

QUANTITIES		
Item	Estimated	As Built
33" Sewer	6,515 L.F.	6,508 L.F.
27" Sewer	506 L.F.	506 L.F.
8" Sewer	100 L.F.	10 L.F.
Manholes	330 V.F.	309 V.F.

**CAPITAL PROJECT S-4-6047**  
**CONTRACT NO. 2721-S**  
**MIDDLE PATUXENT INTERCEPTOR**  
**I-95 TO MURRAY HILL ROAD**  
**HOWARD COUNTY, MARYLAND**  
**DEPARTMENT OF PUBLIC WORKS**

- GENERAL NOTES
- Approximate location of existing utilities is shown. The Contractor shall take all necessary precautions to protect existing utilities and to maintain uninterrupted service. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer by the Contractor at the Contractor's expense.
  - The Contractor shall locate existing utilities a minimum of two weeks in advance of construction operations in vicinity of utilities. Cost shall be included in the unit price bid for excavation and backfill of sewer mains.
  - Contractor shall notify the following utilities or agencies at least five (5) days before starting work shown on these plans.  
 Miss Utility 1-800-441-8355  
 State of Maryland - Department of Water Resources 301-267-5551
  - Clear all utilities by a minimum of 0'. Clear all poles 2'-0" minimum, or tunnel as required. Cost for tunneling or bracing at poles shall be included in the unit prices bid for excavation and backfill of sewer mains.
  - All pipe elevations shown are invert elevations.
  - All manholes shall be 4' - 0" I.D. unless otherwise noted.
  - The Contractor shall provide a pipe joint in each sewer main within 2'-0" of the exterior manhole walls.
  - Watertight manhole frame and cover to be used where indicated on drawings [Standard Detail S-12 (CRS-63A)]. Where watertight manhole frame and cover is used, set top of frame 1'-6" above finished grade.
  - For details not shown on the Contract Drawings see Standard Details bound in the specifications.
  - Trees are to be protected from damage to the maximum extent.
  - 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 sewer mains.
  - Horizontal and Vertical controls are based on the Maryland State Grid coordinate system.



PURDUM & JESCHKE  
ENGINEERS  
1023 N. CALVERT ST.  
BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*P. J. Reppert* 6-28-77  
 DIRECTOR OF PUBLIC WORKS DATE  
*W. O. Albert* 6-27-77  
 CHIEF, BUREAU OF ENGINEERING DATE

CONTRACT NO. 2721-S  
CAPITAL PROJECT NO. S-4-6047

LOCATION MAP  
OF  
SANITARY SEWERS

MIDDLE PATUXENT INTERCEPTOR  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY, MARYLAND

DRAWING NO. 1 OF 6	SCALE 1" = 600'	MAPS 220-41 221-41
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WS 721 S/1

