LEFT TURN EQUIPMENT (2)

F SIGNAL HEADS STD CAP VISORS
Remove exist signal heads #4
and replace with 5 head combination
No (See Plan)

Traffic Signal #4

Size of Indication
12 Red
12" Amber , 12" Amber Arrow
12" Green , 12" Green Arrow

G CONTROLLER MODIFICATIONS

Modify existing CROUSE HINES MODEL 200 S/N 82408 to provide Phase and Sequence Diagram as shown below As much of the existing equipment shall be reused as possible with the unused equipment being returned to Traffic Division stock (Contact Traffic Engineer for disposition)

H LOOPS AND AMPLIFIERS

All loops and amplifiers shall be compatible with CROUSE and HINES Model 200 S/N 824208 (2)

GENERAL NOTES

1. All highway marking shall be the responsibility of the Division of Traffic Engineering of the Bureau of Engineering Department of Public Works of Howard County Maryland and is not to be considered a part of this contract

2. The utilities shown on the construction plan are schematic only and are not to be considered complete The contractor shall be responsible for notifying all utility companies prior to construction so that all utilities can be located in the field Any damage incurred by the contractor shall be repaired immediately at the contractors expense

3. Timing of the signal system shall be furnished by the Traffic Engineer (Ref 4 03 K of the General Specifications)

4. All materials and workmanship employed under this contract shall conform with the "GENERAL SPECIFICATIONS FOR INSTALLATION OF AND EQUIPMENT FOR TRAFFIC SIGNALS FOR HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS" dated Oct 7 1975 revised Feb 18 1976

5. All wiring to be underground. The conduit shall be sized to accomodate future wiring for left turn detectors, left turn signals on pedestals, and pedestrian (WALK/DON'T WALK) signal heads. An additional 1" conduit elbow shall be provided in control cabinet foundation. An additional conduit band shall be provided in each pole foundation for future Left turn detectors and signal heads

6. Signal head #9 shall be mounted to provide 10 feet vertical clearance above finished grade

STANDARD SYMBOLS

- Signal heads
- Proposed Steel pole
- Existing Street Lights
- Controller
- Meter (with vandal proof Cover)
- Hand box
- Loop Detector
- Mast Arm
- Pedestrian Push Button

GENERAL NOTES cont (2)

7. All heads, both existing and new, shall be painted in accordance with Specification Section 509 a

EXISTING EQUIPMENT LIST

SEE PAGE 9-12 OF SPECIFICATIONS FOR MAKE/MODEL

A. CONTROLLER AND ACCESSORIES

1. Two phase modular controller with solid state circuitry and digital timing
   - a. Equipped with one (1) each vehicular actuated and non actuated module
   - b. Equipped with actuated pedestrian Clearance for Phase B
   - c. Memory, recall, red clearance, dual maximum and pedestrian clearance for actuated phase
   - d. Minimum green yellow clearance all red clearance and pedestrian clearance for non actuated phase
2. Conflict monitor and solid state signal load g switches
3. Standard police panel with manual override feature
4. Base mounted control cabinet large enough to accomodate the above control equipment and the co ord other equipment specified on sheet 2 of 2 "DETAILS OF CO-ORDINATION OF LITTLE PATUXENT PKWY/WEST RUNNING BROOK RD/VANTAGE POINT RD with LITTLE PATUXENT PKWY/STERRET PLACE TRAFFIC SIGNALS" and shall be finished bronze paint

B. LOOPS AND DETECTORS

1. Two (2) delayed timer vehicle loop detectors for loops 1 & 4
2. Two (2) delayed timer vehicle loop detectors for loops 2 3 5 & 6
   Loops 2 & 3 and 5 & 6 are to be wired separately to a common detector as per manufacturers recommendations for correct operation
3. Loop sizes

Phase	Loop No	Size
1	7	6 x 20
3	4 & 5	6 x 30
3	6	6 x 20
4	1, 2, 25	6 x 30
4	3, 6	6 x 20

(2)

C. SIGNAL HEADS (WITH CLEVIS HANGER)

1. Signal head description

Signal No	Description
1 2 7 8	12" diam indications
3 4 5 6	12" diam red indications; 8" diam yellow & green indications

D. POLES

1. Two (2) twin arm support poles with a 90° angle of separation
2. Style and appearance equivalent to UNION METAL DESIGN #30300 Finish shall be bronze paint
3. Pole No 1 & 2 — Description: 42' & 34' span (42 span supports 2 12" heads) (34 span supports 2 combination heads)

E. PEDESTRIAN PUSH BUTTON

1. QUANTITY - 3
2. LOCATION - In accordance with plan
3. DESIGN - See detail below
4. SIGN - R-10-3 - 9"x12" (quantity 3)

