUIPMENT PER ASSIGNMENT |
| 8012 | 40 LF | F&I UP TO 4" PVC ELECTRICAL CONDUIT - TRENCHED |
| 8016 | 1 EA | F&I METERED SERVICE PEDESTAL |
| 8020 | 360 LF | F&I 7 CONDUCTOR ELECTRICAL CABLE (No. 14 AWG) |
| 8021 | 80 LF | F&I 1 CONDUCTOR ELECTRICAL CABLE 250 KCML |
| 8023 | 1 EA | INSTALL CABINET-BASE MOUNT |

## 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 | 25 | 26 | 27 | 28 | 36 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PHASE 1 + 5 | R | R | R/G | G | G | G | G | R | R | R | R | R | G | G | R | R | R | R | G | G | R | R | DW | DW | DW | DW | DW | DW | DARK |
| 1 + 5 CHANGE | 1 + 5 MAY CHANGE TO PHASE 1 + 6, PHASE 2 + 5 OR PHASE 2 + 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PHASE 1 + 6 | R | R | R/G | G | G | G | G | R | R | R | R | R | G | G | G | R/G | R | R | R | R | R | R | DW | DW | DW | DW | DW | DW | DARK |
| 1 + 6 CHANGE | R | R | R/G | G | G | G | G | R | R | R | R | R | Y | Y | Y | R/G | R | R | R | R | R | R | DW | DW | DW | DW | DW | DW | DARK |
| PHASE 2 + 5 | R | R | R | G | G | G | G | R | R | R | R | R | R | R | R | R | R | R | G | G | G | G | DW | DW | DW | DW | DW | DW | DARK |
| 2 + 5 CHANGE | R | R | R | G | G | G | G | R | R | R | R | R | R | R | R | R | R | R | Y | Y | Y | Y | DW | DW | DW | DW | DW | DW | DARK |
| PHASE 2 + 6 | R | R | R | G | G | G | G | R | R | R | R | R | R | R | G | G | R | R | R | R | G | G | DW | DW | WK | WK | WK | WK | DARK |
| PED CLEARANCE | R | R | R | G | G | G | G | R | R | R | R | R | R | R | G | G | R | R | R | R | G | G | DW | DW | FLDW | FLDW | FLDW | FLDW | DARK |
| 2 + 6 CHANGE | R | R | R | G | G | G | G | R | R | R | R | R | R | R | Y | Y | R | R | R | R | Y | Y | DW | DW | DW | DW | DW | DW | DARK |
| PHASE 3 | G | G | G | G | G | G | G | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | DW | DW | DW | DW | DW | DW | DARK |
| 3 CHANGE | Y | Y | Y | G | G | G | G | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | DW | DW | DW | DW | DW | DW | DARK |
| PHASE 4 | R | R | R | G | G | G | G | G | G | G | G | G | R | R | R | R | R | R | R | R | R | R | DW | DW | DW | DW | DW | DW | DARK |
| 4 CHANGE | R | R | R | G | G | G | G | Y | Y | Y | Y | Y | R | R | R | R | R | R | R | R | R | R | DW | DW | DW | DW | DW | DW | DARK |
| PHASE 4 ALT | R | R | R | G | G | G | G | G | G | G | G | G | R | R | R | R | R | R | R | R | R | R | WK | WK | DW | DW | DW | DW | DARK |
| PED CLEARANCE | R | R | R | G | G | G | G | G | G | G | G | G | R | R | R | R | R | R | R | R | R | R | FLDW | FLDW | DW | DW | DW | DW | DARK |
| 4 ALT CHANGE | R | R | R | G | G | G | G | Y | Y | Y | Y | Y | R | R | R | R | R | R | R | R | R | R | DW | DW | DW | DW | DW | DW | DARK |
| FIREHOUSE | R | R | R | R | R | R | R | G | G | G | G | G | R | R | R | R | G | G | R | R | R | R | DW | DW | DW | DW | DW | DW | ⊘ |
| PRE-EMPTION | R | R | R | R | R | R | R | Y | Y | Y | Y | Y | R | R | R | R | Y | Y | R | R | R | R | DW | DW | DW | DW | DW | DW | DARK |
| FLASHING OPERATION | FL/R | FL/R | FL/R | FL/Y | FL/Y | FL/Y | FL/Y | FL/RA | FL/RA | FL/RA | FL/R | FL/R | FL/RA | FL/RA | FL/Y | FL/Y | FL/R | FL/R | FL/RA | FL/RA | FL/Y | FL/Y | DARK | DARK | DARK | DARK | DARK | DARK | DARK |

## WIRING DIAGRAM




WIRING KEY

A, B — 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 115 & SHADY GROVE RD /AIRPARK RD

GENERAL INFORMATION

| REVISIONS | |
|---|---|
| (B) | MODIFY NORTH & SOUTH EP LEFT TURNS TO EXCLUSIVE LEFT TURN XX3545168 05/2011 |
| (A) | MODIFY TRAFFIC SIGNAL DUE TO GEOMETRIC IMPROVEMENTS 11-99 |

SCALE ____ ADVERTISED DATE 11-99 CONTRACT NO. ____

DESIGNED BY S.BLOSS
DRAWN BY N.LEARY
CHECKED BY ____
F.A.P. NO. ____
COUNTY MONTGOMERY
LOGMILE 15.01/15.01.03
TIMS NO. ____
TOD NO. ____

TS NO. 4789S-GI | DRAWING ... OF | SHEET NO. 02 OF 02

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BY: [illegible]