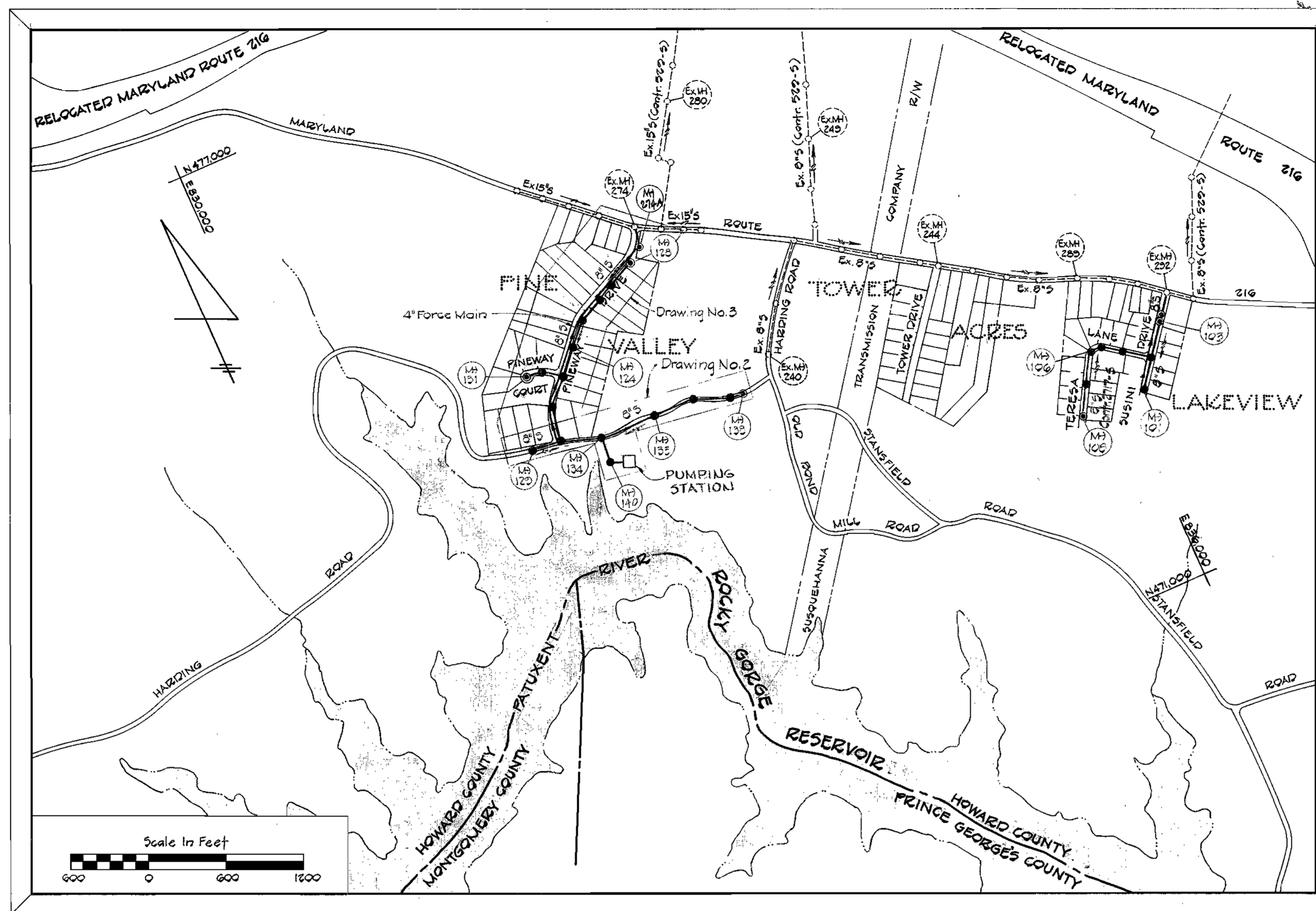


INDEX OF DRAWINGS	
NO.	DESCRIPTION
1	Title Drawing
2	Sewer Plans
3	Sewer Plans
4	Sewer Profiles
5	Site Plan
6	Drainage & Sediment Control Map
7	Mechanical Plans & Details
8	Mechanical Sections & Details
9	Structural Plans & Details
10	Structural Sections & Details
11	Misc. Details
12	Electrical Plans & Details
13	Electrical Details

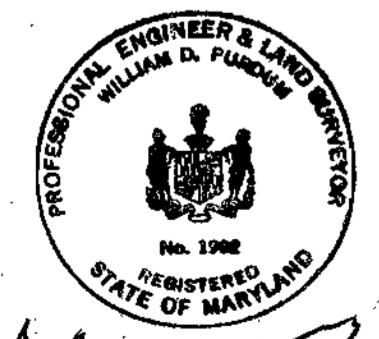
QUANTITIES				
Item	Unit	Estimated	"As Bui.:"	Materials
8" Sewer	L.F.	3,815		
6" Sewer	L.F.	245		
4" F.M.	L.F.	2,152		
Manholes	V.F.	207		

Type of Building	S.F.D.
Number of Lots	41
Number of Sewer House Conn.	41
Drainage Area	Patuxent



- GENERAL NOTES
- Approximate locations of existing utilities are 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 prices bid for excavation and backfill for sewer mains.
  - Contractor shall notify the following utilities or agencies at least five (5) days before starting work shown on these plans.
    - Baltimore Gas & Electric Company - Underground Electric Distribution Engineering - "Damage Control" - 234-5691
    - Baltimore Gas & Electric Company - Underground Gas Distribution Engineering - 234-5533
    - Chesapeake and Potomac Telephone Company - 725-9976
    - Miss Utility - 1-559-0100 (collect)
  - Clear all utilities by a minimum of 6". 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 for sewer mains.
  - All pipe elevations shown are invert (I) elevations.
  - 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 (RCR-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. Trees located within the construction strips are not to be removed by the Contractor.
  - 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 prices bid for excavation and backfill for sewer mains.
  - Place regulation "Men Working" and warning signs as required to comply with Maryland State Highway Administration Manual of Traffic Control for Highway Construction & Maintenance Operations.
  - All sewer mains shall be C.S.P.X., V.C.P.X., or A.C.P. Class 2400 unless otherwise noted.
  - Force main shall be ductile iron pipe U.S.A. A21.51. (AWWA C151.76) in accordance with Section 8 of the specifications.
  - Buttress or anchor all force main fittings with concrete. For details see Standard Details bound in the specifications.
  - Horizontal and vertical controls are based on the Maryland State Grid Coordinate System.

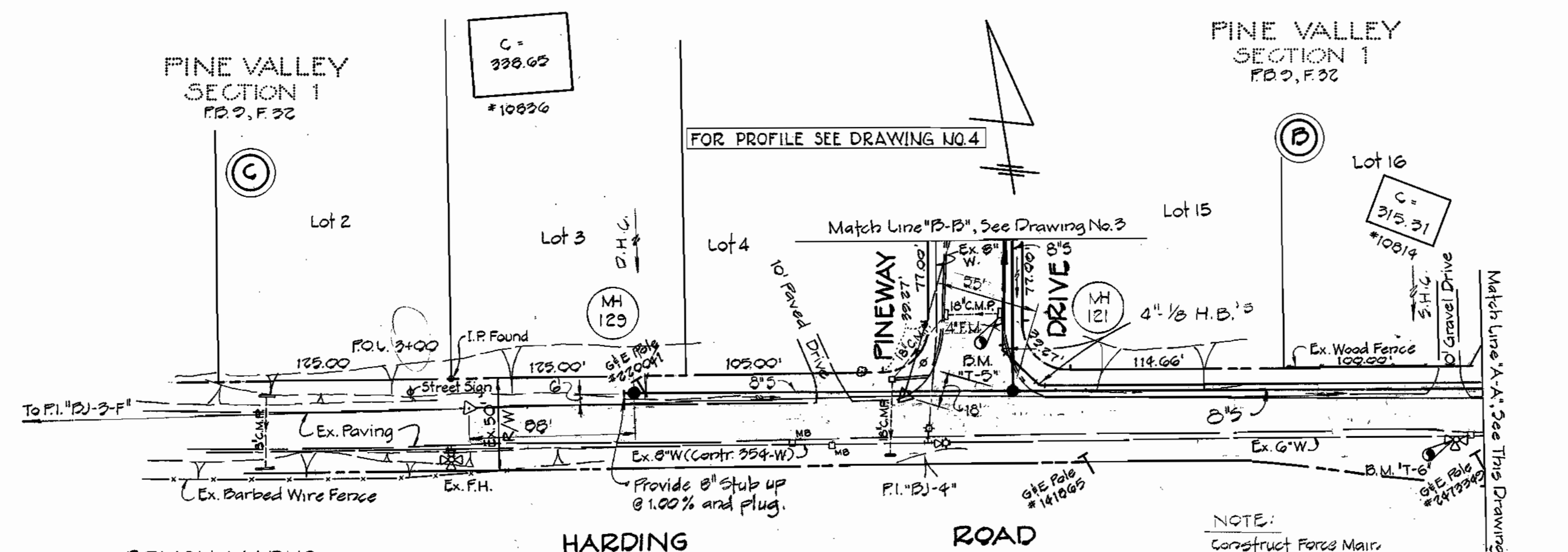
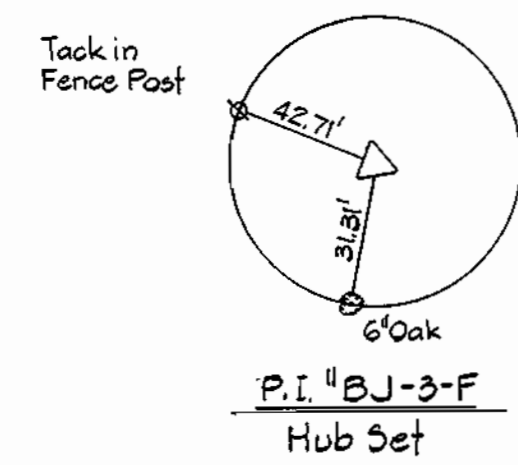
**CAPITAL PROJECT S-4-6049**  
**CONTRACT NO. 2719-S**  
**PINE VALLEY SANITARY SEWERS**  
**HOWARD COUNTY, MARYLAND**  
**DEPARTMENT OF PUBLIC WORKS**



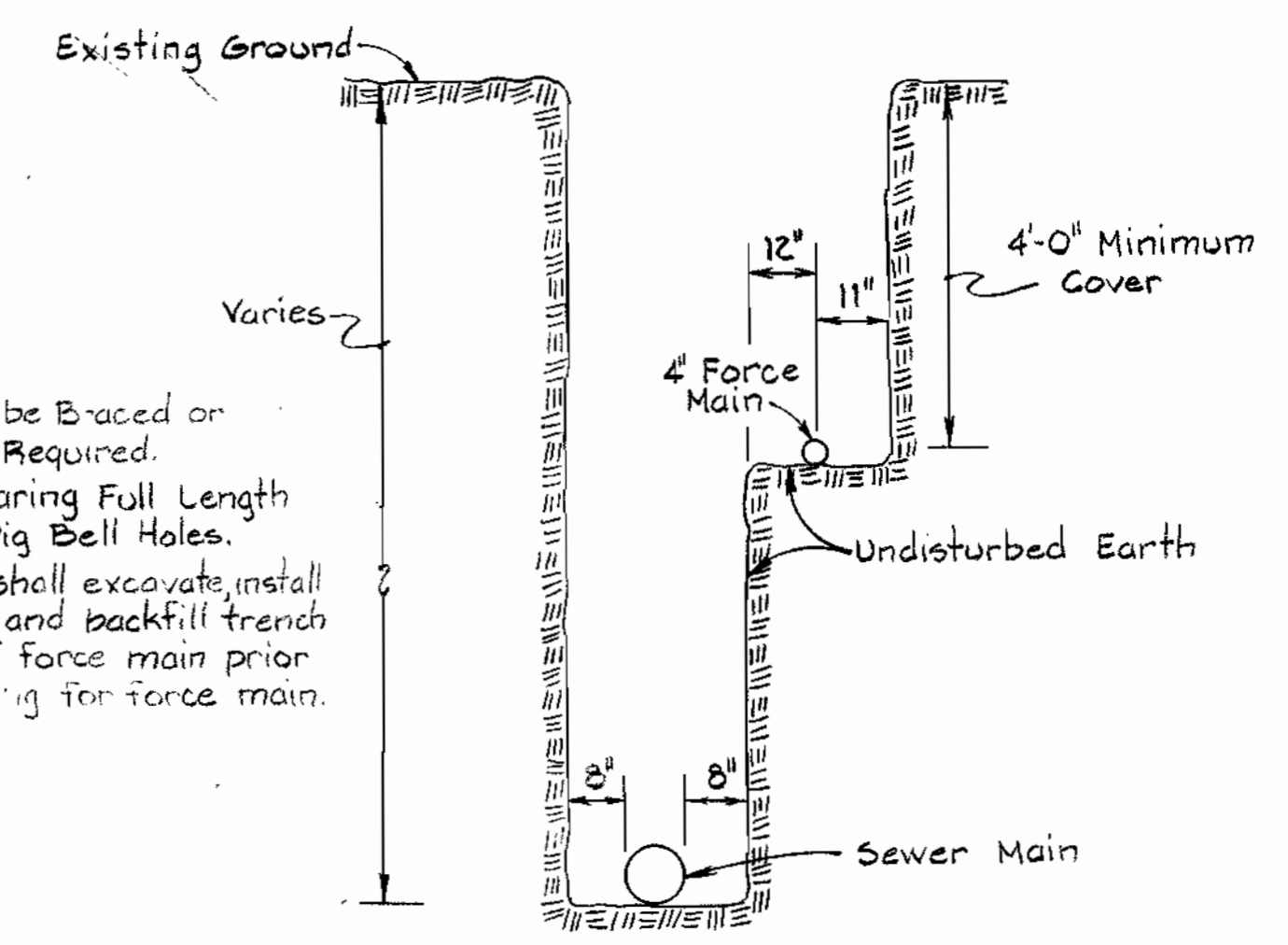
*William D. Purdum*

PURDUM & JESCHKE ENGINEERS 1023 N. CALVERT ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY MARYLAND <i>James L. ...</i> 2-7-80 DIRECTOR OF PUBLIC WORKS DATE	WASHINGTON SUBURBAN SANITARY COMMISSION FOR SANITARY SEWERS LOCATED ON W.S.S.C. PROPERTY <i>...</i> 12/31/81 PROJECT DEVELOPMENT DIVISION HEAD DATE	CONTRACT NO. 2719-S CAPITAL PROJECT NO. S-4-6049	LOCATION MAP FOR SANITARY SEWERS	PINE VALLEY SANITARY SEWERS ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND	DRAWING NO. 1 OF 13	SCALE 1" = 600'	MAP 219-39 Date: 10/26/79
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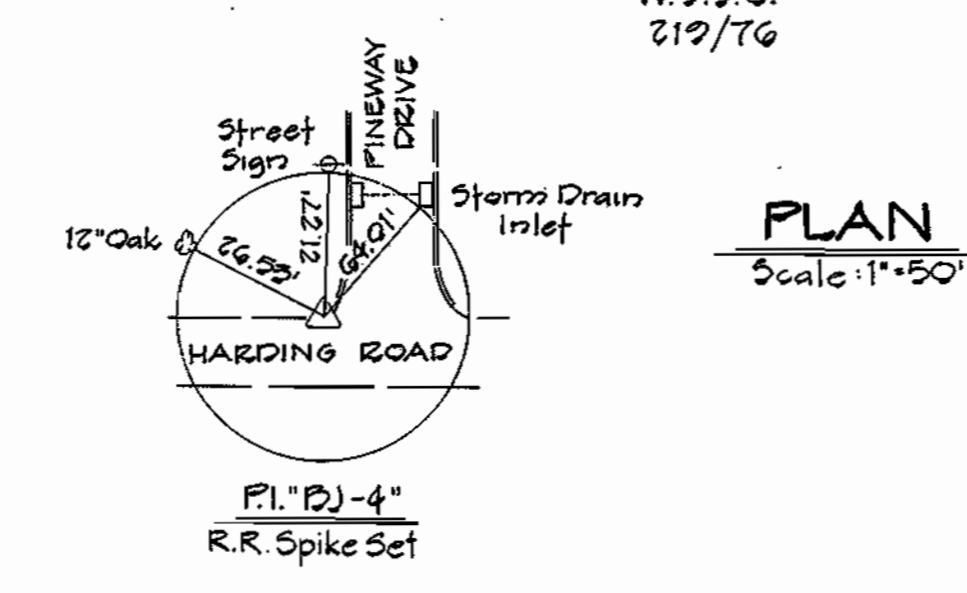
WS 719-S/1



- Notes:
1. Trench shall be Braced or Sheeted as Required.
  2. Provide Bearing Full Length of Barrel Dig Bell Holes.
  3. Contractor shall excavate, install sewer main and backfill trench to invert of force main prior to excavating for force main.



- BENCH MARKS**
- B.M. T-5' Elev. 315.44  
a Cut in Southwest corner of storm drain inlet 64' Northeast of P.I. BJ-4'
  - B.M. T-6' Elev. 313.17  
Road side bonnet bolt of fire hydrant 295' Southeast of P.I. BJ-4'
  - B.M. T-7' Elev. 336.06  
Top West end of concrete curb 27' Southeast of P.O.L. G+70, P.I. BJ-4' to P.I. BJ-5'
  - B.M. T-8' Elev. 344.41  
Railroad Spike in C/P #7, 29' South-west of P.O.L. G+00, P.I. BJ-4 to P.I. BJ-5'
  - B.M. T-9' Elev. 370.00  
Road side bonnet bolt of fire hydrant 50' West of P.I. BJ-5'
  - B.M. T-10' Elev. 412.07  
West bonnet bolt of fire hydrant 158' Northeast of P.I. BJ-6'

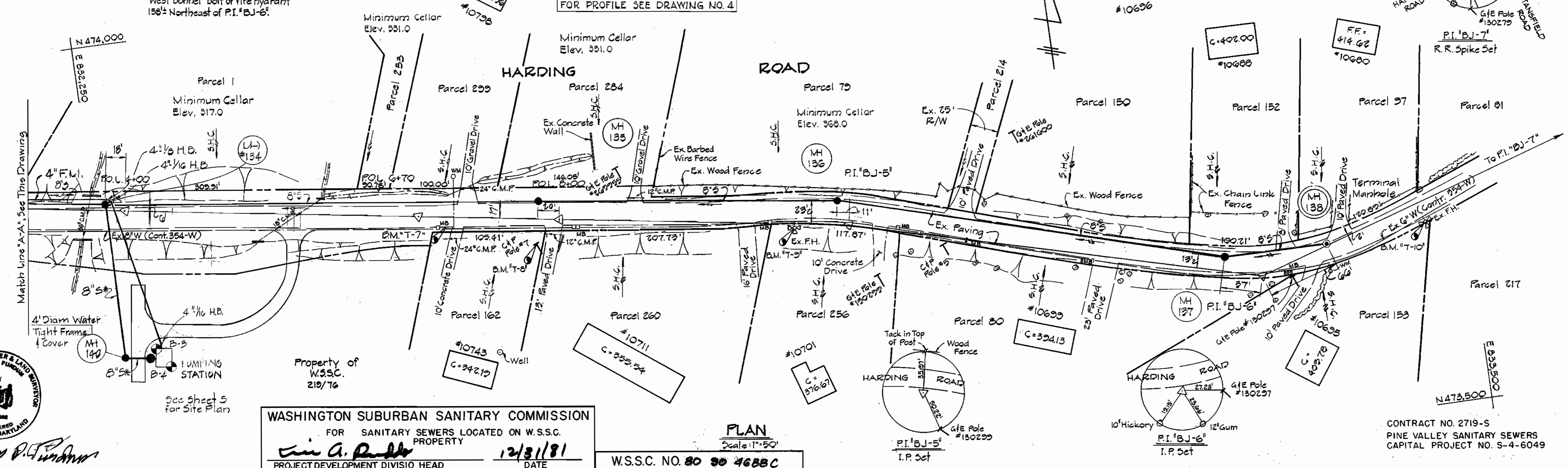


**PLAN**  
Scale: 1"=50'

NOTE:  
Construct Force Main and Sewer Main in Common Trench. See Detail This Sheet.

8" Sewer = Eligible (Federal Grant Funds)

**FORCE MAIN AND SEWER MAIN IN COMMON TRENCH**  
No Scale



WASHINGTON SUBURBAN SANITARY COMMISSION  
FOR SANITARY SEWERS LOCATED ON W.S.S.C. PROPERTY  
*W. A. Purdum*  
PROJECT DEVELOPMENT DIVISION HEAD DATE 12/31/81

W.S.S.C. NO. 80 90 4688C  
CONTRACT NO. 719-S  
CAPITAL PROJECT NO. S-4-6049

**PLAN & DETAILS FOR SANITARY SEWERS**

PINE VALLEY SANITARY SEWERS  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY, MARYLAND

CONTRACT NO. 2719-S  
PINE VALLEY SANITARY SEWERS  
CAPITAL PROJECT NO. S-4-6049

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

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
2-13-80  
DIRECTOR OF PUBLIC WORKS DATE

CONTRACT NO. 719-S  
CAPITAL PROJECT NO. S-4-6049

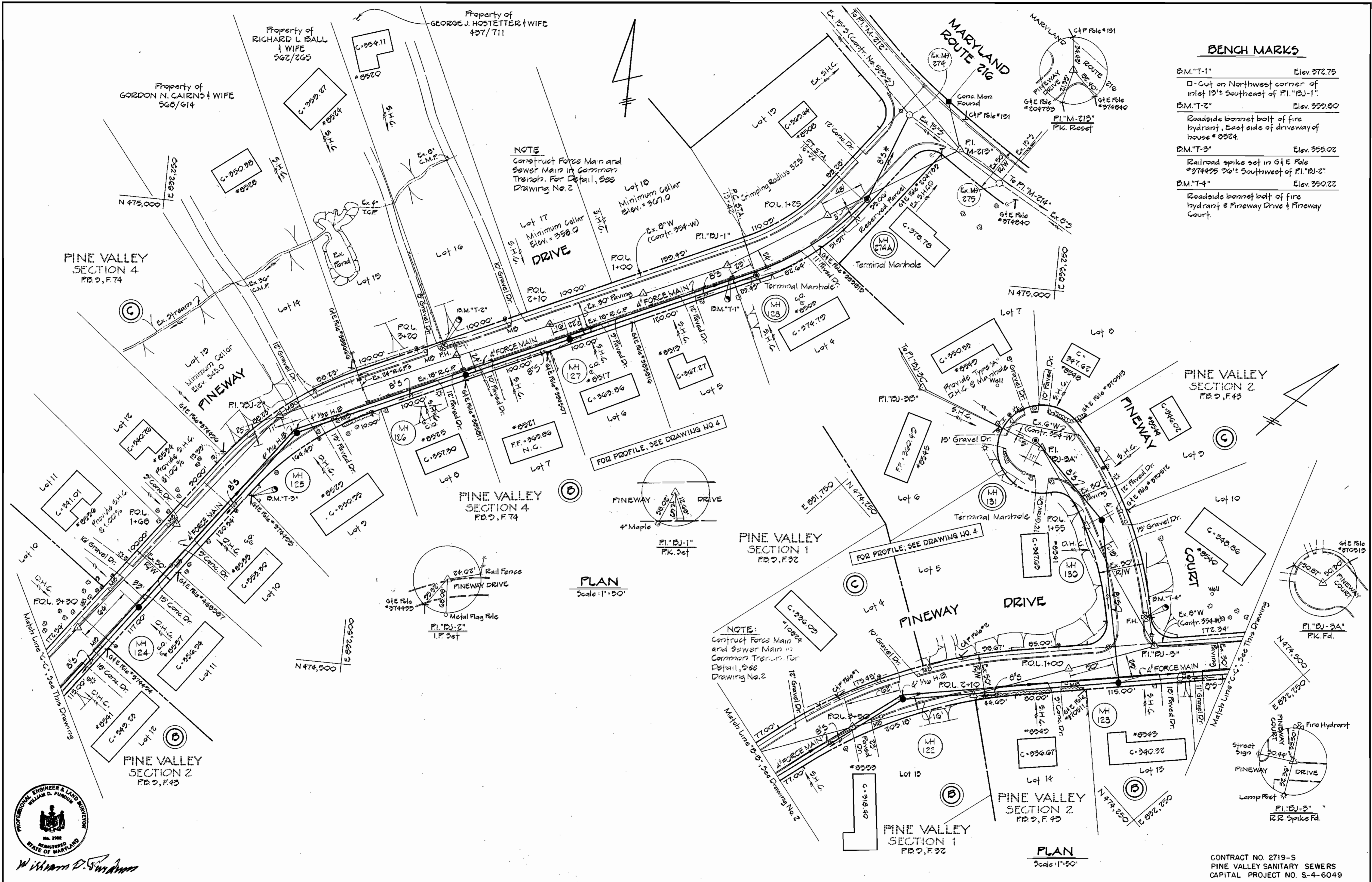
PLAN & DETAILS FOR SANITARY SEWERS

PINE VALLEY SANITARY SEWERS  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY, MARYLAND

DRAWING NO. 2 OF 13  
SCALE AS SHOWN  
DESIGNED: REP  
DRAFTED: TAM  
CHECKED: EDC  
DATE: 10/26/79

WS 719-S/2

WS 719-S/3

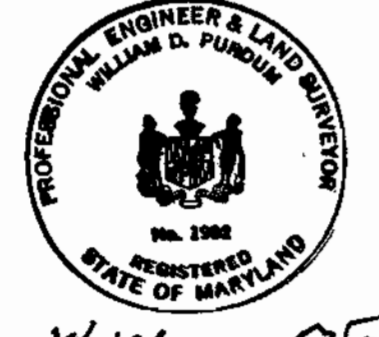


**BENCH MARKS**

B.M."T-1"	Elev. 372.75
□ Cut on Northwest corner of inlet 12" Southeast of P.I."BJ-1"	
B.M."T-2"	Elev. 352.80
Roadside bonnet bolt of fire hydrant, East side of driveway of house # 8524.	
B.M."T-3"	Elev. 355.02
Railroad spike set in G.E. Pole #374425 26" Southwest of P.I."BJ-2"	
B.M."T-4"	Elev. 350.22
Roadside bonnet bolt of fire hydrant & Pineway Drive & Pineway Court.	

