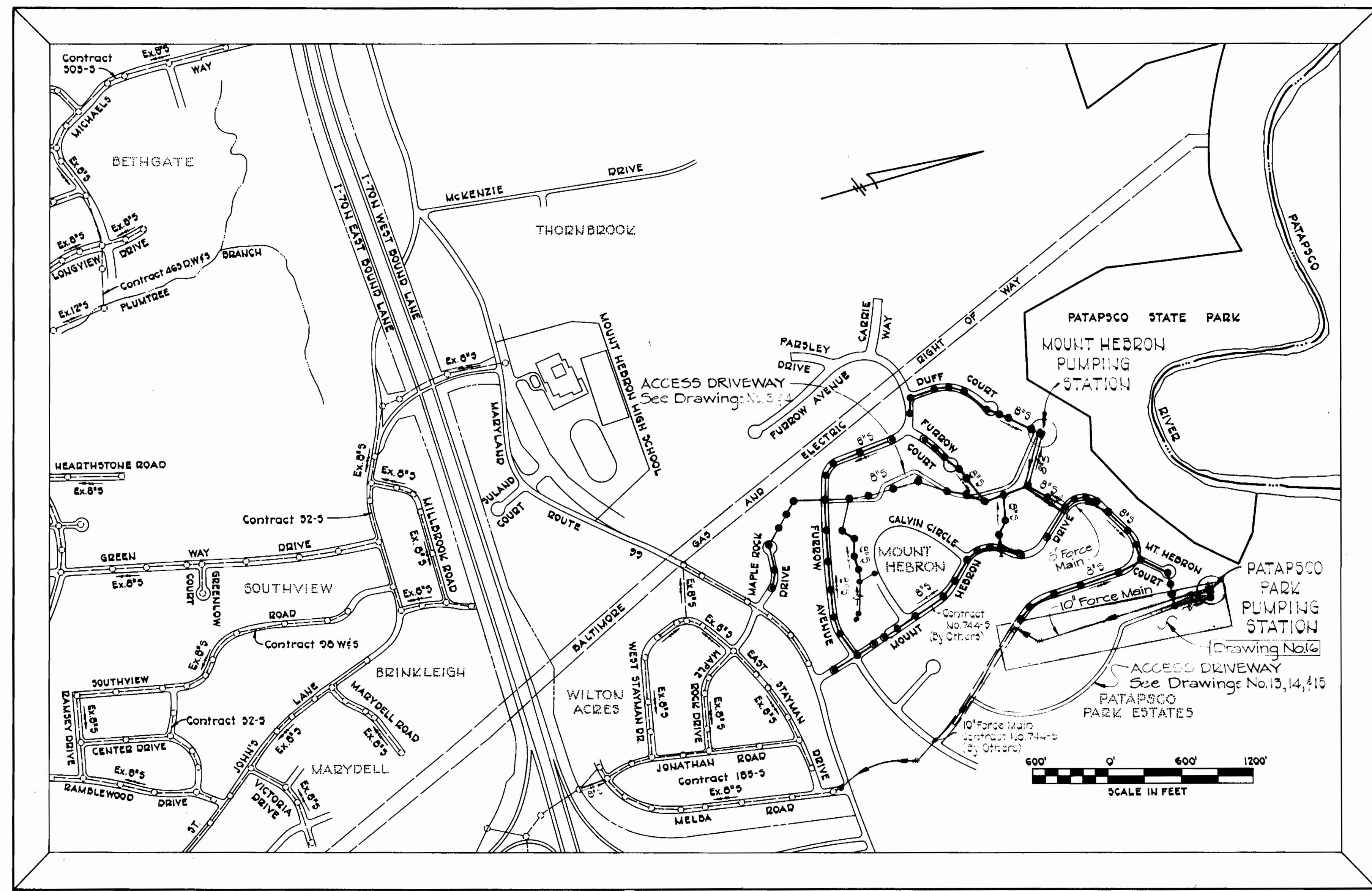


GENERAL NOTES

1. Approximate location 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, at the Contractor's expense.
2. All horizontal controls are based on Maryland State Coordinates.
3. All vertical controls are based on U.S.G.S. Datum.
4. All pipe elevations shown are invert elevations.
5. Clear all utilities by a minimum of 6'. Clear all poles by 2'-0" minimum or tunnel as required. Any cost incurred to the Contractor for tunneling or bracing of poles shall be included in unit prices bid for excavation and backfill.
6. For details not shown on the drawings use Howard County Standard Details.
7. For materials and construction methods use Howard County Standard Specifications.
8. Contractor shall locate existing utilities a minimum of two (2) weeks in advance of construction operations in the vicinity of proposed utilities at his own expense.
9. Contractor shall notify the following utilities or agencies of least five (5) working days before starting work shown on these plans:
  - State Highway Administration - 531-5533
  - Baltimore Gas and Electric Company - Underground Electric Distribution Customer Service - 685-0123
  - Baltimore Gas and Electric Company - Underground Gas Distribution Customer Service - 685-0123
  - Engineering "Damage Control" - 234-5621
  - "Miss Utility" - 1-559-0100
  - Chesapeake & Potomac (C&P) Telephone Company - 725-9976
  - American Telephone and Telegraph - Cable Location Division - 393-3553
  - Colonial Pipeline Company - 781-4641
  - Bureau of Utilities - Howard County - 992-2366
10. 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.
11. 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.
12. 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.
13. Top of all force mains to have a minimum of 3'-1/2" cover unless otherwise noted.
14. Block all force main fittings with concrete.
15. All sewer mains shall be C.S.P.X., V.C.P.X. or A.C.P. Class 2400 unless otherwise noted.
16. Contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole walls.
17. All manholes shall be 4'-0" inside diameter, unless otherwise noted.
18. Force mains shall be D.I.P. Class 54 only.
19. Manholes shown with 12" and 16" walls are brick manholes only.
20. Manholes designated W.T. in plan and profile shall have watertight frames and covers, Standard Detail S-12 (RCR-63A). Where watertight manhole frame and cover is used, set top of frame 1'-6" above finished grade.

INDEX OF DRAWINGS	
NO.	DESCRIPTION
1	Title Drawing
2	Mt. Hebron P.S. Site Development Plan
3	Mt. Hebron P.S. Site Development Plan
4	Mt. Hebron P.S. Site Development Plan
5	Mt. Hebron P.S. Structural Plan and Details
6	Mt. Hebron P.S. Structural Sections
7	Mt. Hebron P.S. Mechanical Plan and Details
8	Mt. Hebron P.S. Mechanical Sections
9	Mt. Hebron P.S. Electrical Plan and Details
10	Mt. Hebron P.S. Electrical Details
11	Mt. Hebron and Patapsco Park P.S. Misc. Details
12	Patapsco Park P.S. Site Development Plan
13	Patapsco Park P.S. Access Driveway
14	Patapsco Park P.S. Access Driveway
15	Patapsco Park P.S. Access Driveway
16	Patapsco Park P.S. Plan For Force Main
17	Patapsco Park P.S. Profiles and Details
18	Patapsco Park P.S. Structural Plan and Details
19	Patapsco Park P.S. Structural Sections
20	Patapsco Park P.S. Mechanical Plan and Details
21	Patapsco Park P.S. Mechanical Sections
22	Patapsco Park P.S. Electrical Plan and Details
23	Patapsco Park P.S. Electrical Details
24	Mt. Hebron and Patapsco Park P.S. Mech Details
25	Mt. Hebron and Patapsco Park P.S. Details



**CAPITAL PROJECT S-4-6037**  
**CONTRACT NO. 745-S**  
**MOUNT HEBRON PUMPING STATIONS**  
**HOWARD COUNTY, MARYLAND**  
**DEPARTMENT OF PUBLIC WORKS**



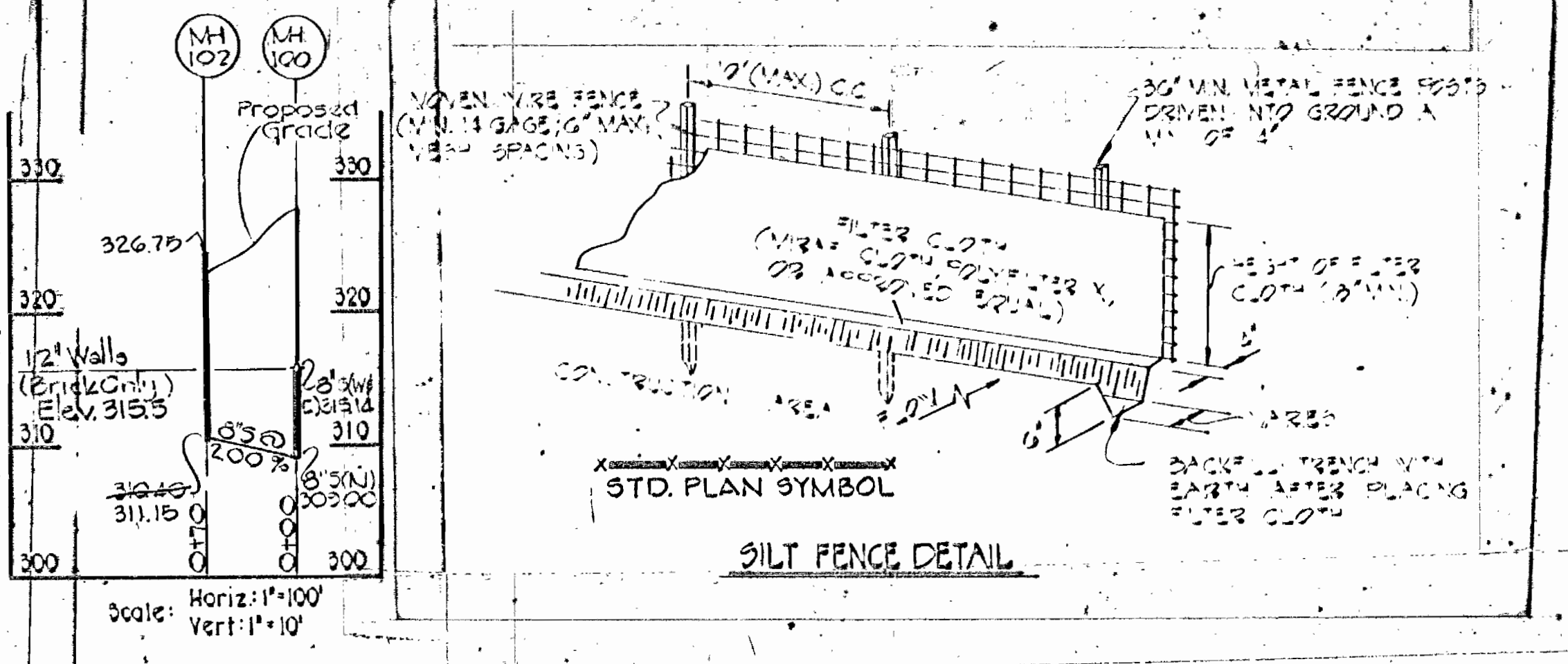
PURDUM & JESCHKE ENGINEERS 1023 N. CALVERT ST. BALTIMORE, MARYLAND	<i>R. M. Benjamin</i> CHIEF BUREAU OF UTILITIES DATE: 2-4-81	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Wm. F. Newman</i> DIRECTOR OF PUBLIC WORKS DATE: 2-5-81	CONTRACT NO. 745-S CAPITAL PROJECT NO. S-4-6037	VICINITY MAP	MOUNT HEBRON SEWER MAINS ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND	DRAWING NO. 1 OF 25 SCALE 1" = 600'	DESIGNED: REP DRAFTED: ARZ CHECKED: REP
---	--	---	--	--------------	--	--	---

EPA NO. C-240593-01  
 CONTRACT NO. 745-S  
 CAPITAL PROJECT S-4-6037  
 MOUNT HEBRON SEWER MAINS  
 PATAPSCO PARK & MOUNT HEBRON  
 PUMPING STATIONS

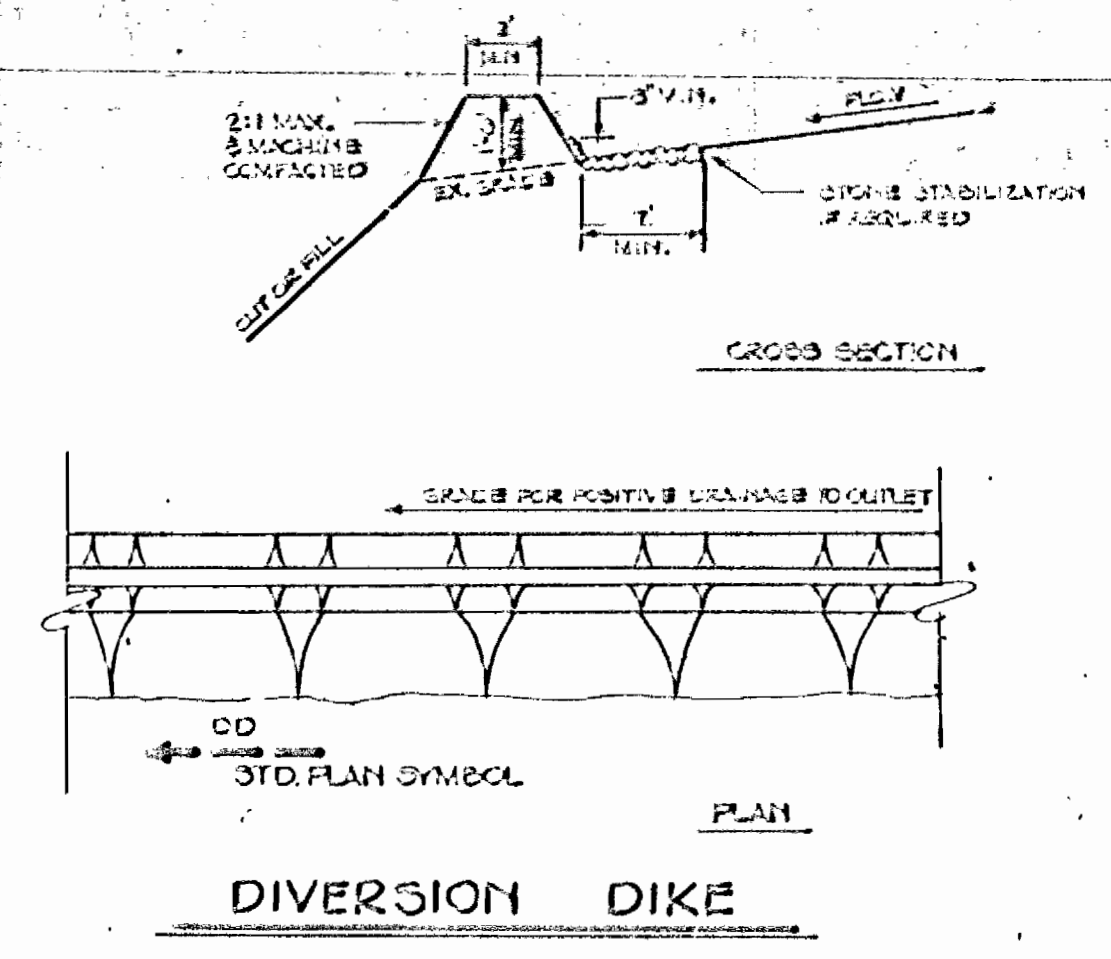


**SEDIMENT CONTROL NOTES**

- 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 (392-2435 or 392-2438).
- 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 (392-2435 or 392-2438).
- 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 15 tons/acre.
      - Commercial fertilizer 10-13-10 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. (10-1000 sq. ft.)
        - Permanent - (Slopes Flatter than 3:1) - Common Kentucky Bluegrass 40% Perennial Ryegrass 40%, Red Fescue 20%. (3-10 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 15 to 2 tons/acre.
      - The mulch down with liquid asphalt at 0.1 gal. s.y. or emulsified asphalt at 0.24 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:
      - Ground vetch (inoculated) 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 bala dikes, silt fences, or other approved sediment control devices.

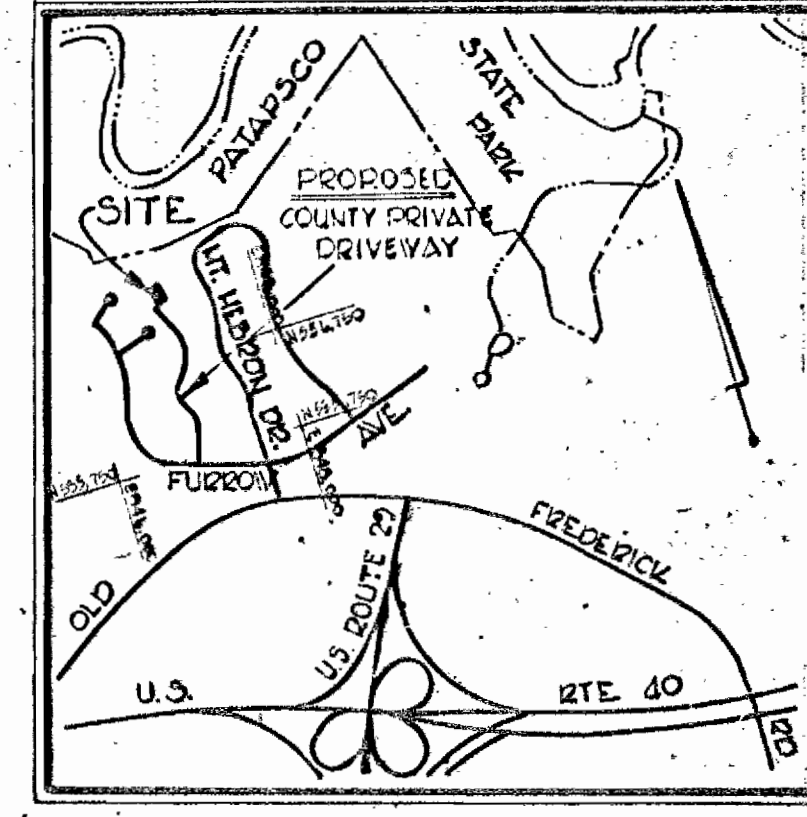


**SCHEMATIC BLDG. PROFILE**



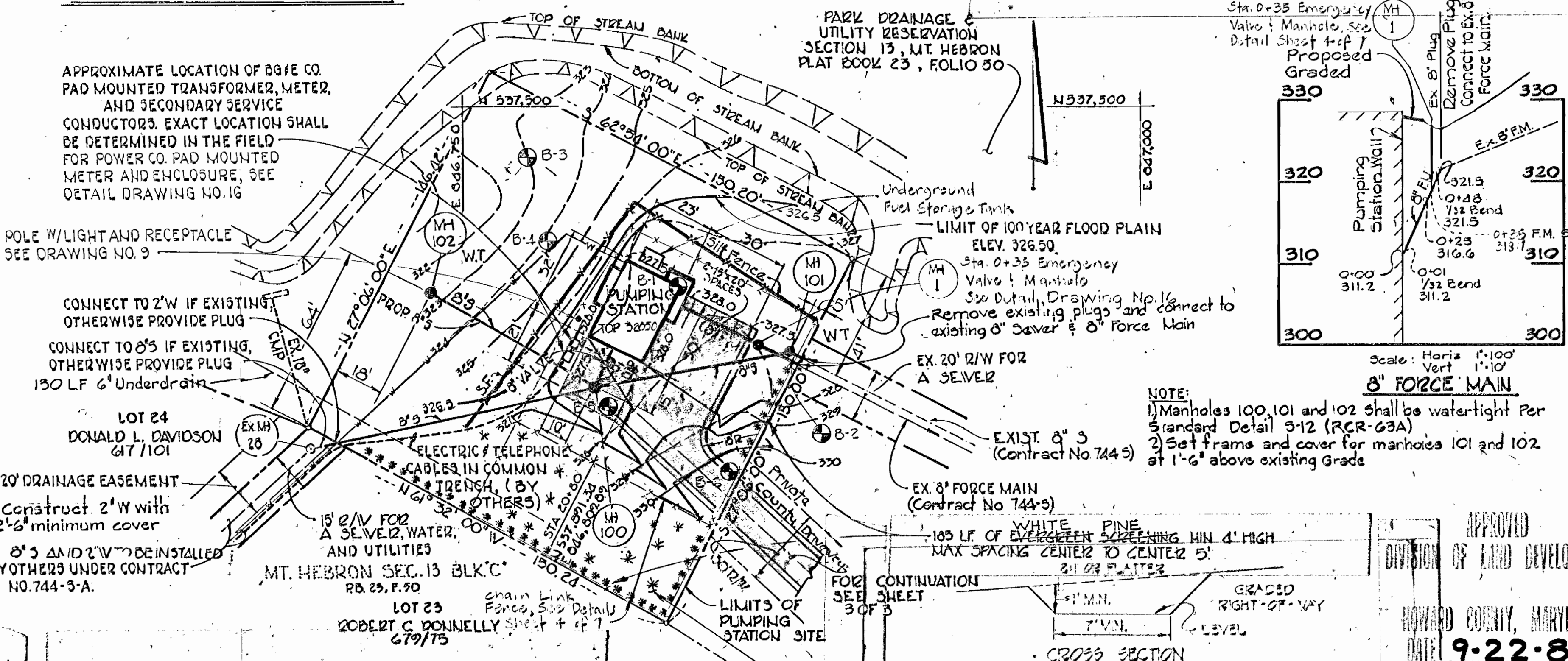
**DIVERSION DIKE**

- 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 outlet 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.

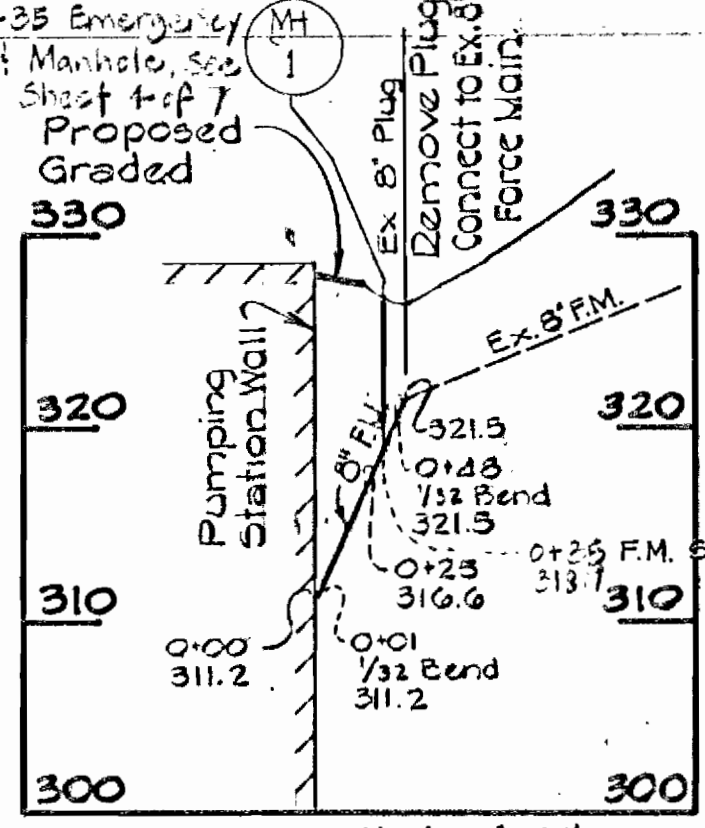


**VICINITY MAP**  
SCALE: 1"=2000'

**NOTE:**  
THE CONTRACTOR SHALL LOCATE THE EXISTING 8" FORCE MAIN PRIOR TO CONSTRUCTION OF MH 101 AND THE PROPOSED 8" FORCE MAIN.



**SITE PLAN**  
SCALE: 1"=30'



**8\"/>**

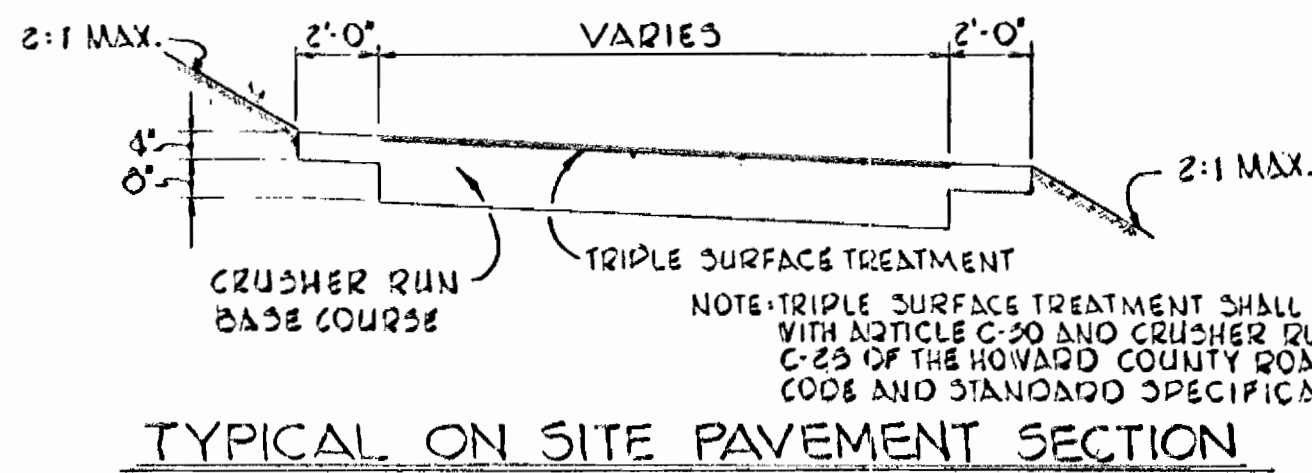
**SITE ANALYSIS**

Present Zoning	R-20
Proposed Use	Pumping Station
Total Area of Pumping Station Site	0.511 Ac.
Total Area Disturbed	1.450 Ac.
Total Area Paved	0.801 Ac.
Total Area Vegetated	0.849 Ac.
Parking Data:	
Full Time Employees	0
Max. No. of Service Vehicles at any one time	2
No. of Spaces Required	2
No. of Spaces Provided	2

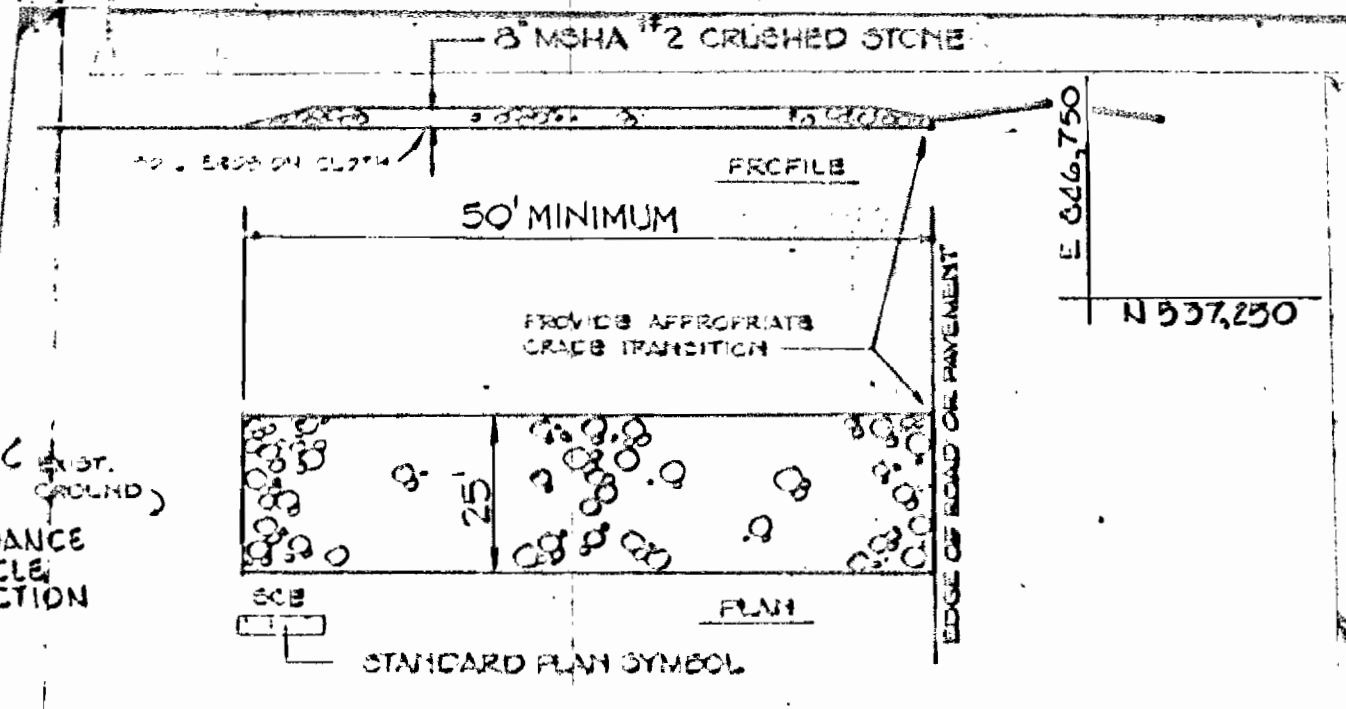
**GENERAL NOTES**

- Drawing and Page numbers shown hereon are referenced to Howard County Road Construction Code and Standard Specifications - Dated August 1989.
- The location of existing utilities shown hereon are based on the latest available information. The contractor shall however, determine the exact location before making any connections.
- The contractor shall notify "MS Utility" at least three (3) days prior to beginning any work shown hereon.
- All workmanship and materials shall be in accordance with the Howard County Road Construction Code and Standard Specifications unless otherwise specified.

- CONSTRUCTION SEQUENCE**
- Obtain Grading Permit.
  - Construct stabilized construction entrance at entrance off Furrow Avenue.
  - Place silt fence along access road as indicated on plan.
  - Construct temporary diversion dikes and swales as indicated on drawings.
  - Stabilize diversion dikes using "Temporary Seeding". See Erosion Control Notes.
  - Install 36" and triple 48" culverts. Construct embankments over culverts and stabilize with Permanent Seeding.
  - Construct access road to finished subgrade elevation.
  - Place gravel base for access road. Construct bituminous curb and paving at intersection with Furrow Avenue.
  - Stabilize all disturbed areas outside limits of road shoulders with Permanent Seeding.
  - Construct silt fence as shown at pumping station site.
  - Rough grade pumping station site.
  - Excavate for pumping station wet well. Install utilities to building line. Continue with pumping station construction.
  - Final grade pumping station site. Stabilize all disturbed areas with Permanent Seeding.
  - Place gravel surface on access road to finished elevation. Place gravel paving in parking and turnaround areas at pumping station site.
  - Remove temporary sediment control measures when permanent stabilization has become established.



**TYPICAL ON SITE PAVEMENT SECTION**



**STABILIZED CONSTRUCTION ENTRANCE**

- Stone size - MSHA No. 2 or AASHTO designation 443 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.