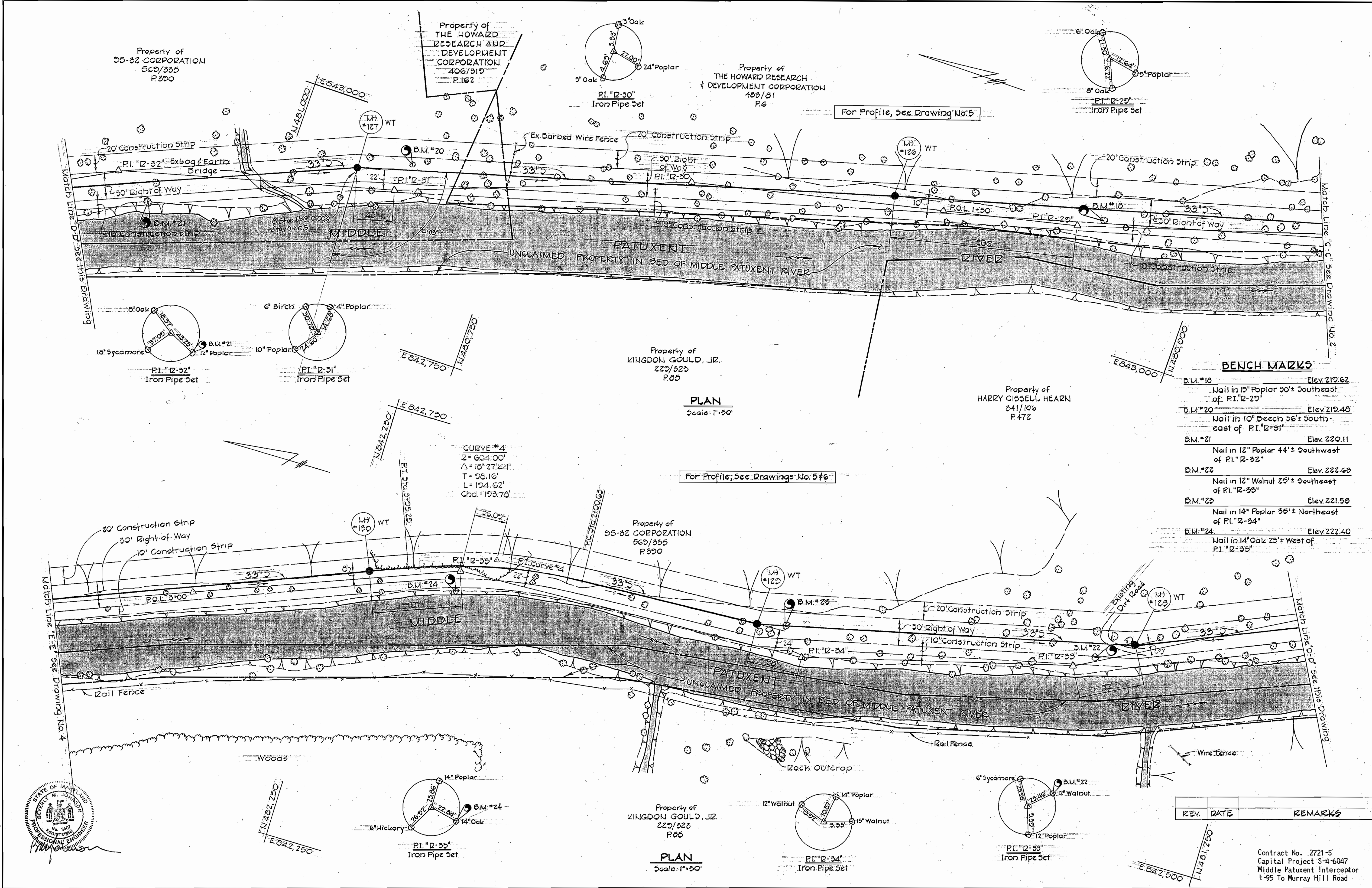
AS BUILT - AUGUST 1, 1980







WS 721 S/3



**BENCH MARKS**

B.M. #18	Elev. 219.62
Nail in 15" Poplar 30'± Southeast of P.I. #12-29"	
B.M. #20	Elev. 219.40
Nail in 10" Beech 36'± Southeast of P.I. #12-31"	
B.M. #21	Elev. 220.11
Nail in 12" Poplar 44'± Southwest of P.I. #12-32"	
B.M. #22	Elev. 222.60
Nail in 12" Walnut 25'± Southeast of P.I. #12-33"	
B.M. #23	Elev. 221.58
Nail in 14" Poplar 35'± Northeast of P.I. #12-34"	
B.M. #24	Elev. 222.40
Nail in 14" Oak 23'± West of P.I. #12-35"	

REV.	DATE	REMARKS

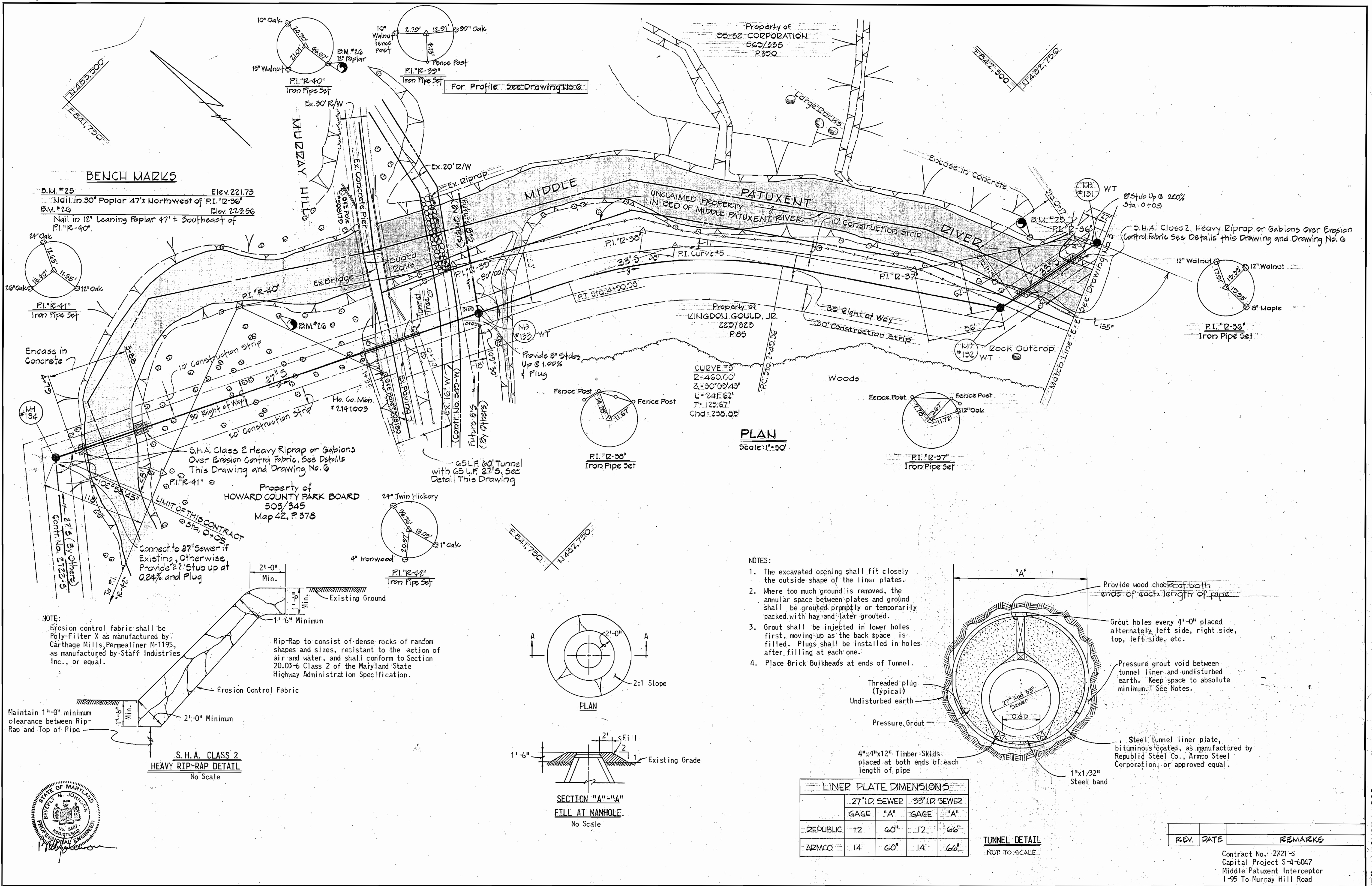
Contract No. 2721-S  
 Capital Project S-4-6047  
 Middle Patuxent Interceptor  
 I-95 To Murray Hill Road

