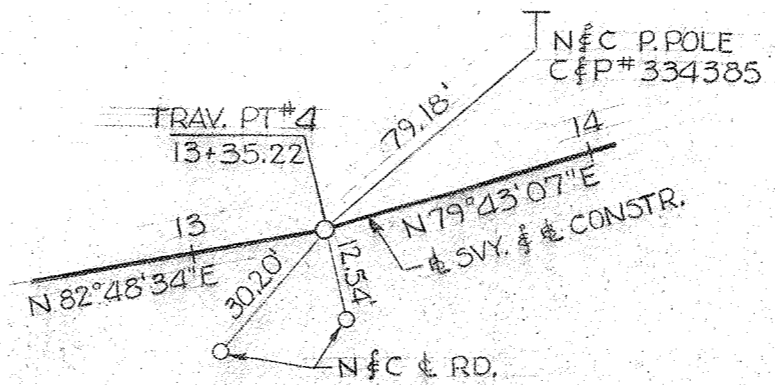
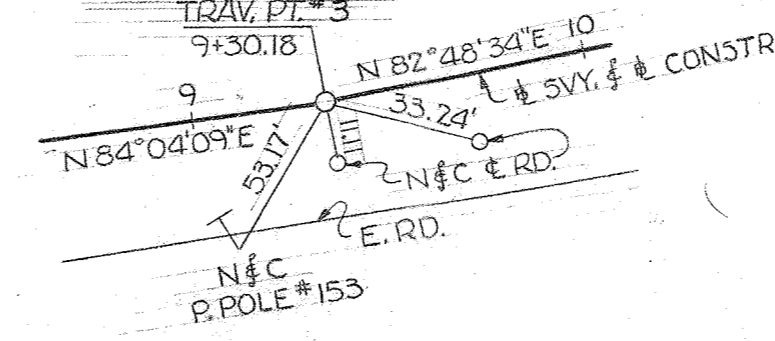
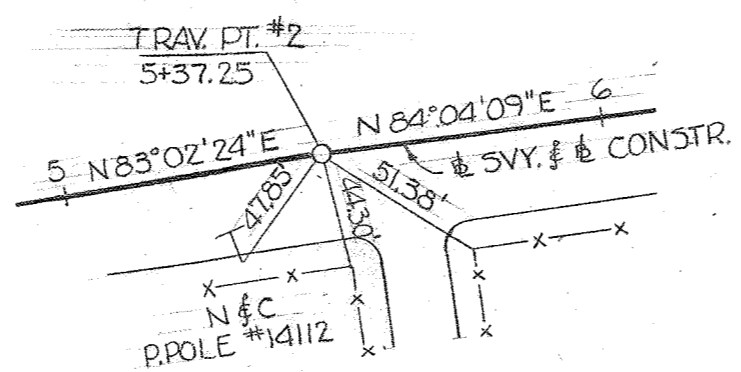
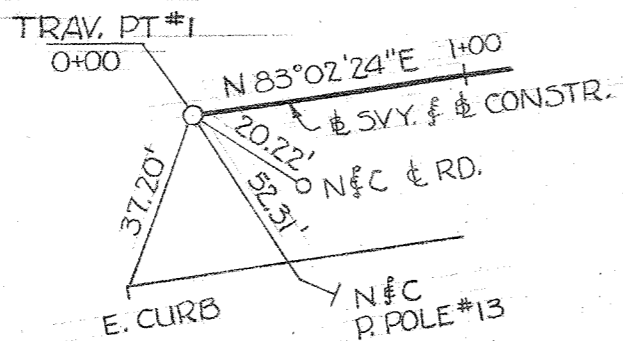