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

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



William D. Purdum

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

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY MARYLAND  
CHIEF BUREAU OF UTILITIES  
DATE: 2-13-80  
DIRECTOR OF PUBLIC WORKS

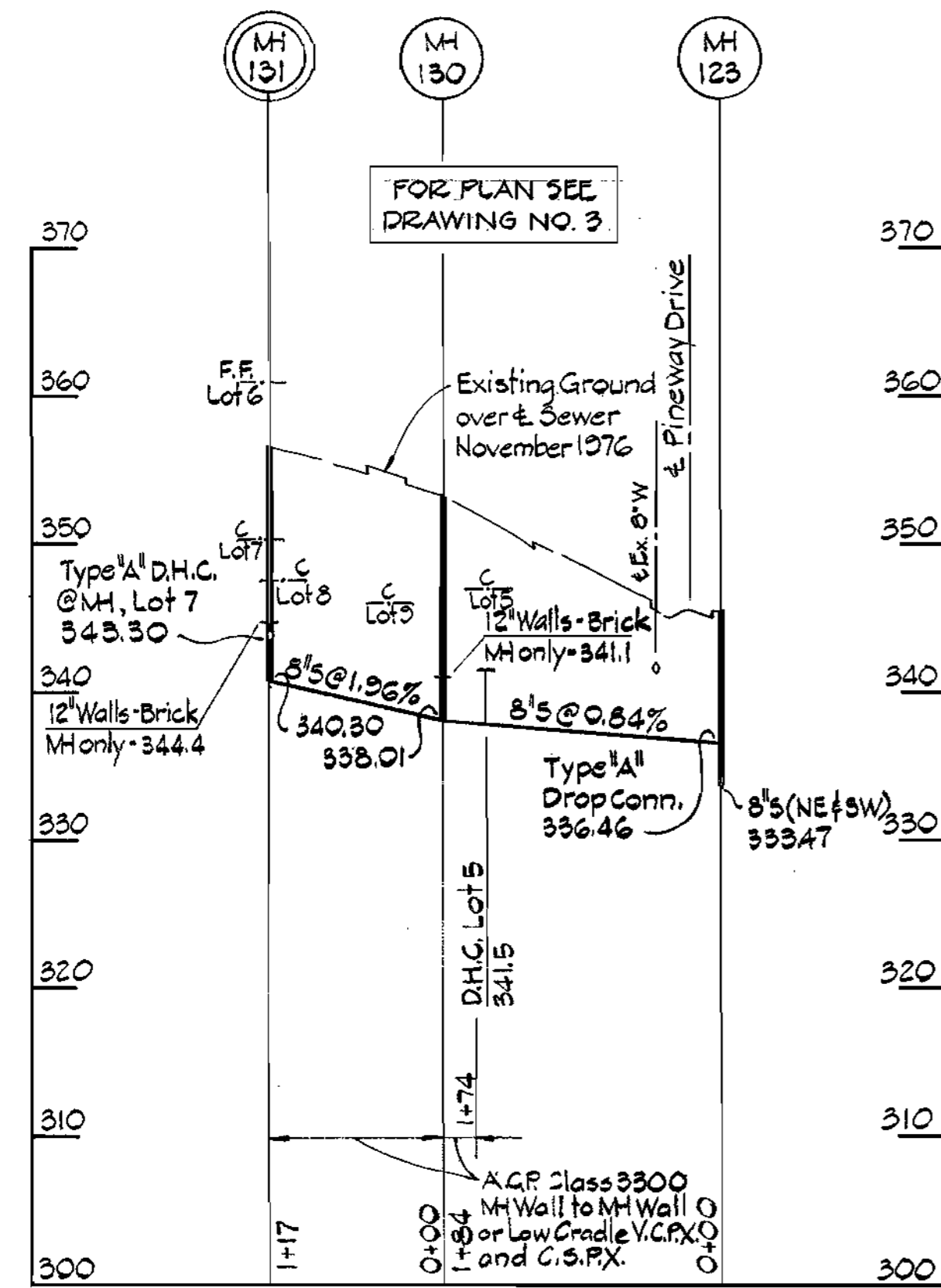
CONTRACT NO. 2719-S  
CAPITAL PROJECT NO. S-4-6049

PLAN FOR  
SANITARY SEWERS

PINE VALLEY SANITARY SEWERS  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY, MARYLAND

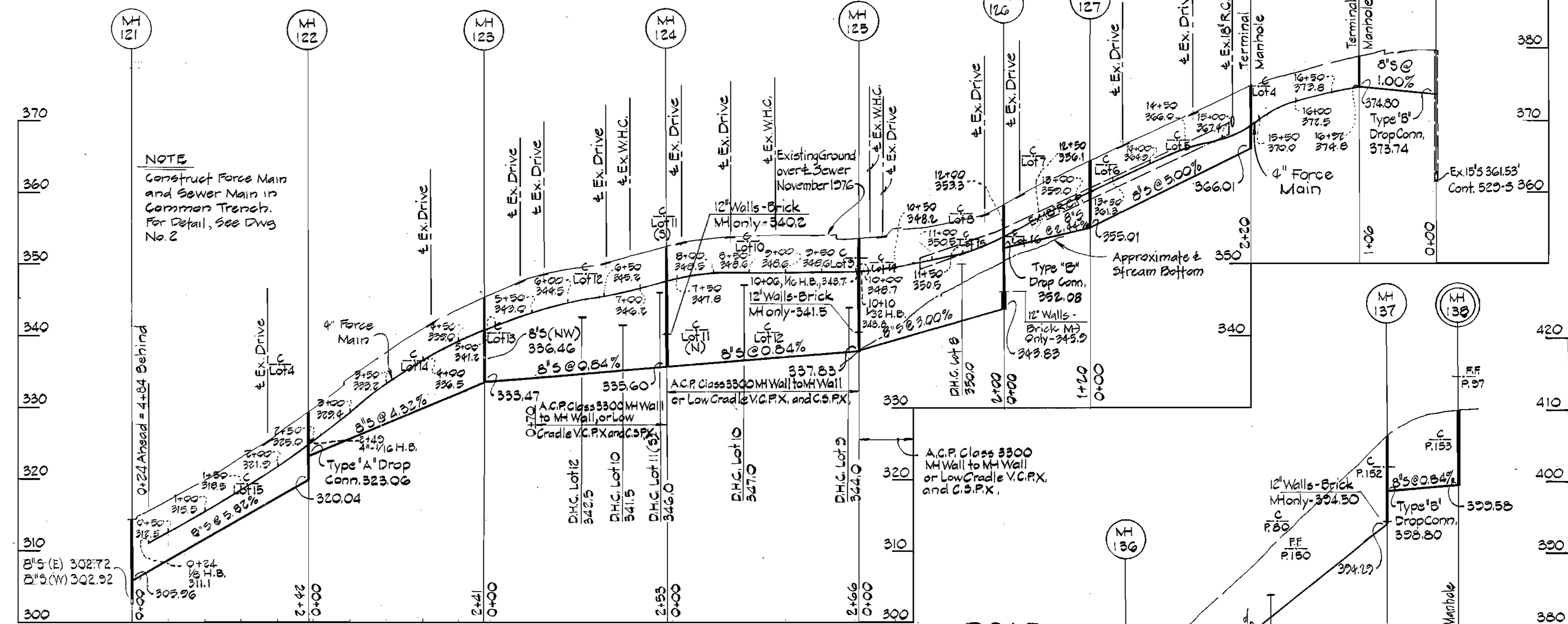
CONTRACT NO. 2719-S  
PINE VALLEY SANITARY SEWERS  
CAPITAL PROJECT NO. S-4-6049

PINEWAY COURT



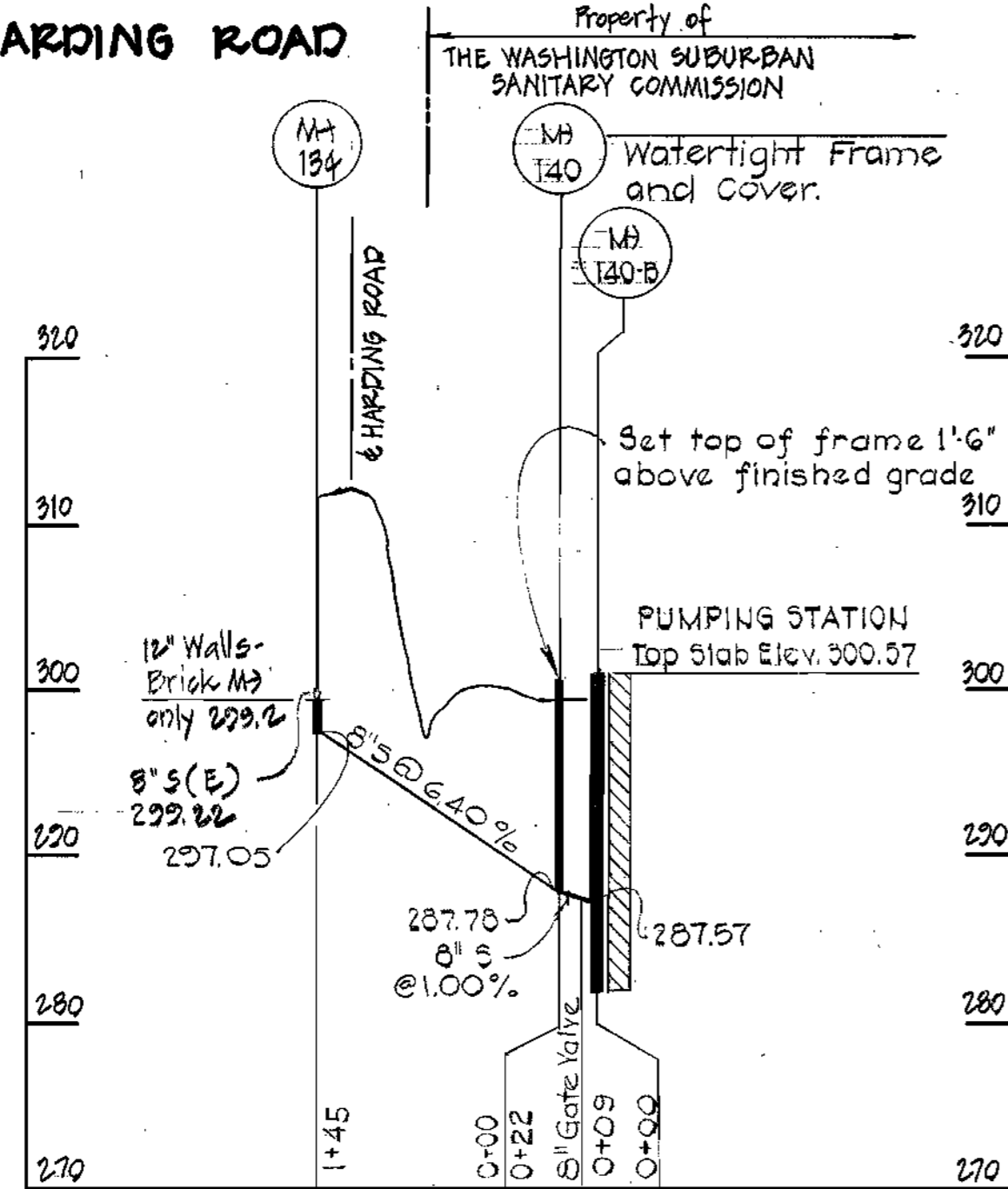
FOR PLAN SEE DRAWINGS NO. 2 & 3

PINEWAY DRIVE



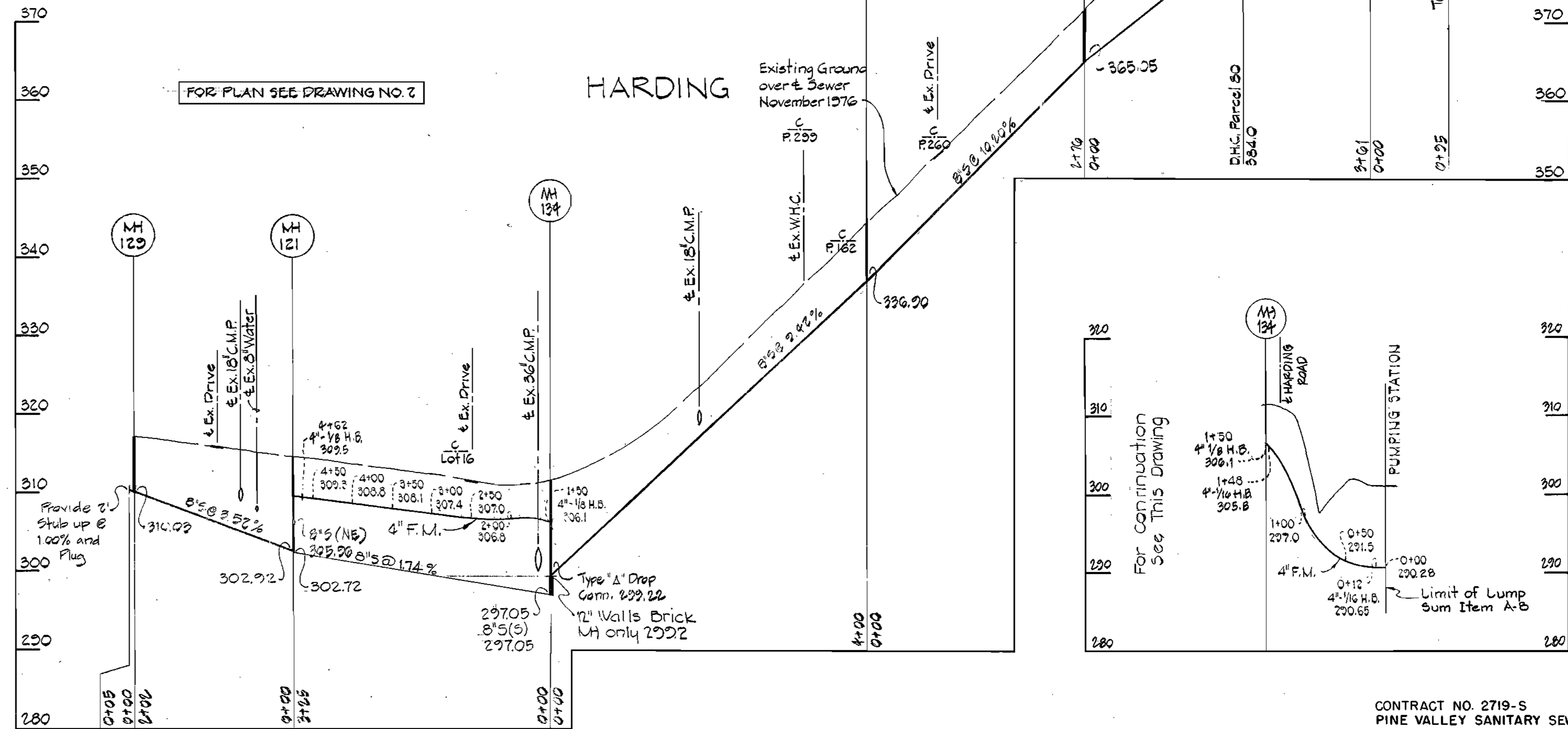
FOR PLAN SEE DRAWING NO. 2

HARDING ROAD



FOR PLAN SEE DRAWING NO. 2

HARDING ROAD



PROFILES

Scale: Horiz: 1"=100'  
Vert: 1"=10'

W.S.S.C. NO. 80 50 4688 C

WASHINGTON SUBURBAN  
SANITARY COMMISSION

FOR SANITARY SEWERS  
LOCATED ON W.S.S.C. PROPERTY

PROJECT DEVELOPMENT DIV. HEAD DATE



William D. Purdum

W. A. Purdum 12/31/80

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

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
2-13-80

CONTRACT NO. 2719-S  
CAPITAL PROJECT NO. S-4-6049

PROFILES  
FOR SANITARY SEWERS

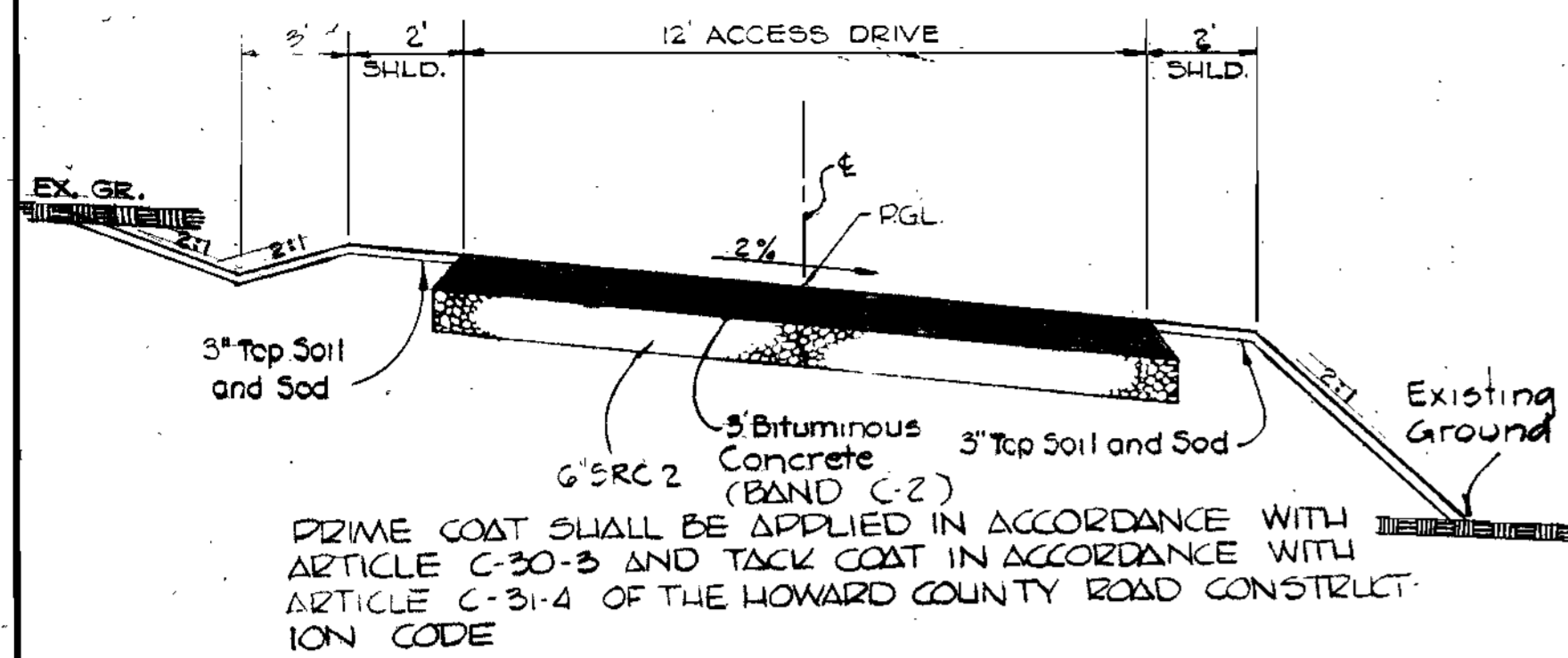
PINE VALLEY SANITARY SEWERS  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY, MARYLAND

DRAWING NO. 4  
OF 13

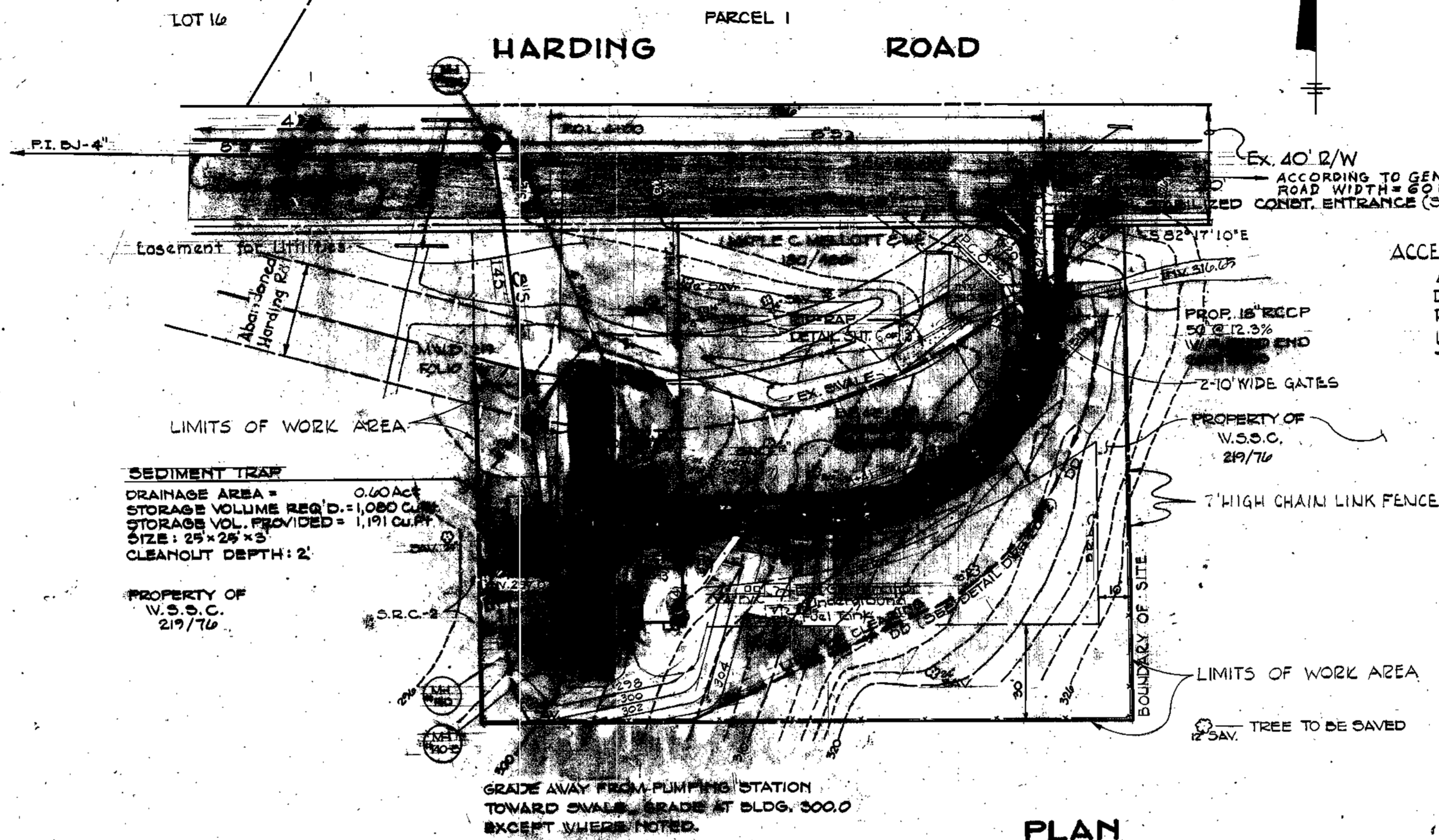
SCALE AS SHOWN  
Designed: REF  
Drafted: TAW  
Checked: EDC  
Date: 10/24/79

CONTRACT NO. 2719-S  
PINE VALLEY SANITARY SEWERS  
CAPITAL PROJECT NO. S-4-6049

WS 719-5/4



TYPICAL ACCESS DRIVE SECTION  
Not to Scale



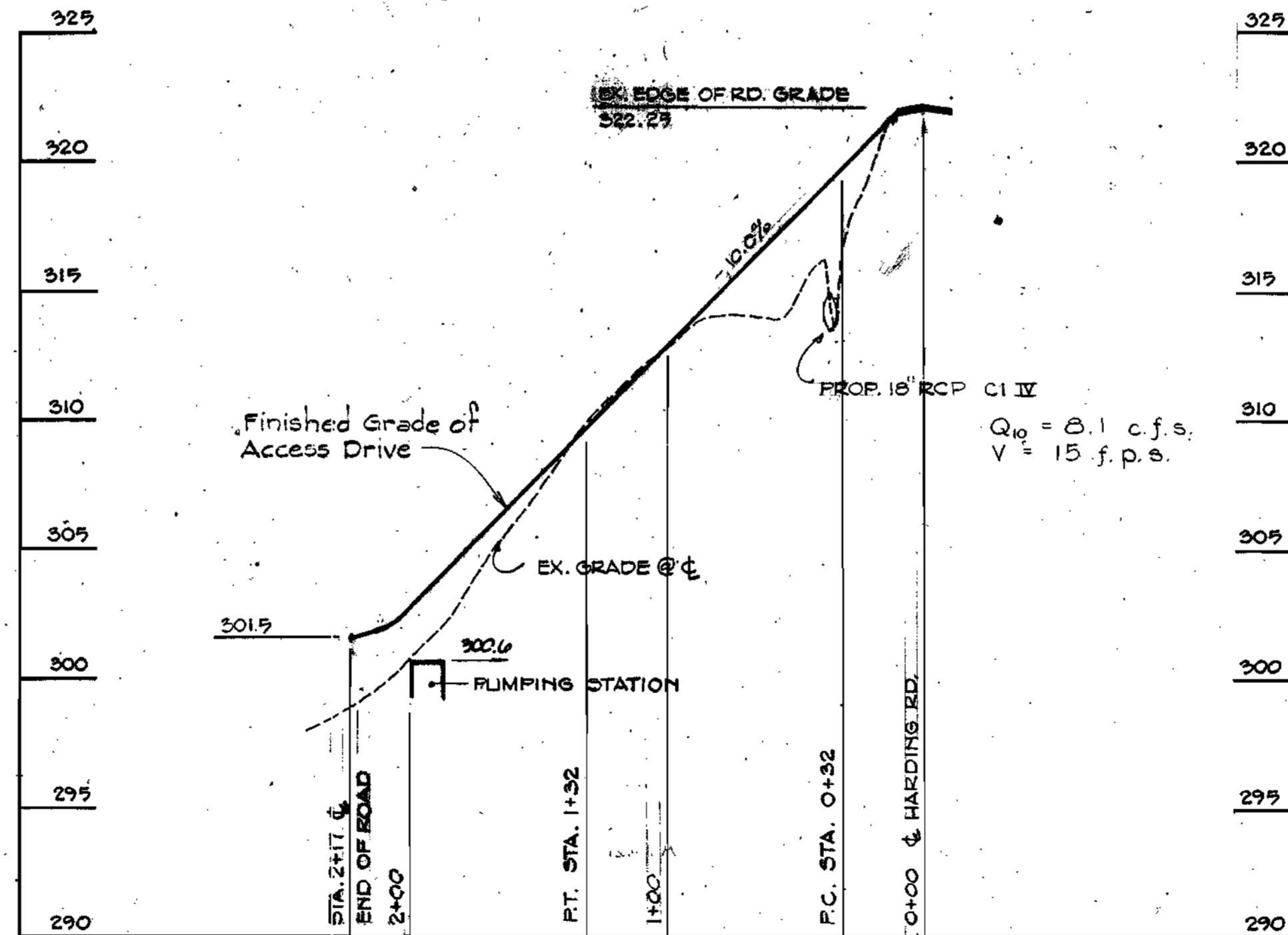
PLAN  
SCALE: 1" = 30'

SEDIMENT TRAP  
DRAINAGE AREA = 0.40 AC  
STORAGE VOLUME REQ'D = 1,080 CU FT  
STORAGE VOL. PROVIDED = 1,191 CU FT  
SIZE: 25' x 25' x 5'  
CLEANOUT DEPTH: 2'

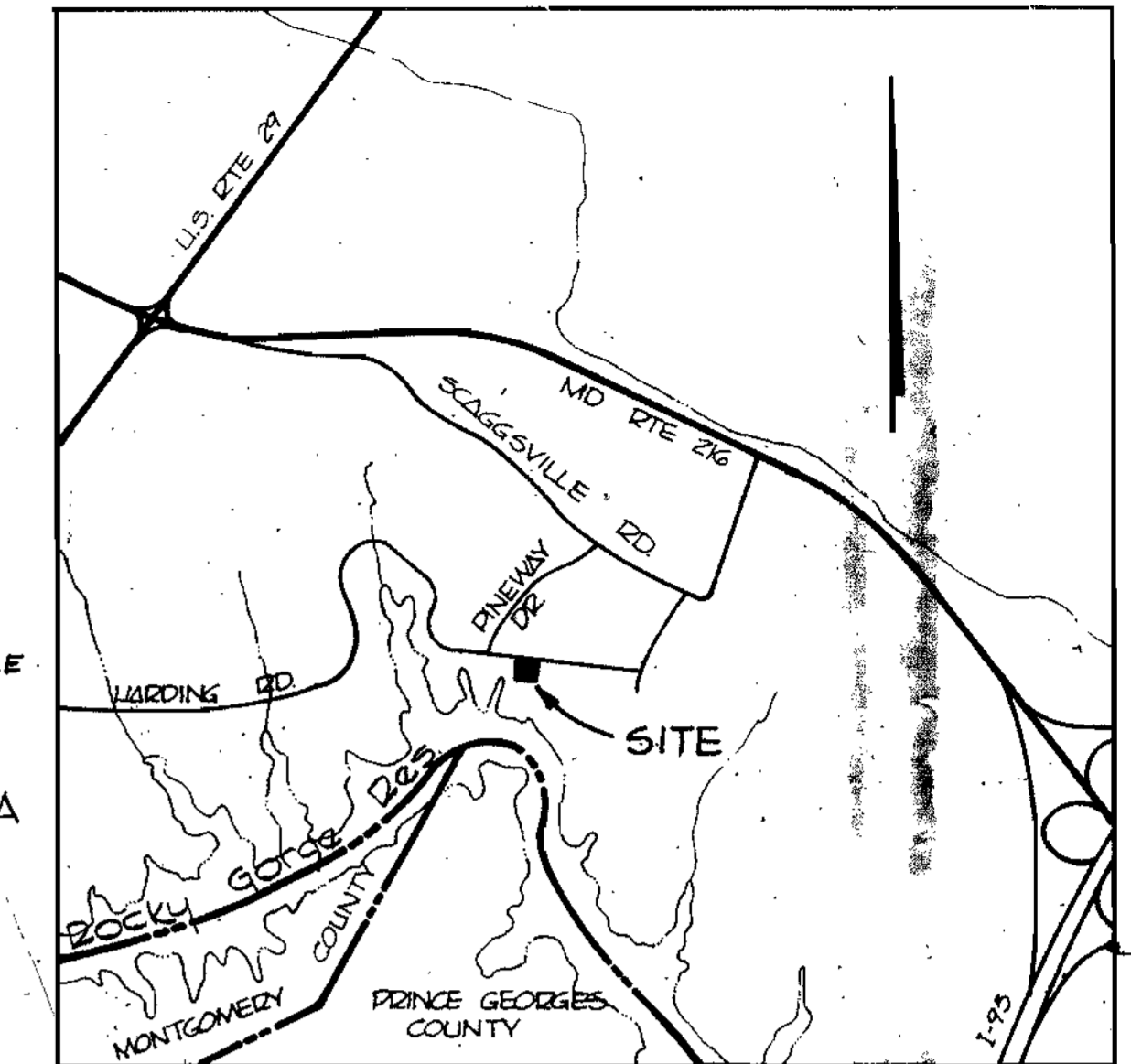
PROPERTY OF  
W.S.S.C.  
219/76

ACCESS ROAD & CURVE DATA  
Δ = 90°00'00"  
D<sub>c</sub> = 81°51'00"  
R = 70.00'  
L = 109.96'  
T = 70.00'

GRADE AWAY FROM PUMPING STATION  
TOWARD SMALLER GRADE AT BLDG. 300.0  
EXCEPT WHERE NOTED.