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.  
*Joseph Boyles* 2-18-81  
DATE

HOWARD SOIL CONSERVATION DISTRICT  
REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND METS TECHNICAL REQUIREMENTS  
*James M. Decker* 2-12-81  
DATE  
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
APPROVED: *William T. Rose* 2-12-81  
DATE  
HOWARD SOIL CONSERVATION DISTRICT

**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.  
*George F. Neumann* 3-22-80  
DATE  
*William T. Rose* 3-17-80  
DATE  
CHIEF BUREAU OF ENGINEERING

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*William T. Rose* 2-11-81  
DATE  
*William T. Rose* 2-11-81  
DATE  
CHIEF DIVISION OF LAND DEVELOPMENT

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 SEEMED NECESSARY. ANY DEVIATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD SOIL CONSERVATION DISTRICT.  
*George F. Neumann* 3-22-80  
DATE

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.  
*William S. Bisher* 1/26/81  
DATE  
WILLIAM S. BISHER P.E. No. 4515

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
CAPITAL PROJECT NO. 5-4-6067  
CONTRACT NO. 743-3  
MOUNT HEBRON SEWERS  
MOUNT HEBRON PUMPING STATION  
SITE DEVELOPMENT PLAN  
ELECTION DISTRICT NO. 2 HOWARD COUNTY, MD.  
TAX MAP PARCEL

EPA NO. C-240593-01  
Designed: D.E.  
Drawn: S.Z.B.  
Checked: J.T.B.  
DRAWING NO. 20725  
SITE PLAN SH. 1077  
Scale: As Shown



**COORDINATES**

NO.	NORTH	EAST
TR-1	535,976.32	846,933.36
TR-2	536,329.10	846,927.18
TR-3	536,529.06	846,979.13
TR-4	536,590.53	847,124.07
TR-5	536,816.59	847,184.12
TR-6	537,044.68	847,296.68
TR-7	537,211.27	847,003.99

STA. 3+63 to 4+26.09  
 ± CURVE DATA  
 R=250'  
 Δ=70°00'00"  
 L=61.09'  
 T=35.01'  
 CHD=57.38'  
 N 19°00'00" W

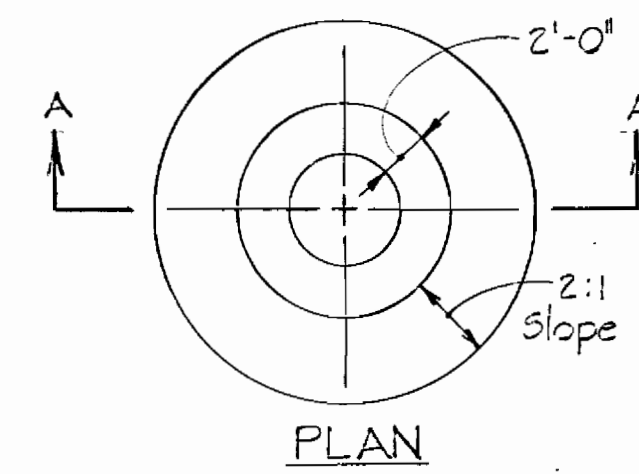
Mt. Hebron  
 SECTION 12  
 P.B. 4, F. 55  
 BLOCK 'C'

STA 4+67.70 to 5+11.44  
 ± CURVE DATA  
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 Δ=50°07'37"  
 L=43.74'  
 T=23.38'  
 CHD=42.36'  
 N 28° 56' 12" W

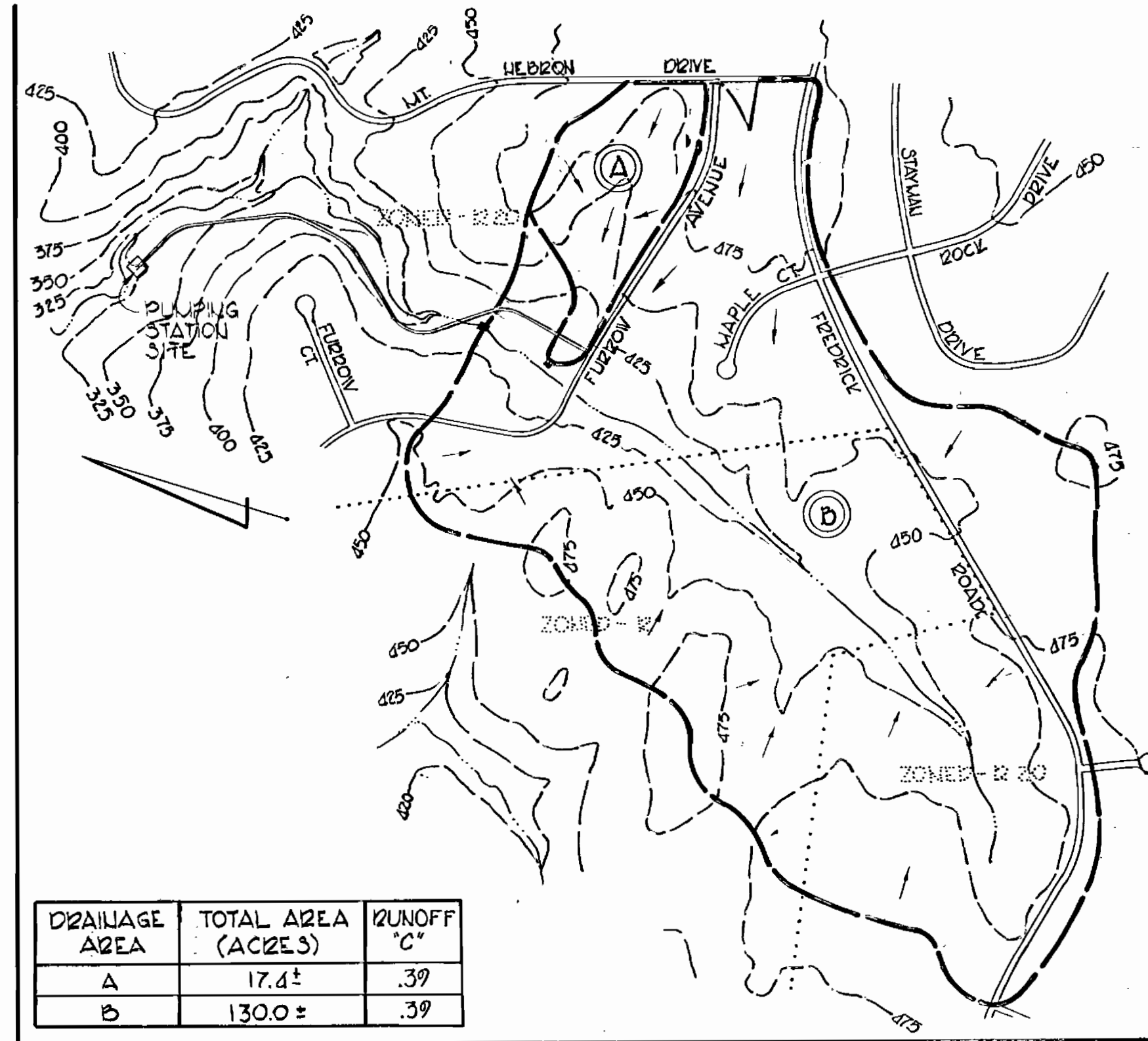
STA 3+35.74 to 4+08.05  
 ± CURVE DATA  
 R=250'  
 Δ=16° 34' 19"  
 L=72.31'  
 T=36.01'  
 CHD=72.00'  
 N 12°09' 33" W

JOHN N. DOYLE & WIFE  
 570/429

STA. 9+68.96 to 10+58.77  
 ± CURVE DATA  
 R=500'  
 Δ=03°00'00"  
 L=69.21'  
 T=34.96'  
 CHD=69.76' N 30°50'08"E



SECTION 'A-A'  
 FILL AT MANHOLE  
 Not to Scale



DRAINAGE AREA	TOTAL AREA (ACRES)	RUNOFF 'C'
A	17.4±	.39
B	130.0±	.39

DRAINAGE AREA MAP  
 SCALE: 1"=300'

STA. 11-27.35 to 11+55.50  
 ± CURVE DATA  
 R=50'  
 Δ=32°15'16"  
 L=28.15'  
 T=14.46'  
 CHD=27.78'  
 N 30°42' 25" E

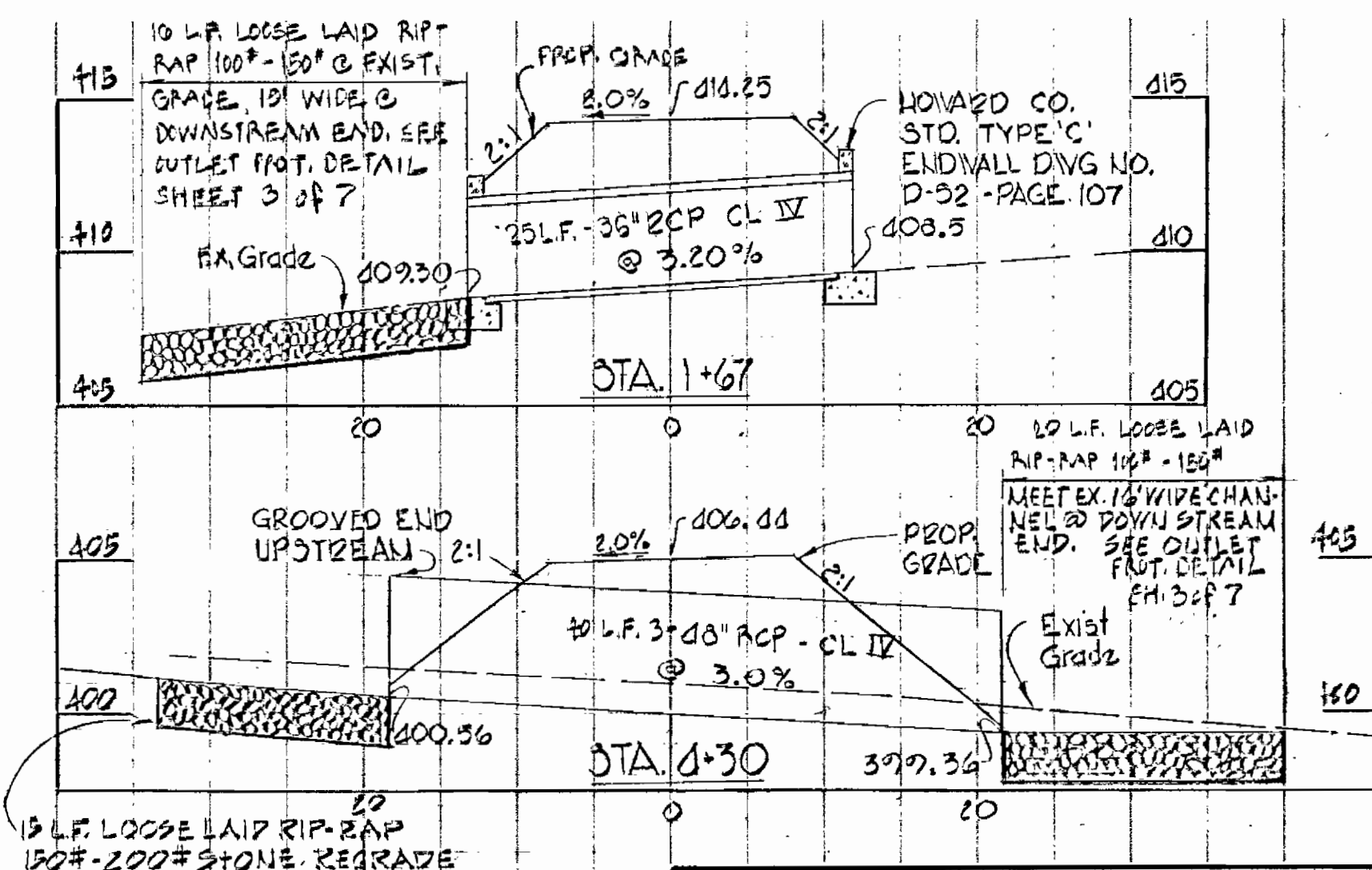
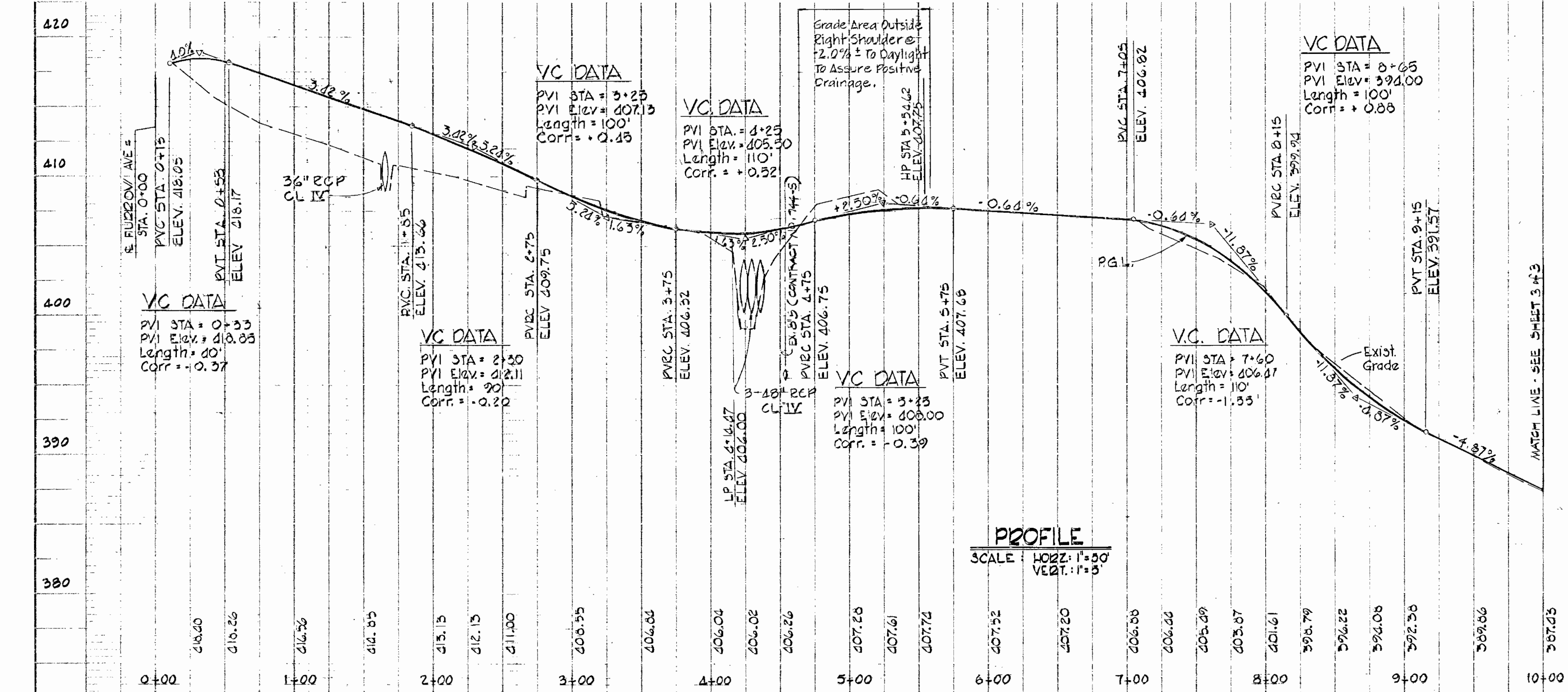
STA 7+43.28 to 8+01.77  
 ± CURVE DATA  
 R=35'  
 Δ=60° 36' 06"  
 L=58.49'  
 T=32.36'  
 CHD=55.76'  
 N 10°01' 21" E

STA 8+31.01 to 8+57.19  
 ± CURVE DATA  
 R=50'  
 Δ=30°00'00"  
 L=26.18'  
 T=13.40'  
 CHD=25.88'  
 N 55° 29' 24" E

PLAN  
 SCALE: 1"=50'

NOTE: RESET FRAME & COVER OF EX MH #5 TO FINISH GRADE ELEV. 391.70

FURZOW AVENUE



CULVERT PROFILES  
 SCALE: HORIZ: 1"=10' VERT: 1"=5'

APPROVED  
 DIVISION OF LAND DEVELOPMENT  
 HOWARD COUNTY, MARYLAND  
 DATE 9-22-80

HOWARD SOIL CONSERVATION DISTRICT  
 Reviewed For Howard Soil Conservation District and meets technical requirements  
 Signature: [Signature] DATE: 2/13/81  
 The development plan is Approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District  
 Signature: [Signature] DATE: 2-13-81  
 APPROVED: For Public Water and Public Sewage Systems, Howard County Health Department  
 Signature: [Signature] DATE: 2-18-81

**PURDUM & JESCHKE**  
 CONSULTING ENGINEERS  
 LAND SURVEYORS  
 1323 North Calvert Street  
 Baltimore, Maryland 21202 301/837-0134

APPROVED: For Public Water, Public Sewage, Storm Drainage Systems and Roads - Howard County Department of Public Works  
 Signature: [Signature] DATE: 3-22-80  
 Signature: [Signature] DATE: 3-12-80

APPROVED: Howard County Office of Planning and Zoning  
 Signature: [Signature] DATE: 3-19-81  
 Signature: [Signature] DATE: 2-19-81

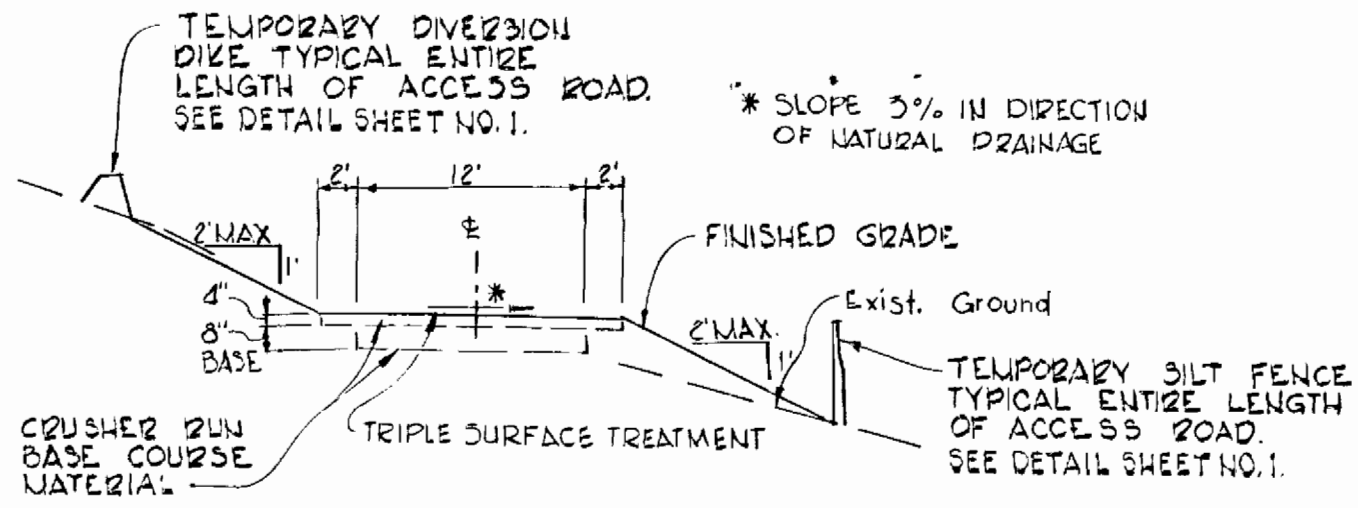
DEVELOPER  
 I Certify that all development and/or construction will be done according to this plan of development and plan for Erosion and Sediment Control and I also Authorize periodic on-site inspection by the Howard Soil Conservation District or their Authorized Agents, as deemed necessary. Deviation from this plan will not be made, unless authorized by the Howard Soil Conservation District.  
 Signature: [Signature] DATE: 8-22-80

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 County Soil Conservation District  
 Signature: [Signature] DATE: 1/23/81  
 WILLIAM G. KASCH I Reg. No. 4815 DATE:

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 CAPITAL PROJECT NO. 3-4-6067  
 CONTRACT NO. 745-5  
 MOUNT HEBRON SEWERS  
 MOUNT HEBRON PUMPING STATION  
 SITE DEVELOPMENT PLAN  
 ELECTION DISTRICT NO. 2 HOWARD COUNTY, MD  
 TAX MAP 17 PAR. 918, 0024  
 A3 BUILT 10/83 SDP-81-34 1/23/81

EPA NO. C-240593-01  
 Designed: DE.  
 Drawn: SJB.  
 Checked: RT.  
 DRWG. NO. 3 OF 25  
 SITE PLAN SH.20F7  
 Scale: As Shown





TYPICAL SECTION  
NO SCALE

NOTE: TEMPORARY DIVERSION DIKE SHALL BE CONSTRUCTED ON UPHILL SIDE OF ACCESS ROAD FOR THE ENTIRE LENGTH. DRAINAGE SHALL BE CARRIED ACROSS ROAD IN INTERCEPTOR SWALES LOCATED AS SHOWN ON THE PLAN. CONSTRUCT TEMPORARY SILT FENCE ON DOWNHILL SIDE OF ACCESS ROAD FOR THE ENTIRE LENGTH.

TRIPLE SURFACE TREATMENT SHALL BE IN ACCORDANCE WITH ARTICLE C-50 OF THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND STANDARD SPECIFICATION.

**HOWARD SOIL CONSERVATION DISTRICT**  
Reviewed for Howard Soil Conservation District and meets technical requirements

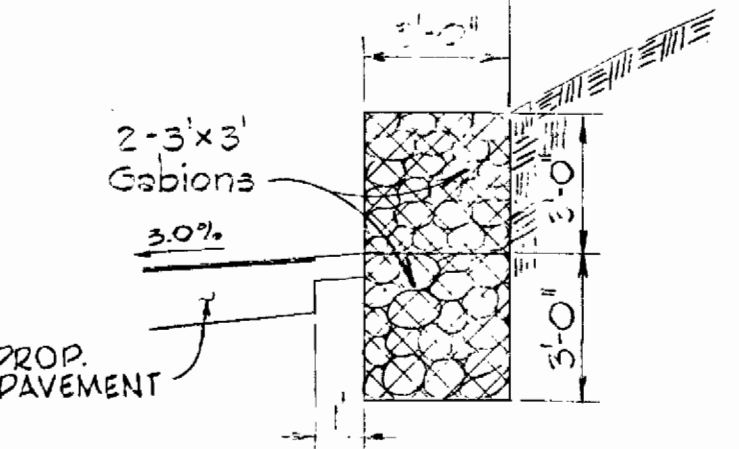
*James M. Helm* 2-13-81  
DATE

This development plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District

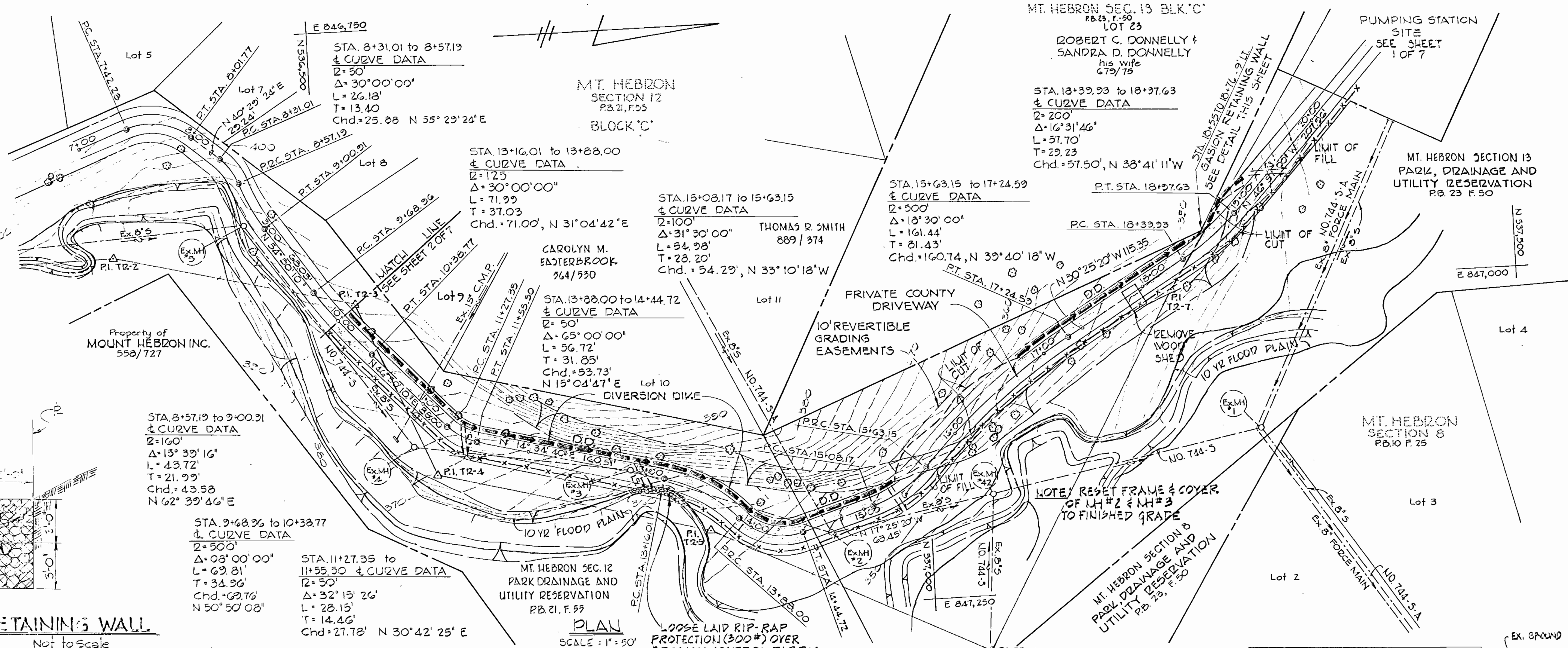
APPROVED *William J. Paine* 2-13-81  
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: For Public Water and Public Sewage Systems  
Howard County Health Department

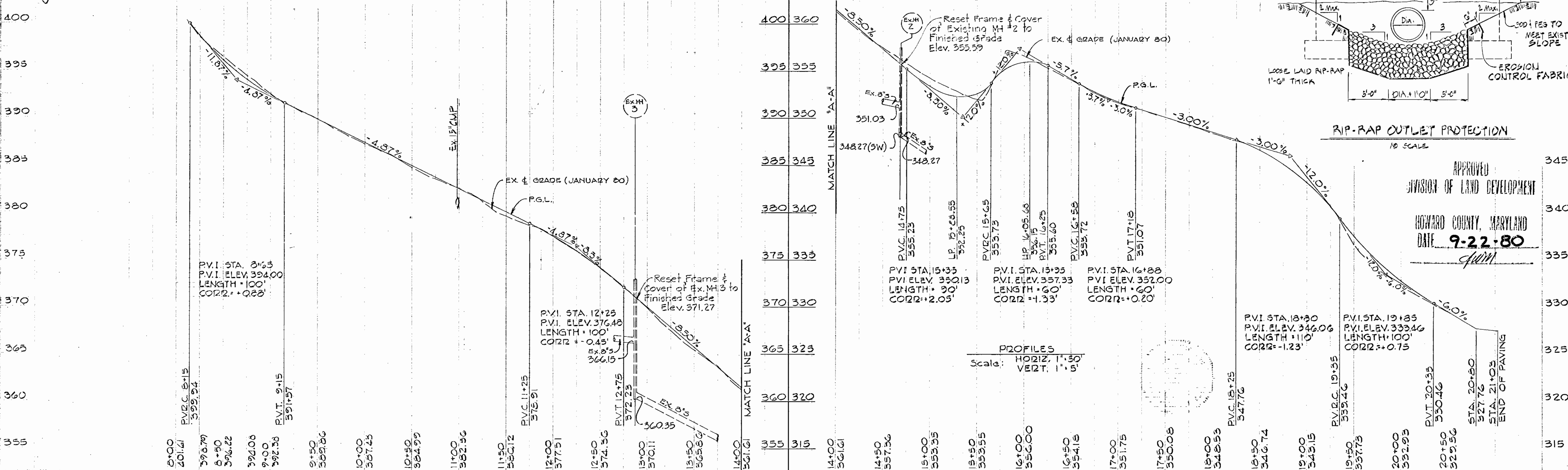
*Joseph B. Baker* 2-15-81  
COUNTY HEALTH OFFICER DATE



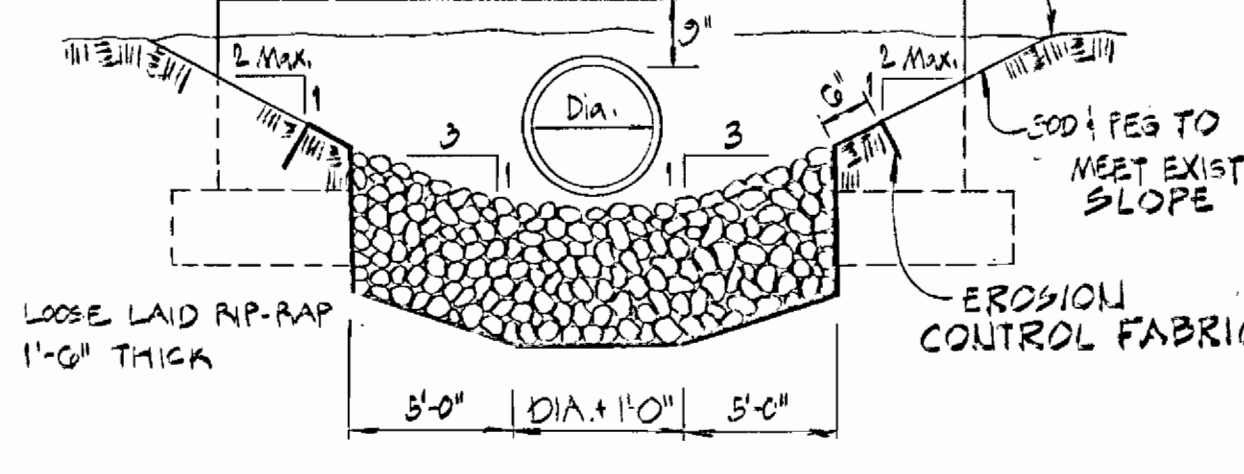
GABION RETAINING WALL  
DETAIL  
Not to Scale



PLAN  
SCALE: 1" = 50'



PROFILES  
Scale: HORIZ. 1" = 50'  
VERT. 1" = 5'



RIP-RAP OUTLET PROTECTION  
NO SCALE

APPROVED  
DIVISION OF LAND DEVELOPMENT  
HOWARD COUNTY, MARYLAND  
DATE 9-22-80  
*William J. Paine*

**PURDUM & JESCHKE**  
CONSULTING ENGINEERS  
LAND SURVEYORS  
1223 North Calvert Street  
Baltimore, Maryland 21212 331/337-0133

APPROVED: For Public Water, Public Sewage, Storm Drainage Systems and Roads - Howard County Department of Public Works  
*Joseph F. Naiman* 2-12-80  
DIRECTOR DATE

*William J. Paine* 3-12-80  
CHIEF BUREAU OF ENGINEERING DATE

APPROVED: Howard County Office of Planning and Zoning  
*William J. Paine* 2-17-81  
PLANNING DIRECTOR DATE

*William J. Paine* 2-17-81  
CHIEF DIVISION OF LAND DEVELOPMENT DATE

DEVELOPER  
I Certify that all development and/or construct thereon 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.

*Joseph F. Naiman* 2-12-80  
SIGNATURE DATE

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 County Soil Conservation District.

