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

INTERSECTION OPERATION

The intersection of US 29 at Westbound MD 193 will operate in a NEMA four-phase semi-traffic-actuated mode with northbound and southbound US 29 operating concurrently, with dummy phase for inside clearence on US 29 and pedestrian phase. Westbound MD 193 will operate alone with an alternate pedestrian phase.

Traffic signals and interconnect shall be maintained during construction of the proposed signal equipment.

CONSTRUCTION DETAILS

A. Install 27' steel pole with twin 36' and 60' mast arms, 20' lighting arm and luminaire, traffic signal heads, pedestrian signal heads, push button and signs as shown (NOTE: 2-3" PVC 90 degree angle conduit bends).

B. Install 8' breakaway pedestal pole with pedestrian signal heads, push button, and signs as shown (NOTE: 1-2" PVC 90 degree angle conduit bend).

C. Install 27' steel pole with twin 42' and 58' mast arms, 20' lighting arm and luminaire, traffic signal heads, pedestrian signal heads, push button, and signs as shown (NOTE: 2-3" PVC 90 degree angle conduit bends).

D. Install traffic signal controller with control and distribution equipment (see drawing B-16) in base-mounted, system-ready cabinet. (NOTE: 1-2" PVC 90 degree angle (schedule 80) conduit bend and 2-4" PVC 90 degree angle conduit bends).

E. Install handhole.

F. Install 1" electrical conduit detector wire sleeve.

G. Install 2" schedule 40 electrical conduit-trenched/buried.

H. Install 3" schedule 40 electrical conduit-trenched/buried.

I. Install 4" schedule 40 electrical conduit-trenched/buried.

J. Install 4" schedule 80 electrical conduit-slotted with 1" flexible PVC corrugated inner conduit (color-orange) with an inner pull string.

K. Install 6'x 30' loop detector, quadrupole type (2-4-2 turns).

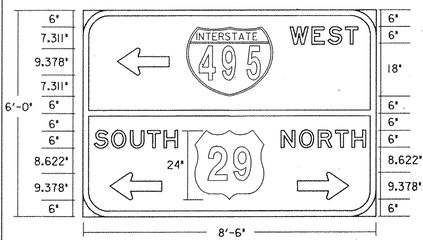
L. Install 6'x 6' loop detector (3 turns) (sampling station).

M. Install 4" schedula 40 electrical conduit-trenched/buried with 1" flexible PVC corrugated inner conduit (color-orange) with an inner pull string.

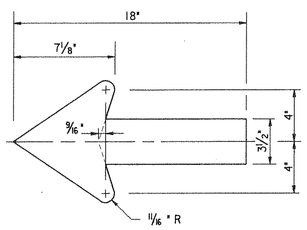
N. Remove and salvage existing traffic signal equipment.