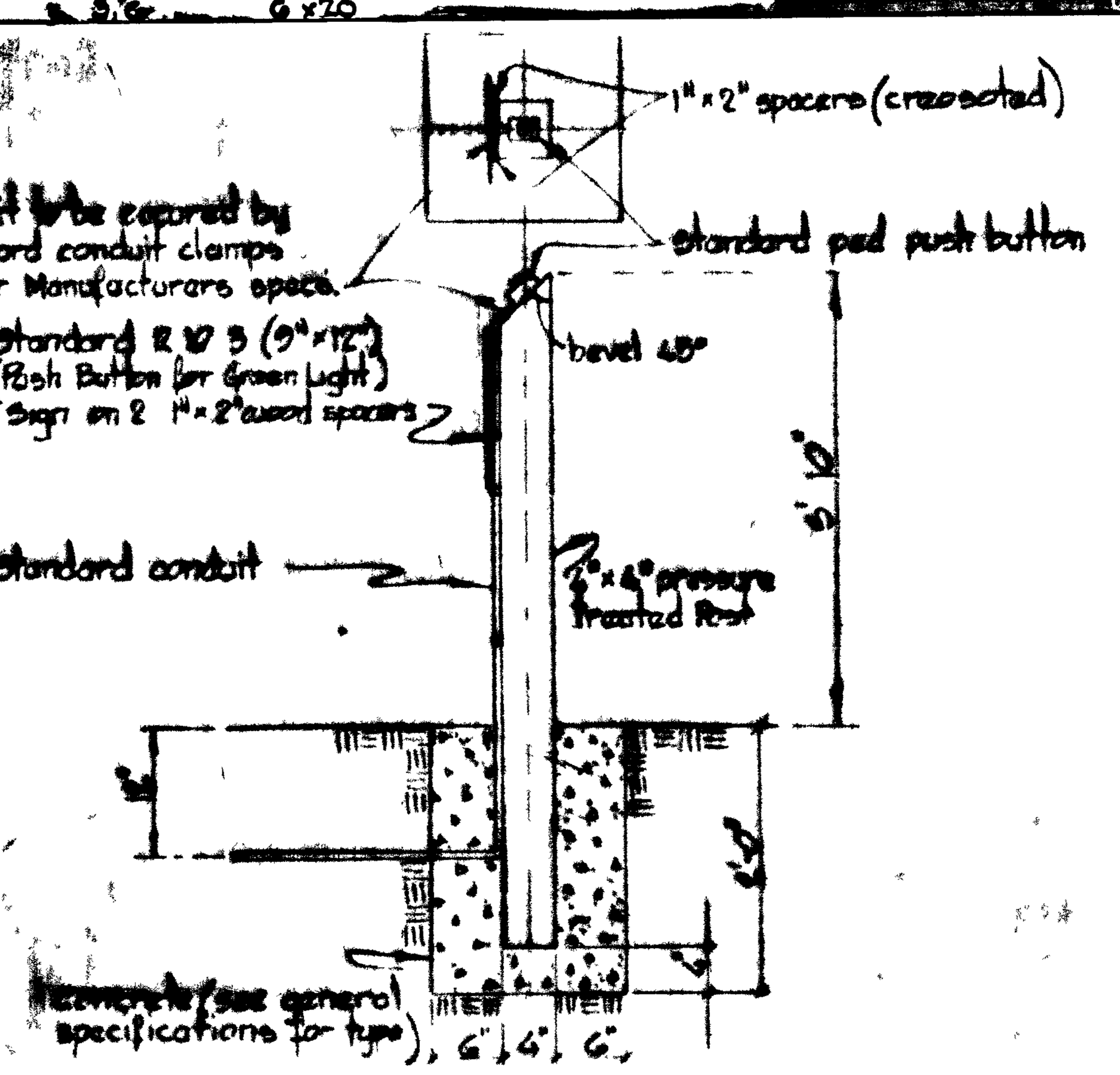
F It is the responsibility of the contractor to provide the specified sequence of operation

