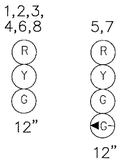
FHWA REGION NO	STATE	FED. AID PROJ. NO	SHEET NO.	TOTAL SHEETS
3	MD.	STPG-218-1(7)E	3	66

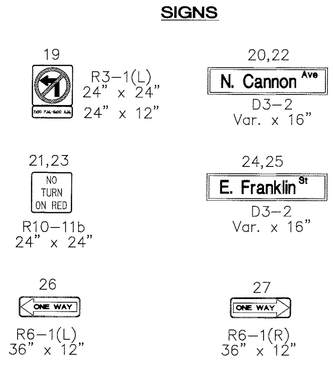
.S. 40 WEST (DUAL HIGHWAY) IS ASSUMED
O RUN IN AN EAST-WEST DIRECTION.

SIGNALS

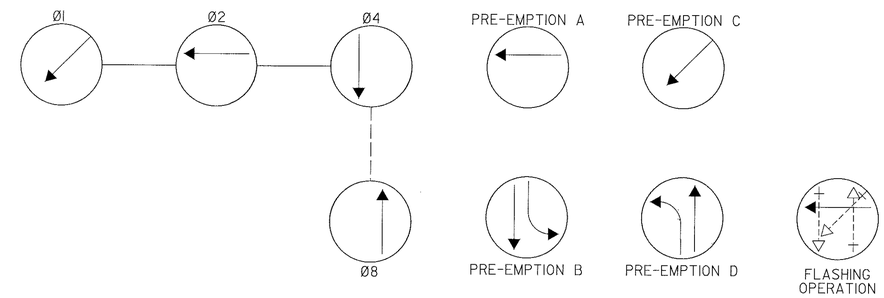


→ – OPTICAL PRE-EMPTION DETECTOR EYE

SIGNS

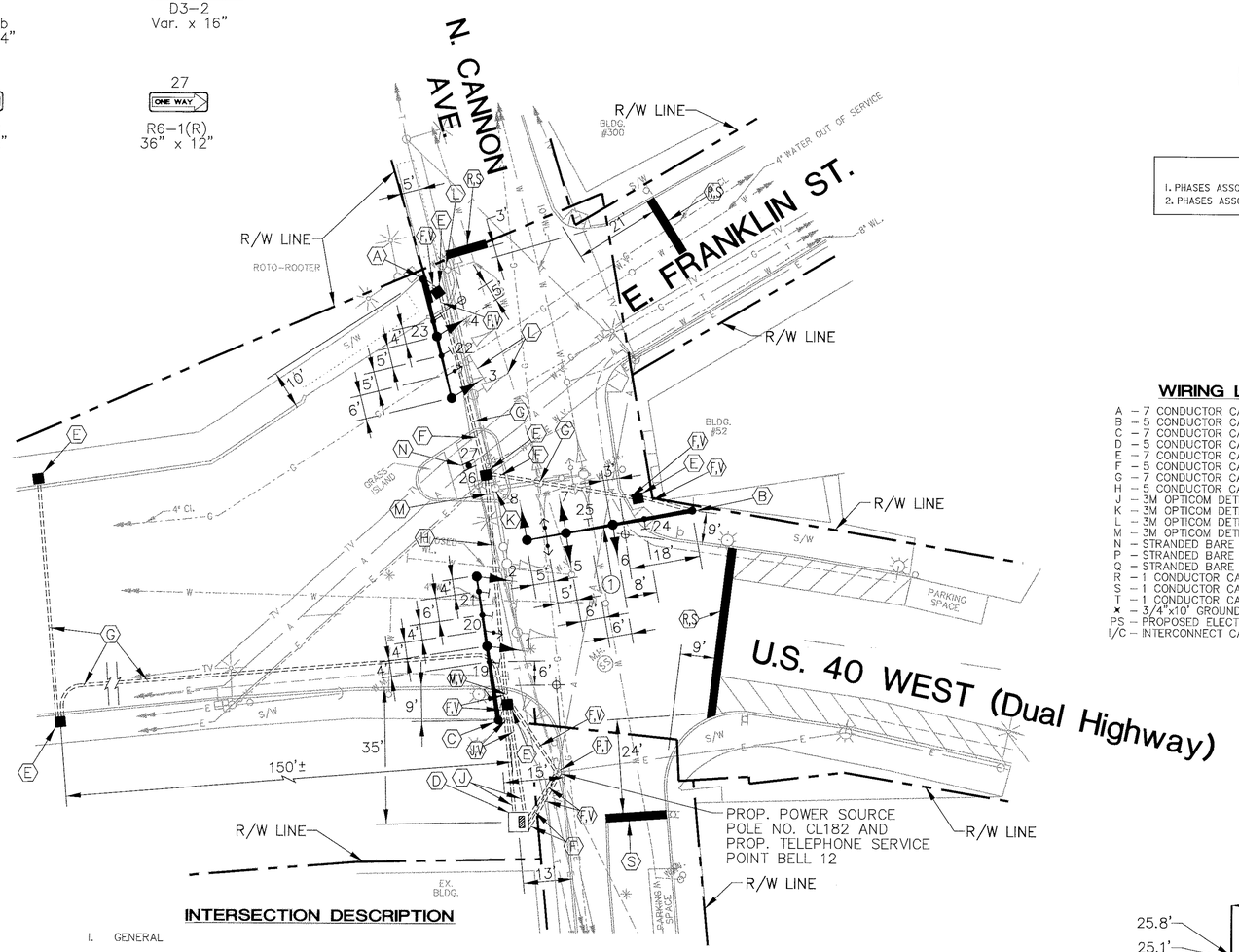


NEMA PHASING

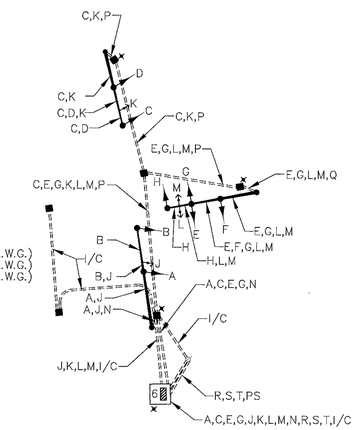


PHASING NOTES:

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



WIRING DIAGRAM



WIRING LEGEND

A – 7 CONDUCTOR CABLE (NO. 14 A.W.G.)
B – 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
C – 7 CONDUCTOR CABLE (NO. 14 A.W.G.)
D – 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
E – 7 CONDUCTOR CABLE (NO. 14 A.W.G.)
F – 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
G – 7 CONDUCTOR CABLE (NO. 14 A.W.G.)
H – 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
J – 3M OPTICOM DETECTOR CABLE, MODEL 138
K – 3M OPTICOM DETECTOR CABLE, MODEL 138
L – 3M OPTICOM DETECTOR CABLE, MODEL 138
M – 3M OPTICOM DETECTOR CABLE, MODEL 138
N – STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
P – STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
