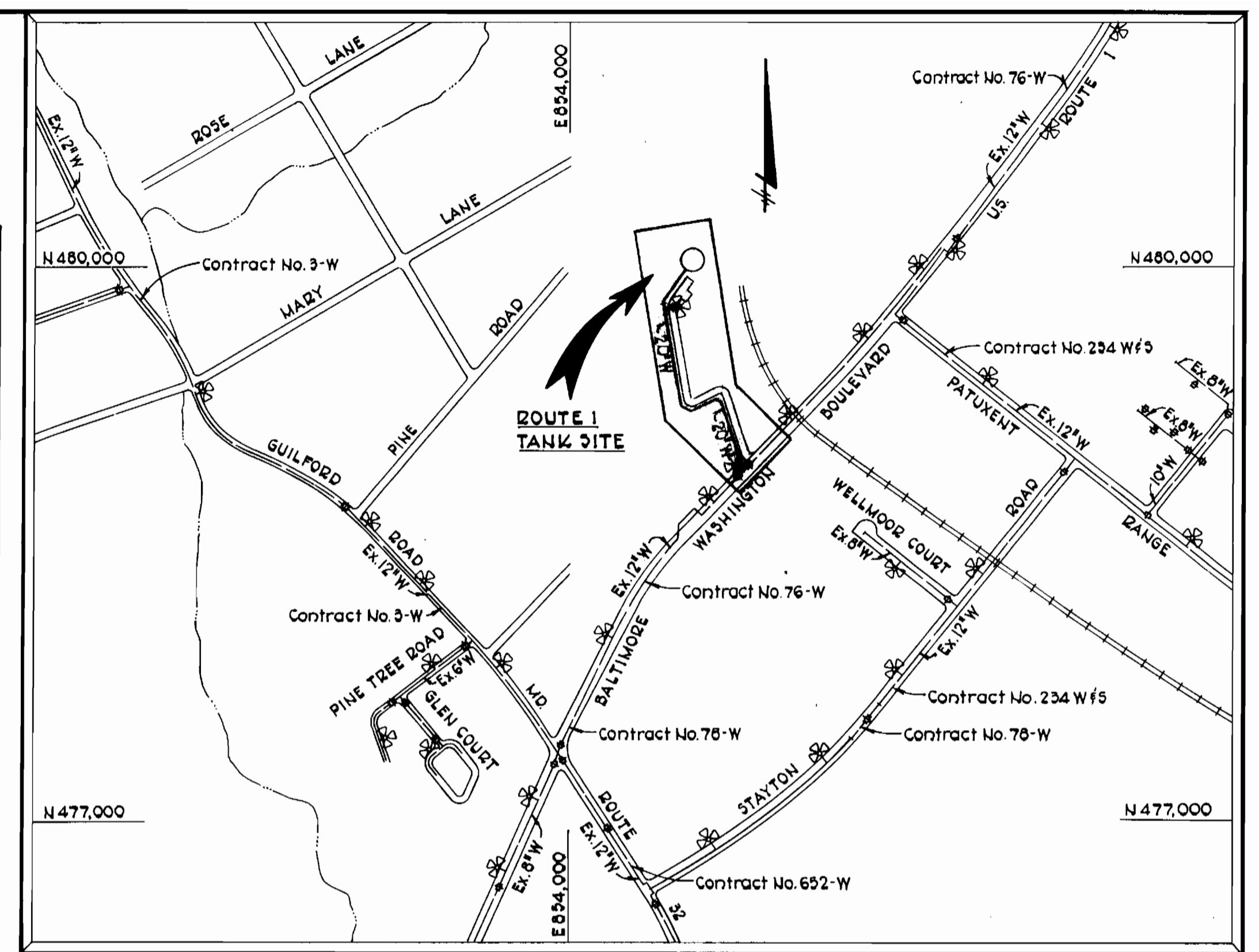


BENCH MARKS

- B.M.#3 Elev. 327.96
Railroad Spike in 12" Oak 25'± NE of P.I. "M-5"
- B.M.#4 Elev. 327.03
Railroad Spike in 15" Oak 30'± SE of P.I. "M-4"

INDEX OF DRAWINGS	
DRAWING NO.	TITLE
1	Plan
2	Private Drive Profile and Details
3	Sediment Control Plan
4	Site and Grading Plan and Water Main Profiles
5	Fencing and Landscaping Plan and Details
6	Altitude Valve Vault Plan and Sections
7	Check Valve Vault Plan and Sections

QUANTITIES			
ITEM	ESTIMATED	AS-BUILT	SUPPLIER
20" Water	1252 L.F.	1092 L.F.	ATLANTIC
8" Water	50 L.F.	36 L.F.	ATLANTIC
Fire Hydrants	1 Each	2 Each	DRESSER



VICINITY MAP
SCALE: 1" = 600'

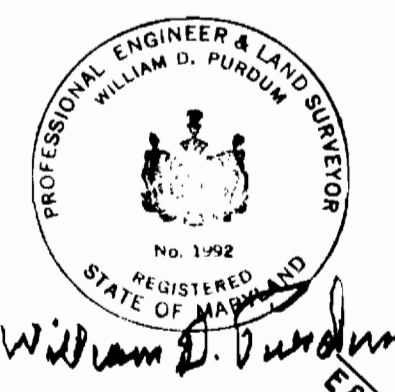
GENERAL NOTES

- 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 to the satisfaction of the engineer by the contractor at the contractor's expense.
- All pipe elevations shown are invert elevations.
- Clear all utilities by a minimum of 6" vertically. Clear all poles 2'-0" minimum or tunnel as required.
- For standard Water Main Details see Howard County Standards.
- Contractor shall locate existing utilities in advance of construction operations in the vicinity of proposed utilities. Cost shall be included in the unit price bid for excavation.
- Contractor shall notify the following utilities or agencies at least five (5) days before starting work shown on these plans:
Baltimore Gas and Electric Company - Underground Electric Distribution Engineering - "Damage Control" - 234-5691
Baltimore Gas and Electric Company - Underground Gas Distribution Engineering - 539-0100
Chesapeake and Potomac Telephone Company - 725-8976
Miss Utility - 559-0100
- Buttress or anchor all water main fittings with concrete. All valves shall be strapped to tees in accordance with standard details.
- All water mains to have a minimum of 3'-6" cover unless otherwise noted.
- All fire hydrants shall be strapped to the tee and shall be buttressed with concrete in accordance with the standard details. Cost of strapping fire hydrants and valves to be included in the unit price bid for furnishing and installing fire hydrants. Soil around the fire hydrant to be compacted in accordance with Section 5-15 of the Howard County Standard Specifications.
- Bury line elevations on fire hydrants shall be set to the elevations shown on the plans.
- Horizontal control is based on the Maryland State Grid Coordinate System.
- Test borings logs are available at Howard County Department of Public Works - Capital Project and Contracts Division.
- All vertical controls are based on U.S.C. & G.S. Datum.
- Trees are to be protected from damage to maximum extent. Trees located outside the limits of clearing are not to be removed or damaged 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 price bid for excavation and backfill for water mains.
- Place regulation "Men Working" and warning signs as required to comply with Maryland State Highway Administration Manual of Traffic Control for Highway Construction and Maintenance Operations.
- All water mains to be 4-I.P. or R.C. P.P. unless otherwise noted.

SITE INFORMATION

TOTAL AREA 2.46 Ac ±
 STRUCTURE AREA 0.10 Ac ±
 ZONING R5A
 TAX MAP 43
 PARCEL NUMBER P/O 235
 LIBER/FOLIO 930/447
 PARKING SPACES AVAILABLE 3
 VARIANCE PETITION NO. 79 -45

CURVE DATA
 CURVES 2 & 3
 R = 61'
 L = 68'
 Δ = 63° 52' 02"
 T = 38'



NOTE:
See 20" Pipe Profile on Drawing No. 4 of 7

NOTE:
1. See Entrance Detail on Drawing No. 2
2. Relocate Ex. 12" W to allow future clearance of 10' Gas. See profile on Drawing No. 4

Note: Contractor shall test pit Ex. 12" Water and 10" Gas prior to installation of any watermain in this area.

PURDUM & JESCHKE
 ENGINEERS
 1023 N. CALVERT ST.
 BALTIMORE, MARYLAND 21202

APPROVED: For Public Water, Storm Drainage Systems, and Public Roads
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 William F. Mumby 11-2-79
 DIRECTOR OF PUBLIC WORKS DATE
 Allen J. Brown 11/29
 CHIEF BUREAU OF ENGINEERING DATE

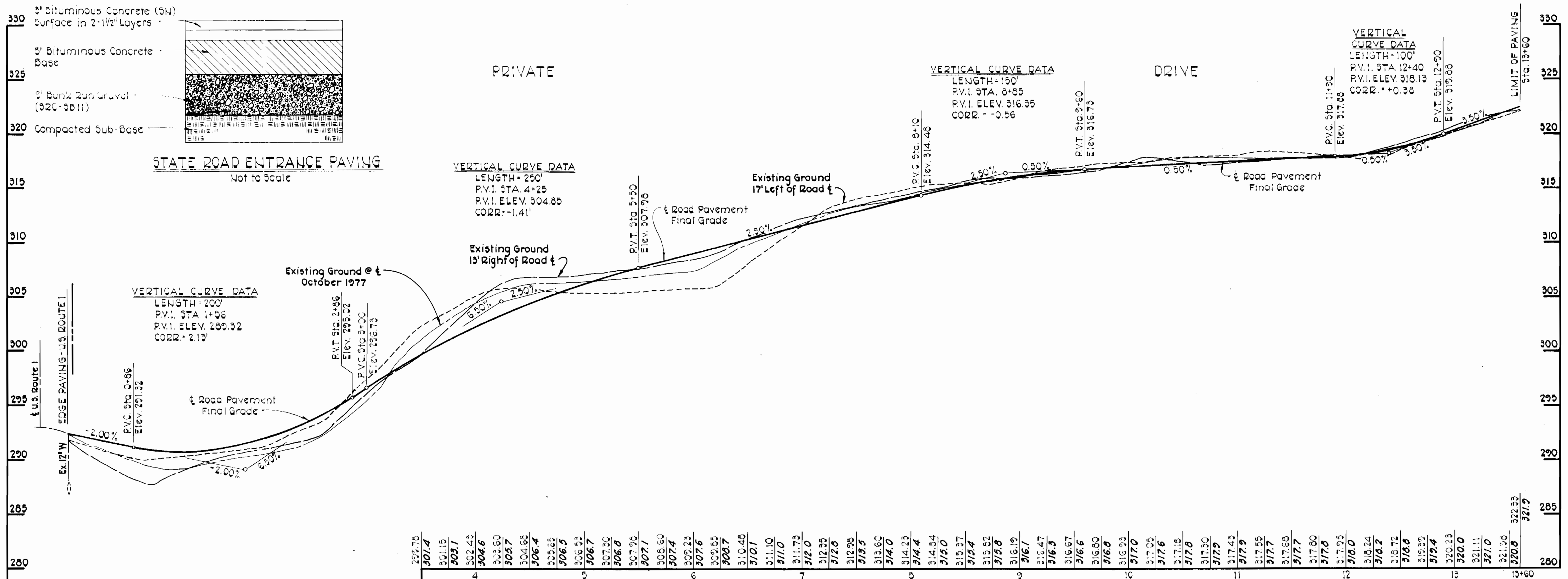
CONTRACT NO. 828-W
 CAPITAL PROJECT NO. W-6-8091