<b>PURDUM &amp; JESCHKE</b> ENGINEERS 1023 N. CALVERT ST. BALTIMORE, MARYLAND	<b>DEPARTMENT OF PUBLIC WORKS</b> HOWARD COUNTY, MARYLAND 6-21-77 DIRECTOR OF PUBLIC WORKS DATE	<b>CONTRACT NO. 2721-S</b> <b>CAPITAL PROJECT NO. S-4-6047</b>	PLAN OF SANITARY SEWERS	MIDDLE PATUXENT INTERCEPTOR ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND	<b>DRAWING NO. 3 OF 6</b> SCALE 1" = 50' DESIGNED: JAH DRAFTED: ARZ CHECKED: TAF

"AS BUILT" - AUGUST 1, 1980



WS 721 S/4



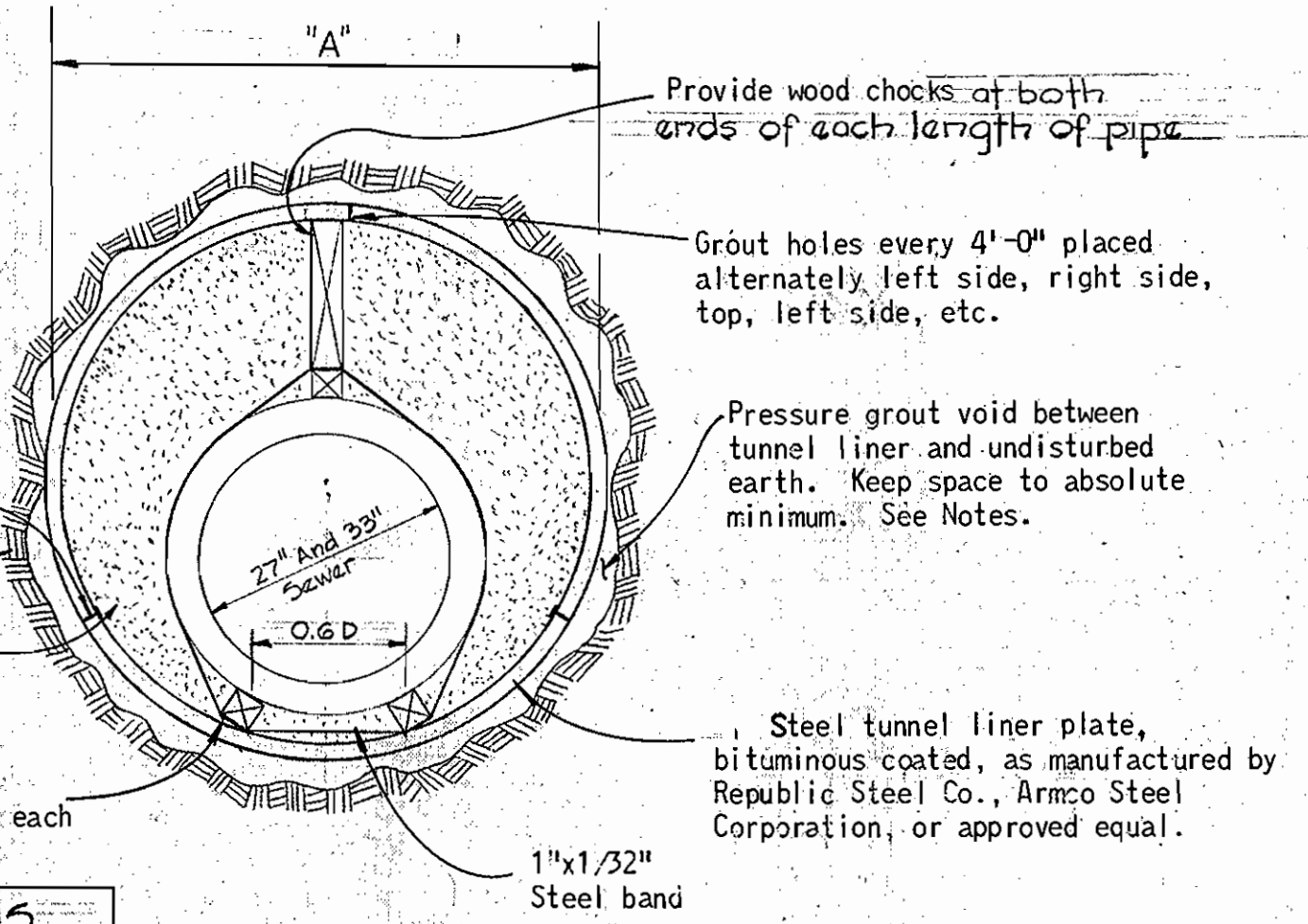
**BENCH MARKS**

B.M. #25  
Nail in 30" Poplar 47'± Northwest of P.I. "R-36" Elev. 221.73

B.M. #26  
Nail in 12" Leaning Poplar 47'± Southeast of P.I. "R-40" Elev. 223.56

**PLAN**  
Scale: 1"=50'

- NOTES:**
1. The excavated opening shall fit closely the outside shape of the liner plates.
  2. Where too much ground is removed, the annular space between plates and ground shall be grouted promptly or temporarily packed with hay and later grouted.
  3. Grout shall be injected in lower holes first, moving up as the back space is filled. Plugs shall be installed in holes after filling at each one.
  4. Place Brick Bulkheads at ends of Tunnel.



**LINER PLATE DIMENSIONS**

	27" I.D. SEWER		33" I.D. SEWER	
	GAGE	"A"	GAGE	"A"