*William G. Paine* 1/23/81  
WILLIAM G. PAINE I Reg No. 4515 DATE

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
CAPITAL PROJECT NO. 3-4-6067  
CONTRACT NO. 745-5

**MOUNT HEBRON SEWER  
MOUNT HEBRON PUMPING STATION  
SITE DEVELOPMENT PLAN**

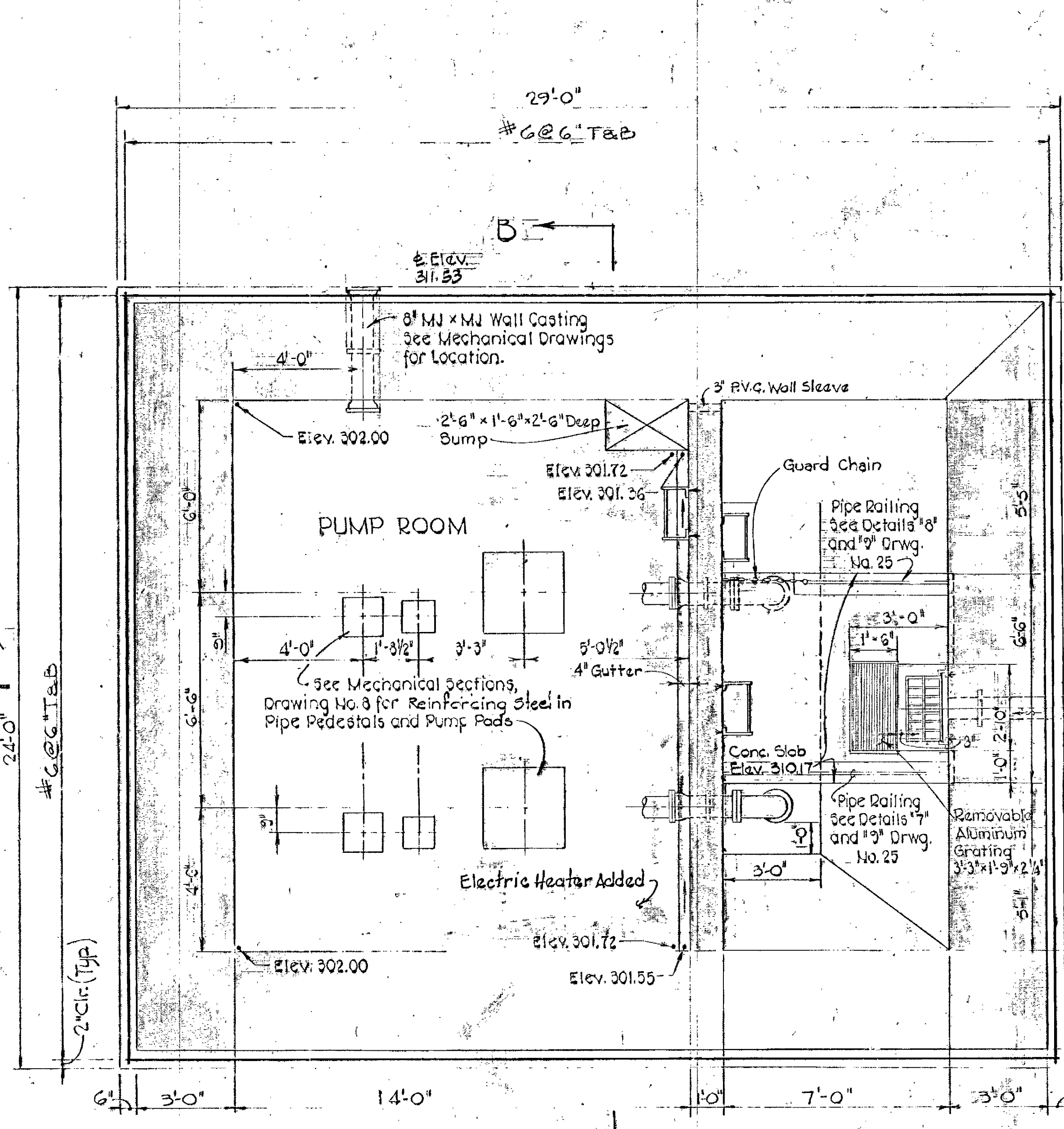
ELECTION DISTRICT NO. 2  
TAX MAP 17

HOWARD COUNTY, MD  
PAR. 710.602.1

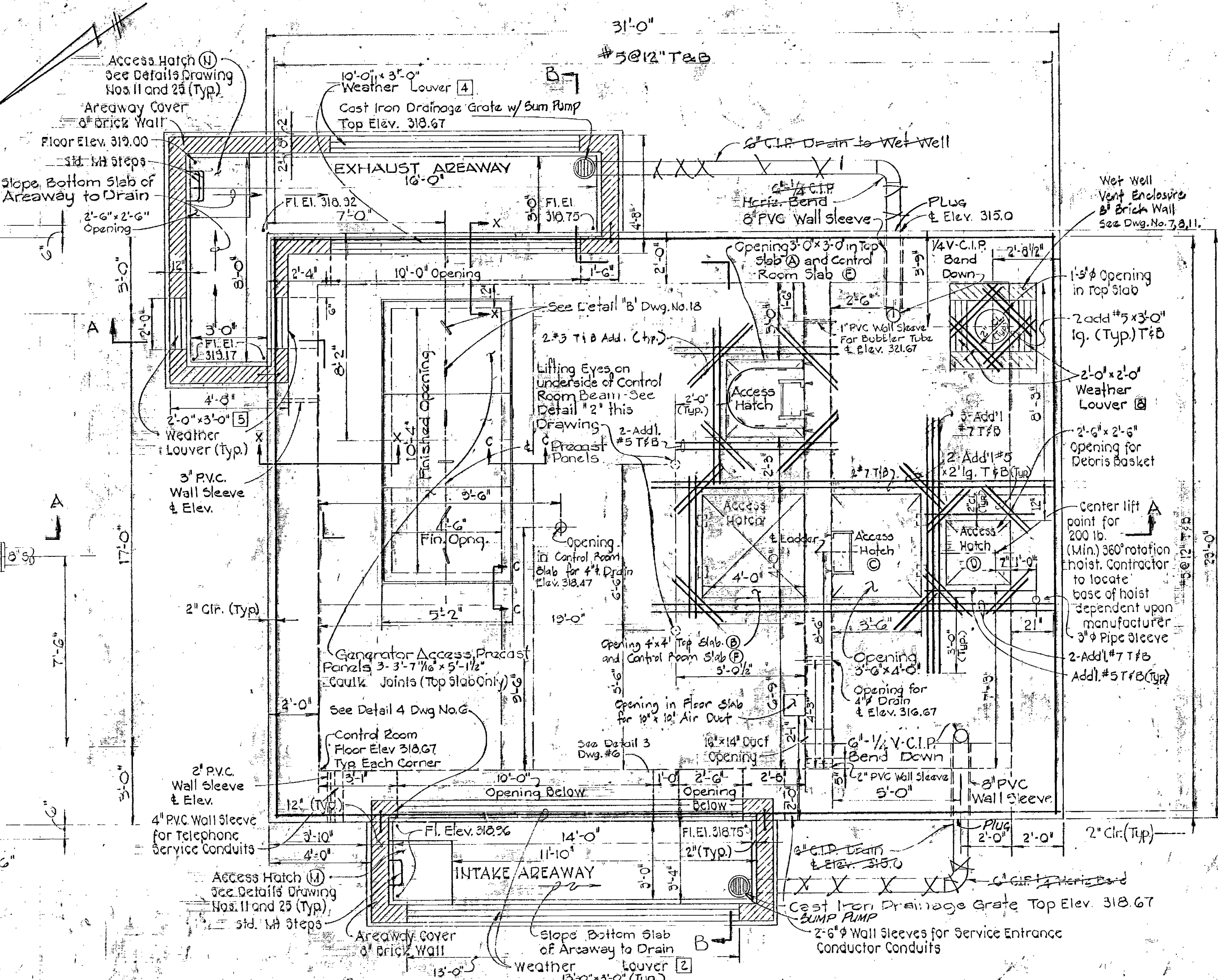
AS BUILT 10/83 **SDP-31-34** 1/23/81

EPA NO. C-240593-01  
Designed: DE.  
Drawn: J.T.  
Checked: J.T.  
DRAWING NO. 1 OF 25  
SITE PLAN SH.3 OF 7  
Scale: As Shown

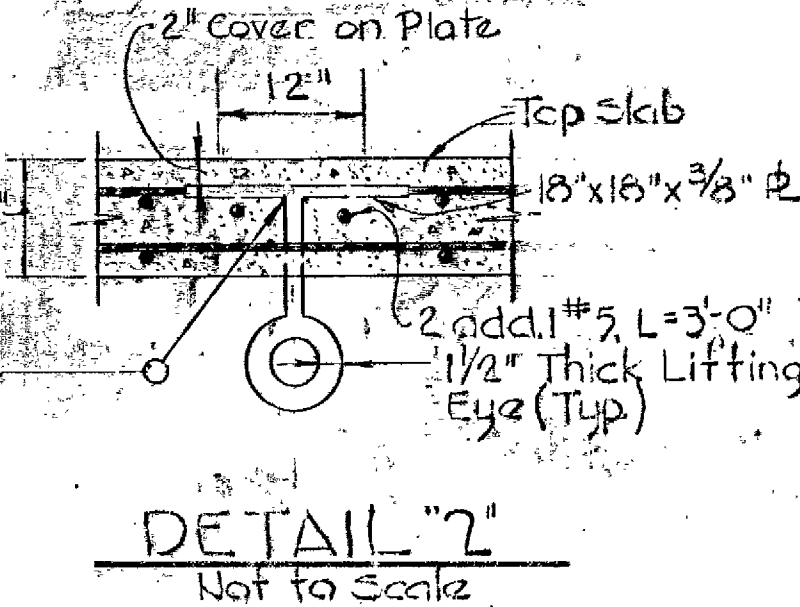




PLAN BELOW ELEVATION 312.00  
PUMP ROOM FLOOR REINFORCING  
Scale: 3/8" = 1'-0"



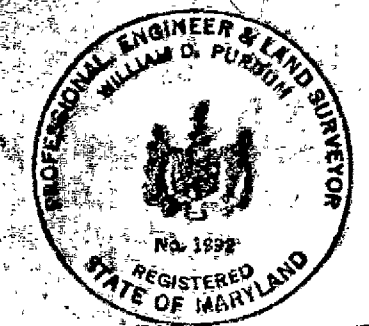
TOP SLAB PLAN  
CONTROL ROOM SLAB SIMILAR EXCEPT AS NOTED  
Scale: 3/8" = 1'-0"



- 1. DESIGN LIVE LOADS:**  
Slabs: 100 P.S.F. + Concentrated Equipment Loads, Grating: 100 P.S.F.
- 2. 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 40. All exposed corners shall be chamfered 1" x 1" unless otherwise noted. All pipe sleeves, conduits, floor boxes, frames, etc. shall be placed before concrete is placed. All openings thru concrete shall be water tight. See Mechanical and Electrical Drawings for openings not shown or located on Structural Plans.
- 3. 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 95 % of maximum density in accordance with A.S.T.M. A 997. Designation T-180 Method - C. Contractor shall adequately protect all walls during backfill operations.

- 4. 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 6061-T6. Bolts in contact with aluminum shall be Stainless Steel anchor bolts, nuts and washers shall be Alloy No. 3000.
- 5. FLOATATION:**  
The entire structure, complete in place, is required to float up if due to hydrostatic pressure.
- 6. MISCELLANEOUS:**  
All Aluminum Surfaces in contact with concrete or steel shall be coated prior to erection, see specifications. There shall be no contact between dissimilar metals or between aluminum and concrete.
- 7. REINFORCING STEEL:**  
Reinforcement steel shall be free from 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 closures are to be wired in place before depositing concrete. All splicing of bars, placing of chairs and bar spacings shall conform to A.C.I. 318-77. All rust scale shall be wire brushed off reinforcing bars.

- NOTES:**  
1. See Drawing No 25 for Access Hatch Schedule and Details.  
2. See Drawing No. 18 for Top Slab and Control Room Slab Drainage Details.  
3. See Drawing No. 19 for Sections X-X and C-C.

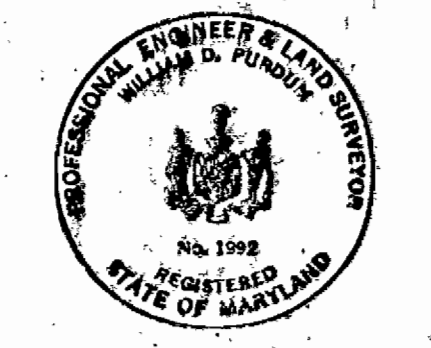
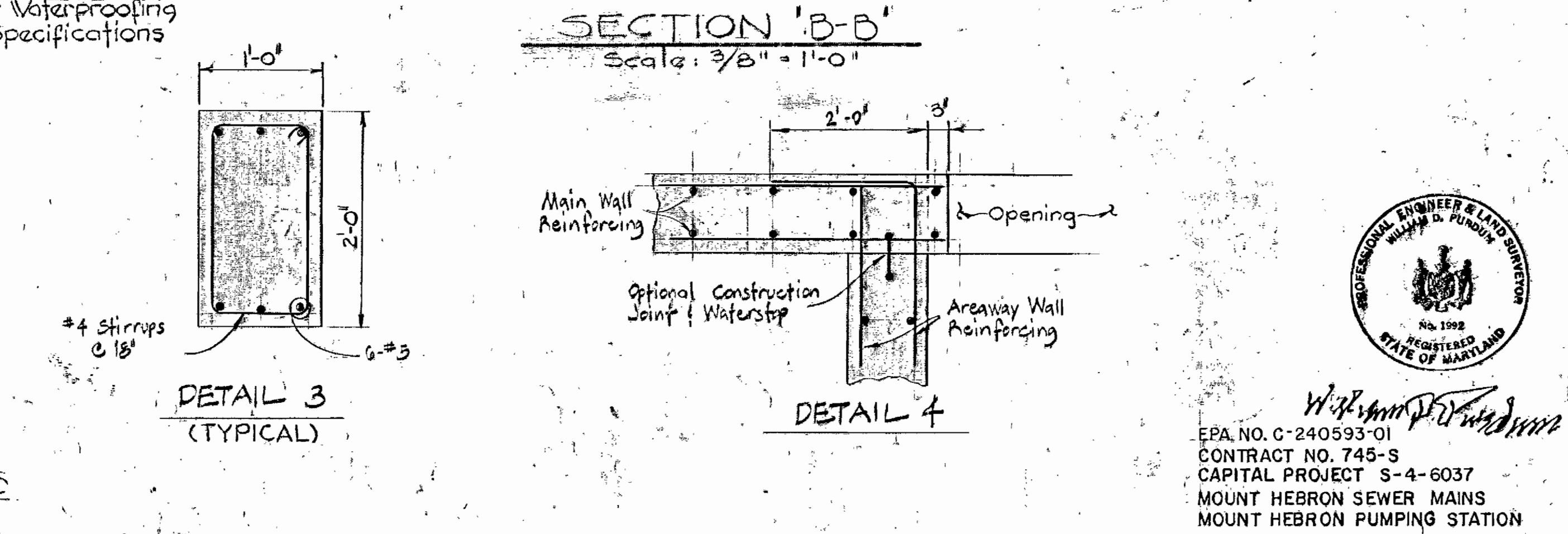
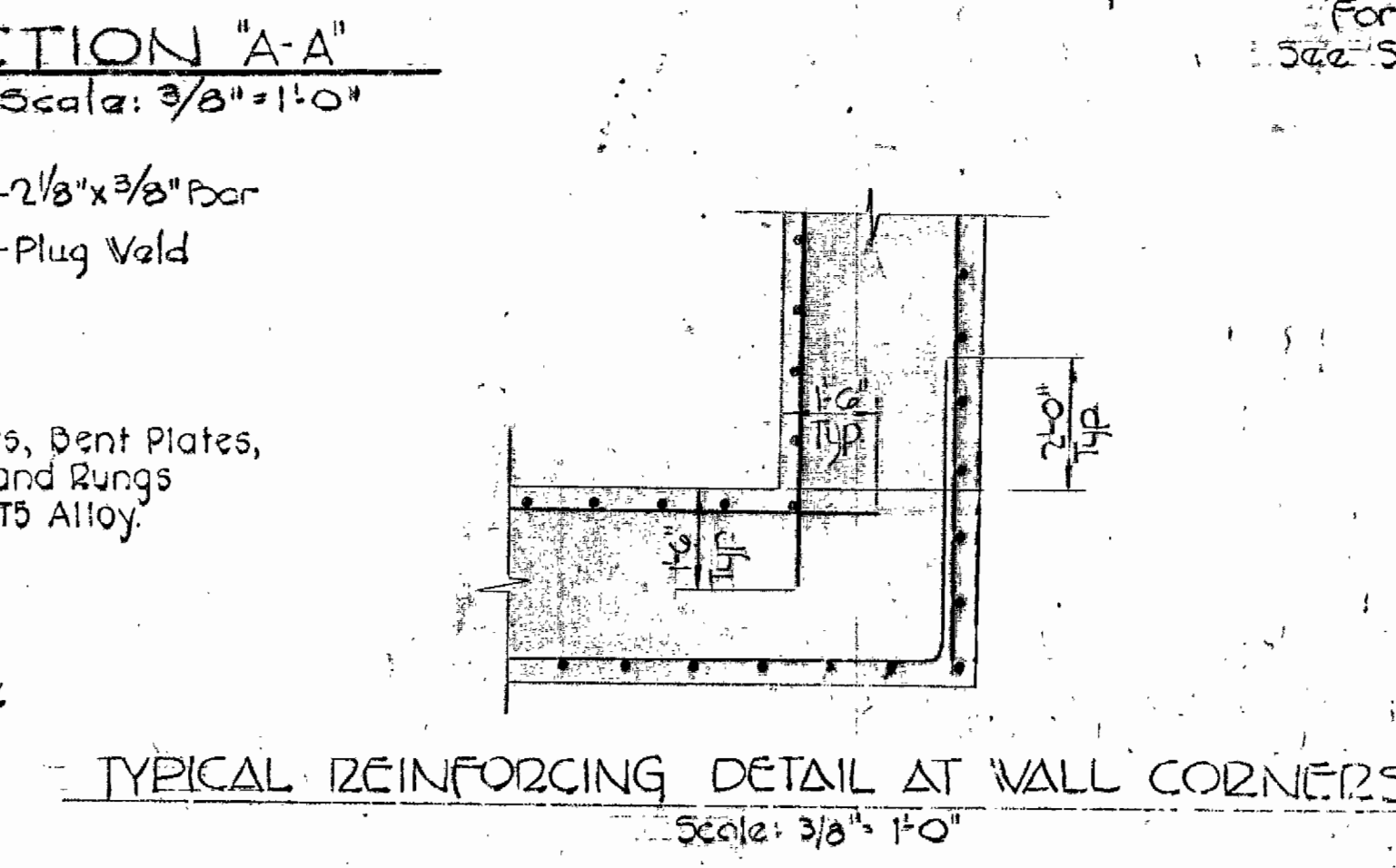
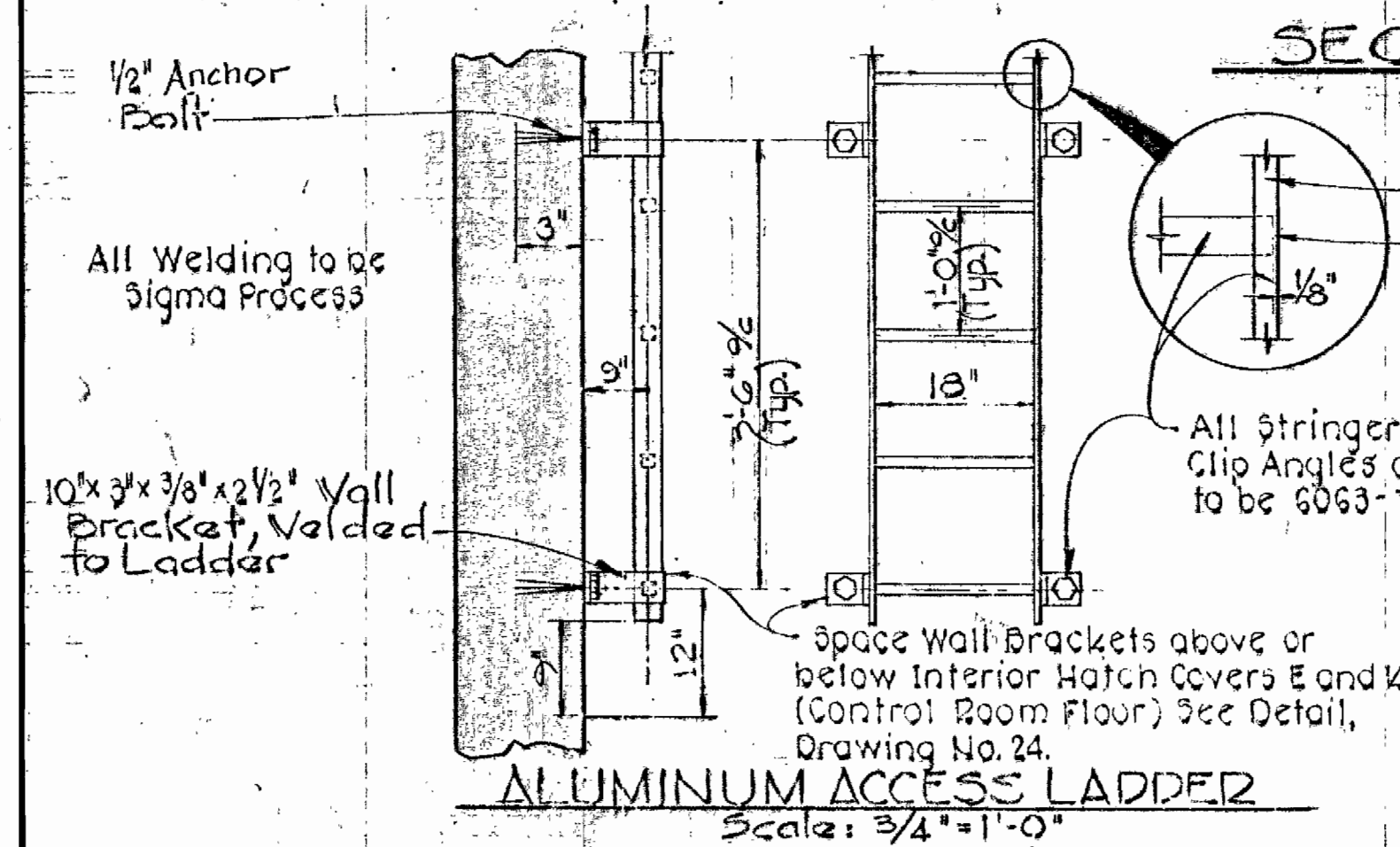
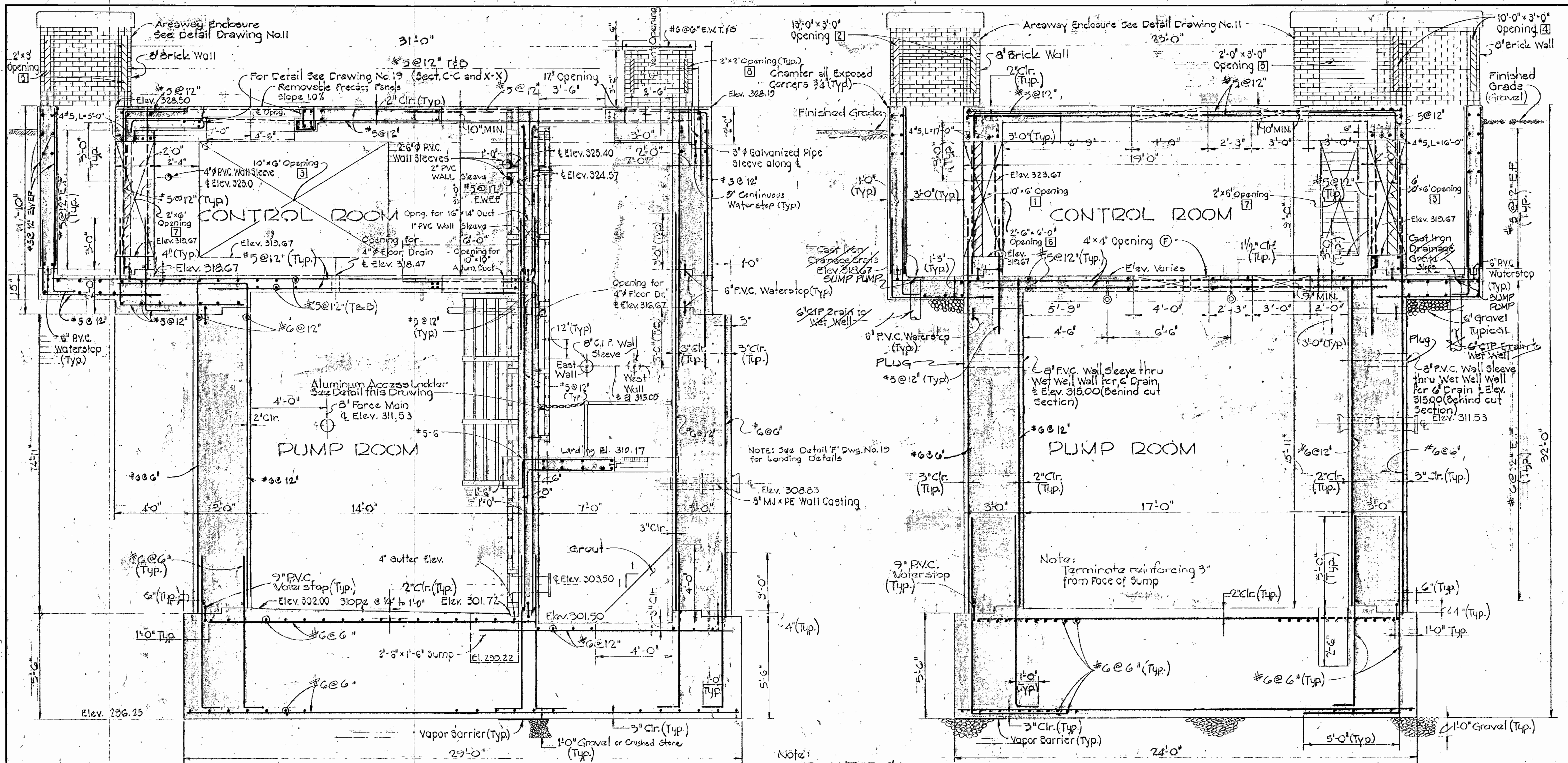


William D. Purdum

EPA NO. C-240593-01  
CONTRACT NO. 745-S  
CAPITAL PROJECT S-4-6037  
MOUNT HEBRON SEWER MAINS  
MOUNT HEBRON PUMPING STATION

<p>PURDUM &amp; JESCHKE ENGINEERS 1023 N. CALVERT ST. BALTIMORE, MARYLAND</p>	<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND R. J. B. B. 2-4-81 CHIEF BUREAU OF UTILITIES DATE F. M. M. 2-5-81 DIRECTOR OF PUBLIC WORKS DATE</p>	<p>CONTRACT NO. 745-S CAPITAL PROJECT NO. S-4-6037</p>	<p>STRUCTURAL PLAN AND DETAILS MOUNT HEBRON PUMPING STATION</p>	<p>MOUNT HEBRON SEWER MAINS ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND</p>	<p>DRAWING NO. 5 OF 25 SCALE AS SHOWN</p>	<p>Designed BCC Drafted JFT Checked BCC</p>
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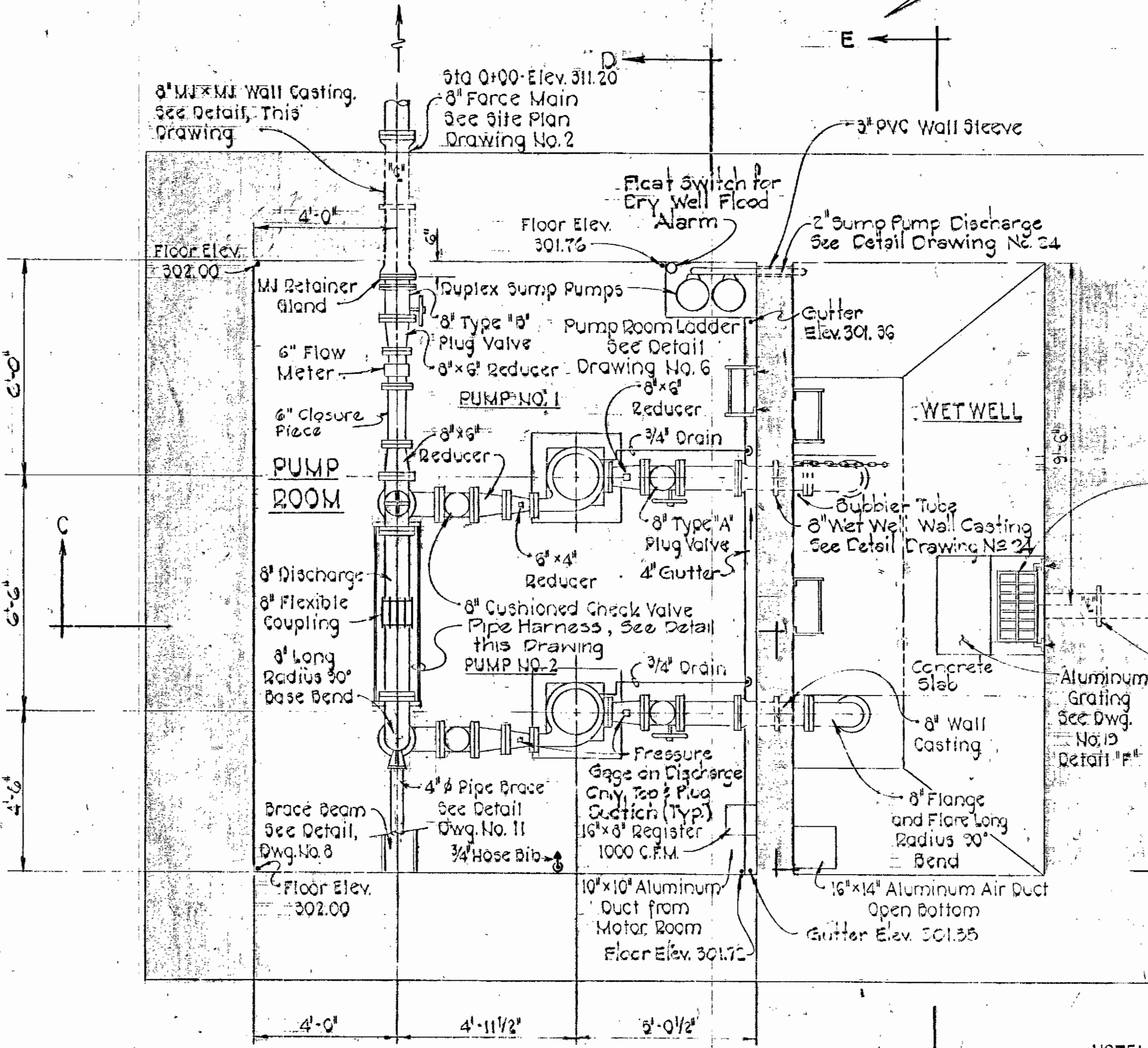
William D. [Name]  
 EPA NO. C-240593-01  
 CONTRACT NO. 745-S  
 CAPITAL PROJECT S-4-6037  
 MOUNT HEBRON SEWER MAINS  
 MOUNT HEBRON PUMPING STATION

<b>PURDUM &amp; JESCHKE</b> ENGINEERS 1023 N. CALVERT ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND [Signature] 2-4-81 CHIEF-BUREAU OF UTILITIES [Signature] 2-5-81 CHIEF-BUREAU OF ENGINEERING	CONTRACT NO. 745-S CAPITAL PROJECT NO.S-4-6037	<b>STRUCTURAL SECTIONS</b> MOUNT HEBRON PUMPING STATION	<b>MOUNT HEBRON SEWER MAINS</b> ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND	DRAWING NO. 6 OF 25	SCALE AS SHOWN Designed BCC Drafted JFT Checked BCC
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NOTE: For Access Hatch Details, See Drawing No. 25

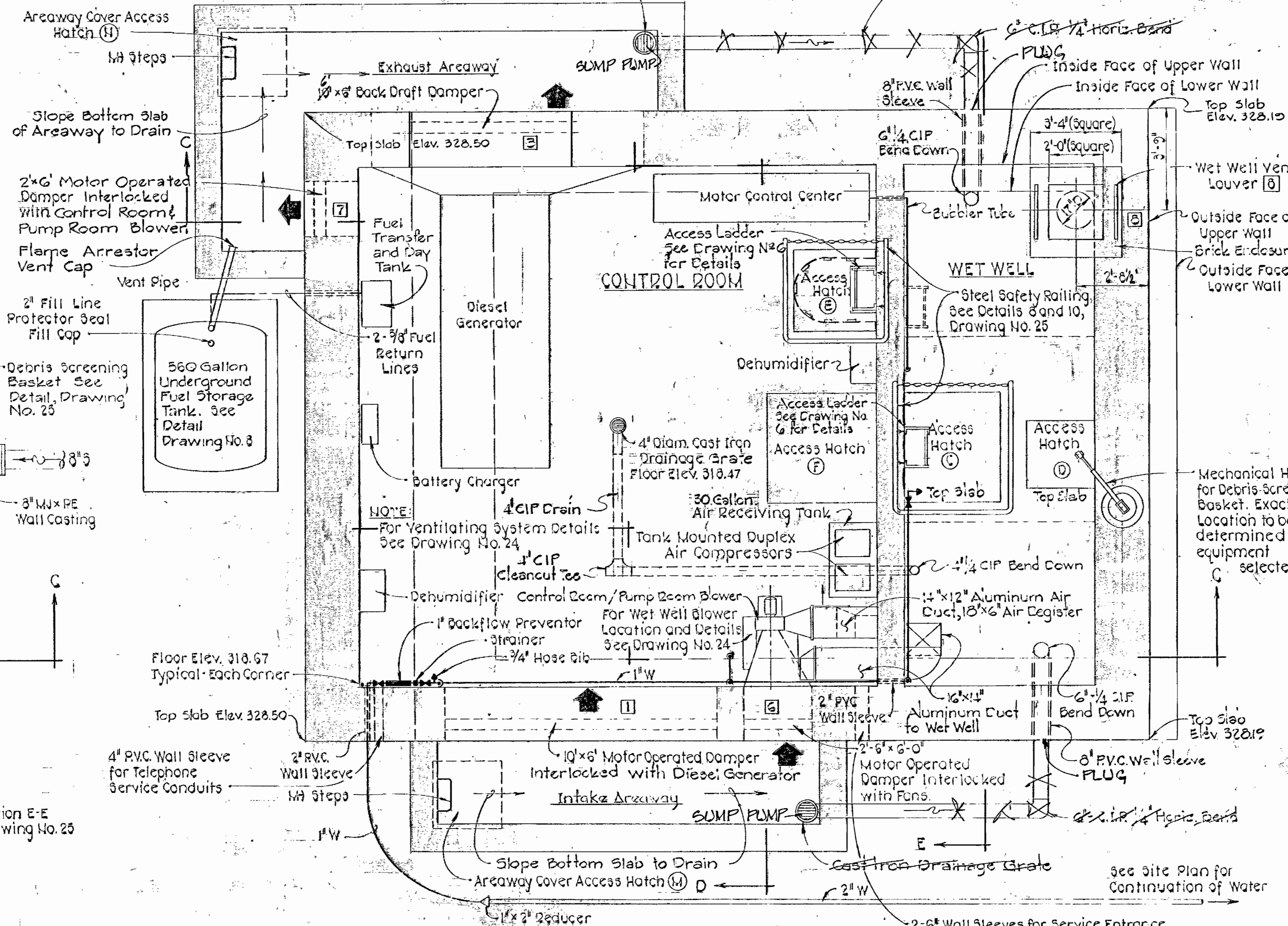
NOTE: For Brick Areaway Enclosures See Drawing Nos. 5 and 11



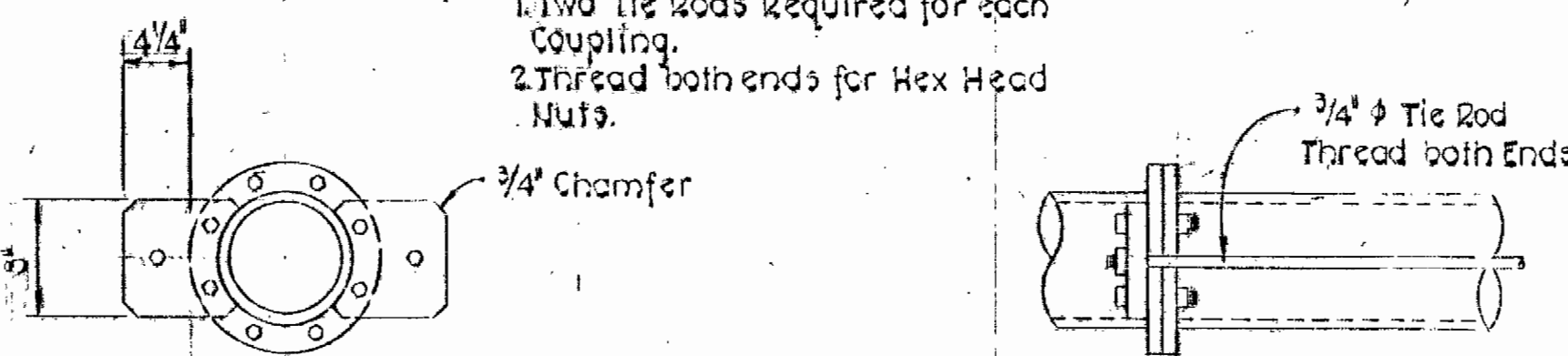
PUMP ROOM PLAN Scale: 3/8" = 1'-0"

