## PROJECT DESCRIPTION
### GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF AN EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF MD 704(MARTIN LUTHER KING JR. HWY.) AT SHERIFF ROAD IN PRINCE GEORGE'S 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 6 NEMA PHASES. THE LEFT TURN PHASES ALONG EASTBOUND AND WESTBOUND MD 704 SHALL OPERATE WITH EXCLUSIVE/PERMISSIVE LEFT TURN PHASING; THE SHERIFF ROAD NORTHBOUND AND SOUTHBOUND SHALL OPERATE WITH SPLIT PHASING.

### SPECIAL NOTES

1. THE FOLLOWING CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS:

   **PROJECT CONTACTS:**

   MR. MAJID SHAKIB, ASSISTANT DISTRICT ENGINEER - TRAFFIC
   PHONE: (301) 513-7359
   MR. DENNIS MCMAHON, ASSISTANT DISTRICT ENGINEER- MAINTENANCE
   PHONE: (301) 513-7300
   MR. AUGI REBISH, ASSISTANT DISTRICT ENGINEER - UTILITY
   PHONE: (301) 513-7300
   MR. RICHARD L. DAFF, SR. CHIEF TRAFFIC OPERATIONS DIVISION
   PHONE: (410) 787-7630

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

### EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

| CATEGORY CODE NO. | DESCRIPTION | UNITS | QUANTITY |
|---|---|---|---|
| 971017 | EIGHT PHASE (FULLY ACTUATED) CONTROLLER AND CABINET - BASE MOUNT, SYSTEM READY, WITH VIDEO INTERFACE EQUIPMENT AND RACK MOUNTED AMPLIFIERS | EA | 1 |
| 973023 | FLAT SHEET ALUMINUM SIGNS (BLUE OR GREEN) | SF | 76 |
| | R10-12 (36"X42") MAST ARM MOUNT | EA | 2 |
| | R3-5 (L) (30"x36") MAST ARM MOUNT | EA | 1 |
| | R3-6 (30"x36") MAST ARM MOUNT | EA | 2 |
| | D3-2 (16" X VAR.) MAST ARM MOUNT | EA | 4 |

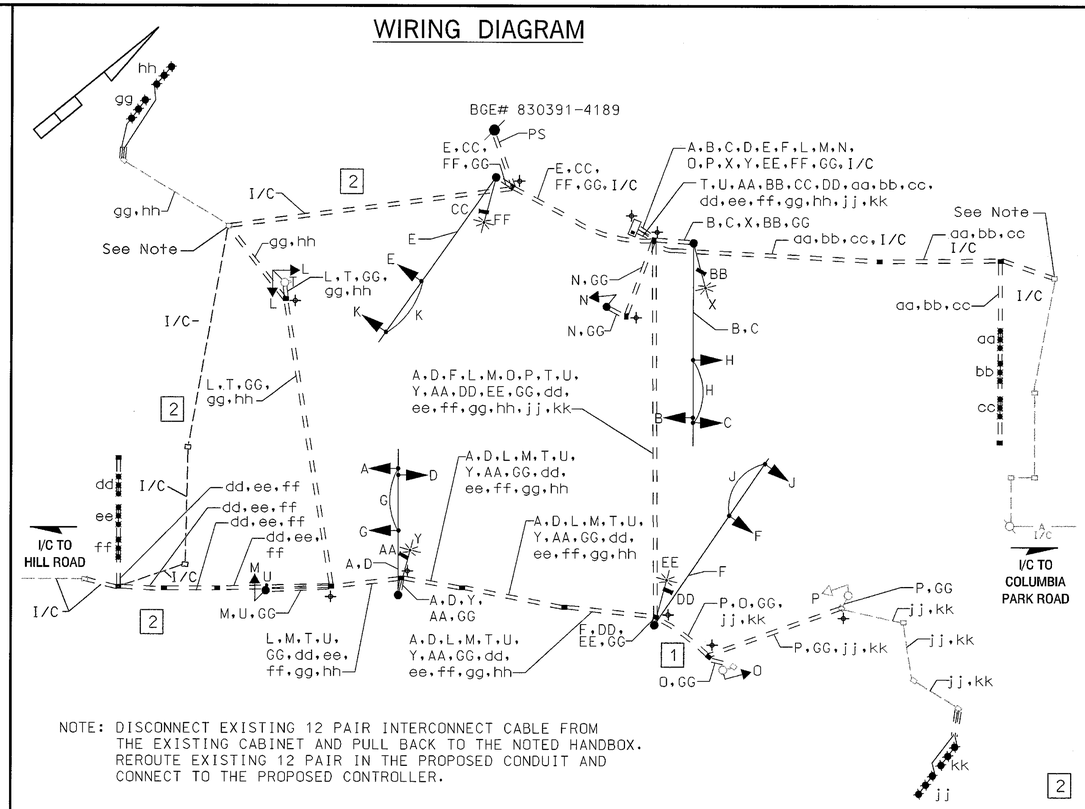
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