PLAN

ROUTE 1 STORAGE FACILITY
ELECTION DISTRICT GUILFORD NO. 6
 TAX MAP 43 LIBER/FOLIO 930/447

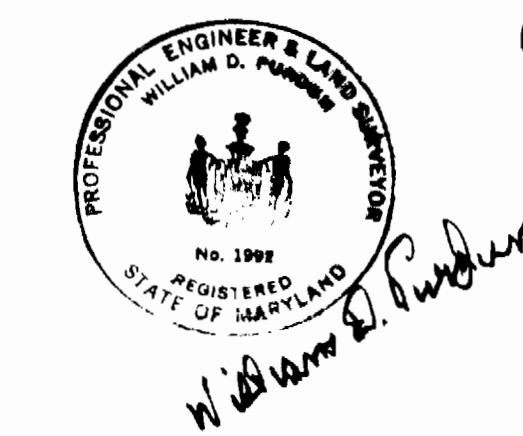
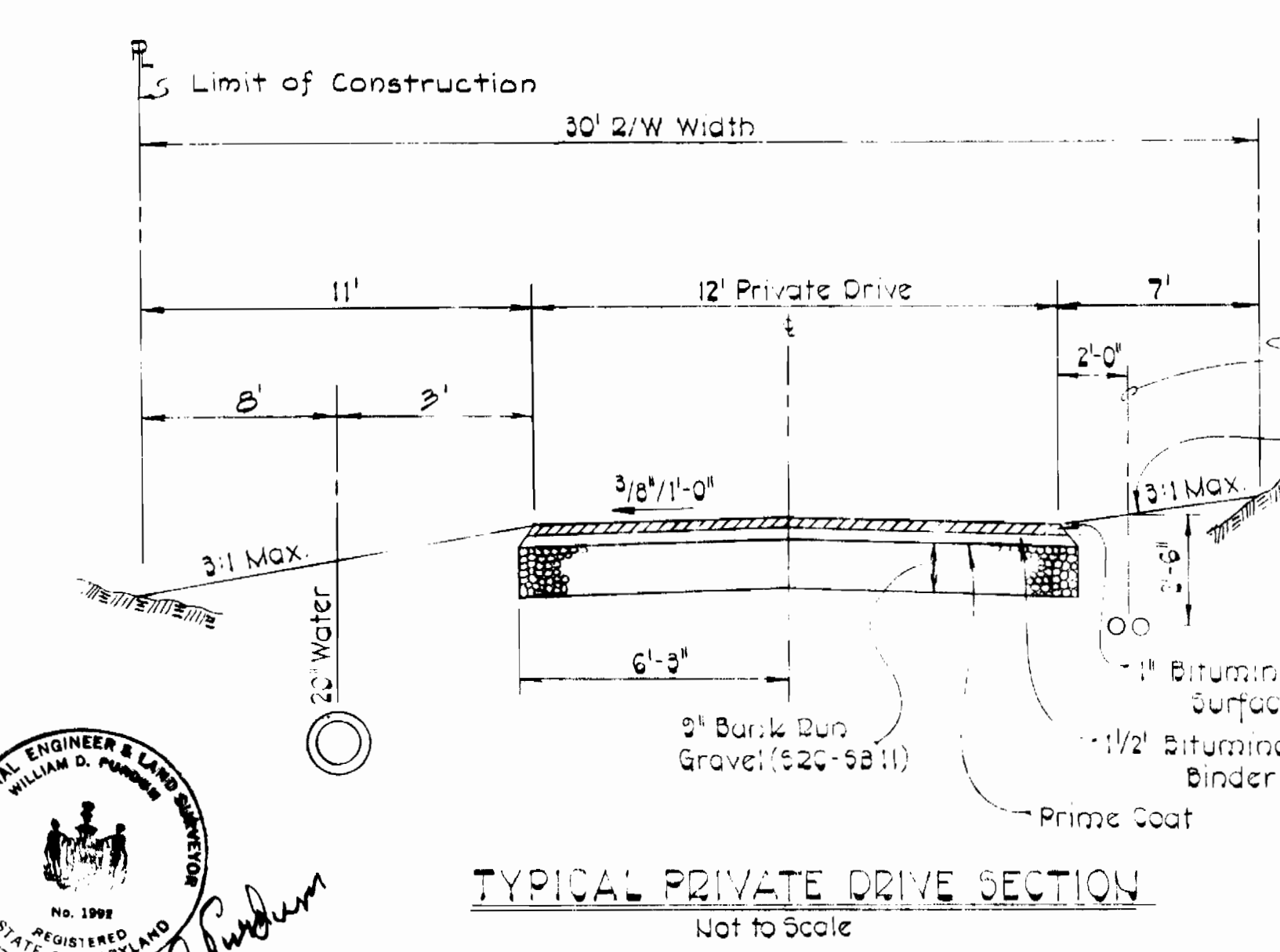
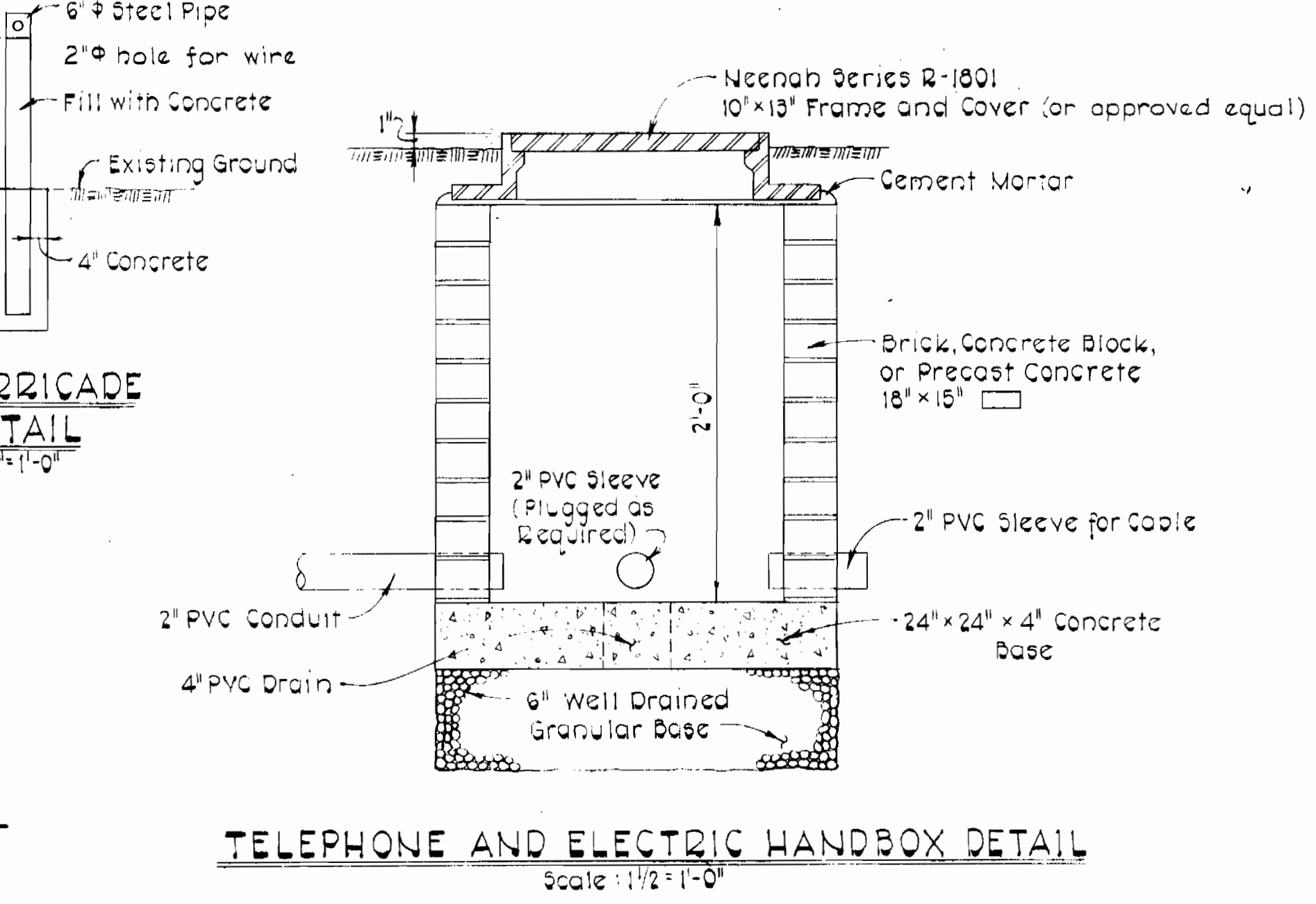
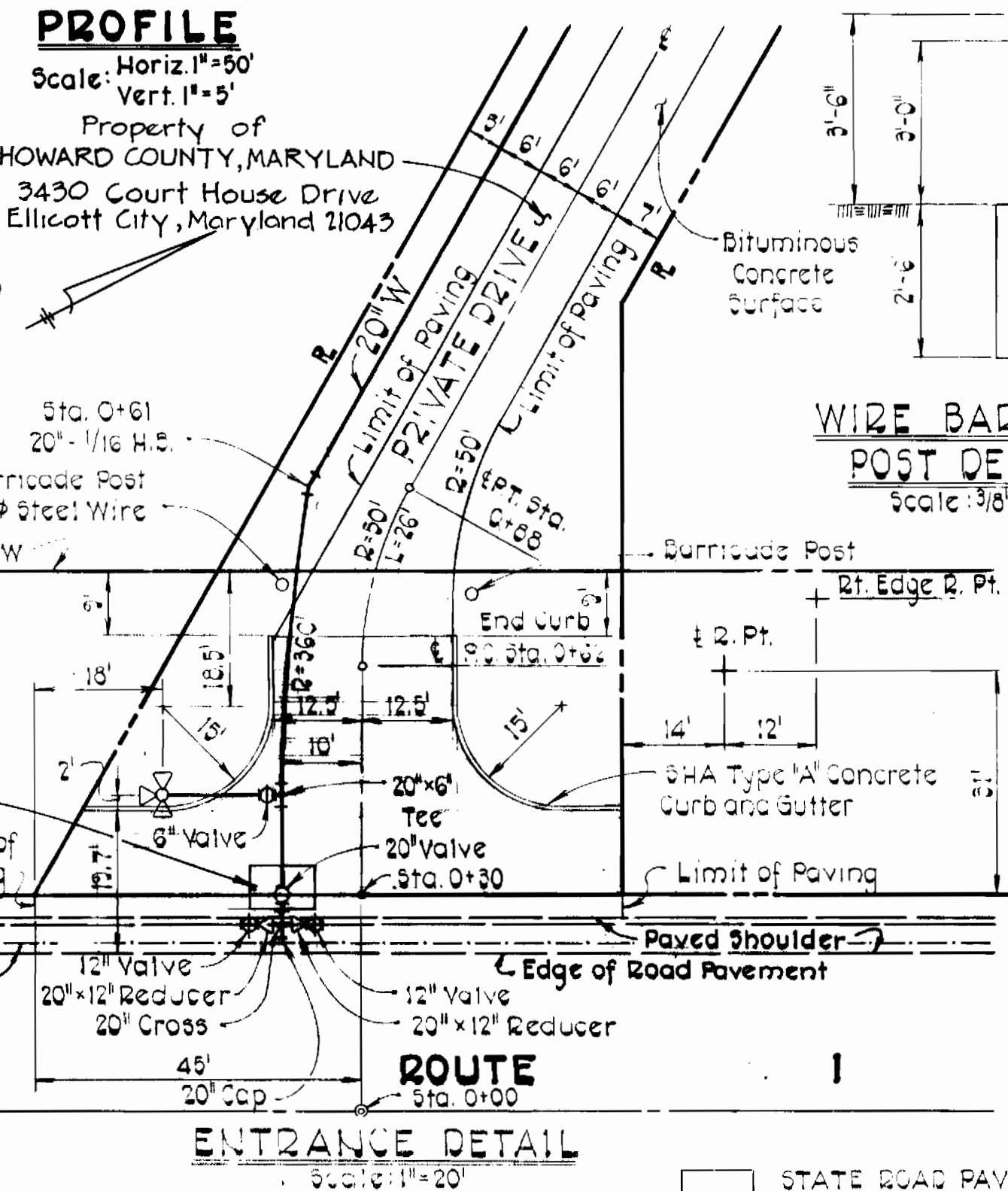
CONTRACT NO. 828-W
 CAPITAL PROJECT W-6-8091
 ROUTE 1 STORAGE FACILITY

DRAWING NO. 1 OF 7	SCALE AS SHOWN	Designed: TAF Drafted: ARZ Checked: RHB Date:
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NOTES: (PRIVATE DRIVE)

- The base will be primed, in accordance with Section C-30-3 and a tack coat is required, in accordance with Section C-31-4 of the Howard County Road Construction Code and Standard Specifications.
- All construction shall be in accordance with the Howard County Road Construction Code and Standard Specifications.



PURDUM & JESCHKE
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APPROVED: For Public Water, Storm Drainage Systems, and Public Roads
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Director of Public Works
DATE: 11-2-79

CONTRACT NO. 828-W
CAPITAL PROJECT NO. W-6-8091

PRIVATE DRIVE PROFILE AND DETAILS

ROUTE 1 STORAGE FACILITY
ELECTION DISTRICT GUILFORD NO. 6
TAX MAP 43 LIBER / FOLIO 930 / 447

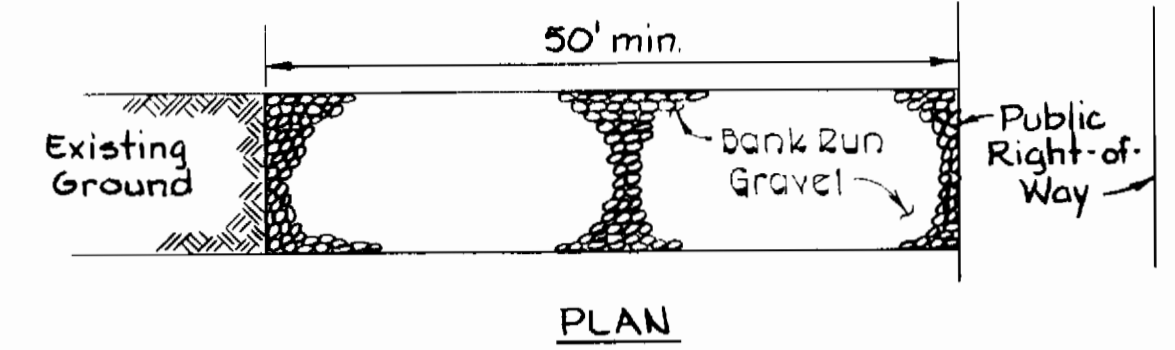
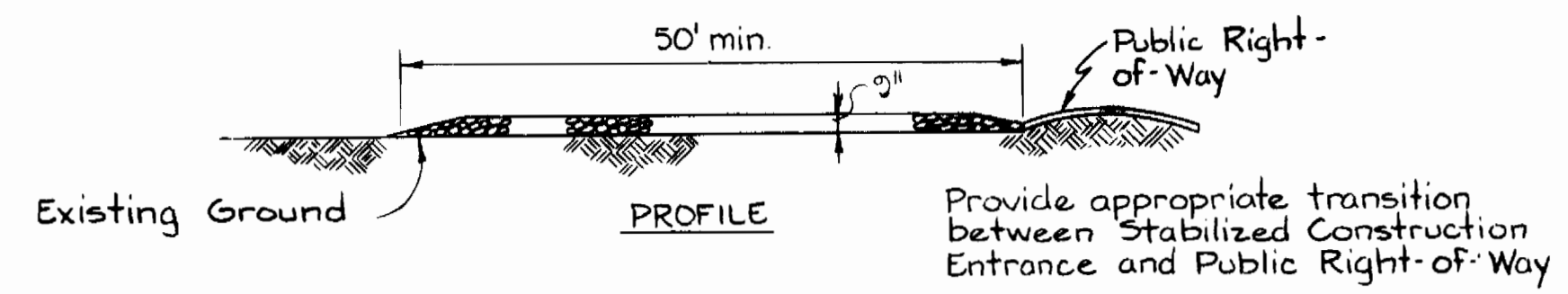
CONTRACT NO. 828-W
CAPITAL PROJECT W-6-8091
ROUTE 1 STORAGE FACILITY

DRAWING NO. 2 OF 7
SCALE AS SHOWN

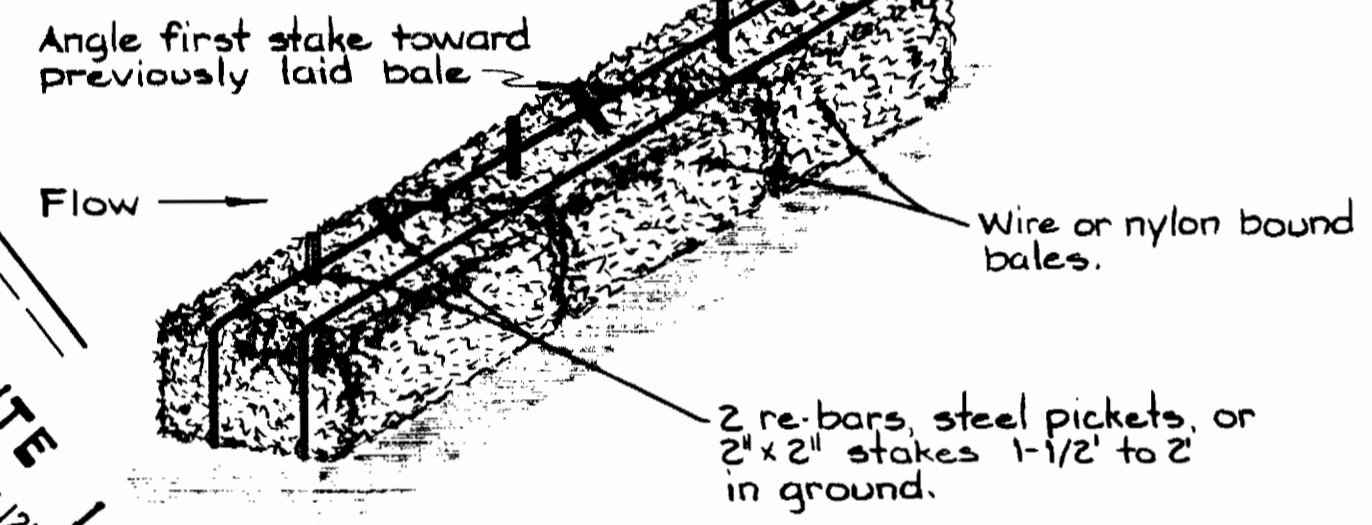
Designed: RHB
Drafted: ARZ
Checked: CHL
Date:

SEDIMENT CONTROL NOTES

- The developer shall notify the Ho. Co. Office of Inspections and Permits at least 24 hours prior to beginning any construction shown hereon (982-2433 Ext. 365).
- Dikes, sediment traps, etc., to be constructed prior to any onsite grading or disturbance to any existing surface material, and are to be stabilized as soon as constructed.
- All sediment structures to remain in place until permission for their removal has been obtained from the How Co. Office of Inspections and Permits (982-2433 Ext. 365).
- All graded areas shall be stabilized by seeding and mulching in accordance with the following:
 - Site Preparation:
 - Harrow or disc in areas proposed 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/tons/acre
 - Super phosphate of 600 lbs/acre
 - Seeding:
 - Sow the following seed mixture at the rate of 200 lbs./acre with a mechanical spreader
 - Temporary: Italian or Perennial Rye Grass
 - Permanent: 40% Marion Blue Grass, 40% South Dakota Blue Grass & 20% Penn Lawn Creeping Red Fescue
 - The seeded area shall then be raked with a York Rake (minimum of 2 passes), covered and compacted with 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 sown with liquid asphalt at 0.1 gal./s.y. or emulsified asphalt at 0.04 gal./s.y. on mulch netting.
- Access Road shall be gravel surfaced immediately after grading to prevent soil erosion.
- All areas disturbed by grading shall be seeded and mulched with temporary seed mixture.

