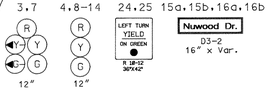
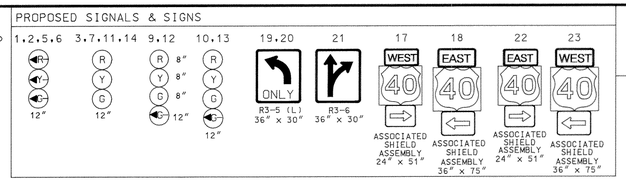
| F.H.W.A. REGION NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| 3 | MD | | 1 | 1 |

## EXISTING SIGNALS & SIGNS




## PROPOSED SIGNALS & SIGNS




A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION

| ITEM NO. | QUANTITY | DESCRIPTION |
|---|---|---|
| | 4 EACH | 12" ONE WAY, THREE SECTION (RA,YA,GA) POLYCARBONITE SIGNAL HEAD, SPAN MOUNTED HARDWARE |
| | 4 EACH | 12" ONE WAY, THREE SECTION (R,Y,G) POLYCARBONITE SIGNAL HEAD, SPAN MOUNTED HARDWARE |
| | 2 EACH | COMBINATION 8"/ 12" ONE WAY, FOUR SECTION (8" R,Y,G. 12" GA) POLYCARBONITE SIGNAL HEAD, SPAN MOUNTED HARDWARE |
| | 2 EACH | 12" ONE WAY, FOUR SECTION (R,Y,G,GA) POLYCARBONITE SIGNAL HEAD, SPAN MOUNTED HARDWARE |
| | 77 S.F. | 2 EACH R3-5 (L) SIGN, 30" x 36", SPAN MOUNTED HARDWARE |
| | | 1 EACH R3-6 (R) SIGN, 30" x 36", SPAN MOUNTED HARDWARE |
| | | 1 EACH ASSOCIATIED SHIELD ASSEMBLY SIGN, "WEST, US 40, (RIGHT ARROW)", 24" x 51", POLE MOUNTED HARDWARE |
| | | 1 EACH ASSOCIATIED SHIELD ASSEMBLY SIGN, "EAST, US 40, (LEFT ARROW)", 36" x 75", POLE MOUNTED HARDWARE |
| | | 1 EACH ASSOCIATIED SHIELD ASSEMBLY SIGN, "EAST, US 40, (RIGHT ARROW)", 24" x 51", POLE MOUNTED HARDWARE |
| | | 1 EACH ASSOCIATIED SHIELD ASSEMBLY SIGN, "WEST, US 40, (LEFT ARROW)", 36" x 75", POLE MOUNTED HARDWARE |
| | 6 EACH | MICROLOOP TRIPLE PROBE SET (1,000 FT.) |
| | 3 EACH | MICROLOOP TRIPLE PROBE SET (500 FT.) |

PROJECT DESCRIPTION

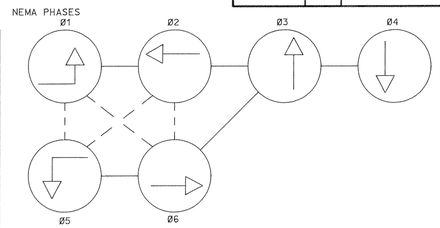
I. GENERAL
THIS PROJECT INVOLVES THE INSTALLATION OF AN EXCLUSIVE LEFT TURN PHASE FOR EASTBOUND, AND WESTBOUND US 40, AND INSTALLING A SPLIT PHASE FOR NORTHBOUND, AND SOUTHBOUND NUWOOD DRIVE.
US 40 RUNS IN A EAST- WEST DIRECTION.

II. INTERSECTION OPERATION
THIS INTERSECTION IS EQUIPPED WITH EIGHT PHASE CONTROLLER HOUSED IN A BASE MOUNTED CABINET. IT WILL USE SIX PHASES OUT OF EIGHT WITH AN EXCLUSIVE LEFT TURN PHASE FOR EASTBOUND, AND WESTBOUND US 40, AND A SPLIT PHASE FOR NORTHBOUND, AND SOUTHBOUND NUWOOD DRIVE.