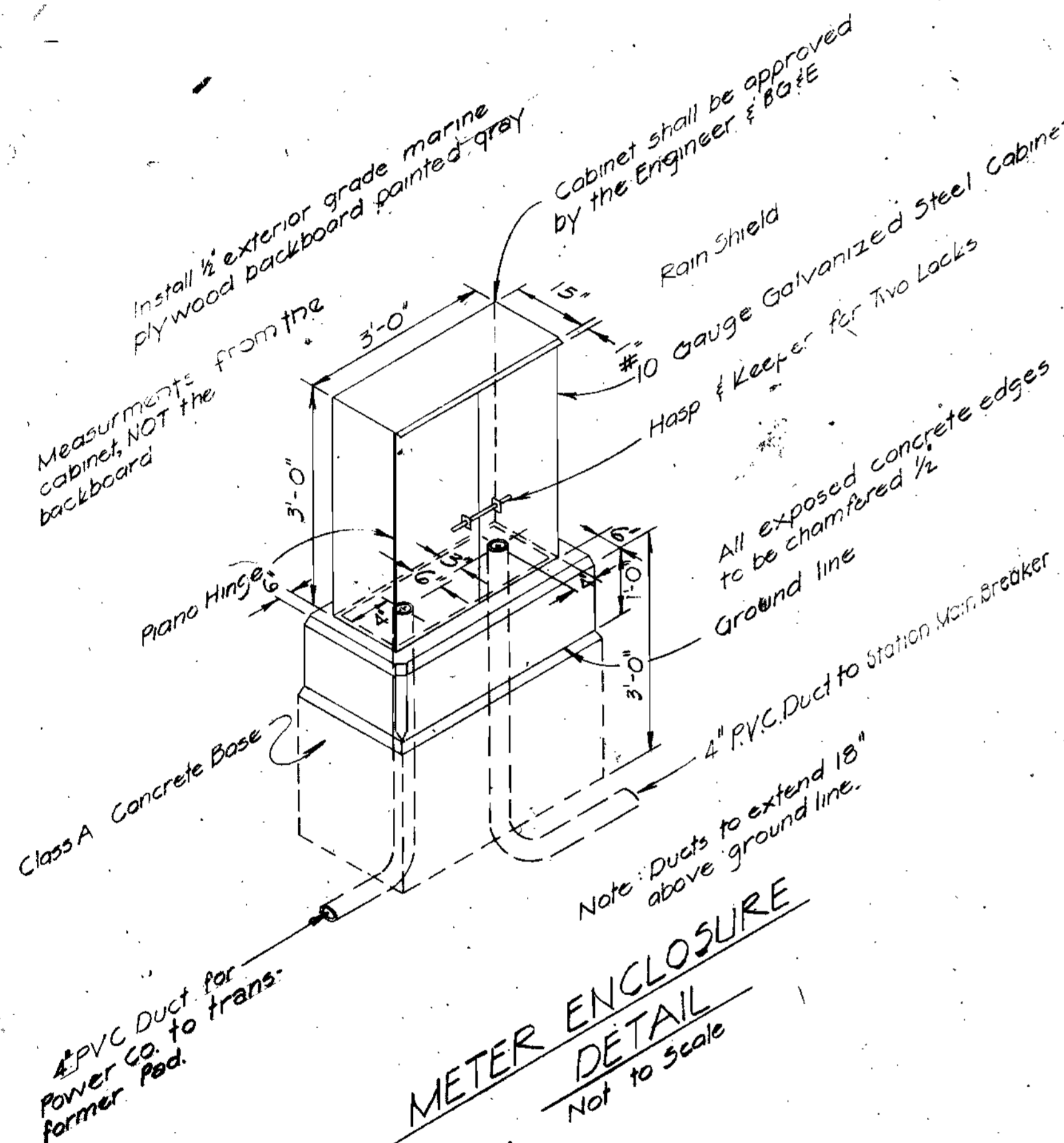
PROFILE  
ACCESS DRIVE  
SCALE: HOR. 1" = 50'  
VERT. 1" = 5'



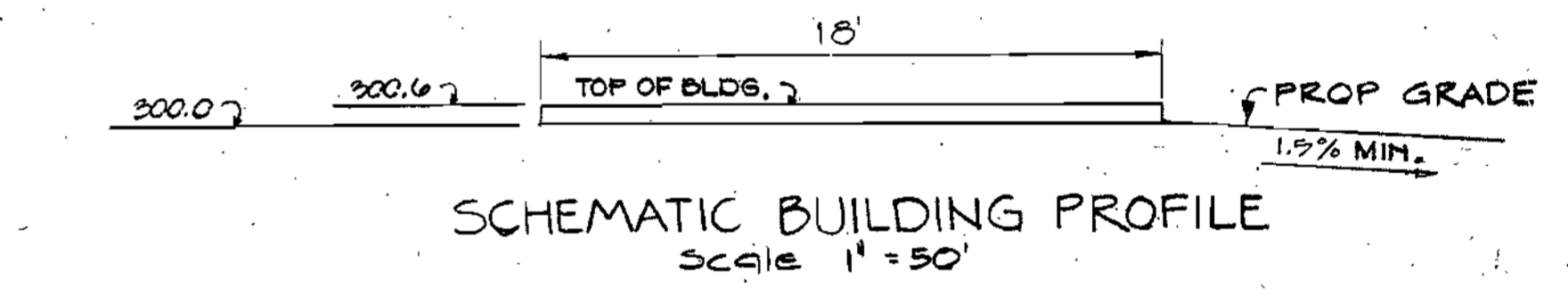
VICINITY MAP  
SCALE 1" = 2000'

SITE ANALYSIS

1. Area of Site	0.515 ac
2. Present Zoning	R-20
3. Disturbed Area	0.24 ac ±
4. Paved Area	0.10 ac ±
5. Proposed Use	Pumping Station
6. Parking Data:	
Number of full time employees	None
Maximum no. of service vehicles at any one time	1
No. of spaces required	1
No. of spaces provided	1

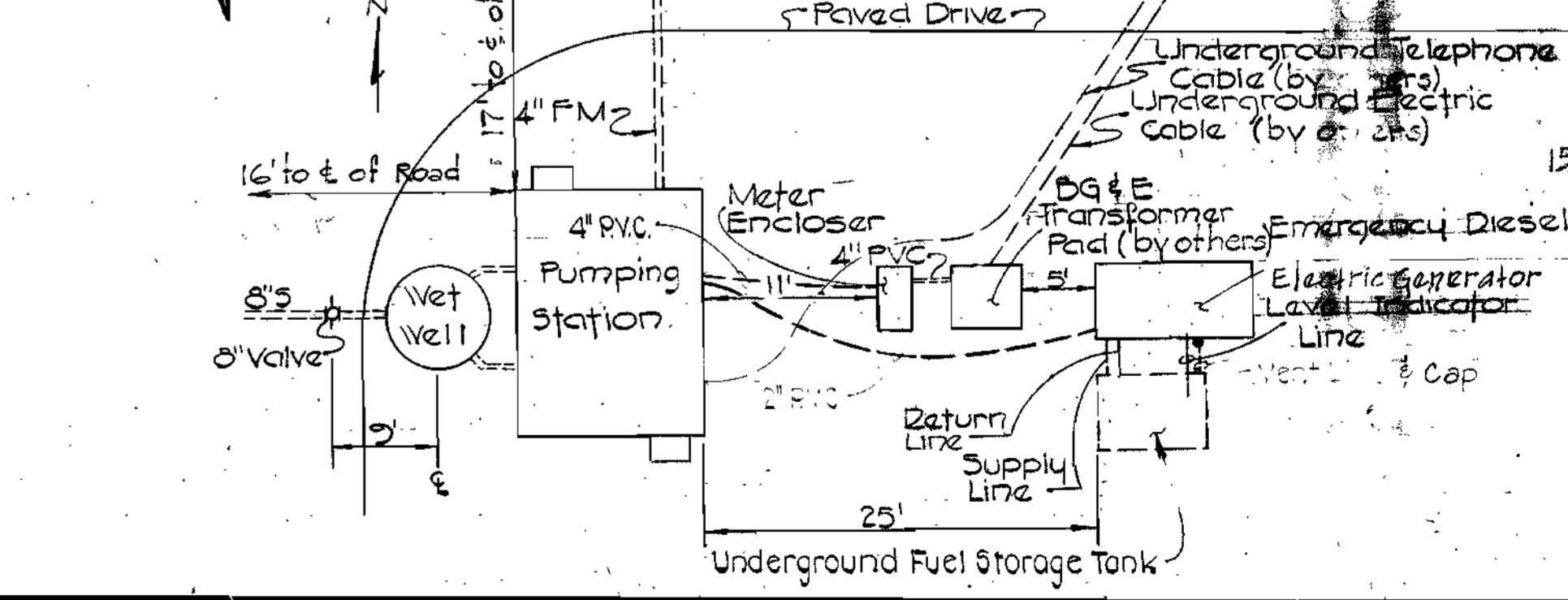


METER ENCLOSURE  
DETAIL  
Not to Scale



SCHEMATIC BUILDING PROFILE  
SCALE 1" = 50'

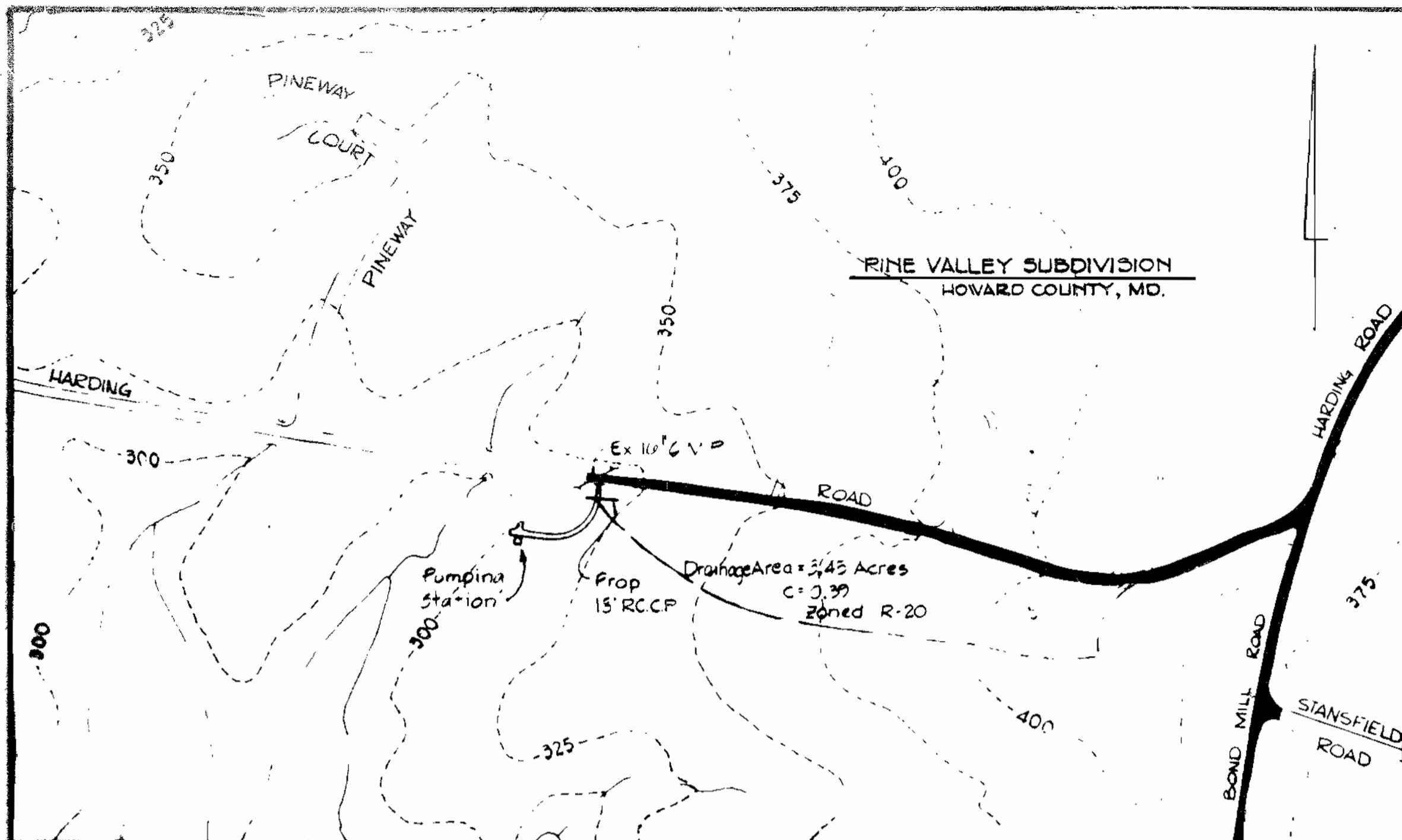
APPROVED  
DIVISION OF LAND DEVELOPMENT  
HOWARD COUNTY, MARYLAND  
DATE 4-8-80  
*J. W. M.*



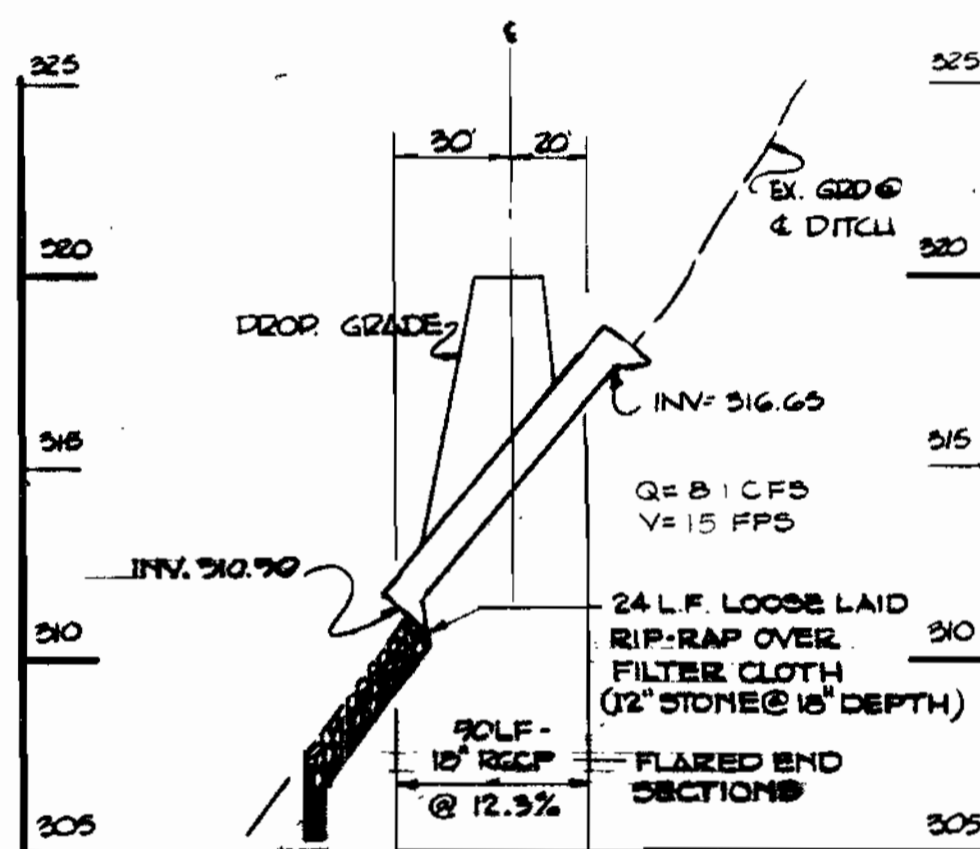
- GENERAL NOTES
- Total Area of Property: 0.515 ac
  - Drawing and page numbers shown herein are referenced to the Howard County Road Construction Code and Standard Specifications, dated August 1968.
  - The location of existing utilities shown herein are based on the latest available information. The Contractor shall, however, determine exact location before making any connections.
  - The Contractor shall notify "Miss Utility" at least three days prior to beginning any work shown hereon. (Call Collect 1-999-0100)
  - All workmanship and materials shall be in accordance with The Howard County Road Construction Code and Standard Specifications unless otherwise specified.
  - For profiles and construction data of The 42 inch Sanitary and 4 inch Force Main see sheets of the contract drawings.

<p>APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.</p> <p><i>J. W. M.</i> 2-28-80 COUNTY HEALTH OFFICER DATE</p>	<p>HOWARD SOIL CONSERVATION DISTRICT REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS</p> <p><i>J. W. M.</i> 2-25-80 SIGNATURE DATE</p> <p>THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EMISSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.</p> <p>APPROVED: <i>J. W. M.</i> 2-28-80 HOWARD SOIL CONSERVATION DISTRICT DATE</p>	<p>W.S.S.C. NO. 80 50 4688C</p> <p>WASHINGTON SUBURBAN SANITARY COMMISSION</p> <p>FOR SANITARY SEWERS LOCATED ON W.S.S.C. PROPERTY</p> <p><i>J. W. M.</i> 12/31/81 PROJECT DEVELOPMENT DIV. HEAD DATE</p>
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<p><b>PURDUM &amp; JESCHKE</b> CONSULTING ENGINEERS LAND SURVEYORS</p> <p>1023 North Calvert Street Baltimore, Maryland 21202 301/837-0194</p>	<p>APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.</p> <p><i>J. W. M.</i> 4/18/80 CHIEF BUREAU OF UTILITIES DATE</p> <p><i>J. W. M.</i> 2-6-80 CHIEF BUREAU OF ENGINEERING DATE</p> <p>DIRECTOR OF PUBLIC WORKS DATE</p>	<p>APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING</p> <p><i>J. W. M.</i> 8-4-80 PLANNING DIRECTOR DATE</p> <p><i>J. W. M.</i> 8-4-80 CHIEF DIVISION OF LAND DEVELOPMENT DATE</p>	<p>DEVELOPER</p> <p>I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS DEEMED NECESSARY. DEVIATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD SOIL CONSERVATION DISTRICT.</p> <p><i>J. W. M.</i> 2-13-80 DATE</p>	<p>PROFESSIONAL ENGINEER</p> <p>I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND HONORABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.</p> <p><i>J. W. M.</i> 11/2/79 DATE</p>	<p>HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS PROJECT S 4 6049 CONTRACT 2719 S.</p> <p><b>PINE VALLEY SANITARY SEWER PINE VALLEY PUMPING STATION</b></p> <p>SITE DEVELOPMENT PLAN</p> <p>ELECTION DISTRICT NO. 6 HOWARD COUNTY, MD TAX MAP 46 PARCEL AS SHOWN</p> <p>DESIGNED: <i>J. W. M.</i> DRAWN: <i>J. W. M.</i> CHECKED: <i>J. W. M.</i></p> <p>DRAWING NO: 3 OF 13</p> <p>SCALE: AS SHOWN</p>
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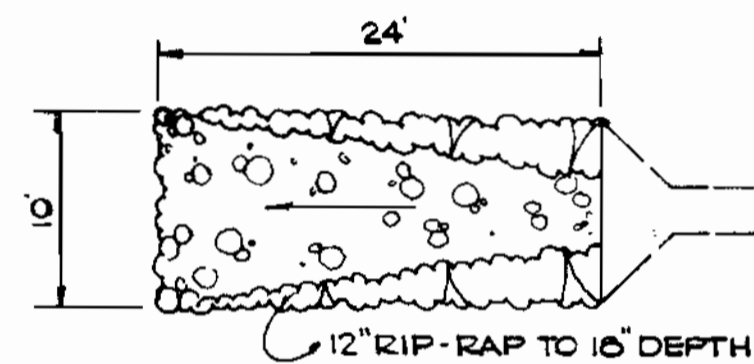


**DRAINAGE AREA MAP**  
Scale: 1"=200'

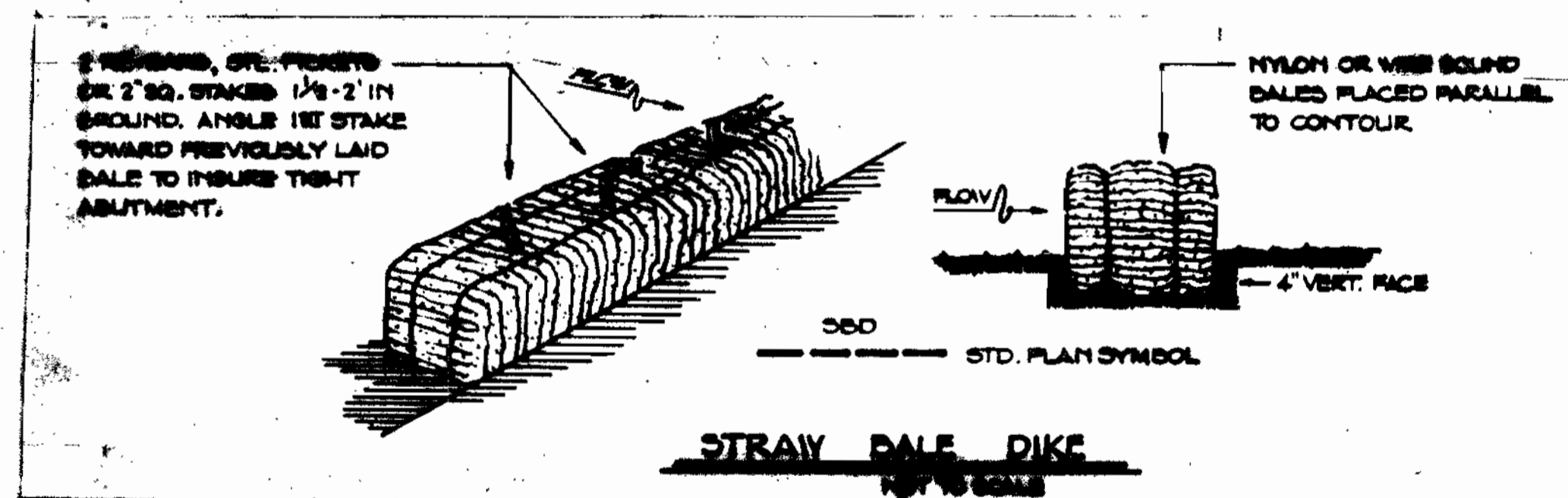


**PROFILE**

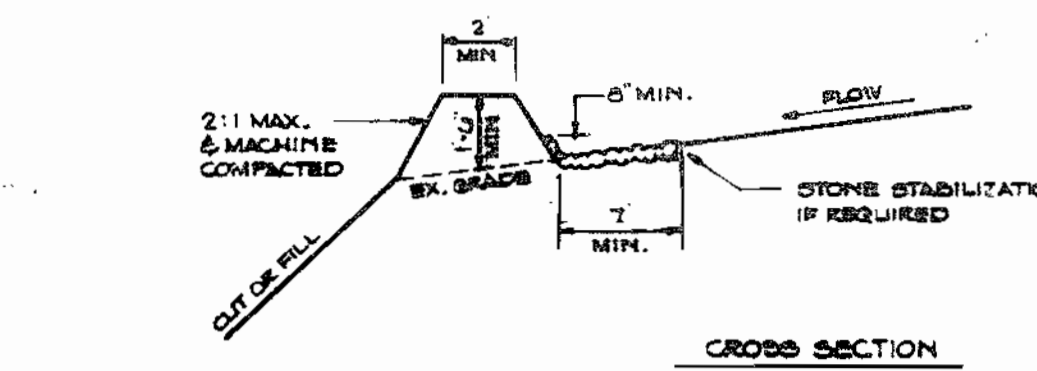
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VERT. 1"=5'



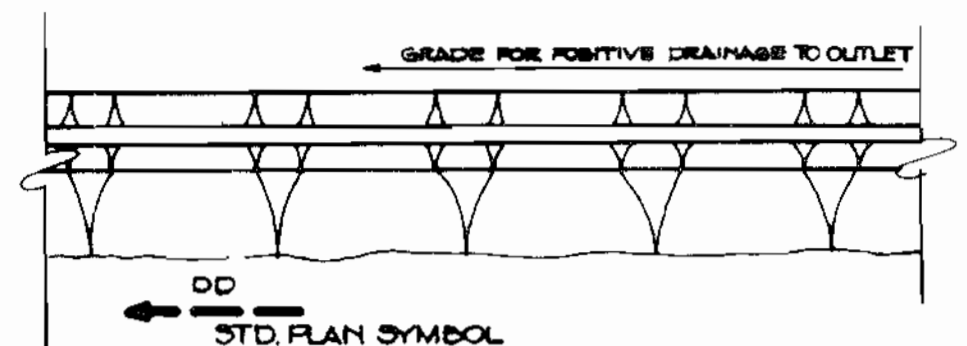
**APRON DETAIL**



**STRAW BALE DIKE**



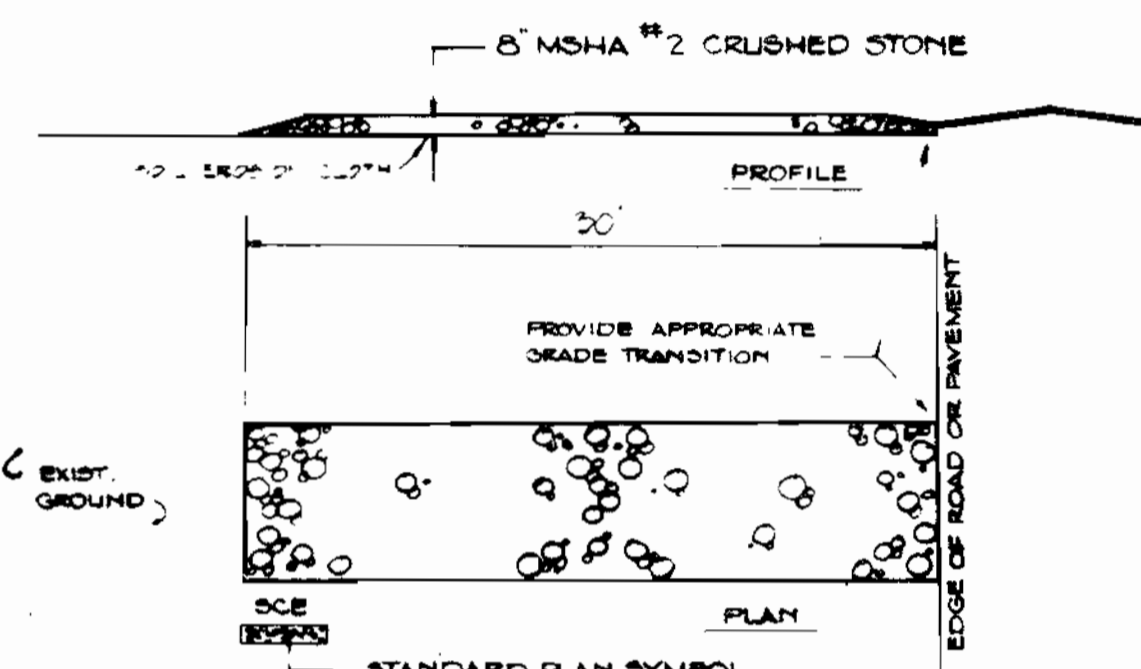
**CROSS SECTION**



**PLAN**

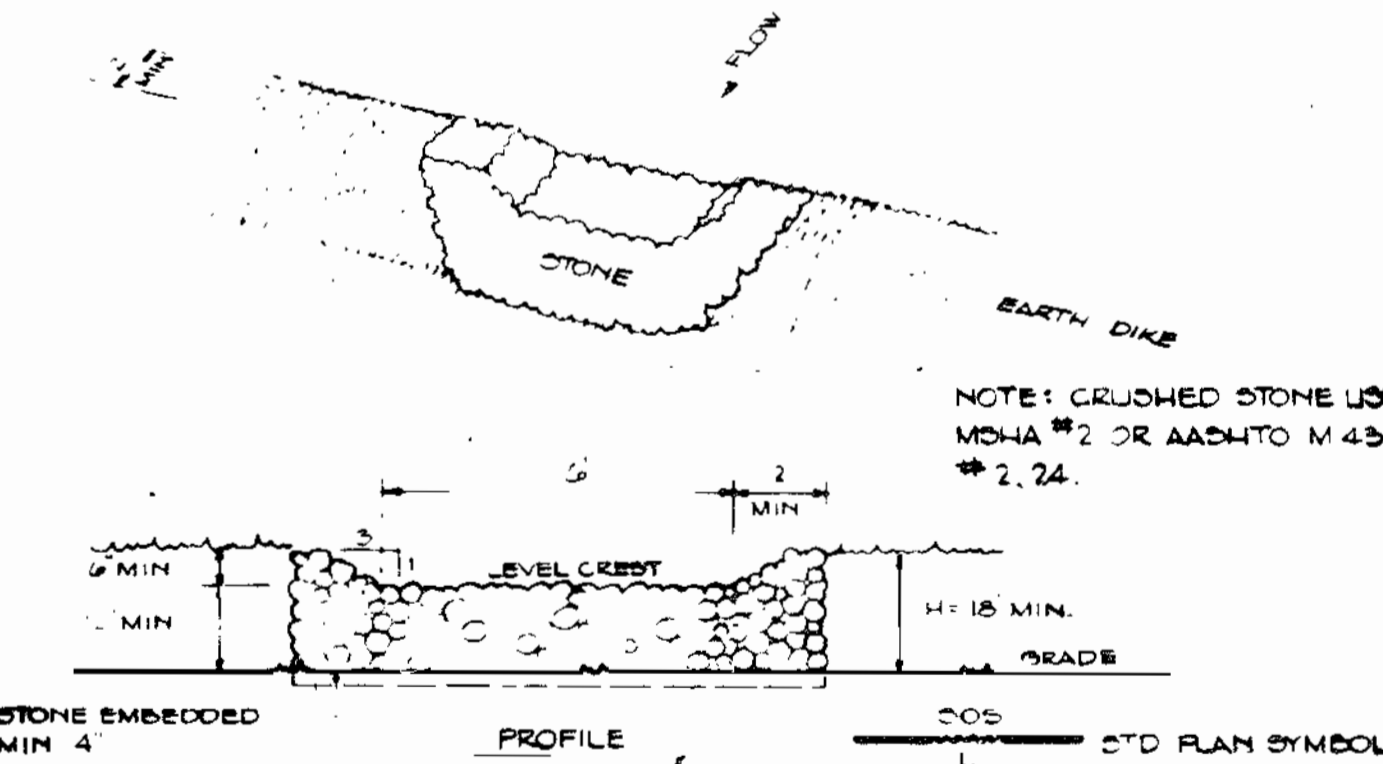
**DIVERSION DIKE**

- All dikes shall be machine compacted and shall have positive drainage to an outlet.
- Diverted runoff from an undisturbed or stabilized area shall outlet to an undisturbed or stabilized area.
- Diverted runoff from a disturbed area shall outfall into an area protected by a sediment control device.
- Stabilization shall be as specified in Sediment Control Notes.
- Stone if required as shown on the plan shall have MSHA No. 2 placed in a 3" thick layer and pressed into the soil.



**STABILIZED CONSTRUCTION ENTRANCE**

- Stone size - MSHA No. 2 or AASHTO designation M43 size No. 2.
- Place stone on soil erosion cloth for its entire width and length.
- When necessary, wheels shall be washed to remove sediment prior to entering public road.



**STONE OUTLET STRUCTURE**

- Area under embankment shall be cleared, grubbed and stripped of vegetation and root mat. Trap area shall be cleared.
- Embankment material shall be free of roots, large stones, rocks, organic or other objectionable material. Compact with construction equipment.
- All cut or fill slopes shall be 2:1 or flatter.
- Crushed stone shall meet AASHTO designation M43 Size No. 2 or 24 (MSHA No. 2). Gravel may be used, crusher-run is unacceptable.
- Clean out when sediment has reached the elevation noted.