| | CATEGORY CODE NO. | DESCRIPTION | UNITS | QUANTITY |
|---|---|---|---|---|
| | 203030 | TEST PIT EXCAVATION | CY | 4 |
| | 585462 | REMOVAL OF PERMANENT PAVEMENT LINE | LF | 300 |
| | 585620 | 12 INCH HEAT APPL. WHITE PERMANENT PREFORMED THERMO. PAVEMENT MARKING | LF | 700 |
| | 585624 | 24 INCH HEAT APPL. WHITE PERMANENT PREFORMED THERMO. PAVEMENT MARKING | LF | 2 ~~100~~ 150 |
| | 801004 | CONCRETE FOR SIGNAL FOUNDATIONS | CY | 20 |
| | 802501 | NO. 6 AWG STRANDED BARE COPPER GROUND WIRE | LF | 700 |
| | 805125 | 2 INCH SCHED. 80 PVC CONDUIT-TRENCHED | LF | 70 |
| | 805135 | 3 INCH SCHED. 80 PVC CONDUIT-TRENCHED | LF | 1300 |
| | 805150 | 3 INCH SCHED. 80 PVC CONDUIT-SLOTTED | LF | 250 |
| | 805140 | 4 INCH SCHED. 80 PVC CONDUIT-TRENCHED | LF | 40 |
| | 805155 | 4 INCH SCHED. 80 PVC CONDUIT-SLOTTED | LF | 2 ~~450~~ 600 |
| | 805160 | 1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT | LF | 50 |
| | 807400 | ELECTRICAL UTILITY SERVICE EQUIPMENT 120/240 VOLTS, 60 AMPS | EA | 1 |
| | 810550 | MICROLOOP PROBE, 500 FOOT LEAD IN CABLE | EA | 1 ~~6~~ 4 |
| | 811001 | F&I ELECTRICAL HANDHOLE | EA | ~~18~~ 17 |
| | 813015 | INSTALL OVERHEAD SIGN | SF | 76 |
| | 816001 | VIDEO DETECTOR CAMERA | EA | 4 |
| | 816005 | CONTROL CABLE, 250 FOOT VIDEO DETECTION CAMERA TO CONTROLLER | EA | 2 |
| | 816010 | CONTROL CABLE, 500 FOOT VIDEO DETECTION CAMERA TO CONTROLLER | EA | 2 |
| | 818004 | 10 FOOT BREAKAWAY PEDESTAL POLE | EA | 1 |
| | 818052 | STEEL POLE WITH A SINGLE 70 FOOT MAST ARM | EA | 3 |
| | 818041 | STEEL POLE WITH A SINGLE 60 FOOT MAST ARM | EA | 1 |
| | 831010 | 250 WATT HPS LAMP AND LUMINAIRE WITH PHOTOCELL | EA | 4 |
| | 832017 | CABLE 1-CONDUCTOR, NO. 4 AWG, TYPE USE, 600V | LF | 50 |
| | 837001 | GROUND ROD - 3/4 INCH DIA. X 10 FOOT LENGTH | EA | 9 |
| | 860272 | 12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION | EA | 40 |
| | 860282 | 12 INCH PEDESTRIAN SIGNAL HEAD SECTION PEDESTAL POLE MOUNT | EA | 10 |
| | 861105 | ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG) | LF | 830 |
| | 861106 | ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 AWG) | LF | 1025 |
| | 861107 | ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG) | LF | 590 |
| | 861108 | ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG) | LF | 1530 |
| | 861116 | ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) | LF | 800 |
| | 862102 | SAW CUT FOR SIGNAL (LOOP DECTOR) | LF | 100 |
| | 865001 | PUSHBUTTON AND SIGN | EA | 1 |
| | 866103 | 15 FOOT LIGHTING ARM ON SIGNAL STRUCTURE | EA | 4 |
| | 871202 | INSTALL CONTROLLER AND CABINET - BASE MOUNT | EA | 1 |
| 2 | 873001 | REMOVE AND SALVAGE EXISTING EQUIPMENT | LS | 1 |
| | 800000 | DISCONNECT EXISTING I/C CABLE AND REINSTALL IN PROPOSED CONDUIT | LF | ~~1600~~ 1300 |
| 1 | 810601 | NONINVASIVE DETECTOR, 500 FOOT LEAD IN CABLE | EA | 6 |

C. MATERIALS TO BE REMOVED BY THE CONTRACTOR.

SHA 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 CONTRACTOR

## WIRING DIAGRAM

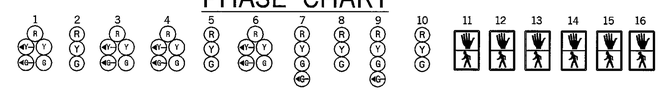



NOTE: DISCONNECT EXISTING 12 PAIR INTERCONNECT CABLE FROM THE EXISTING CABINET AND PULL BACK TO THE NOTED HANDBOX. REROUTE EXISTING 12 PAIR IN THE PROPOSED CONDUIT AND CONNECT TO THE PROPOSED CONTROLLER.