NOTE: For Plug Valve Control Panel Stand, See Detail Dwg. No. 30

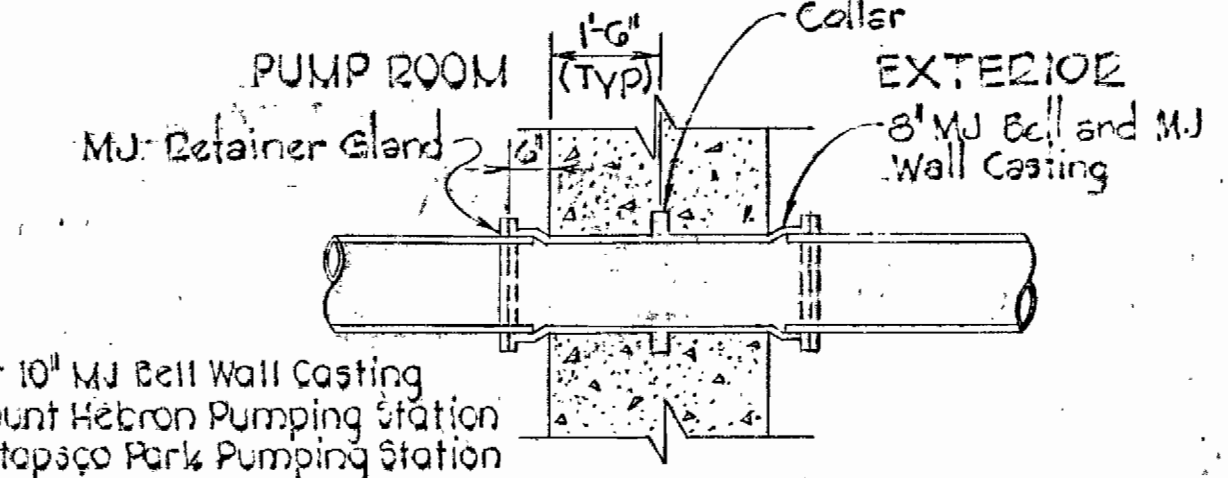
NOTE: For Section E-E See Drawing No. 25



CONTROL ROOM PLAN Scale: 3/8" = 1'-0"



PIPE HARNESS DETAIL Not to Scale



FORCE MAIN WALL CASTING DETAIL Not to Scale



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

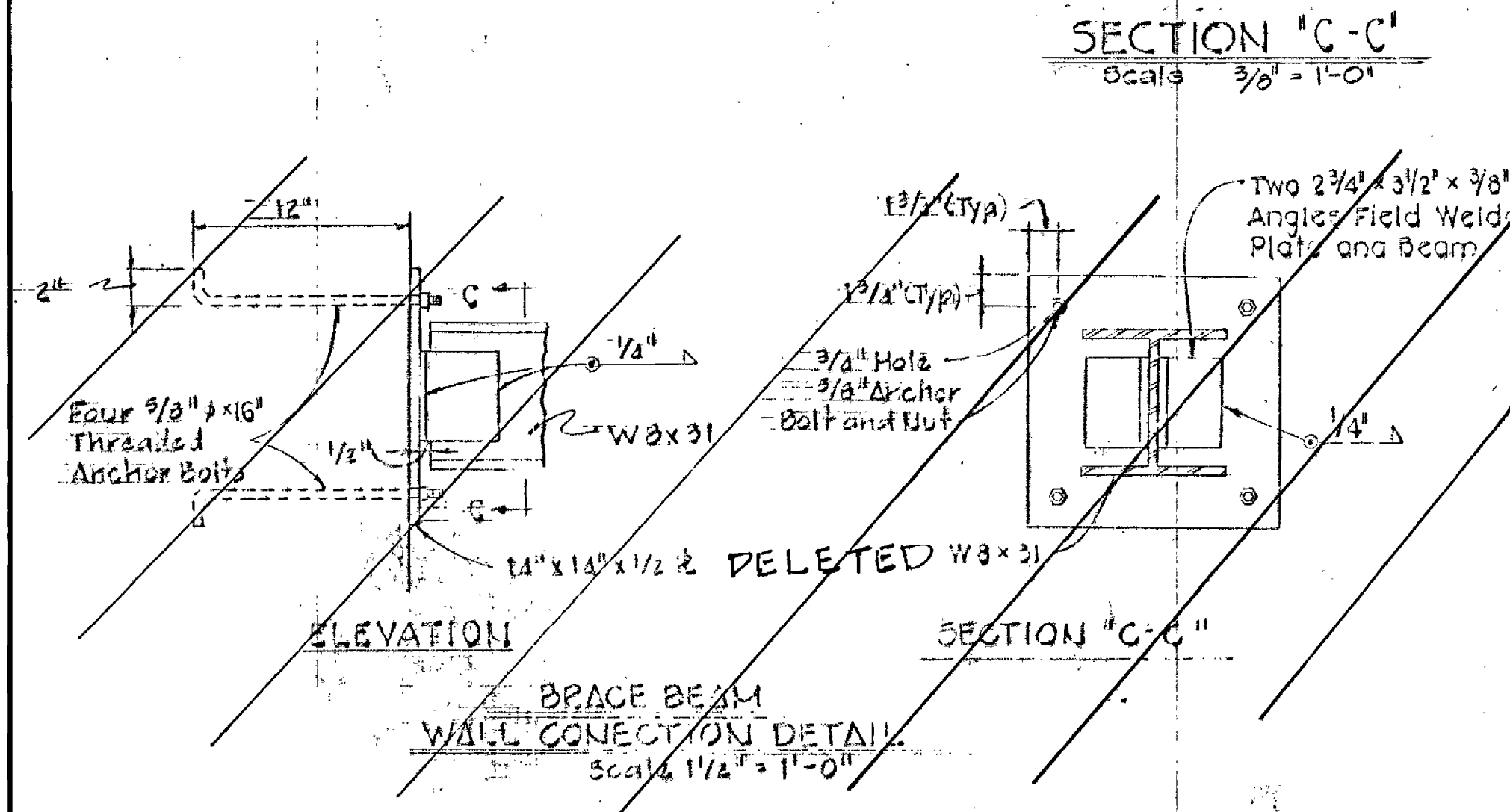
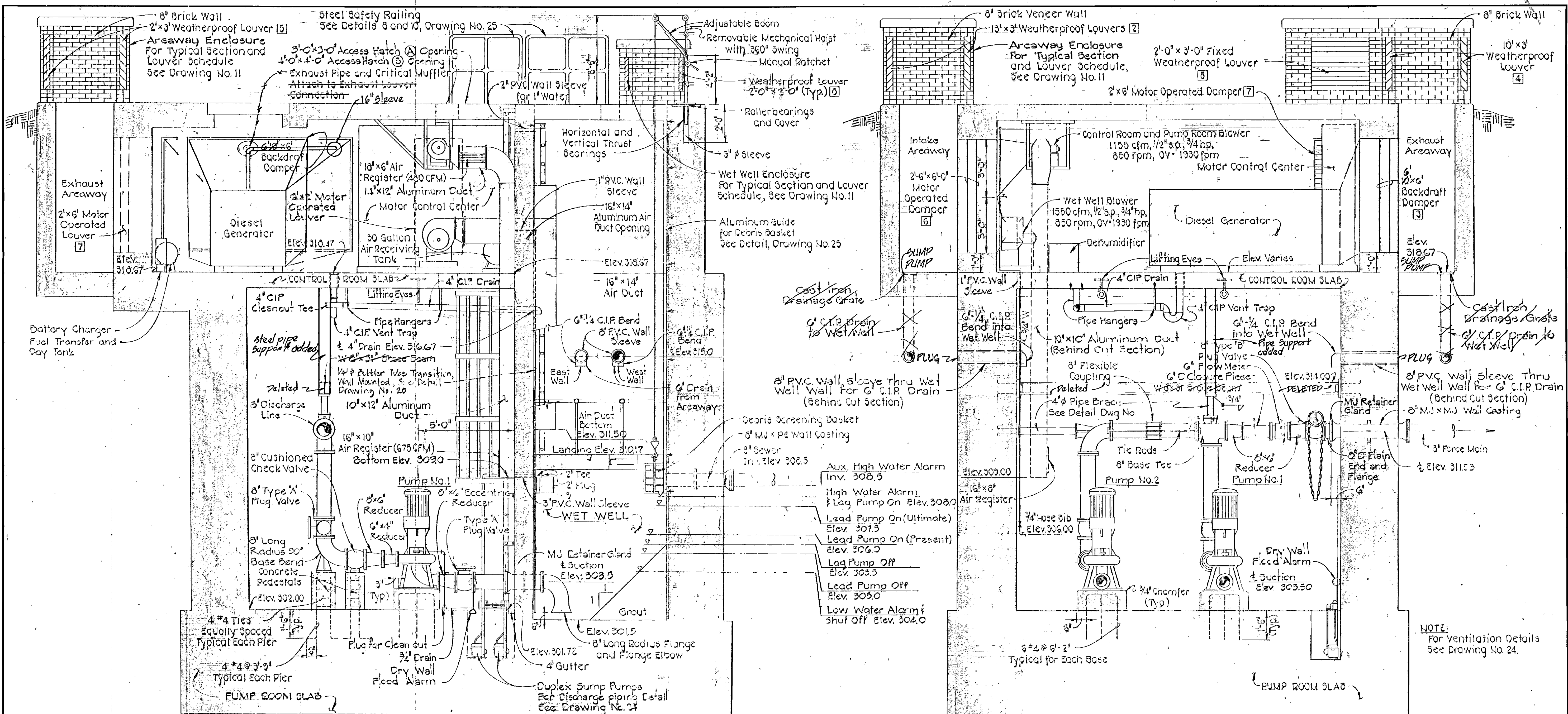
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND CHIEF-BUREAU OF UTILITIES DATE 2-4-81

CONTRACT NO. 745-S MECHANICAL PLAN AND DETAILS MOUNT HEBRON PUMPING STATION CAPITAL PROJECT NO. S-4-6037

MOUNT HEBRON SEWER MAINS ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND

DRAWING NO. 7 OF 25 SCALE AS SHOWN Designed: D.J.D. Drafted: A.R.W. Checked: REP.





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

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
R. J. M. B... 2-4-81  
CHIEF - BUREAU OF UTILITIES DATE  
J. E. N... 3-3-81  
DIRECTOR OF PUBLIC WORKS DATE CHIEF - BUREAU OF ENGINEERING DATE

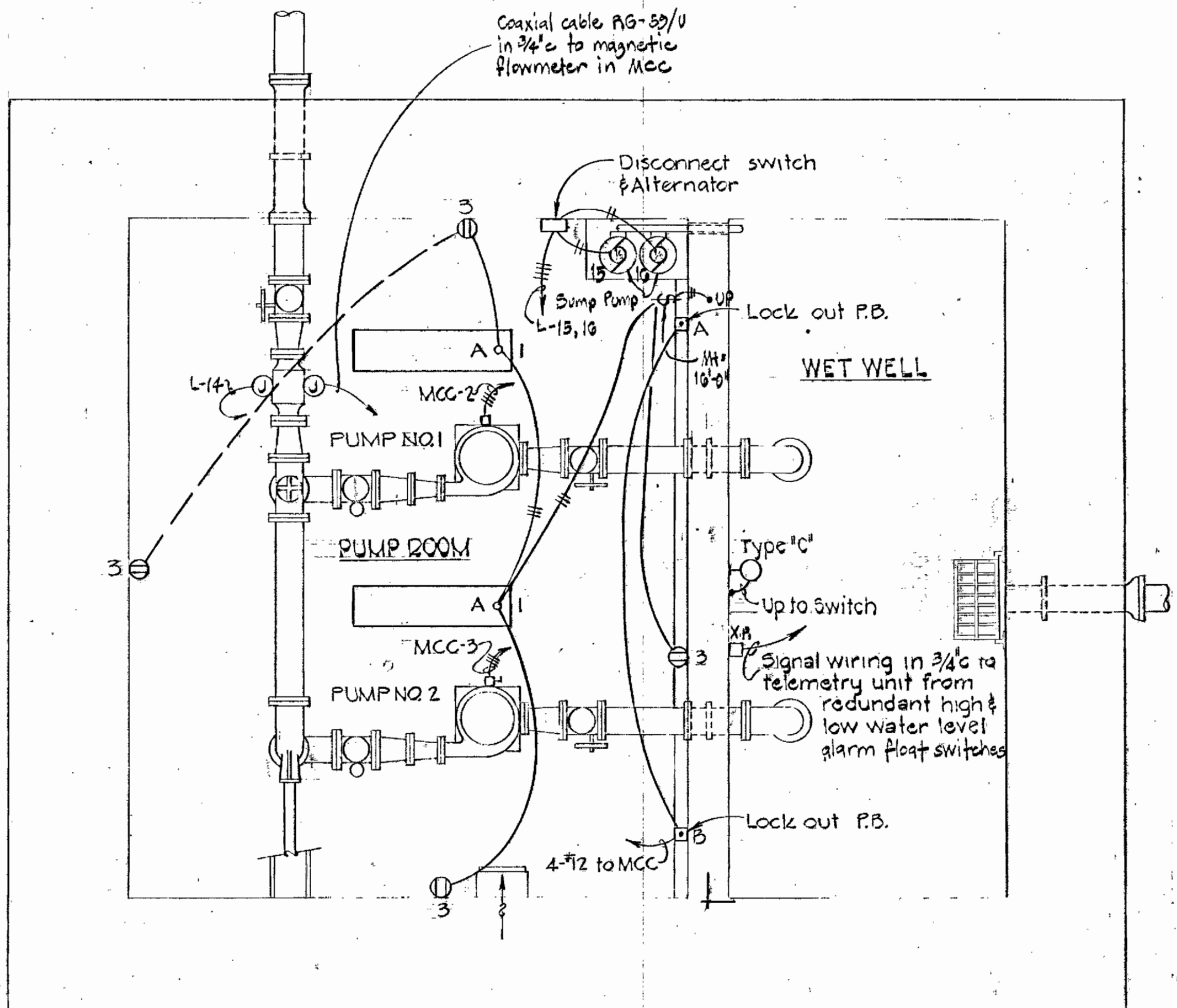
CONTRACT NO. 745-S  
CAPITAL PROJECT NO. S-4-6037

MECHANICAL SECTIONS  
MOUNT HEBRON  
PUMPING STATION

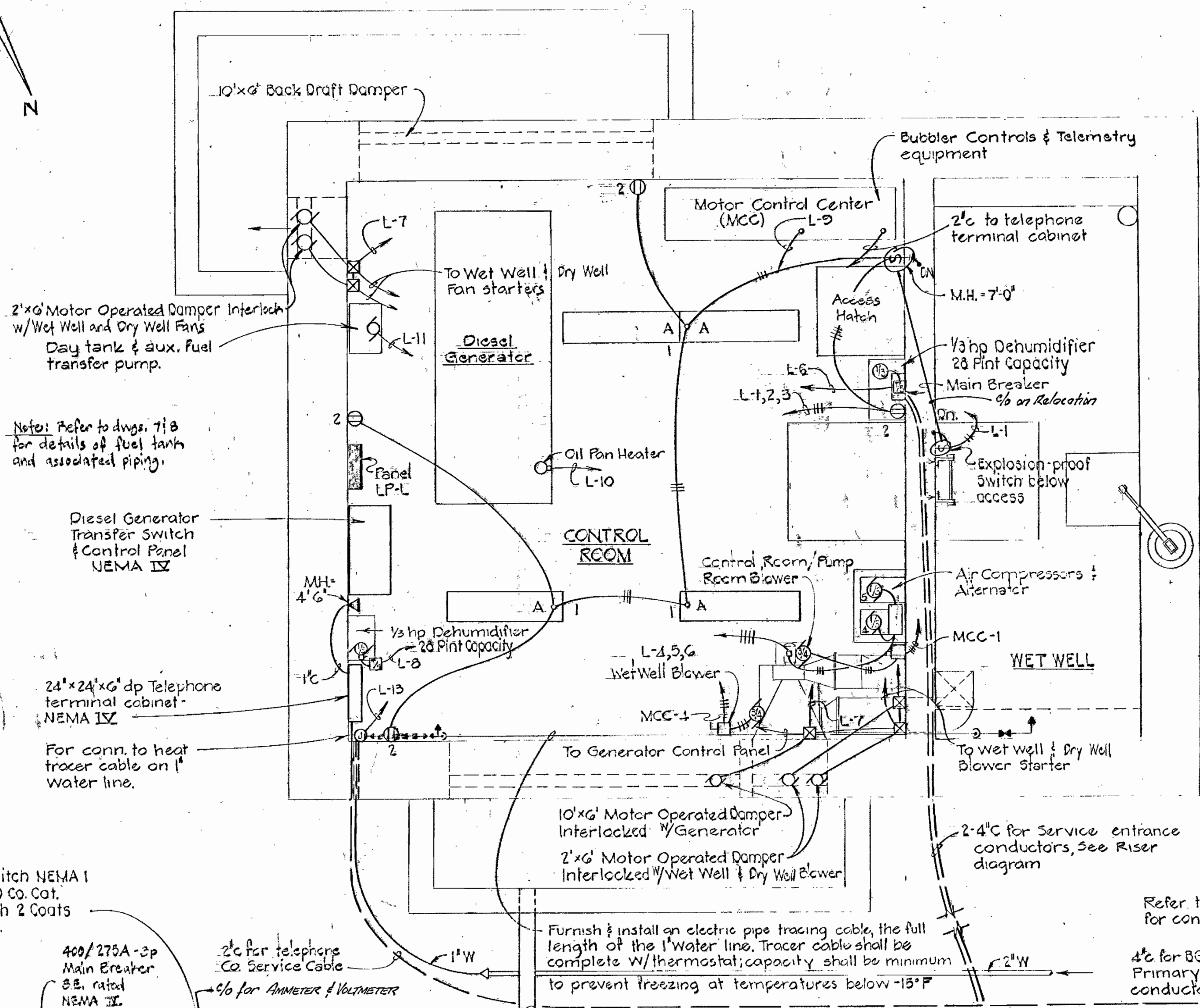
MOUNT HEBRON SEWER MAINS  
ELECTION DISTRICT NO. 2  
HOWARD COUNTY, MARYLAND

DRAWING NO. 8 OF 25  
SCALE AS SHOWN  
Designed: DJD  
Drafted: PWR  
Checked: REP





**PUMP ROOM PLAN**  
Scale 3/8" = 1'-0"



**CONTROL ROOM PLAN**  
Scale 3/8" = 1'-0"

LIGHTING FIXTURE SCHEDULE				
TYPE	DESCRIPTION	LAMP	MOUNTING	CATALOG NO.
A	4" Fluorescent, U.L. Listed Enclosed and Gasketed with Clear Acrylic Diffuser & 0" F Ballast	2-40W T-12	Stem Mtg.	Benjamin FA-2224-4R Daverite TR41241, or equal.
B	Incandescent U.L. listed enclosed & gasketed with red glass globe and guard w/ lamp life extender	1-200W A-23	Pole Mtg.	Crouse-Hinds VXH3F11-GR, Appleton VFW8 10750, or equal.
C	Incandescent Explosion-proof	1-200W A-23	Wall Mtg.	Benjamin 7604-BX, Appleton AH 15150, or equal.

NOTES: 1. Pole for Type B fixture shall be wood, 1 1/2" Class 4 w/ pentachlorathane treatment.  
2. Time clocks shall be Paragon 4001-00, Turk, or equal.

400 A-3P N.E.O.T. Switch NEMA I Enclosure, Square D Co. Cat. No. 92353 Paint with 2 Coats of Rustproof Paint.

400/275A-3P Main Breaker S.E. rated NEMA III

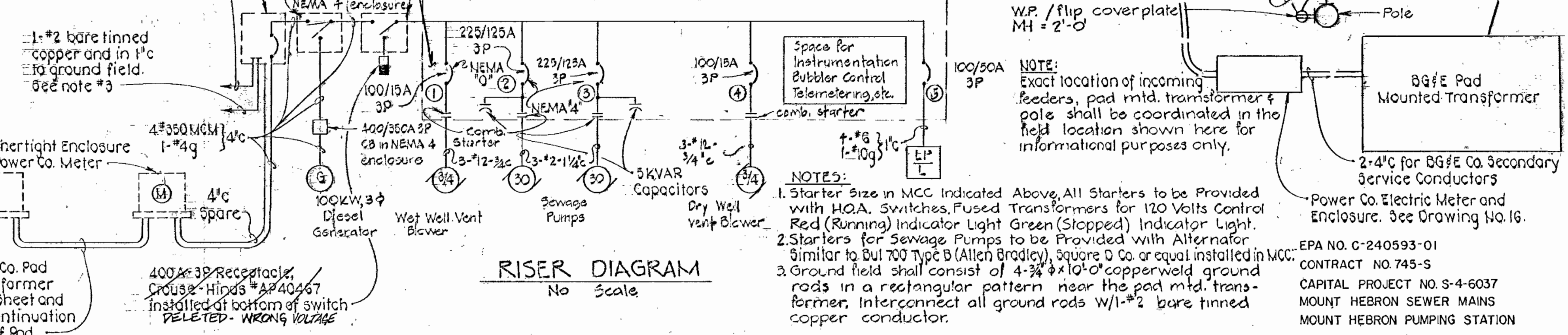
400A-3P Transfer Switch NEMA I enclosure

2" c for telephone Co. Service Cable

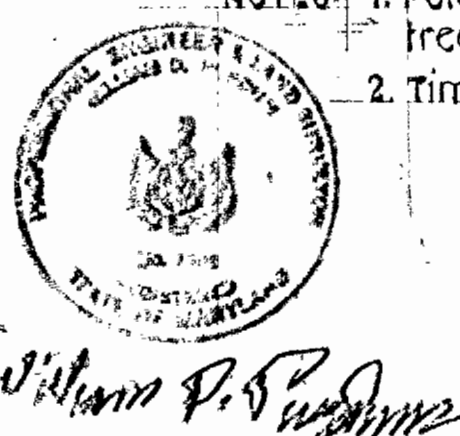
1" W

% for AMMETER & VOLTMETER

Motor Control Center (M.C.C.) 400A Bus, 3 P, 4W, 60 Hz w/grd bus, 120/208 V.



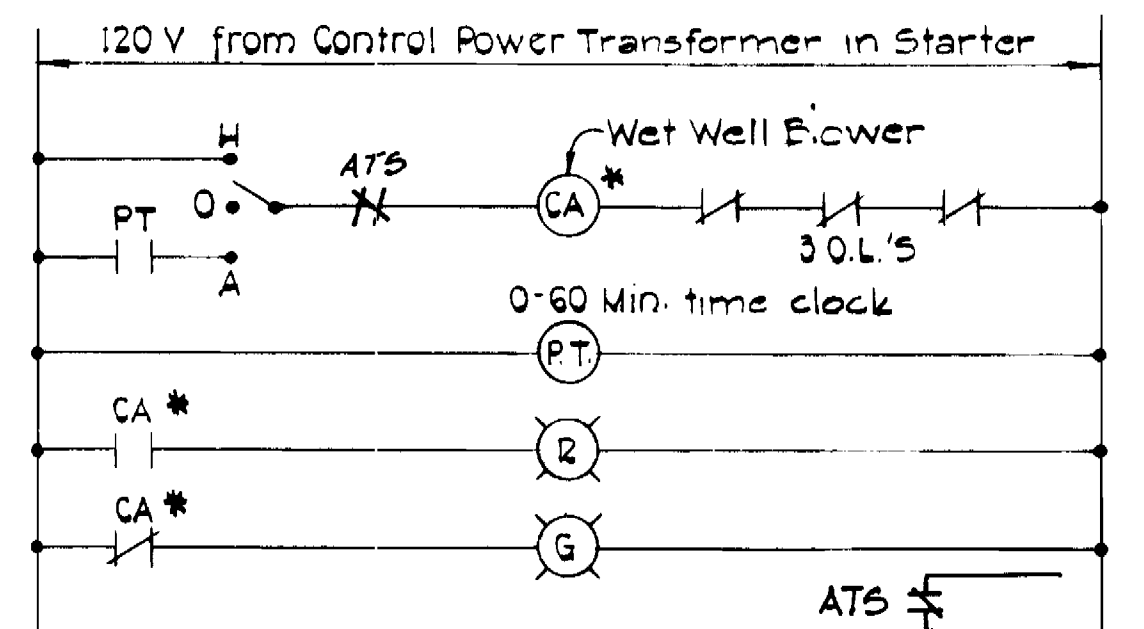
**RISER DIAGRAM**  
No Scale





ELECTRICAL LEGEND	
SYMBOL	DESCRIPTION
	Fixture - Fluorescent, letter indicates Type
	Fixture - Incandescent - Ceiling/Wall Bracket
S, Sa	Switch - Single Pole - M.H. 4'-0" Subscript* Denotes Outlets Controlled
	Receptacle - 20A - 125V - Duplex - M.H. 3'-0"
	Receptacle - 20A - 125V - Single - M.H. 3'-0"
	Receptacle - Clock Hanger 15A, 125V, M.H. 7'-6"
	Junction Box
	Motor - Horsepower as Indicated
	Thermostat - M.H. 5'-0"
	Percentage Timer
	Time Clock - M.H. 5'-6" to Top
	Control Device as Indicated on Plans
	Baseboard Electric Heater
	Panelboard - M.H. 6'-6" to Top
	Unfused Disconnect Switch - M.H. 5'-6" to Top
	Thermal Manual Motor Starter with Hand-Off-Auto Selector Switch - M.H. 5'-0"
	Conduit - On Ceiling or Wall
	Conduit - In or under Floor
	Home run to Panel No. of Arrows Indicate No. of Circuits and 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 Mounted
	Ground Rod, 3/4" x 10'-0" Copperplated Steel
	Exothermically Welded Connection
	Solenoid Valve
	Fixture, Mercury Vapor
	Combination Magnetic Starter (MCC), all 3φ starters
	Contactor
	Starter Coil (One Line Diagram)
	Indicating Light - Red - Heavy Duty Type
T.C.	Time Relay Contact (One Line Diagram)
	Time Delay Relay

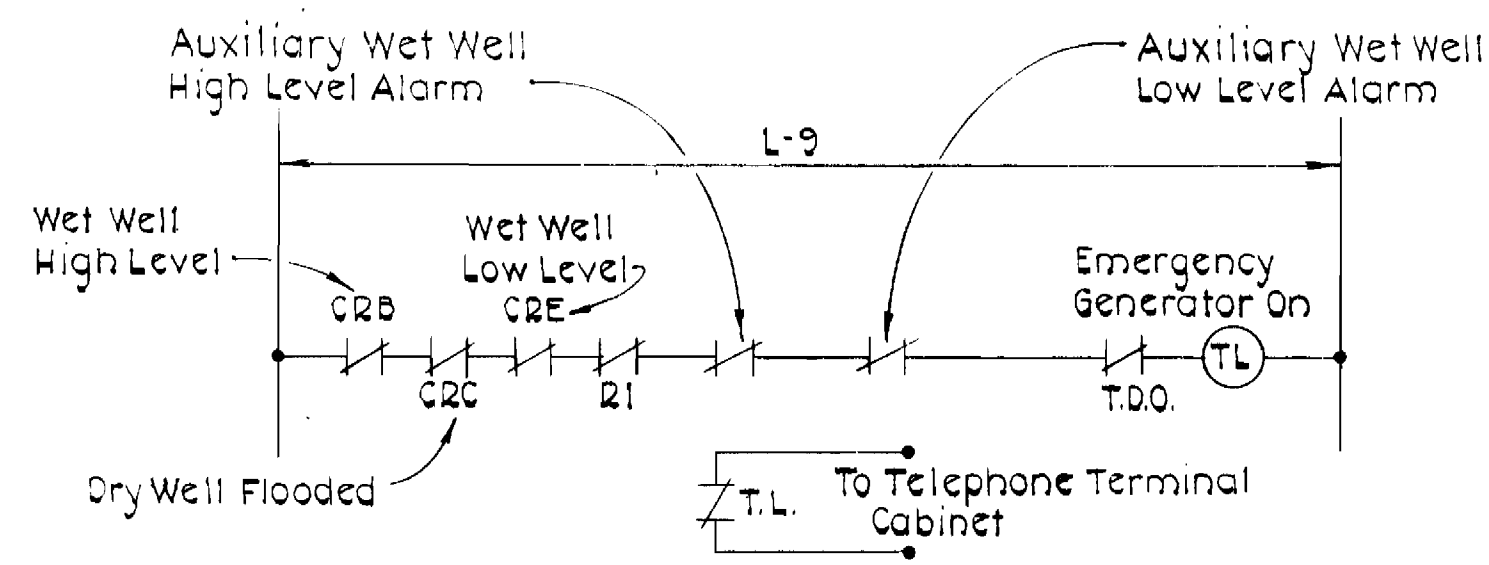
\* Ground conductor not indicated.



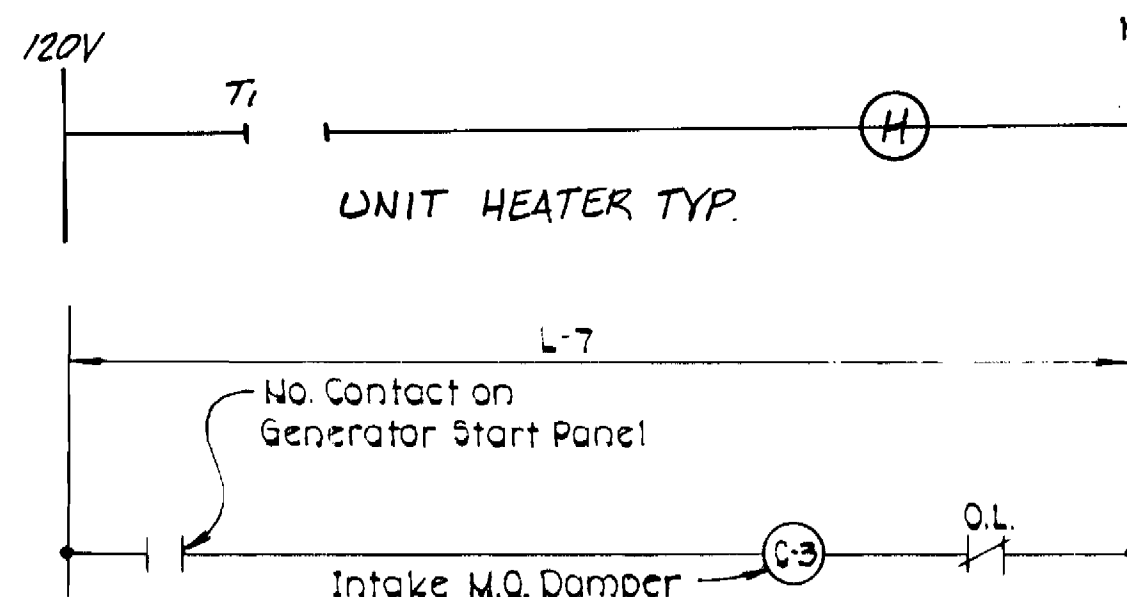
PUMP ROOM AND WET WELL VENT BLOWERS

\* CB for Pump Room (Dry Well) Blower.