- Specifications for the Sediment Control Details shown hereon are included in the U.S.D.A. Soil Conservation Service "Standards and Specifications for soil erosion and sediment control in developing areas."
- The developer shall notify the Howard County Office of Inspection and Permits at least 24 hours prior to beginning any construction shown hereon (892-2435 or 892-2436).
- All sediment control structures to remain in place until permission for their removal has been obtained from the Howard County Office of Inspection and Permits (892-2435 or 892-2436).
- All graded areas shall be stabilized in accordance with the following requirements:
  - Site Preparation:
    - Harrow or disc the areas to be seeded with the following materials at the specified rate to a depth of 3".
      - Pulverized limestone at 1 1/2 tons/acre.
      - Commercial fertilizer 10-10-10 at 3/4 tons/acre.
      - Super phosphate at 600 lbs./acre.
    - Seeding:
      - Sow the following seed mixture at the specified rate with a mechanical spreader:
        - Temporary - Italian or Perennial Ryegrass: (1 lb./1000 sq. ft.)
        - Permanent - (Slopes Flatter than 3:1) - Common Kentucky Bluegrass 40%, Merion Bluegrass 40%, Red Fescue 20%. (4 lb./1000 sq. ft.) Slopes steeper than 3:1 - Ground cover.
      - The seeded area shall be raked with a York Rake (minimum of 2 passes), covered and compacted with a cultipacker or other approved method.
    - Mulching:
      - Seeded areas shall be uniformly mulched immediately after seeding with unweathered small grain straw at the rate of 1 1/2 to 2 tons/acre.
      - Tie mulch down with liquid asphalt at 0.1 gal./s.y. or emulsified asphalt at 0.04 gal./s.y.
    - Sodding:
      - Apply 10-10-10 fertilizer at 1000 lbs./acre. (25 lbs./1000 s.f.)
      - Apply ground agricultural limestone at 2000 lbs./acre. (50 lbs./1000 s.f.)
      - Incorporate both lime and fertilizer into soil by discing. Firm up after incorporation.
      - Lay sod to a tight fit. Roll to insure contact with underlying soil. Water as necessary for first two weeks (in summer) to insure establishment.
    - Ground Cover:
      - Crown vetch (innoculated) at 15 lbs./acre. and Kentucky 31 Tall Fescue (certified) at 40 lbs./acre. (2:1 maximum slope)
  - The contractor shall place plywood braced with sand bags at the inlet end of unfinished drain pipes at the end of each work day.
  - All stockpiles shall be protected with straw bale dikes, silt fences, or other approved sediment control devices.

**CONSTRUCTION SEQUENCE**

- Outlet grading permit
- Construct temporary stabilized entrance
- Place straw bale dikes as shown on drawings
- Construct Diversion Dike and Sediment Trap to the dimensions shown on the drawings.
- Stabilize Sediment trap and dike using "Temporary Seeding". See Sediment Control Notes
- Clear and rough grade site
- Cut Channel, place 18" RCCP and install Flared end sections
- Place gravel base for access road
- Place rip-rap, filter cloth and 1/2" stone @ 12" depth construction
- Place 6" crusher run base course for road
- Final grade slopes
- Stabilize site with permanent seeding and mulch. See Sediment Control Notes.
- Place final surface treatment course of pavement
- Remove temporary sediment control devices and stabilize disturbed area per sediment control notes

APPROVED  
DIVISION OF LAND DEVELOPMENT  
HOWARD COUNTY, MARYLAND  
DATE 4-8-80  
[Signature]

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.  
HOWARD COUNTY HEALTH DEPARTMENT.  
[Signature]  
COUNTY HEALTH OFFICER DATE 2-28-80

HOWARD SOIL CONSERVATION DISTRICT  
REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS  
[Signature]  
DATE 2-25-80  
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
APPROVED: [Signature]  
HOWARD SOIL CONSERVATION DISTRICT DATE 2-25-80

W.S.S.C. NO. 80 50 4688C  
WASHINGTON SUBURBAN SANITARY COMMISSION  
FOR SANITARY SEWERS  
LOCATED ON W.S.S.C. PROPERTY  
[Signature]  
12/31/81  
PROJECT DEVELOPMENT DIV. HEAD DATE

**PURDUM & JESCHKE**  
CONSULTING ENGINEERS  
LAND SURVEYORS  
1023 North Calvert Street  
Baltimore, Maryland 21202 301/837 0194

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
[Signature]  
CHIEF BUREAU OF UTILITIES DATE 2/6/80  
[Signature]  
CHIEF BUREAU OF ENGINEERING DATE 2-6-80  
DIRECTOR OF PUBLIC WORKS DATE

APPROVED HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
[Signature]  
PLANNING DIRECTOR DATE 8-4-80  
[Signature]  
CHIEF DIVISION OF LAND DEVELOPMENT DATE 8-4-80

DEVELOPER  
I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS DEEMED NECESSARY. DEVIATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD SOIL CONSERVATION DISTRICT.  
[Signature]  
DATE 2-28-80

PROFESSIONAL ENGINEER  
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
[Signature]  
DATE 11/13/79



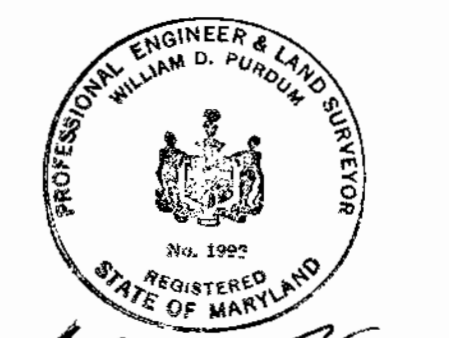
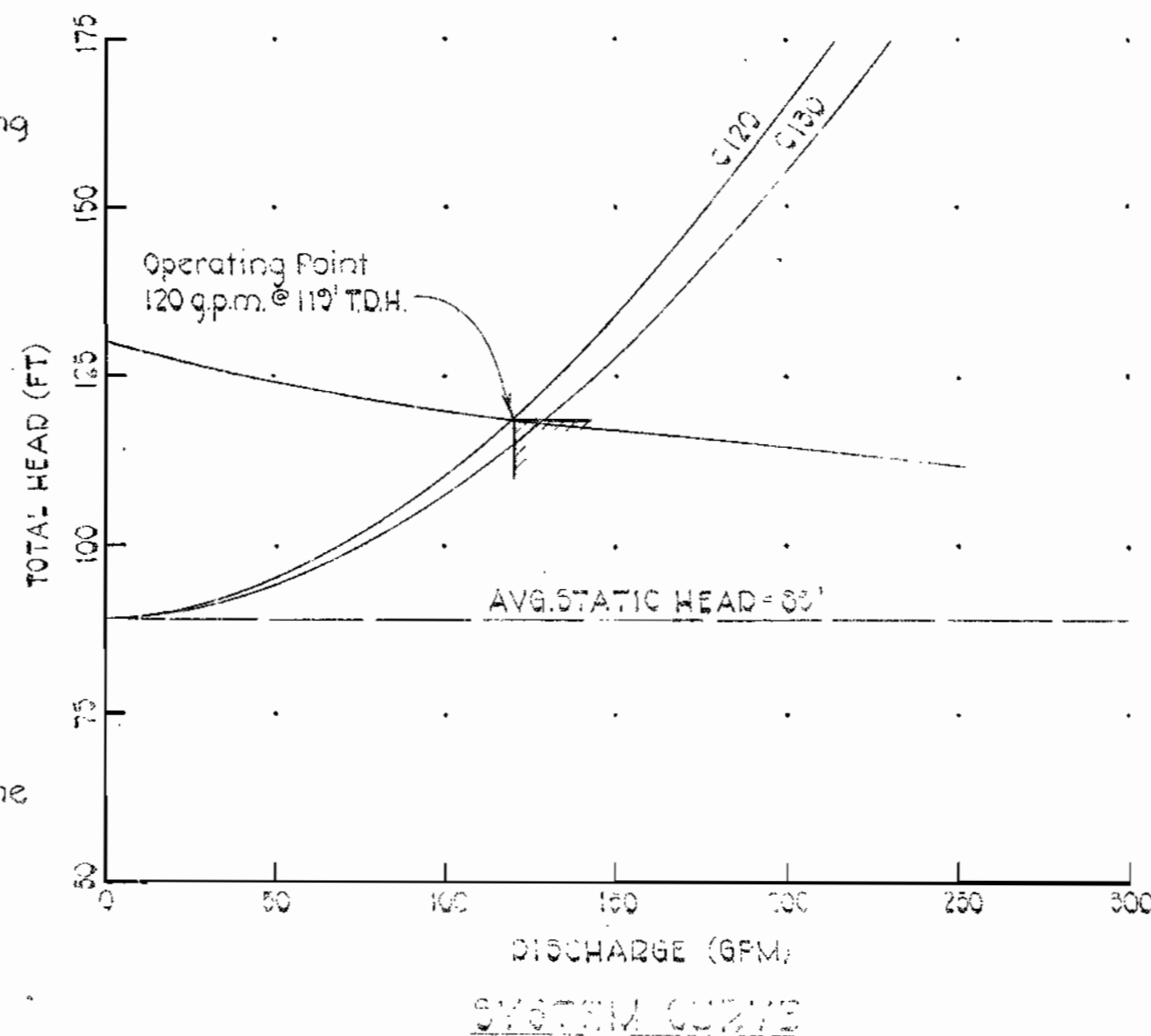
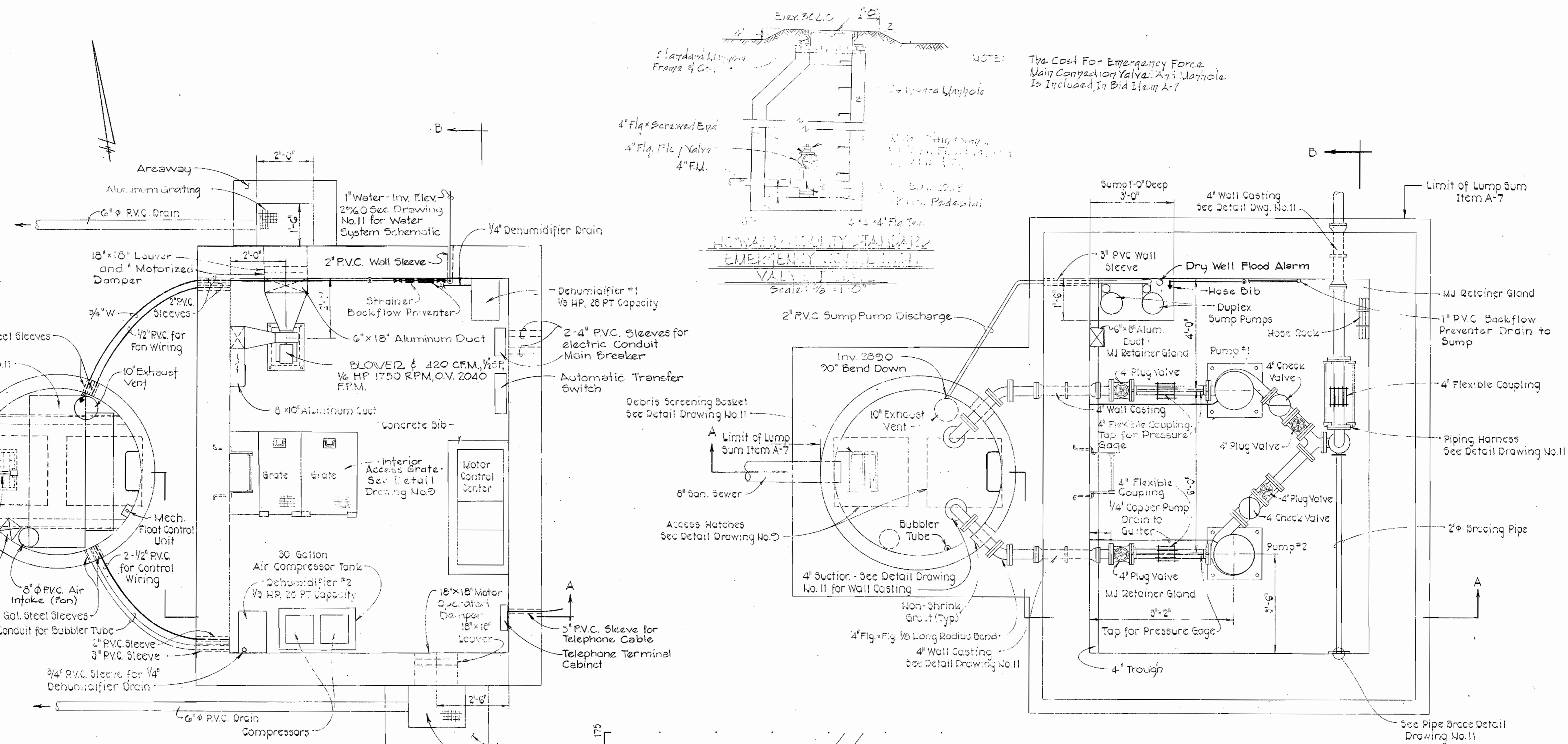
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PROJECT S 4 6049  
CONTRACT 2719 S  
PINE VALLEY SANITARY SEWER  
PINE VALLEY PUMPING STATION  
DRAINAGE AREA MAP AND  
SEDIMENT CONTROL DETAILS  
ELECTION DISTRICT NO. 6 HOWARD COUNTY, MD.  
TAX MAP 46 PARCEL

NO. R.T.  
DRAWING NO: 6 OF 13  
DATE AS SHOWN  
4/23/80

SUSPENDED

SUSPENDED

WS 719-S/7



CONTRACT NO. 2719-S  
PINE VALLEY SANITARY SEWERS  
PINE VALLEY PUMPING STATION  
CAPITAL PROJECT NO. S-4-6049

WASHINGTON SUBURBAN SANITARY COMMISSION  
FOR SANITARY SEWERS LOCATED ON W.S.S.C. PROPERTY  
*James A. Purdum* 12/31/81  
PROJECT DEVELOPMENT DIVISION HEAD DATE

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*Leon F. Newman* 2-13-80  
DIRECTOR OF PUBLIC WORKS-DATE CHIEF-BUREAU OF ENGINEERING-DATE

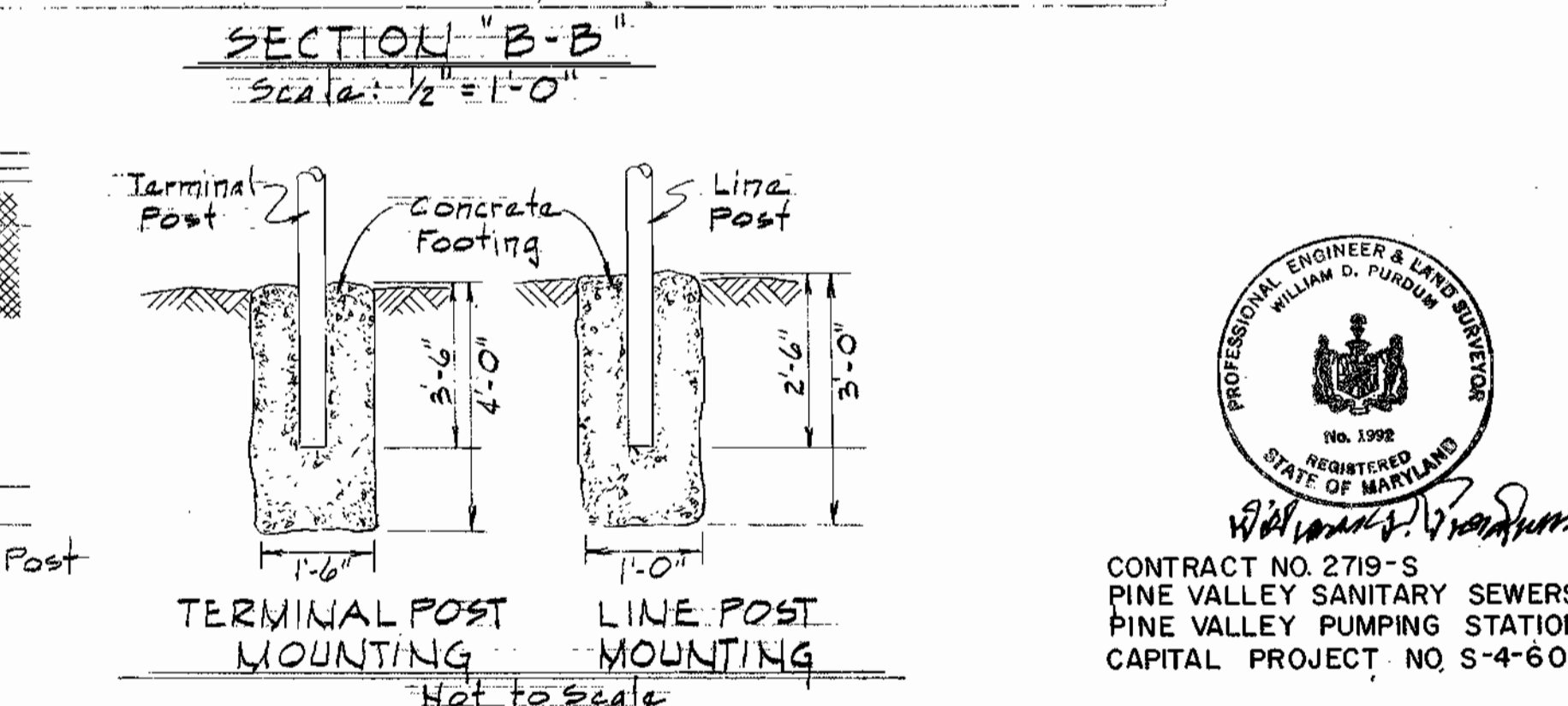
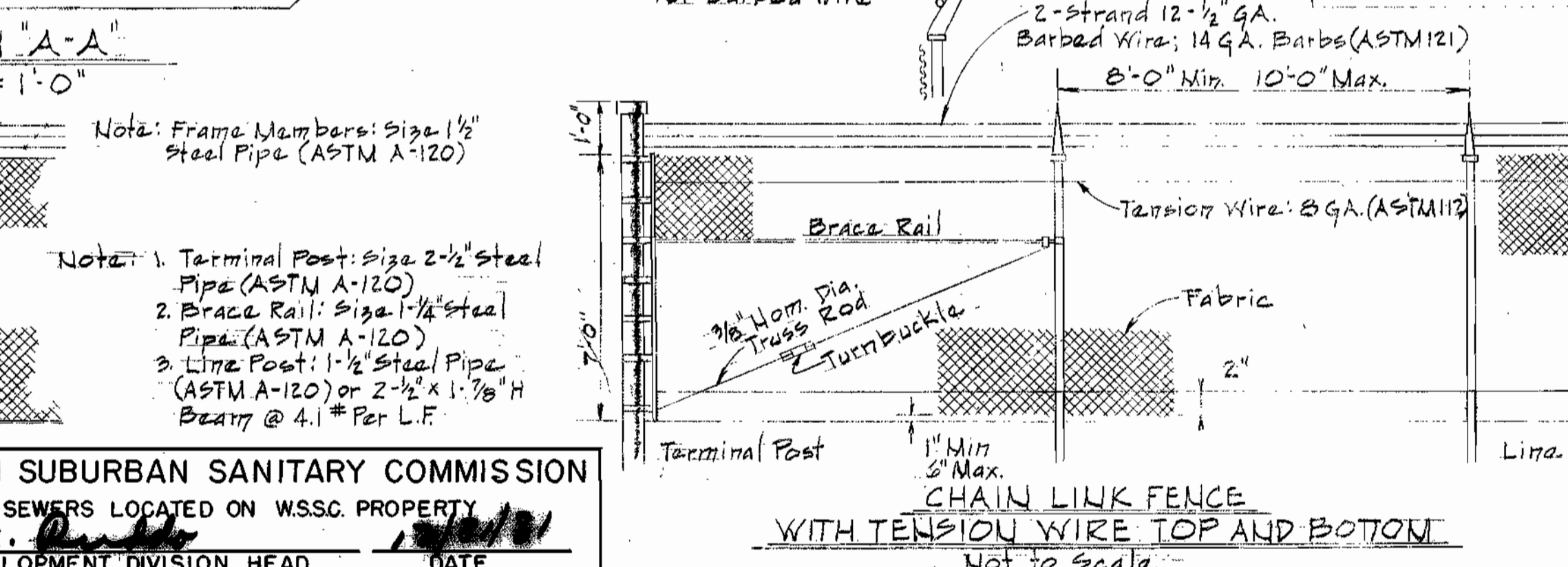
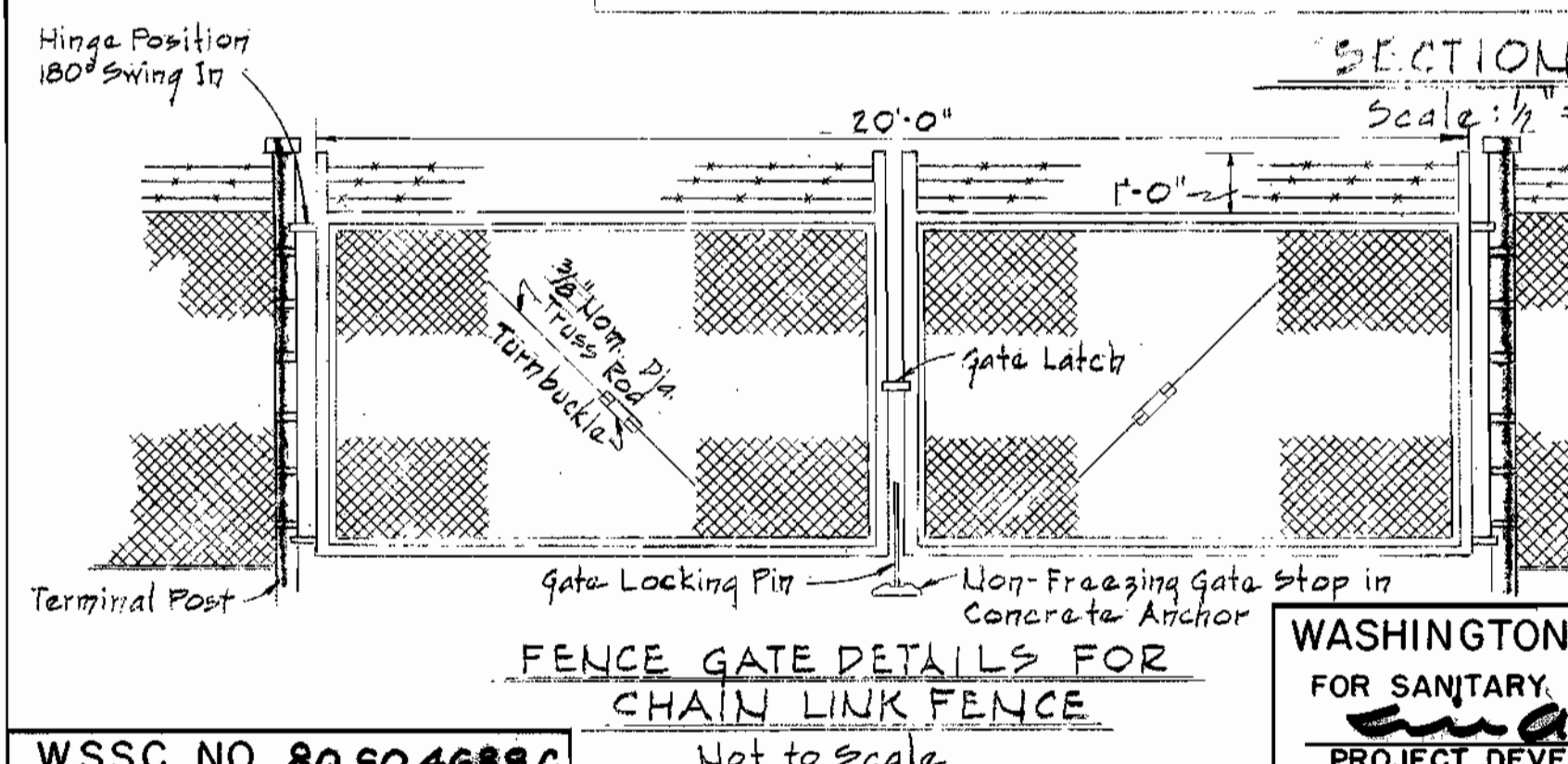
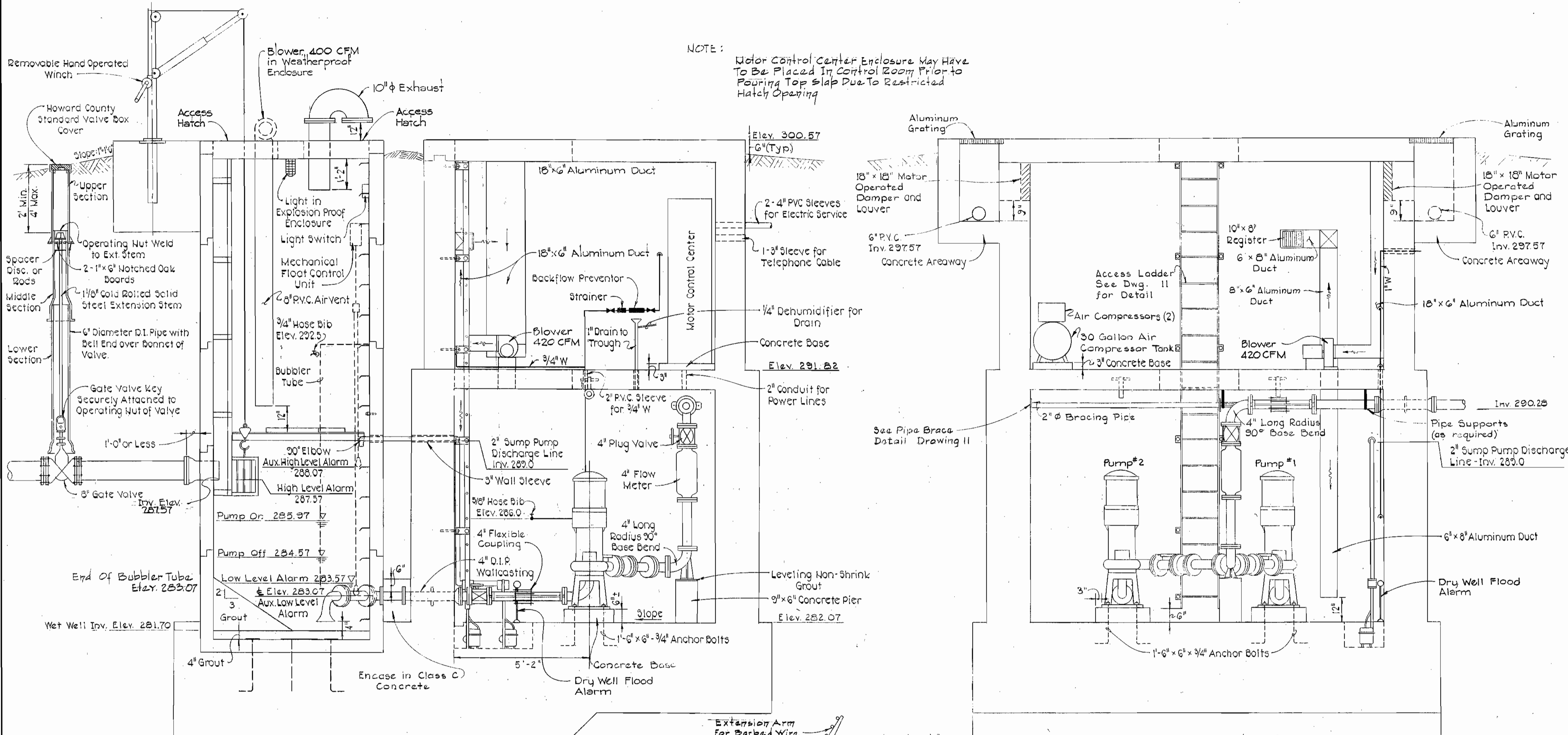
**PURDUM & JESCHKE**  
ENGINEERS  
1023 N. CALVERT ST.  
BALTIMORE, MARYLAND

