

PHASE CHART

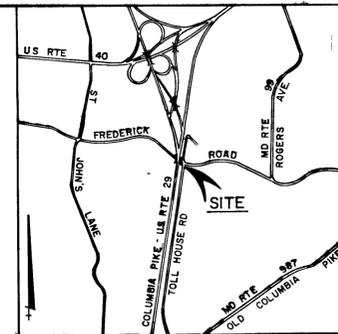
	1	2	3	4	5	6
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R

12" SIGNALS

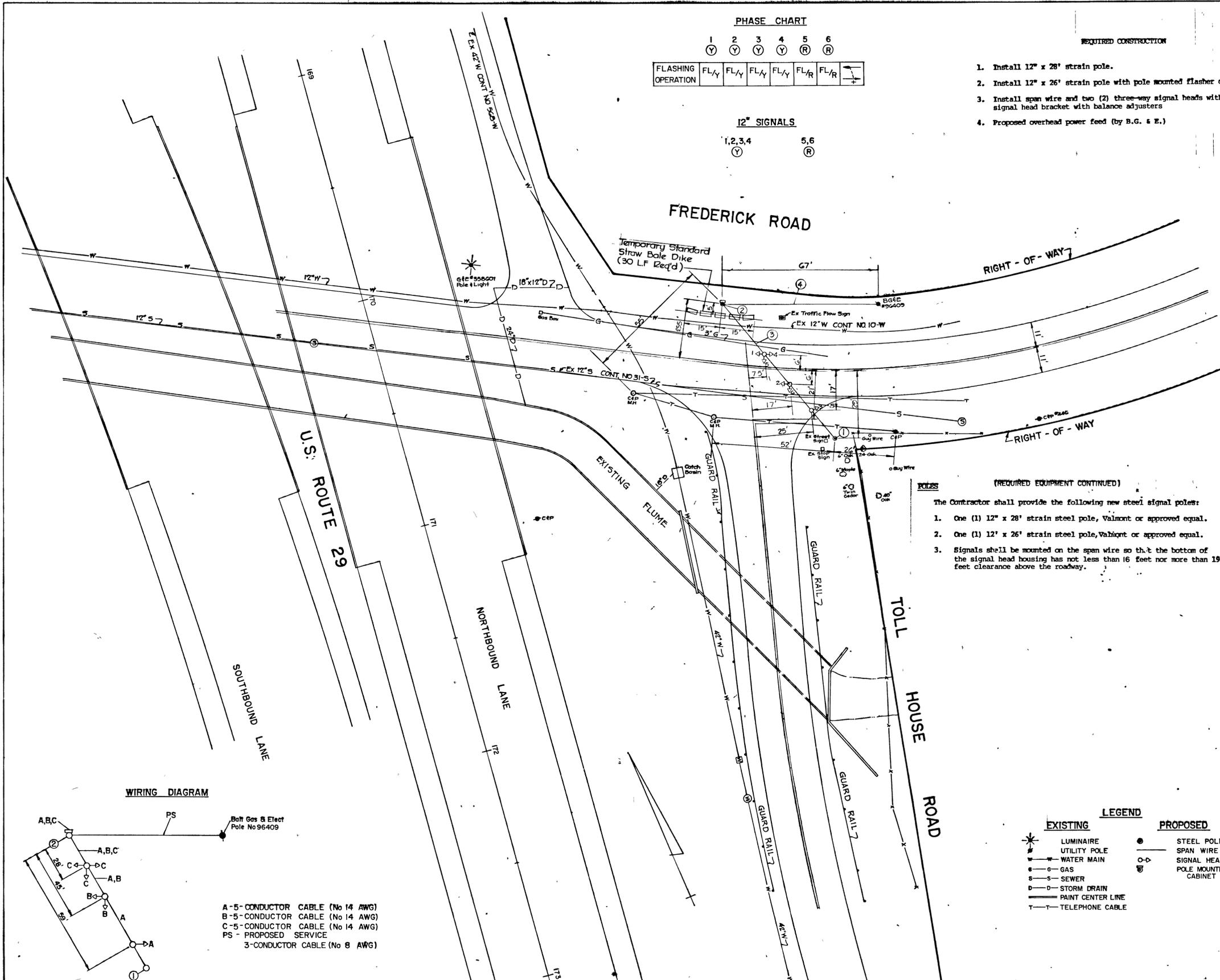
1,2,3,4	5,6
Y	R

REQUIRED CONSTRUCTION

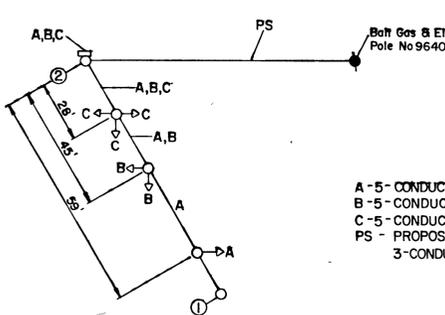
1. Install 12" x 28' strain pole.
2. Install 12" x 26' strain pole with pole mounted flasher cabinet
3. Install span wire and two (2) three-way signal heads with adjustable signal head bracket with balance adjusters
4. Proposed overhead power feed (by B.G. & E.)