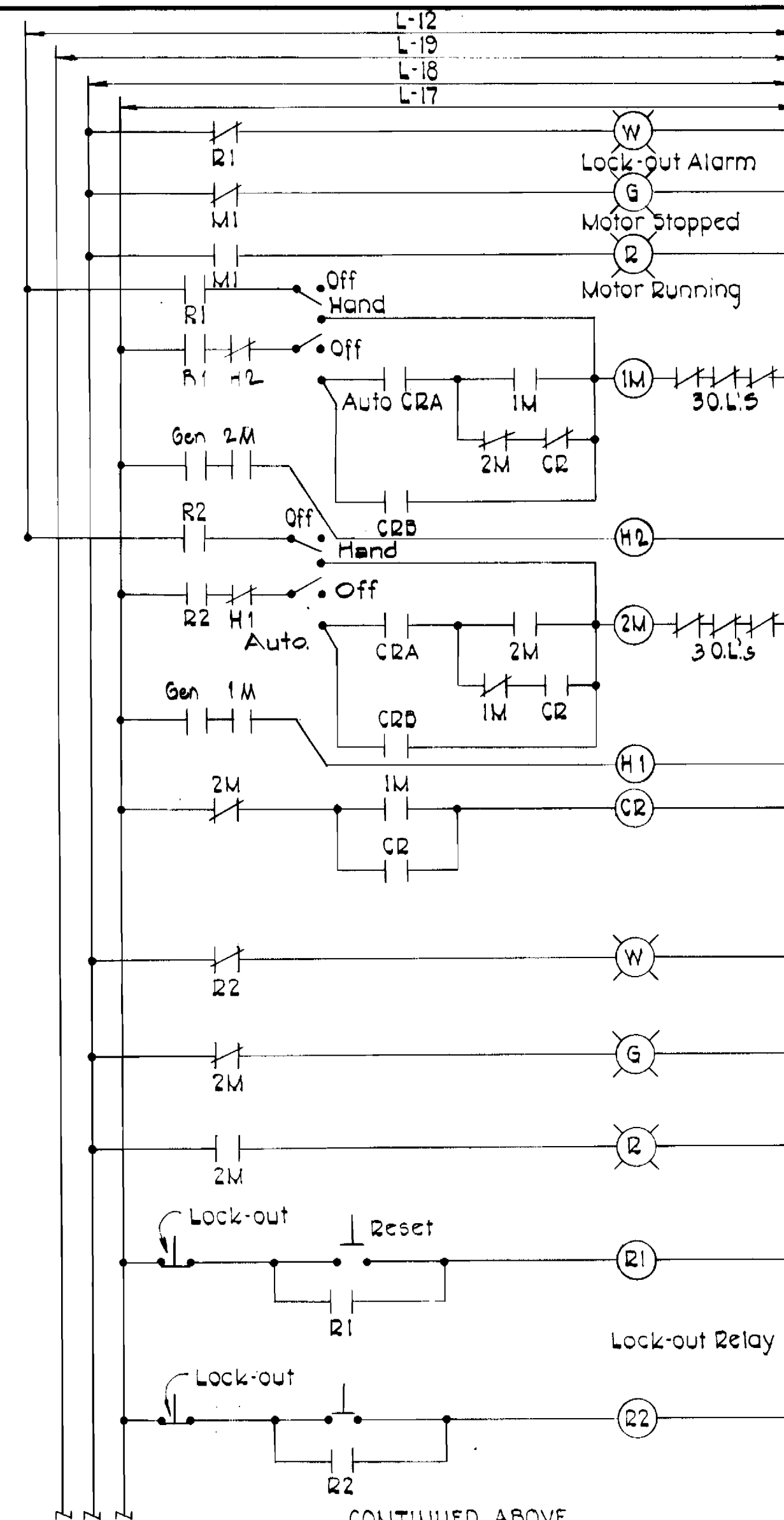
SCHEDULE OF PANEL - L 208/120 VOLTS, 3 PHASE, 4-WIRE, 100 AMP MAIN BREAKER W/EQUIPMENT GROUND BUS.					
NO.	EQUIPMENT SERVED	CIRCUIT BREAKER			REMARKS
		POLES	TRIP	FRAME	
1	Lights, Control Room and Pump Room	1	20A	100	
2	Receptacles, Control Room	1	20A	100	
3	Receptacles, Pump Room	1	20A	100	
4	Air Compressor	1	15A	100	
5	Air Compressor	1	15A	100	
6	Dehumidifier	1	15A	100	
7	Motor Operated Dampers	1	20A	100	
8	Dehumidifier	1	15A	100	
9	Bubbler and Telemetry Control	1	20A	100	
10	Oil Pan Heater	1	20A	100	
11	Fuel Transfer Pump	1	20A	100	
12	Control	1	20A	100	
13	Tracer Cable	1	20A	100	
14	Flowmeter	1	20A	100	
15-16	Sump Pump	1	15A	100	
17-19	Controls	1	20A	100	
20-24	Spares	1	20A	100	
	Breaker for W-1 Heater	2	20A	100	
	" " W-2 "	2	20A	100	



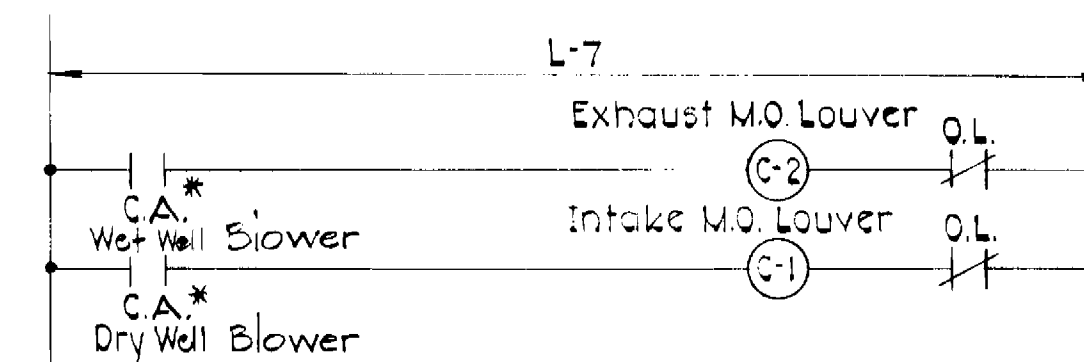
TELEMETRY ALARM DIAGRAM



MOTOR OPERATED DAMPER FOR DIESEL GENERATOR

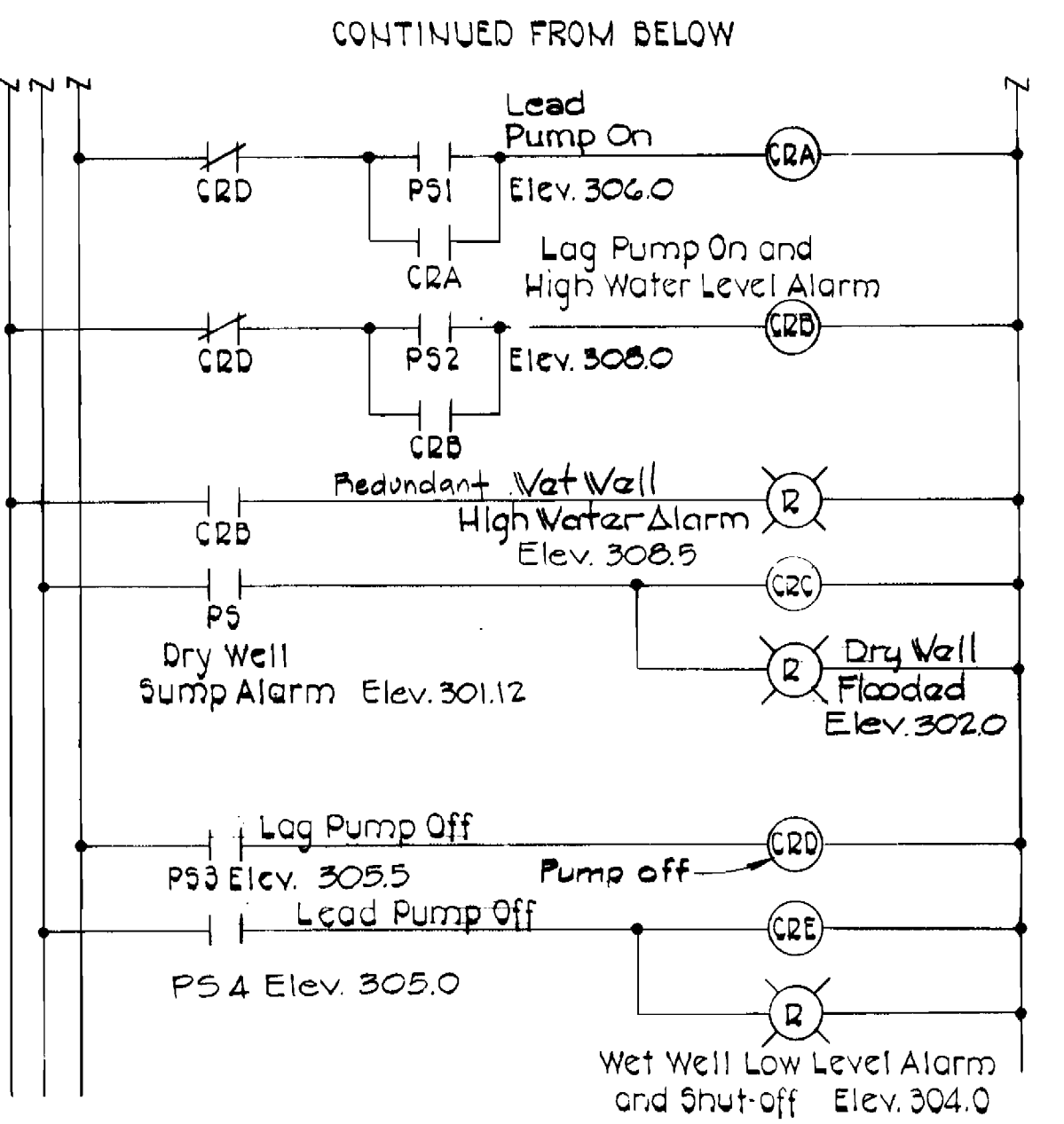


(PUMP MOTOR AND BUBBLER SYSTEM CONTROL)



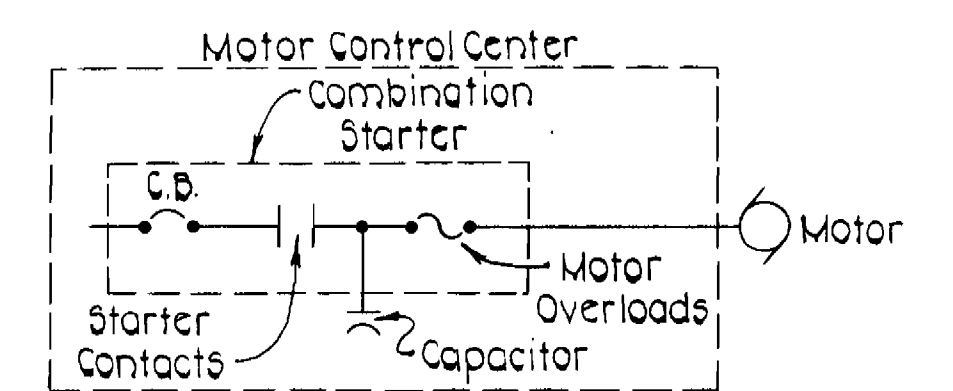
MOTOR OPERATED DAMPERS FOR VENT BLOWERS

\* CB for Dry Well Blower



PUMP MOTOR AND BUBBLER SYSTEM CONTROL

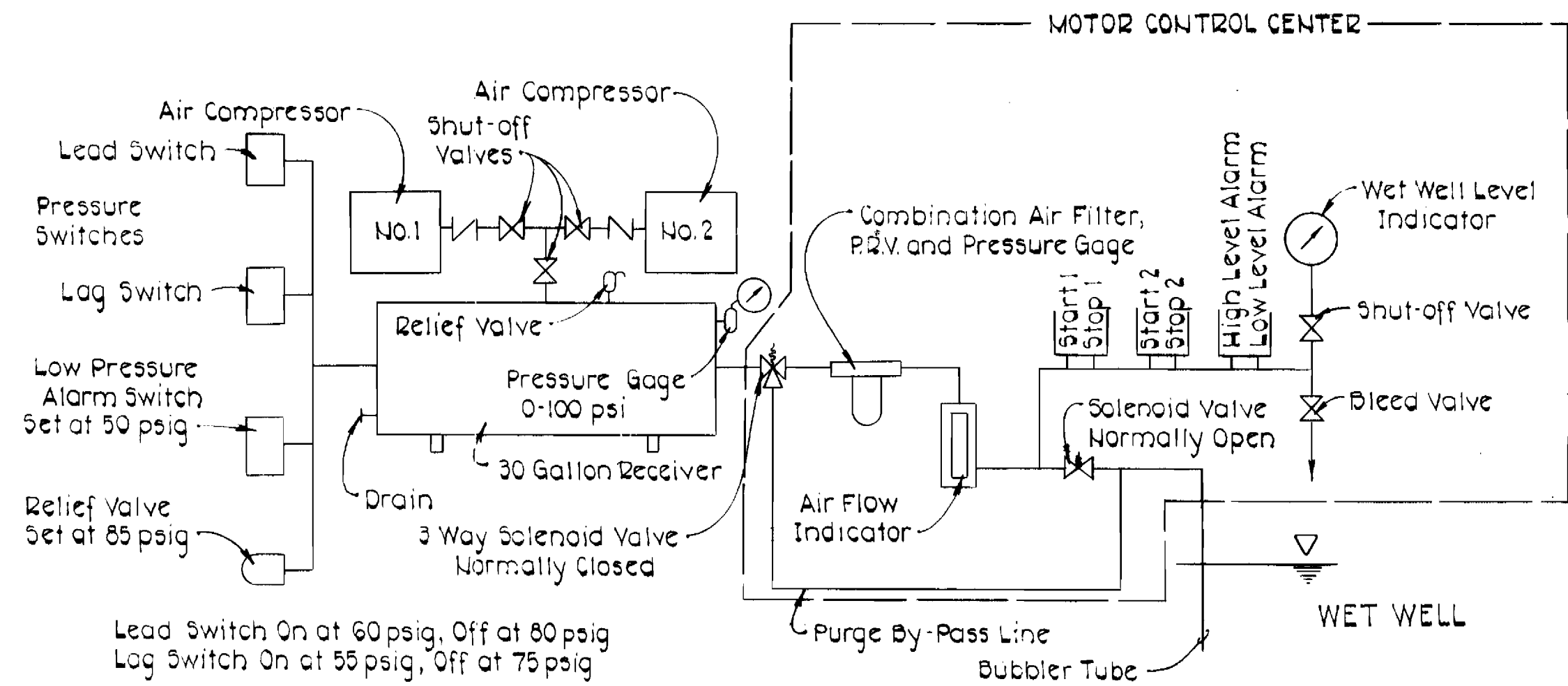
- NOTES:
- The Contractor shall verify with equipment manufacturers the exact number of control wires before installing conduits.
  - Check working drawing for conduit stub locations.
  - Control diagrams indicate the system of control required. Exact wiring connections shall be installed per manufacturers' wiring diagrams.
  - All electrical work in the Wet Well shall be suitable for Class I, Division 1, Group D areas. Provide seals on all conduits.
  - All panels shall be mounted to wall utilizing 1/4 inch channels.
  - A green insulated ground conductor (min #12 AWG) shall be installed in all conduits from panel equipment around bus to particular items of equipment.
  - All conduit exposed in the Wet Well shall be heavy wall PVC.



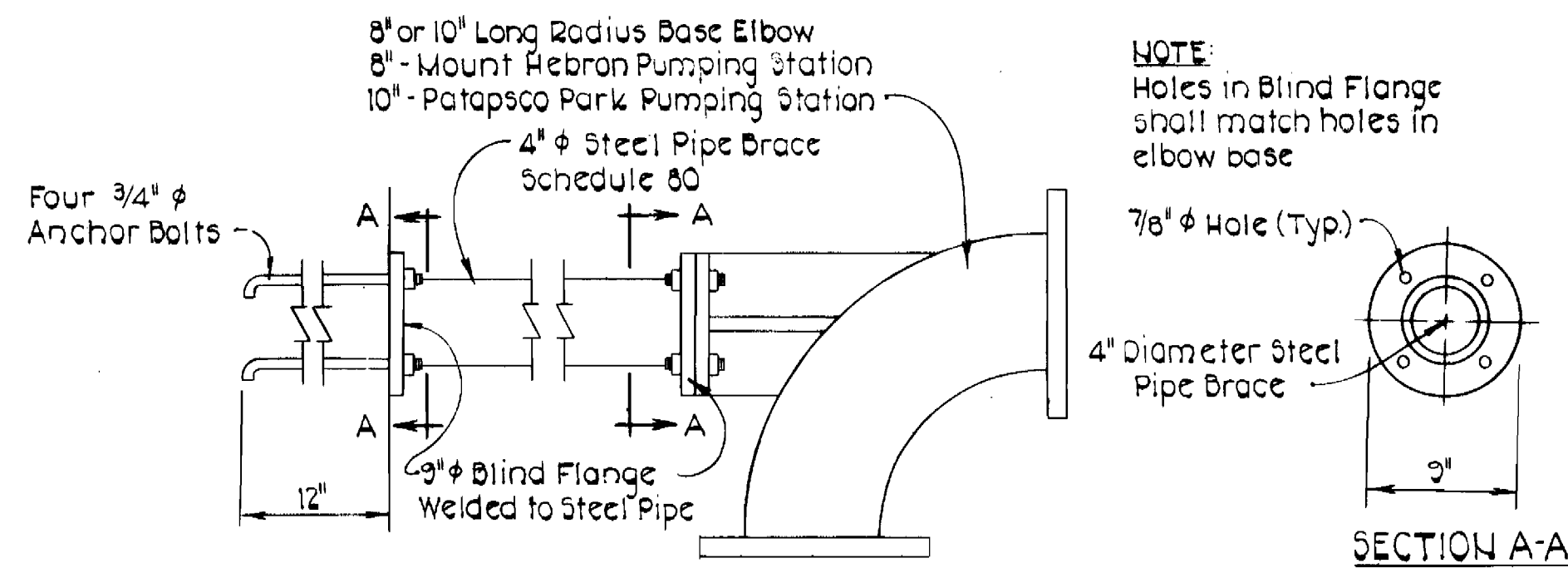
POWER CORRECTION CAPACITOR INSTALLATION  
NO SCALE

*William A. ...*





**MOUNT HEBRON STATION  
COMPRESSED AIR SYSTEM DIAGRAM**  
Not to Scale

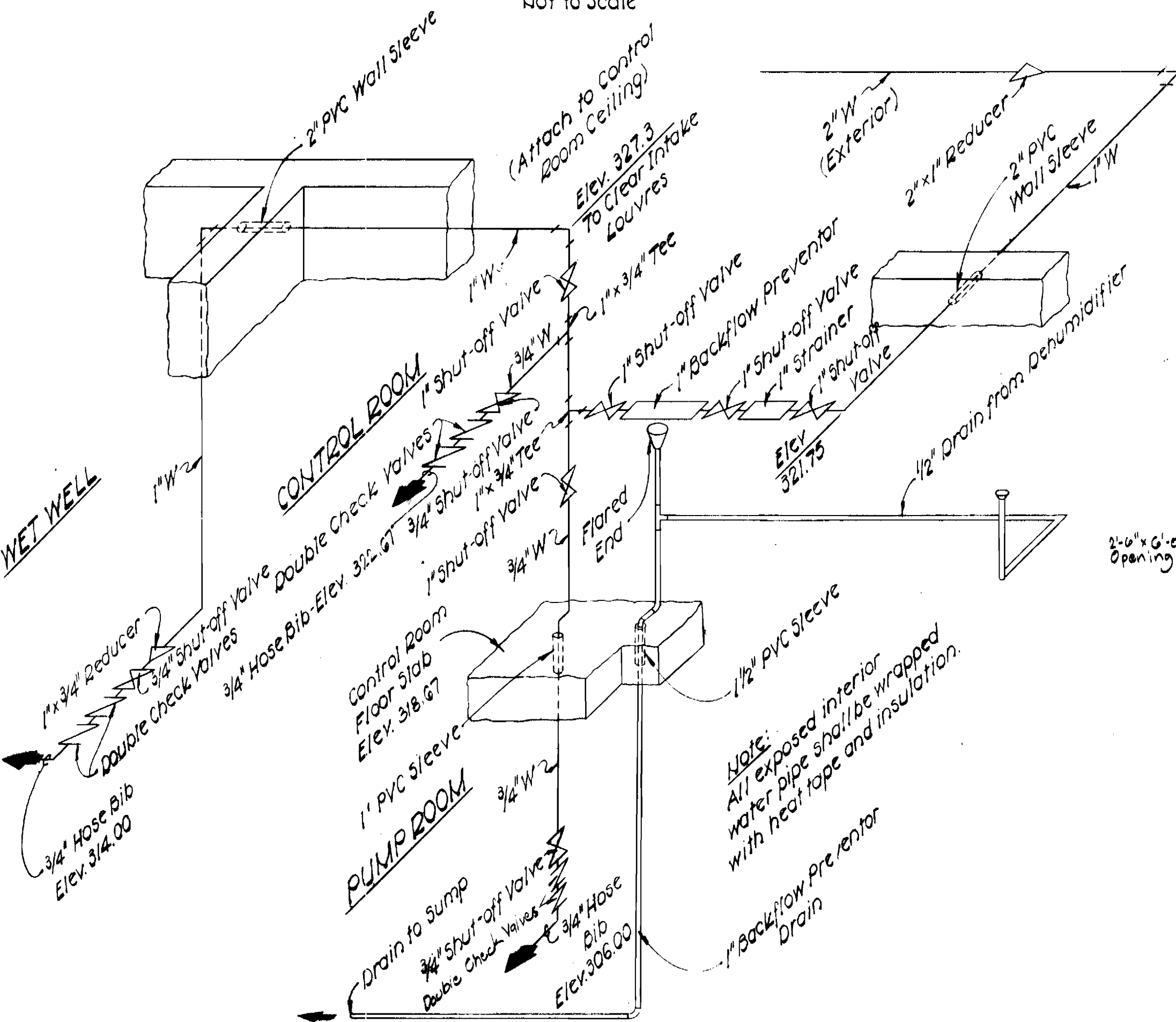


**TYPICAL  
STEEL PIPE BRACE DETAIL**  
Not to Scale

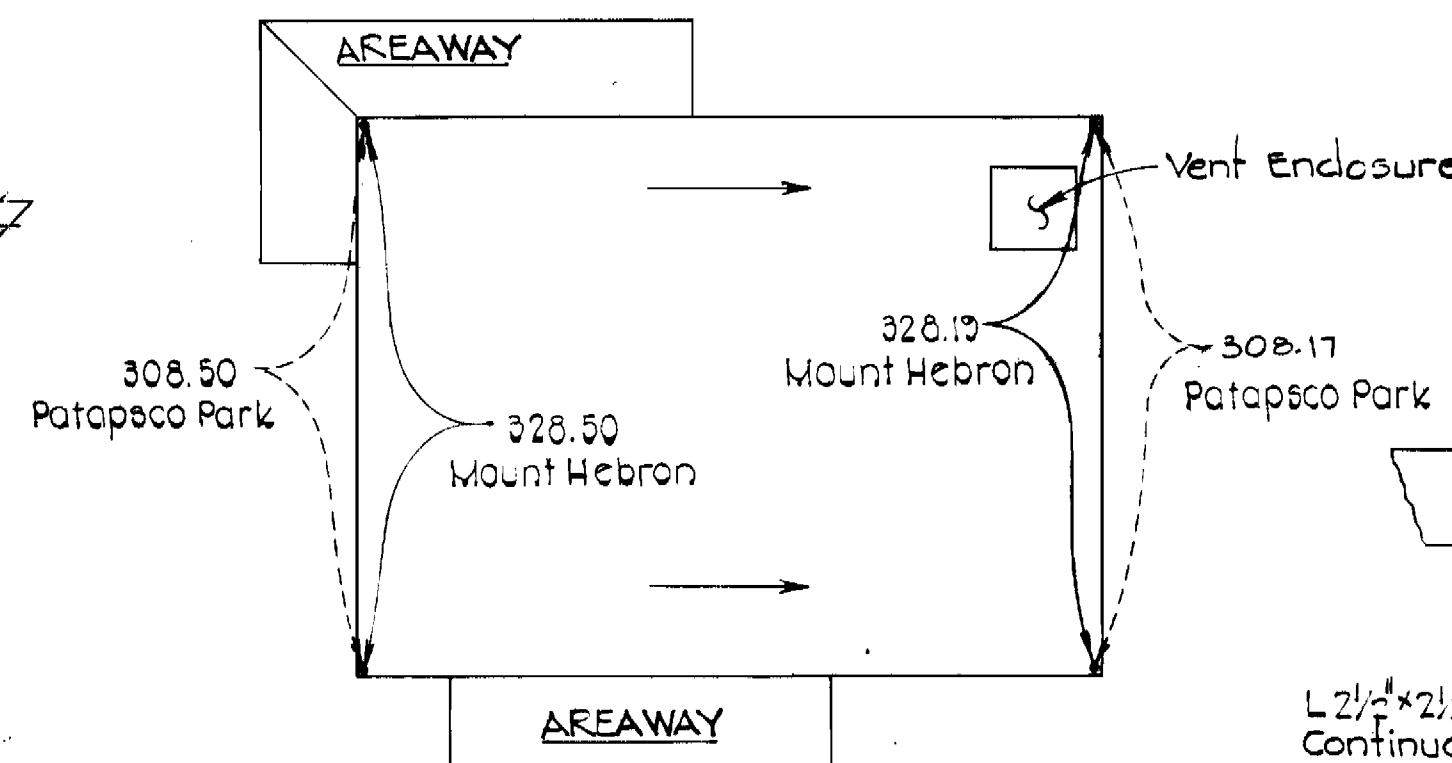
NO.	LOCATION	TYPE	SIZE (W×H)
1	Generator Intake (Damper)	Motorized	10'-0" × 6'-0"
2	Areaway Enclosure Intake *	Fixed Weatherproof	13'-0" × 3'-0"
3	Generator Exhaust (Damper)	Gravity Closed	10'-0" × 6'-0"
4	Areaway Enclosure Exhaust (Generator)	Fixed Weatherproof	10'-0" × 3'-0"
5	Areaway Enclosure Exhaust (Control Room)	Fixed Weatherproof	2'-0" × 3'-0"
6	Control Room, Pump Room and Wet Well Blower Intake	Motorized	2'-6" × 6'-0"
7	Control Room Exhaust	Motorized	2'-0" × 6'-0"
8	Wet Well Vent	Fixed Weatherproof	2'-0" × 2'-0"

\* Includes Louver Area for Generator and Control Room, Pump Room and Wet Well Intake.

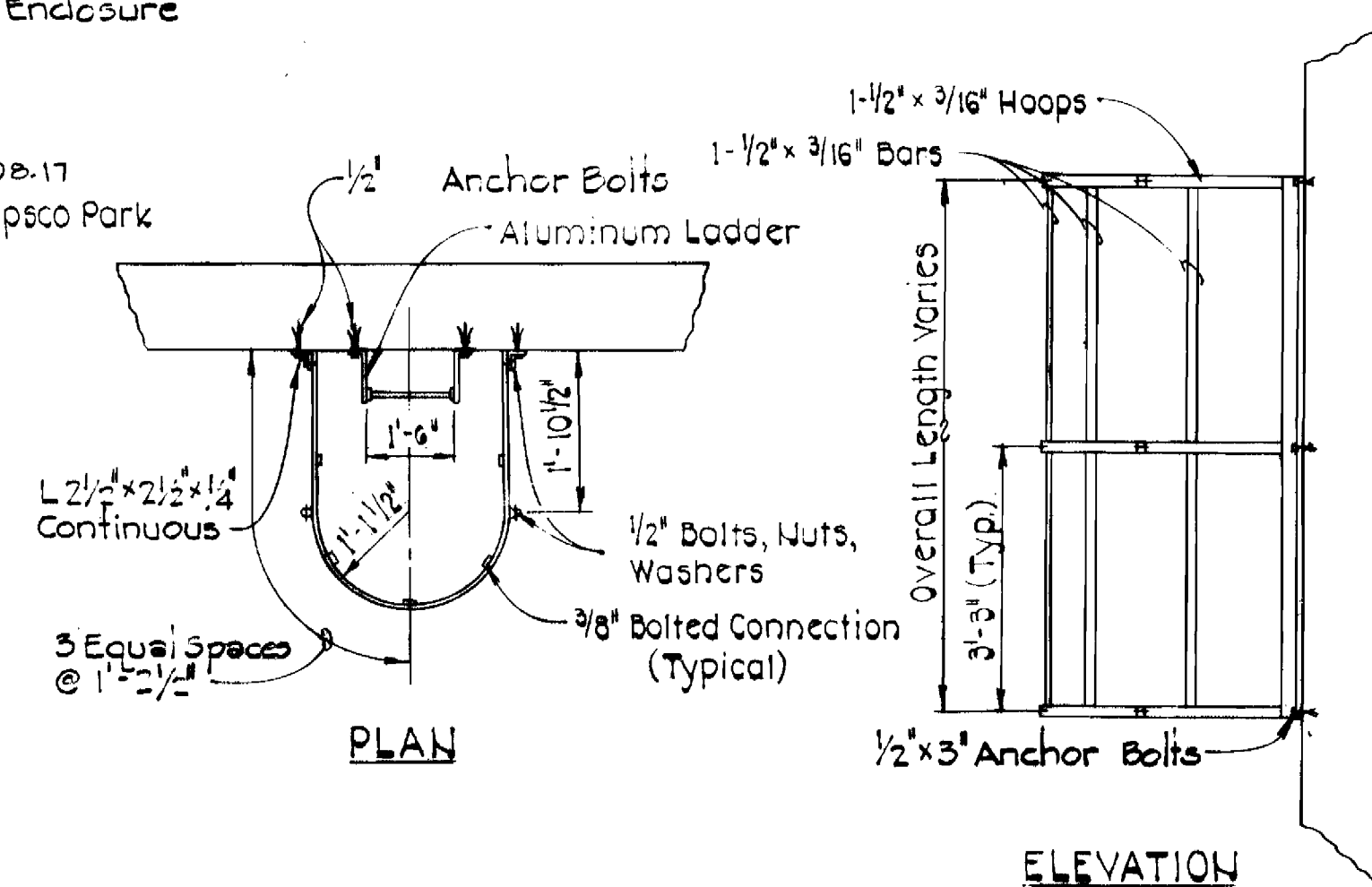
**TYPICAL LOUVER SCHEDULE  
MOUNT HEBRON AND PATAPSCO PARK PUMPING STATIONS**



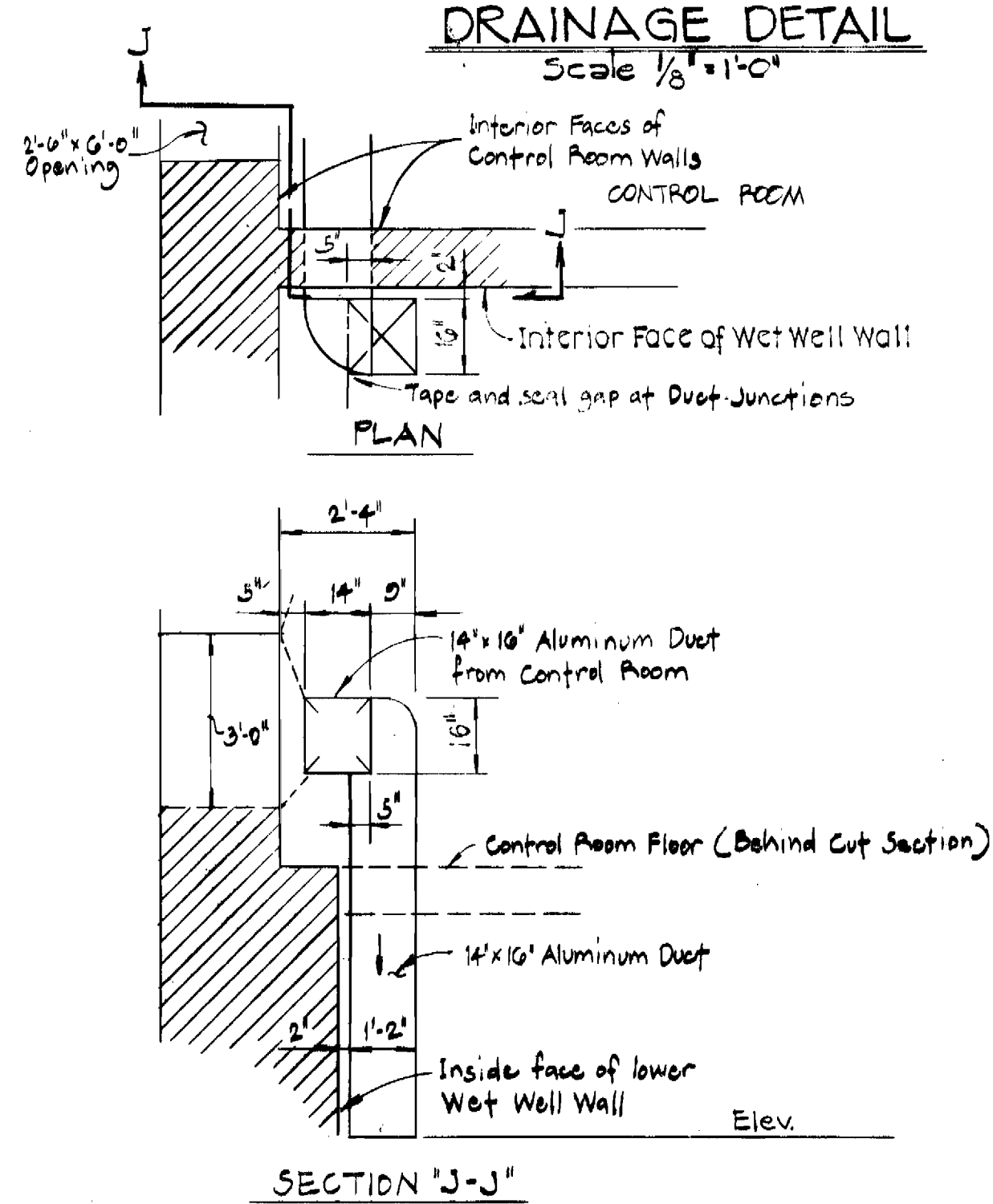
**MOUNT HEBRON PUMPING STATION  
WATER SUPPLY DIAGRAM**  
Not to Scale