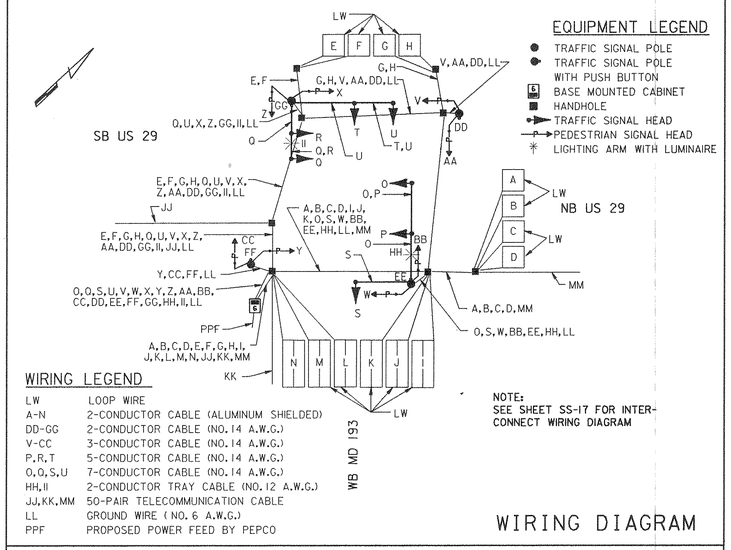
GENERAL NOTES

1. Geometrics shall be confirmed prior to the installation of signal equipment.
2. Loop detectors and conduits shall be installed prior to the installation of pavement markings.
3. All utilities are shown in their approximate locations and are not to be considered as complete. The Contractor shall be responsible for contacting Miss Utility to verify the location of all utilities. The Contractor shall contact The Project Engineer prior to construction if there may be potential conflicts.
4. Pavement markings detailed are proposed and are to be installed by the Contractor in accordance with S.H.A. standards. All other pavement markings will be installed as part of the highway contract.
5. All luminaires must be full cut off.
6. "D.O." indicates delay output loop detector.
7. See Utility Plans for utility location.
8. When installing the signal heads, the contractor must leave enough cable to relocate them for maintenance of traffic placement.
9. All loops must be installed in the base course paving after the milling is completed.
10. All patching shall be done with type "B" pavement, as per roadway details.

PANEL DESIGNATION	SHEET NO.	QUANTITY	LEGEND	COLOR LEGEND	COLOR BCKGRND	BORDER WIDTH	BORDER RADIUS	ARROW	SHIELD	LUMINAIRES
PM-2	SS-04	1		W	G	2"	9"	NOTE #1	MI-1 30"x24" MI-4 24"x24"	-

NOTES: 1. COLORS: B=BLACK, BL=BLUE, BR=BROWN, G=GREEN, W=WHITE/SILVER, Y=YELLOW.
2. SIGN SHALL BE MADE FROM SHEET ALUMINUM





WIRING LEGEND

LW	LOOP WIRE
A-N	2-CONDUCTOR CABLE (ALUMINUM SHIELDED)
DD-GG	2-CONDUCTOR CABLE (NO.14 A.W.G.)
V-CC	3-CONDUCTOR CABLE (NO.14 A.W.G.)
P,R,T	5-CONDUCTOR CABLE (NO.14 A.W.G.)
O,O,S,U	7-CONDUCTOR CABLE (NO.14 A.W.G.)
HH,II	2-CONDUCTOR TRAY CABLE (NO.12 A.W.G.)
JJ,KK,MM	50-PAIR TELECOMMUNICATION CABLE
LL	GROUND WIRE (NO. 6 A.W.G.)
PPF	PROPOSED POWER FEED BY PEPCO

NOTE: SEE SHEET SS-17 FOR INTER-CONNECT WIRING DIAGRAM

WIRING DIAGRAM

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	DW WK	DW WK	DW WK	DW WK	DW WK	DW WK	DW WK	DW WK
PHASE 2+5	G	G	G	G	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED. CLEAR.	G	G	G	G	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2+5 CHANGE	G	G	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 6	G	G	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
6 CHANGE	Y	Y	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4	R	R	R	R	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 CHANGE	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 ALT.	R	R	R	R	G	G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED. CLEAR.	R	R	R	R	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 ALT. CHANGE	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

PHASING CHART

SS-05

REVISIONS:	APPROVALS:
REVISED 09/95 FOR THE US 29 IMPROVEMENTS S.H.A. NO. M 425-502-370	ORIGINAL
	CHIEF SIGNAL DESIGN SECTION
	ON
	ASST. DISTRICT ENGINEER TRAFFIC
	CHIEF TRAFFIC ENGINEERING DESIGN DIVISION
	FILE
	DIRECTOR OFFICE OF TRAFFIC & SAFETY

RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

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

LOG MILE # 15002902.72

DRAWN BY: ZAJ
DES. BY: ZAJ
CHK. BY:

US 29 @ WB MD 193
GENERAL INFORMATION

COUNTY: MONTGOMERY

DATE: SEPTEMBER, 1995 F.A.P. NO.
SCALE: None S.H.A. NO. M 425-502-370

TS/STD. NO.: TS-487B-GI-1

SHEET NO. ___ OF ___