## PROJECT DESCRIPTION

### I. GENERAL:

THIS PROJECT INVOLVES CONVERTING THE EXISTING PEDESTRIAN SIGNALS TO COUNTDOWN PEDESTRIAN SIGNAL HEADS AND AUDIBLE PEDESTRIAN PUSHBUTTON SYSTEMS, UPDATING TRAFFIC SIGNAL HEADS TO LEDS, AND UPDATING SIGNAL DETECTION WITH VIDEO DETECTION CAMERAS FOR THE EXISTING TRAFFIC SIGNAL AT MD 12 (SNOW HILL ROAD) AND COLLEGE AVENUE/BEAGLIN PARK DRIVE IN SALISBURY, WICOMICO COUNTY, MARYLAND.

MD 12 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

### II. INTERSECTION OPERATION:

THE INTERSECTION OPERATES IN NEMA EIGHT PHASES. FULL TRAFFIC ACTUATED MODE. THE MD 12 (SNOW HILL ROAD) APPROACHES SHALL OPERATE CONCURRENTLY AS WILL THE COLLEGE AVENUE AND BEAGLIN PARK DRIVE APPROACHES. MD 12 AND COLLEGE AVENUE AND BEAGLIN PARK DRIVE LEFT TURN PHASES SHALL BE EXCLUSIVE PERMISSIVE. AUDIBLE PEDESTRIAN PUSHBUTTON WITH COUNTDOWN PEDESTRIAN SIGNAL ARE PROVIDE FOR EAST AND SOUTH LEGS OF THE INTERSECTION.

THE EXISTING FULL TRAFFIC ACTUATED EIGHT PHASE TRAFFIC SIGNAL CONTROLLER HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET WILL BE UTILIZED.

### III. SPECIAL NOTES:

1. APS WILL FUNCTION AS FOLLOWS:

   FOR MD 12 (SNOW HILL ROAD)
   - A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS SNOW HILL AT COLLEGE AND BEAGLIN PARK."
   - B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

   FOR BEAGLIN PARK DRIVE
   - A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS BEAGLIN PARK AT SNOW HILL CROSSWALK ANGLES LEFT."
   - B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

2. THE CONTRACTOR SHALL PURCHASE AND DELIVER THE "APS" CENTRAL CONTROL UNIT FOR THE CONTROLLER TO THE SHA SIGNAL SHOP AT 7491 CONNELLEY DRIVE, HANOVER, MARYLAND, 21076. MR. EDWARD RODENHIZER AT 410 787-7652 SHALL BE CONTACTED AT LEAST THREE DAYS PRIOR TO DELIVERY.

## PROJECT CONTACTS

THE CONTACT PERSONS FOR THE SHA ARE AS FOLLOWS:

MR. GENE COFIELL
ASSISTANT DIVISION ENGINEER
TRAFFIC
PHONE: 410-677-4040

JAMES WRIGHT
ASSISTANT DISTRICT ENGINEER
MAINTENANCE
PHONE: 410-677-4010

BRUCE POOLE
DISTRICT UTILITIES ENGINEER
PHONE: 410-677-4082

DON SCHAEFER
DISTRICT CONSTRUCTION ENGINEER
PHONE: 410-677-4020

ROBERT SNYDER
ASSISTANT DIVISION CHIEF
TRAFFIC OPERATIONS DIVISION
PHONE: 410-787-7631

EDWARD RODENHIZER
CHIEF, SIGNAL OPERATIONS SECTION
PHONE: 410-787-7652

## EQUIPMENT LIST "C"

ALL EQUIPMENT AND OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

## EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY SHA AND INSTALLED BY THE CONTRACTOR.

| ITEM NO. | QUANTITY | DESCRIPTION |
|---|---|---|
| 9042 | 1 EA | CONTROLLER ASC II WITH TELEMETRY |
| 9044 | 1 EA | NEMA 6 CONTROLLER CABINET |
| 9086 | 1 EA | VIDEO DETECTOR INTERFACE EQUIPMENT: 1-4 CAMERAS |
| 9571 | 4 SF | SHEET ALUMINIUM MAST ARM/POLE MOUNTED SIGNS |
| | 2 EA | R10-4(1) COUNTDOWN PEDESTRIAN PUSHBUTTON SIGN "TO CROSS SNOW HILL ROAD" (9"x 15") |
| | 2 EA | R10-4(1) COUNTDOWN PEDESTRIAN PUSHBUTTON SIGN "TO CROSS BEAGLIN PARK DRIVE" (9"x 15") |