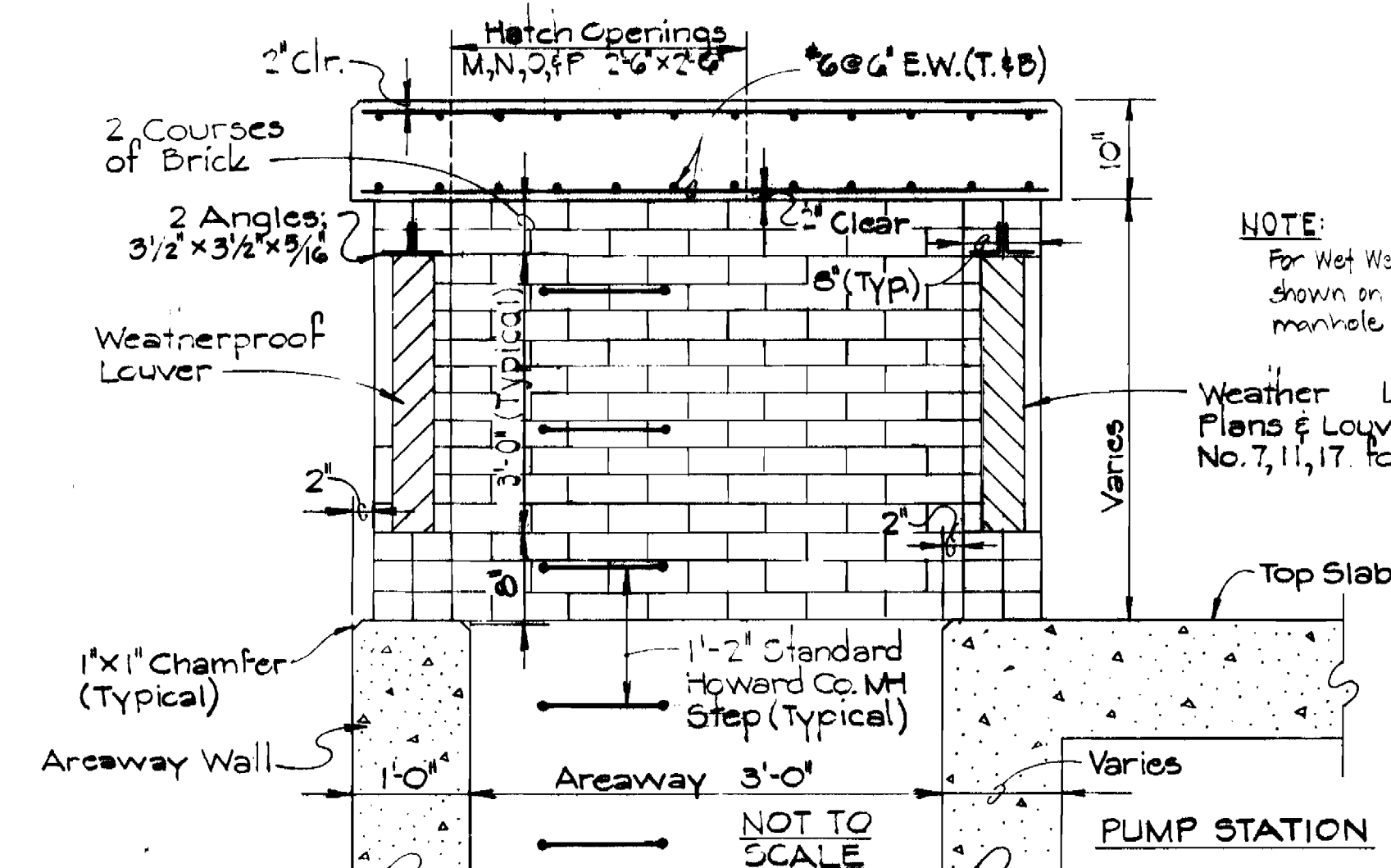
**TYPICAL TOP SLAB  
DRAINAGE DETAIL**  
Scale 1/8" = 1'-0"



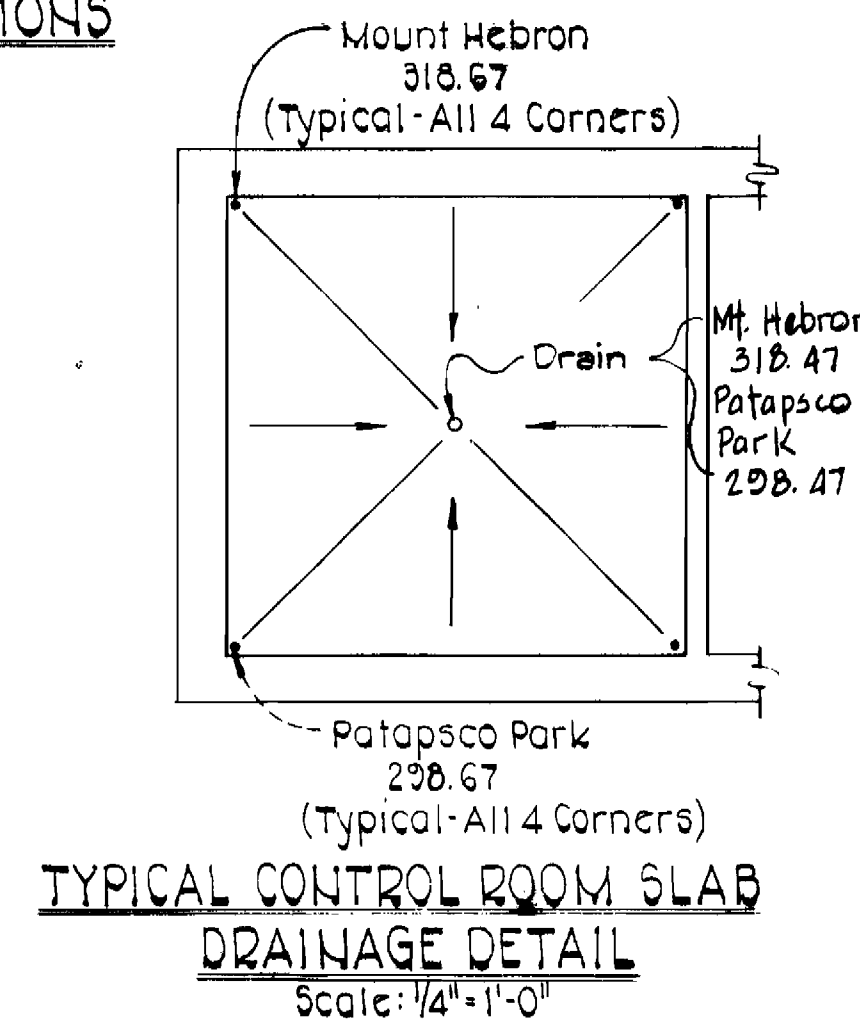
**MOUNT HEBRON & PATAPSCO PARK PUMPING STATIONS  
SAFETY CAGE DETAILS**  
Not to Scale



**WET WELL INTAKE DUCT DETAILS  
MT. HEBRON & PATAPSCO PARK  
PUMPING STATIONS**  
Scale: 3/16" = 1'-0"



**AREAWAY ENCLOSURE  
TYPICAL SECTION**  
NOT TO SCALE  
MOUNT HEBRON & PATAPSCO PARK PUMPING STATIONS



**TYPICAL CONTROL ROOM SLAB  
DRAINAGE DETAIL**  
Scale: 1/4" = 1'-0"

NOTE:  
For Wet Well Enclosure, Use this Detail with Dimensions shown on Drawing No. 7 and top slab: 6" thick. Delete manhole steps.

Weather Louver See Mechanical Plans & Louver Schedule and Drawings No. 7, 11, 17 for Location & Dimensions

EPA NO. C-240593-01  
CONTRACT NO. 745-S  
CAPITAL PROJECT S-4-6037  
MOUNT HEBRON SEWER MAINS  
MOUNT HEBRON PUMPING STATION

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

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
2-9-81  
DATE  
2-5-81  
DATE  
DIRECTOR OF PUBLIC WORKS-DATE  
CHIEF-BUREAU OF ENGINEERING-DATE

CONTRACT NO. 745-S  
CAPITAL PROJECT NO. S-4-6037

MISCELLANEOUS DETAILS  
MOUNT HEBRON  
PUMPING STATION

MOUNT HEBRON SEWER MAINS  
ELECTION DISTRICT NO. 2  
HOWARD COUNTY, MARYLAND

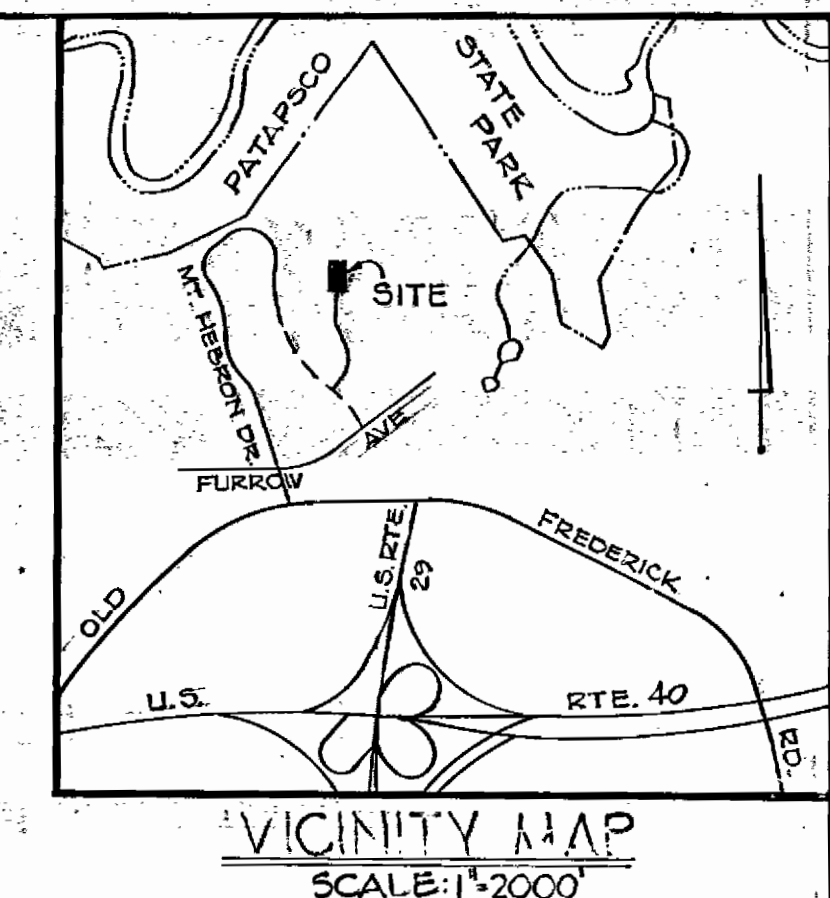
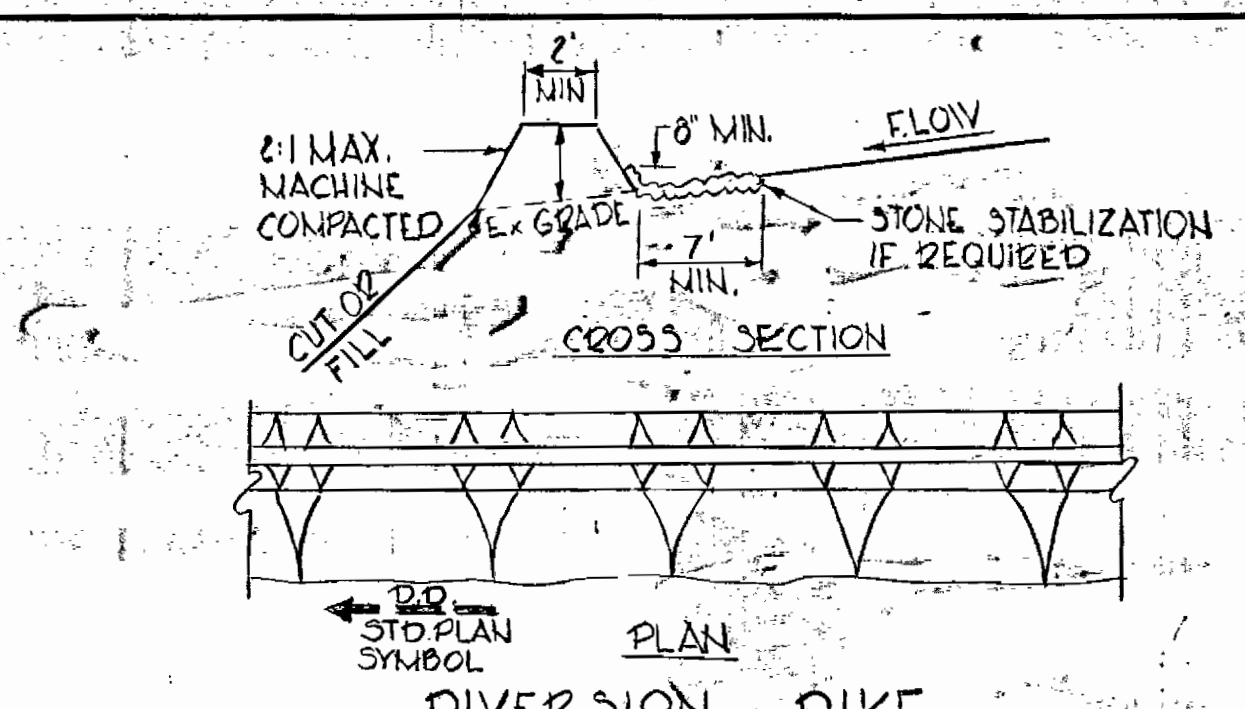
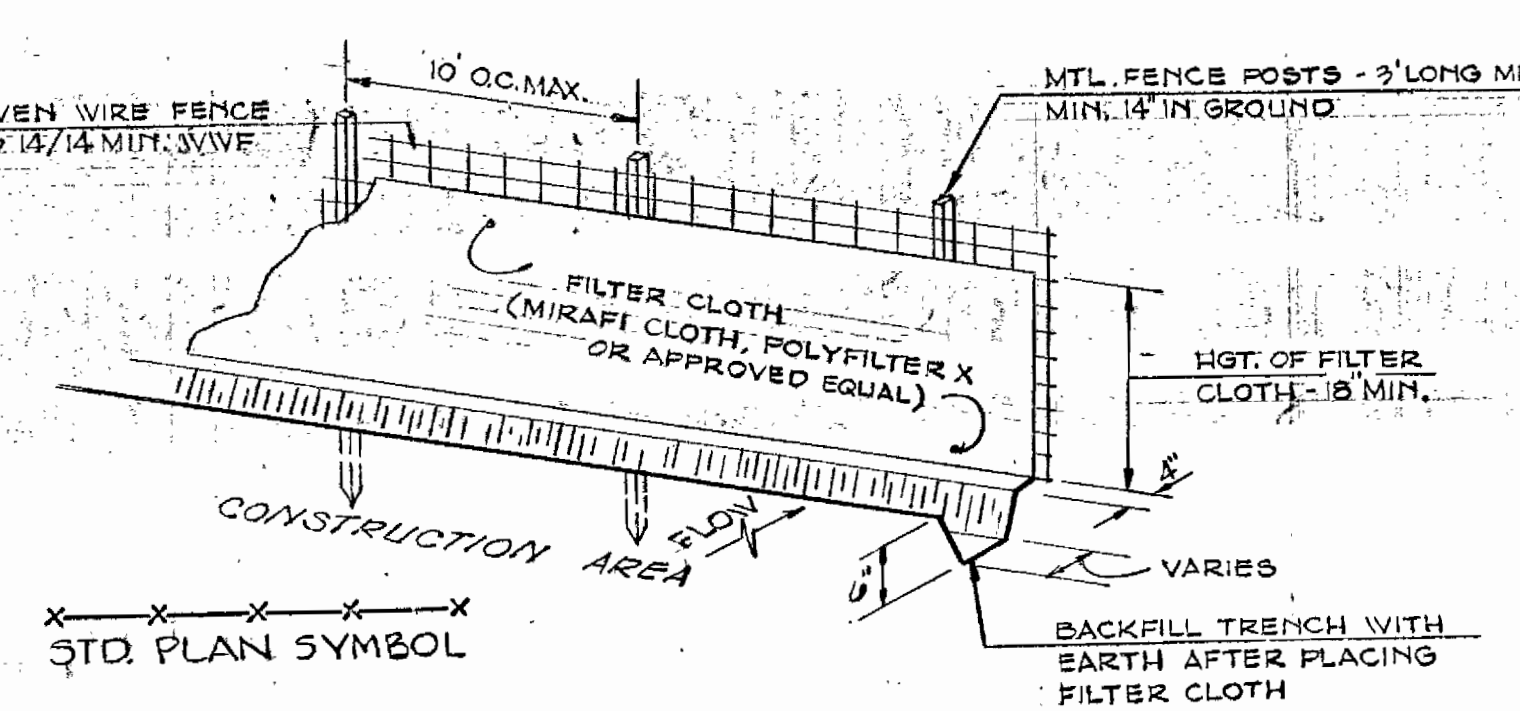
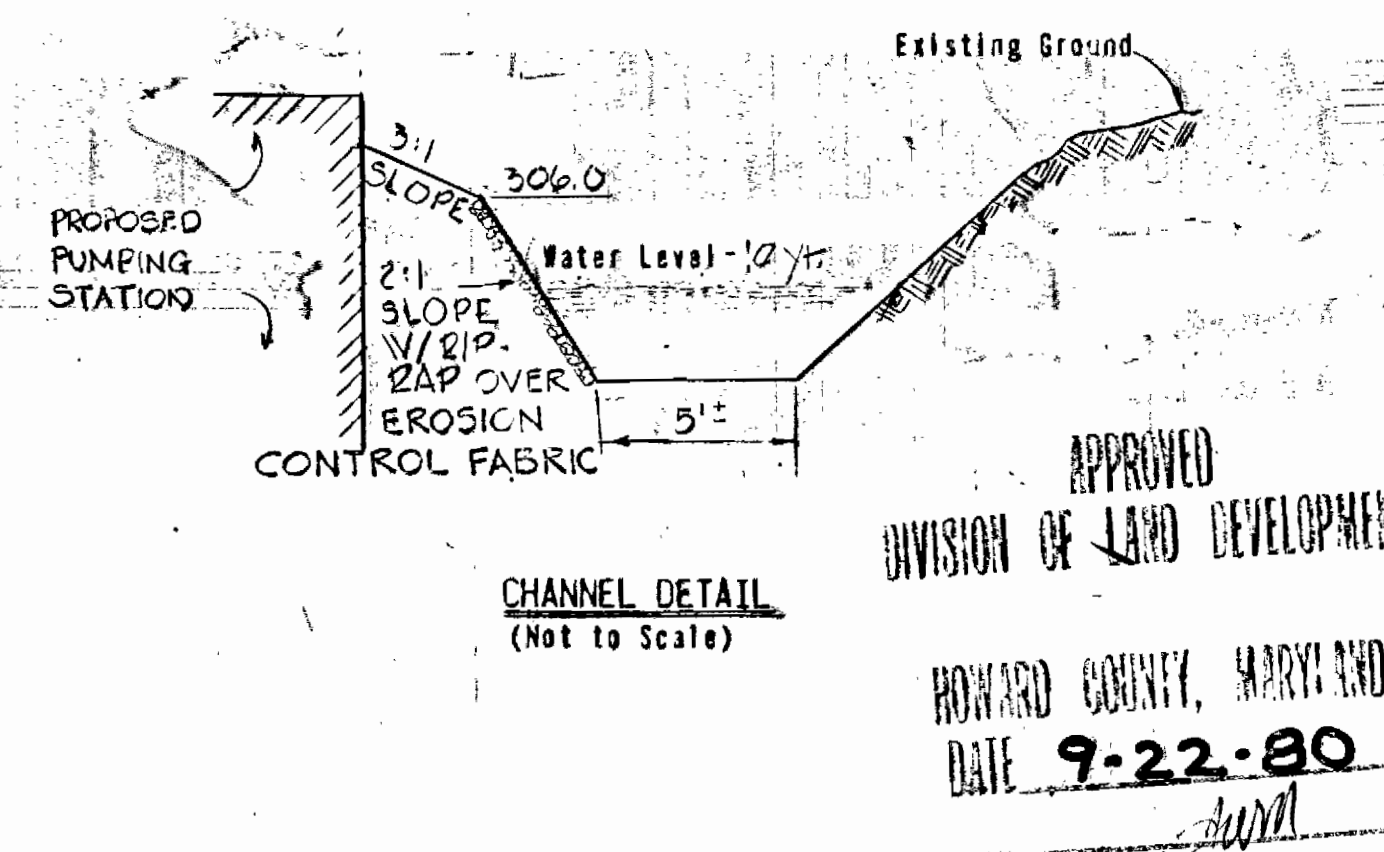
DRAWING NO. 11 OF 25  
SCALE AS SHOWN

Designed: DJD  
Drafted: ARZ  
Checked: REP



**SEDIMENT CONTROL NOTES:**

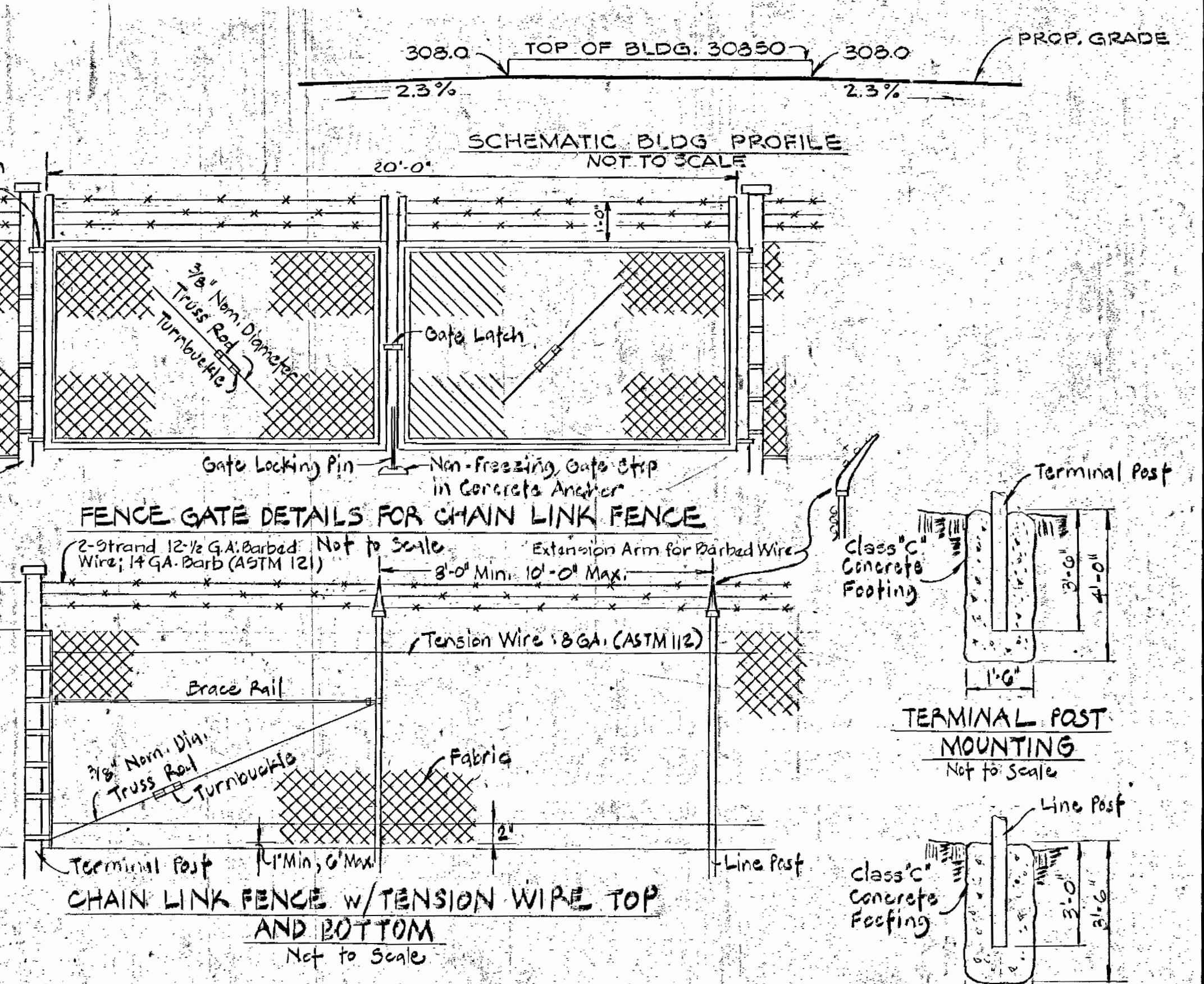
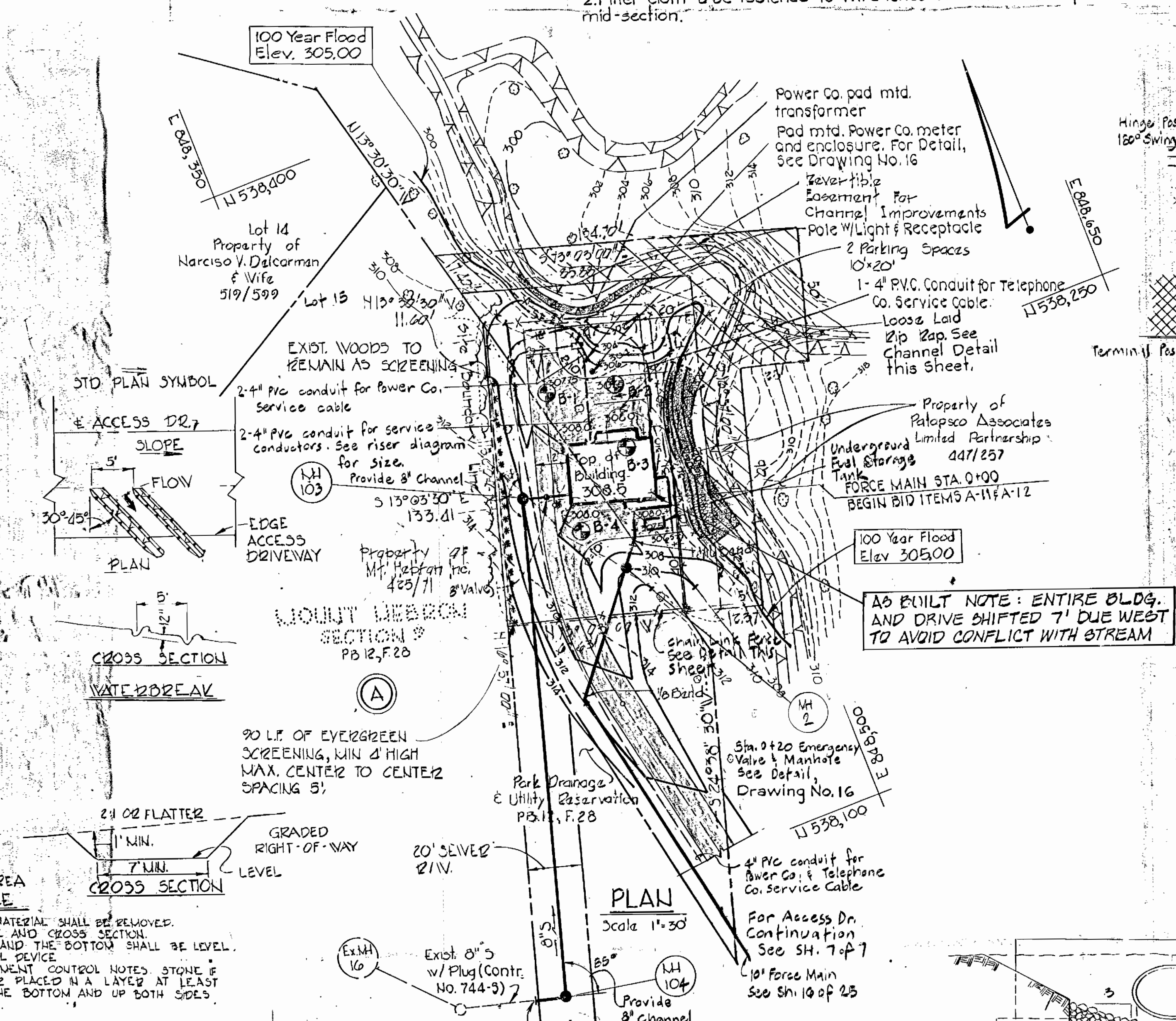
- The Contractor shall notify the Ho. Co. Office of Inspections and Permits at least 24 hours prior to beginning any construction shown hereon at 982-2433.
- Dikes, sediment traps, etc. to be constructed prior to any onsite grading or disturbance to any existing surface material, and are to be stabilized as soon as constructed.
- All sediment structures to remain in place until permission for their removal has been obtained from the Ho. Co. Office of Inspections and Permits at 982-2433.
- All graded areas not to be sodded 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 1-2 tons/acre
      - Commercial fertilizer 10-10-10 at 3 1/4 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 Lam 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 1/2 to 2 tons/acre.
  - The mulch sown with liquid asphalt at 0.4 gal./s.y. or emulsified asphalt at 0.04 gal./s.y. on mulch netting.
- Sodding:
  - Apply 10-10-10 Fertilizer @ 1000 lbs./acre (25 lbs./1000 sq.ft.).
  - Apply Ground Agricultural Limestone @ 2000 lbs./acre (50 lbs./1000 sq.ft.).
  - Incorporate both lime and fertilizer into soil by disking. Firm up after incorporation.
  - Lay sod to a tight fit. Roll to ensure contact with underlying soil. Water as necessary for first two weeks (in summer) to ensure establishment.



- All dikes shall be machine compacted and shall have positive drainage to an outlet.
- Diverted runoff from an undisturbed or stabilized area shall be 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 USHA No 2 placed in a 3\"/>

**NOTE:**  
 1. Woven wire fence to be securely fastened to fence posts with wire ties or staples.  
 2. Filter cloth to be fastened to wire fence with wire at top and mid-section.

- CONSTRUCTION SEQUENCE**
- Obtain grading permit.
  - Construct temporary stabilized entrance. Barricade point of access along Mt. Hebron Drive.
  - Place Silt Fence as shown on plans.
  - Construct Interceptor Dike to the dimensions shown on Drawings.
  - Stabilize Interceptor Dike using "Temporary Seeding". See Sediment Control Notes.
  - Clear and rough grade site.
  - Cut Channel, place 20% concrete slope and construct headwalls.
  - Construct sanitary sewer and force main.
  - Place gravel base for access road.
  - Place building footings and begin building construction.
  - Place 6\"/>



- GENERAL NOTES**
- TOTAL PROPERTY AREA 2.000 Ac.±
  - DRAWING & PAGE NUMBERS SHOWN HEREON ARE REFERENCED TO HOWARD COUNTY ROAD CONSTRUCTION CODE & STANDARD SPECIFICATIONS - DATED AUGUST 1968
  - THE LOCATION OF EXIST. UTILITIES SHOWN HEREON ARE BASED ON THE LATEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL, HOWEVER, DETERMINE THE EXACT LOCATION BEFORE MAKING ANY CONNECTIONS.
  - THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT LEAST (3) DAYS PRIOR TO BEGINNING ANY WORK SHOWN HEREON.
  - ALL WORKMANSHIP & MATERIALS SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY ROAD CONSTRUCTION CODE & STANDARD SPECIFICATIONS UNLESS OTHERWISE SPECIFIED, & PARKING DATA:
    - FULLTIME EMPLOYEES - 0
    - MAX. NO. OF SERVICE VEHICLES AT ANY ONE TIME - 2
    - NO. OF SPACES REQ'D - 2
    - NO. OF SPACES PROVIDED - 2

**APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.**  
 Signature: *Joseph J. Jones* 2-18-81  
 DATE: 2-18-81

**HOWARD SOIL CONSERVATION DISTRICT**  
 REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS  
 Signature: *James M. Hahn* 2-13-81  
 DATE: 2-13-81  
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EMISSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 Signature: *William V. Stone* 2-23-81  
 DATE: 2-23-81  
 HOWARD SOIL CONSERVATION DISTRICT

**SITE ANALYSIS**

Total Area of Pumping Station Site: 1.100 Ac.±  
 Total Area Disturbed: 1.300 Ac.±  
 Total Area Paved: 5000 Ac.±  
 Total Area Vegetated: 1.000 Ac.±  
 Present Zoning: R-20  
 Proposed Use: Pumping Station

**NOTE:**  
 TYPICAL PAVEMENT SECTION FOR PARKING AREA SHALL MATCH THE TYPICAL ACCESS DRIVE PAVEMENT SECTION, SEE SH. 7 OF 7

**APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.**  
 Signature: *John F. Nemec* 8-22-80  
 DATE: 8-22-80

**APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING**  
 Signature: *Donald L. Harris* 2-17-81  
 DATE: 2-17-81

**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: *John F. Nemec* 8-22-80  
 DATE: 8-22-80

**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: *William P. Purdon* 1/23/81  
 DATE: 1/23/81  
 WILLIAM P. PURDON REG. NO. 1492

**HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS**  
 PROJECT: 8-4-6037  
 CONTRACT: 745-3  
 MOUNT HEBRON SEVER'S PATAPSCO PARK PUMPING STATION  
 SITE DEVELOPMENT PLAN  
 ELECTION DISTRICT NO. 2 HOWARD COUNTY, MD.  
 TAX MAP 17 PARCEL

Designed: B.Z.  
 Drawn: D.J.G.  
 Checked: J.T.T.  
 DRWG. NO. 12 OF 25  
 SITE PLAN SH. 4 OF 7  
 Scale: As Shown