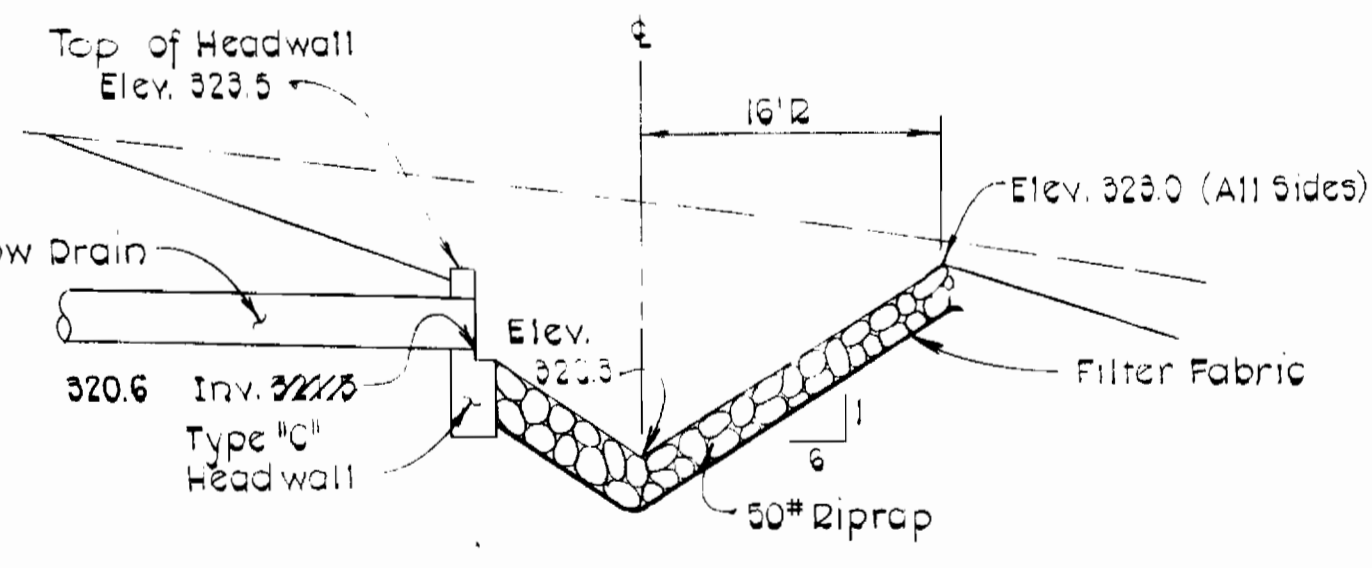


STABILIZED CONSTRUCTION ENTRANCE
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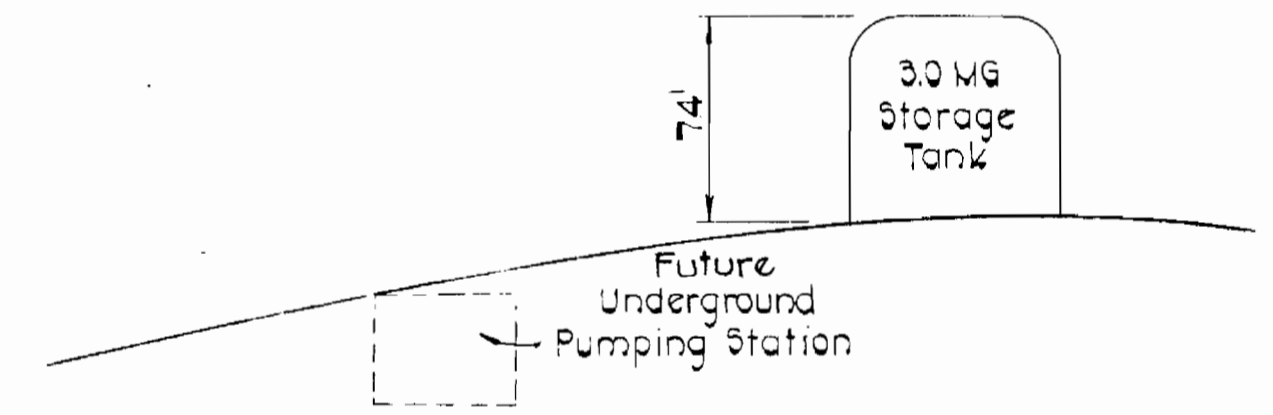


ANCHORING DETAIL

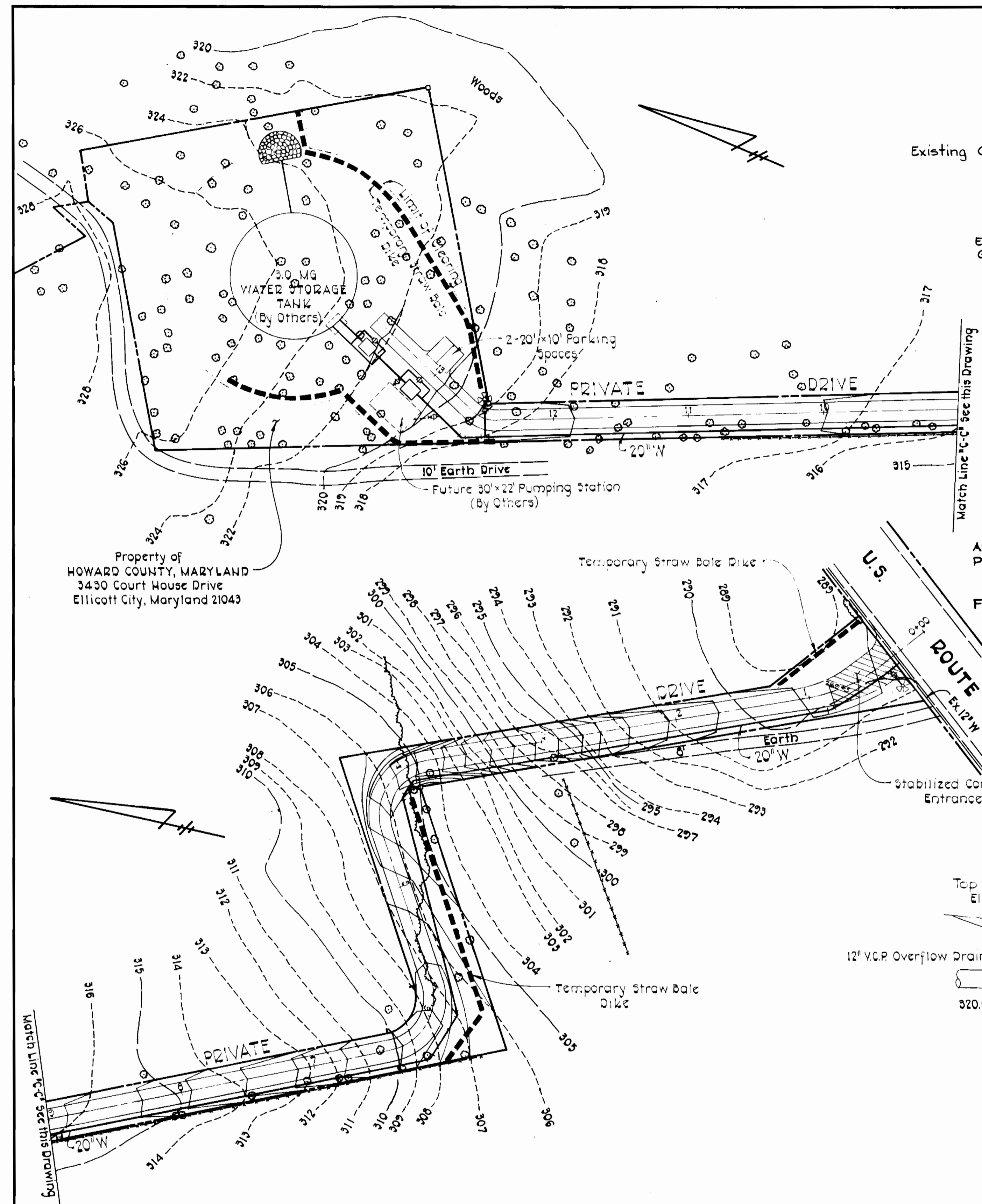
STRAW BALE DIKE
(Not to Scale)



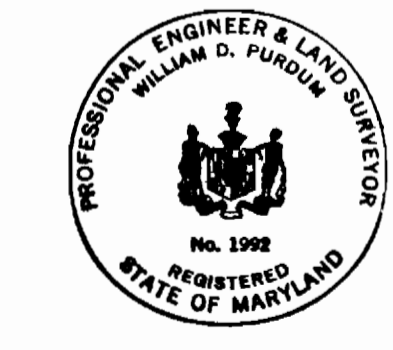
OVERFLOW STILLING BASIN DETAIL
(Not to Scale)



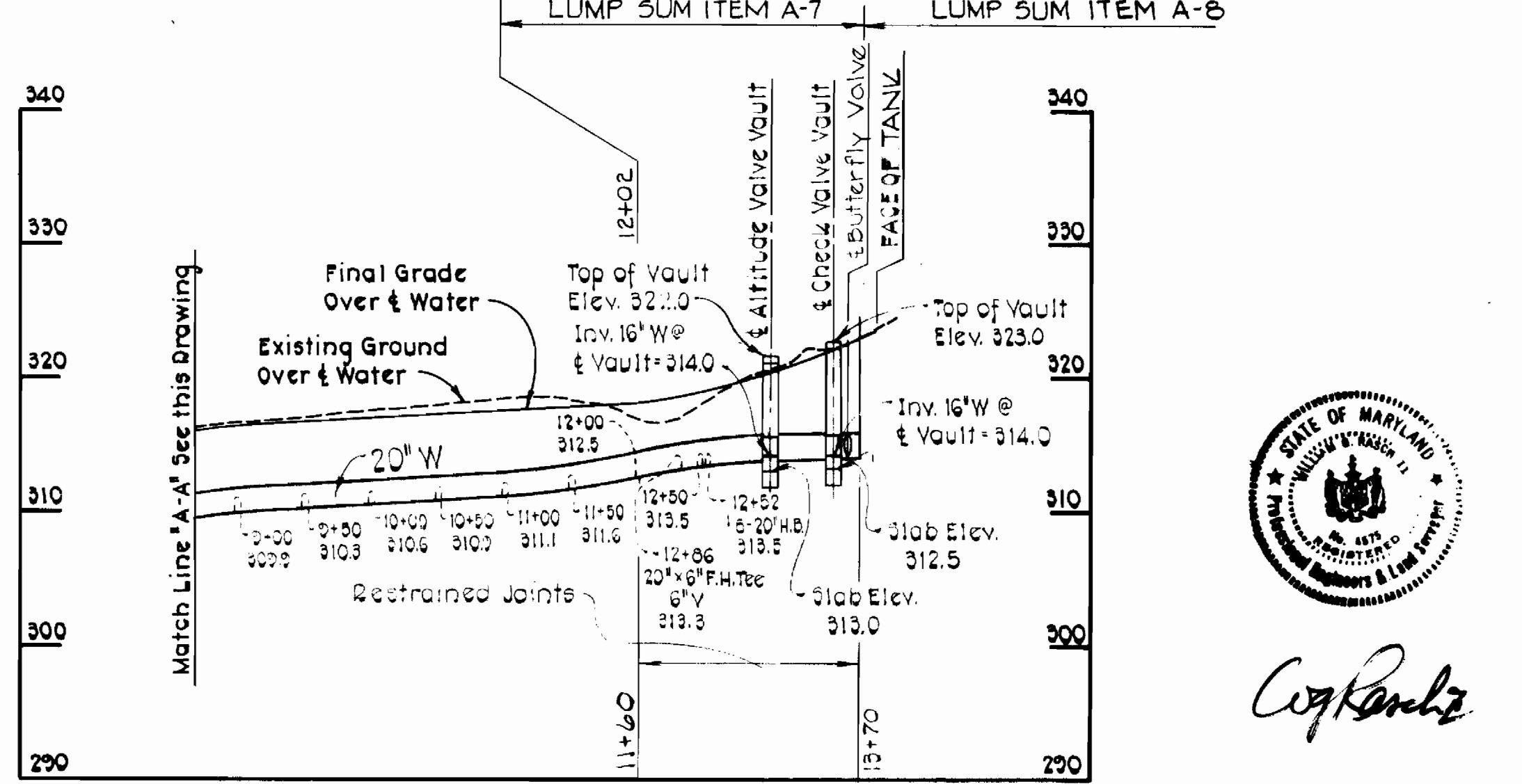
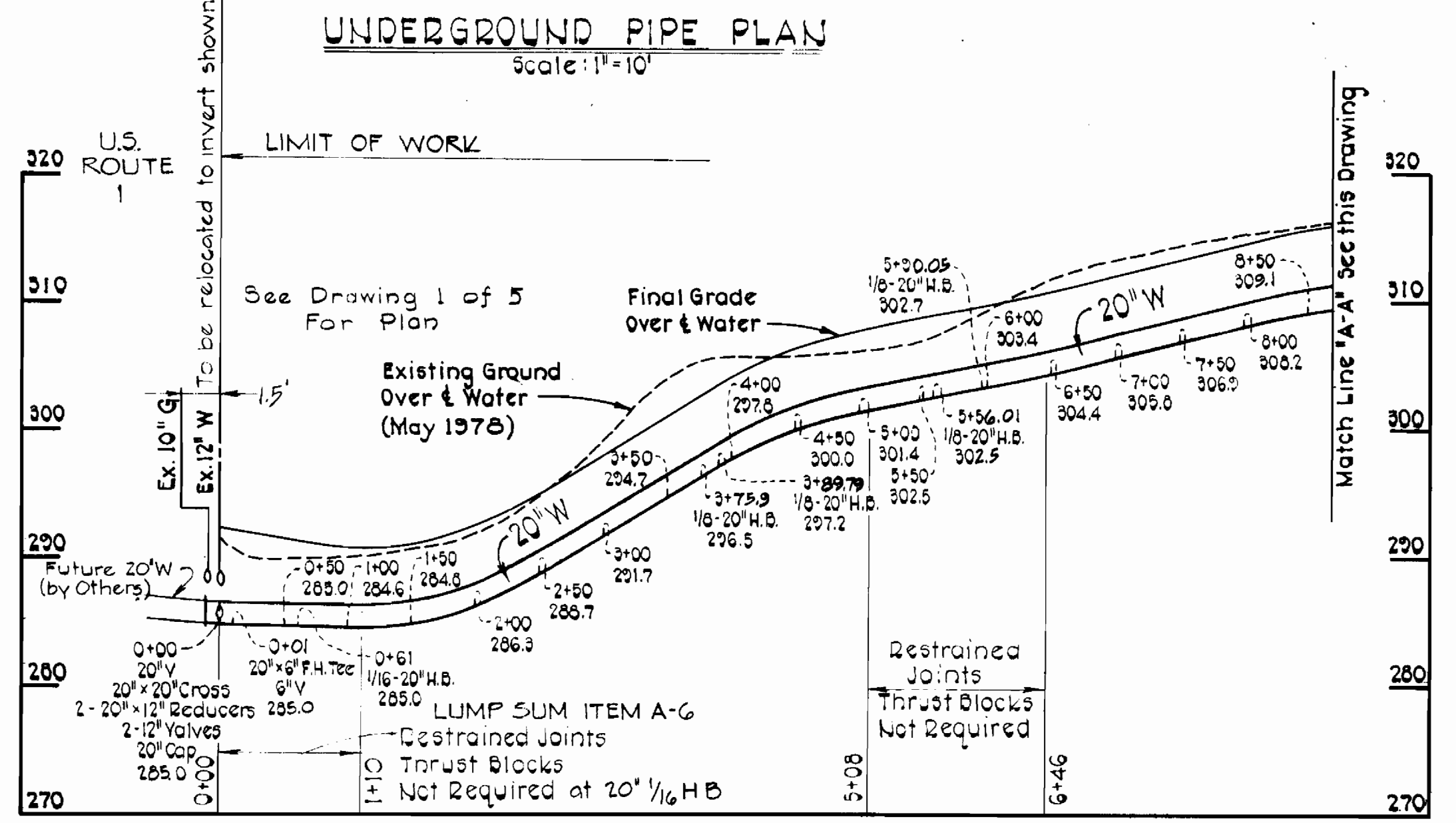
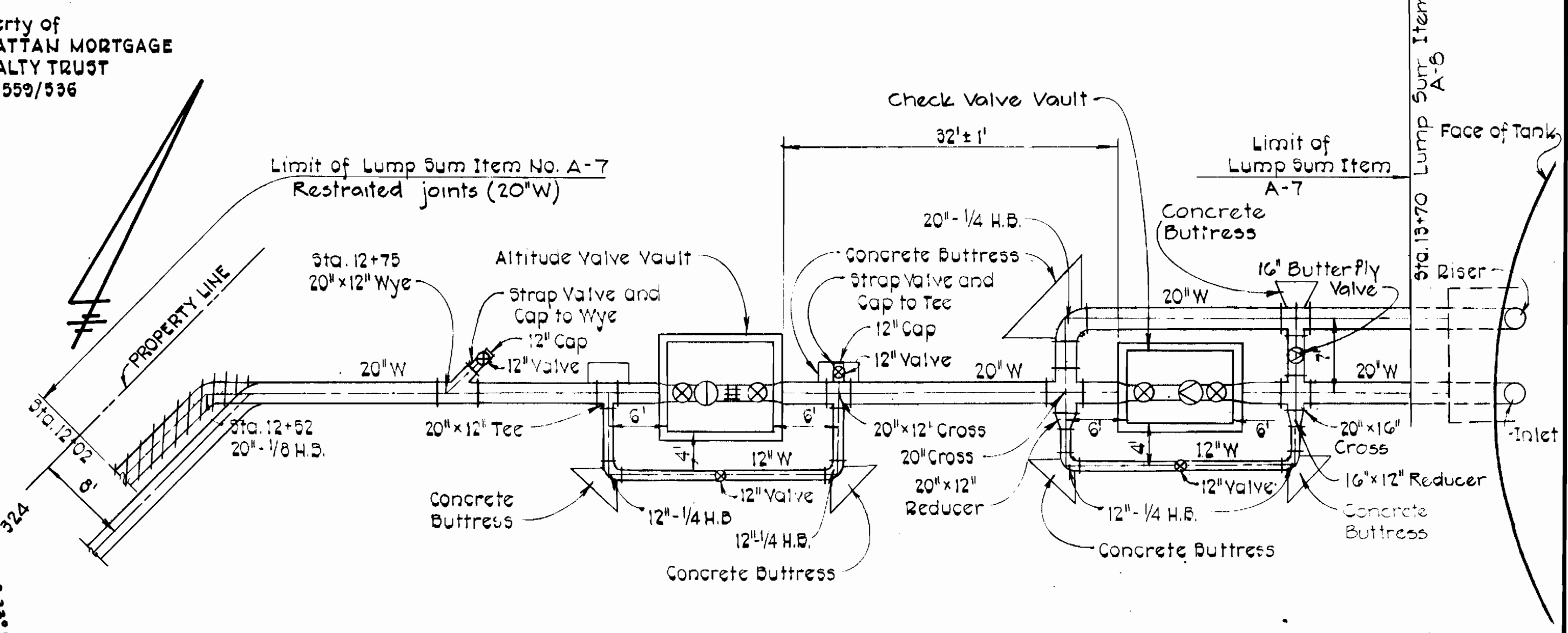
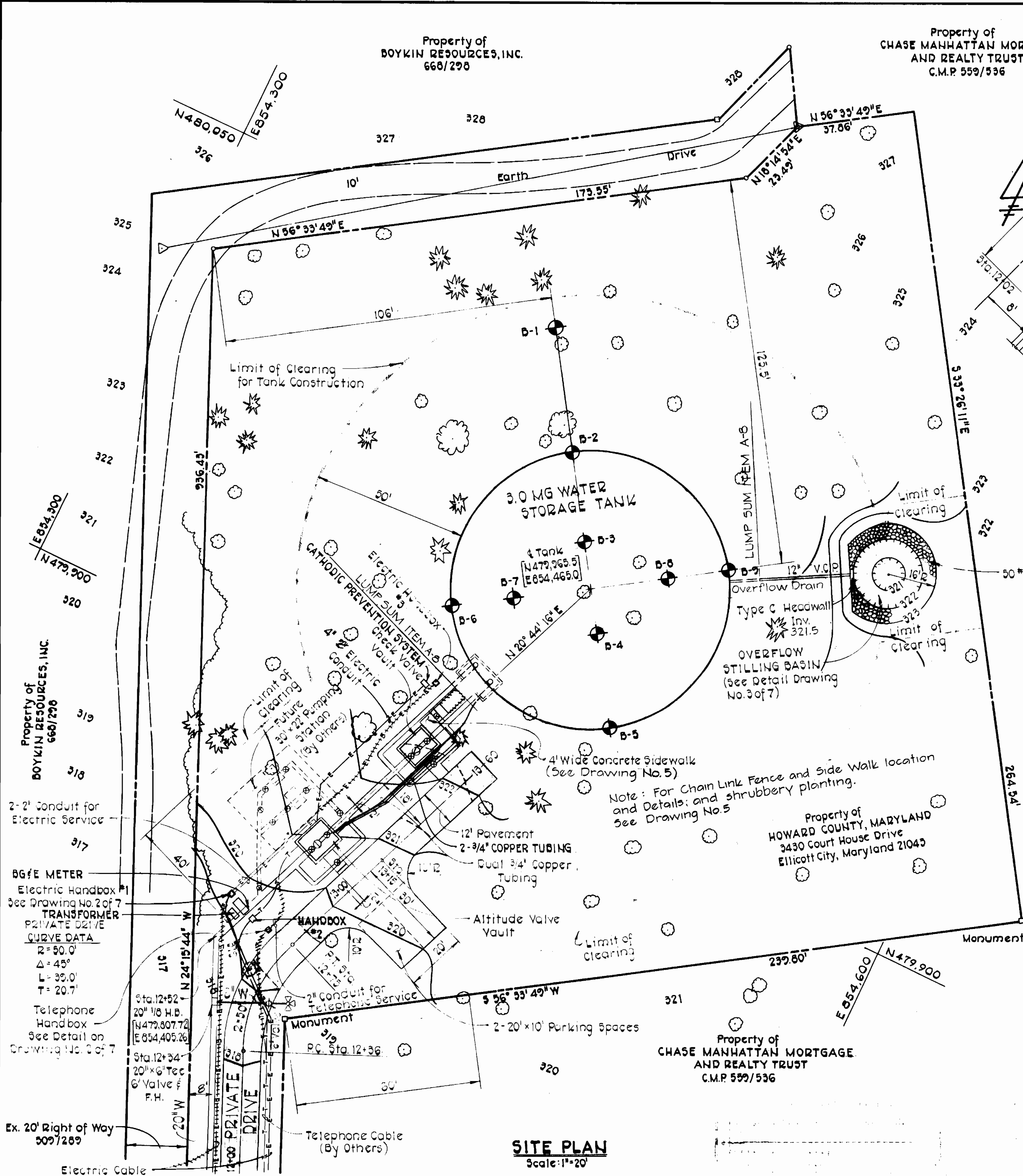
SCHEMATIC PROFILE
(Not to Scale)