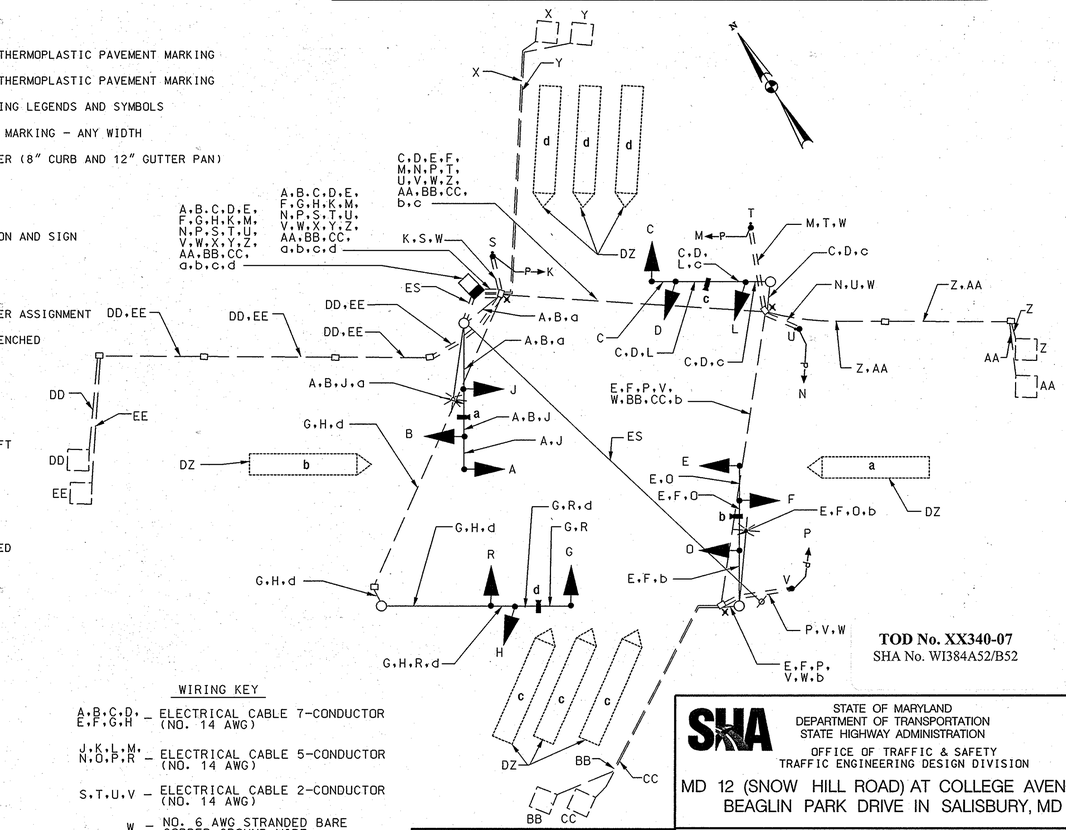
## EQUIPMENT LIST "B"

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

| ITEM NO. | QUANTITY | DESCRIPTION |
|---|---|---|
| 1001 | 1 EA | MAINTENANCE OF TRAFFIC |
| 2002 | 2 CY | TEST PIT EXCAVATION |
| 5003 | 250 LF | 12" HEAT APPLIED WHITE PERMANENT PERFORMED THERMOPLASTIC PAVEMENT MARKING |
| 5004 | 70 LF | 24" HEAT APPLIED WHITE PERMANENT PERFORMED THERMOPLASTIC PAVEMENT MARKING |
| 5005 | 11 SF | WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS |
| 5006 | 380 LF | REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKING - ANY WIDTH |
| 6001 | 28 LF | STANDARD TYPE 'A' COMBINATION CURB AND GUTTER (8" CURB AND 12" GUTTER PAN) |
| 6002 | 650 SF | 5" CONCRETE SIDEWALK |
| 8001 | 52 EA | 12" LED SIGNAL HEAD SECTION |
| 8007 | 4 EA | AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGN |
| 8008 | 4 EA | BREAKAWAY PEDESTAL POLE - ANY SIZE |
| 8011 | 4 EA | LED 16" COUNTDOWN PEDESTRIAN SIGNAL HEAD |
| 8014 | 1 EA | REMOVE AND DISPOSE OF EXISTING EQUIPMENT- PER ASSIGNMENT |
| 8020 | 60 LF | UP TO 4" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED |
| 8021 | 50 SF | DETECTABLE WARNING SURFACES |
| 8027 | 580 LF | NO. 6 AWG STRANDED BARE COPPER GROUND WIRE |
| 8030 | 4 SF | INSTALL OVERHEAD SIGN |
| 8033 | 4 EA | VIDEO DETECTION CAMERA AND CABLE UP TO 500 FT |
| 8037 | 700 LF | ELECTRICAL CABLE - 2 CONDUCTOR NO 14 AWG |
| 8039 | 800 LF | ELECTRICAL CABLE - 5 CONDUCTOR NO 14 AWG |
| 8040 | 2000 LF | ELECTRICAL CABLE - 7 CONDUCTOR NO 14 AWG |
| 8044 | 1 EA | INSTALL CONTROLLER AND CABINET - BASE MOUNTED |

