FHWA REGION NO	STATE	FED. AID PROJ. NO	SHEET NO.	TOTAL SHEETS
3	MD.		1	2

SIGNALS

1,2,4,5 — R, Y, G — 12"

3,6 — R, Y, G — 8"

7,8,9,10, 11,12,13,14 — 12"

→ – OPTICAL PRE-EMPTION DETECTOR EYE

SIGNS

15,23 — ONE WAY — R6-1(R) 36" x 12"

16 — ← E. Washington St / W. Washington St →

17,18 — NO TURN ON RED — R10-11b 24" x 24"

D3-2 Var. x 32"

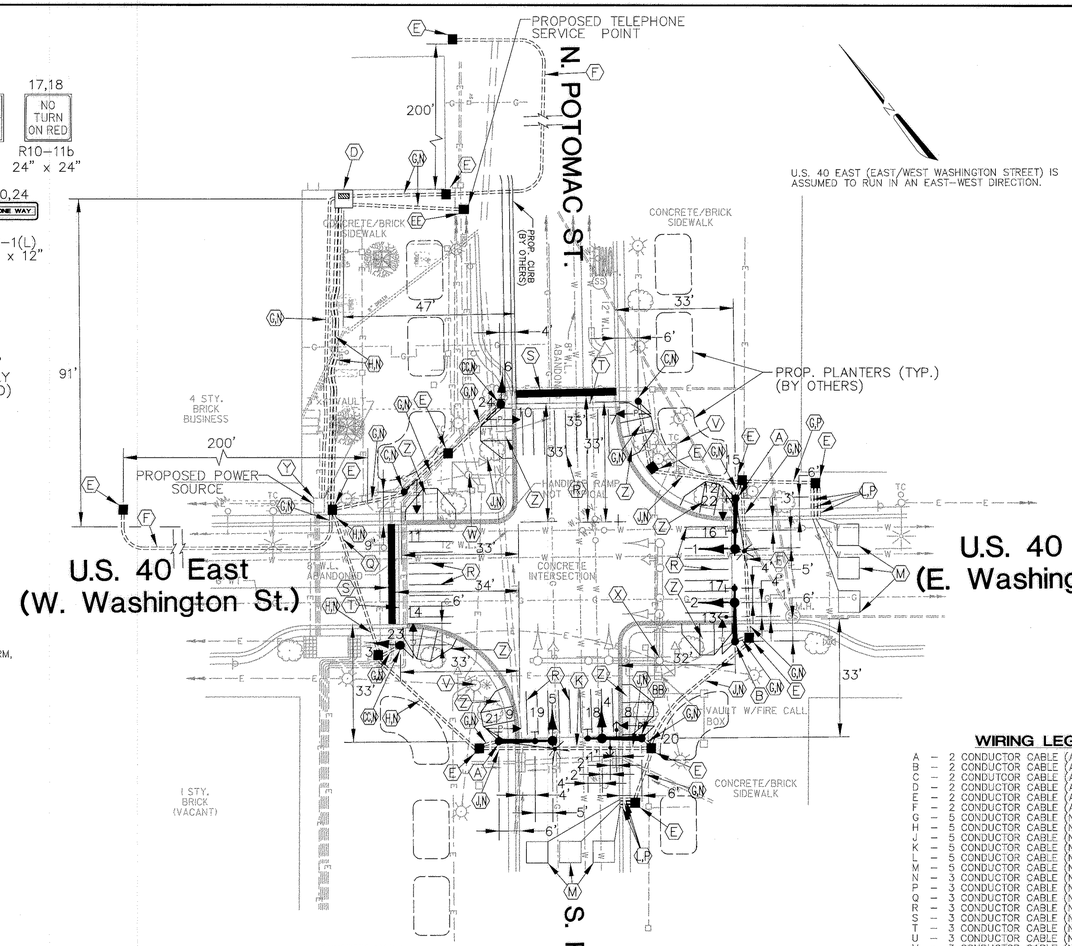
19 — ← N. Potomac St / S. Potomac St →

20,24 — ONE WAY — R6-1(L) 36" x 12"

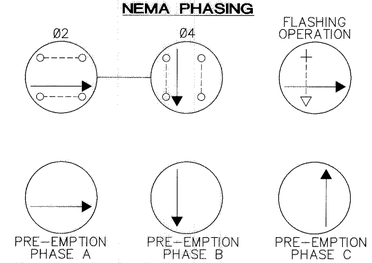
D3-2 Var. x 32"

21 — R3-1 24" x 24" (INTERNALLY ILLUMINATED)

22 — R3-1 24" x 24" (INTERNALLY ILLUMINATED)



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) INSTALL 27' STEEL POLE, 16' MAST ARM, SIGNAL HEAD, SIGNS, 15' STREET LIGHTING ARM, AND 250 WATT H.P.S. (CUTOFF) LUMINAIRE WITH PHOTOELECTRIC CELL, PEDESTRIAN SIGNALS (NOTE: 1-2", 90-DEGREE P.V.C. ELBOW).