Property of
HOWARD COUNTY, MARYLAND
3430 Court House Drive
Ellicott City, Maryland 21043



		<p>HOWARD SOIL CONSERVATION DISTRICT</p> <p>REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.</p> <p>SIGNATURE _____ DATE _____</p> <p>THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.</p> <p>APPROVED: _____ DATE _____</p> <p>HOWARD SOIL CONSERVATION DISTRICT</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 OF THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY. DEVIATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD SOIL CONSERVATION DISTRICT.</p> <p>SIGNATURE _____ DATE _____</p>		<p>PROFESSIONAL ENGINEER</p> <p>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.</p> <p><i>William D. Purdum</i> 3/22/79 REG. NO. 1992 DATE</p>		<p>CONTRACT NO 828-W CAPITAL PROJECT NO. W-6-8091 ROUTE 1 STORAGE FACILITY</p>				
<p>PURDUM & JESCHKE ENGINEERS 1023 N. CALVERT ST. BALTIMORE, MARYLAND 21202</p>		<p>APPROVED: For Public Water, Storm Drainage Systems, and Public Roads HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS <i>Don F. Newman</i> 11-2-79 DIRECTOR OF PUBLIC WORKS DATE</p>		<p>CONTRACT NO. 828-W CAPITAL PROJECT NO. W-6-8091</p>		<p>SEDIMENT CONTROL PLAN</p>		<p>ROUTE 1 STORAGE FACILITY ELECTION DISTRICT GUILFORD NO.6 TAX MAP 43 LIBER/FOLIO 930/447</p>		<p>DRAWING NO. 3 OF 7</p>	<p>SCALE 1"=50'</p>	<p>Designed: RHB Drafted: LJP Checked: CHL Date:</p>



C. J. Rantz

CONTRACT NO. 828-W
 CAPITAL PROJECT W-6-8091
 ROUTE 1 STORAGE FACILITY

PURDUM & JESCHKE
 ENGINEERS
 1023 N. CALVERT ST.
 BALTIMORE, MARYLAND 21202

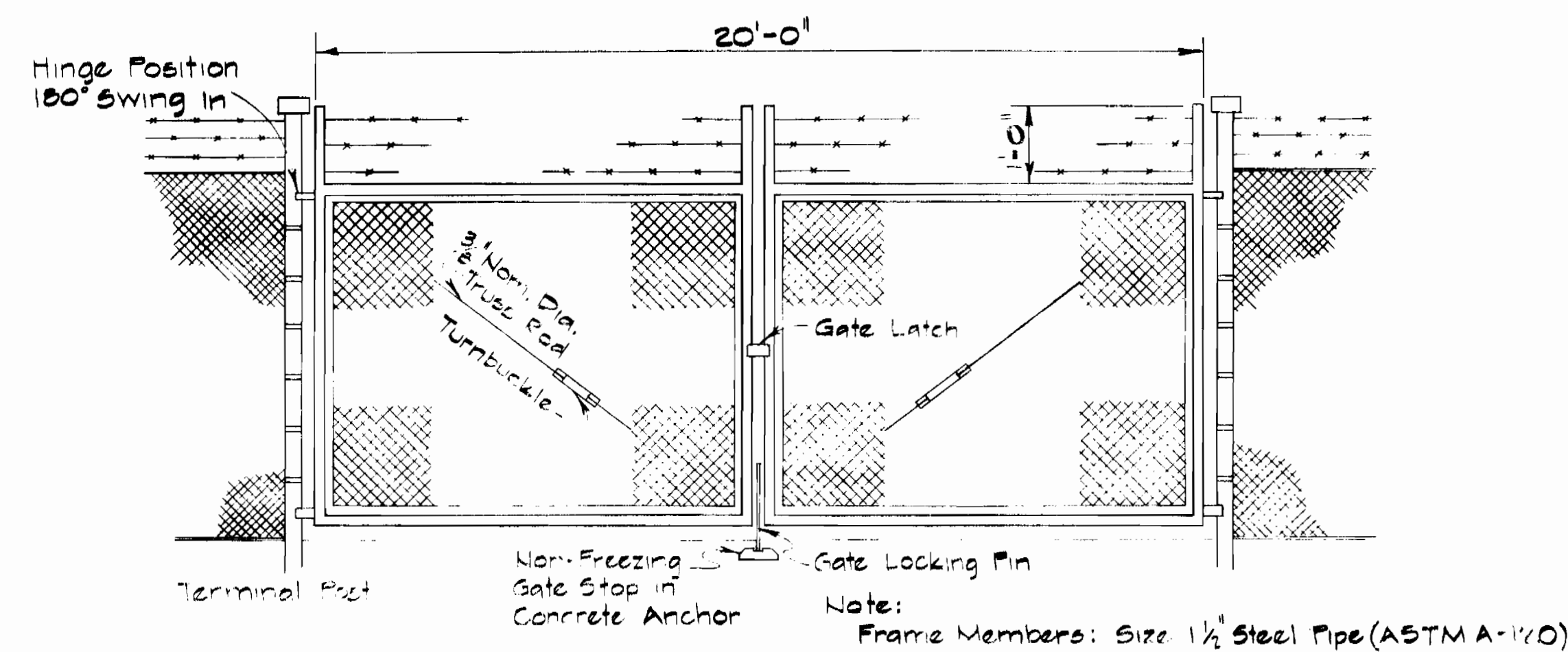
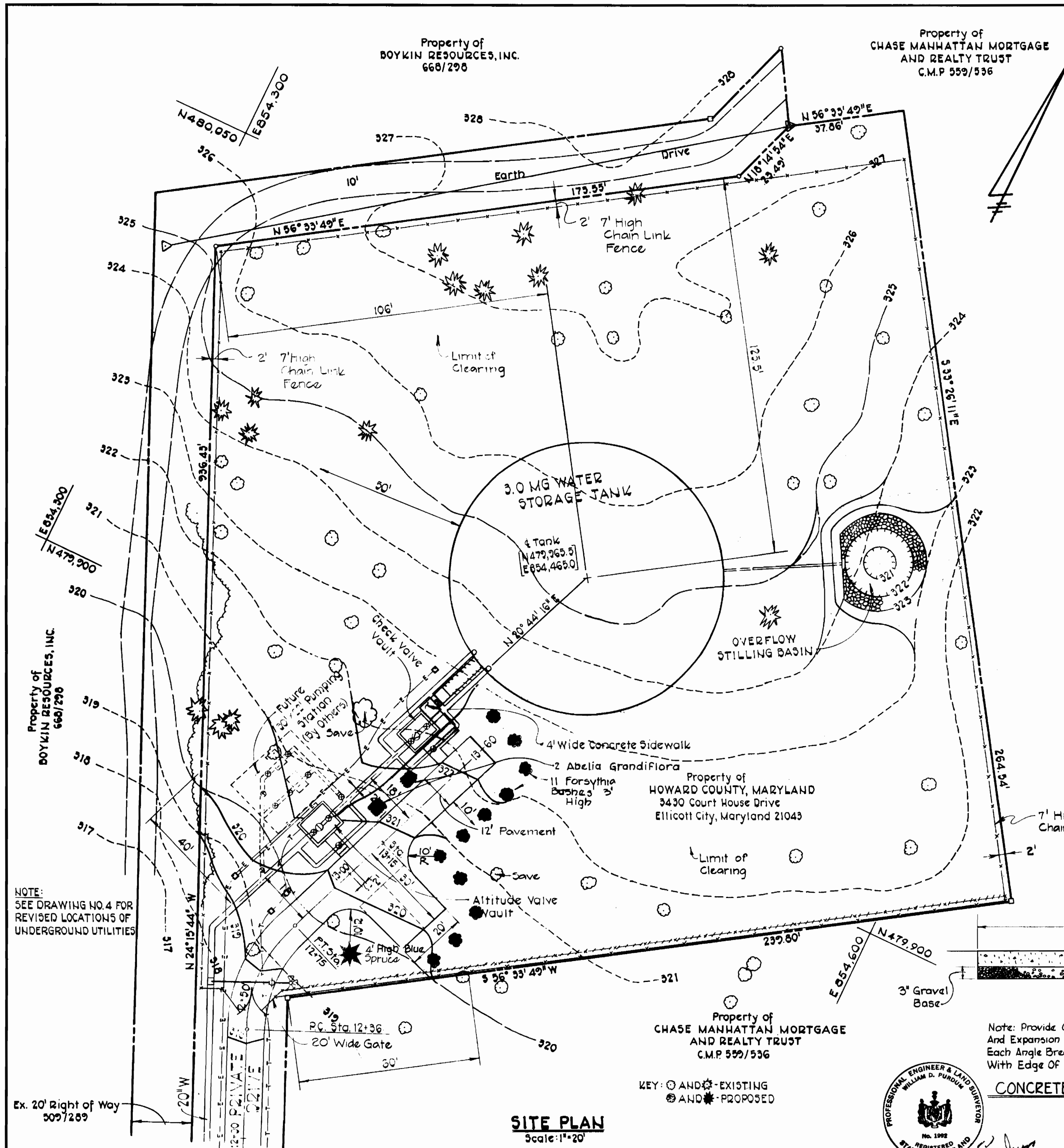
APPROVED: For Public Water, Storm Drainage Systems, and Public Roads
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Director of Public Works: [Signature]
 Chief Bureau of Engineering: [Signature]
 DATE: 11-2-77