W.S.S.C. NO. 80 30 4685 C  
CONTRACT NO. 2719-S  
CAPITAL PROJECT NO. S-4-6049

**MECHANICAL PLAN & DETAILS**  
PINE VALLEY PUMPING STATION

**PINE VALLEY SANITARY SEWERS**  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY, MARYLAND

**DRAWING NO. 7 OF 13**  
**SCALE AS SHOWN**  
Designed: RHB  
Drafted: ARZ  
Checked: CHL  
Date: 10/26/79



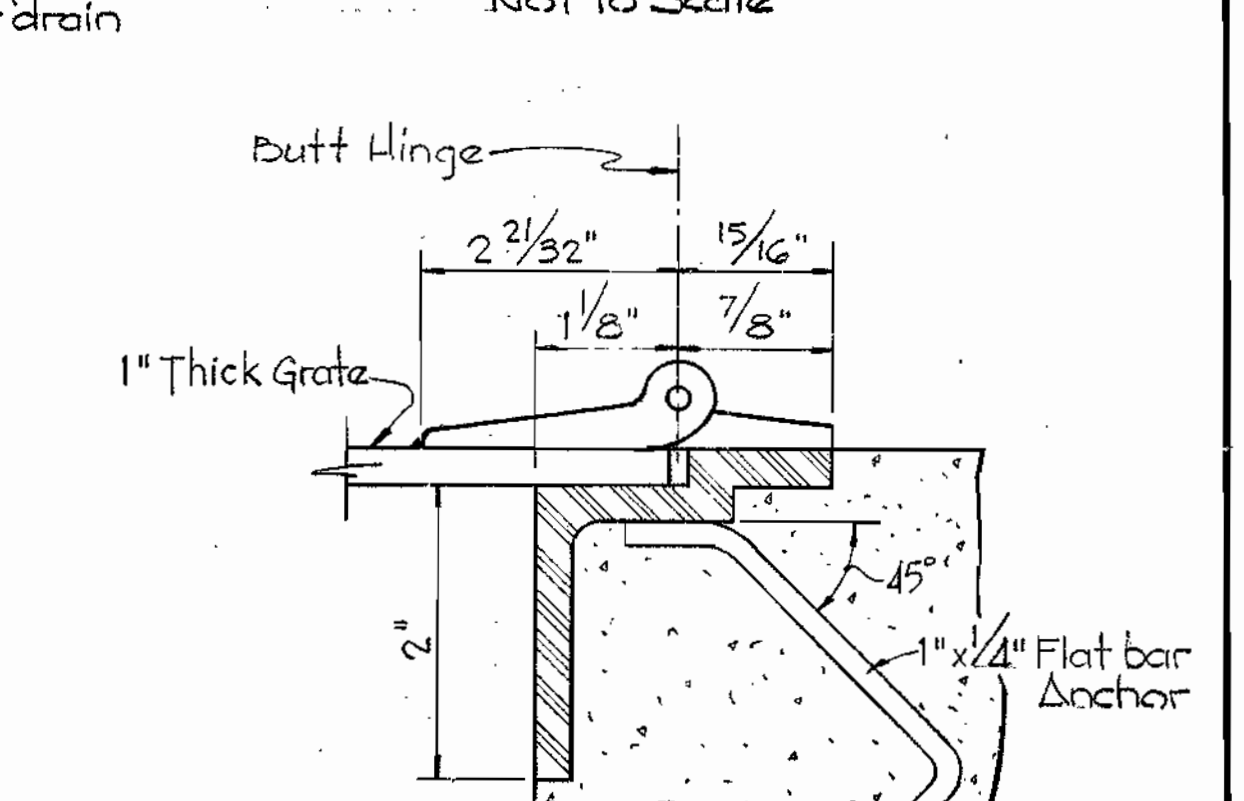
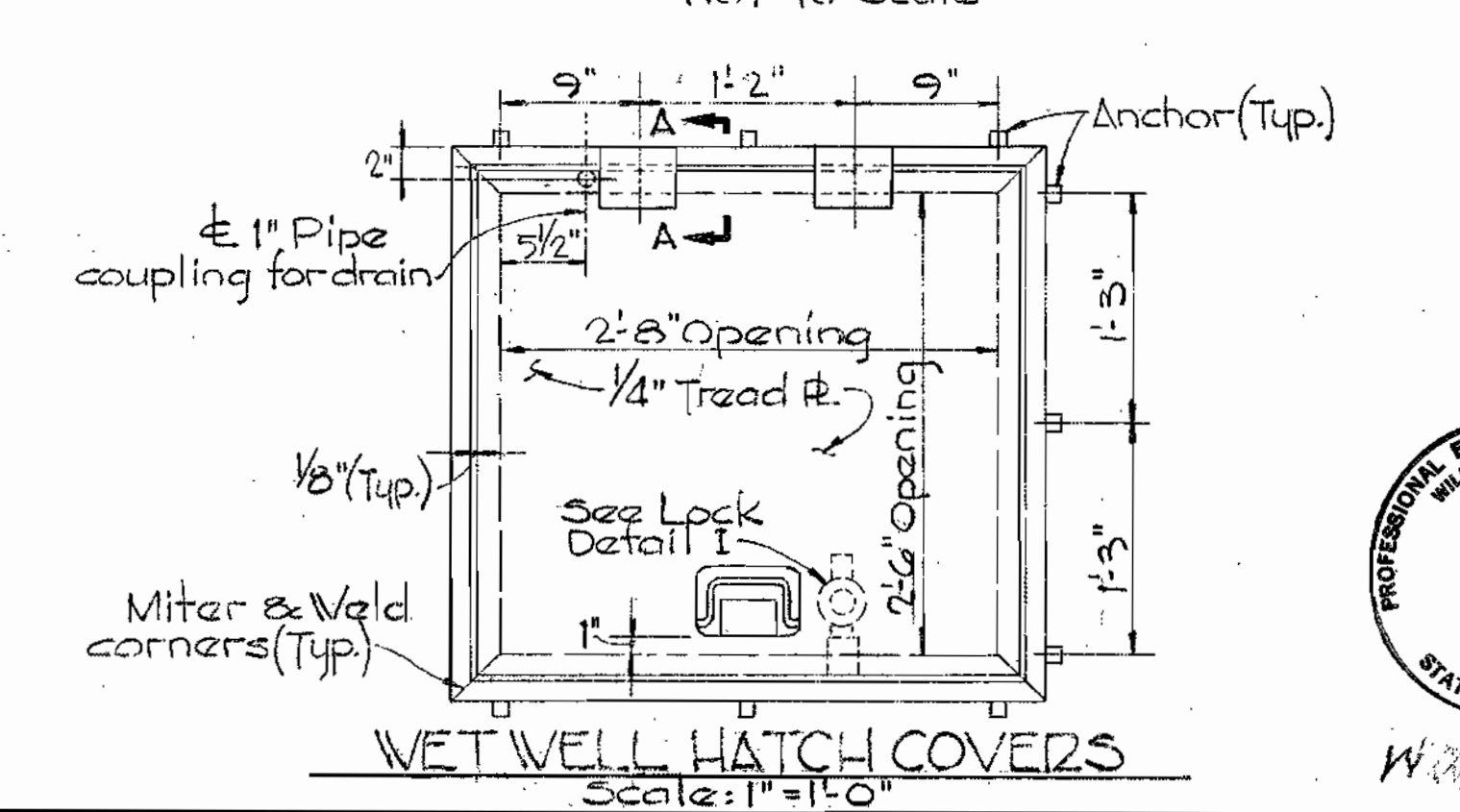
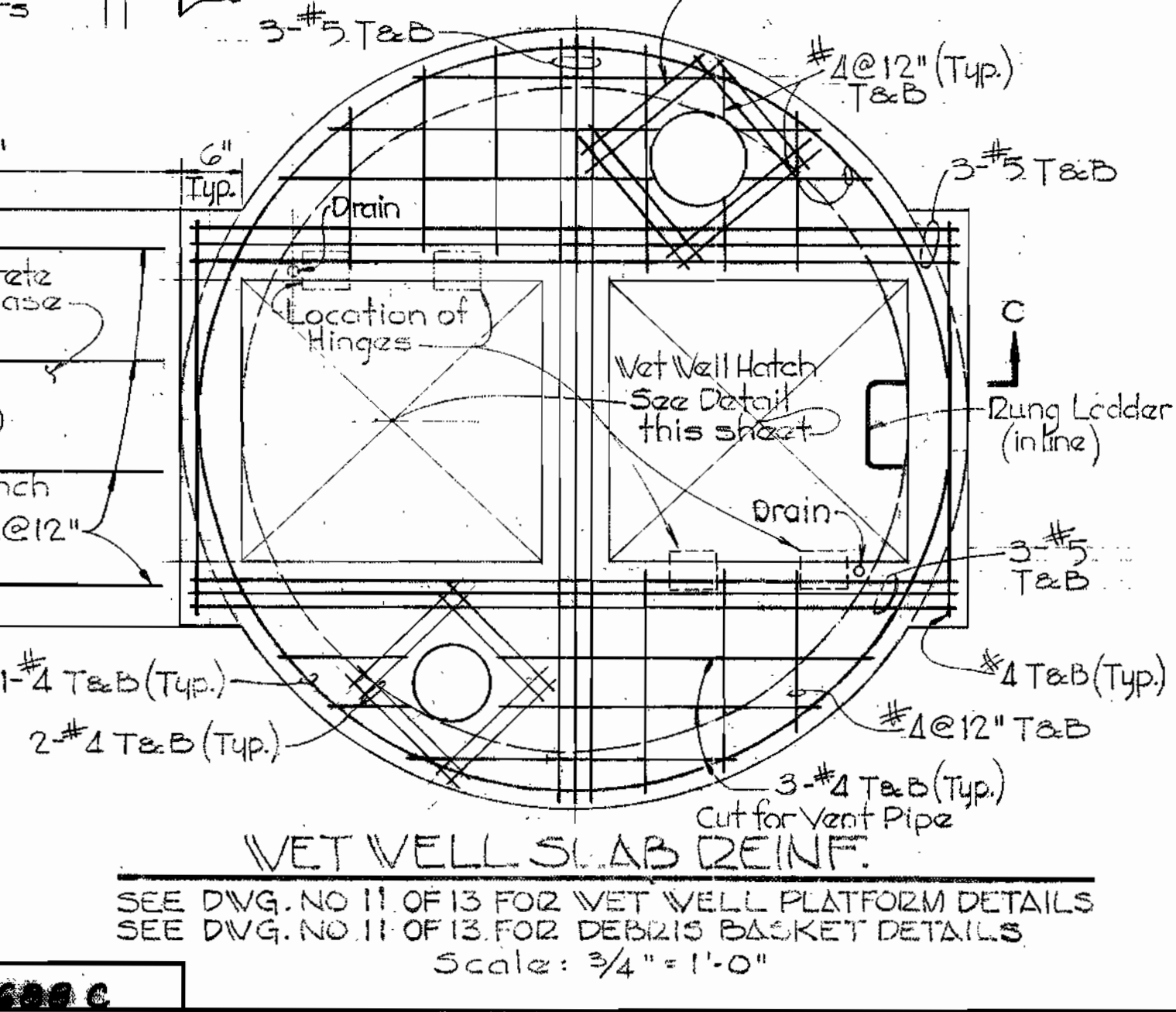
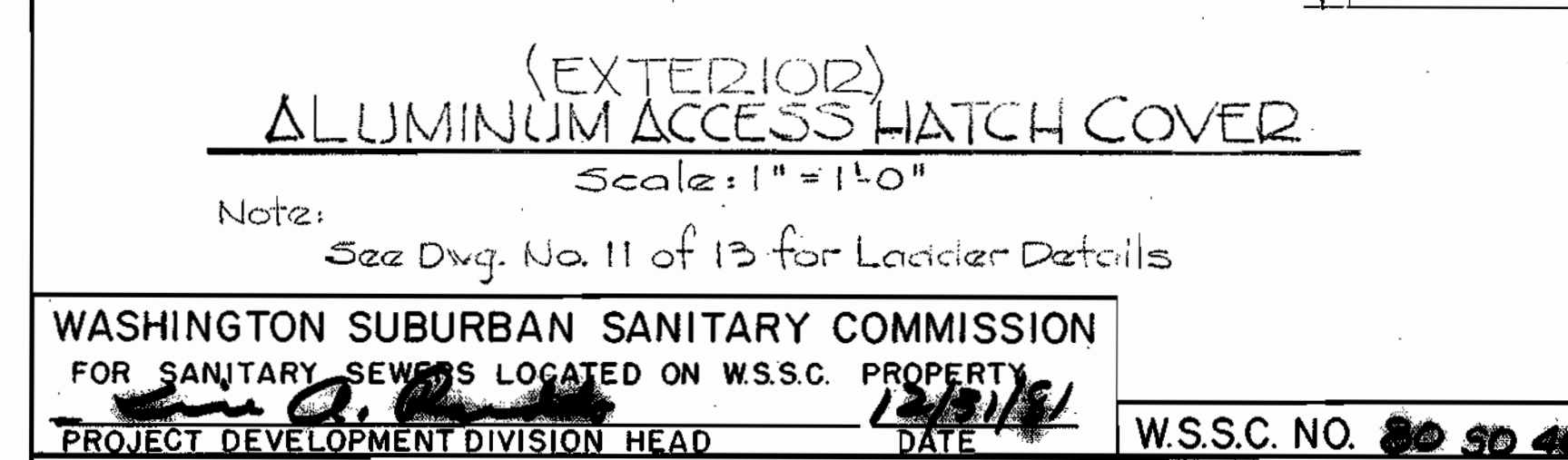
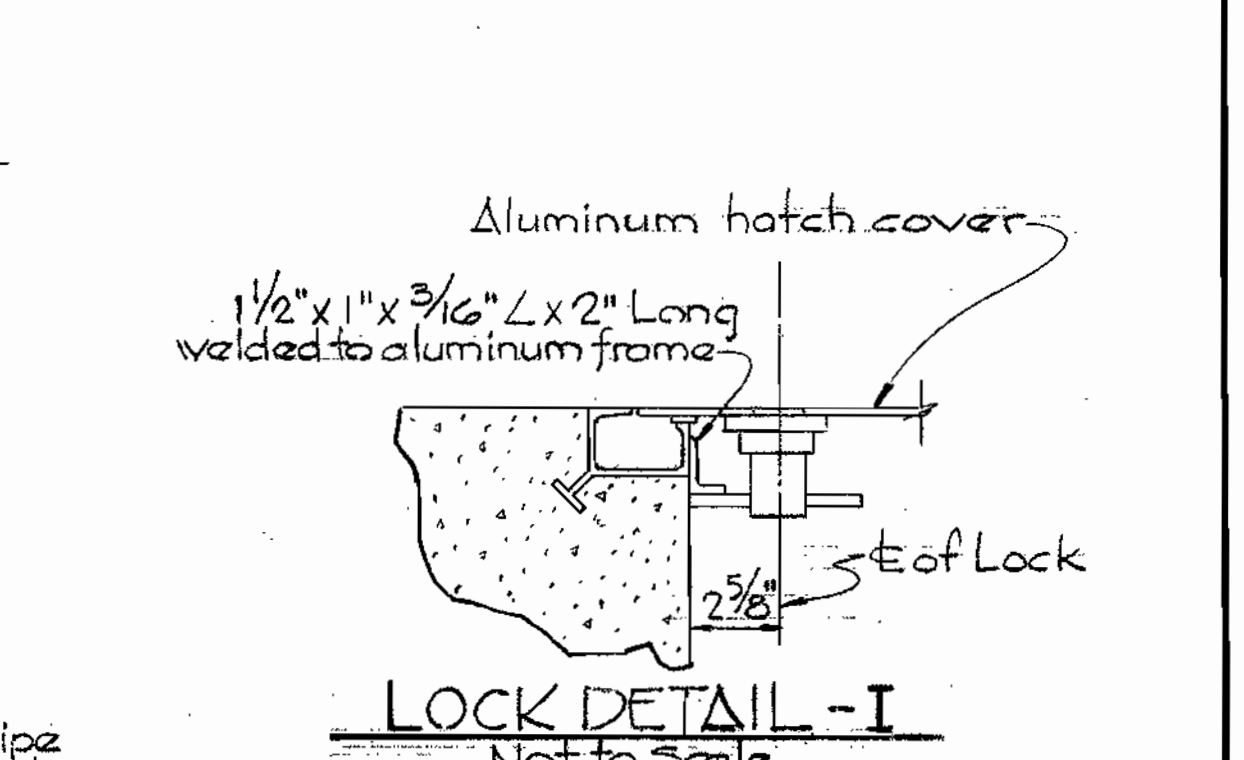
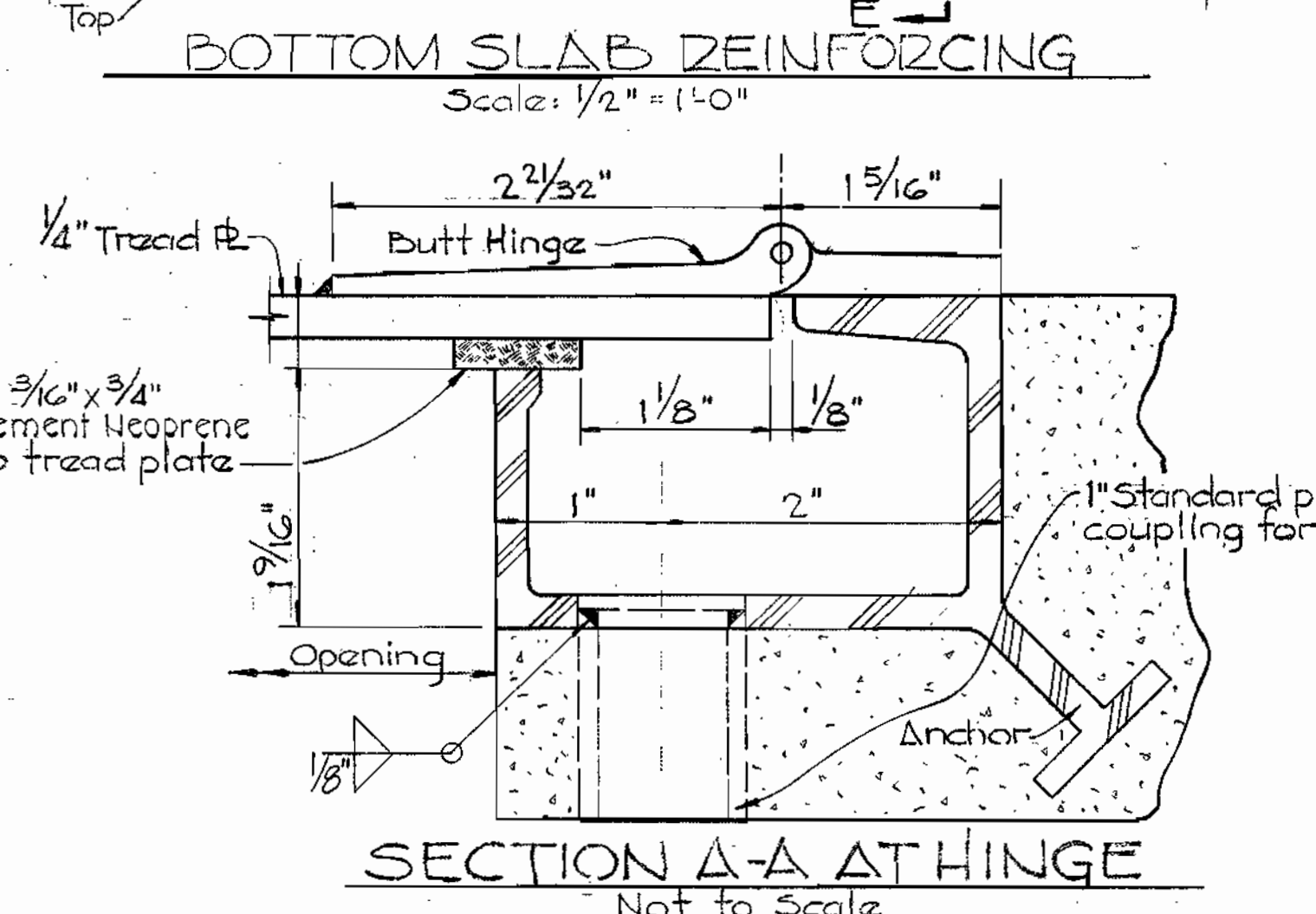
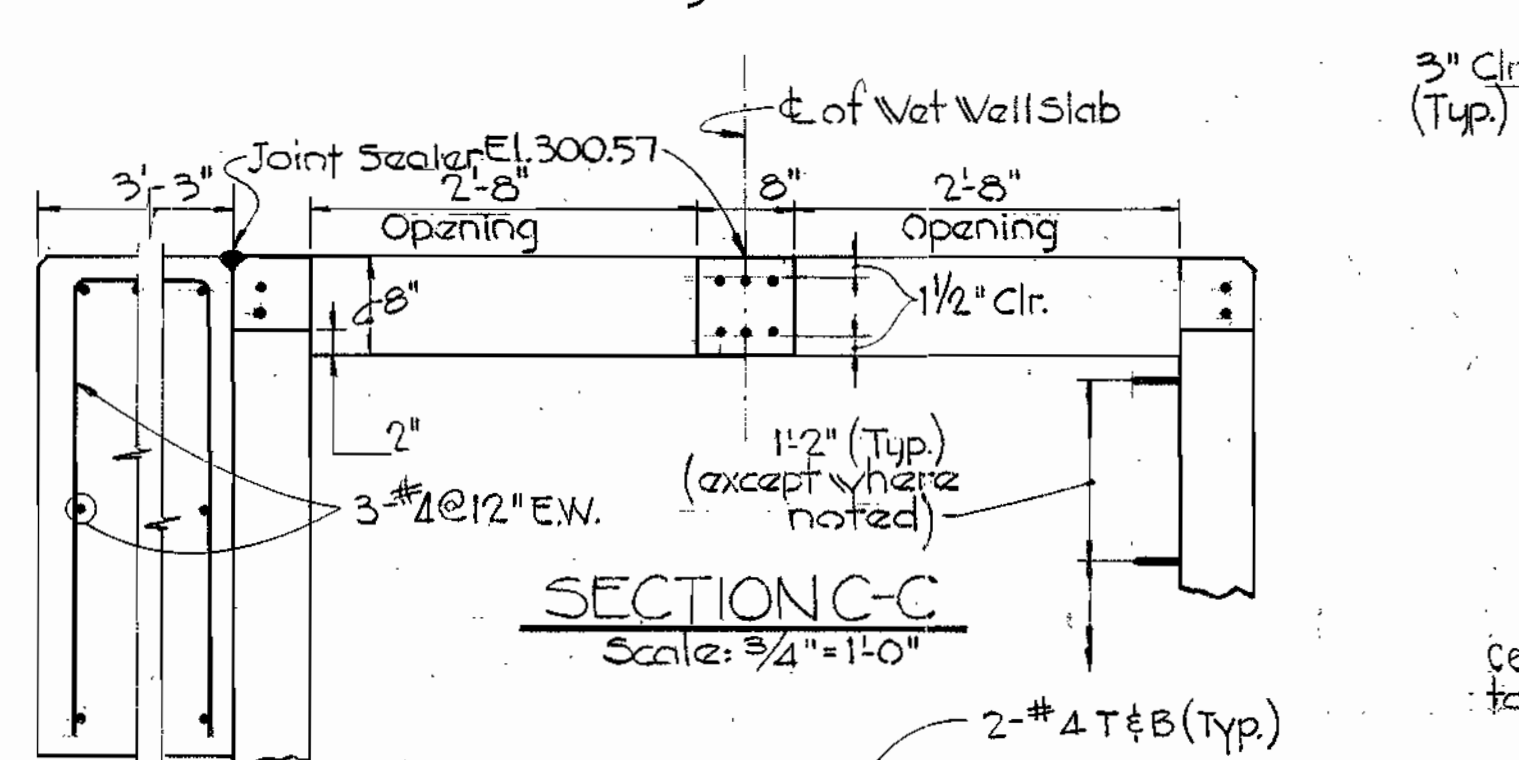
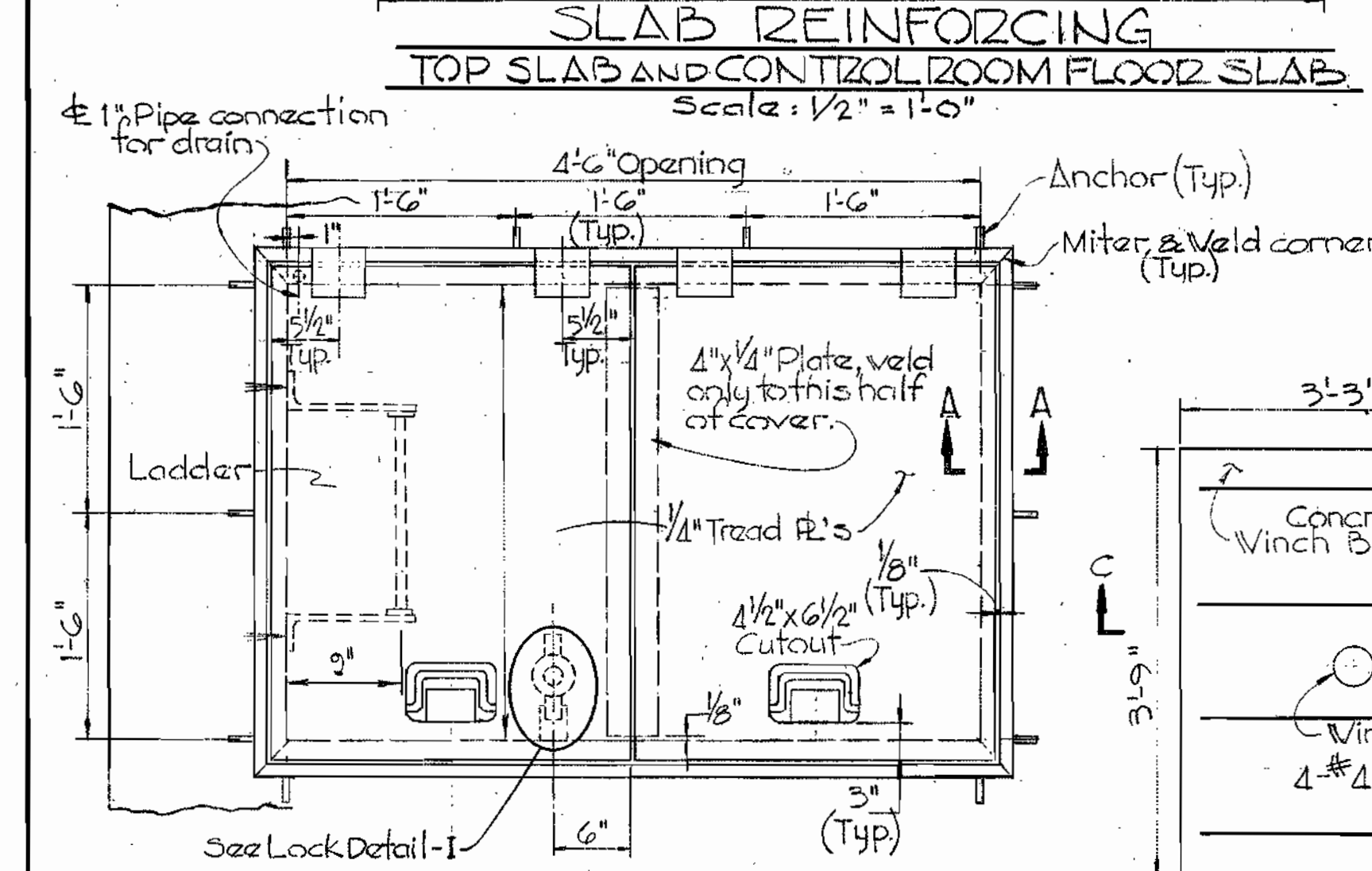
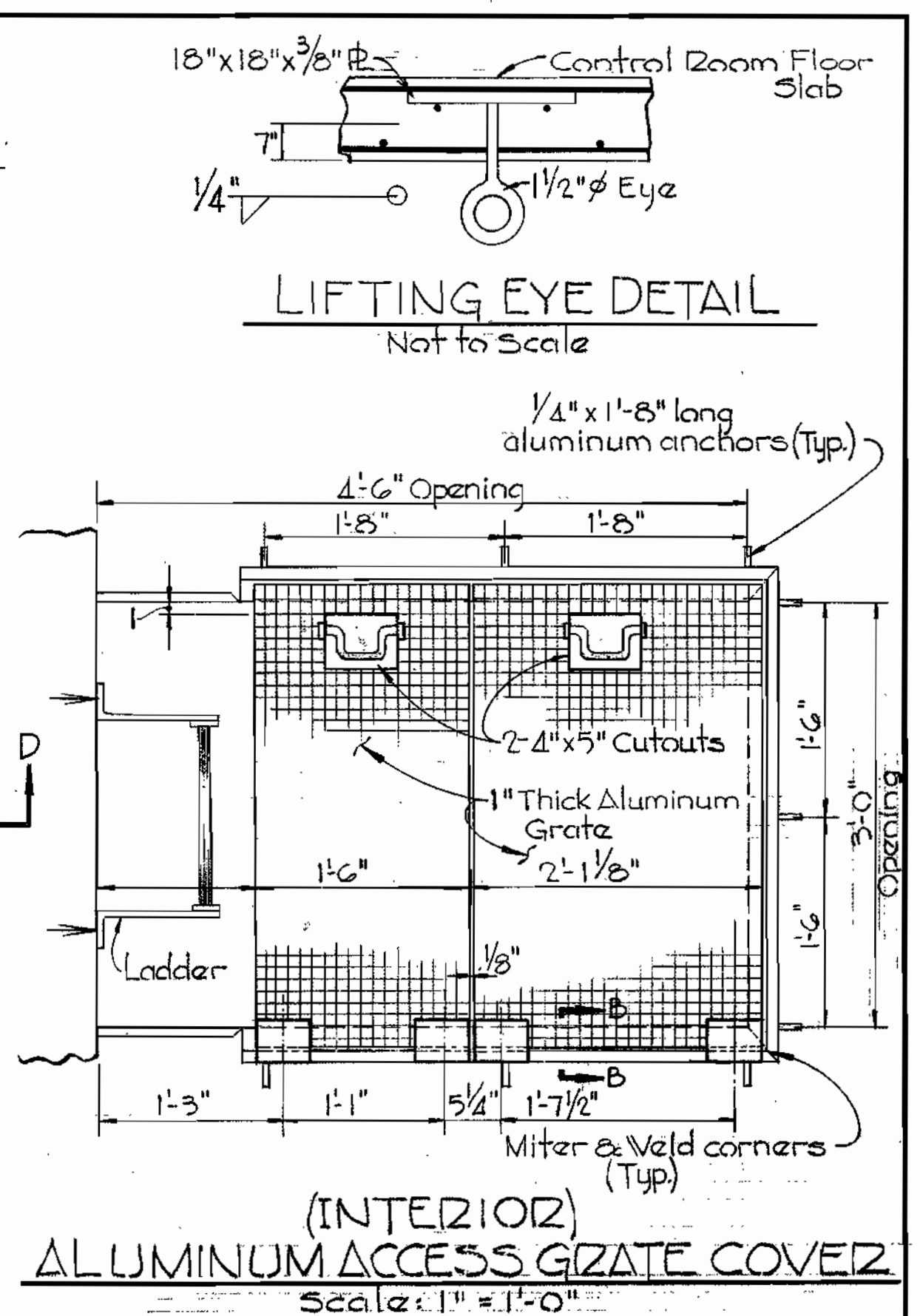
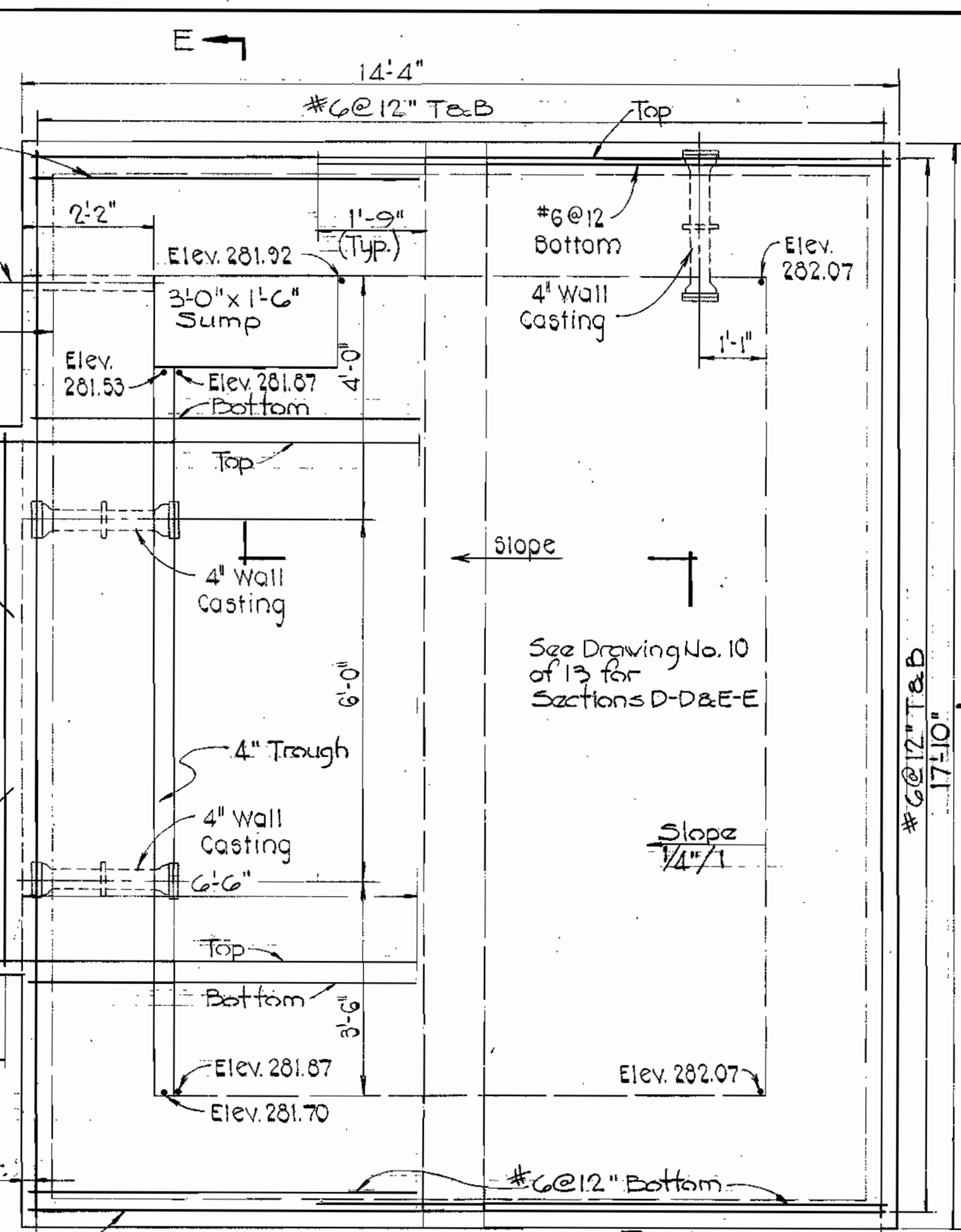
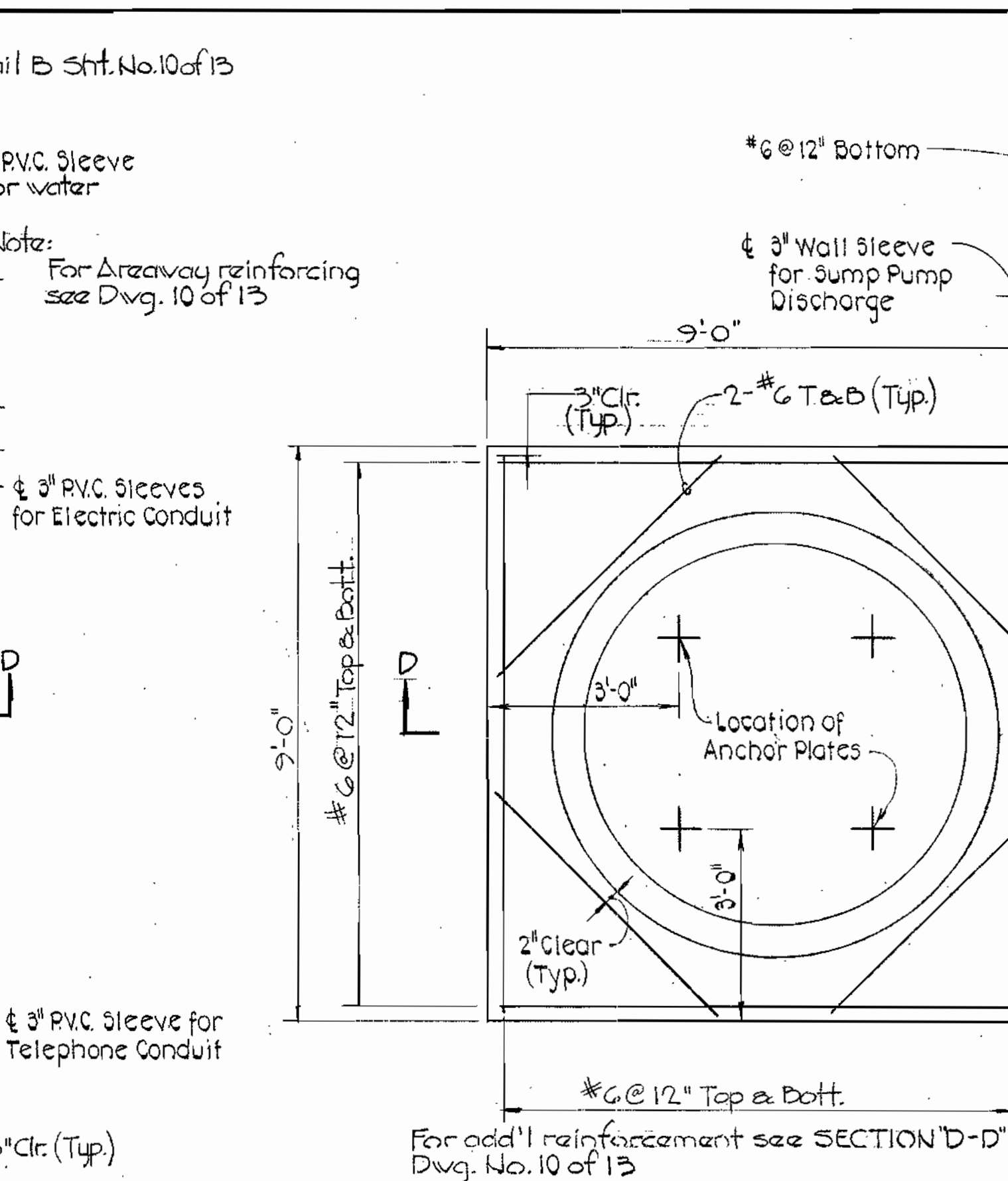
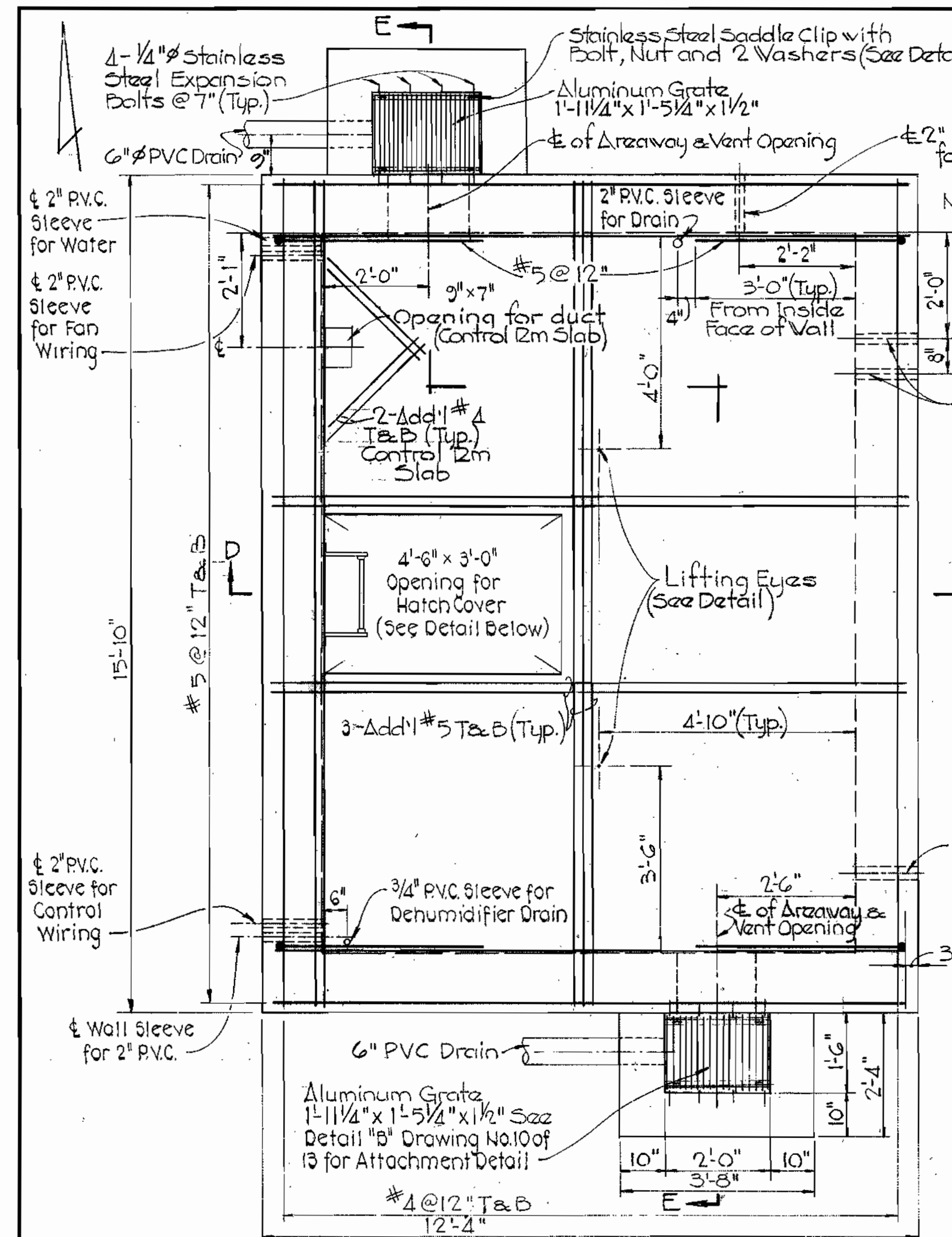
W.S.S.C. NO. 80 50 4688 C	Not to Scale	<b>WASHINGTON SUBURBAN SANITARY COMMISSION</b> FOR SANITARY SEWERS LOCATED ON WSSC PROPERTY PROJECT DEVELOPMENT DIVISION HEAD DATE	CONTRACT NO. 719-S CAPITAL PROJECT NO. S-4-6049	MECHANICAL SECTIONS AND DETAILS PINE VALLEY PUMPING STATION	PINE VALLEY SANITARY SEWERS ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND	DRAWING NO. 8 OF 13	SCALE AS SHOWN	Designed: RHB Drafted: NLS Checked: CHL Oct. 10, 1979
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WS 719-S/8