G Loops 2 & 5 will be used with existing amplifiers

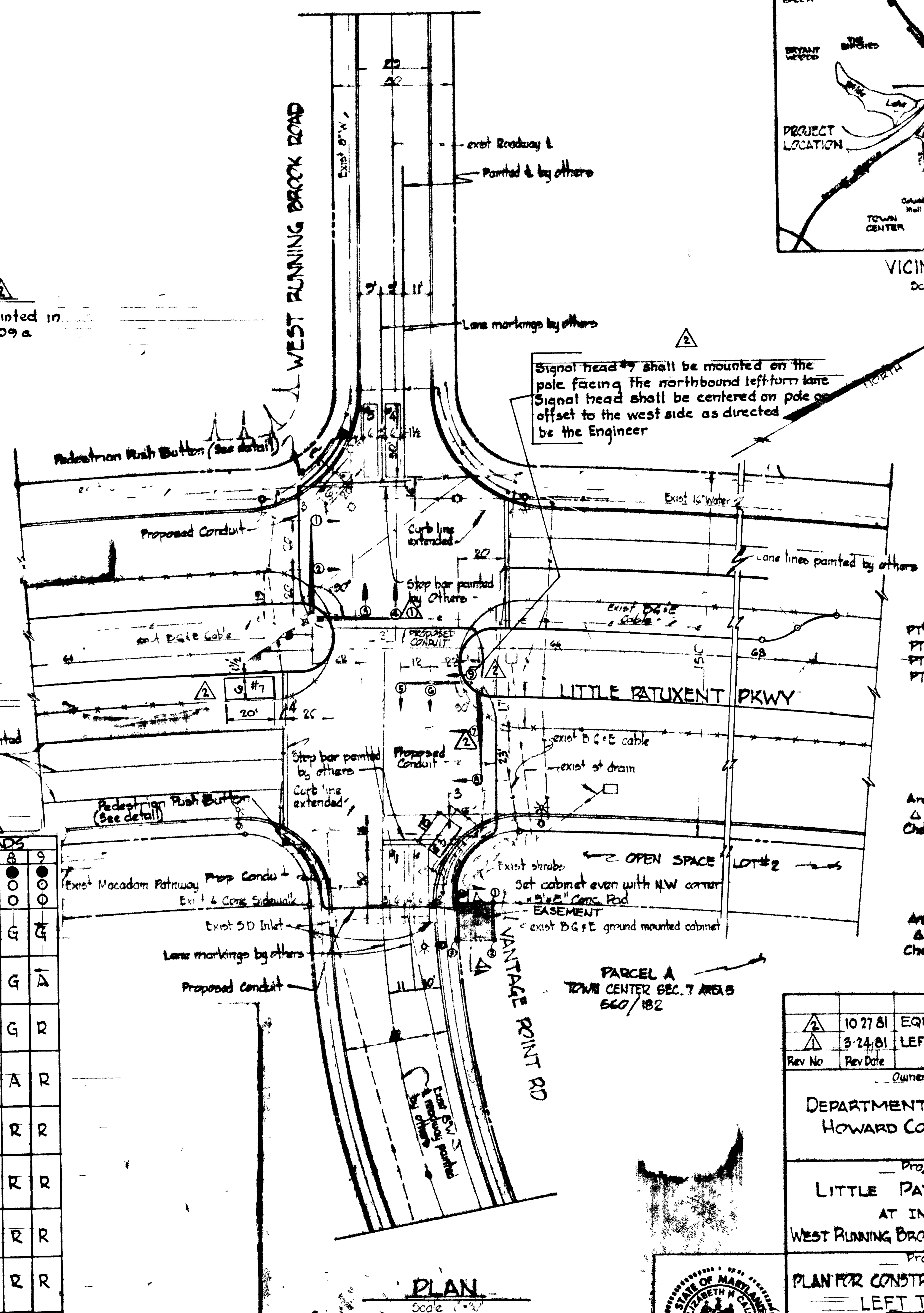
PHASE & SEQUENCE DIAGRAM (2)

SYMBOL: ○ = 8", ● = 12"