CONTRACT NO. 828-W
 CAPITAL PROJECT NO. W-6-8091

SITE AND GRADING PLAN
 AND WATER MAIN PROFILES

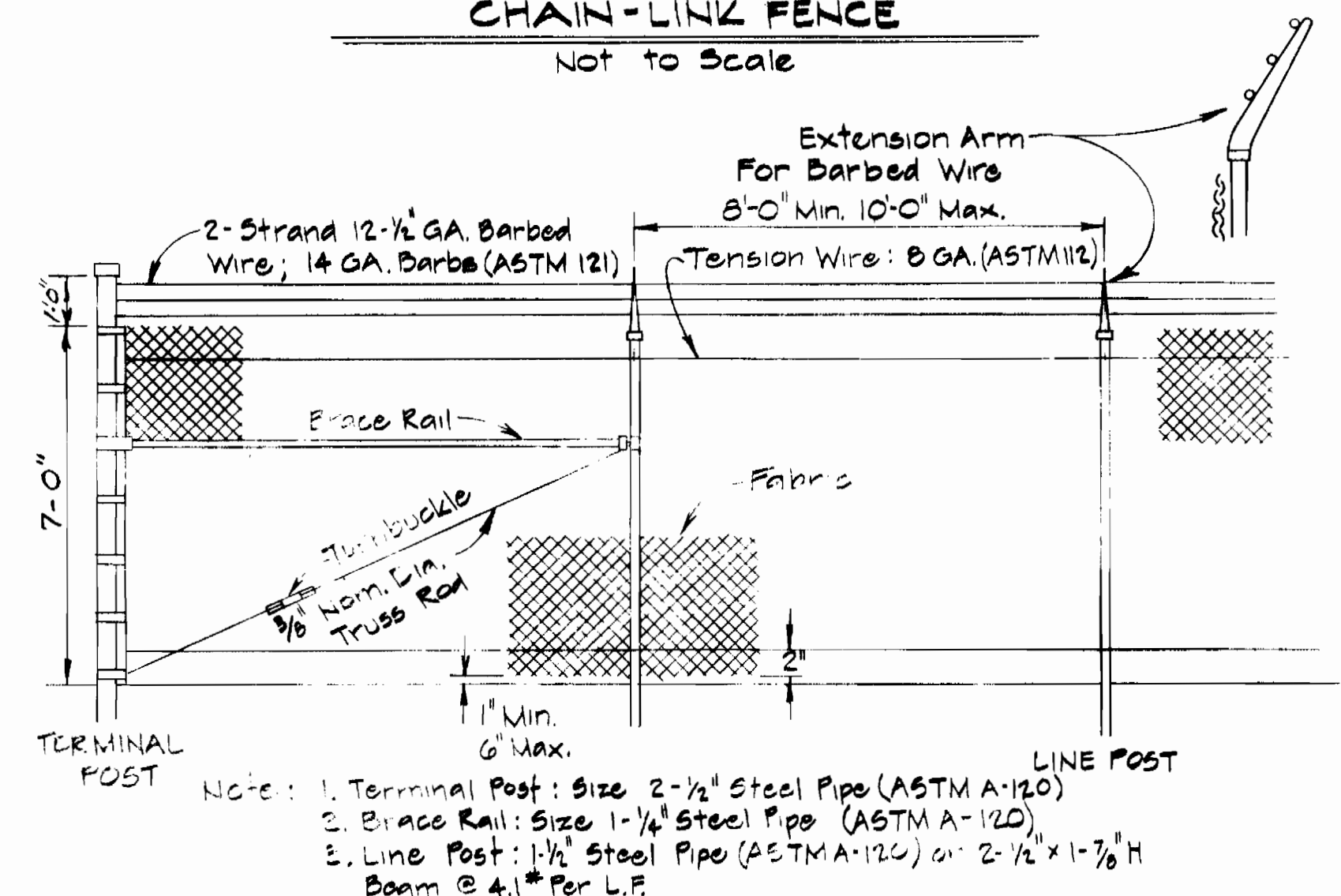
ROUTE 1 STORAGE FACILITY
 ELECTION DISTRICT GUILFORD NO. 6
 TAX MAP 43 LIBER/FOLIO 930/447

DRAWING NO. 4 OF 7
 SCALE AS SHOWN
 Designed: RHB
 Drafted: ARZ
 Checked: CHL
 Date:



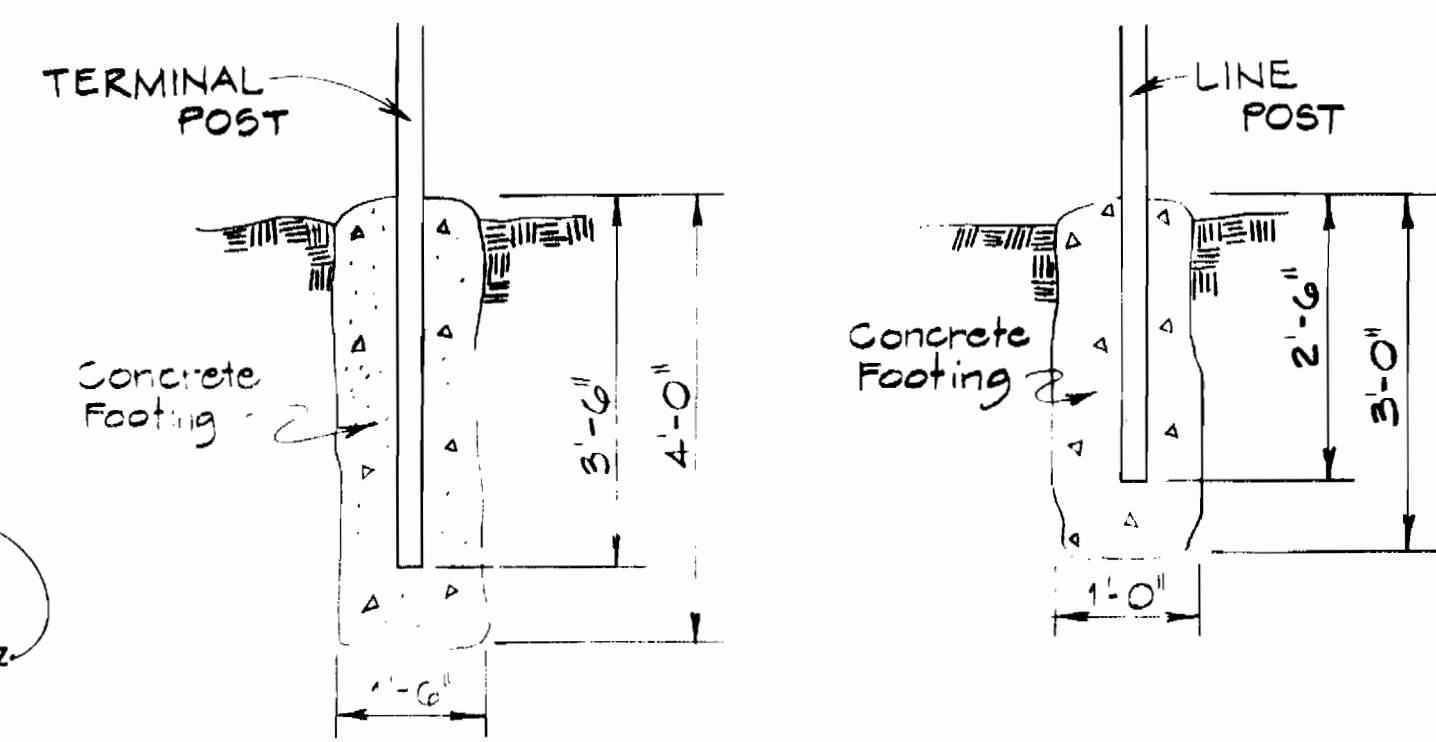
FENCE GATE DETAILS FOR CHAIN-LINK FENCE

Not to Scale



CHAIN-LINK FENCE WITH TENSION WIRE TOP AND BOTTOM

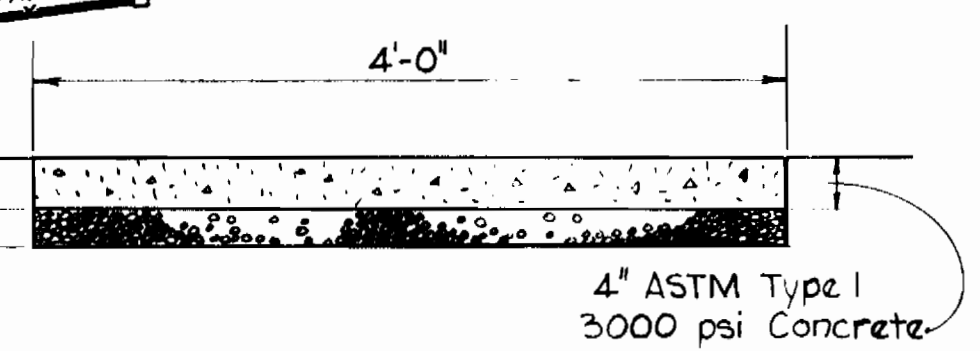
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TERMINAL POST MOUNTING