PHASE CHART

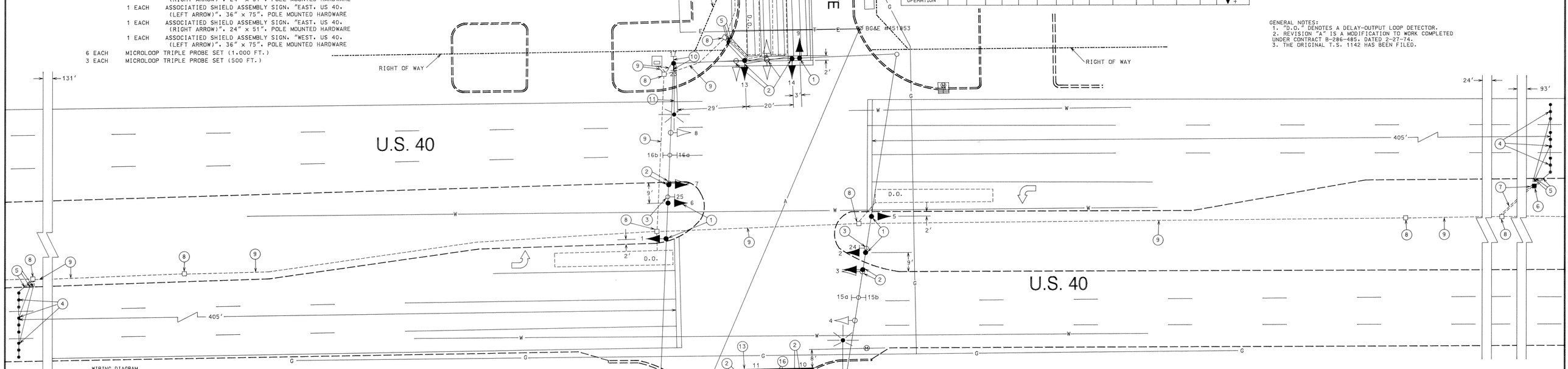
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PHASE 1 & 5 | ◄G- | ◄G- | R | R | ◄G- | ◄G- | R | R | R | R | R | R | R | R | |
| 1 & 5 CHANGE | THE CONTROLLER MAY SKIP TO PHASES 1 & 6, OR 2 & 5, OR 2 & 6 | | | | | | | | | | | | | | |
| PHASE 1 & 6 | ◄G- | ◄G- | G | G | ◄R- | ◄R- | R | R | R | R | R | R | R | R | |
| 1 CHANGE | ◄Y- | ◄Y- | G | G | ◄R- | ◄R- | R | R | R | R | R | R | R | R | |
| PHASE 2 & 5 | ◄R- | ◄R- | R | R | ◄G- | ◄G- | G | G | R | R | R | R | R | R | |
| 5 CHANGE | ◄R- | ◄R- | R | R | ◄Y- | ◄Y- | G | G | R | R | R | R | R | R | |
| PHASE 2 & 6 | ◄R- | ◄R- | G | G | ◄R- | ◄R- | G | G | R | R | R | R | R | R | |
| 2 & 6 CHANGE | ◄R- | ◄R- | Y | Y | ◄R- | ◄R- | Y | Y | R | R | R | R | R | R | |
| PHASE 3 | ◄R- | ◄R- | R | R | ◄R- | ◄R- | R | R | R | R | R | ◄G-G | ◄G-G | G | |
| 3 CHANGE | ◄R- | ◄R- | R | R | ◄R- | ◄R- | R | R | R | R | R | Y | Y | Y | |
| PHASE 4 | ◄R- | ◄R- | R | R | ◄R- | ◄R- | R | R | ◄G-G | ◄G-G | G | R | R | R | |
| 4 CHANGE | ◄R- | ◄R- | R | R | ◄R- | ◄R- | R | R | Y | Y | Y | R | R | R | |
| FLASHING OPERATION | FL/RA | FL/RA | FL/Y | FL/Y | FL/RA | FL/RA | FL/Y | FL/Y | FL/R | FL/R | FL/R | FL/R | FL/R | FL/R | |

NEMA PHASES



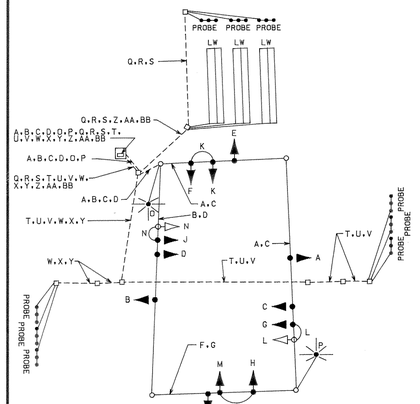

NEMA NOTES
1. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.

GENERAL NOTES:
1. "D.O." DENOTES A DELAY-OUTPUT LOOP DETECTOR.
2. REVISION "A" IS A MODIFICATION TO WORK COMPLETED UNDER CONTRACT B-286-485, DATED 2-27-74.
3. THE ORIGINAL T.S. 1142 HAS BEEN FILED.




WIRING DIAGRAM

A-D = 7 CONDUCTOR CABLE (NO. 14 AWG)
E-J = USE EXISTING 7 CONDUCTOR CABLE (NO. 14 AWG)
K-N = USE EXISTING 5 CONDUCTOR CABLE (NO. 14 AWG)
O-P = 2 CONDUCTOR CABLE (NO. 12 AWG) - T/C
Q-S = MICROLOOP TRIPLE PROBE SET (500 FT.)
T-Y = MICROLOOP TRIPLE PROBE SET (1,000 FT.)
Z-BB = 2 CONDUCTOR (ALUMINUM SHIELDED) CABLE
PROBE = MICROLOOP TRIPLE PROBE SET
LW = LOOP WIRE




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

| ITEM NO. | QUANTITY | DESCRIPTION |
|---|---|---|
| 1001 | 1 EACH | MAINTENANCE OF TRAFFIC |
| 2001 | 1 C.Y. | TEST PIT EXCAVATION |
| 5001 | 270 L.F. | F & I 6" YELLOW PERMANENT PREFORMED PAVEMENT MARKING TAPE |
| 5005 | 40 L.F. | F & I 24" WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE |
| 8011 | 12 EACH | INSTALL SIGNAL HEAD |
| 8015 | 9 EACH | INSTALL MICROLOOP TRIPLE PROBE SET |
| 8022 | 415 L.F. | F & I SAW CUT FOR SIGNAL (LOOP DETECTOR) |
| 8024 | 130 L.F. | F & I 1" LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE |
| 8025 | 120 L.F. | F & I 2" SCHEDULE 40 RIGID PVC CONDUIT - TRENCHED |
| 8035 | 1 EACH | F & I HANDHOLE |
| 8043 | 1,440 L.F. | F & I LOOP WIRE ENCASED IN FLEXIBLE TUBING |
| 8044 | 190 L.F. | F & I ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED) |
| 8048 | 810 L.F. | F & I ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG) |
| 8049 | 350 L.F. | F & I ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) |
| 8056 | 54.5 S.F. | INSTALL GROUND MOUNTED SIGN |
| 8057 | 22.5 S.F. | INSTALL OVERHEAD SIGN |
| 8059 | 2 EACH | F & I 250 WATT HPS LUMINAIRE WITH PHOTOCELL |
| 8060 | 2 EACH | F & I 20' LIGHTING BRACKET ARM FOR TRAFFIC SIGNAL STRUCTURE |

UTILITY LEGEND

| | |
|---|---|
| —G—G— | GAS MAIN |
| —W—W— | WATER MAIN |
| —S—S— | SEWER MAIN |
| —E—E— | ELECTRIC CABLES |
| —A—A— | AERIAL CABLES |
| —T—T— | TELEPHONE CABLES |

CONSTRUCTION DETAILS
1. INSTALL PROPOSED SIGNAL HEAD ON EXISTING SPAN WIRE.
2. REMOVE EXISTING SIGNAL HEAD. INSTALL PROPOSED SIGNAL HEAD ON EXISTING SPAN WIRE. USE EXISTING ELECTRICAL CABLE.
3. REMOVE EXISTING SIGN.
4. INSTALL MICROLOOP TRIPLE PROBE SET (1,000 FT.).
5. INSTALL 1" LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE.
6. INSTALL HANDHOLE.
7. INSTALL 2" SCHEDULE 40 RIGID PVC CONDUIT - TRENCHED.
8. USE EXISTING HANDHOLE.
9. USE EXISTING CONDUIT.
10. INSTALL PROPOSED SIGNS ON EXISTING POLE.
11. INSTALL LUMINAIRE WITH 20' BRACKET ARM ON EXISTING POLE.
12. INSTALL 6" YELLOW PAVEMENT MARKING.
13. INSTALL 24" STOPLINE.
14. INSTALL 6' x 30' LOOP DETECTOR (3-6-3 TURNS). DISCONNECT EXISTING DETECTOR.
15. DISCONNECT EXISTING LOOP DETECTOR.
16. INSTALL PROPOSED SIGN ON EXISTING SPAN WIRE
17. PAVEMENT MARKINGS TO BE INSTALLED BY BALTIMORE COUNTY FORCES.
18. INSTALL MICROLOOP TRIPLE PROBE SET (500 FT.).

| REVISIONS | APPROVALS |
|---|---|
| (A) .09/96 - AS BUILT: CHANGED E/B & W/B US 40 TO EXCLUS. L.T. & SPLIT NUWOOD DR./1 | ASST. DIVISION CHIEF, TEOD |
| | ASST. DISTRICT ENGINEER, TRAFFIC |
| | CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION |
| | DIRECTOR, OFFICE OF TRAFFIC & SAFETY |

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

U.S. 40 (BALTO. NAT. PIKE) AND NUWOOD DRIVE

SIGNAL # 0300400 1.01 — DATE 2/27/74

| | | | | | |
|---|---|---|---|---|---|
| DRAWN BY: STEVE RENZI | F.A.P. NO. T-8007 (20) | PLAN SHEET NO.: TS-1142 A | SHEET NO. 1 OF 1 |
| DES. BY: STEVE RENZI | S.H.A. NO. B-286-485 | | |
| CHECK BY: | COUNTY BALTIMORE | | |
| SCALE: 1" = 20' | | | |