EPA NO. C-240593-01

**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: *John F. Nemec* 8-22-80  
 DATE: 8-22-80

**APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING**  
 Signature: *Donald L. Harris* 2-17-81  
 DATE: 2-17-81

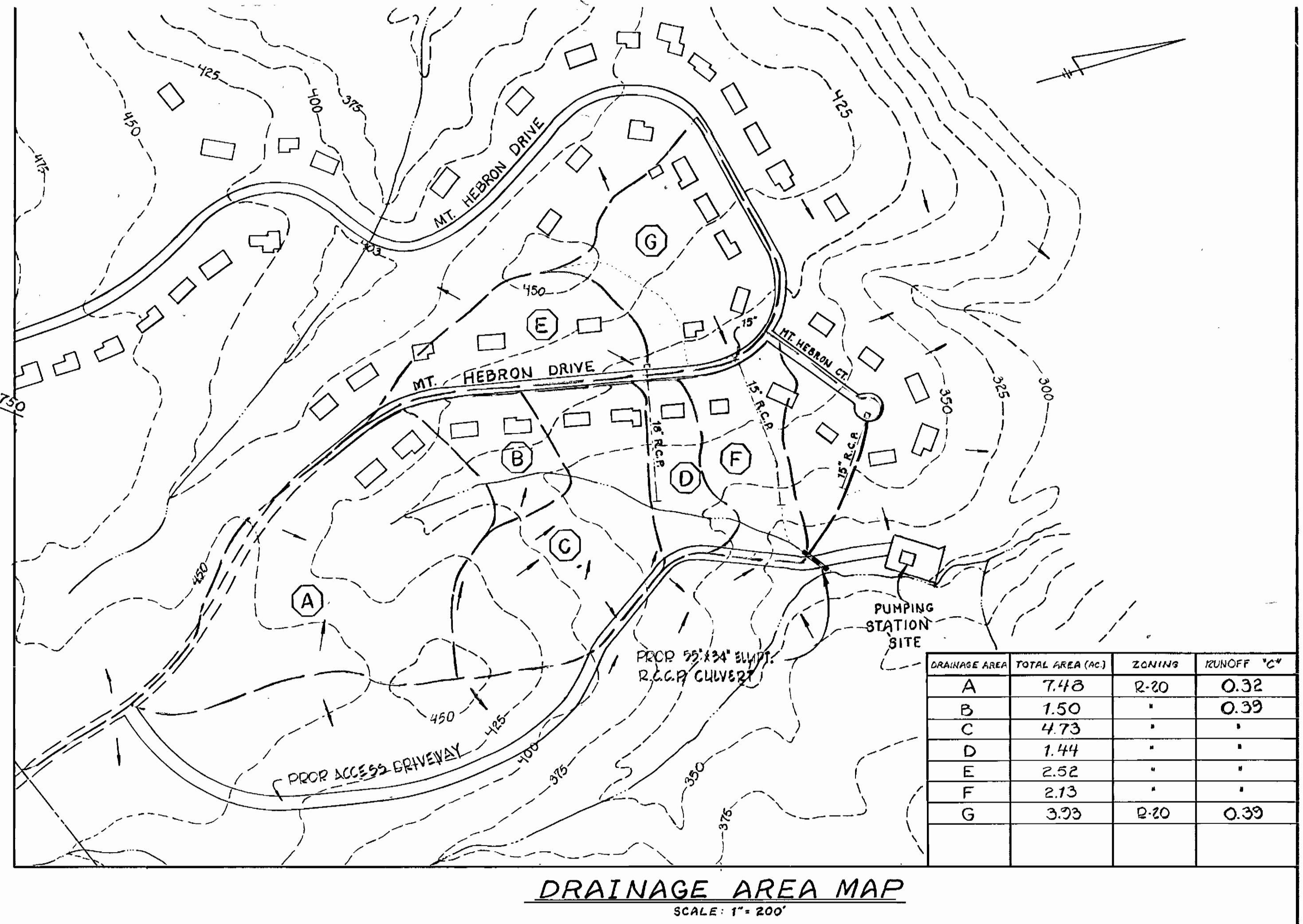
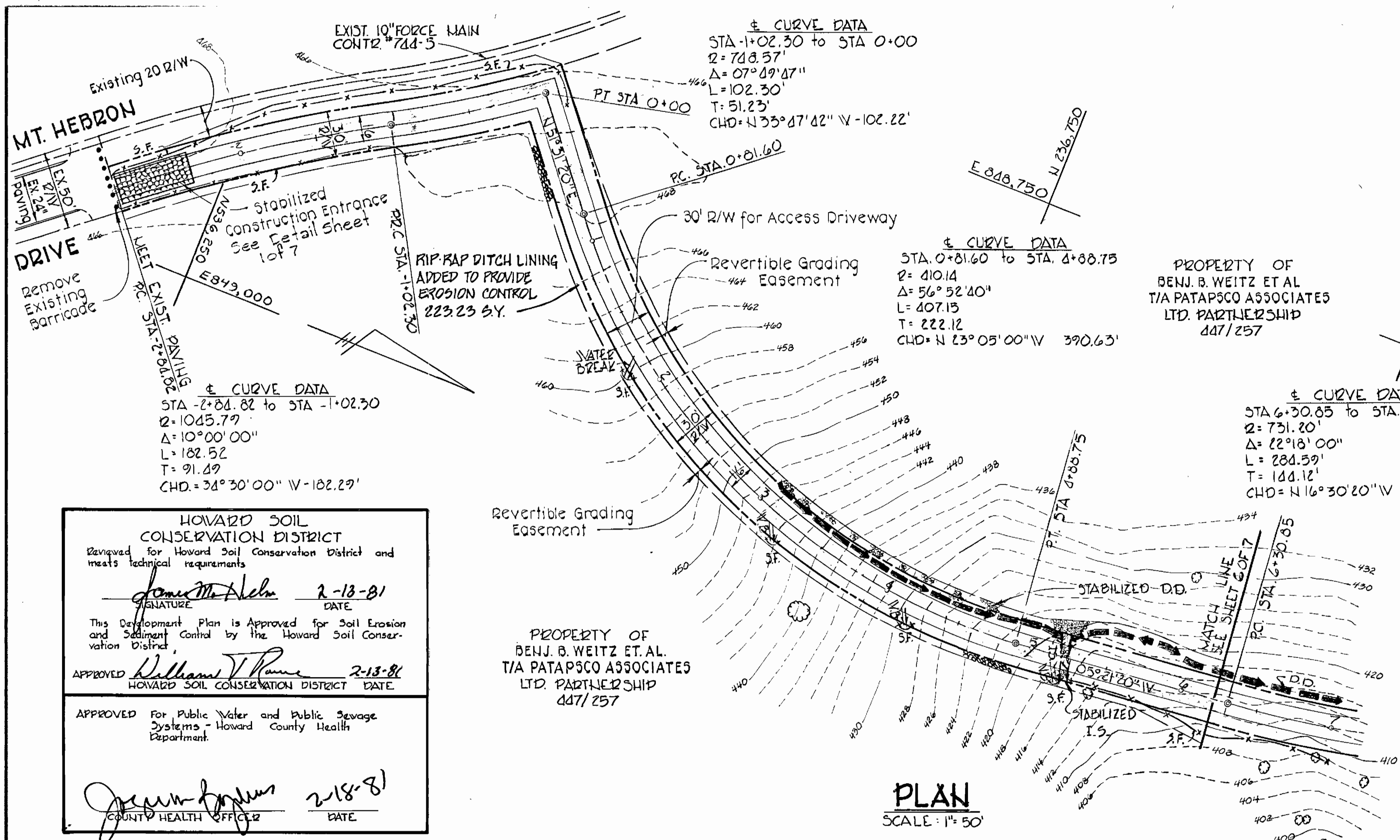
**DEVELOPER**  
 Signature: *John F. Nemec* 8-22-80  
 DATE: 8-22-80

**PROFESSIONAL ENGINEER**  
 Signature: *William P. Purdon* 1/23/81  
 DATE: 1/23/81  
 WILLIAM P. PURDON REG. NO. 1492

**HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS**  
 PROJECT: 8-4-6037  
 CONTRACT: 745-3  
 MOUNT HEBRON SEVER'S PATAPSCO PARK PUMPING STATION  
 SITE DEVELOPMENT PLAN  
 ELECTION DISTRICT NO. 2 HOWARD COUNTY, MD.  
 TAX MAP 17 PARCEL

Scale: As Shown





**HOWARD SOIL CONSERVATION DISTRICT**  
 Reviewed for Howard Soil Conservation District and meets technical requirements.

Signature: *James M. Ahearn* 2-18-81  
 DATE

This Development Plan is Approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

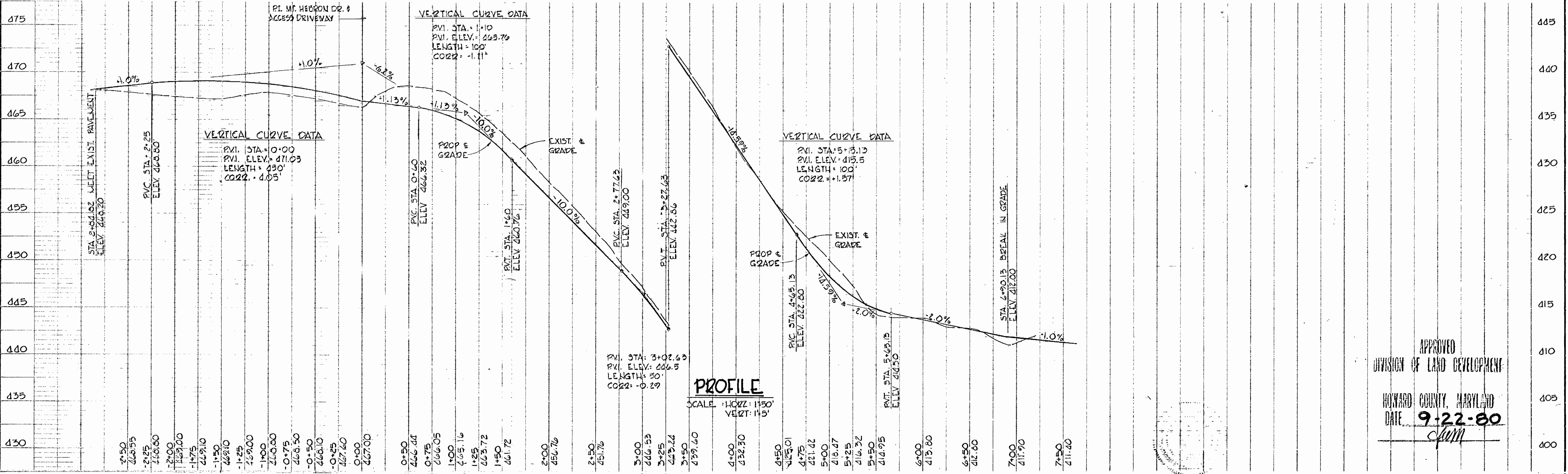
APPROVED: *William J. Rame* 2-18-81  
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED For Public Water and Public Sewage Systems - Howard County Health Department.

Signature: *James F. Nummy* 2-18-81  
 COUNTY HEALTH OFFICER DATE

PROPERTY OF  
 BENJ. B. WEITZ ET AL.  
 T/A PATAPSCO ASSOCIATES  
 LTD. PARTNERSHIP  
 447/257

PROPERTY OF  
 BENJ. B. WEITZ ET AL.  
 T/A PATAPSCO ASSOCIATES  
 LTD. PARTNERSHIP  
 447/257



APPROVED  
 DIVISION OF LAND DEVELOPMENT  
 HOWARD COUNTY, MARYLAND  
 DATE: 9-22-80  
*[Signature]*

**PURDUM & JESCHKE**  
 CONSULTING ENGINEERS  
 LAND SURVEYORS  
 1023 North Calvert Street  
 Baltimore, Maryland 21202 301/337-0193

APPROVED: For Public Water, Public Sewage, Storm Drainage Systems, and roads Howard County Department of Public Works.

Signature: *William J. Rame* 8-22-80  
 DIRECTOR DATE

Signature: *William J. Rame* 8-19-80  
 CHIEF BUREAU OF ENGINEERING DATE

APPROVED: Howard County Office of Planning and Zoning.

Signature: *William J. Rame* 2-19-81  
 PLANNING DIRECTOR DATE

Signature: *William J. Rame* 2-19-81  
 CHIEF DIVISION OF LAND DEVELOPMENT DATE

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 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: *James F. Nummy* 8-22-80  
 SIGNATURE DATE

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 County Soil Conservation District.

Signature: *William G. Basch II* 1/23/81  
 WILLIAM G. BASCH II Reg. No. 4575 DATE

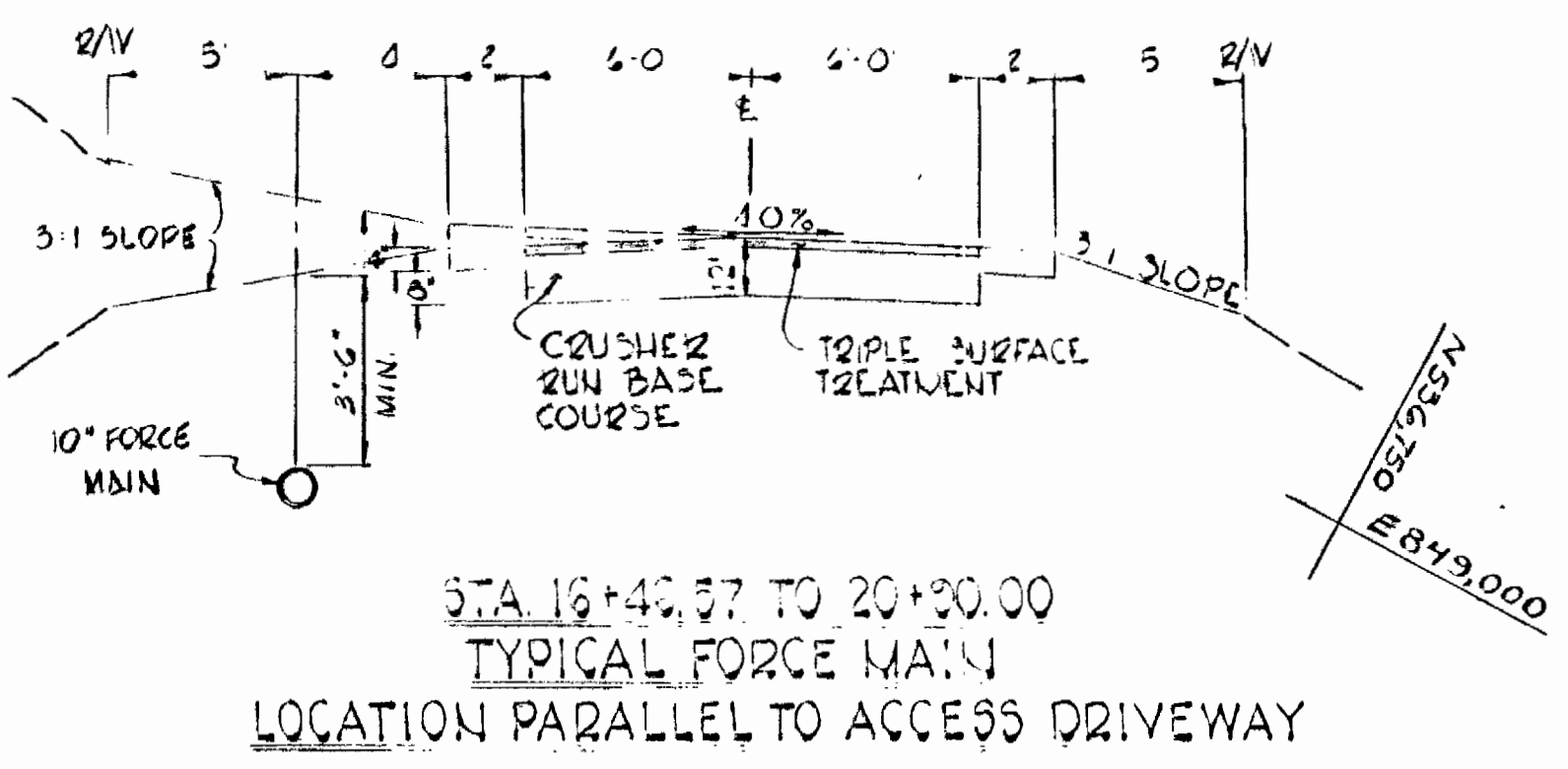


HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 CAPITAL PROJECT NO. 9-4-8067  
 CONTRACT NO. 745-9  
 MOUNT HEBRON SEWER  
**PATAPSCO PARK PUMP STATION**  
 SITE DEVELOPMENT PLAN  
**ACCESS DRIVEWAY**  
 STA -2+84.82 TO 20+29.50  
 ELECTION DISTRICT NO. 2 HOWARD COUNTY, MD  
 TAX MAP 17

DESIGNED: M.T.  
 DRAWN: J.P.B.  
 CHECKED: R.T.  
 DWG. NO. 13 OF 25  
 SITE PLAN SH. 50F7  
 Scale: As Shown

EPA NO. C-240593-01

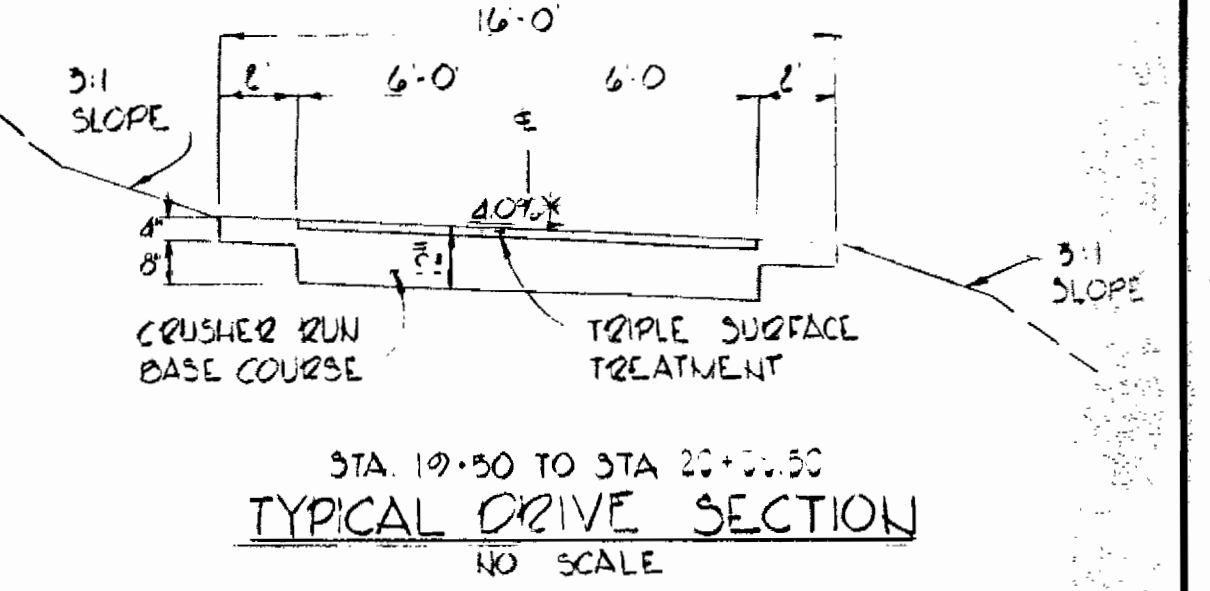




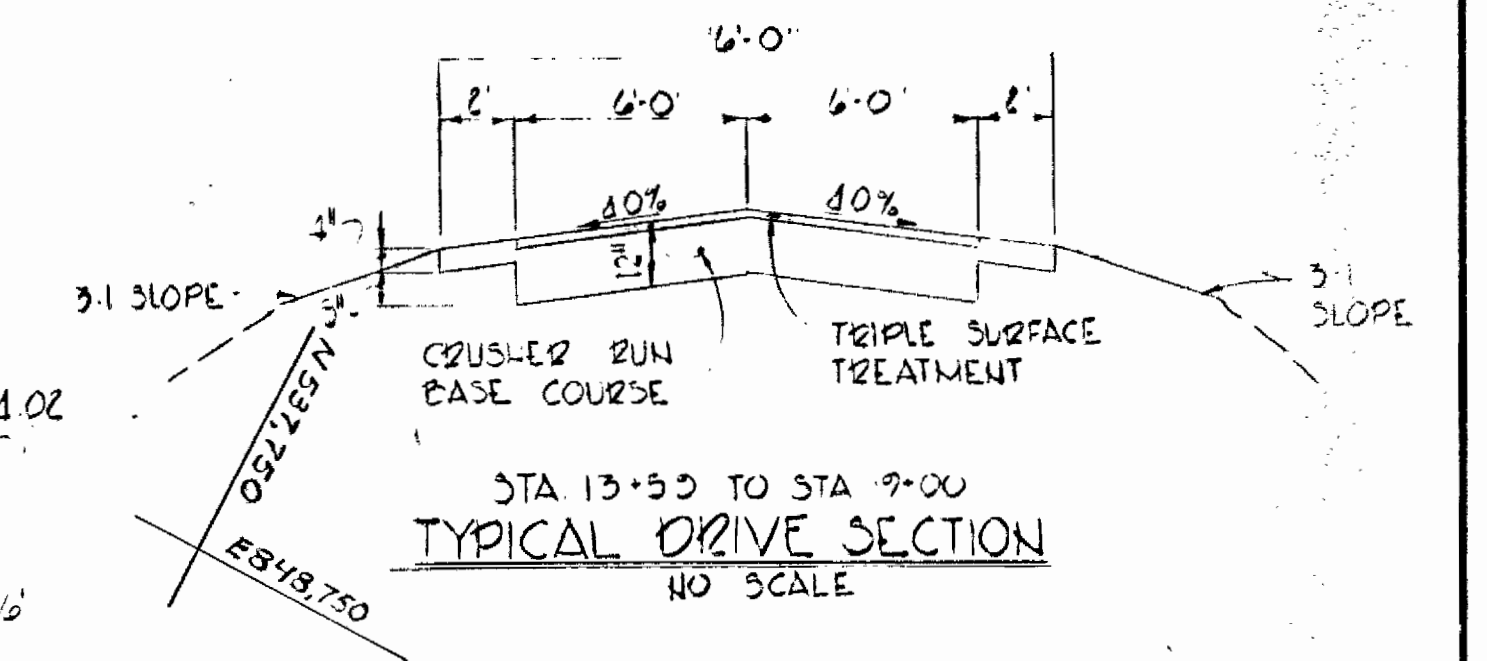
**CURVE DATA**  
 STA 6+30.05 TO STA 9+15.04  
 R = 75.20'  
 Δ = 22° 18' 00"  
 L = 284.39'  
 T = N116° 30' 20" W 287.00'

**CURVE DATA**  
 STA 9+00 TO STA 12+50.34  
 R = 410.41'  
 Δ = 30° 57' 00"  
 L = 278.34'  
 T = 144.77'  
 CHD = N47° 05' 30" W 273.05'

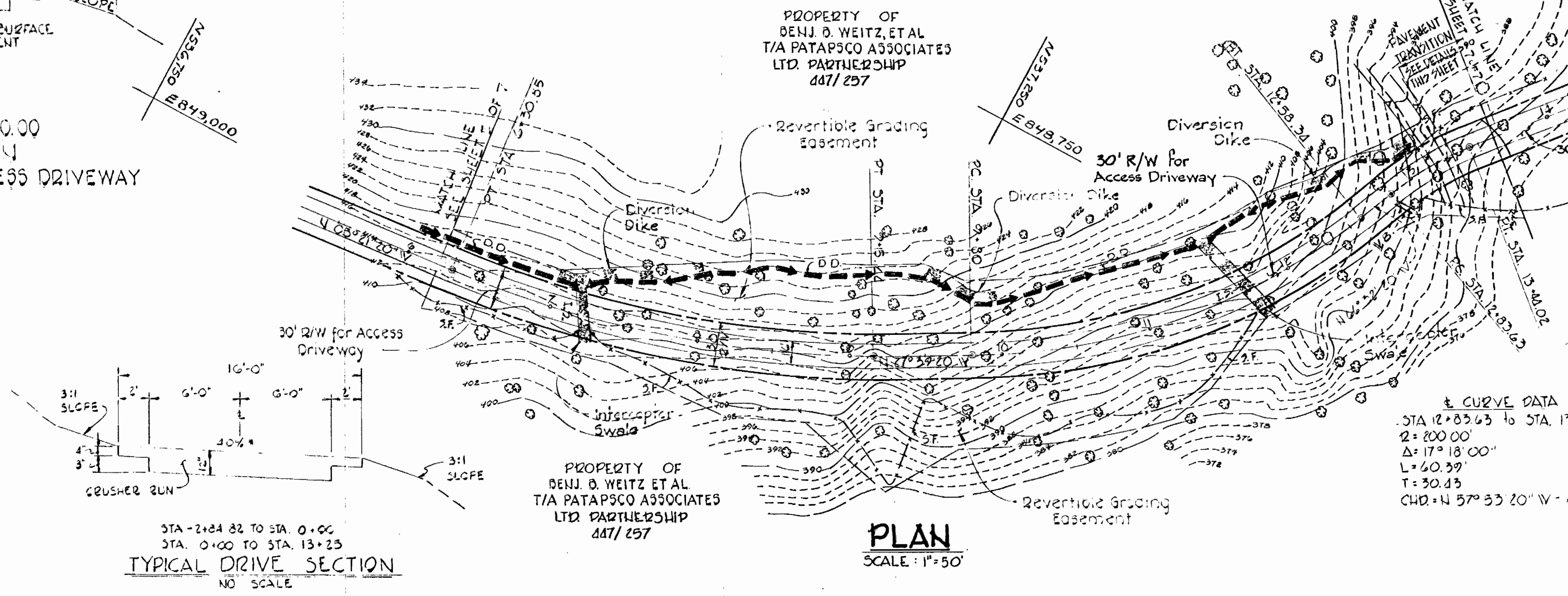
\* PAVEMENT BETWEEN STA 2+84.82 TO STA 0+00 SLOPE = 3.3%



NOTE: TRIPLE SURFACE TREATMENT SHALL BE IN ACCORDANCE WITH ARTICLE C-30 AND CRUSHER RUN WITH ARTICLE C-23 OF HOWARD COUNTY ROAD CONSTRUCTION CODE AND STANDARD SPECIFICATIONS.

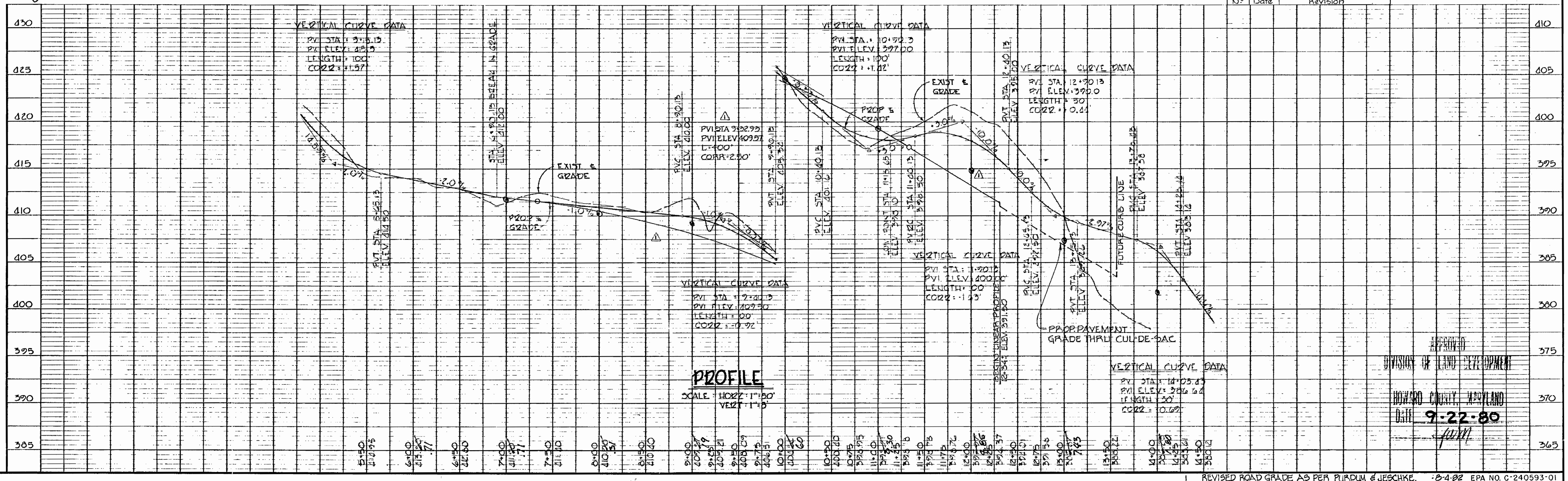


**CURVE DATA**  
 STA 12+85.63 TO STA 13+44.02  
 R = 200.00'  
 Δ = 17° 18' 00"  
 L = 60.39'  
 T = 30.43'  
 CHD = N47° 33' 20" W 60.16'



**HOWARD SOIL CONSERVATION DISTRICT**  
 Reviewed for Howard Soil Conservation District and meets technical requirements.  
 Signature: [Signature] DATE: 2-13-81  
 This development plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.  
 APPROVED: [Signature] DATE: 2-13-81  
 HOWARD SOIL CONSERVATION DISTRICT  
 APPROVED: For Public Water and Public Sewage Systems - Howard County Health Department  
 Signature: [Signature] DATE: 2-15-81  
 COUNTY HEALTH OFFICER

STA 2+84.82 TO STA 0+00  
 STA 0+00 TO STA 13+23  
 TYPICAL DRIVE SECTION  
 NO SCALE



Δ	6-4-82	REV. PROFILES
N°	Date	Revision

APPROVED  
 DIVISION OF LAND DEVELOPMENT  
 HOWARD COUNTY, MARYLAND  
 DATE: 9-22-80

**PURDUM & JESCHKE**  
 CONSULTING ENGINEERS  
 LAND SURVEYORS  
 1023 North Calvert Street  
 Baltimore, Maryland 21202 301/837-0184

APPROVED: For Public Water, Public Sewage, Storm Drainage systems and roads Howard County  
 [Signature] DATE: 1-19-81  
 CHIEF DIVISION

APPROVED: Howard County Office of Planning  
 [Signature] DATE: 1-19-81  
 CHIEF DIVISION

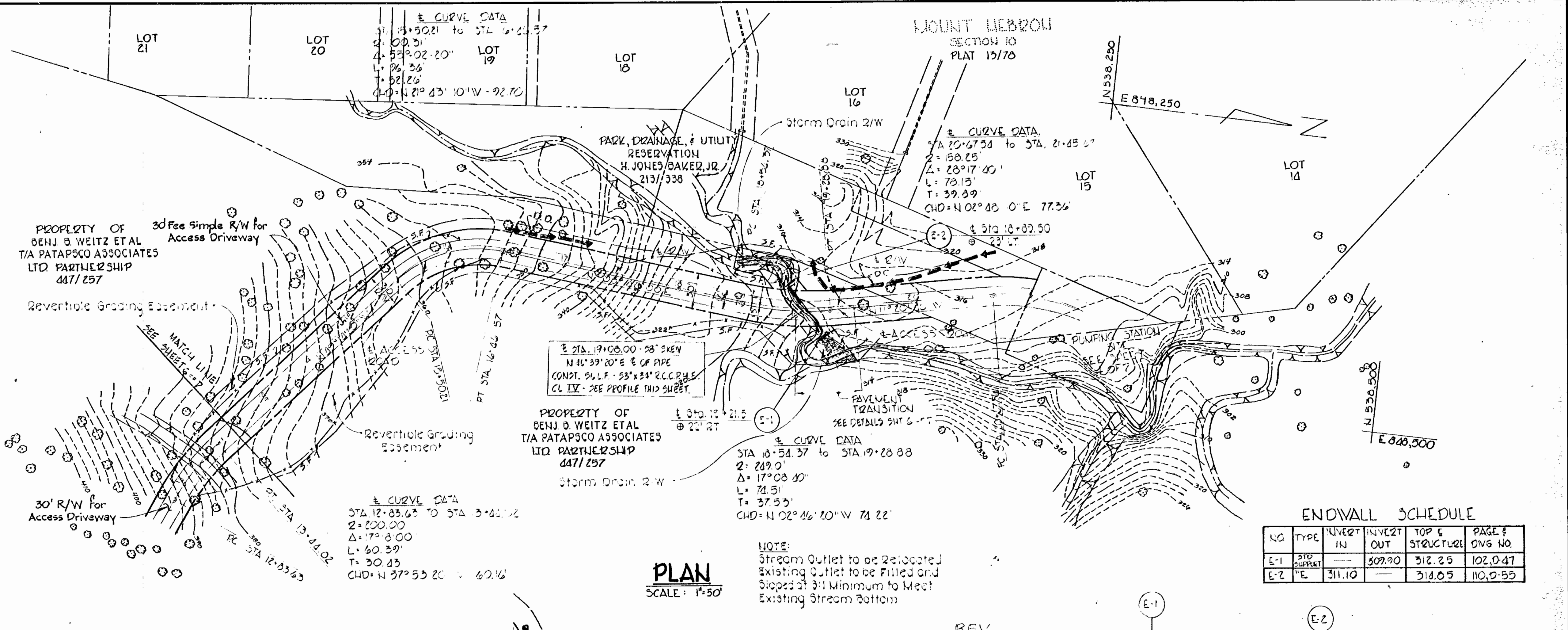
**DEVELOPER**  
 I certify that all development and/or construction will be done according to this plan of development and plan for Erosion and Sediment Control and I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District.  
 Signature: [Signature] DATE: 3/18/81

**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 County Soil Conservation District.  
 Signature: [Signature] DATE: 1/23/81  
 WILLIAM G. RASCHKE II Reg. No. 4575



REVISED ROAD GRADE AS PER PURDUM & JESCHKE. 6-4-82 EPA NO. C-240593-01  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 CAPITAL PROJECT NO. 3-4-8067  
 CONTRACT NO. 745-3  
 MOUNT HEBRON SEWER  
**PATAPASCO PARK PUMP STATION**  
 SITE DEVELOPMENT PLAN  
**ACCESS DRIVEWAY**  
 STA 2+84.82 TO 20+30.00  
 ELECTION DISTRICT NO. 2 HOWARD COUNTY, MD  
 TAX MAP 17  
 DESIGNED: JLT  
 DRAWN: 32B  
 CHECKED: RT  
 DRAWING NO. 18 OF 25  
 SITE PLAN SH 607.7  
 Scale: As Shown  
 AS BUILT 10/83 SDP-81-34





HOWARD SOIL CONSERVATION DISTRICT  
Revised for Howard Soil Conservation District and meets technical requirements

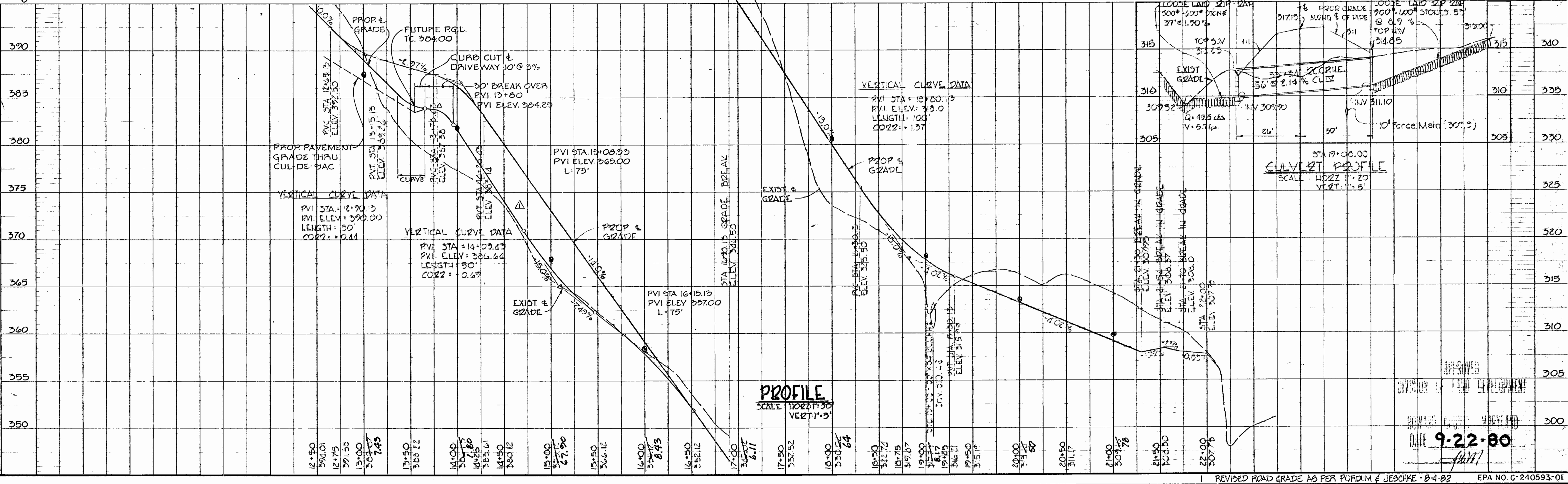
*James M. Allen* 2-13-81  
SIGNATURE DATE

This development plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District

APPROVED *William J. Rame* 2-13-81  
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED For Public Water and Public Sewage Systems, Howard County Health Department

*William J. Rame* 2-18-81  
COUNTY HEALTH OFFICER DATE



APPROVED For Public Water, Public Sewage Drainage systems, and roads Works

*William J. Rame* 2-19-81  
DATE

APPROVED Howard County Office of Planning

*William J. Rame* 2-19-81  
DATE

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.