LINE POST MOUNTING

Not to Scale



CONCRETE SIDEWALK DETAIL

Not to Scale

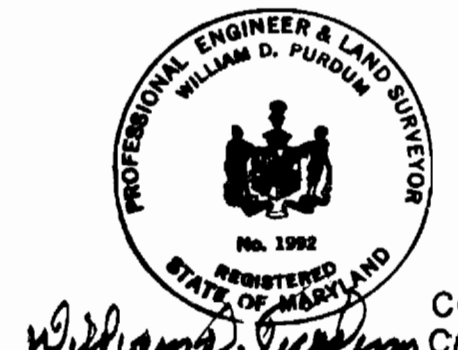
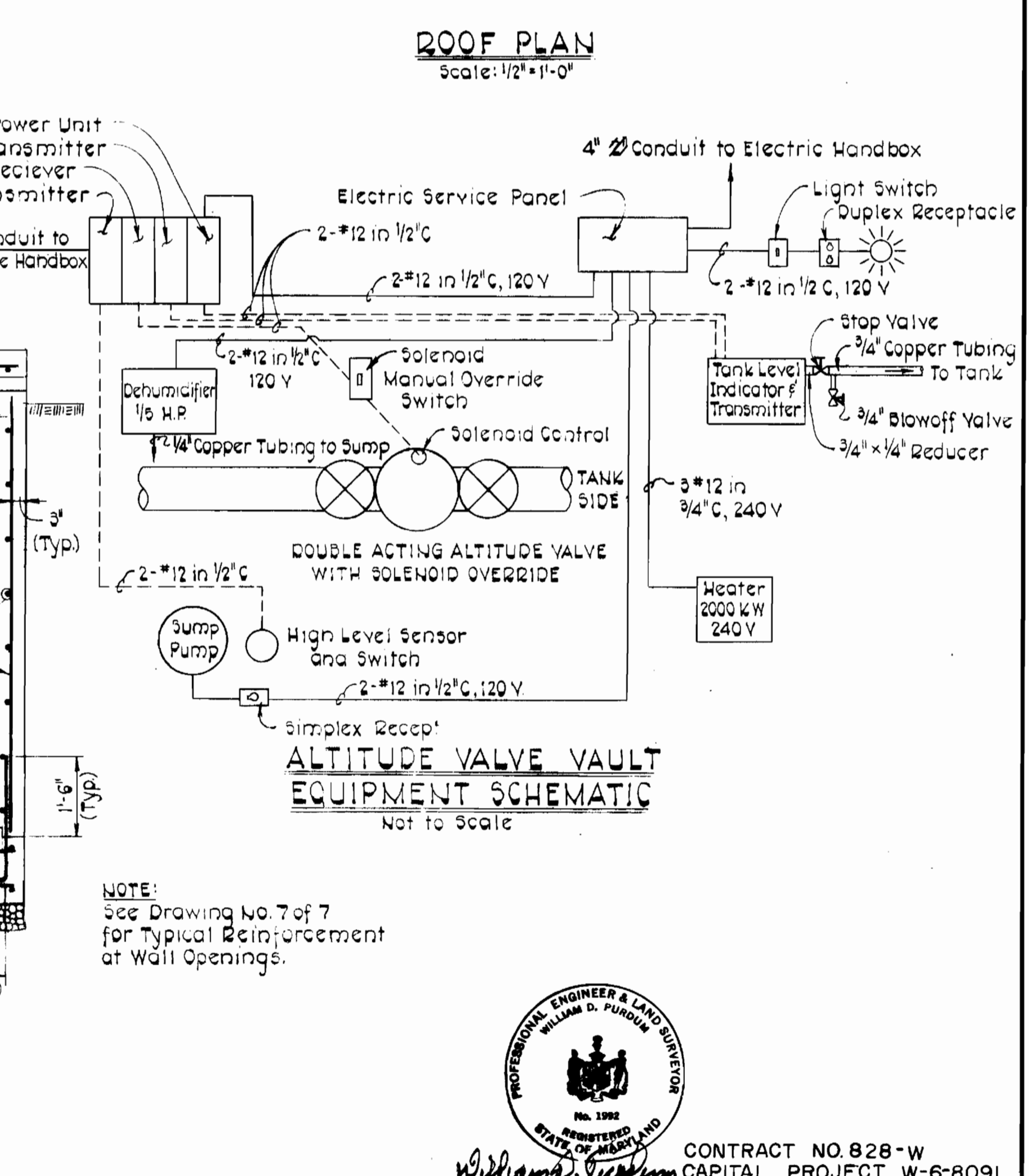
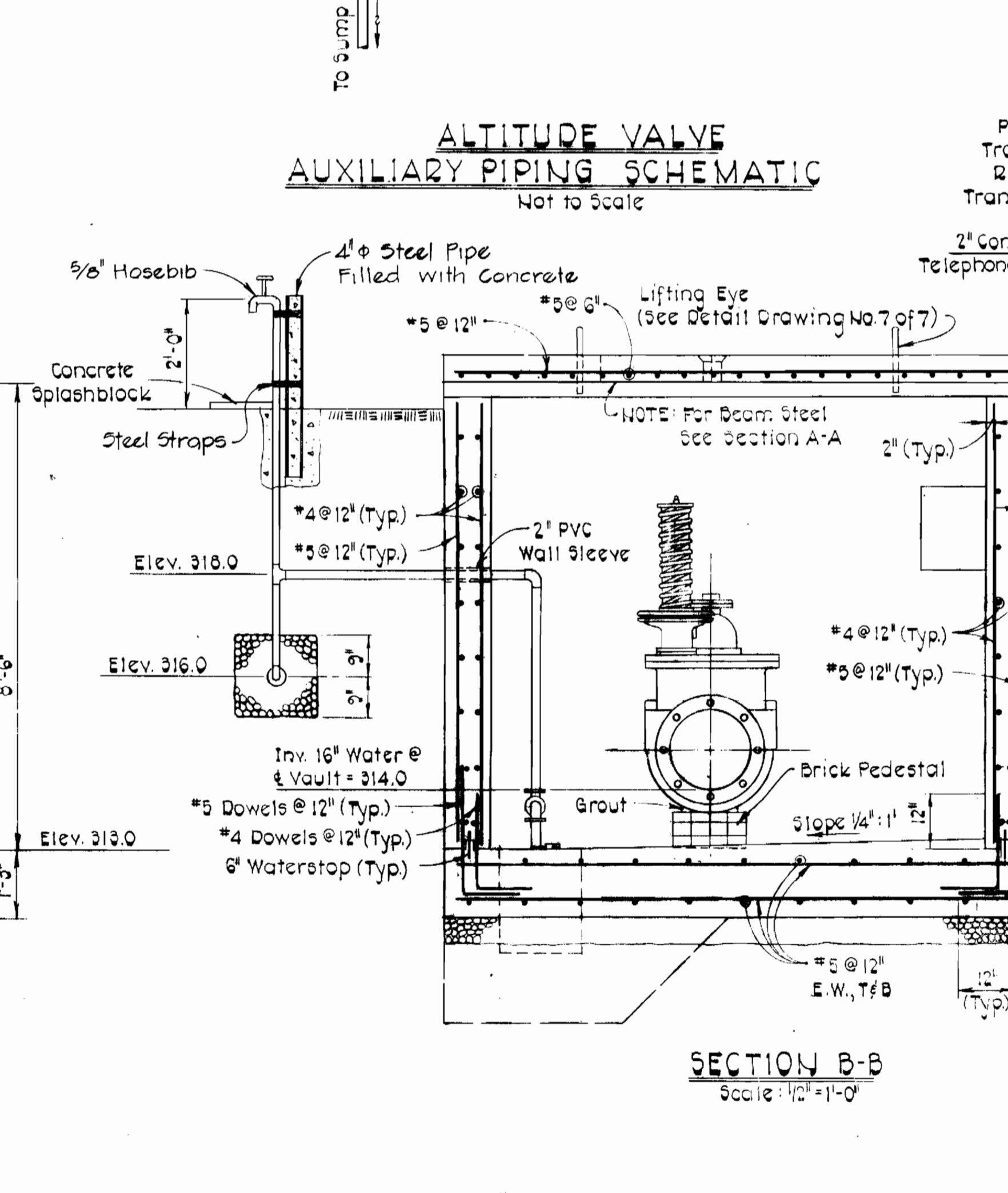
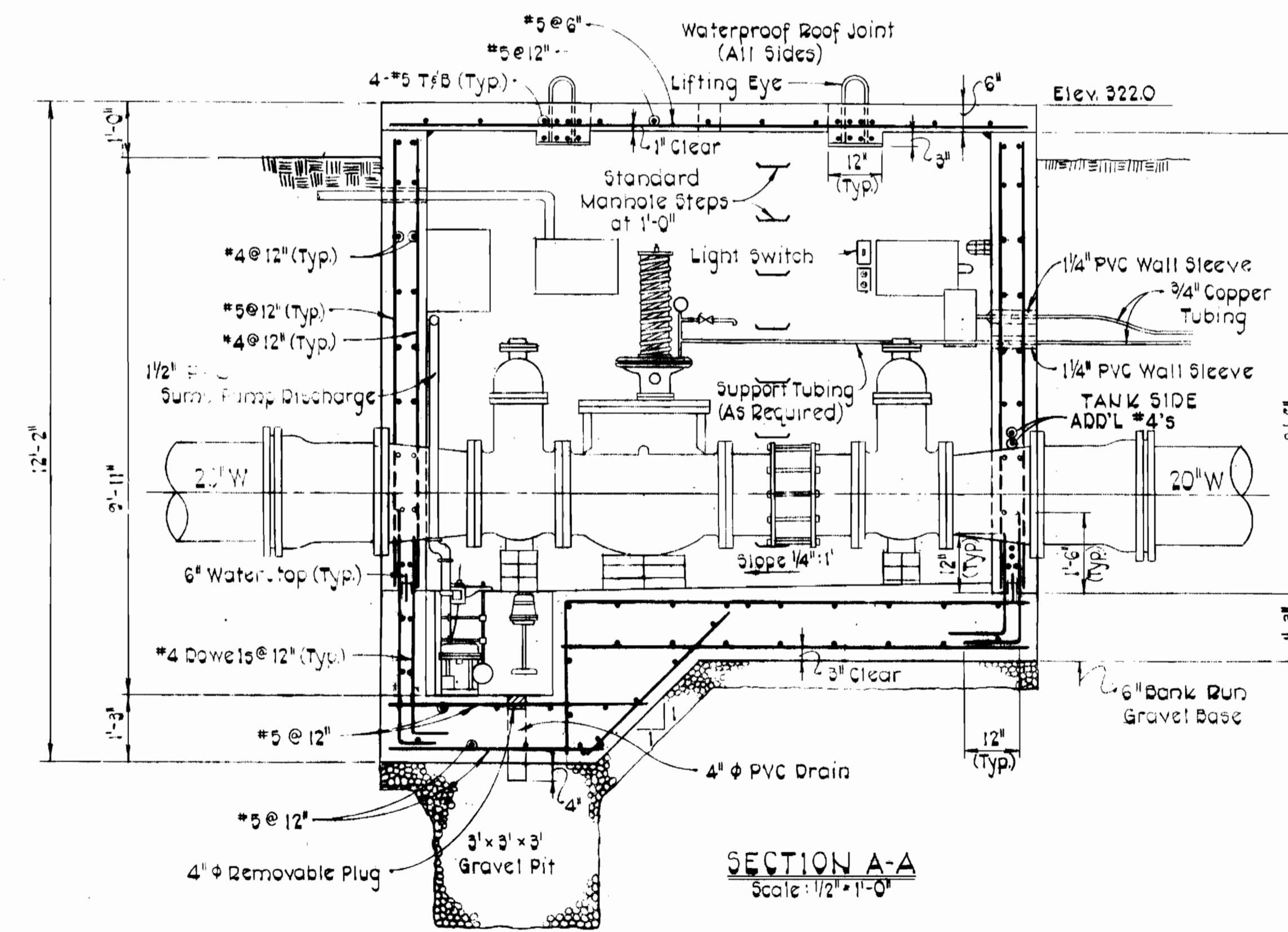
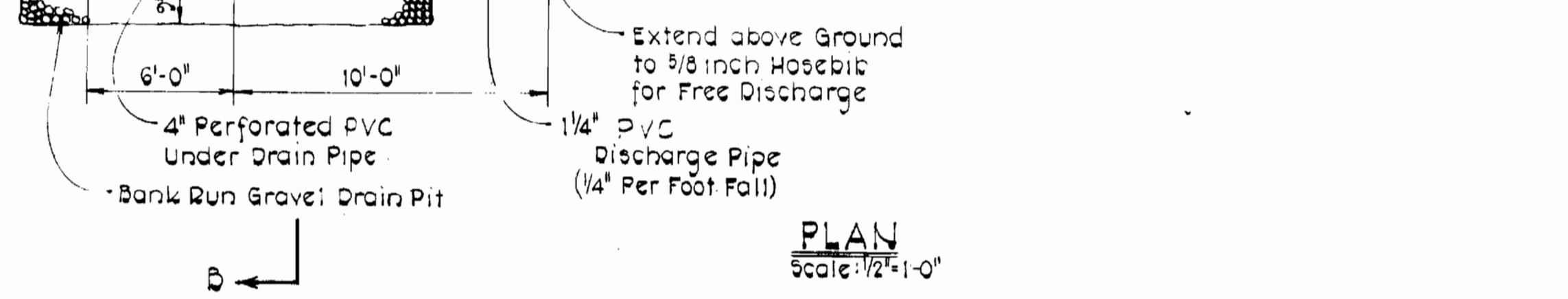
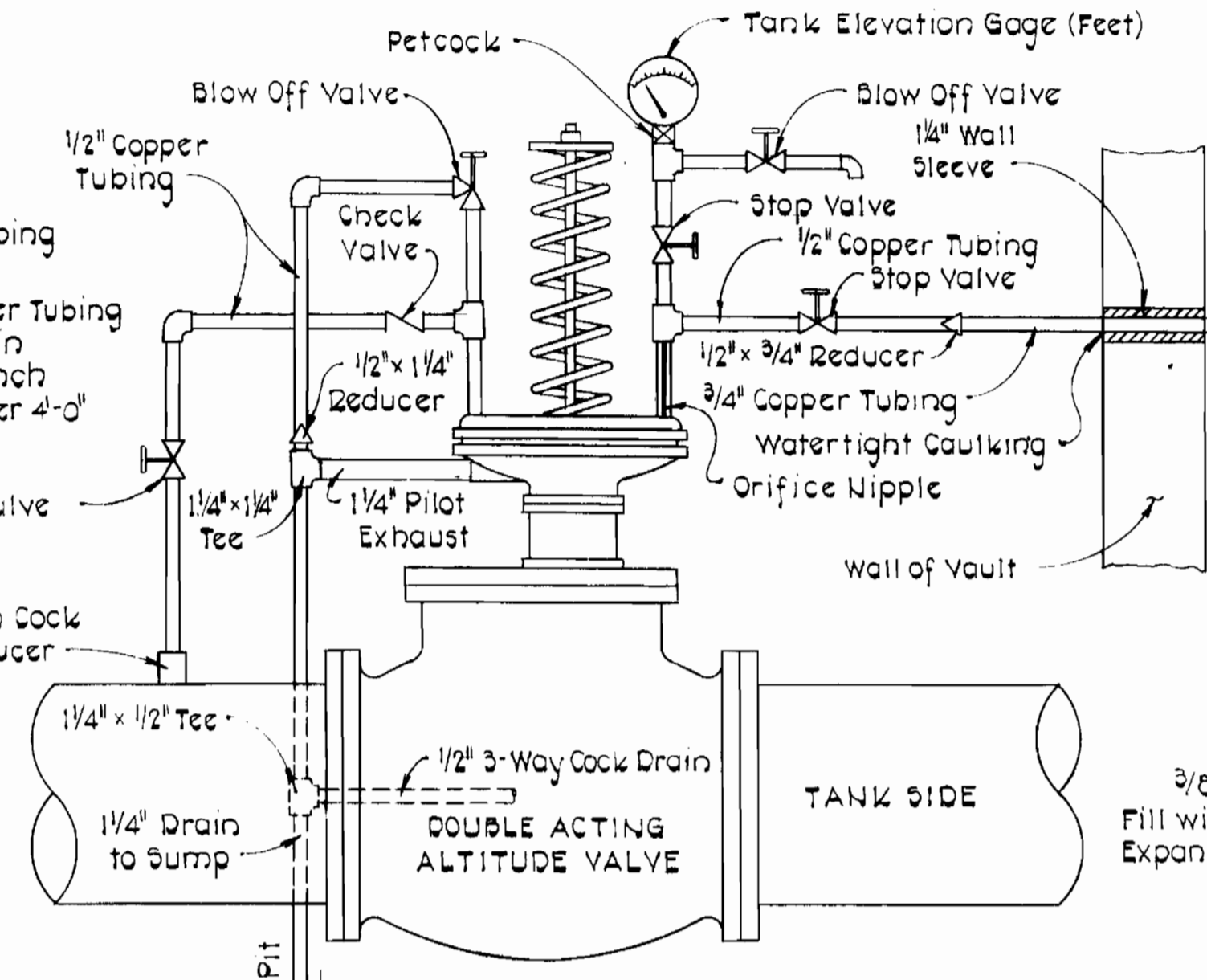
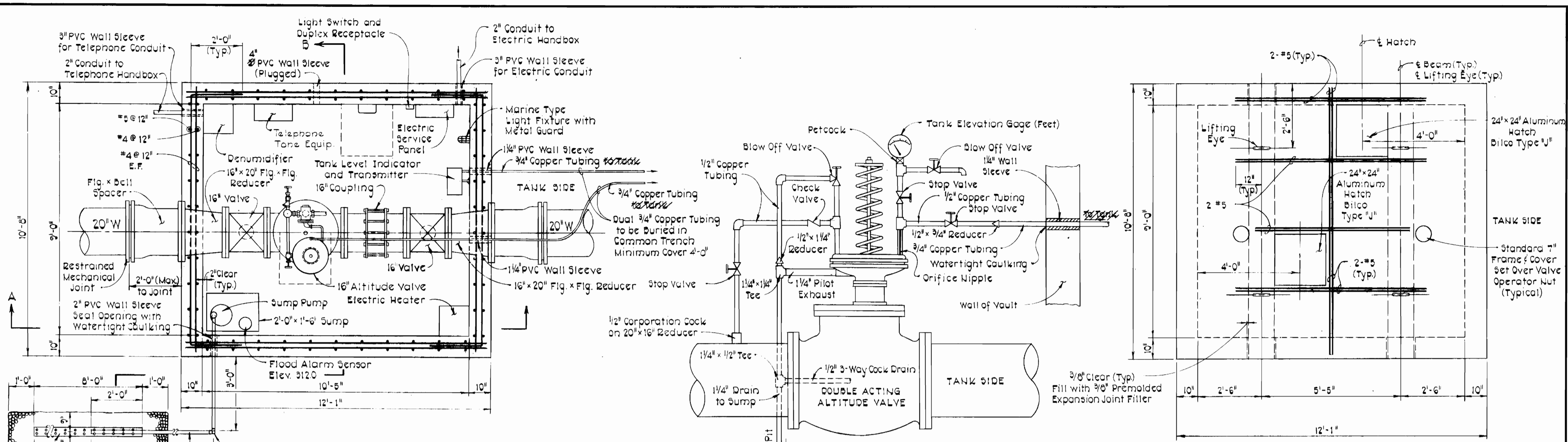


William D. Purdum

NOTE: SEE DRAWING NO. 4 FOR REVISED LOCATIONS OF UNDERGROUND UTILITIES

Ex. 20' Right of Way 309/289

PURDUM & JESCHKE ENGINEERS 1023 N. CALVERT ST. BALTIMORE, MARYLAND 21202	APPROVED: For Public Water, Storm Drainage Systems, and Public Roads HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS <i>John E. Nunn</i> 11-2-77 DIRECTOR OF PUBLIC WORKS DATE	CONTRACT NO. 828-W CAPITAL PROJECT NO. W-6-8091	FENCING AND LANDSCAPING PLAN AND DETAILS	PROFILES Scale: Horiz. 1"=100' Vert. 1"=10'	CONTRACT NO. 828-W CAPITAL PROJECT W-6-8091 ROUTE 1 STORAGE FACILITY	DRAWING NO. 5 OF 7	SCALE AS SHOWN	Designed: RMB Drafted: ARZ Checked: CHL Date:
						ROUTE 1 STORAGE FACILITY ELECTION DISTRICT GUILFORD NO. 6 TAX MAP 43 LIBER/FOLIO 930/447		