Q – STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
R – 1 CONDUCTOR CABLE (NO. 4 A.W.G.)
S – 1 CONDUCTOR CABLE (NO. 4 A.W.G.)
T – 1 CONDUCTOR CABLE (NO. 4 A.W.G.)
x – 3/4"x10' GROUND ROD
PS – PROPOSED ELECTRICAL SERVICE
I/C – INTERCONNECT CABLE

CONSTRUCTION DETAILS

STALL 21' STEEL POLE, 32' MAST ARM, SIGNAL HEADS, SIGNS, AND OPTICOM TECTOR. (NOTE: 1–2", 90–DEGREE P.V.C. BEND).

STALL 21' STEEL POLE, 44' MAST ARM, SIGNAL HEADS, SIGNS, OPTICOM TECTORS (NOTE: 1–2", 90–DEGREE P.V.C. BEND).

STALL 21' STEEL POLE, 38' MAST ARM, SIGNAL HEADS, SIGNS, AND OPTICOM TECTOR. (NOTE: 1–2", 90–DEGREE P.V.C. BEND).

STALL BASE–MOUNTED CABINET, SIZE #6, AND MASTER–LOCAL CONTROLLER TH ALL NECESSARY EQUIPMENT AS SHOWN (NOTE: 2–4", 90–DEGREE .V.C. BENDS; AND, 2–2", 90–DEGREE P.V.C. BENDS.).

STALL HANDHOLE.

STALL 2" P.V.C. (SCHEDULE 40) ELECTRICAL CONDUIT (TRENCHED).

STALL 2" P.V.C. (SCHEDULE 80) ELECTRICAL CONDUIT (SLOTTED).

STALL 3" P.V.C. (SCHEDULE 80) ELECTRICAL CONDUIT (SLOTTED).

STALL 4" P.V.C. (SCHEDULE 40) ELECTRICAL CONDUIT (TRENCHED).

MOVE EXISTING STEEL POLE, MAST ARMS, SIGNALS, SIGNS, OPTICOM DETECTORS, BINET, CONTROLLER, AND FOUNDATION.

MOVE EXISTING STRAIN POLE, SPAN WIRE, SIGNALS, SIGNS, OPTICOM DETECTOR D FOUNDATION.

