

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE MODIFICATION ON THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF US 50 AND MD 309 (BLACK DOG ALLEY/AIRPORT RD.) IN TALBOT COUNTY. US 50 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE EXISTING EIGHT-PHASE, FULLY ACTUATED NEMA CONTROLLER HOUSED IN A BASE MOUNTED CABINET WILL BE USED. THE CONTROLLER CURRENTLY OPERATES AS A SEVEN-PHASE FULL-TRAFFIC-ACTUATED CONTROLLER WITH EXCLUSIVE LEFT TURN PHASES FOR E.B. AND W.B. US 50 AND AN EXCLUSIVE-PERMISSIVE LEFT TURN PHASE FOR S.B. MD 309 (BLACK DOG ALLEY) THE CONTROLLER WILL BE CHANGED TO OPERATE AS A SIX-PHASE FULL-TRAFFIC-ACTUATED CONTROLLER WITH EXCLUSIVE LEFT TURN PHASES FOR E.B. AND W.B. US 50 AND SIDE STREET SPLIT PHASING.

PHASE CHART

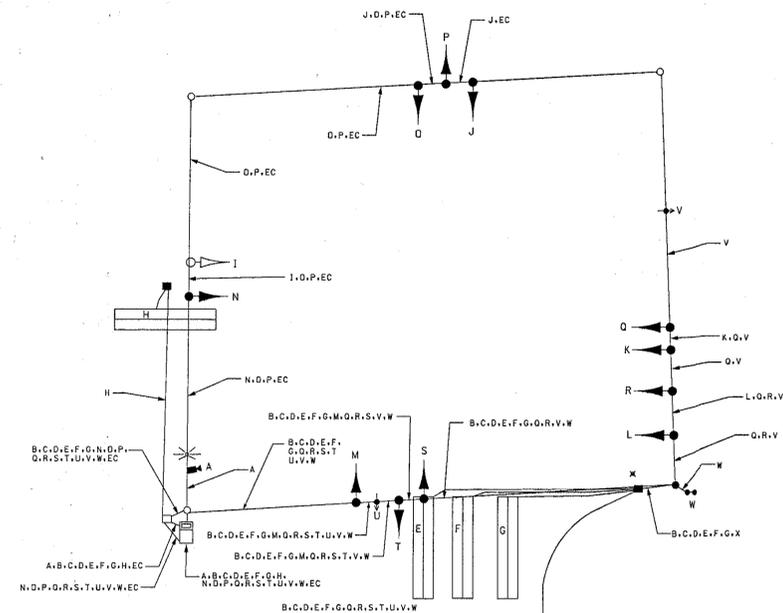
| | | | | | | | | | | | | | | | |
|--------------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | (E) | (E) | (W) | (W) | (E) | (E) | (W) | (W) | (E) | (E) | (W) | (W) | (E) | (E) | (W) |
| PHASE 1 & 5 | <G- | <G- | R | R | R | <G- | <G- | R | R | R | R | R | R | R | R |
| 1 & 5 CHANGE | PHASE 1 & 5 CHANGE MAY CHANGE TO PHASE 1 & 6, 2 & 5 OR 2 & 6 | | | | | | | | | | | | | | |
| PHASE 1 & 6 | <G- | <G- | G | G | G | <R- | <R- | R | R | R | R | R | R | R | R |
| 1 & 6 CHANGE | <Y- | <Y- | G | G | G | <R- | <R- | R | R | R | R | R | R | R | R |
| PHASE 2 & 5 | <R- | <R- | R | R | R | <G- | <G- | G | G | R | R | R | R | R | R |
| 2 & 5 CHANGE | <R- | <R- | R | R | R | <Y- | <Y- | G | G | R | R | R | R | R | R |
| PHASE 2 & 6 | <R- | <R- | G | G | G | <R- | <R- | G | G | R | R | R | R | R | R |
| 2 & 6 CHANGE | <R- | <R- | Y | Y | Y | <R- | <R- | Y | Y | R | R | R | R | R | R |
| PHASE 3 | <R- | <R- | R | R | R | <R- | <R- | R | R | ⊘ | ⊘ | G | R | R | R |
| 3 CHANGE | <R- | <R- | R | R | R | <R- | <R- | R | R | Y | Y | Y | R | R | R |
| PHASE 4 | <R- | <R- | R | R | R | <R- | <R- | R | R | R | R | R | ⊘ | ⊘ | G |
| 4 CHANGE | <R- | <R- | R | R | R | <R- | <R- | R | R | R | R | R | Y | Y | Y |
| FLASHING OPERATION | FL/R | FL/R | FL/Y | FL/Y | FL/Y | FL/R | FL/R | FL/Y | FL/Y | FL/R | FL/R | FL/R | FL/R | FL/R | FL/R |