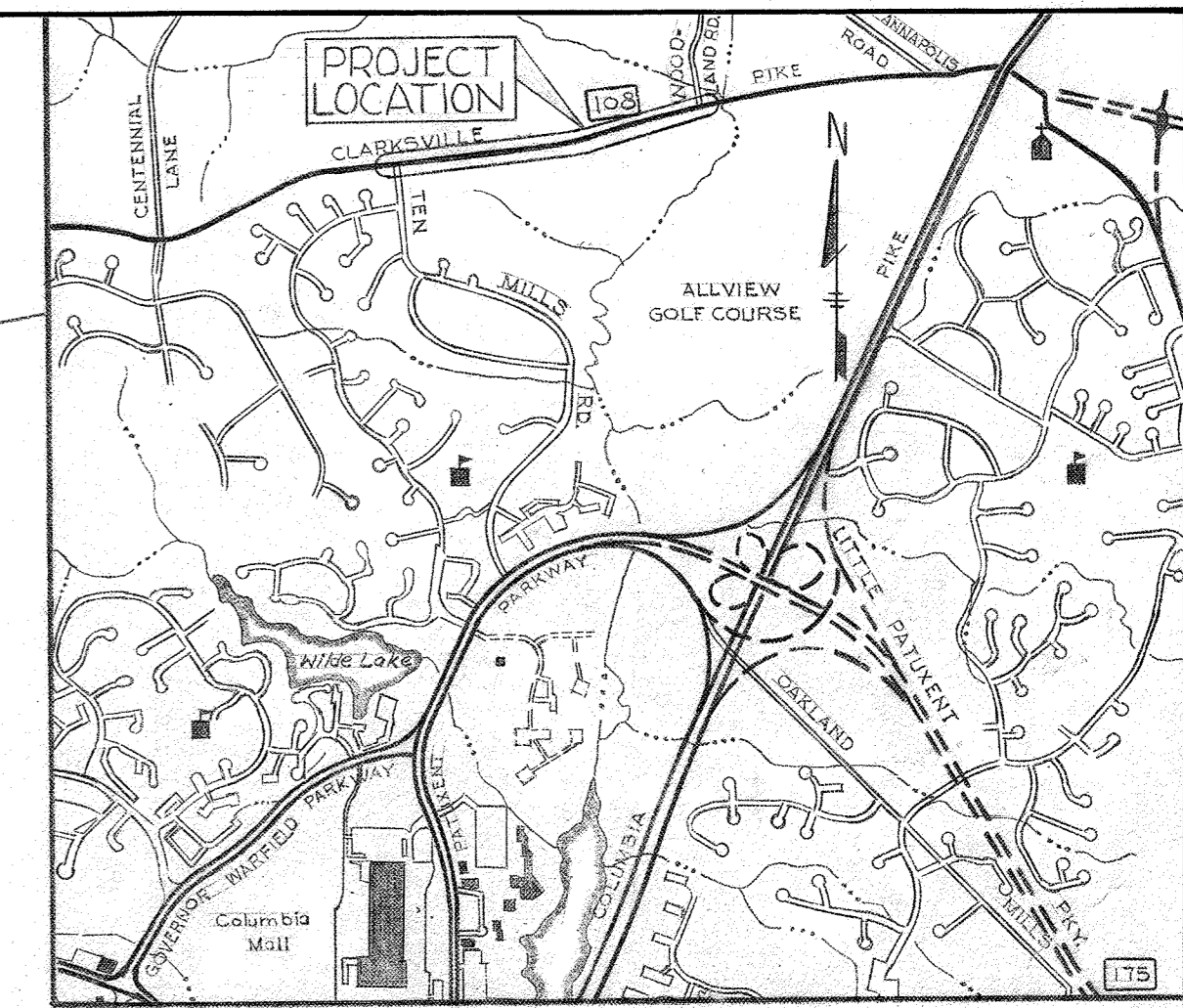
B.M. # 20 - R.R. Spike in base of  
P. Pole #13 - 37' Rt. to  
Survey Sta. 0+45  
Elev. 409.1

B.M. # 21 - R.R. Spike in base of  
P. Pole G#E #332983  
21' Lt. to Survey Sta. 11+25  
Elev. 412.3