LOCATION MAP  
SCALE 1" = 2000'



WIRING DIAGRAM



A-5-CONDUCTOR CABLE (No 14 AWG)  
 B-5-CONDUCTOR CABLE (No 14 AWG)  
 C-5-CONDUCTOR CABLE (No 14 AWG)  
 PS - PROPOSED SERVICE  
 3-CONDUCTOR CABLE (No 8 AWG)

(REQUIRED EQUIPMENT CONTINUED)

- The Contractor shall provide the following new steel signal poles:
1. One (1) 12" x 28' strain steel pole, Valmont or approved equal.
  2. One (1) 12' x 26' strain steel pole, Valmont or approved equal.
  3. Signals shall be mounted on the span wire so that the bottom of the signal head housing has not less than 16 feet nor more than 19 feet clearance above the roadway.

LEGEND

EXISTING	PROPOSED
LUMINAIRE	STEEL POLE
UTILITY POLE	SPAN WIRE
WATER MAIN	SIGNAL HEAD
GAS	POLE MOUNTED CABINET
SEWER	
STORM DRAIN	
PAINT CENTER LINE	
TELEPHONE CABLE	

GENERAL NOTES

1. All highway marking and signing shall be the responsibility of others, except as noted
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. The contractor shall locate existing utilities a minimum of two (2) weeks in advance of the construction operations in the vicinity of the utilities. Any damage incurred by the contractor shall be repaired immediately at the contractor's expense. See Section 4.09 of the "General Provisions". Contractor shall notify the following utilities or agencies at least five (5) days before starting work shown on these plans:
  - Miss Utility (Collect) 1-559-0100
  - Baltimore Gas & Electric Company - Underground Electric Distribution Engineering "Damage Control" 234-5691
  - Baltimore Gas & Electric Company - Underground Gas Distribution Engineering "Damage Control" 234-5533
  - Chesapeake and Potomac Telephone Company - 752-9976
  - Traffic Division - 992-2072
  - Howard County Cable T.V. - 461-1156
  - Bureau of Utilities - Howard County - 992-2366
3. Construction shall be completed in accordance with Howard County Standard Specifications and Details for Construction Design Manual Volume IV.
4. All disturbed areas shall be properly restored in accordance with General Provisions, Section 4.20, General Specifications for Installation of Equipment for Traffic Signals for Howard County Department of Public Works dated October 7, 1974; revised February 18, 1976.
5. All new signal heads shall be securely wrapped and/or bagged in burlap, prior to signal being placed in service.
6. The Contractor shall comply with OSHA and MSHA codes.
7. The Contractor shall furnish an "as-built" drawing as per "General Provisions, Section 4.02b".
8. The Contractor shall comply with the following:
  - Maintain six (6) inches minimum clearance with all underground utilities and all overhead clearances shall be in accordance with the Maryland High Voltage Act.
9. The Contractor will supply all other hardware and ancillary equipment required for the completion of the project and ensure proper signal operation as designed and shown on the plans.

REQUIRED EQUIPMENT

CONTROLLER

NSA, Solid State 2-circuit Flasher unit with photo-cell and timer switch housed in a pole mounted cabinet; Model SP-5 manufactured by Solid State Division, Tempe, Arizona, or Flasher Model 2017-L, Econolite; or approved equal.

SIGNAL HEADS

1. The Contractor shall provide the following signal heads.
 

Signal Number	Description
1, 2, 3, 4,	Single Section, 12" signal heads having yellow indication with tunnel visor and proper span wire mounting with adjustable signal head bracket with clevis hangers
5, 6	Single Section, 12" heads having red indication with tunnel visor and proper span wire mounting with adjustable signal head bracket with clevis hangers
- NOTE Signal heads to be assembled to form one (1), three (3) way assembly head (1,4,5) and one (1) two (2) way assembly head (2 & 6) as shown on the plans Signal head No 3 is one way and mounted separately
2. All signal heads shall be painted Federal Yellow.
3. Final signal head locations and aiming to be determined in the field with the Engineer.

(CONTINUED)

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

JOHN E. HARMS, JR. & ASSOCIATES, INC.  
CONSULTING ENGINEERS  
PASADENA, MARYLAND  
PROFESSIONAL TRANSPORTATION CONSULTANTS  
LANHAM, MARYLAND



DESIGNED BY  
H S CHADDA  
DRAWN BY  
FAL, WEB  
CHECKED BY  
WHV  
DATE  
4-10-85

TRAFFIC SIGNAL PLAN

TOLL HOUSE ROAD & FREDERICK ROAD  
CAPITAL PROJECT T-7030  
HOWARD COUNTY, MARYLAND

SCALE  
1" = 20'  
SHEET  
1 OF 1