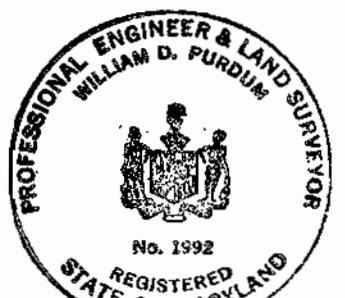
SUSPENSE

SUSPENSE





WASHINGTON SUBURBAN SANITARY COMMISSION FOR SANITARY SEWERS LOCATED ON W.S.S.C. PROPERTY PROJECT DEVELOPMENT DIVISION HEAD <i>[Signature]</i> DATE <i>[Date]</i>		W.S.S.C. NO. <b>80 90 4600 C</b>		DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND CHIEF-BUREAU OF UTILITIES DATE <i>[Date]</i> DIRECTOR OF PUBLIC WORKS DATE <i>[Date]</i> CHIEF-BUREAU OF ENGINEERING DATE <i>[Date]</i>		CONTRACT NO. <b>719-S</b> CAPITAL PROJECT NO. <b>S-4-6049</b>		STRUCTURAL PLANS AND DETAILS PINE VALLEY PUMPING STATION		PINE VALLEY SANITARY SEWERS ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND		DRAWING NO. <b>9</b> OF <b>13</b>	SCALE AS SHOWN	Designed: B.C.C. Drafted: J.F.T. Checked: B.C.C. Date: 10/26/79
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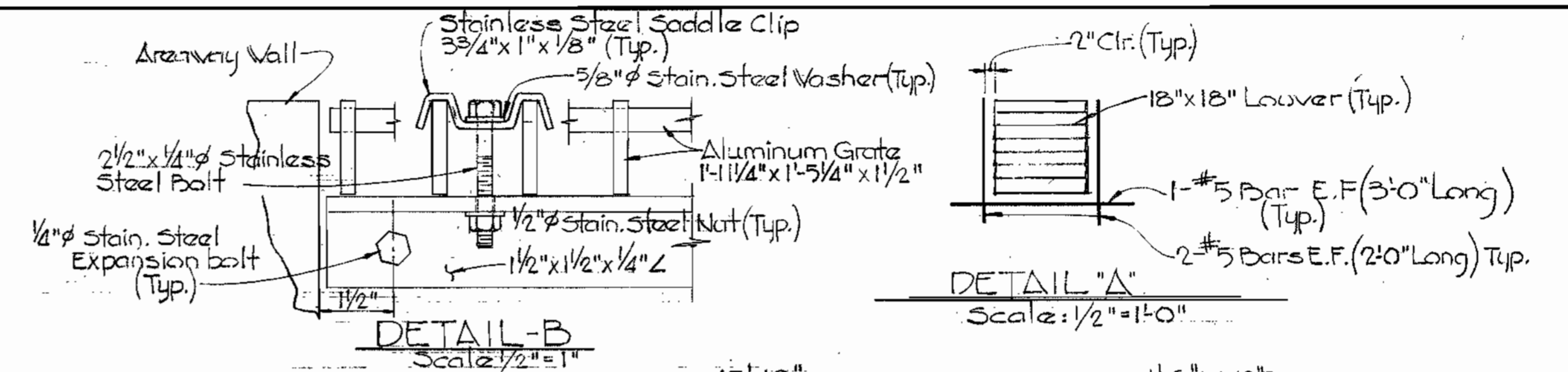
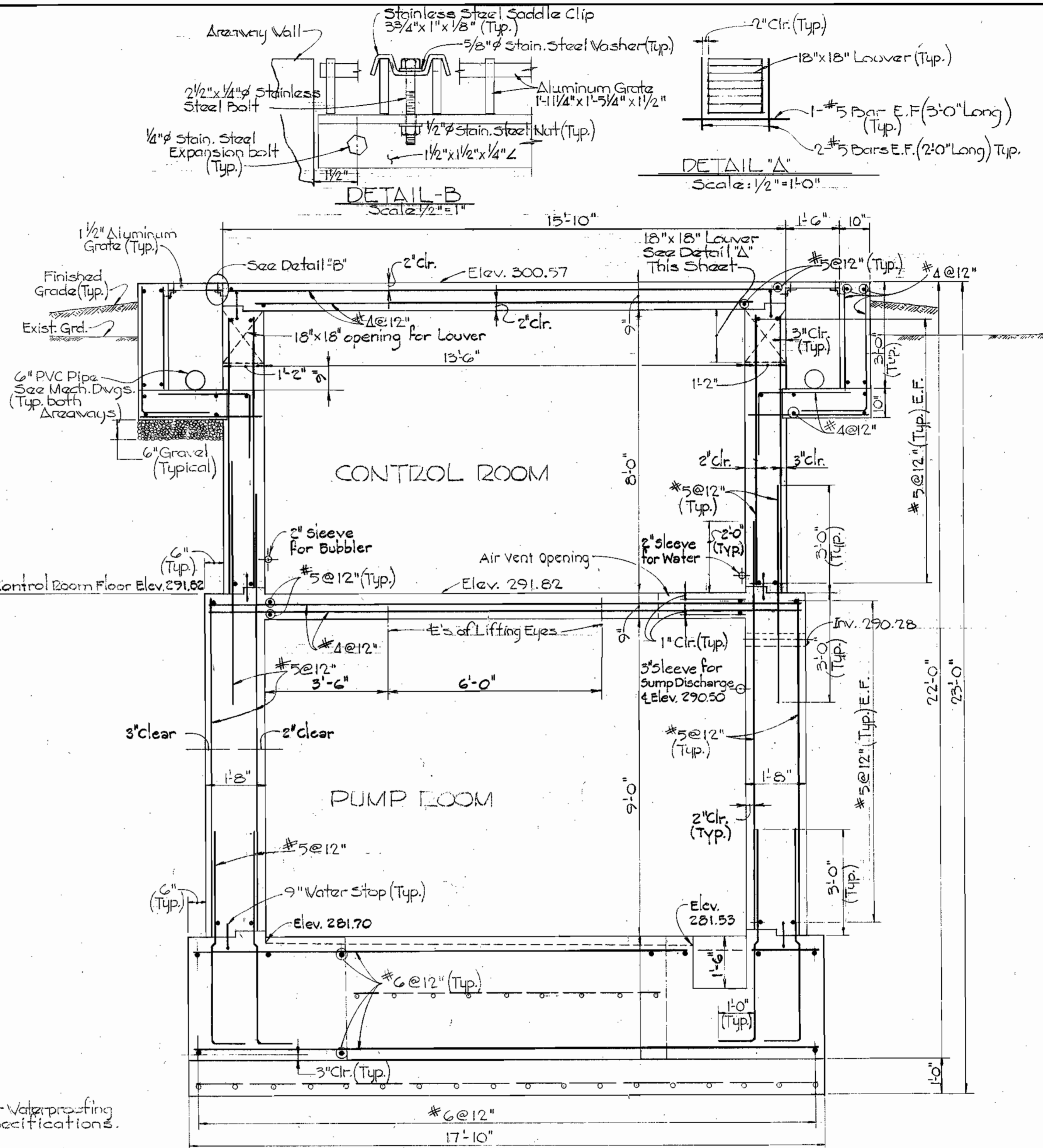
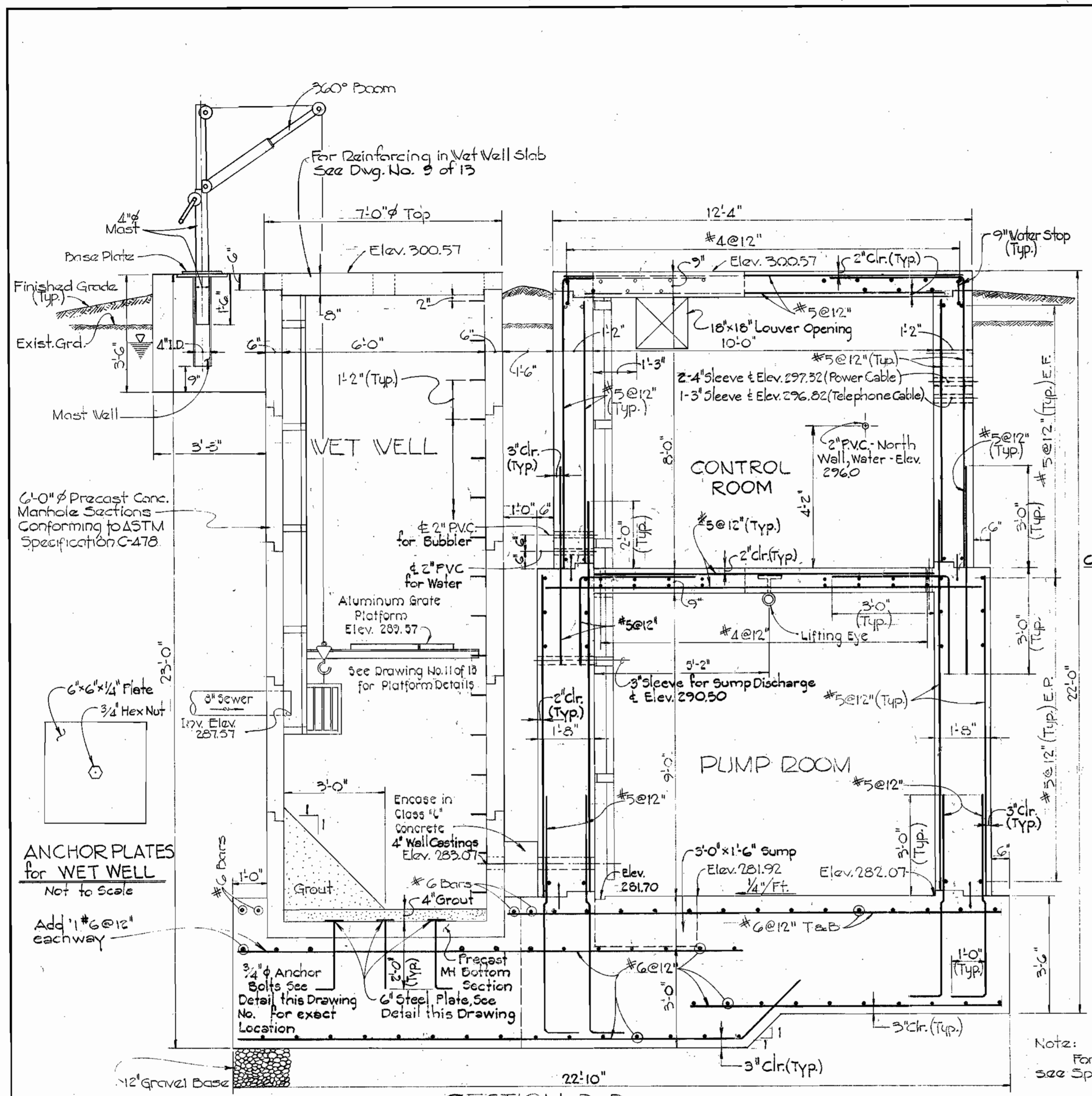


WS 719-S/9

WS 719-S/10

suspension

suspension



GENERAL STRUCTURAL NOTES

- DESIGN LIVE LOADS: Slabs 100 P.S.F. + Concentrated Equipment Loads. Grating 100 P.S.F.
- CONCRETE: All concrete work, both plain and reinforced shall be in accordance with the latest A.C.I. Specifications. All Structural Concrete shall have a minimum 28 day strength of 3,500 P.S.I. Class "C" shall have a minimum 28 day strength of 2,000 P.S.I. Reinforcing Steel shall conform to A.S.T.M. A-615 Grade 60. All exposed corners shall be Chamfered 1"x1" unless otherwise noted. All Pipe Sleeves, Conduits, Floor Boxes, Frames, etc. shall be placed before concrete is poured. All openings thru concrete shall be watertight. See Mechanical and Electrical Drawings for openings not shown or located on Structural Plans.
- EARTHWORK: All excavation for structures shall be kept free of water until backfill is properly tamped in place to finish grade. Backfill shall be placed in 6" layers and adequately compacted to 90% of maximum density in accordance with A.A.S.H.O. designation T-180 Method-A. Contractor shall adequately protect all walls during backfill operations.
- METAL WORK: All Structural Steel shall be A.S.T.M. A-36. All bolts except anchor bolts shall be A.S.T.M. A-325 High Strength Bolts. All Anchor Bolts shall be A.S.T.M. A-307. All Structural Aluminum shall be Alloy 6063-T6. Bolts in contact with Aluminum shall be Stainless Steel. Stainless Steel anchor bolts, nuts and washers shall be Alloy No. 300.
- FLOATATION: The entire structure, complete in place, is required to offset uplift due to hydrostatic pressure.
- MISCELLANEOUS: All Aluminum Surfaces in contact with concrete or steel shall be coated (See Specifications) prior to erection. There shall be no contact between dissimilar metals or aluminum and concrete.
- REINFORCING STEEL: Reinforcement Steel shall be free from mud, oil, or other non-metallic coatings that adversely affect bonding capacity. Bars are to be securely tied to prevent displacement during the concreting operation and all dowels are to be wired in place before depositing concrete. All splicing of bars, placing tolerances and bar spacings shall conform to A.C.I. 318-71.

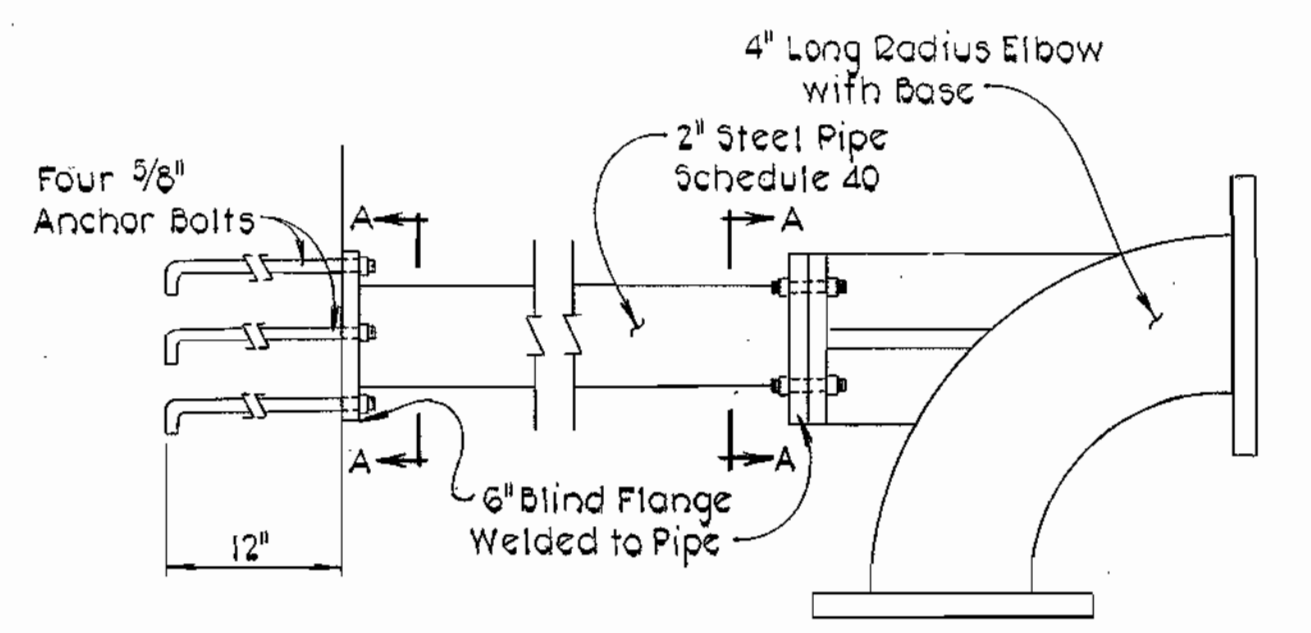
Note: For Waterproofing see Specifications.

W.S.S.C. NO. 80804688C  
 WASHINGTON SUBURBAN  
 SANITARY COMMISSION  
 FOR SANITARY SEWERS  
 LOCATED ON W.S.S.C. PROPERTY  
 PROJECT DEVELOPMENT DIV. HEAD DATE



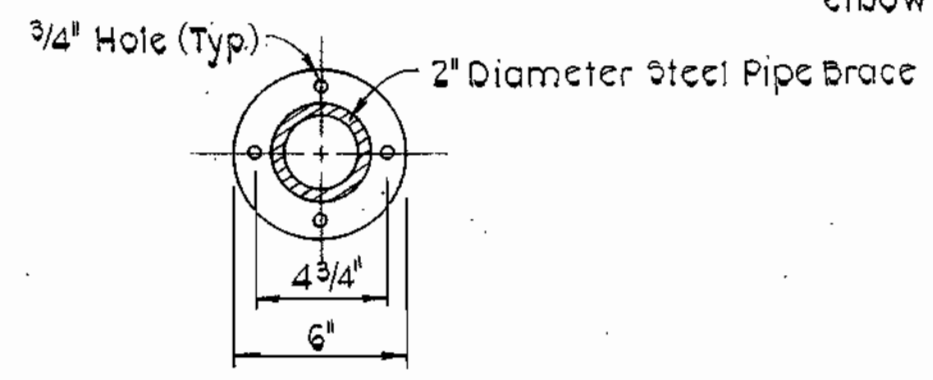
CONTRACT NO. 2719-S  
 PINE VALLEY SANITARY SEWERS  
 PINE VALLEY PUMPING STATION  
 CAPITAL PROJECT NO. S-4609

PURDUM & JESCHKE ENGINEERS 1023 N. CALVERT ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND CHIEF-BUREAU OF UTILITIES DATE Director of Public Works DATE Chief-Bureau of Engineering DATE	CONTRACT NO. 719-S CAPITAL PROJECT NO. S-4-6049	STRUCTURAL SECTIONS AND DETAILS PINE VALLEY PUMPING STATION	PINE VALLEY SANITARY SEWERS ELECTION DISTRICT NO.6 HOWARD COUNTY, MARYLAND	DRAWING NO. 10 OF 13	SCALE AS SHOWN	Designed: BCC Drafted: JFT Checked: CHL Date: 10/26/79
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**ELEVATION**

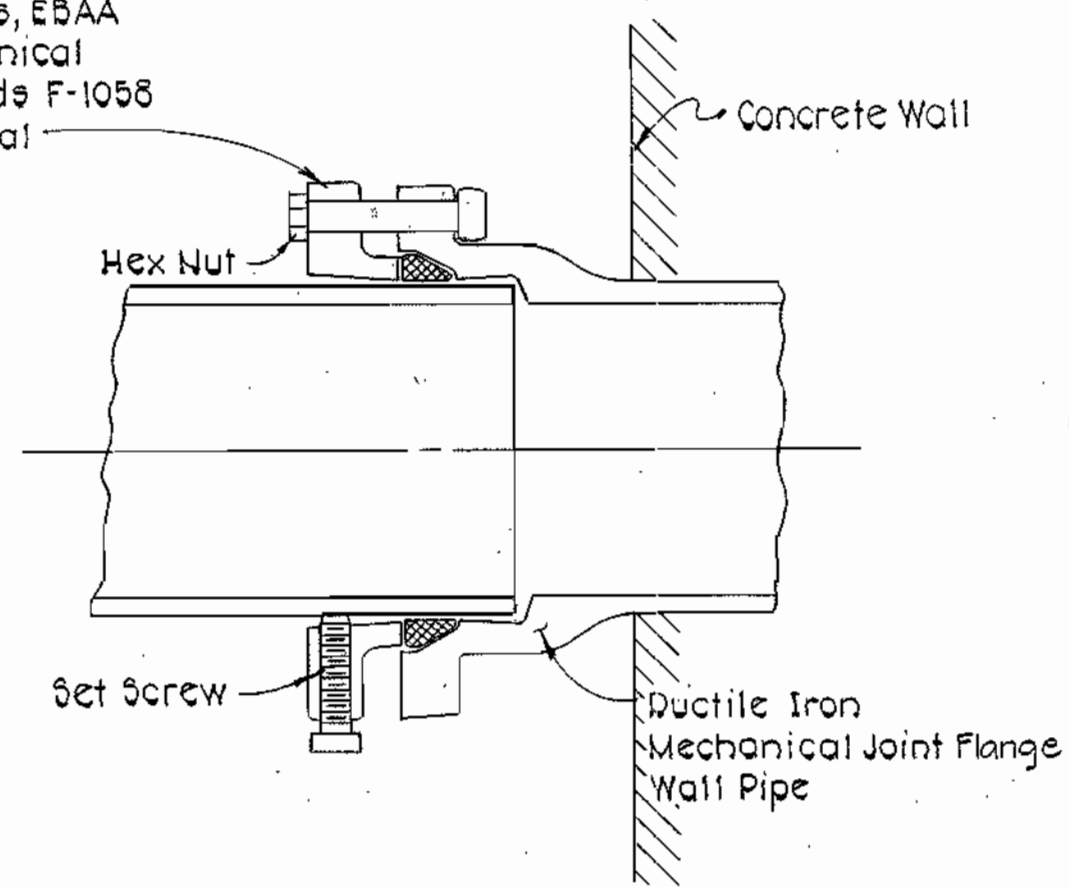
Note: Holes in Blind Flange shall match holes in elbow base.