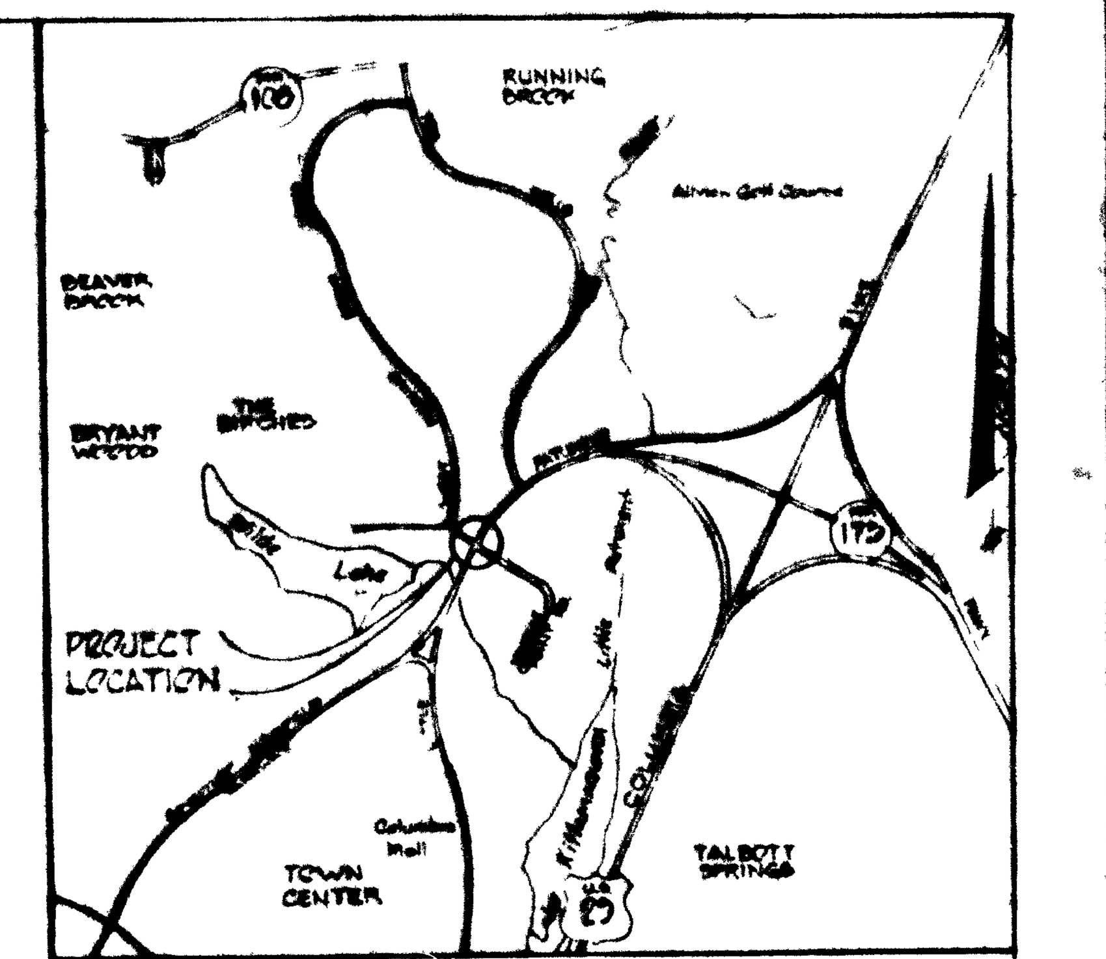
	TRAFFIC SIGNAL HEADS 1	2	3	4	5	6	7	8	9
PHASE 1	R	R	R	R	R	R	G	G	G
PHASE 1 CLEAR	R	R	R	R	R	R	G	G	A
PHASE 2	G	G	R	R	R	R	G	G	R
PHASE 2 CLEAR	A	A	R	R	R	R	A	A	R
PHASE 3	R	R	G	G G	R	R	R	R	R
PHASE 3 CLEAR	R	R	G	A G	R	R	R	R	R
PHASE 4	R	R	G	G	G	G	R	R	R
PHASE 4 CLEAR	R	R	A	A	A	A	R	R	R
FLASH	F/A	F/A	F/R	F/R	F/R	F/R	F/A	F/A	F/A



PEDESTRIAN PUSHBUTTON
No Scale



PLAN
Scale 1"=30'



VICINITY MAP
Scale 1" 2000'

COORDINATE SCHEDULE

PT#362	N 506 524 28	E 840 562 74
PT#1	N 506,537 47	E 840 569 89
PT#2	N 506 530 69	E 840 583 24
PT#3	N 506,517 40	E 840 576 09

EASEMENT DESCRIPTION

From #362 to #1
N 28° 27 46" E - 15 00

From #1 to #2
Arc = 15.00 Rad = 355 00'
Δ = 2° 25 27 Tan 7 50'
Chd = 15 00 Chd brg S 62° 46 08" E

From #2 to #3
S 28° 2" 46" E 15 00

From #3 to #4
Arc = 15.00 Rad = 370 00'
Δ = 2° 19 23" Tan = 7.50'
Chd = 15.00' Chd brg = N 62° 46' 08" W

Rev No	Rev Date	Revision Description
2	10 27 81	EQUIPMENT CHANGE
1	3 24 81	LEFT TURN PHASES

Owner and Developer
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Project Area
LITTLE PATUXENT PARKWAY
AT INTERSECTION OF
WEST RUNNING BROOK ROAD AND VANTAGE POINT ROAD

Project Title
PLAN FOR CONSTRUCTION OF TRAFFIC SIGNAL
LEFT TURN PHASE
CAPITAL PROJECT NO T-7012 BB

STATE OF MARYLAND — ELIZABETH H CALL — REGISTERED PROFESSIONAL ENGINEER

Designed	DC/EAC	Scale	As Noted
Drawn	EAC	Date	3 24 81
Checked	EAC/JK	Sheet	1 of 1

James E Kienker 11/13/81 — CHIEF, TRAFFIC DIVISION
Elizabeth H Call — CHIEF, RDS, BRIDGES & STM DRNG DIV
William E Riley — CHIEF, BUREAU OF ENGINEERING
George F. Nemeyer — DIRECTOR OF PUBLIC WORKS

CONTRACT NO. LPPVANT3