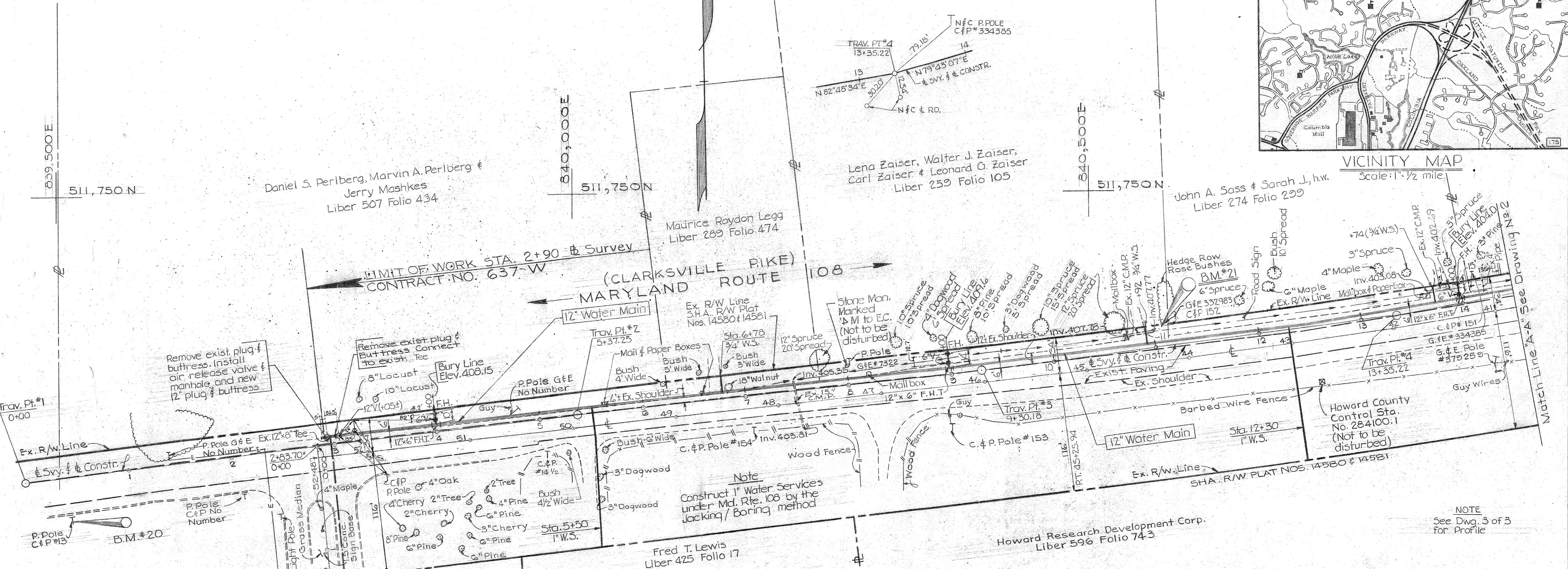


CURVE DATA  
C.M.D. 108

Δ = 6° 51' 15"  
Dc = 0' 42"  
R = 8185.11  
L = 979.17  
T = 490.18  
E = 14.66



VICINITY MAP  
Scale: 1" = 1/2 mile



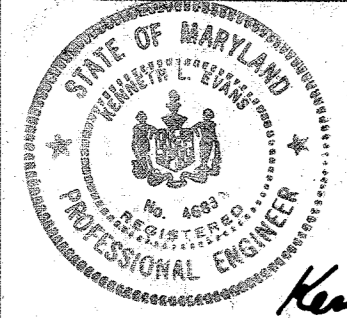
Remove exist. plug & buttress. Install air release valve & manhole and new 12" plug & buttress.

Remove exist. plug & buttress. Connect to exist. Tee.

Note  
Construct 1" Water Services under Md. Rte. 108 by the Jacking/Boring method

NOTE  
See Dwg. 3 of 3 for Profile

Quantities	
12" Water	3310 L.F.
6" Water	95 L.F.
Fire Hydrants	7. each
3/4" Copper Water House Conn.	80 L.F.
1" Copper Water House Conn.	270 L.F.