REPUBLIC	12	60"	12	66"
ARMCO	14	60"	14	66"

**TUNNEL DETAIL**  
NOT TO SCALE

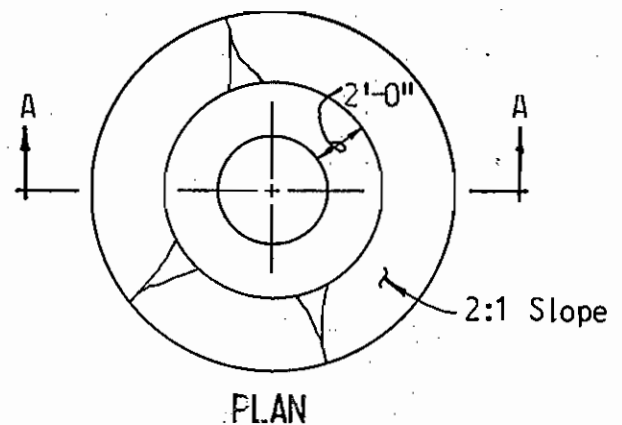
REV.	DATE	REMARKS

**NOTE:**  
Erosion control fabric shall be Poly-Filter X as manufactured by Carthage Mills, Permealiner M-1195, as manufactured by Staff Industries Inc., or equal.

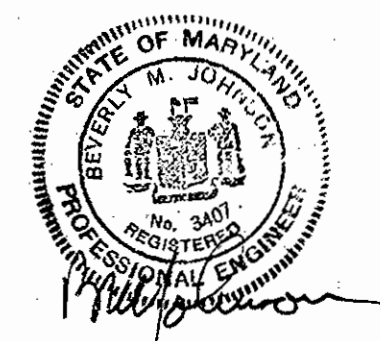
**S.H.A. CLASS 2 HEAVY RIP-RAP DETAIL**  
No Scale

Maintain 1'-0" minimum clearance between Rip-Rap and Top of Pipe

Rip-Rap to consist of dense rocks of random shapes and sizes, resistant to the action of air and water, and shall conform to Section 20.03-6 Class 2 of the Maryland State Highway Administration Specification.



**SECTION "A"- "A"**  
FILL AT MANHOLE  
No Scale



**PURDUM & JESCHKE**  
ENGINEERS  
1023 N. CALVERT ST.  
BALTIMORE, MARYLAND

**DEPARTMENT OF PUBLIC WORKS**  
HOWARD COUNTY, MARYLAND  
Director of Public Works: *M. P. ...* 6-28-77  
Chief Bureau of Engineering: *W. O. ...* 6-27-77

**CONTRACT NO. X721-S**  
**CAPITAL PROJECT NO. S-4-6047**

PLAN OF SANITARY SEWERS AND DETAILS

MIDDLE PATUXENT INTERCEPTOR  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY, MARYLAND

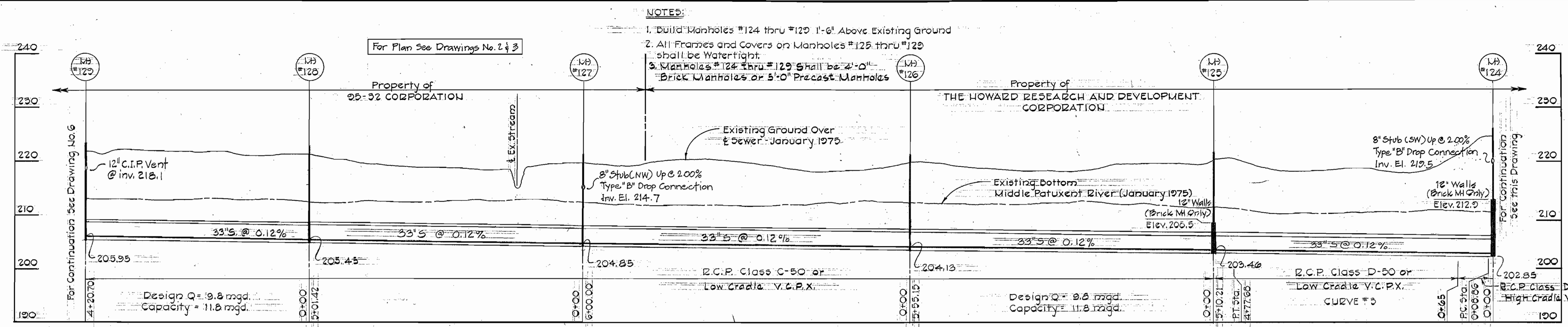
**DRAWING NO. 4 OF 6**  
**SCALE AS SHOWN**