EQUIPMENT LIST "B" CONTINUED

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR
ALL EQUIPMENT SHALL HAVE CATALOG CUTS SUBMITTED TO OOTS FOR APPROVAL PRIOR TO INSTALLATION.

| ITEM NO. | QUANTITY | DESCRIPTION |
|----------|----------|--|
| 8004 | 1 EA | ADJUST EXISTING HANDHOLE TO FINAL GRADE W/COLLAR |
| 8008 | 1 EA | FURNISH AND INSTALL 14 IN. X 32 FT. STRAIN POLE |
| 8011 | 37 EA | FURNISH AND INSTALL 12 IN. VEHICLE SIGNAL HEAD SECTION |
| 8044 | 3 EA | FURNISH AND INSTALL MICRO-LOOP NON-EVASIVE PROBE WITH 500 FT. LEAD-IN |
| 8048 | LS | REMOVE AND DISPOSE OF EXISTING EQUIPMENT |
| 8049 | 1 EA | FURNISH AND INSTALL VIDEO DETECTION CAMERA |
| 8050 | 1 EA | FURNISH AND INSTALL VIDEO DETECTION CAMERA INTERFACE EQUIPMENT |
| 8051 | 10 LF | FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - TRENCHED |
| 8056 | 275 LF | FURNISH AND INSTALL 4-CONDUCTOR OPTICOM CABLE |
| 8057 | 5 CY | FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION |
| 8060 | 10 LF | FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER WIRE |
| 8062 | 50 LF | FURNISH AND INSTALL 1 IN. GALVANIZED CONDUIT DETECTOR SLEEVE |
| 8068 | 10 LF | FURNISH AND INSTALL 1 IN. LIQUID TIGHT, FLEXIBLE, NON-METALLIC CONDUIT FOR DETECTOR SLEEVE |
| 8072 | 3 EA | FURNISH AND INSTALL ELECTRICAL HANDHOLE |
| 8080 | 1 EA | FURNISH AND INSTALL GROUND ROD 3/4 IN. DIAMETER X 10 FT. LENGTH |
| 8081 | 800 LF | FURNISH AND INSTALL ELECTRICAL CABLE 2-CONDUCTOR ALUMINUM SHIELDED |
| 8084 | 80 LF | FURNISH AND INSTALL ELECTRICAL CABLE 5-CONDUCTOR NO. 14 AWG |
| 8085 | 1370 LF | FURNISH AND INSTALL ELECTRICAL CABLE 7-CONDUCTOR NO. 14 AWG |
| 8087 | 1850 LF | FURNISH AND INSTALL LOOP WIRE ENCASED IN 1/4 IN. FLEXIBLE TUBING (NO. 14 AWG) |
| 8088 | 560 LF | FURNISH AND INSTALL SAW CUT FOR LOOP DETECTOR |
| 8089 | 290 LF | FURNISH AND INSTALL 1/4 IN. STEEL SPAN WIRE |
| 8090 | 290 LF | FURNISH AND INSTALL 3/8 IN. STEEL SPAN WIRE |
| 8091 | 100 LF | FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - TRENCHED |
| --- | 4 EA | FURNISH AND INSTALL R3-5(L) SIGN (30" X 36") SPAN WIRE MOUNT |
| --- | 1 EA | FURNISH AND INSTALL R3-6(L) SIGN (30" X 36") SPAN WIRE MOUNT |
| --- | 2 EA | RELOCATE EXISTING GROUND MOUNTED SIGN |
| --- | 2 EA | RELOCATE EXISTING OVERHEAD SIGN |
| --- | 1 EA | RELOCATE EXISTING 3-M OPTICOM DETECTOR EYE |
| --- | 1 EA | FURNISH AND INSTALL R3-5(R) SIGN (30" X 36") SPAN WIRE MOUNT |
| --- | 200 LF | FURNISH AND INSTALL 4-CONDUCTOR AIRCRAFT BEACON CABLE |
| --- | 2 EA | FURNISH AND INSTALL AIRCRAFT BEACON |
| --- | 4 EA | FURNISH AND INSTALL TEMPORARY GUY WIRE (DURING CONSTRUCTION) |