THE WILSON T. BALLARD COMPANY  
CONSULTING ENGINEERS  
OWINGS MILLS MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
2-25-77  
DIRECTOR OF PUBLIC WORKS DATE

CONTRACT NO. 637-W

PLAN OF 12" WATER MAIN

CLARKSVILLE PIKE (ROUTE 108)  
TEN MILLS ROAD TO WOODLAND ROAD  
ELECTION DISTRICT 2 & ELECTION DISTRICT 5

DRAWING NO. 1 OF 3  
SCALE 1" = 50'  
DATE: Feb. 22, 1977

**GENERAL NOTES**

- GENERAL
- Approximate locations of existing mains are shown. The Contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted supply. Any damage incurred shall be repaired immediately.
  - All horizontal controls are based on Maryland State Coordinates.
  - All vertical controls are based on U.S.G.S. Datum.
  - All pipe elevations shown are invert elevations.
  - Clear all utilities by a minimum of 6". Clear all poles 2'-0" minimum or tunnel as required. Cost for tunneling or bracing poles shall be included in the unit prices bid for "Excavation and Backfill for Water Mains".
  - For all standard details, see standards bound in Specifications.
  - Contractor shall locate existing utilities in advance of construction operations in the vicinity of proposed utilities.
  - Contractor shall notify the following utilities or agencies at least five (5) days before starting work shown on these plans:  
State Highway Administration - 531-5533  
Baltimore Gas and Electric Company - Underground Electric Distribution Engineering - "Damage Control" - 234-5691  
Baltimore Gas and Electric Company - Underground Gas Distribution Engineering - 559-0100  
Chesapeake and Potomac Telephone Company - 725-9976  
American Telephone and Telegraph - Cable Location Division - 301-393-3553  
Colonial Pipeline Company - 781-4641
  - Trees are to be protected from damage to maximum extent. Trees located within the construction strip are not to be removed or damaged by the Contractor.
  - At least two permanent bench marks, location and elevation to be noted.
  - Contractor shall remove trees, stumps and roots along line of excavation as directed by the Engineer. Payment for such removal shall be included in the unit price bid for excavation and backfill for water and sewer mains.
  - Place regulations "Men Working" and warning signs as required to comply with Maryland State Highway Administration Manual of Traffic Control for Highway Construction and Maintenance Operations.
- WATER MAINS
- All water mains to be C.I.P., D.I.P. or A.C.P. unless otherwise noted.
  - Top of all water mains to have a minimum of 3'-1/2" cover unless otherwise noted.
  - All valves shall be strapped to tees in accordance with standard details.
  - Block all fittings with concrete, see standards bound in Specifications.
  - Bury line elevations on fire hydrants shall be set to the elevations shown on the drawings. All fire hydrants shall be strapped and buttressed with concrete in accordance with standard details. Soil around the fire hydrant to be compacted in accordance with section 5-15 of the Standard Specifications.
  - Payment for strapping fire hydrants and valves will be included in unit price bid for furnishing and laying water main.