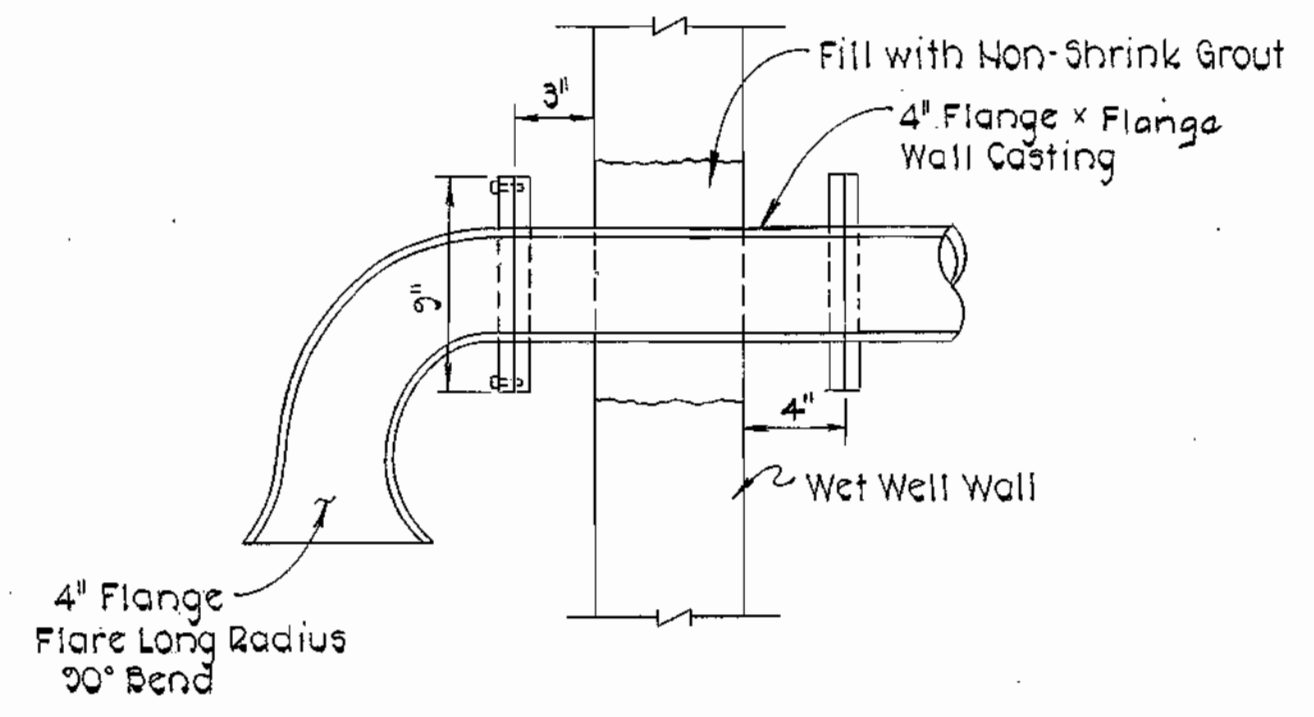
**SECTION A-A**

**STEEL PIPE BRACE DETAIL**  
Not to Scale

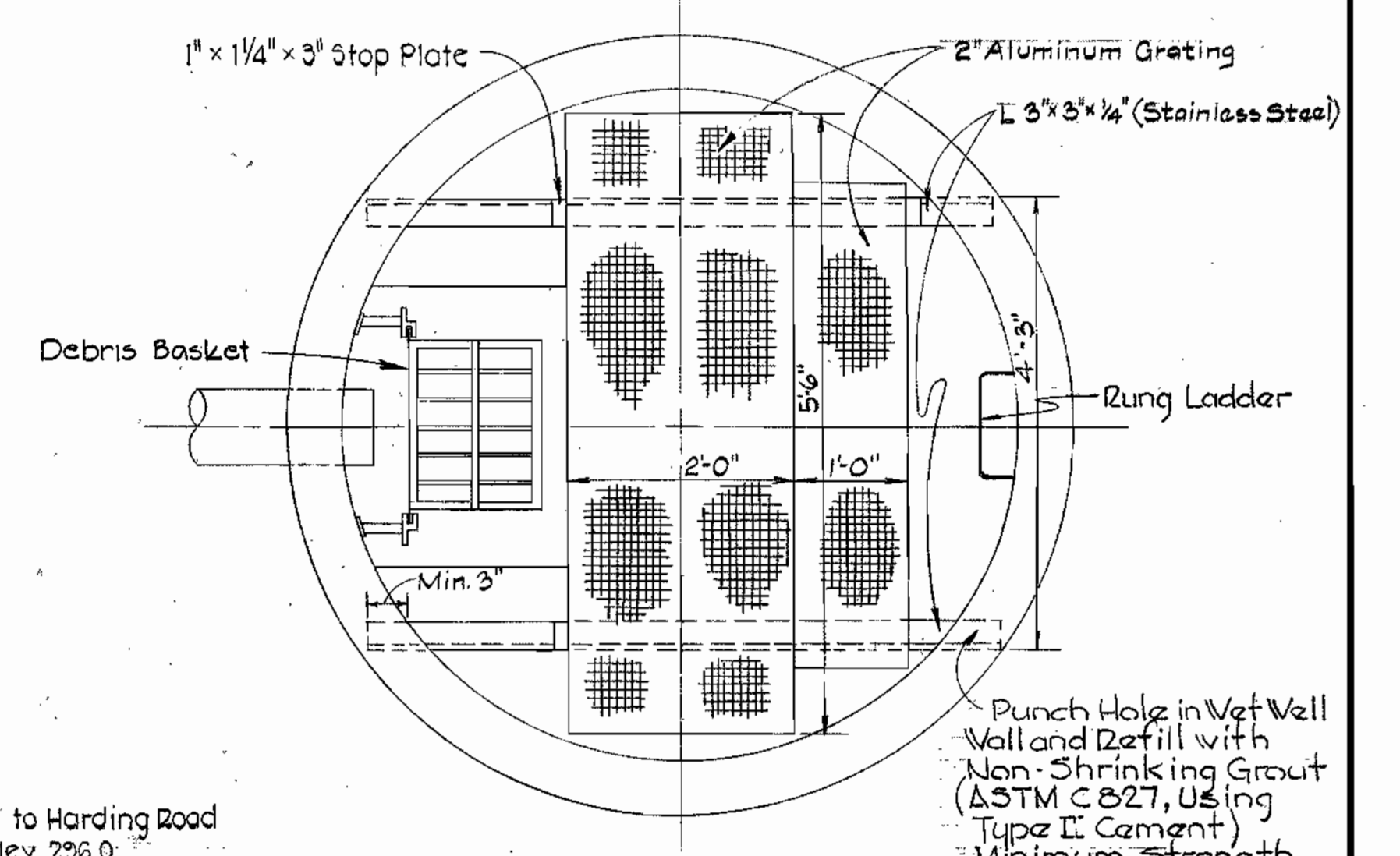
Type 'UL' Series 106 Ductile Iron Retainer Glands, EBAA IRON, Inc. or Mechanical Joint Retainer Glands F-1058 by CLOW, Inc. or Equal



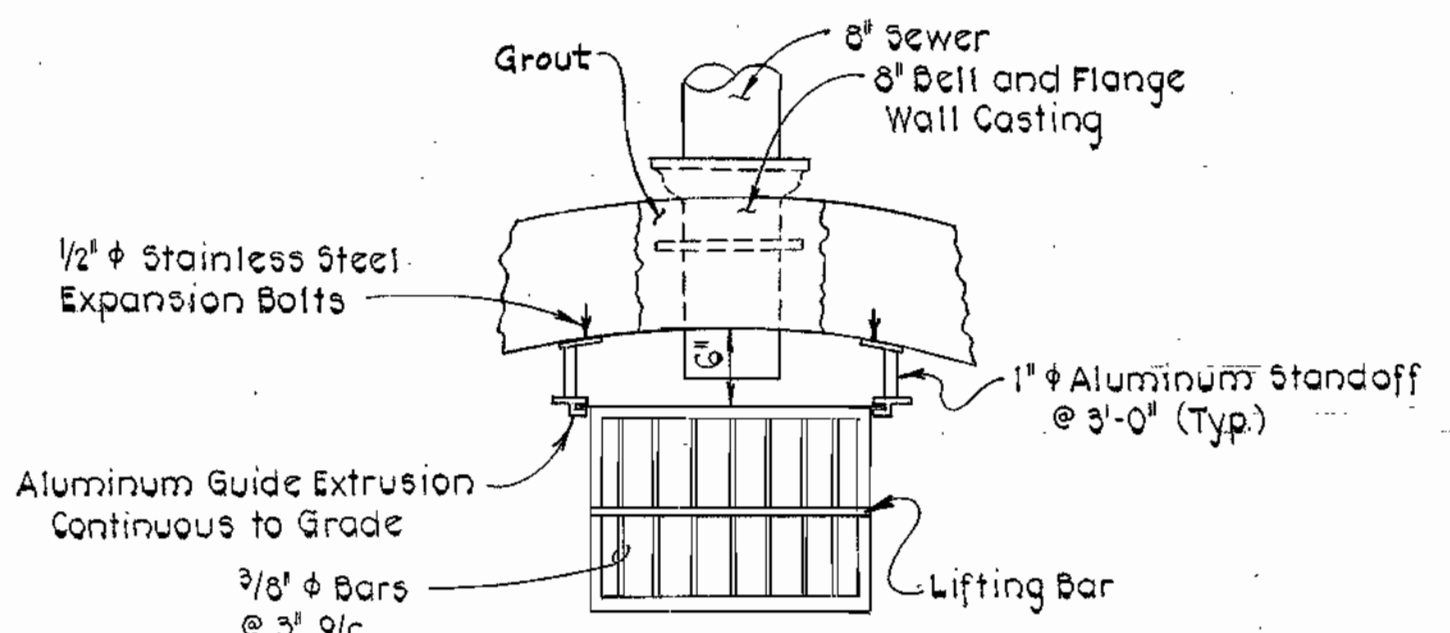
**WALL CASTING DETAIL**  
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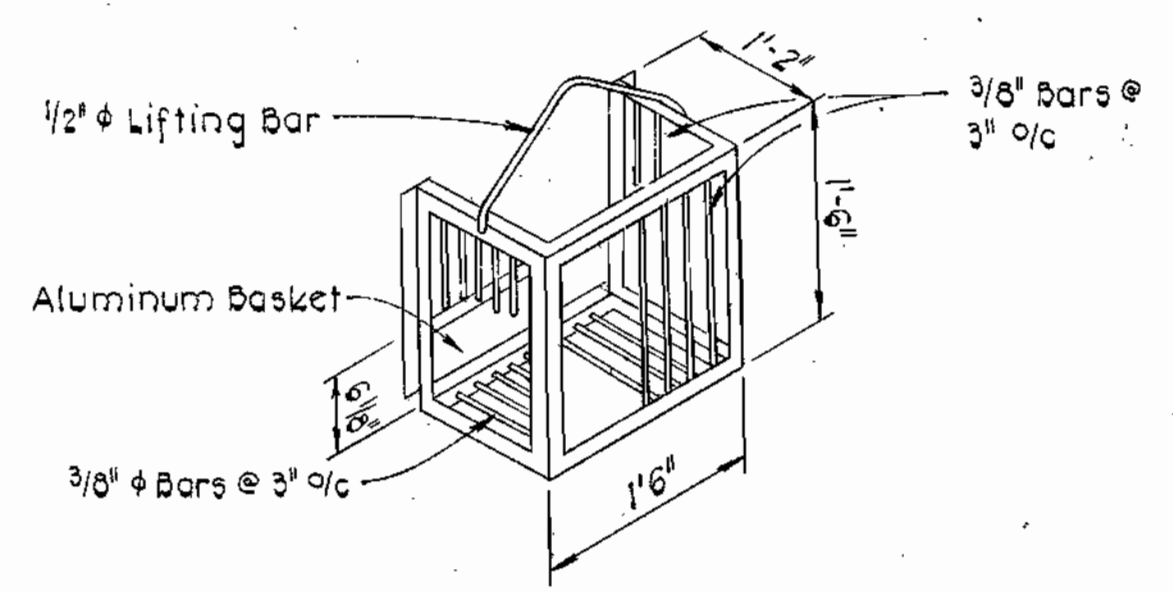
**4" SUCTION WALL CASTING DETAIL**  
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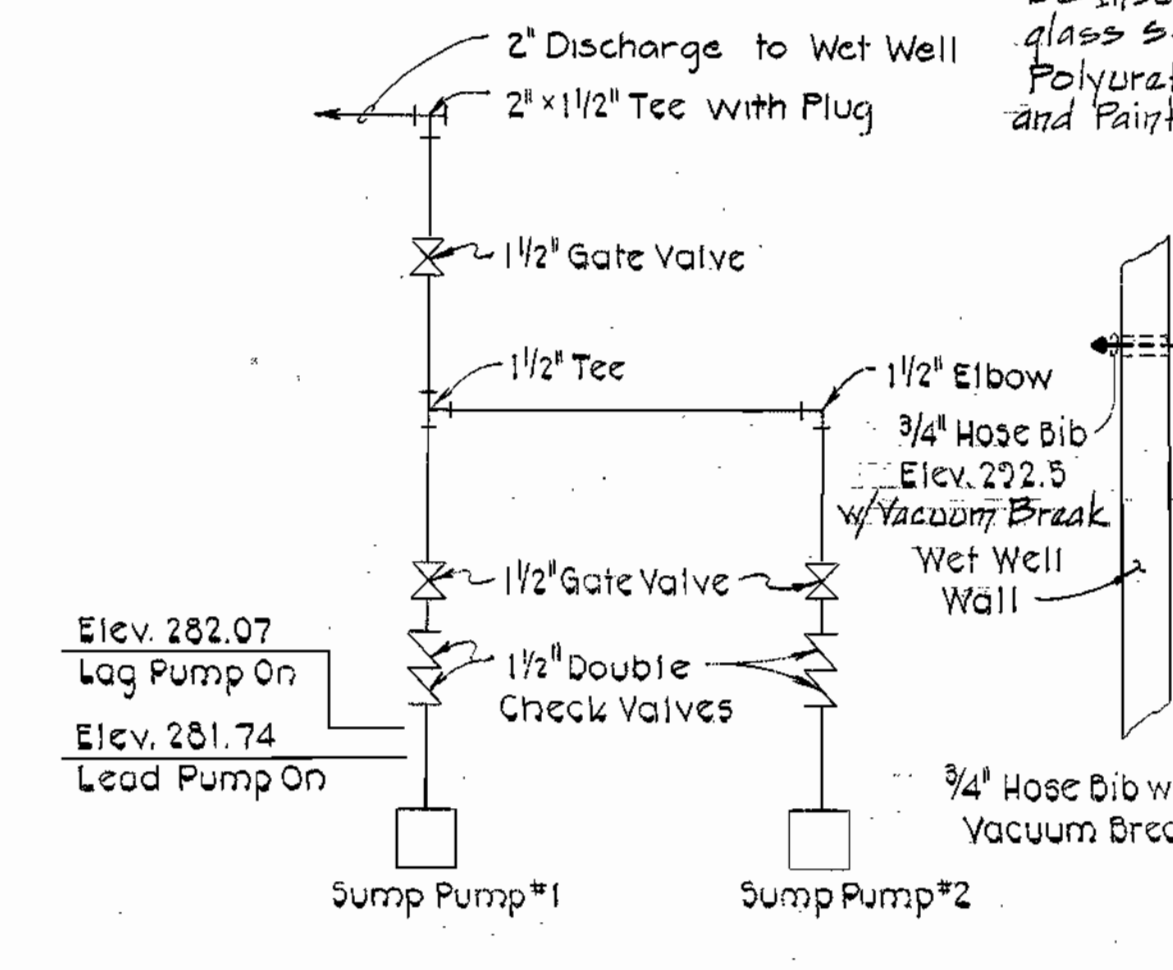
**WET WELL PLATFORM DETAIL**  
3/4" = 1'-0"



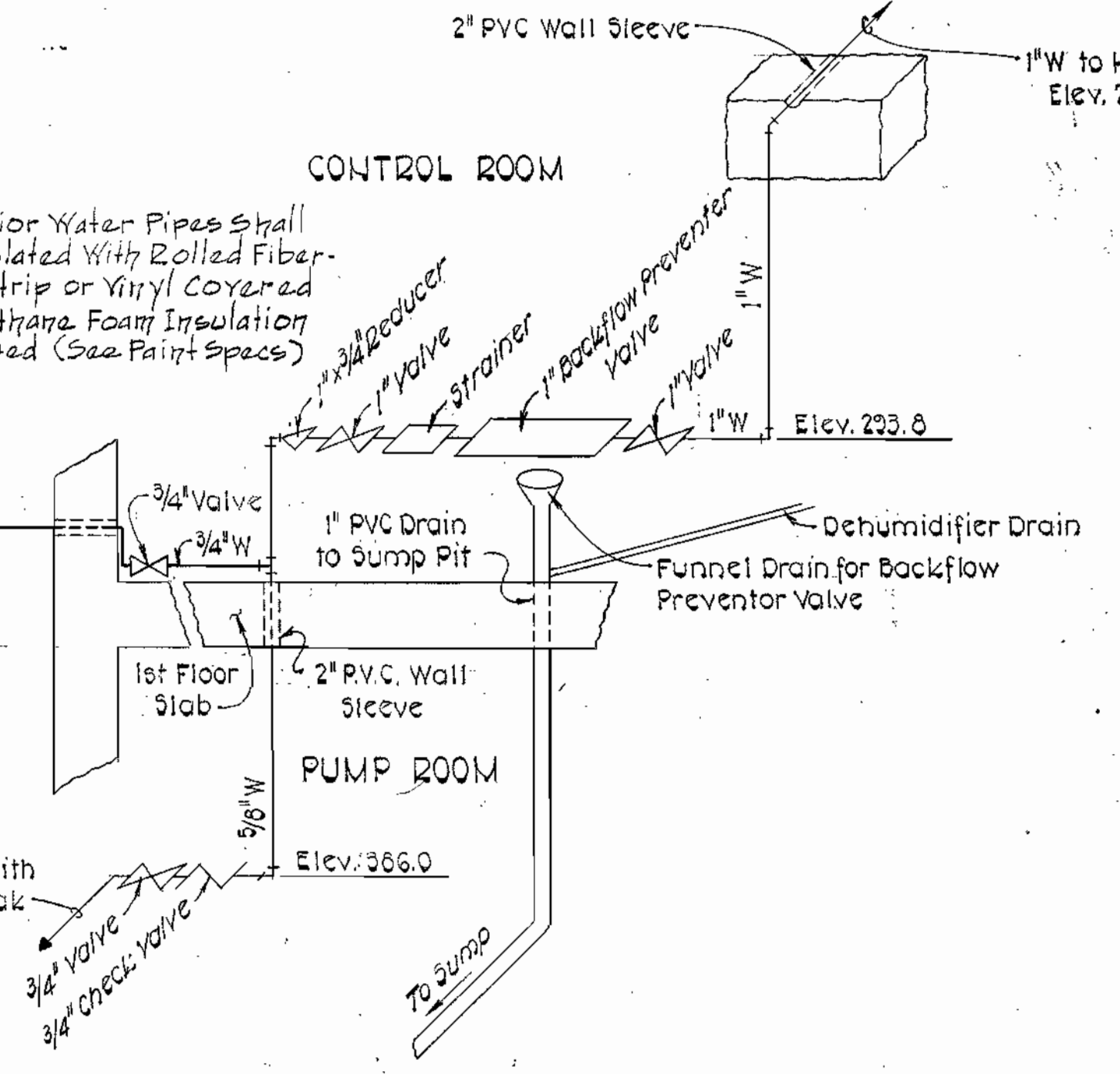
**PLAN**



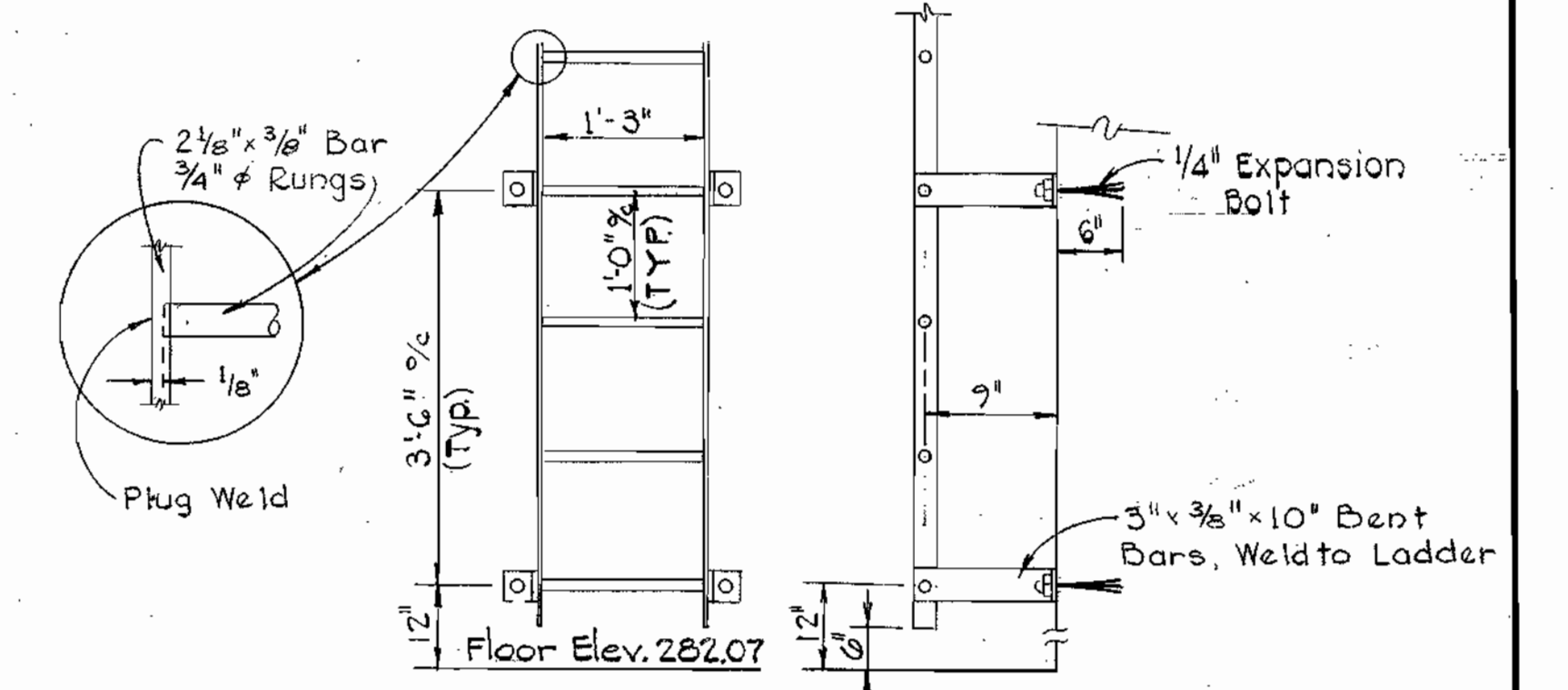
**DEBRIS SCREENING BASKET DETAIL**  
Not to Scale



**SUMP PUMP DISCHARGE PIPING DIAGRAM**  
Not to Scale

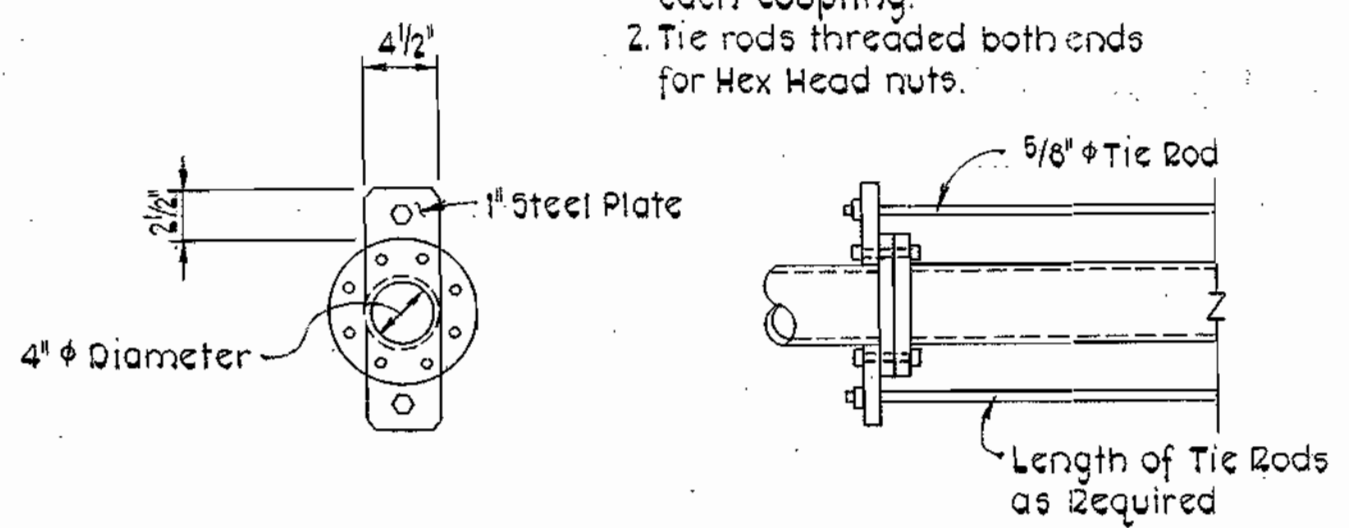


**WATER SUPPLY DIAGRAM**  
Not to Scale



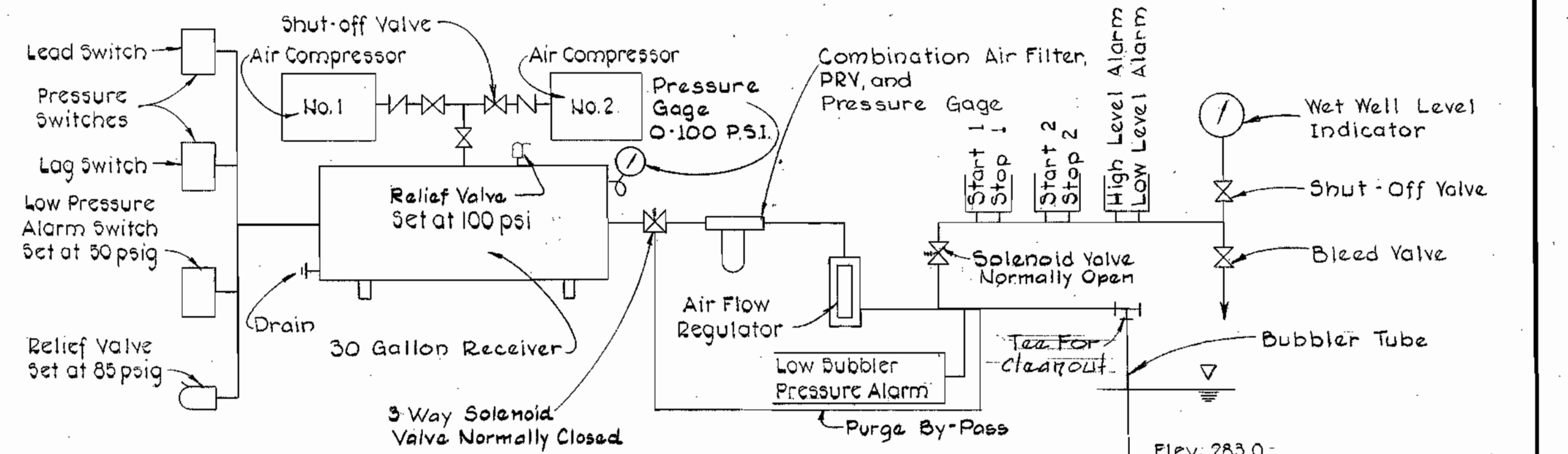
**ALUMINUM ACCESS LADDER**  
Scale: 3/4" = 1'-0"

Notes:  
1. Two tie rods required for each coupling.  
2. Tie rods threaded both ends for Hex Head nuts.