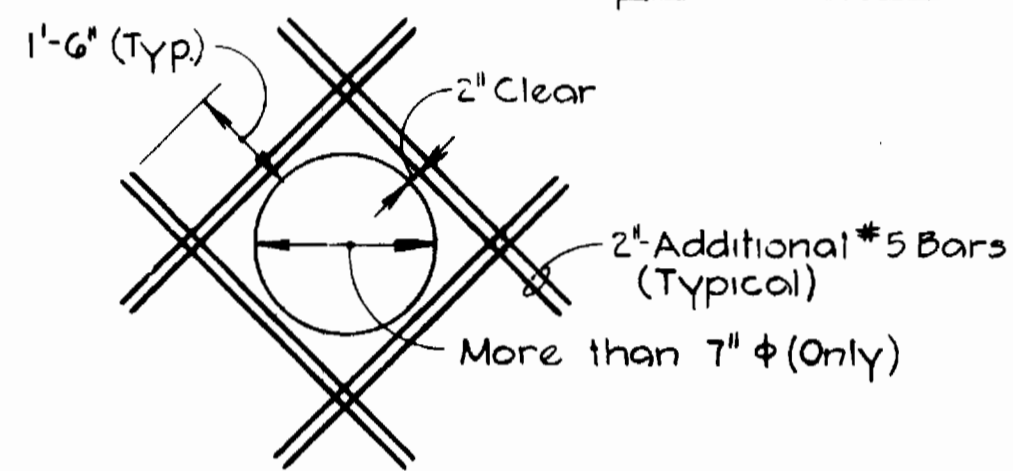
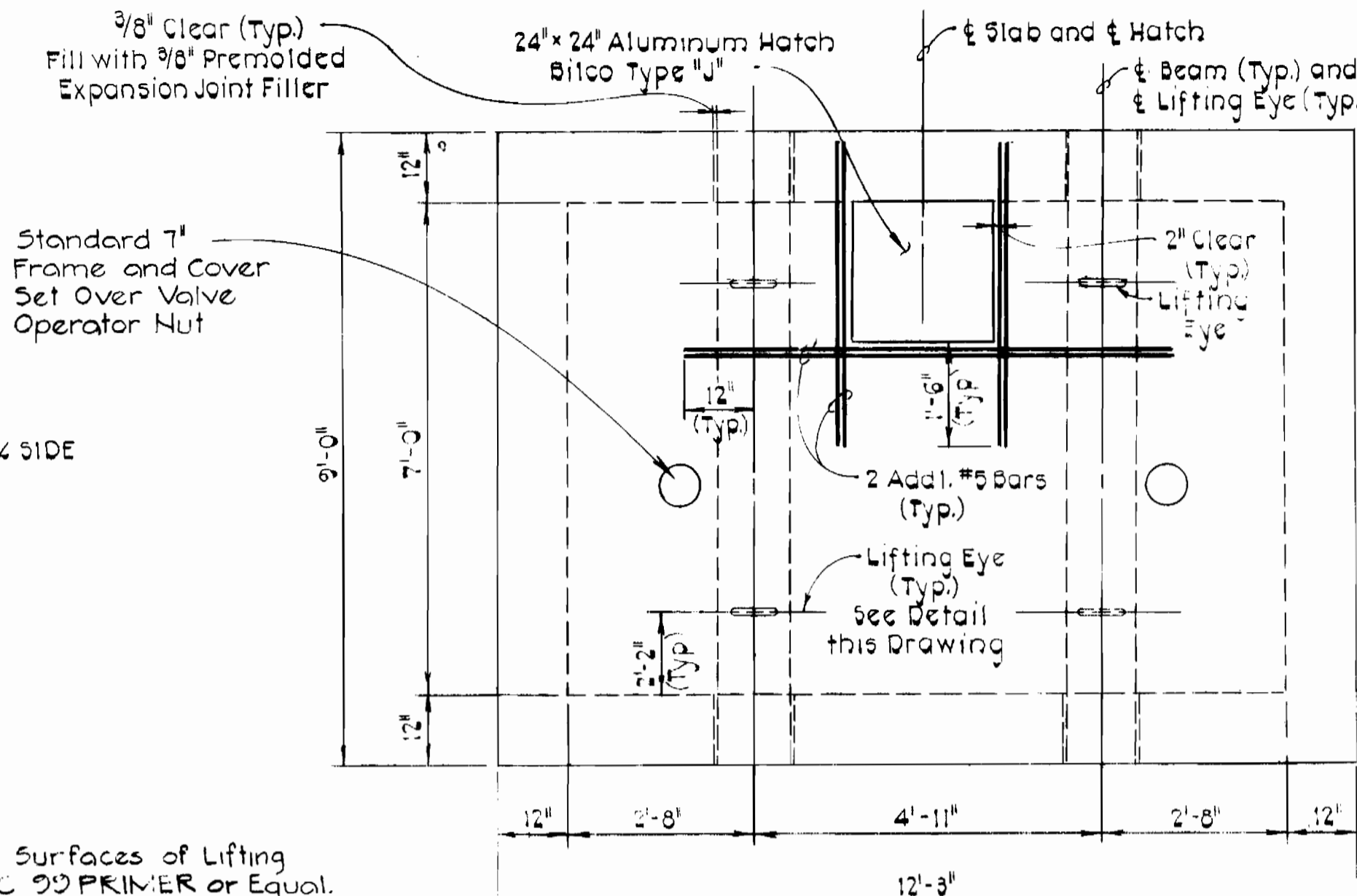
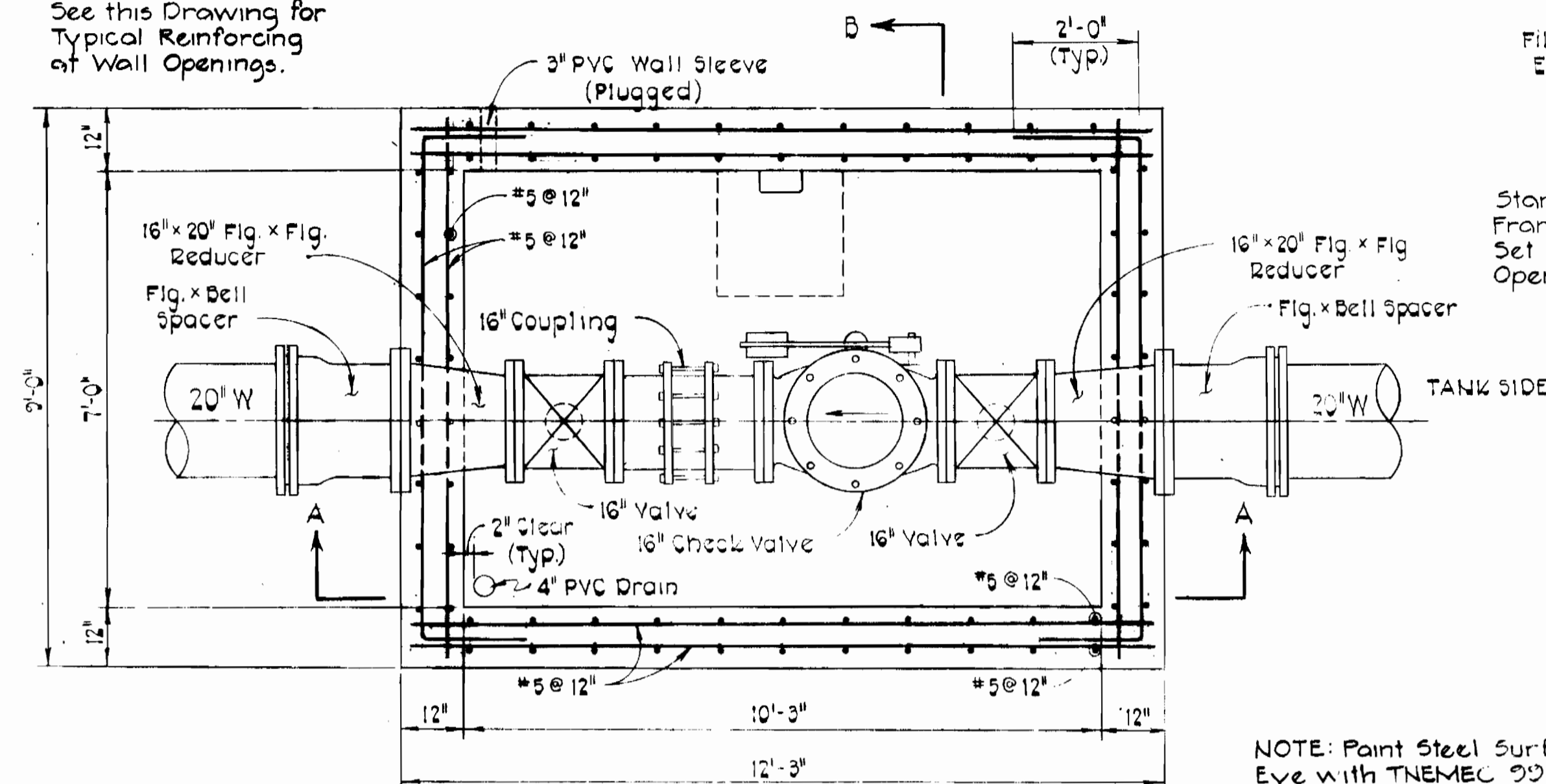
CONTRACT NO. 828-W
CAPITAL PROJECT W-6-8091
ROUTE 1 STORAGE FACILITY

PURDUM & JESCHKE ENGINEERS 1023 N. CALVERT ST. BALTIMORE, MARYLAND 21202	APPROVED: For Public Water, Storm Drainage Systems, and Public Roads HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS <i>William F. Nummy</i> 11-2-77 DIRECTOR OF PUBLIC WORKS DATE	CONTRACT NO. 828-W CAPITAL PROJECT NO. W-6-8091	ALTITUDE VALVE VAULT PLAN AND SECTIONS	ROUTE 1 STORAGE FACILITY ELECTION DISTRICT GUILFORD NO. 6 TAX MAP 43 LIBER/FOLIO 930/447	DRAWING NO. 6	SCALE AS SHOWN	Designed: RHB Drafted: ARZ Checked: CHL Date:
					OF 7		

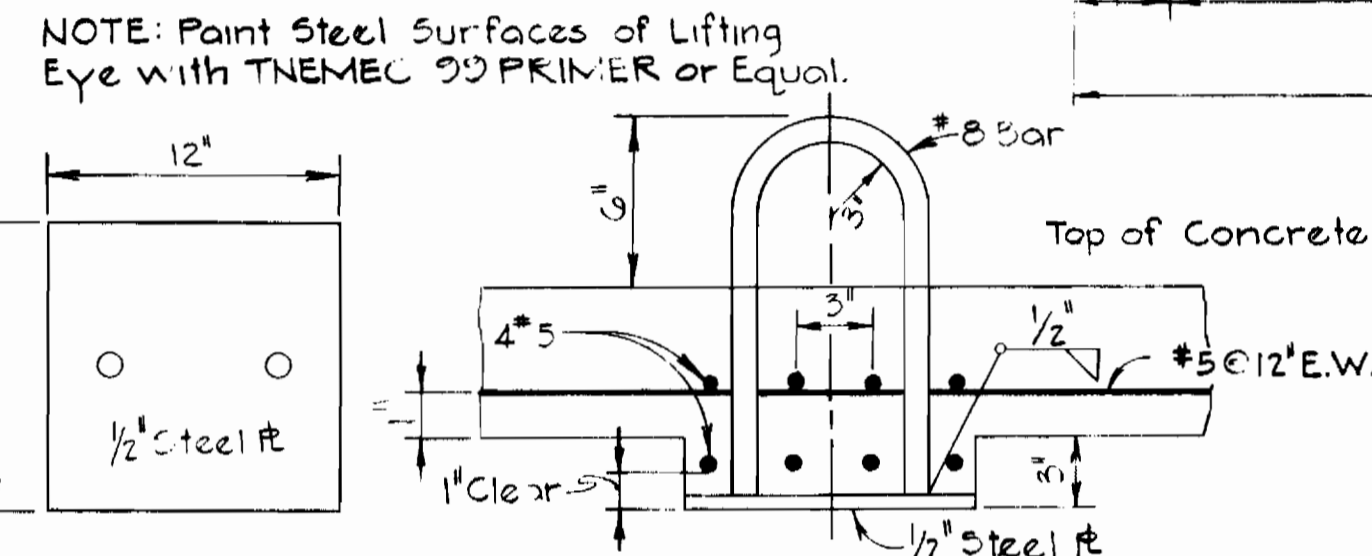
ALTITUDE VALVE AND CHECK VALVE VAULT NOTES

- Limits of Lump Sum item for Altitude Valve and Check Valve, vaults bypass piping, fittings and valves, telemetry equipment and recording devices, and other equipment including excavation and backfill, labor, and all materials are shown on the plan.
- Concrete for the vault shall be Class A - 3500 psi, air entrained with a maximum slump of 5 inches in accordance with Section 6 of the Specifications.
- Reinforcing steel shall be in accordance with the latest revisions of ASTM A-615 Grade 40 for Deformed Bars.
- Flanged pipe and fittings shall be Ductile Iron Pipe CI 52 with Class 125 flanges conforming to ANSI-A21-6 and A21-8 Specifications.
- Contractor shall use Flange x Plain End (PE) template and coupling when casting pipe in vault walls to guarantee alignment of pipe and bolt holes for later installation of Altitude Valve and Check Valve.
- Concrete for thrust blocking shall have a minimum strength of 3000 psi at 28 days.
- Concrete thrust block bearing surfaces shall be extended to undisturbed earth or firm subgrade.
- Concrete thrust blocks have been designed to resist test pressures of 100 psi.

