

PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of the existing traffic control signal at MD 4 and Dowerhouse Road in Prince George's County, Maryland. MD 4 is considered to run in an east/west direction.

II. INTERSECTION OPERATION

The existing cabinet and controller will be utilized.

The intersection presently operates in a NEMA four (4) phase, full-traffic-actuated mode. The existing phasing is to be changed to operate in a NEMA six phase full-traffic-actuated mode. The MD 4 through movements will run concurrently. The side road movements will operate sequentially in phases three, four and seven. Phase three will be controlled by the detector in the exclusive right turn lane for westbound Marlboro Pike. This movement will consist of the right turn from Marlboro Pike to make the left turn onto westbound MD 4. Phase four will be the northbound approach of Dowerhouse Road operating as one-half of the side street split. Phase seven will be the southbound movement of Dowerhouse Road operating as the other half of the side street split.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY S.H.A. AND INSTALLED BY THE CONTRACTOR.

Quantity	Unit	Specification Section	Description
4	EA	813	30" X 36" R3-5(L) Sign--span wire mount
2	EA	814	12", one way, four-section (R,Y,G,GA) adjustable traffic signal head having proper span wire hangers, balance adjusters, and tunnel visors
1	EA	813	30" x 36" R3-5(R) Sign -- span mount
1	EA	813	36" x 72" R3-8(Mod) Sign -- ground mount
2	EA	816	Two-channel loop detector amplifier with time delay output

EQUIPMENT LIST

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

Quantity	Unit	Specification Section	Description
Lump Sum	LS	108	Mobilization
Lump Sum	LS	104	Maintenance of Traffic (traffic control)
1	EA	811	Handhole
670	LF	815	Saw Cut
2400	LF	810	Loop detector wire (No. 14 A.W.G.) encased in flexible tubing
1380	LF	810	2-conductor electrical cable (aluminum shielded)
30	LF	810	5-conductor electrical cable (No. 14 A.W.G.)
50	LF	805	1" liquid tight flexible non-metallic conduit for loop detector lead-in
10	LF	805	2" polyvinyl chloride (Schedule 40) electrical conduit --trenched
200	LF	104	Preformed pavement markings--white 24" wide for stop line
1	EA	104	"Curved Arrow" (right) --pavement making tape
350	LF	104	Preformed pavement markings--white 5" wide for lane line
330	LF	104	Preformed pavement markings--yellow 5" wide for center line
4	EA	104	"Curved Arrow" (left) --pavement making tape
1	EA	104	"Straight" -- pavement making tape
1	EA	104	Combination "Curved/Straight Arrow" (right) -- pavement making tape
330	LF	104	Remove Existing Pavement Markings
1	EA	---	Relocate existing ground mounted sign
84	LF	812	4 in. x 6 in. wood sign support