WIRING DIAGRAM



WIRING KEY

- A VIDEO DETECTION 250 FT. PREMANUFACTURED CABLE
- B-D MICRO-LOOP PROBE WITH 500 FT. LEAD-IN
- E-H 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) ALUMINUM SHIELDED
- I-M 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- N-T 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- U-V 4 CONDUCTOR OPTICOM DETECTOR CABLE
- W 4 CONDUCTOR CABLE (NO. 14 A.W.G.) FOR AIRCRAFT BEACON
- X STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- EC EXISTING CABLE
- LW LOOP WIRE (NO. 14 A.W.G.)
- ML MICRO-LOOP PROBE
- ⊗ GROUND ROD

EQUIPMENT LIST "A"

A. APPROVED SHA EQUIPMENT TO BE PURCHASED BY THE DEVELOPER AND INSTALLED BY THE CONTRACTOR. ALL EQUIPMENT IN THIS LIST SHALL HAVE CATALOG CUTS SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.

| ITEM NO. | QUANTITY | DESCRIPTION |
|----------|----------|-------------|
| NONE | | |

CONTACT PERSONS FOR DISTRICT 2 ARE AS FOLLOWS:

- | | |
|---|---|
| MR. ROBERT KIEL ASSISTANT DISTRICT ENGINEER - TRAFFIC (410) 778-3061 | MR. TERRY WRIGHT ASSISTANT DISTRICT ENGINEER - MAINTENANCE (410) 778-3061 |
| MR. BARRY CLOTHIER ASSISTANT DISTRICT ENGINEER - UTILITIES (410) 778-3061 | |

CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY

- | | |
|--|--|
| MR. RICHARD DAFF, SR. CHIEF, TRAFFIC OPERATIONS (410) 787-7630 | MR. EUGENE BAILEY TEAM LEADER SIGN OPERATIONS (410) 787-7676 |
| MR. ROBERT SNYDER ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS (410) 787-7631 | MS. DARLENE EIDE SUPPLY OFFICE SIGNAL SHOP WAREHOUSE (410) 787-7668 |
| MR. ED RODENHIZER TEAM LEADER SIGNAL OPERATIONS (410) 787-7652 | |

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR
ALL EQUIPMENT SHALL HAVE CATALOG CUTS SUBMITTED TO OOTS FOR APPROVAL PRIOR TO INSTALLATION.

| ITEM NO. | QUANTITY | DESCRIPTION |
|----------|----------|---|
| 1001 | 1 EA | MAINTENANCE OF TRAFFIC |
| 2002 | 1 CY | TEST PIT EXCAVATION |
| 5001 | 6 EA | FURNISH AND INSTALL HEAT APPLIED PERMANENT THERMOPLASTIC PAVEMENT MARKING ARROW (LEFT) |
| 5001 | 3 EA | FURNISH AND INSTALL HEAT APPLIED PERMANENT THERMOPLASTIC PAVEMENT MARKING ARROW (RIGHT) |
| 5001 | 2 EA | FURNISH AND INSTALL HEAT APPLIED PERMANENT THERMOPLASTIC PAVEMENT MARKING ARROW (LEFT/THRU) |
| 5002 | 4 EA | FURNISH AND INSTALL HEAT APPLIED PERMANENT THERMOPLASTIC PAVEMENT MARKING LETTER |
| 5005 | 120 LF | FURNISH AND INSTALL 24 IN. WHITE HEAT APPLIED PERMANENT THERMOPLASTIC PAVEMENT MARKING |
| 8001 | 1 EA | FURNISH AND INSTALL 250 FT. VIDEO CABLE TO CONTROLLER |

EQUIPMENT LIST "C"

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION, 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076. THE CONTRACTOR SHALL NOTIFY THE SHA AT (410) 787-7652 AT LEAST THREE DAYS IN ADVANCE OF DELIVERY.

NONE

ALL SIGNAL EQUIPMENT TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION
US 50 AND MD 309 (BLACK DOG ALLEY RD/AIRPORT RD.)

TRAFFIC CONCEPTS, INC.

325 Gambrills Road
Suite E
Gambrills, MD 21054
(410) 923-7101

DRAWN BY: M.HOWELL
CHECKED BY: J.ZAYDEL
SCALE: 1" = 20'
DATE: 11-15-02

F.A.P. NO.
S.H.A. NO.
COUNTY: TALBOT
LOG MILE: 2005008.77

TS NO.
1525 H.G.I.
T.I.M.S. NO.
F639
SHEET NO.
2 OF 2