DESIGNED: JAM  
DRAFTED: ARZ  
CHECKED: TAF

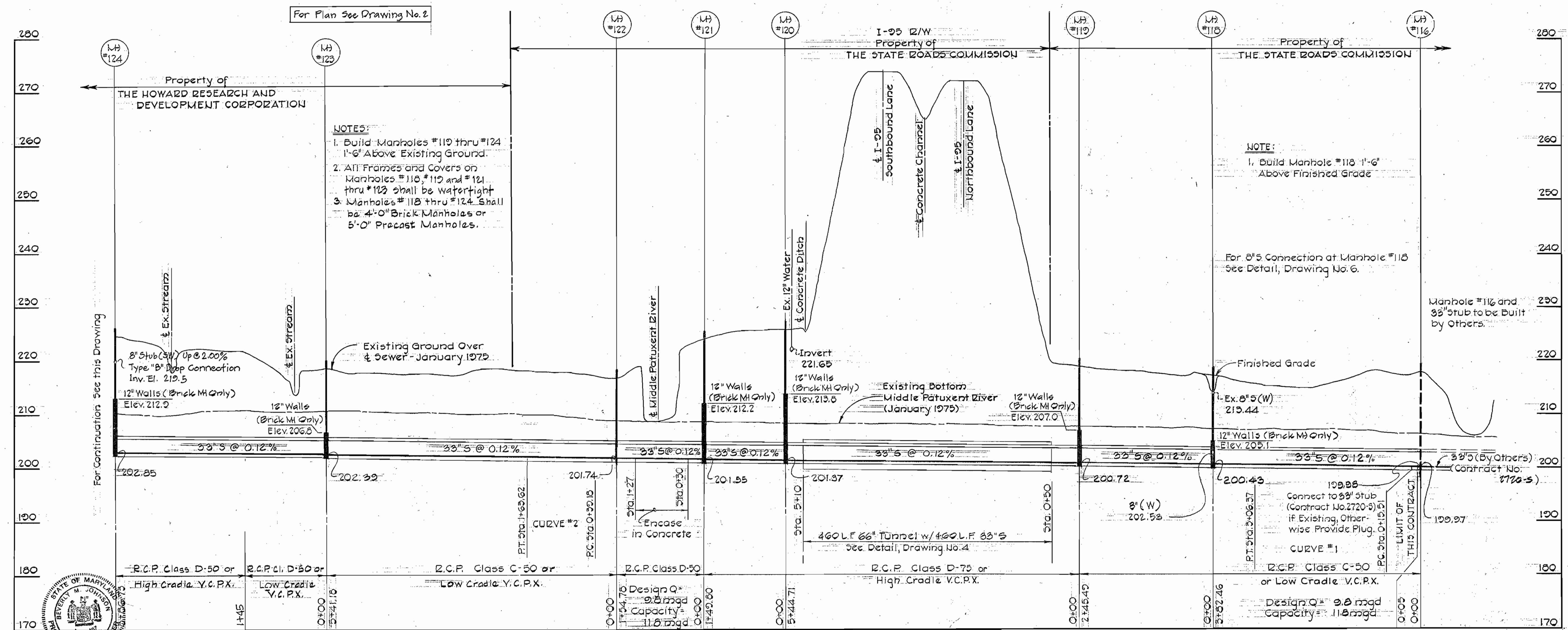
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WS 721 S/S



PROFILE  
HORIZ: 1"=100'  
VERT: 1"=10'



PROFILE  
HORIZ: 1"=100'  
VERT: 1"=10'

PURDUM & JESCHKE ENGINEERS  
1023 N. CALVERT ST.  
BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
6-23-77

CONTRACT NO. 721-S  
CAPITAL PROJECT NO. S-4-6047

REV.	DATE	REMARKS

MIDDLE PATUXENT INTERCEPTOR  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY, MARYLAND