STALL 3" P.V.C. (SCHEDULE 40) ELECTRICAL CONDUIT (TRENCHED).

STALL GROUND MOUNTED SIGNS.

STALL 2" P.V.C. (SCHEDULE 80) ELECTRICAL CONDUIT – RISER AND 2" WEATHERHEAD.

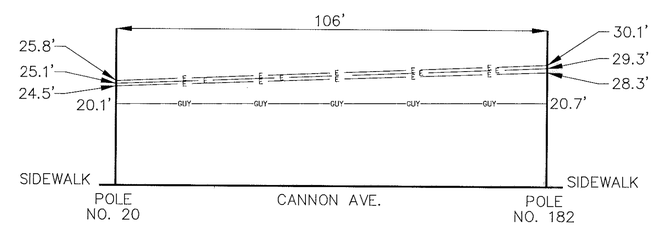
MOVE EXISTING STOP BAR.

STALL 24" SOLID WHITE LINE.

STALL 2–10' SECTIONS OF 2" P.V.C. (SCHEDULE 80) ELECTRICAL CONDUIT – RISER AND IL 25' OF ADDITIONAL CABLE.

MOVE AND REPLACE EXISTING SIDEWALK.

① VERTICAL CLEARANCE SKETCH



INTERSECTION DESCRIPTION

I. GENERAL

THIS INTERSECTION IS U.S. 40 WEST (DUAL HIGHWAY) AT NORTH CANNON AVENUE AND EAST FRANKLIN STREET. CONSTRUCTION AT THIS INTERSECTION INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL AND INTERCONNECTION WITH THE OTHER SIGNALIZED INTERSECTIONS IN THE NEW CITY–WIDE SYSTEM. IT IS ASSUMED THAT U.S. 40 WEST AND EAST FRANKLIN STREET RUN IN AN EAST–WEST DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FOUR (4) PHASE PRE–TIMED MODE. WESTBOUND U.S. 40 WEST (DUAL HIGHWAY) AND WESTBOUND EAST FRANKLIN STREET WILL OPERATE IN SEPARATE PHASES. NORTHBOUND AND SOUTHBOUND NORTH CANNON AVENUE WILL OPERATE CONCURRENTLY.

PRE–EMPTION ON WESTBOUND U.S. 40 WEST (DUAL HIGHWAY) WILL CALL PRE–EMPTION A.
PRE–EMPTION ON SOUTHBOUND NORTH CANNON AVENUE WILL CALL PRE–EMPTION B.
PRE–EMPTION ON WESTBOUND EAST FRANKLIN STREET WILL CALL PRE–EMPTION C.
PRE–EMPTION ON NORTHBOUND NORTH CANNON STREET WILL CALL PRE–EMPTION D.

A NEW EIGHT PHASE FULLY ACTUATED CONTROLLER WITH TELEMETRY MODULE, AND PRE–EMPTION ISOLATION RELAY PACKAGE HOUSED IN A GROUND MOUNTED CABINET WILL BE INSTALLED. A NEW MASTER CONTROLLER WILL ALSO BE INSTALLED IN THE GROUND MOUNTED CABINET.

III. SPECIAL NOTE

MDSHA WILL PROVIDE BELL ATLANTIC WITH THE FOLLOWING INFORMATION FOR TELEPHONE SERVICE: POLE 12 IN FRONT OF 46 CANNON AVENUE

NOTE: EXISTING RIGHT–OF–WAY BASED ON MDSHA PLAT NOS. 4394, 4841, 5023, AND 45723 AND INFORMATION PROVIDED BY THE CITY OF HAGERSTOWN.

UTILITY LEGEND

G —— G ——	GAS MAIN
W —— W ——	WATER MAIN
S —— S ——	SEWER MAIN
========:	STORM DRAIN
TV —— TV ——	CABLE TELEVISION
E —— E ——	ELECTRIC CABLES
T —— T ——	TELEPHONE CABLES
A —— A ——	AERIAL CABLES

A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 95–289

REVISIONS	APPROVALS
	CHIEF, SIGNAL DESIGN SECTION
	ASST. DISTRICT ENGINEER, TRAFFIC
	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR, OFFICE OF TRAFFIC & SAFETY

MDOT – STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION

LOG MI. 21W04036.43

DRAWN BY: M. GESELL
DES. BY: J. LAWRENCE
CHK. BY:

US 40 West (Dual Highway) at North Cannon Ave./East Franklin St.

COUNTY: WASHINGTON

DATE: 05/30/97
SCALE: 1" = 20'
F.A.P. NO. STPG–218–1(7)E
S.H.A. NO. WA9535185
TS . NO. 3682
SHEET NO. 3 OF 66