(B) INSTALL 21' STEEL POLE, 16' MAST ARM, SIGNAL HEAD, SIGNS, OPTICOM DETECTOR, PEDESTRIAN SIGNAL (NOTE: 1-2", 90-DEGREE P.V.C. ELBOW).

(BB) INSTALL 21' STEEL POLE, 16' MAST ARM, SIGNAL HEAD, SIGNS, OPTICOM DETECTORS, PEDESTRIAN SIGNAL (NOTE: 2-2", 90-DEGREE P.V.C. ELBOWS).

(C) INSTALL 10' STEEL PEDESTAL POLE, PEDESTRIAN SIGNALS (NOTE: 1-2", 90-DEGREE P.V.C. ELBOW).

(CC) INSTALL 14' STEEL PEDESTAL POLE, SIGNAL HEAD, PEDESTRIAN SIGNAL (NOTE: 1-2", 90-DEGREE P.V.C. ELBOW).

(D) INSTALL BASE-MOUNTED CABINET, SIZE #6, MASTER/LOCAL CONTROLLER WITH ALL NECESSARY EQUIPMENT AS SHOWN (NOTE: 2-4", 90-DEGREE P.V.C. ELBOWS; AND, 2-2", 90-DEGREE P.V.C. ELBOWS).

(E) INSTALL HANDHOLE.

(EE) INSTALL HANDHOLE ON EXISTING CONDUIT.

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

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

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

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

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

(L) INSTALL 1" LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT SLEEVE FOR DETECTOR WIRING.

(M) INSTALL 6' X 6' SAMPLING LOOP DETECTOR ENCASED IN 1/4" FLEXIBLE TUBING (4 TURNS).

(N) REMOVE EXISTING BRICK SIDEWALK AND INSTALL TEMPORARY BITUMINOUS PATCH.

(P) REMOVE AND REPLACE EXISTING SIDEWALK.

(Q) INSTALL 4" P.V.C. (SCHEDULE 80) ELECTRICAL CONDUIT (SLOTTED).

(R) INSTALL 24" SOLID WHITE LINE FOR CROSSWALKS.

(S) INSTALL 24" SOLID WHITE LINE FOR STOP BAR.

(T) REMOVE EXISTING STOP BAR.

(V) REMOVE EXISTING PEDESTAL POLE, SIGNALS, SIGN AND FOUNDATION.

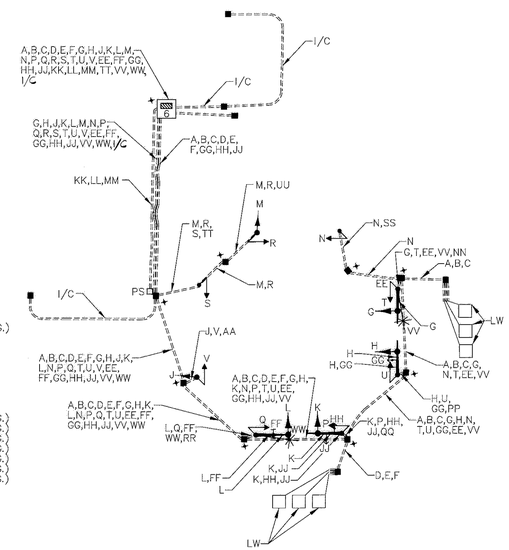
(W) REMOVE EXISTING STEEL POLE, PEDESTRIAN SIGNALS, LIGHTING ARM, LUMINAIRE AND FOUNDATION.

(X) REMOVE EXISTING STEEL POLE, MAST ARMS, SIGNALS, SIGNS, LIGHTING ARMS, LUMINAIRE AND FOUNDATION.

(Y) COIL 15' OF CABLE AT EXISTING ELECTRICAL VAULT.

(Z) SIDEWALK RAMP (BY OTHERS).