### KEY

- A, B, C, D, E, F — 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- G, H, J, K, L — 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- M, N, O, P — 3 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- T, U — 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- X, Y, EE, FF — 2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) TRAY CABLE
- AA, DD — VIDEO DETECTION CABLE (500 FT CABLE LENGTH)
- BB, CC — VIDEO DETECTION CABLE (250 FT CABLE LENGTH)
- aa, bb, cc, dd, ee, ff — NON-INVASIVE LOOP DETECTOR CABLE LEAD-IN
- gg, hh, jj, kk — MICRO LOOP DETECTOR CABLE LEAD-IN
- GG — 1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
- PS — POWER SERVICE UNDERGROUND
- ✦ — GROUND ROD
- 2 I/C — REROUTED EXISTING INTERCONNECT CABLE

## PHASE CHART

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PHASE 1 AND 5 | ←G/R– | R | ←G/R– | ←G/R– | R | ←G/R– | R | R | R | R | DW | DW | DW | DW | DW | DW |
| 1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6 | | | | | | | | | | | | | | | | |
| PHASE 1 AND 6 | ←G/G– | G | ←G/G– | R | R | R | R | R | R | R | DW | DW | DW | DW | DW | DW |
| 1 AND 6 CHANGE | ←Y/G– | G | ←Y/G– | R | R | R | R | R | R | R | DW | DW | DW | DW | DW | DW |
| PHASE 2 AND 5 | R | R | R | ←G/G– | G | ←G/G– | R | R | R | R | DW | DW | DW | DW | DW | DW |
| 2 AND 5 CHANGE | R | R | R | ←Y/G– | G | ←Y/G– | R | R | R | R | DW | DW | DW | DW | DW | DW |
| PHASE 2 AND 6 | G | G | G | G | G | G | R | R | R | R | WK | WK | WK | WK | DW | DW |
| PED CLEARANCE | G | G | G | G | G | G | R | R | R | R | FL/DW | FL/DW | FL/DW | FL/DW | DW | DW |
| 2 AND 6 CHANGE | Y | Y | Y | Y | Y | Y | R | R | R | R | DW | DW | DW | DW | DW | DW |
| PHASE 3 | R | R | R | R | R | R | R | R | G/G– | G | DW | DW | DW | DW | DW | DW |
| 3 CHANGE | R | R | R | R | R | R | R | R | Y | Y | DW | DW | DW | DW | DW | DW |
| PHASE 3 ALT | R | R | R | R | R | R | R | R | G/G– | G | DW | DW | DW | DW | WK | WK |
| PED CLEARANCE | R | R | R | R | R | R | R | R | G/G– | G | DW | DW | DW | DW | FL/DW | FL/DW |
| 3 ALT CHANGE | R | R | R | R | R | R | R | R | Y | Y | DW | DW | DW | DW | DW | DW |
| PHASE 4 | R | R | R | R | R | R | G/G– | G | R | R | DW | DW | DW | DW | DW | DW |
| 4 CHANGE | R | R | R | R | R | R | Y | Y | R | R | DW | DW | DW | DW | DW | DW |
| FLASHING OPERATION | FL/Y | FL/Y | FL/Y | FL/Y | FL/Y | FL/Y | FL/R | FL/R | FL/R | FL/R | DARK | DARK | DARK | DARK | DARK | DARK |

2 REDLINE REVISION NO. 2
1 REDLINE REVISION NO. 1


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MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
*Office of Traffic & Safety*
TRAFFIC ENGINEERING DESIGN DIVISION
TRAFFIC SIGNAL PLAN
MD 704 (MARTIN LUTHER KING JR. HIGHWAY) AND SHERIFF ROAD

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| DRAWN BY: SJ DU | F.A.P. NO. SEE TITLE SHEET | TS NO. 36B | SHEET NO. |
| CHECKED BY: Keith Rinker | S.H.A. NO. PG4005176 | | |
| SCALE: NTS | COUNTY: PRINCE GEORGES | T.I.M.S. NO. F465 | 12 OF 16 |
| DATE: DECEMBER, 2002 | LOG MILE: 16070401.51 | | |

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