### PHASE CHART

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13,14 | 15,16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase 1 & 5 | ◁G-R | ◁G-R | R | ◁G-R | ◁G-R | R | R | R | R | R | R | R | DW | DW |
| 1 & 5 Change | THE CONTROLLER MAY SKIP TO PHASES 1 & 6 OR 2 & 5 OR 2 & 6 | | | | | | | | | | | R | DW | DW |
| Phase 1 & 6 | ◁G-G | ◁G-G | G | R | R | R | R | R | R | R | R | R | DW | DW |
| 1 Change | ◁Y-G | ◁Y-G | G | R | R | R | R | R | R | R | R | R | DW | DW |
| Phase 2 & 5 | R | R | R | ◁G-G | ◁G-G | G | R | R | R | R | R | R | WK | DW |
| 5 Change | R | R | R | ◁Y-G | ◁Y-G | G | R | R | R | R | R | R | WK | DW |
| Phase 2 & 6 | G | G | G | G | G | G | R | R | R | R | R | R | WK | WK |
| Ped. Clear and Countdown | G | G | G | G | G | G | R | R | R | R | R | R | FL/DW | FL/DW |
| 2 & 6 Change | Y | Y | Y | Y | Y | Y | R | R | R | R | R | R | DW | DW |
| Phase 3 & 7 | R | R | R | R | R | ◁G-R | ◁G-R | R | ◁G-R | ◁G-R | R | DW | DW |
| 3 & 7 Change | THE CONTROLLER MAY SKIP TO PHASES 3 & 8 OR 4 & 7 OR 4 & 8 | | | | | | | | | | | | DW | DW |
| Phase 3 & 8 | R | R | R | R | R | R | R | R | R | ◁G-G | ◁G-G | G | DW | DW |
| 3 & 8 Change | R | R | R | R | R | R | R | R | R | ◁Y-G | ◁Y-G | G | DW | DW |
| Phase 4 & 7 | R | R | R | R | R | R | ◁G-G | ◁G-G | G | R | R | R | DW | DW |
| 4 & 7 Change | R | R | R | R | R | R | ◁Y-G | ◁Y-G | G | R | R | R | DW | DW |
| Phase 4 & 8 | R | R | R | R | R | R | G | G | G | G | G | G | DW | DW |
| 4 & 8 Change | R | R | R | R | R | R | Y | Y | Y | Y | Y | Y | DW | DW |
| 4 & 8 Alt. | R | R | R | R | R | R | G | G | G | G | G | G | DW | WK |
| Ped. Clear and Countdown | R | R | R | R | R | R | G | G | G | G | G | G | DW | FL/DW |
| 4 & 8 Alt. Change | R | R | R | R | R | R | Y | Y | Y | Y | Y | Y | DW | DW |
| Flashing Operation | FL/Y | FL/Y | FL/Y | FL/Y | FL/Y | FL/Y | FL/R | FL/R | FL/R | FL/R | FL/R | FL/R | DARK | DARK |




### WIRING KEY

A,B,C,D, E,F,G,H – ELECTRICAL CABLE 7-CONDUCTOR (NO. 14 AWG)

J,K,L,M, N,O,P,R – ELECTRICAL CABLE 5-CONDUCTOR (NO. 14 AWG)

S,T,U,V – ELECTRICAL CABLE 2-CONDUCTOR (NO. 14 AWG)

W – NO. 6 AWG STRANDED BARE COPPER GROUND WIRE

X,Y,Z,AA, BB,CC,DD, EE – EXISTING 6' X 6' LOOP LEAD-IN

a,b,c,d – VIDEO DETECTOR WIRING

DZ – CAMERA DETECTOR ZONE

ES – EXISTING SERVICE

x – PROPOSED GROUND ROD

✱✱✱ – MICROLOOP PROBES

**TOD No. XX340-07**
SHA No. WI384A52/B52

SHA
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 12 (SNOW HILL ROAD) AT COLLEGE AVENUE / BEAGLIN PARK DRIVE IN SALISBURY, MD

CENTURY ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 GILROY ROAD
HUNT VALLEY, MD 21031

REVISION 'E' 25003.93

**GENERAL INFORMATION SHEET**

SCALE NONE DATE 3/2008 CONTRACT NO. XX3405185

DESIGNED BY ENB COUNTY WICOMICO
DRAWN BY ENB LOGMILE 22001205.88
CHECKED BY T.I.M.S. NO. J 036
F.A.P. NO. TOD NO.

DRAWING NO. TS-1320D-GI SG-2 OF 2 | SHEET NO. 2 OF 2

PLOTTED: WEDNESDAY, JUNE 11, 2008 AT 10:32 AM
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BY: BOSTIC