DRAWING NO. 5 OF 6  
SCALE AS SHOWN

DESIGNED: JAM  
DRAFTED: ARZ  
CHECKED: TAF

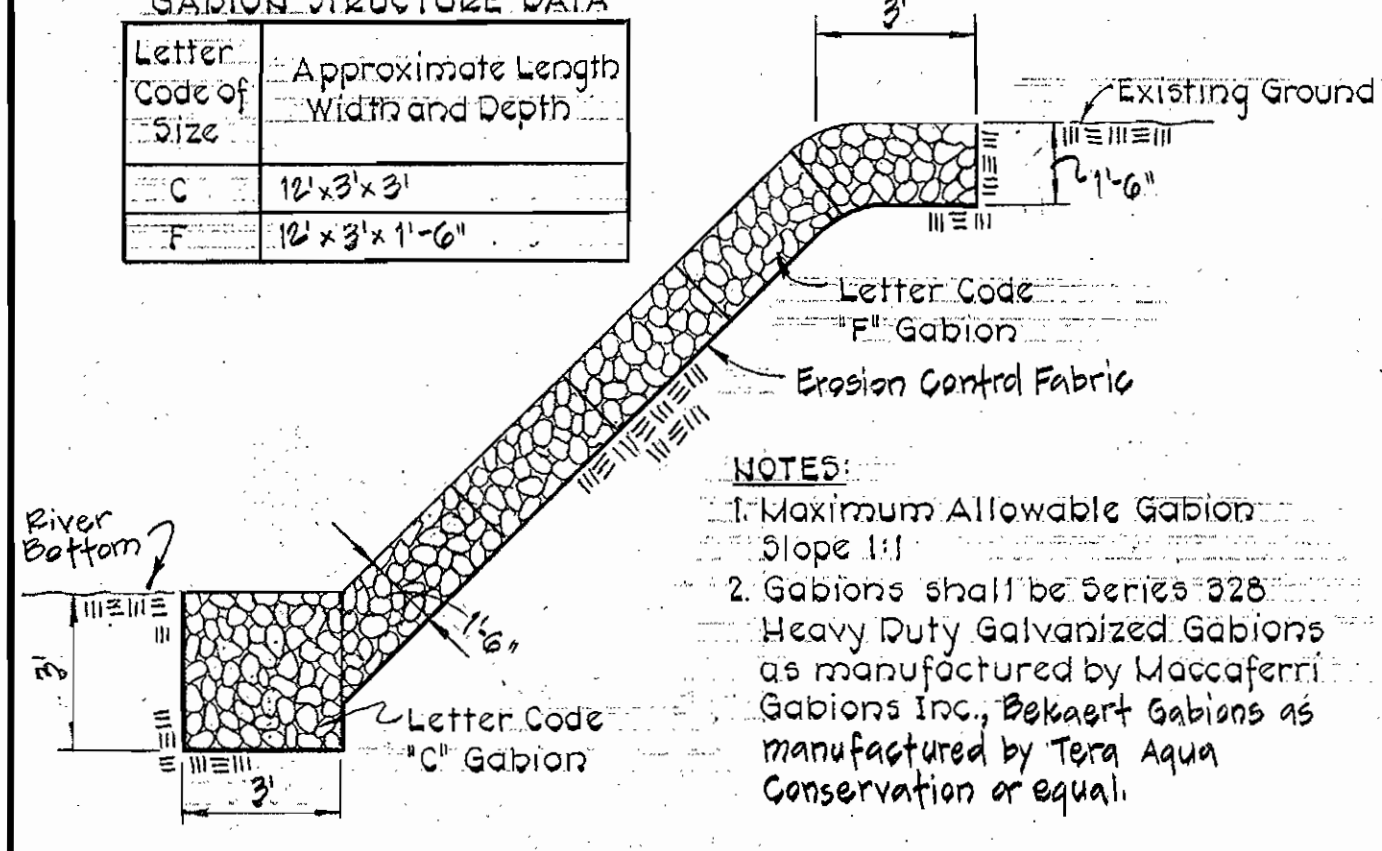
Contract No. 2721-S  
Capital Project S-4-6047  
Middle Patuxent Interceptor  
1-95 To Murray Hill Road