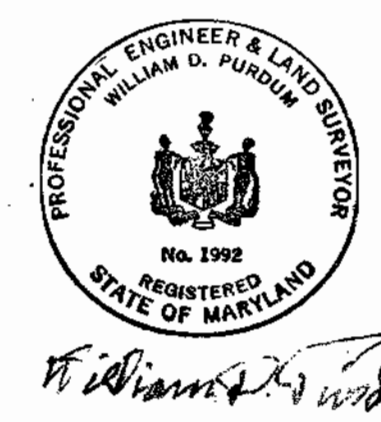
**PIPING HARNESS DETAILS**  
Not to Scale

Lead Switch On at 60 psig, Off at 80 psig  
Lag Switch On at 55 psig, Off at 75 psig



**COMPRESSED AIR SYSTEM DIAGRAM**  
Not to Scale

CONTRACT NO. 2719-S  
PINE VALLEY SANITARY SEWERS  
PINE VALLEY PUMPING STATION  
CAPITAL PROJECT NO. S-4-6049



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

WASHINGTON SUBURBAN SANITARY COMMISSION  
FOR SANITARY SEWERS LOCATED ON W.S.S.C. PROPERTY  
PROJECT DEVELOPMENT DIV. HEAD DATE W.S.S.C. NO. [REDACTED]

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
CONTRACT NO. 2719-S  
CAPITAL PROJECT NO. S-4-6049

MISC. DETAILS  
PINE VALLEY PUMPING STATION

PINE VALLEY SANITARY SEWERS  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY, MARYLAND

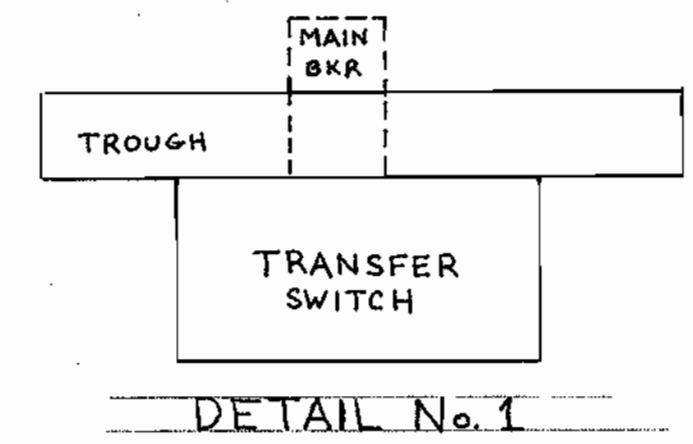
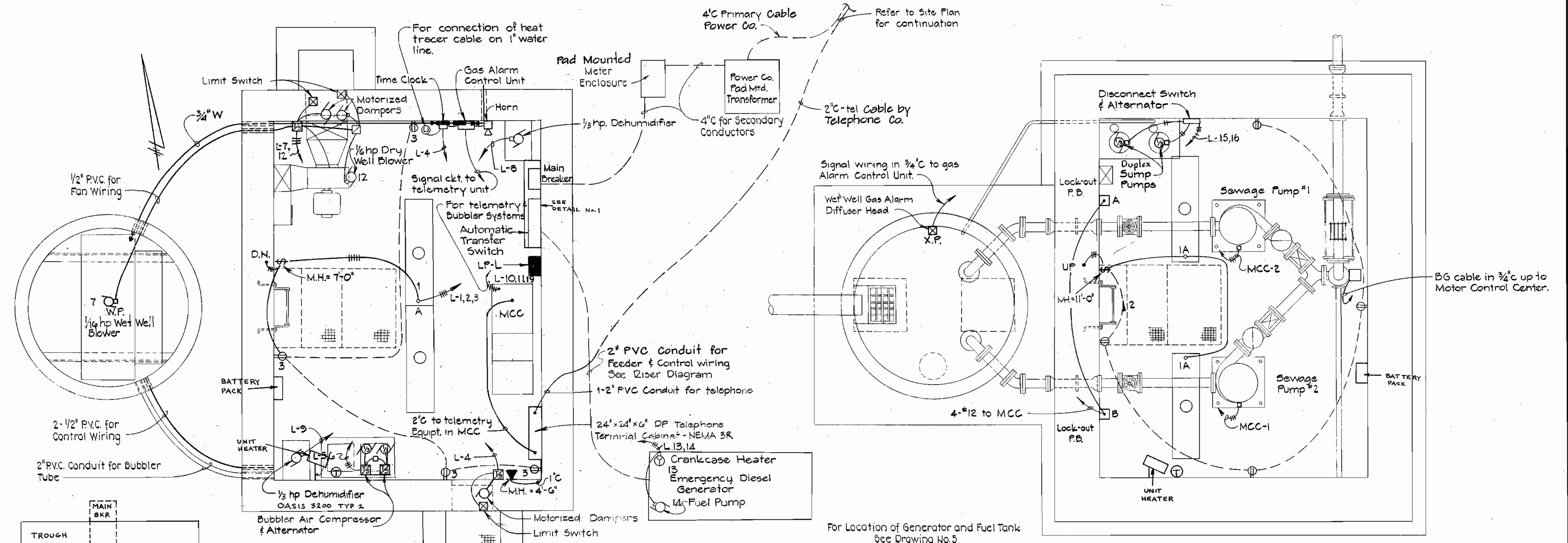
DRAWING NO. 11 OF 13 SCALE AS SHOWN  
Designed: R.H.B.  
Drafted: A.R.Z.  
Checked: C.H.L.  
Date: 10/26/79

WS 719-S/11 SM

WS 719-S/12

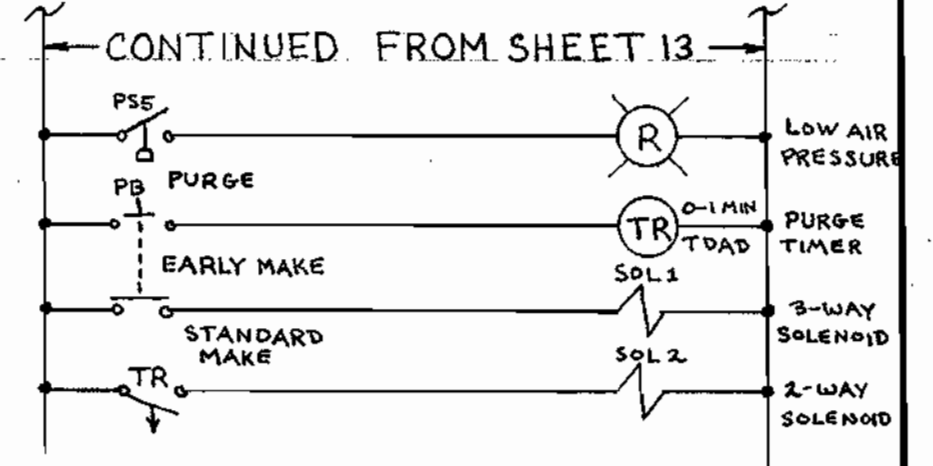
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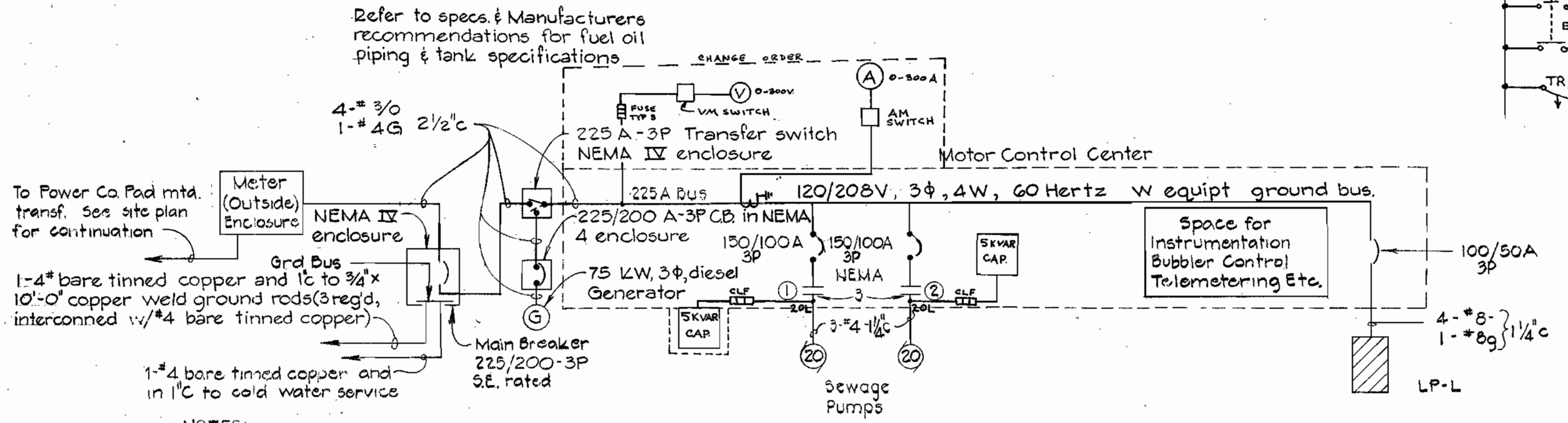
**CONTROL ROOM PLAN**  
Scale: 1/2"=1'-0"

**PUMP ROOM PLAN**  
Scale: 1/2"=1'-0"



LIGHTING FIXTURE SCHEDULE				
TYPE	DESCRIPTION	LAMP	MOUNTING	CATALOG NO.
A	4' Fluorescent, U.L. listed enclosed and gasketed with clear acrylic diffuser w/o ballasts	2-40W T-12	Stem Mtg.	Benjamin FA-2224 4F, Daybrite TB 41241, or equal

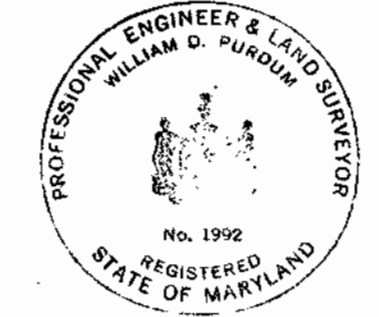
NOTE: Time Clocks shall be Paragon 4001-00, Torq or equal.



- NOTES:
1. Starter sizes in MCC indicated above. All starters to be provided with H.O.A. switches, Fused Transformers for 120 Volts Control Red (Running) Indicator Light Green (Stopped) Indicator Light.
  2. Starters for Sewage Pumps to be provided with Control relay similar to BUL700 Type 'B' Allen-Bradley, Square D; or equal. to provide alternating operation of pumps.
  3. Unless noted otherwise all breakers in MCC shall be 3 pole.
  4. The grounding electrode conductor shall be made electrically continuous with the protective metal conduit by bonding the ground electrode conductor to the metal conduit at both ends.

**RISED DIAGRAM**  
Not to Scale

W.S.S.C. NO. **80 80 4683 C**  
**WASHINGTON SUBURBAN SANITARY COMMISSION**  
 FOR SANITARY SEWERS LOCATED ON W.S.S.C. PROPERTY  
 PROJECT DEVELOPMENT DIV. HEAD DATE



CONTRACT NO. 2719-S  
 PINE VALLEY SANITARY SEWERS  
 PINE VALLEY PUMPING STATION  
 CAPITAL PROJECT NO. S-4-6049

<b>PURDUM &amp; JESCHKE</b> ENGINEERS 1023 N. CALVERT ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND CHIEF-BUREAU OF UTILITIES DATE 2-13-80 DIRECTOR OF PUBLIC WORKS-DATE 2-6-80 CHIEF-BUREAU OF ENGINEERING-DATE	CONTRACT NO. <b>2719-S</b> CAPITAL PROJECT NO. <b>S-4-6049</b>	<b>ELECTRICAL PLANS &amp; DETAILS</b> <b>PINE VALLEY PUMPING STATION</b>	<b>PINE VALLEY SANITARY SEWERS</b> ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND	<b>DRAWING</b> NO. <b>12</b> OF <b>13</b>	<b>SCALE</b> AS SHOWN	Designed: J.H. Drafted: P.W.R. Checked: J.H. Date: 10/26/79
		AS-BUILT 7-24-86 4/23/80			K&E BALTIMORE 17 0453 PHOENIX MC 1316		

WS 719-S/13

ELECTRICAL

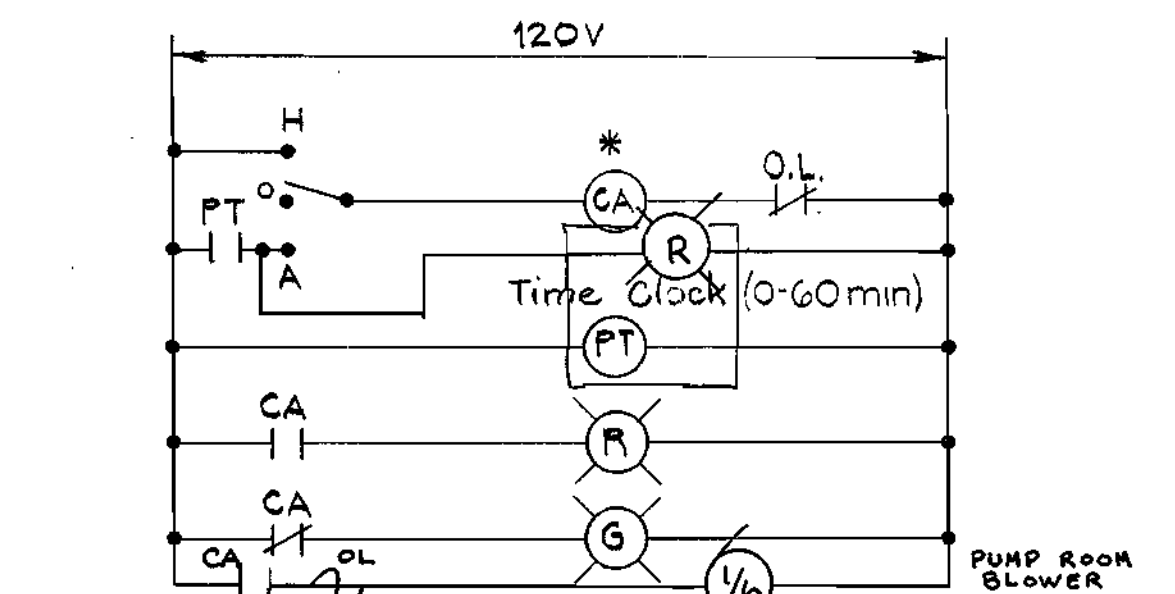
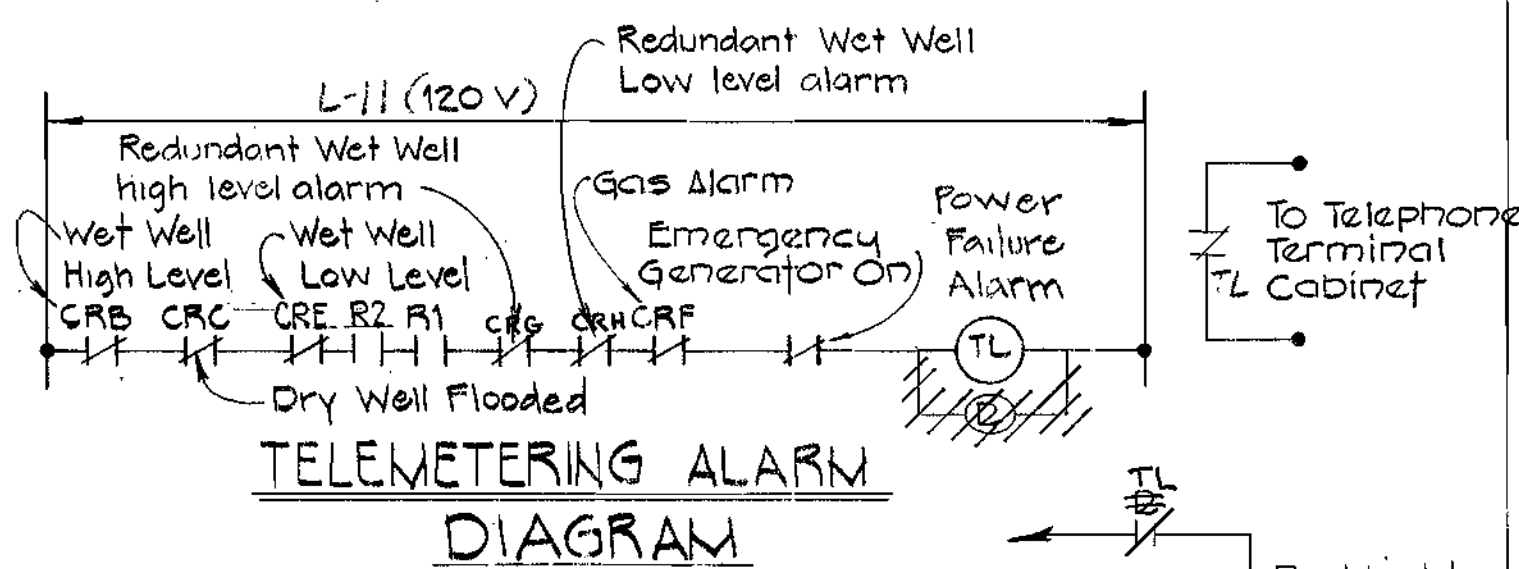
ELECTRICAL

ELECTRICAL LEGEND	
SYMBOL	DESCRIPTION
	Fixture - Fluorescent
	Fixture - Incandescent - Ceiling Wall Bracket
S, Sa	Switch - Single Pole - Subscript Denotes Outlets Controlled
	Receptacle - 20A, 125V - Duplex - M.H. 5'-0"
	Receptacle - 20A, 125V - Single - M.H. 5'-0"
	Junction Box
	Motor - Horsepower As Indicated
	Thermostat - M.H. 5'-0"
	Time Clock - M.H. 5'-0"
	Control Device As Indicated on Plans
	Panel board - M.H. 6'-6" To Top
	Unfused Disconnect Switch - M.H. 5'-6" To Top
	Thermal Manual Motor Starter w/ Hand-Off - Auto Selector Switch - M.H. 5'-0"
	Conduit - In Or On Ceiling Or Wall 2 #12, 3/4" C. Unless Otherwise Noted
	Conduit - In Or Under Floor
	Home-run to Panel. No. of Arrows Indicate No. of Circuits & No. of Crosslines Indicate No. of Conductors.
M.H.	Mounting Height to Center of Outlet Unless Otherwise Indicated.
W.P.	Weatherproof
X.P.	Explosion-Proof
	Outlet, Telephone, Wall M.H. 4'-6" Above Floor
	Ground Rod, 3/4" x 10'-0" Copperclad Steel
	Exothermically Welded Connection
	Thermal Manual Motor Starter With Hand Off Automatic Selector Switch M.H. 4'-0"
	Fixture - Mercury Vapor
	Combination Magnetic Starter
	Contactors
	Starter Coil (One Line Diagram)
	Indicating Light - Red - Heavy Duty Type
	Running Time Meter

**SCHEDULE OF PANEL**  
208/120 VOLTS, 3 PHASE, 4-WIRE, 100 AMP MAINS

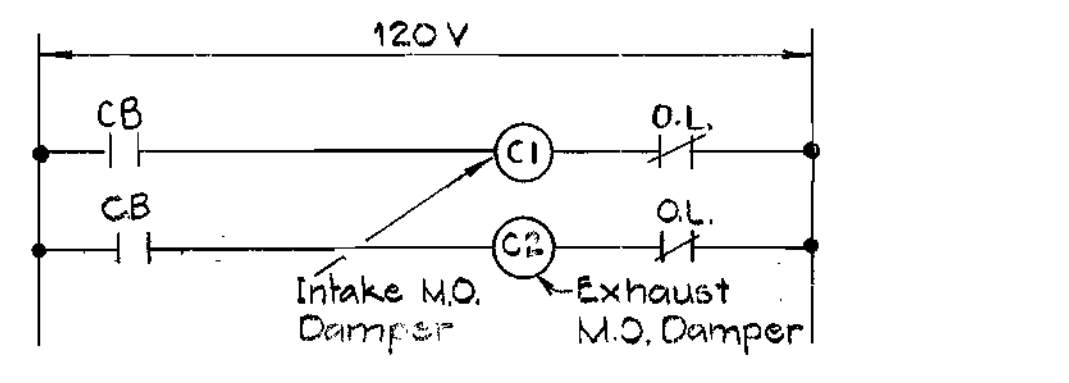
CKT NO.	EQUIPMENT SERVED	CIRCUIT BREAKER			REMARKS
		POLES	TRIP	FRAME	
1	Lights, First Floor & Pump Room	1	20A	100	Ground Fault Breaker
2	Receptacles, Pump Room	1	20A	100	
3	Receptacles, First Floor	1	20A	100	
4	Motor Operated Dampers	1	20A	100	
5	1/2 hp Air Compressor	1	15A	100	
6	1/2 hp Air Compressor	1	15A	100	
7	1/2 hp Wet Well Fan	1	15A	100	
8	1/2 hp Dehumidifier	1	15A	100	
9	1/2 hp Dehumidifier	1	15A	100	
10	Pump and Bubbler System Control and Flowmeter	1	15A	100	
11	Telemetry Alarm and Bubbler Alarm	1	15A	100	
12	1/2 hp Dry Well Fan	1	15A	100	
13	Generator Crankcase Heater	1	20A	100	
14	Fuel Pump	1	20A	100	
15	Sump Pump	1	15A	100	
16	Sump Pump	1	15A	100	
17	Spare	1	15A	100	
18	Spare	1	15A	100	
19	Control circuit for "HAND" operation of sewage pumps	1	15A	100	
21-22	Spare	2 each	20A	100	
23-26	Spare	4 each	-	100	
20	Control High Level Alarm	1	15A	100	

Panel shall be complete w/ equip. and bus

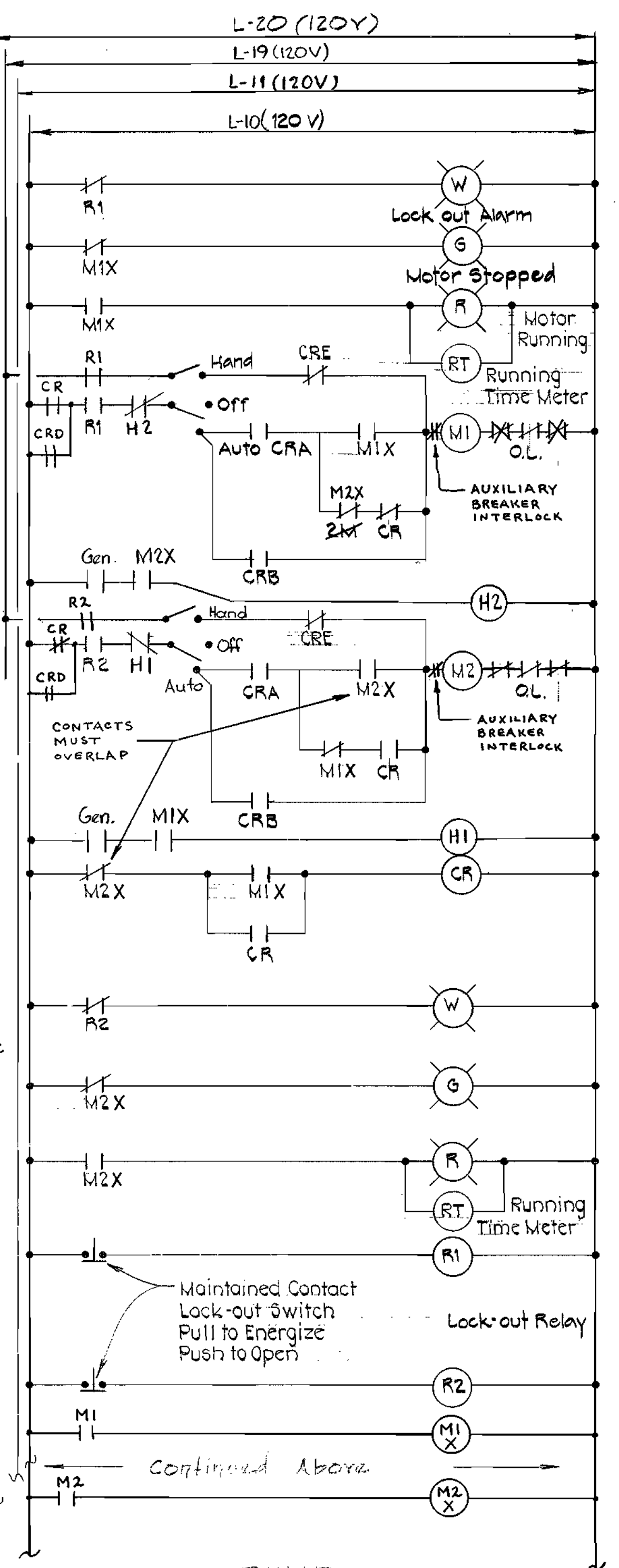


PUMP ROOM AND WET WELL VENT FANS (TYPICAL)

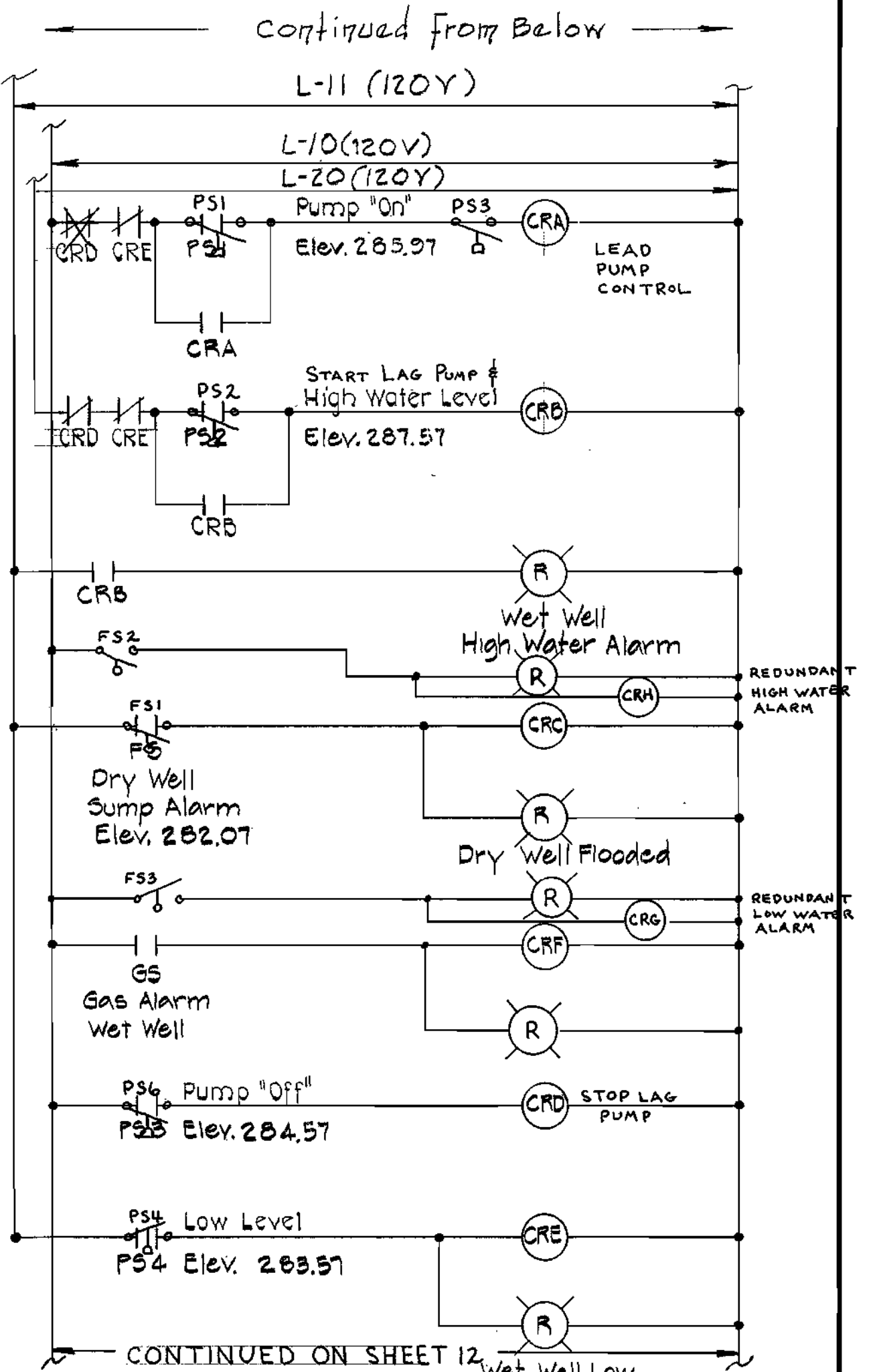
\* CB for Wet Well



MOTOR OPERATED DAMPER FOR WET WELL VENT FAN & DRY WELL VENT FAN (TYPICAL)

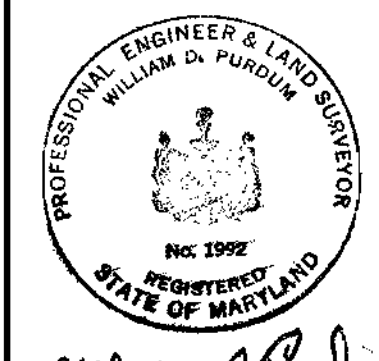


PUMP AND BUBBLER SYSTEM CONTROL



PUMP AND BUBBLER SYSTEM CONTROL

- Notes**
- The Contractor shall verify with equipment manufacturers the exact number of control wires before installing conduits.
  - Check working drawings for conduit stub locations.
  - Control diagrams indicate the system of control required. Exact wiring connections shall be installed per manufacturers wiring diagrams.
  - All electrical work in the wet well shall be suitable for Class 1 Division 1 Group D areas. Provide seals on all conduits.
  - All panels shall be mounted to wall utilizing 1/4" kerf channel.
  - A green insulated ground conductor (min #12 AWG) shall be installed in all conduits from panel equipment ground bus to particular items of equipment.
  - All conduit shall be PVC heavy wall Schedule 40 conduit with a minimum inside diameter of 3/4" inch trade size.



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

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
DATE: 2-13-80  
DATE: 2-6-80

CONTRACT NO. 719-S  
CAPITAL PROJECT NO. S-4-6049

ELECTRICAL DETAILS  
PINE VALLEY PUMPING STATION

PINE VALLEY SANITARY SEWERS  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY, MARYLAND

DRAWING NO. 13 OF 13  
SCALE NOT TO SCALE  
Designed: JH  
Drafted: PWR  
Checked: JH  
Date: 10/26/79

W.S.S.C. NO. 80 50 4688 C  
WASHINGTON SUBURBAN SANITARY COMMISSION  
FOR SANITARY SEWERS LOCATED ON W.S.S.C. PROPERTY  
CONTRACT NO. 2719-S  
PINE VALLEY SANITARY SEWERS  
PINE VALLEY PUMPING STATION  
CAPITAL PROJECT NO. S-4-6049