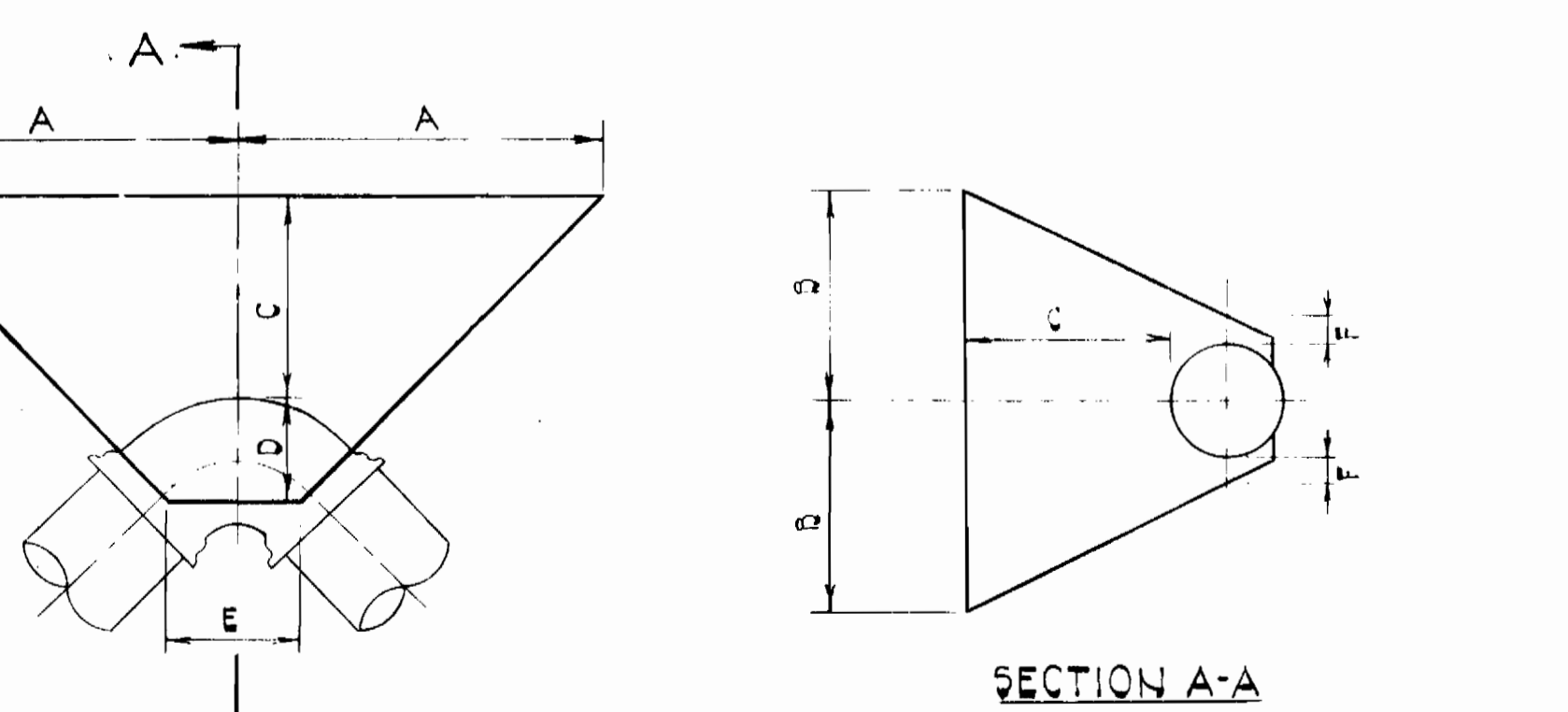
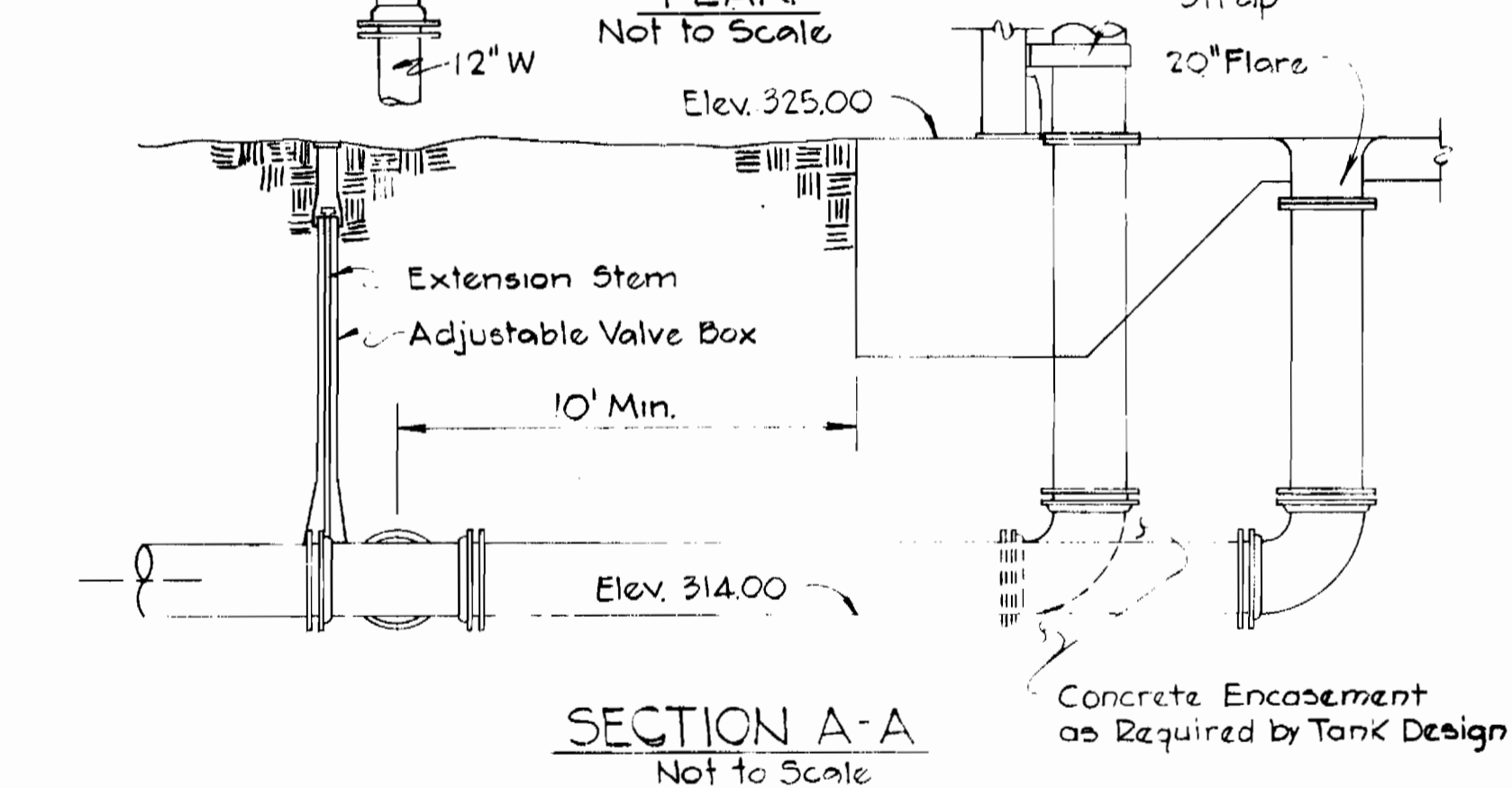
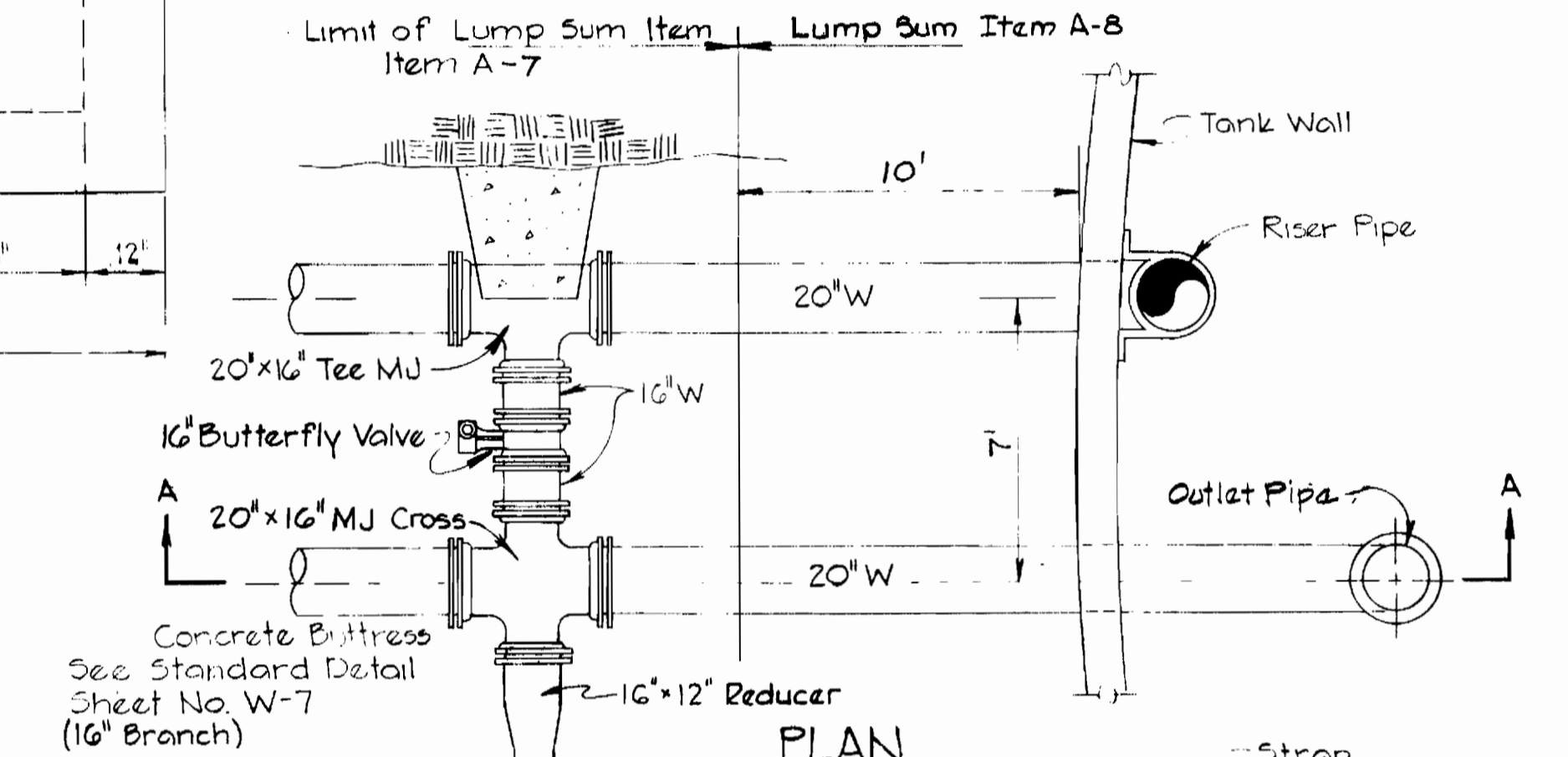
NOTE:
See this Drawing for
Typical Reinforcing
of Wall Openings.



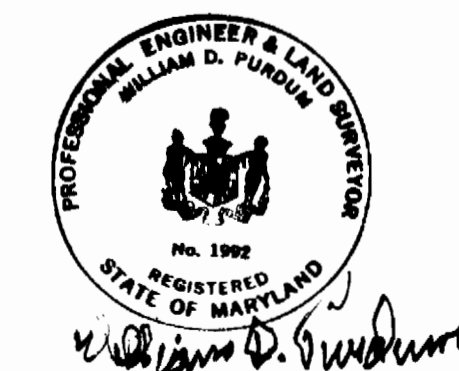
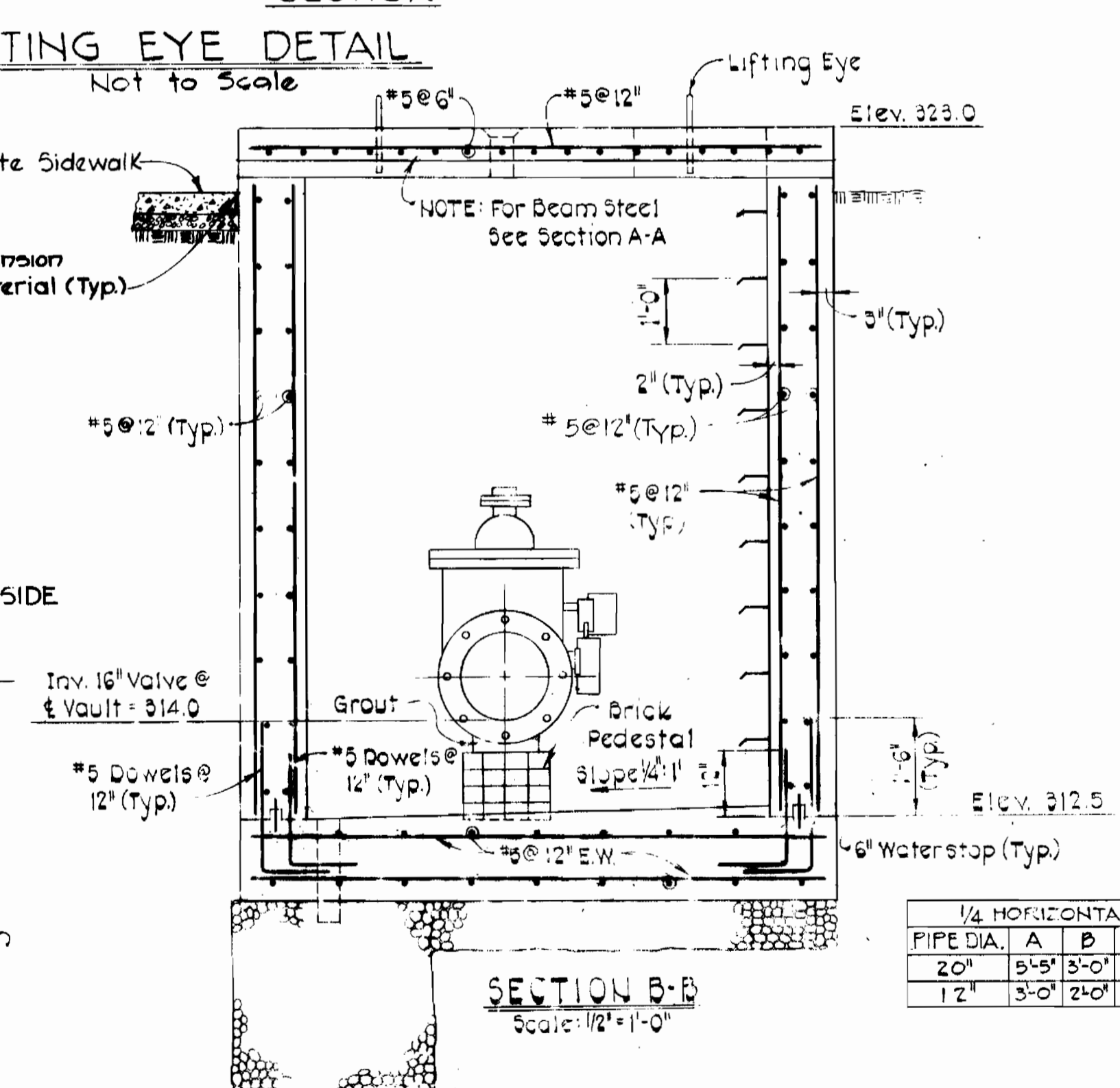
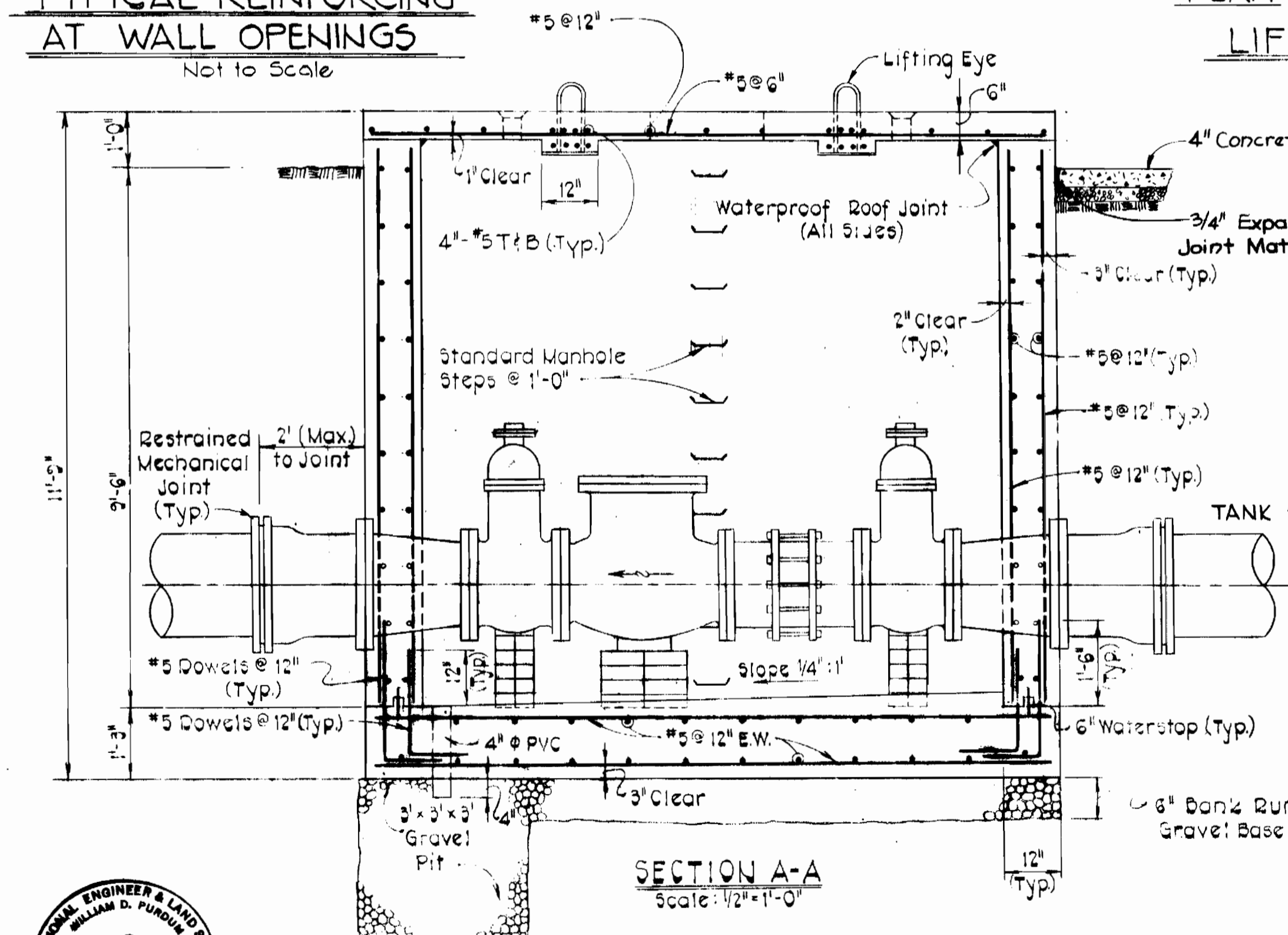
TYPICAL REINFORCING AT WALL OPENINGS
Not to Scale



PLAN SECTION LIFTING EYE DETAIL
Not to Scale



1/4 HORIZONTAL BEND (90°)						
PIPE DIA.	A	B	C	D	E	F
20"	5'-5"	3'-0"	3'-0"	1'-6"	2'-0"	4"
12"	3'-0"	2'-0"	1'-7"	1'-0"	1'-6"	4"



PURDUM & JESCHKE ENGINEERS
1023 N. CALVERT ST.
BALTIMORE, MARYLAND 21202

APPROVED: For Public Water, Storm Drain Systems, and Public Roads
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Director of Public Works - DATE

CONTRACT NO. 828-W
CHECK VALVE VAULT
PLAN AND SECTIONS
CAPITAL PROJECT NO. W-6-8091

ROUTE I STORAGE FACILITY
ELECTION DISTRICT GUILFORD NO. 6
TAX MAP 43 LIBER/FOLIO 930/447

CONTRACT NO. 828-W
CAPITAL PROJECT W-6-8091
ROUTE I STORAGE FACILITY
DRAWING NO. 7 OF 7
SCALE AS SHOWN
Designed: RHB
Drafted: ARZ
Checked: CHL
Date: