F.H.W.A. REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	MD.	SEE TITLE SHEET		

PROJECT DESCRIPTION

(A) THIS PROJECT INVOLVES THE INSTALLATION OF AN EXCLUSIVE / PERMISSIVE U-TURN SIGNAL AND LOOP DETECTOR FOR NORTHBOUND MD 650 AT THE INTERSECTION OF MD 650 (NEW HAMSHIRE AVE.) AND MD 198 IN MONTGOMERY COUNTY

(A)

EQUIPMENT LIST 'A'

A. EQUIPMENT TO BE SUPPLIED BY SHA

ITEM NO.	QUANTITY	DESCRIPTION
9050	1 EA	12" 1-WAY, 5 SECTION SIGNAL HEAD ALUM. (R,Y,G,YA,GA) SPAN WIRE
9053	1 EA	8" & 12" COMBO SIGNAL ALUM. (8" R,Y,G, / 12" YA,GA) SPAN WIRE
9089	10.5 SF	36" X 42" R10-12 MOD. (U-TURN ON GREEN BALL SIGN) SPAN WIRE MOUNT

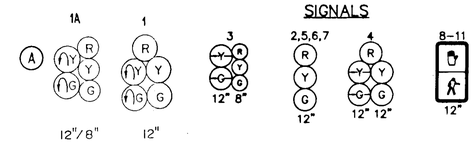
EQUIPMENT LIST 'B'

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

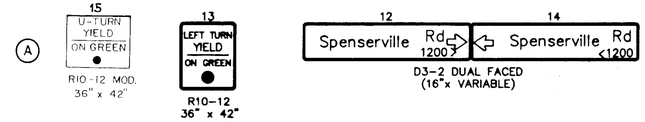
(A)

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EACH	MAINTENANCE OF TRAFFIC PER ASSIGNMENT
5004	15 LF	24 INCH WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE
8011	2 EACH	INSTALL SIGNAL HEAD (ANY TYPE)
8021	102 LF	F & I SAWCUT FOR SIGNAL (LOOP DETECTOR)
8022	20 LF	F & I 1 INCH ELECTRICAL CONDUIT - GALVANIZED SLEEVE
8029	100 LF	F & I 3 INCH SCHEDULE 80 RIGID PVC CONDUIT -PUSHED
8033	1 EA	F & I ELECTRICAL HANDHOLE
8040	425 LF	F & I LOOPWIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
8041	350 LF	F & I ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
8045	325 LF	F & I ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8054	10.5 SF	INSTALL OVERHEAD SIGN
8061	1 EA	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT PER ASSIGNMENT