WS 637-W/1

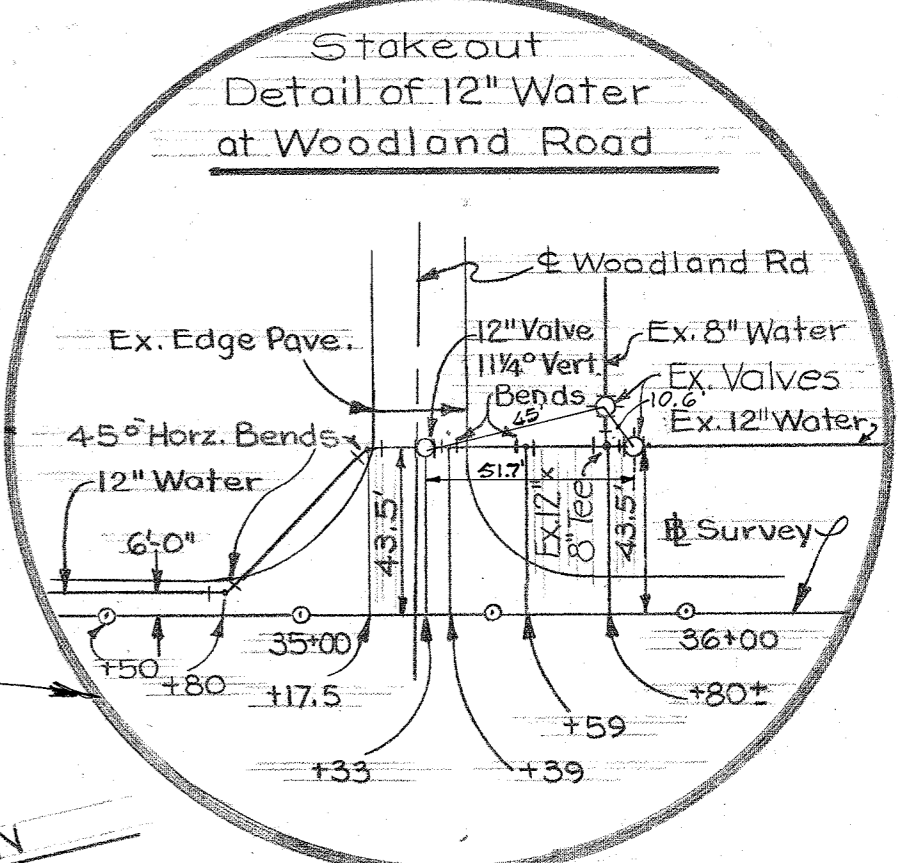
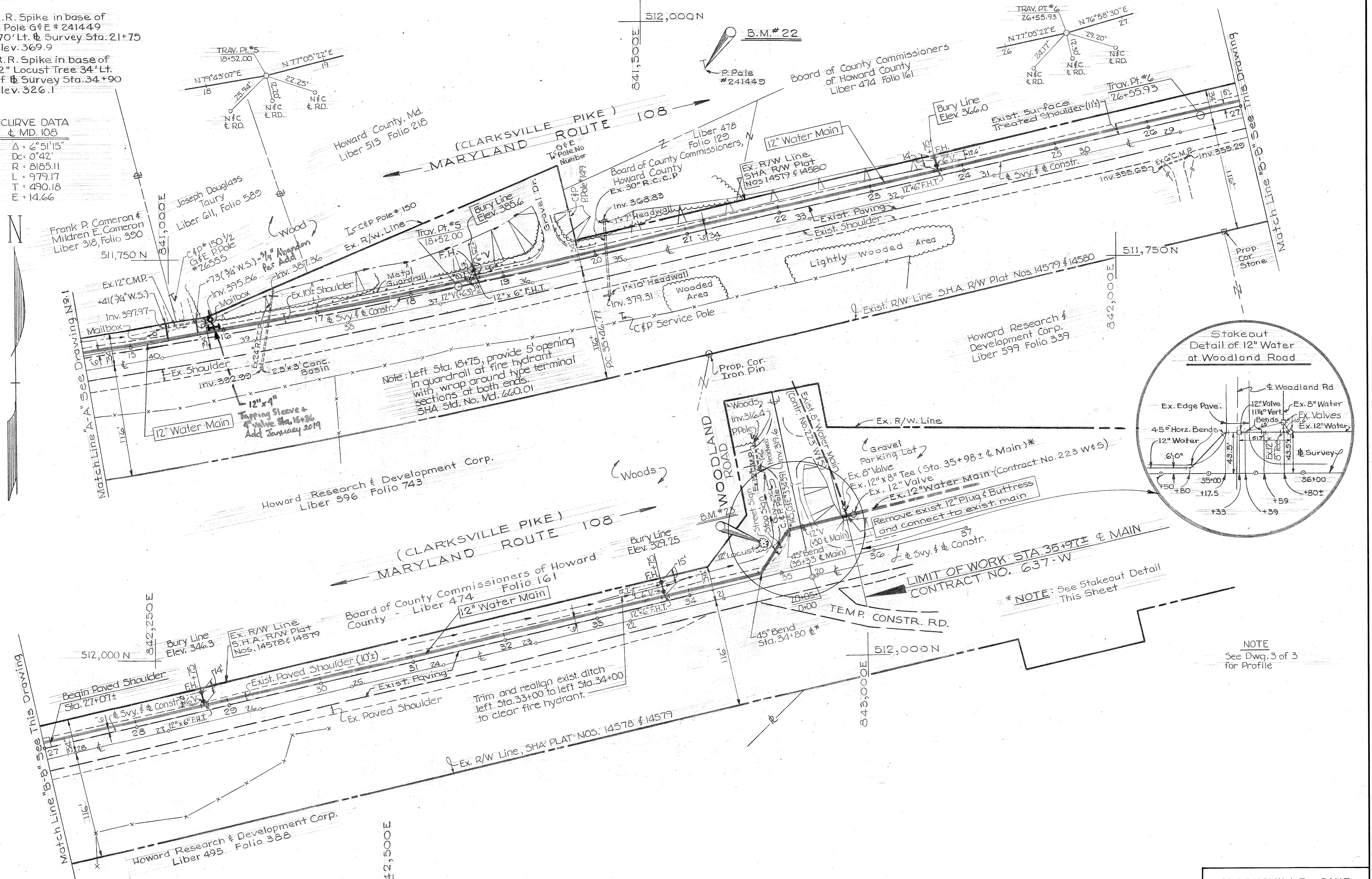
B.M. # 22 - R.R. Spike in base of Pole G&E # 241449  
 170' Lt. & Survey Sta. 21+75  
 Elev. 369.9