EQUIPMENT LIST

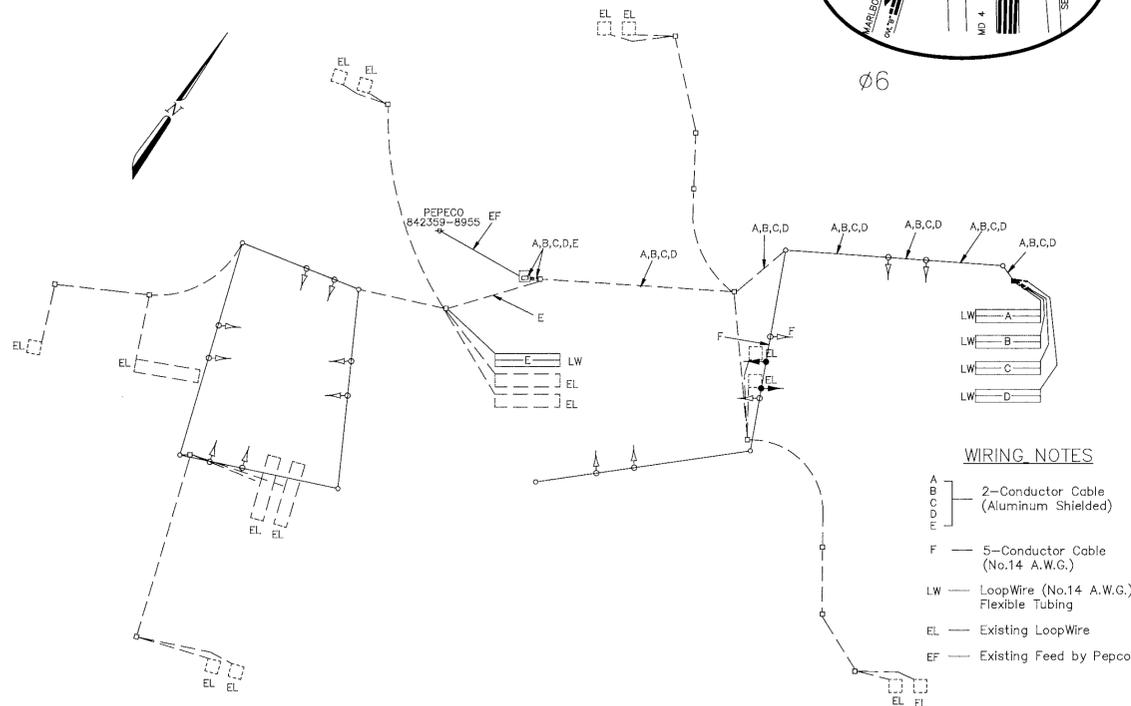
C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE OFFICE OF TRAFFIC, SIGNAL SHOP, TRAFFIC OPERATIONS DIVISION, MARYLAND STATE HIGHWAY ADMINISTRATION, 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21078. A TWENTY-FOUR (24) HOUR NOTICE IS REQUIRED PRIOR TO DELIVERY. PLEASE CONTACT MR. ED RODENHIZER AT (410) 787-7650.

Quantity	Unit	Description
1	EA	12", one-way five-section signal head
1	EA	12", one-way three-section signal head

CONSTRUCTION DETAILS

- A. Use existing steel span wire, and signal heads. Install signal heads and signs and relocate signal head as shown.
- B. Install 6' x 30' loop detector encased in 1/4" flexible tubing, quadrupole type (3-6-3 turns).
- C. Locate existing conduit and place handhole on it.
- D. Install 1" flexible non-metallic electrical conduit for detector lead-in.
- E. Install preformed pavement marking -- white, 24" wide for stop line.
- F. Use existing handhole.
- G. Disconnect loop detector.
- H. Use existing conduit.
- J. Use existing base mounted cabinet and controller and use existing empty 2" elbow located in the cabinet.
- K. Install 2" (Schedule 40) polyvinyl chloride electrical conduit--trenched.
- L. Use existing underground feed by Pepco.
- M. Use existing steel span wire.
- N. Remove existing handhole.
- O. Install 5" Double yellow line for center line.
- P. Install right thru arrow -- white.
- Q. Install 5" solid white line for lane line.
- R. Remove existing stopline.
- S. Install right arrow -- white.
- T. Install 5" broken white line (10ft. segments and 30ft. gap).
- U. Install left arrow -- white.
- V. Use existing loop detector.
- W. Relocate existing sign as shown.
- X. Install ground mounted sign.
- Y. Install 5" broken white line (3 ft. segments and 9 ft. gap).

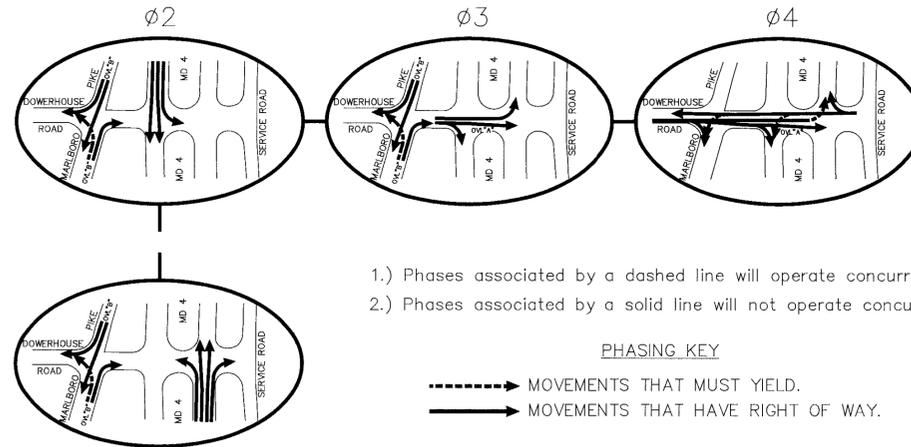
WIRING DIAGRAM



WIRING NOTES

- A B C D E F --- 2-Conductor Cable (Aluminum Shielded)
- F --- 5-Conductor Cable (No.14 A.W.G.) In Flexible Tubing
- LW --- LoopWire (No.14 A.W.G.) In Flexible Tubing
- EL --- Existing LoopWire
- EF --- Existing Feed by Pepco

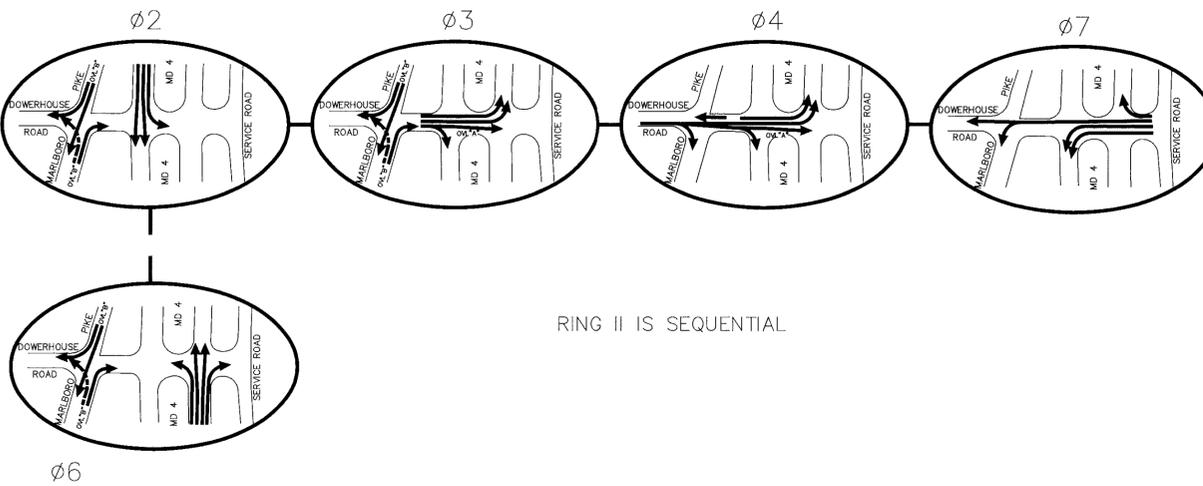
EXISTING NEMA PHASING



PHASING KEY

- MOVEMENTS THAT MUST YIELD.
- MOVEMENTS THAT HAVE RIGHT OF WAY.

PROPOSED NEMA PHASING



PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Phase 2 & 6	G	G	G	G	G	G	G	G	R	R	R	R	R	R	R	R
2 & 6 Change	Y	Y	G	G	G	G	Y	Y	R	R	R	R	R	R	R	R
Phase 3	R	R	G	G	G	G	R	R	R	R	R	G	R	R	R	R
3 Change	R	R	Y	Y	Y	Y	R	R	R	R	R	G	R	R	R	R
Phase 4	R	R	R	R	R	R	R	R	R	R	G	G	R	R	R	G
4 Change	R	R	R	R	R	R	R	R	Y	Y	Y	Y	R	R	R	G
Phase 7	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G
7 Change	R	R	R	R	R	R	R	R	R	R	R	R	Y	Y	Y	Y
Flashing Operation	FL/Y	FL/R														

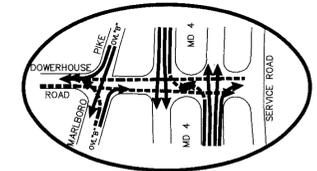
MDOT -- STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION

DRAWN BY: M.A. MEARS
DES. BY: M.A. MEARS
CHK. BY:

GENERAL INFORMATION
MD 4 AND DOWER HOUSE ROAD
COUNTY: PRINCE GEORGE'S

DATE: September 13, 1996 F.A.P. NO. N/A TS/STD. NO. SHEET NO. 2 OF 2
SCALE: N/A S.H.A. NO. BW945M82

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



FLASHING OPERATION

Revision 'B'

The Traffic Group
The Traffic Group, Inc.
Suite 600
40 W. Chesapeake Avenue
Towson, Maryland 21204
410-583-8405
1-800-583-8411
Fax: 410-321-8458
Job No. 940904