WIRING DIAGRAM



WIRING LEGEND

A – 2 CONDUCTOR CABLE (ALUMINUM SHIELDED)
B – 2 CONDUCTOR CABLE (ALUMINUM SHIELDED)
C – 2 CONDUTCOR CABLE (ALUMINUM SHIELDED)
D – 2 CONDUCTOR CABLE (ALUMINUM SHIELDED)
E – 2 CONDUCTOR CABLE (ALUMINUM SHIELDED)
F – 2 CONDUCTOR CABLE (ALUMINUM SHIELDED)
G – 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
H – 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
J – 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
K – 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
L – 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
M – 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
N – 3 CONDUCTOR CABLE (NO. 14 A.W.G.)
P – 3 CONDUCTOR CABLE (NO. 14 A.W.G.)
Q – 3 CONDUCTOR CABLE (NO. 14 A.W.G.)
R – 3 CONDUCTOR CABLE (NO. 14 A.W.G.)
S – 3 CONDUCTOR CABLE (NO. 14 A.W.G.)
T – 3 CONDUCTOR CABLE (NO. 14 A.W.G.)
U – 3 CONDUCTOR CABLE (NO. 14 A.W.G.)
V – 3 CONDUCTOR CABLE (NO. 14 A.W.G.)
AA – STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
EE – 3 CONDUCTOR CABLE (NO. 14 A.W.G.)
FF – 3 CONDUCTOR CABLE (NO. 14 A.W.G.)
GG – 3M OPTICOM DETECTOR CABLE, MODEL 138
HH – 3M OPTICOM DETECTOR CABLE, MODEL 138
JJ – 3M OPTICOM DETECTOR CABLE, MODEL 138
KK – 1 CONDUCTOR CABLE (NO. 4 A.W.G.)
LL – 1 CONDUCTOR CABLE (NO. 4 A.W.G.)
MM – 1 CONDUCTOR CABLE (NO. 4 A.W.G.)
NN – STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
PP – STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
QQ – STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
RR – STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
SS – STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
TT – STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
UU – STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
VV – 2 CONDUCTOR TRAY CABLE (NO. 12 A.W.G.)
WW – 2 CONDUCTOR TRAY CABLE (NO. 12 A.W.G.)
✦ – 3/4" X 10' GROUND ROD
LW – LOOP WIRE
PS – PROPOSED ELECTRICAL SERVICE
I/C – INTERCONNECT CABLE

INTERSECTION DESCRIPTION

I. GENERAL

THIS INTERSECTION IS U.S. 40 EAST (EAST/WEST WASHINGTON STREET) AND NORTH/SOUTH POTOMAC STREET. CONSTRUCTION AT THIS INTERSECTION INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL AND PREPARATION FOR INTERCONNECTION WITH THE OTHER SIGNALIZED INTERSECTIONS IN THE NEW CITY-WIDE SYSTEM. IT IS ASSUMED THAT U.S. 40 EAST (EAST/WEST WASHINGTON STREET) RUNS IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA TWO (2) PHASE PRE-TIMED MODE. EASTBOUND U.S. 40 EAST (EAST/WEST WASHINGTON STREET) AND SOUTHBOUND NORTH/SOUTH POTOMAC STREET WILL OPERATE IN SEPARATE PHASES. PEDESTRIAN SIGNALS WILL OPERATE CONCURRENTLY WITH THE EASTBOUND U.S. 40 EAST (EAST/WEST WASHINGTON STREET) PHASE. PEDESTRIAN SIGNALS WILL OPERATE CONCURRENTLY WITH THE SOUTHBOUND NORTH/SOUTH POTOMAC STREET PHASE.

PRE-EMPTION ON EASTBOUND U.S. 40 EAST (EAST/WEST WASHINGTON STREET) WILL CALL PRE-EMPTION PHASE A. PRE-EMPTION ON SOUTHBOUND NORTH POTOMAC STREET WILL CALL PRE-EMPTION PHASE B. PRE-EMPTION ON NORTHBOUND SOUTH POTOMAC STREET WILL CALL PRE-EMPTION PHASE C.

A NEW EIGHT PHASE FULLY ACTUATED MASTER/LOCAL CONTROLLER WITH TWO (2) FOUR- CHANNEL TIME DELAY OUTPUT LOOP DETECTOR AMPLIFIERS, TELEMETRY MODULE, AND PRE-EMPTION HOUSED IN A GROUND MOUNTED CABINET WILL BE INSTALLED.

III. SPECIAL NOTE

BEFORE BEGINNING WORK, THE CONTRACTOR SHALL REQUEST THE CITY ENGINEERING DEPARTMENT TO LAYOUT PLANTERS. NO NEW WORK IS TO BE INSTALLED CLOSER THAN 3 FEET TO THE PLANTERS.

NOTE: EXISTING RIGHT-OF-WAY BASED ON 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

6/2/97 — CHIEF, SIGNAL DESIGN SECTION

ASST. DISTRICT ENGINEER, TRAFFIC

6/2/97 — CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION

6/2/97 — DIRECTOR, OFFICE OF TRAFFIC & SAFETY

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

LOG MILE NO. 21040036.08

DRAWN BY: R. ISAACS
DES. BY: J. LAWRENCE
CHK. BY: 5-29-97

US 40 East (East/West Washington St.) at North/South Potomac St.

COUNTY: WASHINGTON

DATE: 5/97
SCALE: 1" = 20'
F.A.P. NO.
S.H.A. NOS: AW10545D, AW10565D

TS/STD. NO. 3667

SHEET NO. 1 OF 2