B.M. # 23 - R.R. Spike in base of 12" Locust Tree 34' Lt. of Survey Sta. 34+90  
 Elev. 326.1

CURVE DATA  
 & MD. 108

$\Delta = 6^{\circ}51'15"$   
 $Dc = 0'42"$   
 $R = 8185.11$   
 $L = 979.17$   
 $T = 490.18$   
 $E = 14.66$

Match Line "A-A" See Drawing No. 1



NOTE  
 See Dwg. 3 of 3  
 for Profile



Hennett P. Evans 12/9/75

THE WILSON T. BALLARD COMPANY  
 CONSULTING ENGINEERS  
 OWINGS MILLS MARYLAND

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 Director of Public Works DATE 2-25-77  
 Chief - Bureau of Engineering DATE 2-25-77

CONTRACT NO. 637 - W

PLAN OF 12" WATER MAIN

CLARKSVILLE PIKE (ROUTE 108)  
 TEN MILLS ROAD TO WOODLAND ROAD  
 ELECTION DISTRICT 2 & ELECTION DISTRICT 5

DRAWING NO. 2 OF 3 SCALE 1"=50'

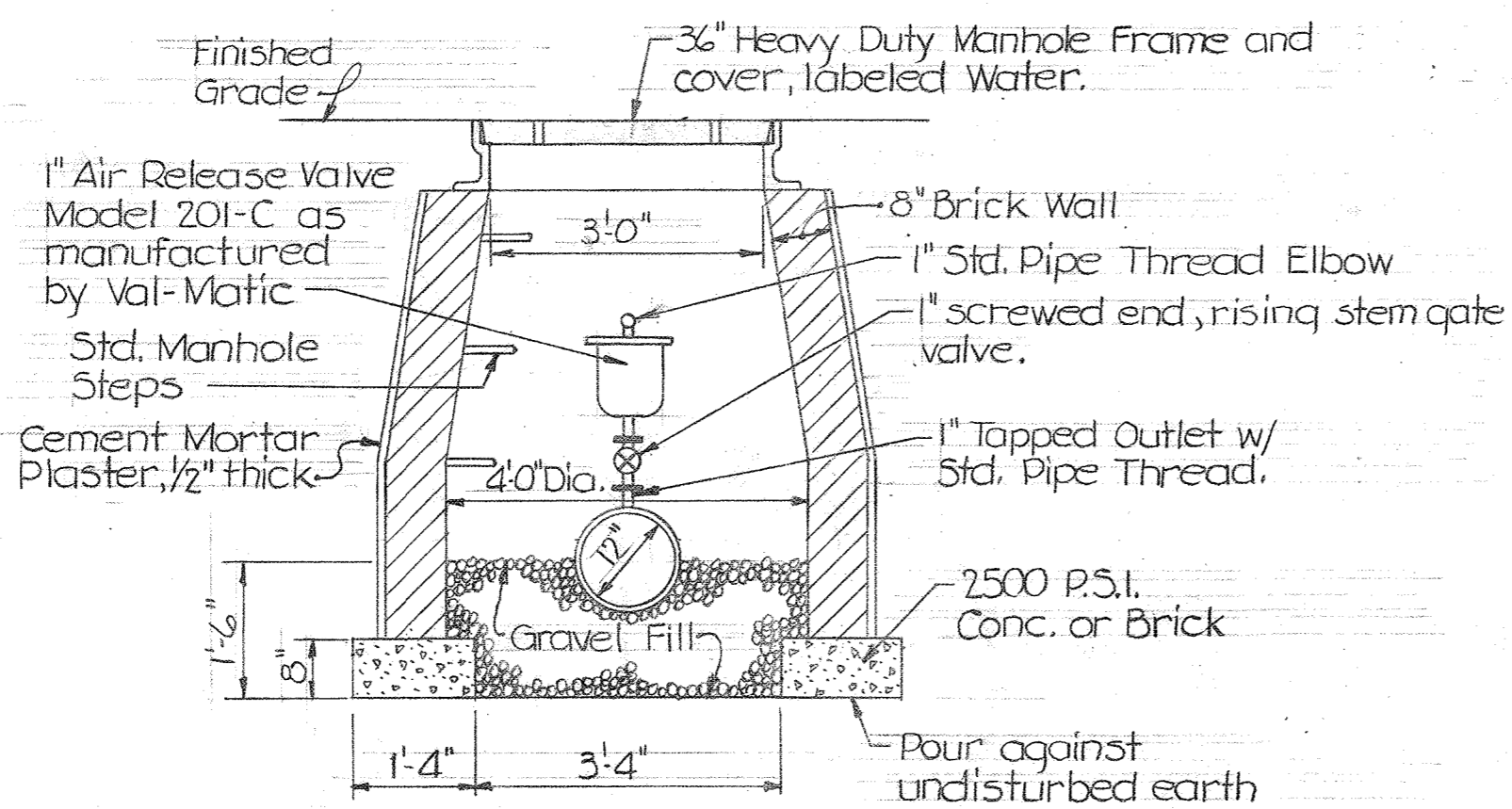
DATE: As Built 3/19/75 MW. Feb. 20, 1977