"AS BUILT" - AUGUST 1, 1980



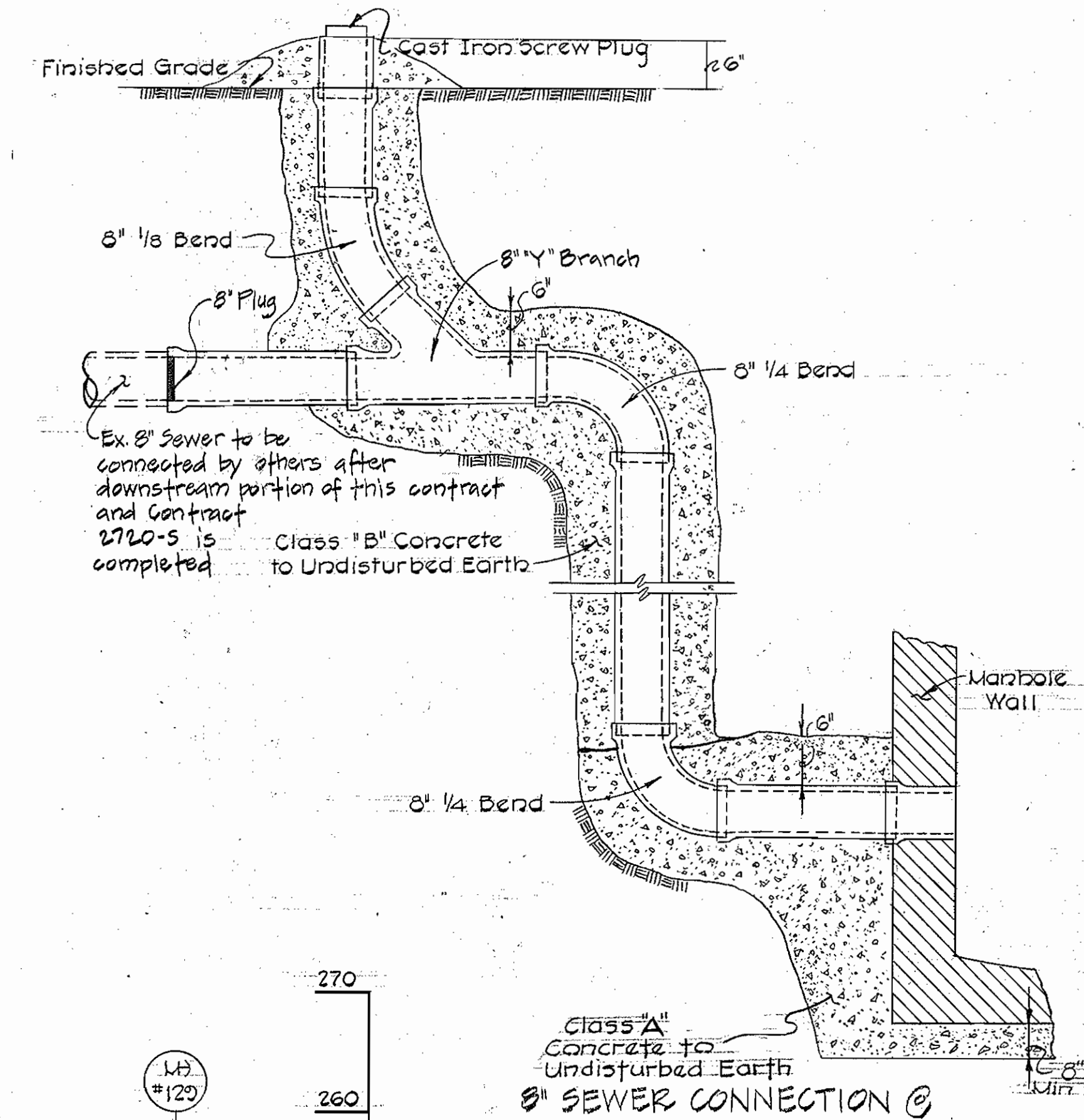
WS 721 S/6

GABION STRUCTURE DATA	
Letter Code of Size	Approximate Length Width and Depth
C	12' x 3' x 3'
F	12' x 3' x 1'-6"

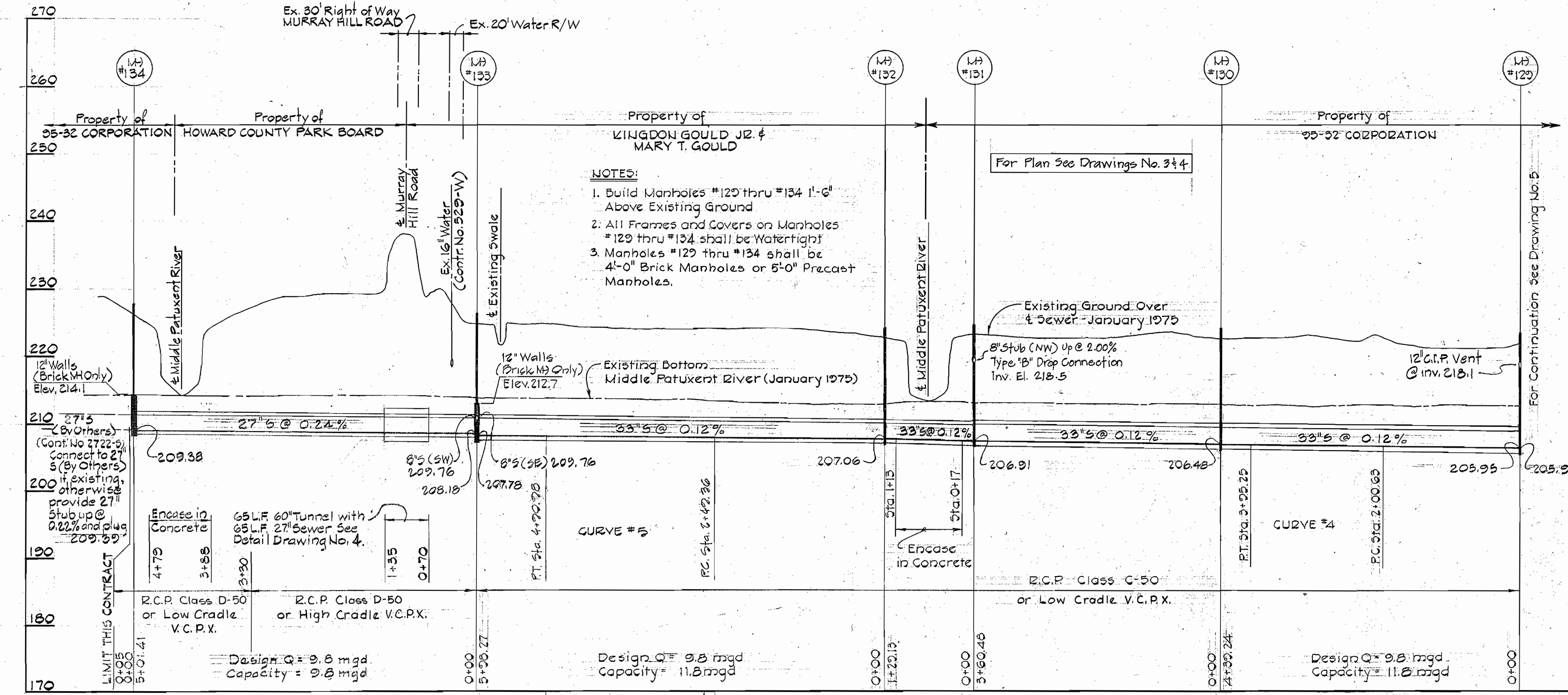


- NOTES:**
1. Maximum Allowable Gabion Slope 1:1
  2. Gabions shall be Series 328 Heavy Duty Galvanized Gabions as manufactured by Maccaferri Gabions Inc., Delkaert Gabions as manufactured by Terra Aqua Conservation or equal.