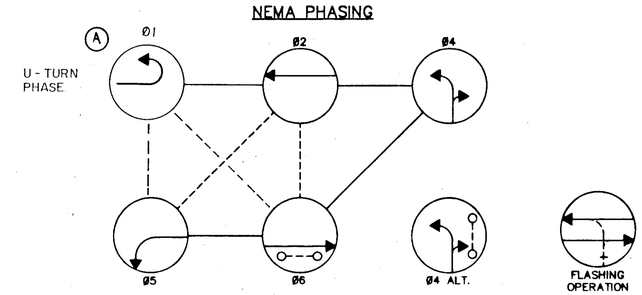
SIGNALS



SIGNS

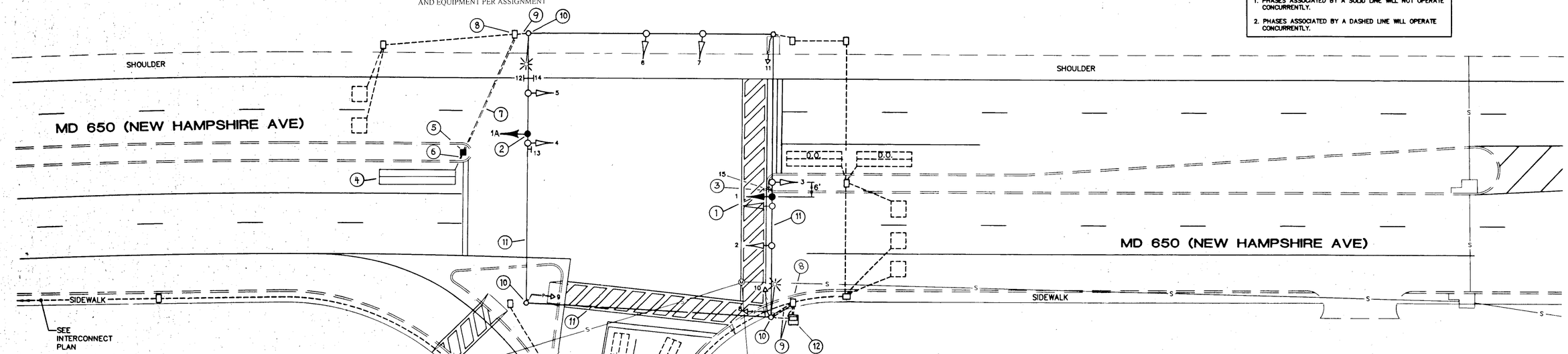


NEMA PHASING



PHASING NOTES:

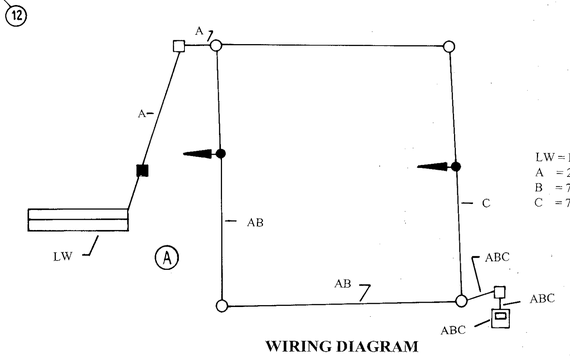
1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.



CONSTRUCTION DETAILS

(A)

1. REMOVE EXISTING SIGNAL HEAD NO.1, (3-SECTION) AND REPLACE WITH NEW SIGNAL HEAD NO.1 (5 SECTION, 12" HEADS) FOR U-TURN.
2. INSTALL NEW NEARSIDE SIGNAL NO.1A,(5 SECTION 12"/8").
3. INSTALL NEW SIGN FOR U-TURN (R10-12 MOD.) NO.15
4. INSTALL NEW 6' X 30' LOOP FOR U-TURN SIGNAL.
5. INSTALL NEW HANDHOLE IN MEDIAN FOR LOOP.
6. INSTALL 1" GALVANIZED CONDUIT SLEEVE FOR DETECTOR WIRE
7. INSTALL 3" SCHEDULE 80 RIGID POLYVINYL CHLORIDE ELECTRICAL CONDUIT (PUSHED)
8. USE EXISTING HANDHOLE
9. USE EXISTING CONDUIT
10. USE EXISTING STRAINPOLE
11. USE EXISTING SPANWIRE
12. MODIFY EXISTING CONTROLLER FOR NEW EXCLUSIVE / PERMISSIVE U-TURN



WIRING DIAGRAM

WIRING DIAGRAM LEGEND

LW = LOOP WIRE
A = 2 CONDUCTOR ALUMINUM SHIELDED ELECTRICAL CABLE
B = 7 CONDUCTOR (NO. 14 AWG) ELECTRICAL CABLE
C = 7 CONDUCTOR (NO. 14 AWG) ELECTRICAL CABLE

SIGNAL PLAN NO. 16

FINAL PLAN

UNDERGROUND UTILITIES

ELECTRIC	E
TELEPHONE	T
GAS	G
SEWER	S
WATER	W
CABLE TV	TV

A/E GROUP, INC.
CONSULTING ENGINEERS PLANNERS
11409 CRONHILL DRIVE
OWINGS MILLS, MD. 21117
(410)-363-1908

REVISIONS	APPROVALS
(A) E/P U-TURN PHASE 11/9/98	CHIEF, SIGNAL DESIGN SECTION
	ASST. DISTRICT ENGINEER, TRAFFIC
	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR, OFFICE OF TRAFFIC & SAFETY

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

LOG MILE: 15065008.80

DRAWN BY: S. SMITH (CADD)
DES. BY:
CHK. BY: E. GUY STANTON

TRAFFIC SIGNAL PLAN
MD 650 AND MD 198

COUNTY: MONTGOMERY

DATE: 4/18/94
SCALE: 1"=20'
F.A.P. NO. AC-STPG-OOOS(588)E
S.H.A. NO. AW2775185
TS/FILE NO. 3401
SHEET NO. 1 OF 1