WS 637-W/2

WS 637-W/3

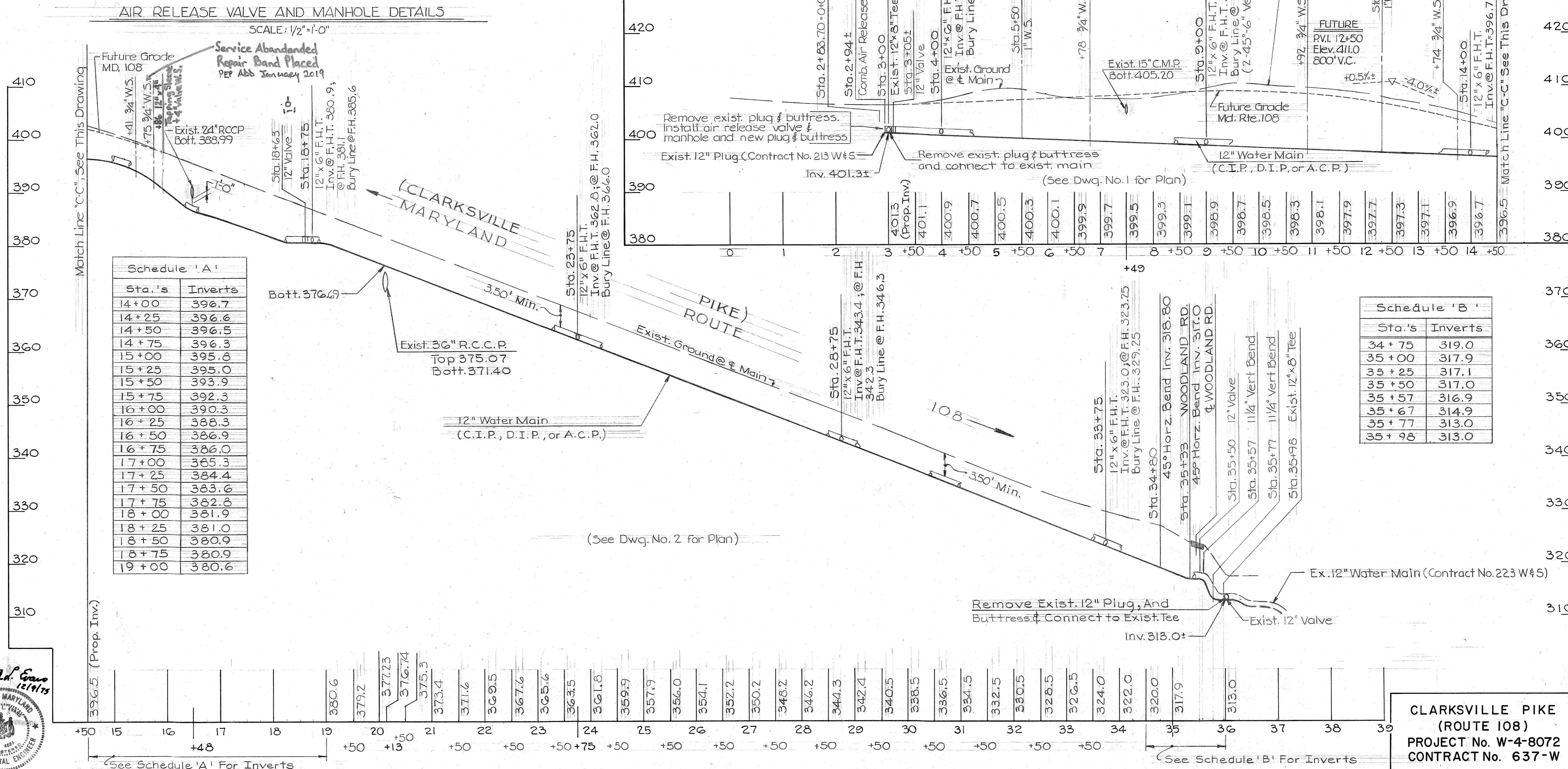
**NOTES**

1. Manhole frame & cover to be Richard Foundry Corp., Design No. B-2310 or approved equal with 4-1" dia. holes in cover.
2. Joints shall be provided in the water main within 1 ft. of the exterior walls of the manhole.



AIR RELEASE VALVE AND MANHOLE DETAILS

SCALE: 1/2" = 1'-0"

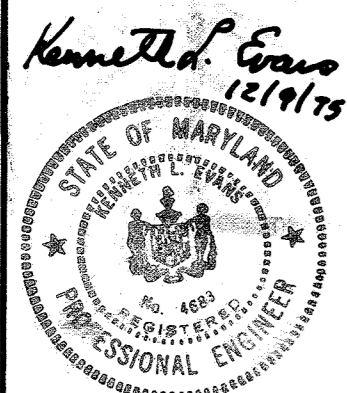


Schedule 'A'

Sta.'s	Inverts
14+00	396.7
14+25	396.6
14+50	396.5
14+75	396.3
15+00	395.8
15+25	395.0
15+50	393.9
15+75	392.3
16+00	390.3
16+25	388.3
16+50	386.9
16+75	386.0
17+00	385.3
17+25	384.4
17+50	383.6
17+75	382.8
18+00	381.9
18+25	381.0
18+50	380.9
18+75	380.9
19+00	380.6

Schedule 'B'

Sta.'s	Inverts
34+75	319.0
35+00	317.9
35+25	317.1
35+50	317.0
35+57	316.9
35+67	314.9
35+77	313.0
35+98	313.0



THE WILSON T. BALLARD COMPANY  
CONSULTING ENGINEERS  
OWINGS MILLS MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
DATE: 2-25-77  
CHIEF - BUREAU OF ENGINEERING

CONTRACT NO. 637-W

PROFILE OF 12" WATER MAIN

CLARKSVILLE PIKE (ROUTE 108)  
TEN MILLS ROAD TO WOODLAND ROAD  
ELECTION DISTRICT 2 & ELECTION DISTRICT 5

DRAWING NO. 3 OF 3  
SCALE H: 1" = 100' V: 1" = 10'

DATE: AS BUILT 9/13/79 M.M. Feb 23, 1977