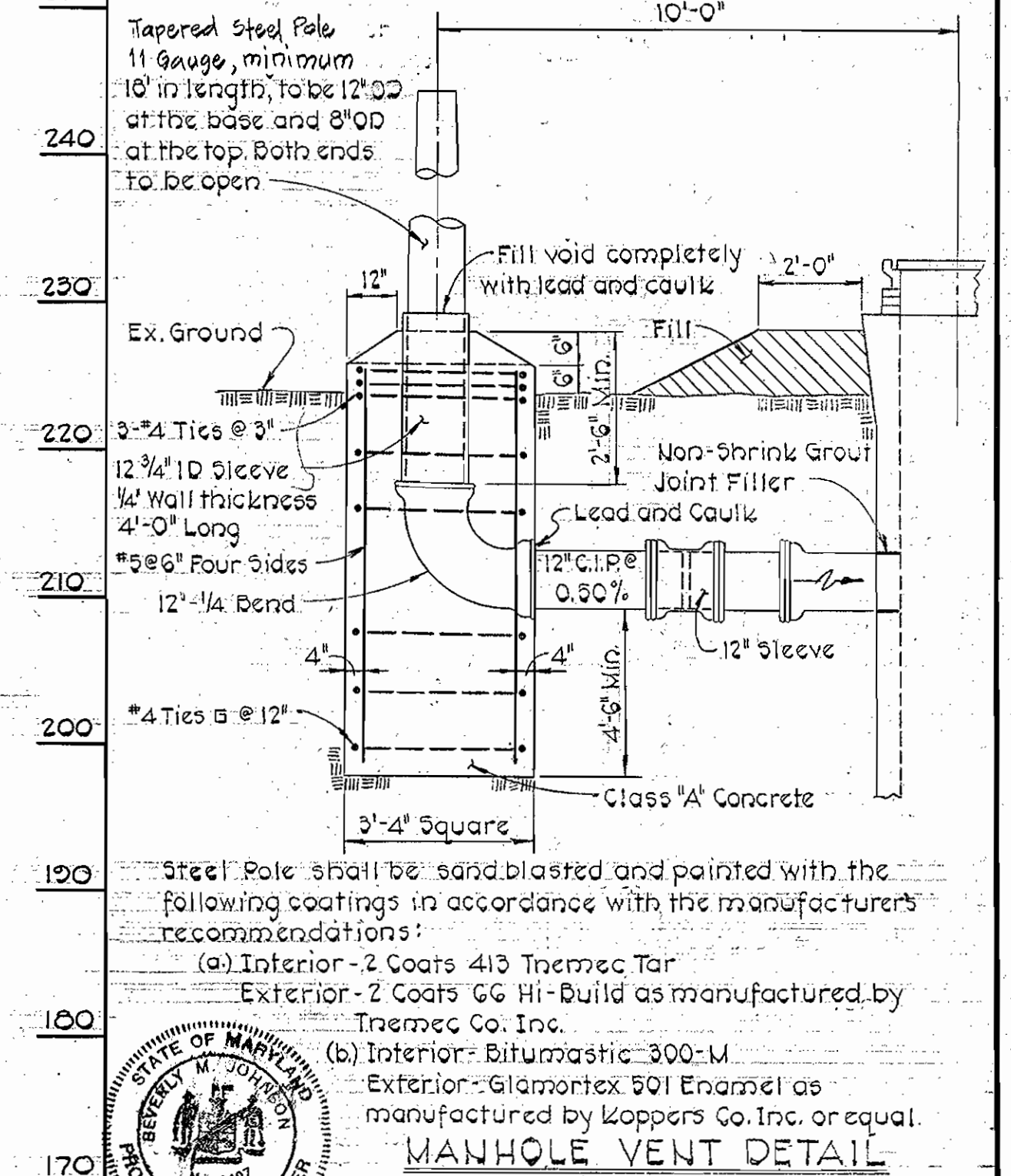
**GABION DETAIL**  
No Scale



**SEWER CONNECTION @ MANHOLE NO. 118**  
No Scale



**PROFILE**  
HORIZ: 1"=100'  
VERT: 1"=10'



**MANHOLE VENT DETAIL**  
No Scale  
Contract No. 2721-S  
Capital Project S-4-6047  
Middle Patuxent Interceptor  
I-95 To Murray Hill Road

**PURDUM & JESCHKE**  
ENGINEERS  
1023 N. CALVERT ST.  
BALTIMORE, MARYLAND

**DEPARTMENT OF PUBLIC WORKS**  
HOWARD COUNTY, MARYLAND  
DATE: 6-25-77  
DATE: 6-27-77

**CONTRACT NO. 721-S**  
**CAPITAL PROJECT NO. S-4-6047**

PROFILES AND DETAILS

MIDDLE PATUXENT INTERCEPTOR  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY, MARYLAND

**DRAWING NO. 6 OF 6**  
**SCALE AS SHOWN**  
DESIGNED: JAM  
DRAFTED: ARZ  
CHECKED: TAF

"AS BUILT" - AUGUST 1, 1980