*William J. Rame* 2-19-81  
SIGNATURE DATE

**PURDUM & JESCHKE**  
CONSULTING ENGINEERS  
LAND SURVEYORS

1023 North Calvert Street  
Baltimore, Maryland 21202 301/837-0184

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 County Soil Conservation District.

*William J. Rame* 1/23/81  
WILLIAM J. RAMSEY II REG. NO. 4575 DATE

REVISD ROAD GRADE AS PER PURDUM & JESCHKE - B-4-B2 EPA NO. C-240593-01

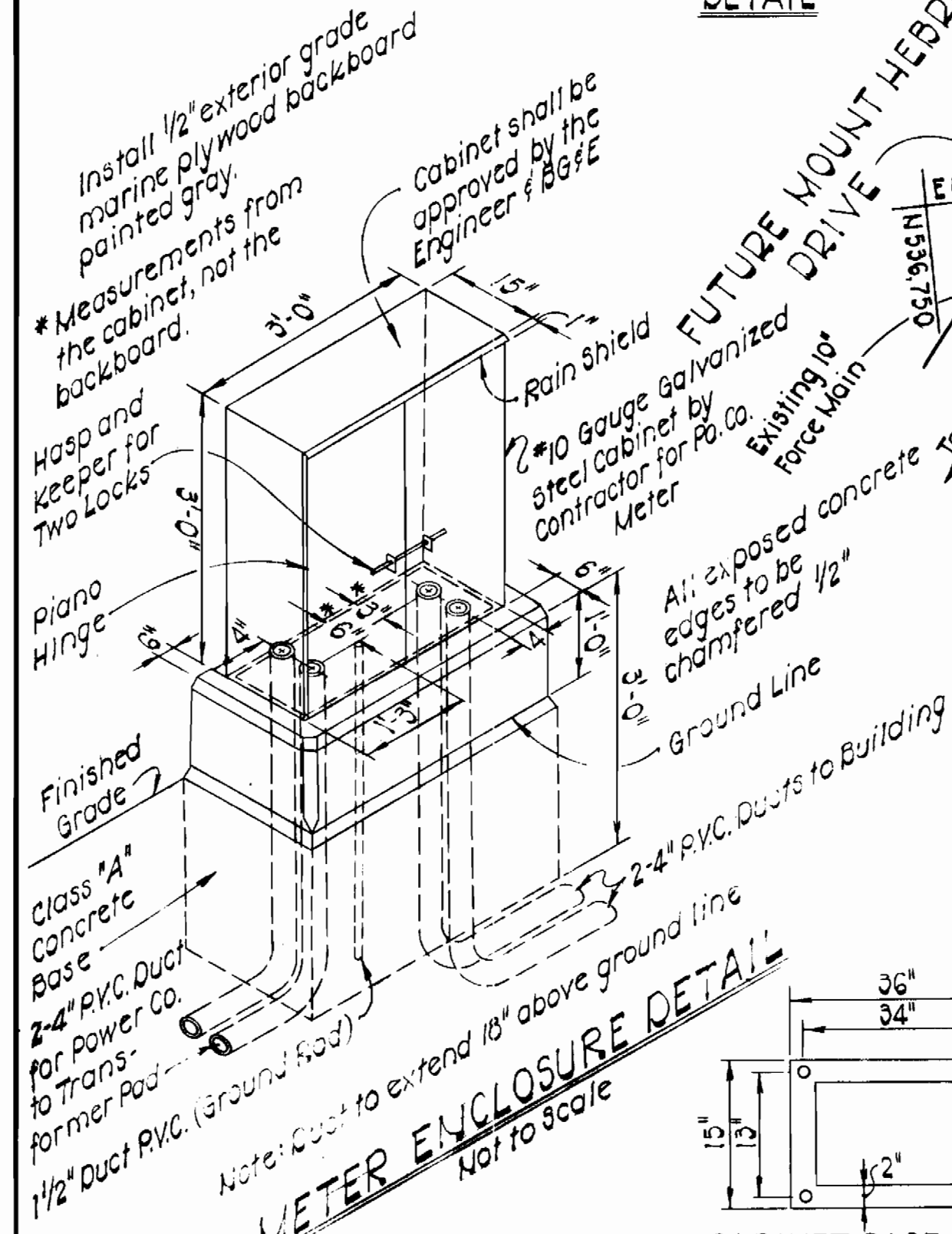
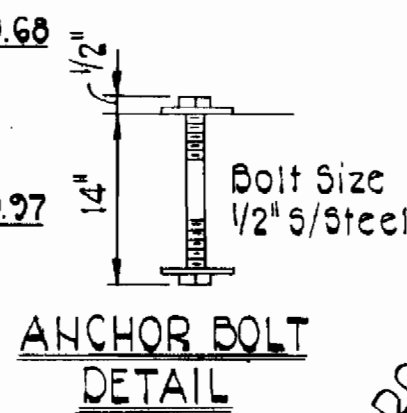
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
CAPITAL PROJECT NO. 3-4-6067  
CONTRACT NO. 749-3  
MOUNT HEBRON SEWER E-25  
PATAPSCO PARK PUMP STATION  
SITE DEVELOPMENT PLAN  
ACCESS DRIVEWAY  
STA 2+04.02 TO 20+99.50  
ELECTION DISTRICT NO. 2 HOWARD COUNTY, MD  
TAX MAP 17

Designed: M.T.  
Drawn: M.T.D.  
Checked: Z.T.  
DRAWING NO. 15 OF 25  
SITE PLAN SH. 70F.7  
Scale: As Shown

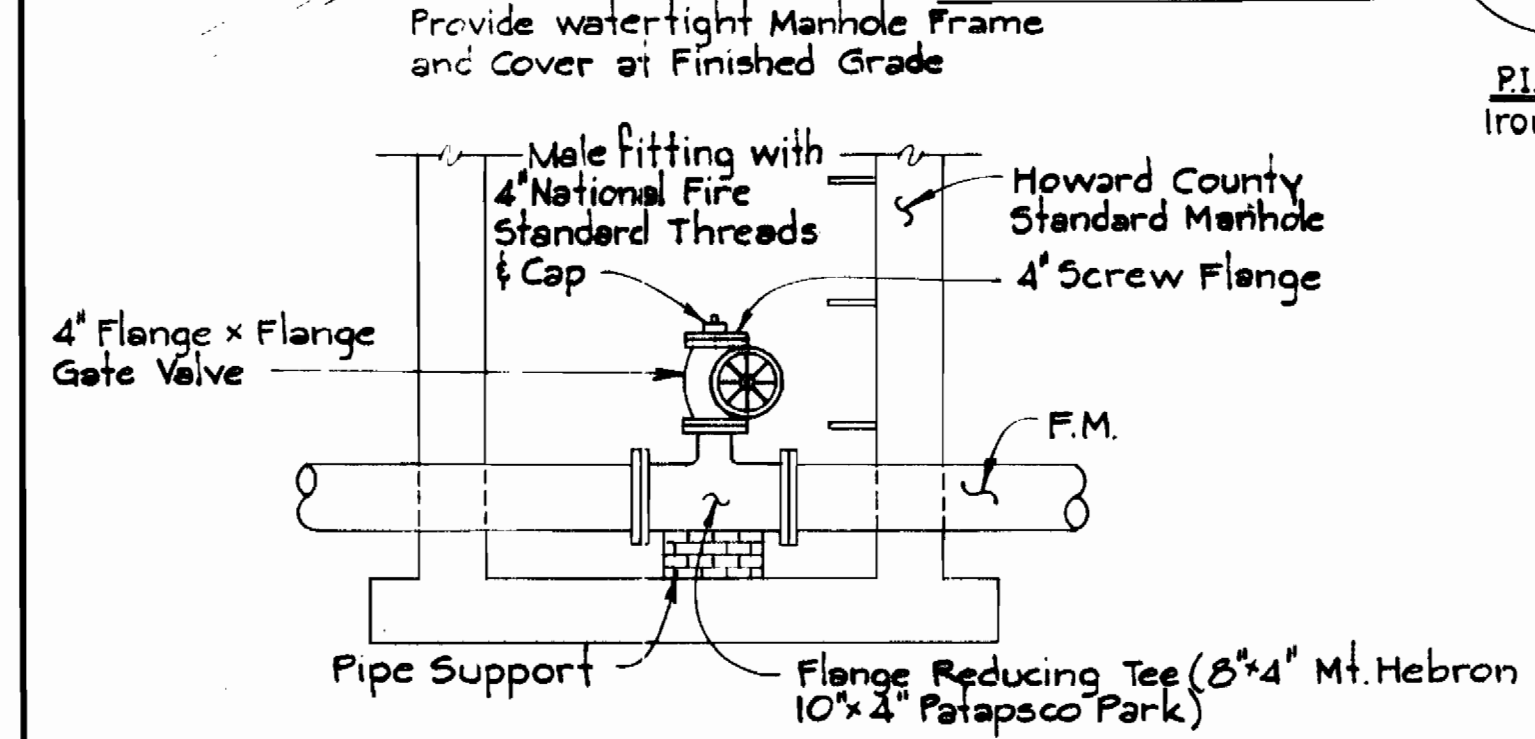


**BENCH MARKS**

B.M. #18 Eley 433.68  
 Road bonnet bolt of Fire Hydrant at House #2100 at end of Mount Hebron Drive.  
 B.M. #12 Eley 352.97  
 Railroad Spike in 30" Oak 74' North-east of P.I. "11-A"

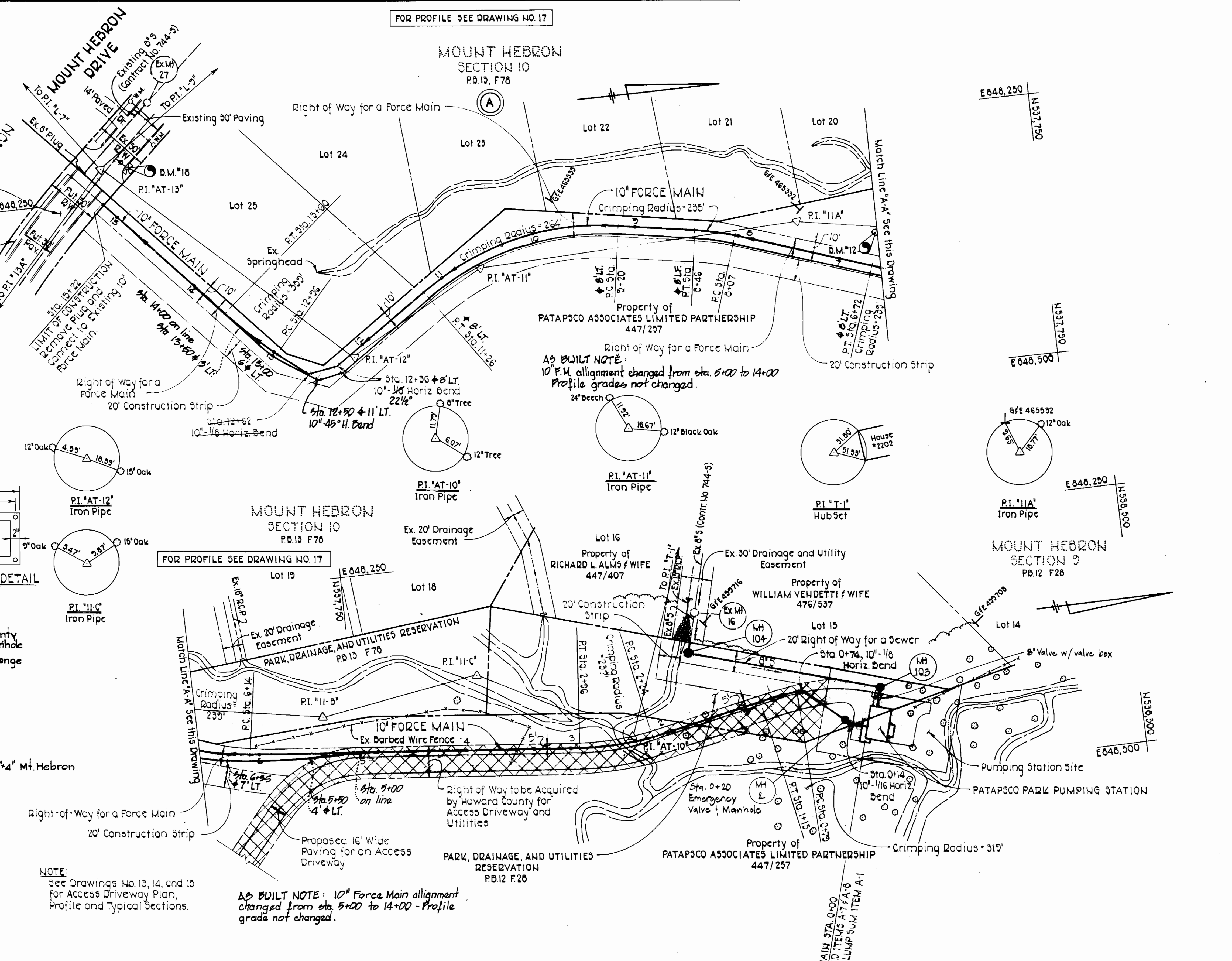


**METER ENCLOSURE DETAIL**  
 Not to Scale



**HOWARD COUNTY STANDARD EMERGENCY CONNECTION VALVE DETAIL**  
 Scale: 1/2" = 1'-0"

FOR PROFILE SEE DRAWING NO. 17



NOTE:  
 See Drawings No. 13, 14, and 15 for Access Driveway Plan, Profile and Typical Sections.

AS BUILT NOTE: 10" Force Main alignment changed from sta. 5+00 to 14+00 - Profile grade not changed.

*Charlton Lee*

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

*Robert M. Benjamin*  
 CHIEF - BUREAU OF UTILITIES  
 DATE: 2-4-81  
**DEPARTMENT OF PUBLIC WORKS**  
 HOWARD COUNTY, MARYLAND  
 DIRECTOR OF PUBLIC WORKS - DATE: 2-5-81  
 CHIEF - BUREAU OF ENGINEERING - DATE: 2-3-81

CONTRACT NO. 745-S  
 CAPITAL PROJECT NO. S-4-6067

PLAN FOR FORCE MAIN

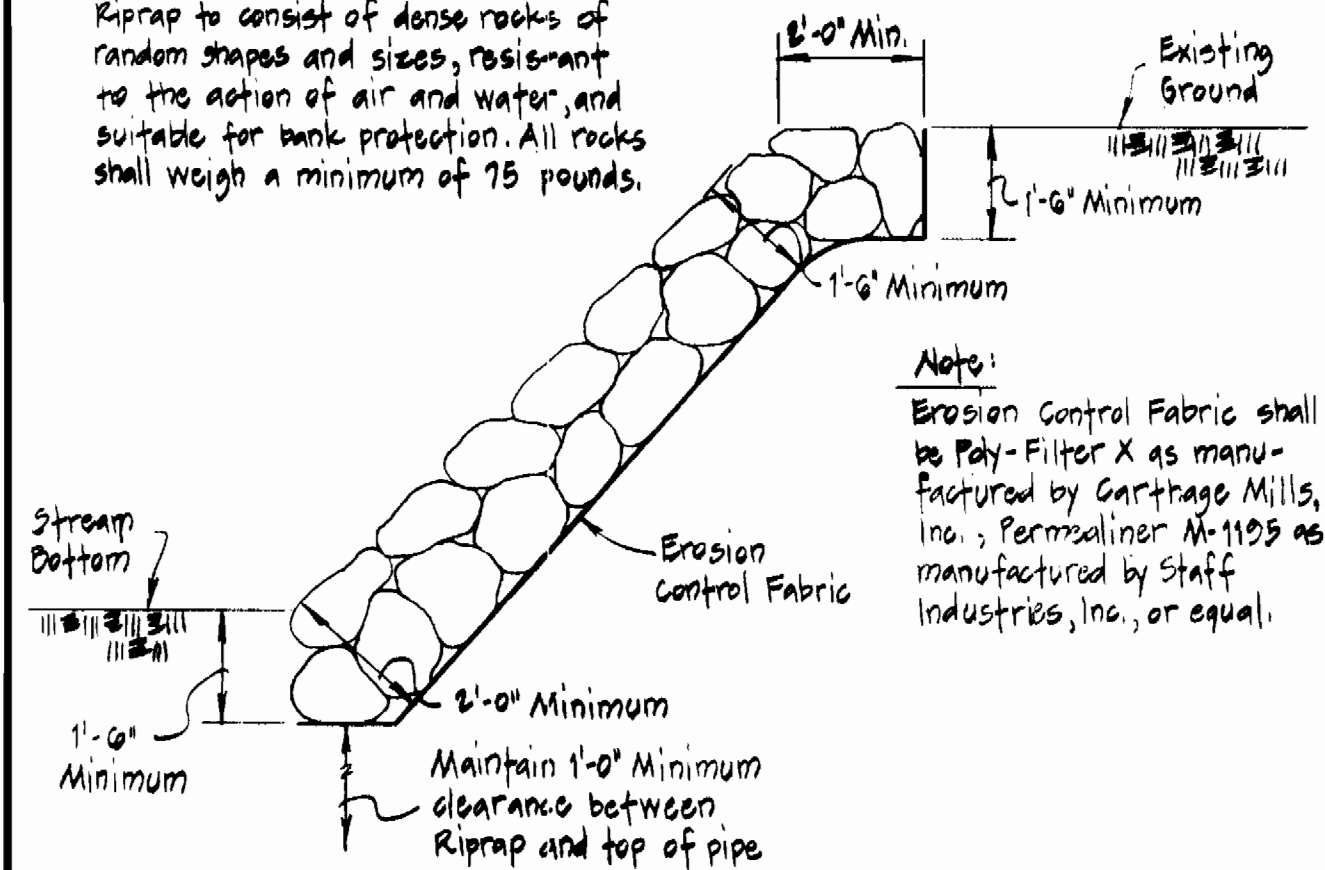
**MOUNT HEBRON SEWER MAINS**  
 ELECTION DISTRICT NO. 2  
 HOWARD COUNTY, MARYLAND

DRAWING NO. 16 OF 25  
 SCALE 1" = 50'  
 Designed: PWK  
 Drafted: ARZ  
 Checked: REP

EPA NO. C-240593-01  
 CONTRACT NO. 745-S  
 CAPITAL PROJECT NO. S-4-6037  
 MOUNT HEBRON SEWER MAINS  
 PATAPSCO PARK PUMPING STATION



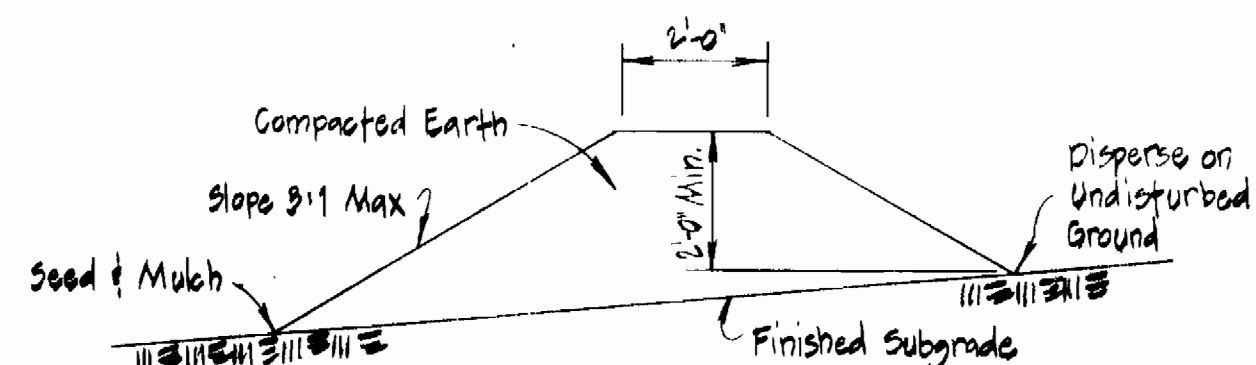
Riprap to consist of dense rocks of random shapes and sizes, resistant to the action of air and water, and suitable for bank protection. All rocks shall weigh a minimum of 75 pounds.



LOOSE LAID RIPRAP DETAIL

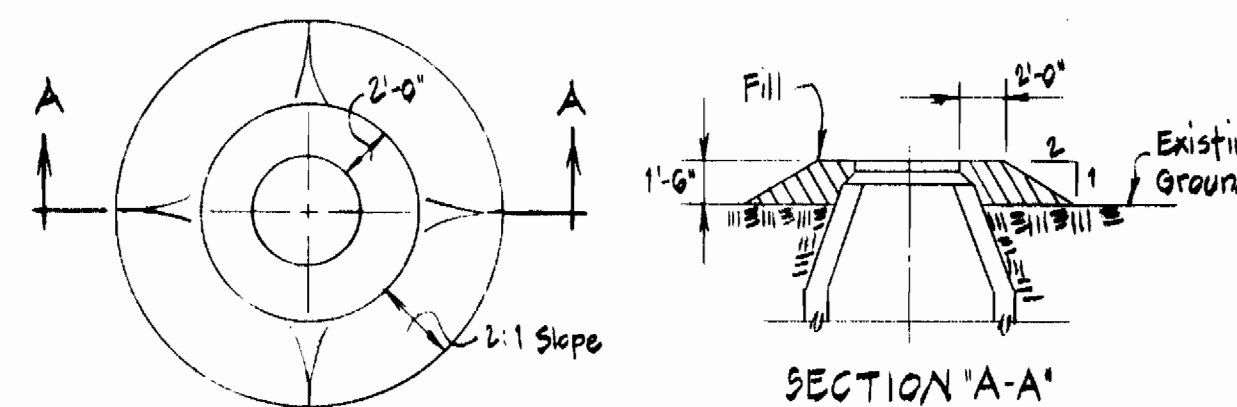
Not to Scale

Diversion berms are required every 150 feet on continuous slopes of 4% or greater. The berms shall conform to the typical section shown herein and shall be constructed across the construction areas immediately after the backfilling of the pipe trench and prior to placing stabilization in order to prevent erosion of the back-filled areas.



TEMPORARY EARTH DIVERSION BERM

Not to Scale

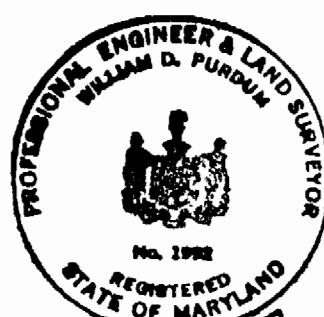


PLAN

SECTION 'A-A'

FILL AT MANHOLE

Not to Scale



W.D. Purdum, D. G. Jeschke

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

*Robert A. Bennett*  
CHIEF - BUREAU OF UTILITIES  
DATE: 2-4-81

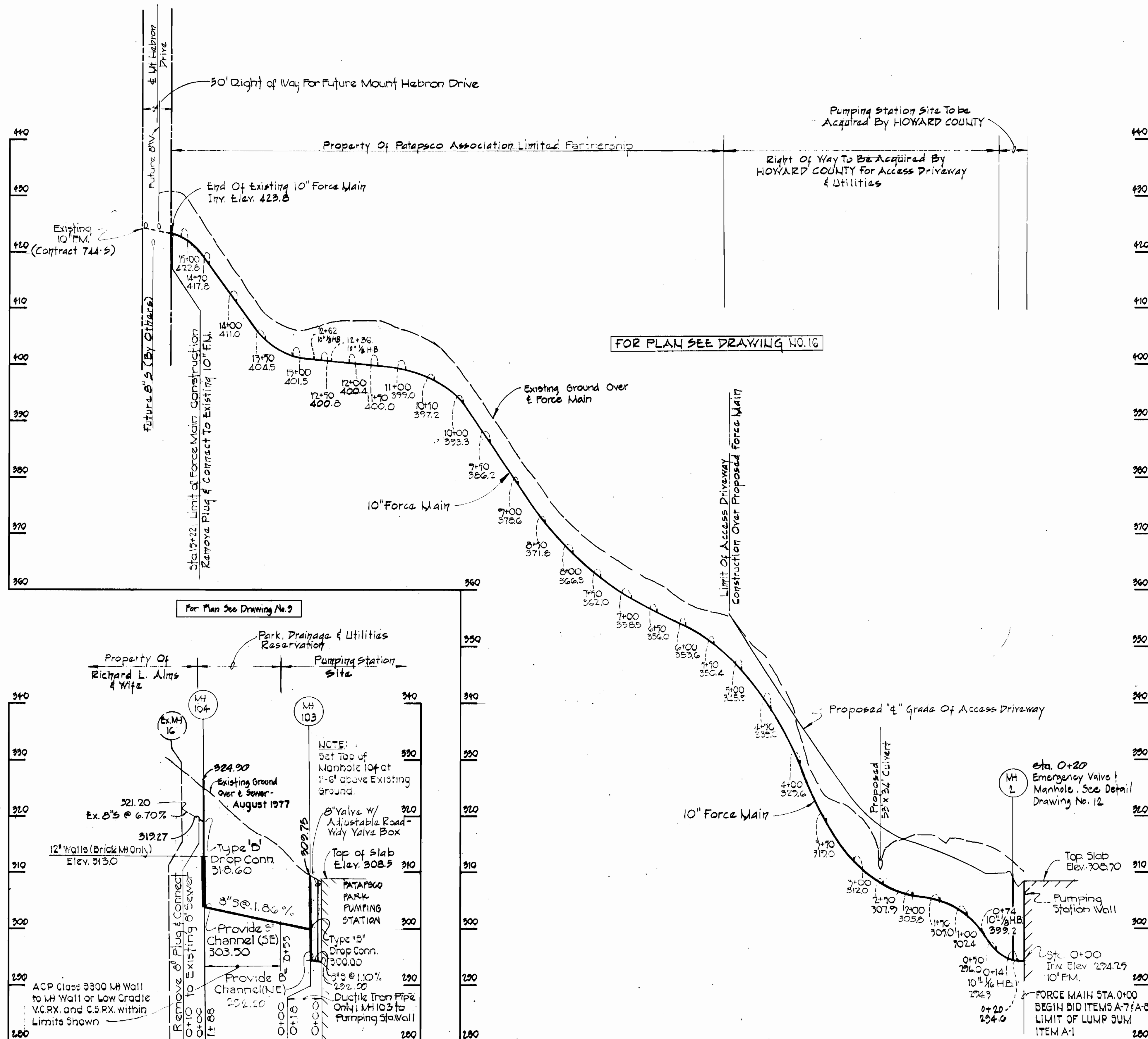
**DEPARTMENT OF PUBLIC WORKS**  
HOWARD COUNTY, MARYLAND  
DATE: 2-5-81  
DIRECTOR OF PUBLIC WORKS

CONTRACT NO. 745-S  
CAPITAL PROJECT NO. S-4-6037

PROFILES AND DETAILS  
PATAPSCO PARK  
PUMPING STATION

MOUNT HEBRON SEWER MAINS  
ELECTION DISTRICT NO. 2  
HOWARD COUNTY, MARYLAND

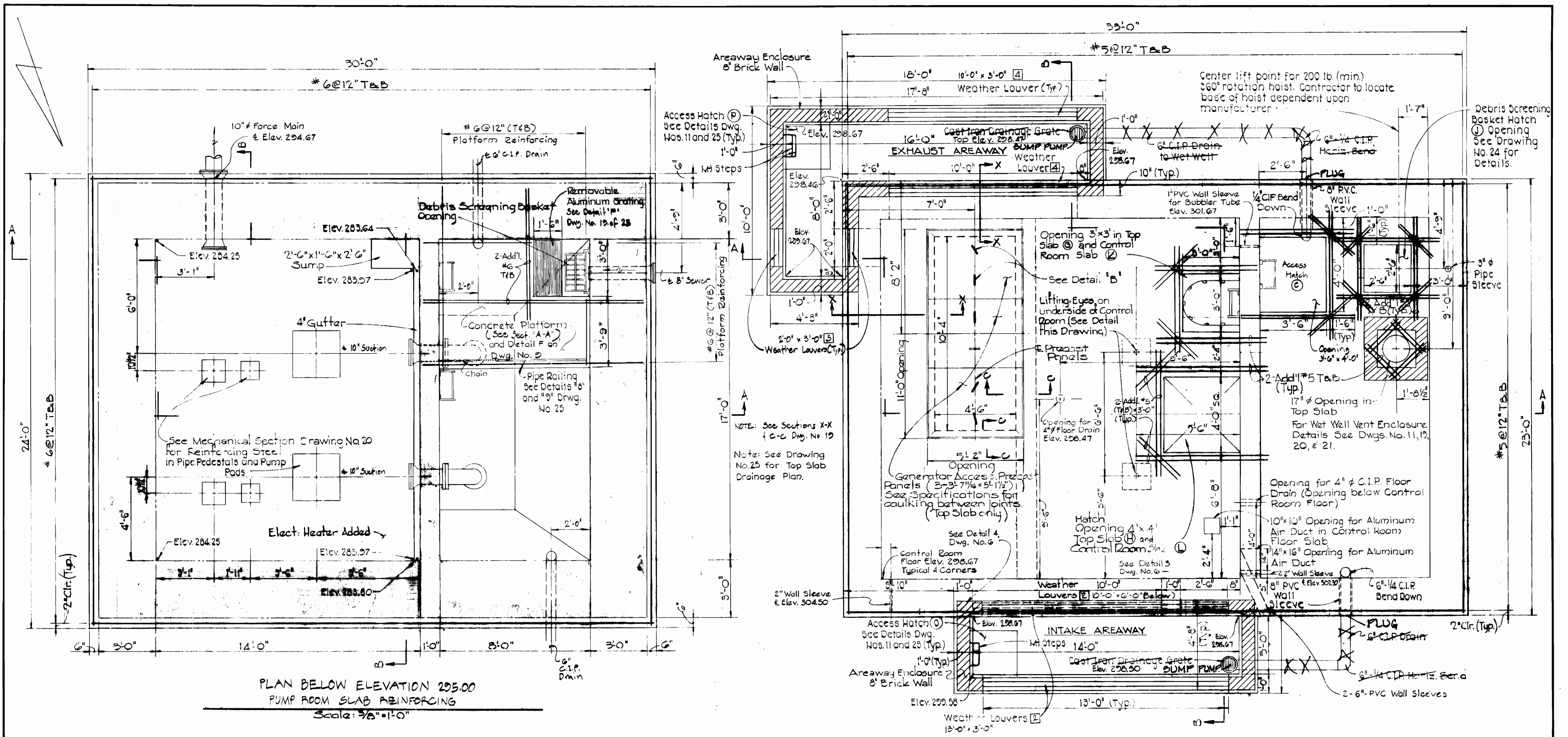
DRAWING NO. 17 OF 25  
SCALE AS SHOWN  
Designed: PWK  
Drafted: REC  
Checked: REP



Scale  
Horizontal: 1"=100'  
Vertical: 1"=10'

EPA NO. C-240593-01  
CONTRACT NO. 745-S  
CAPITAL PROJECT S-4-6037  
MOUNT HEBRON SEWER MAINS  
PATAPSCO PARK PUMPING STATION



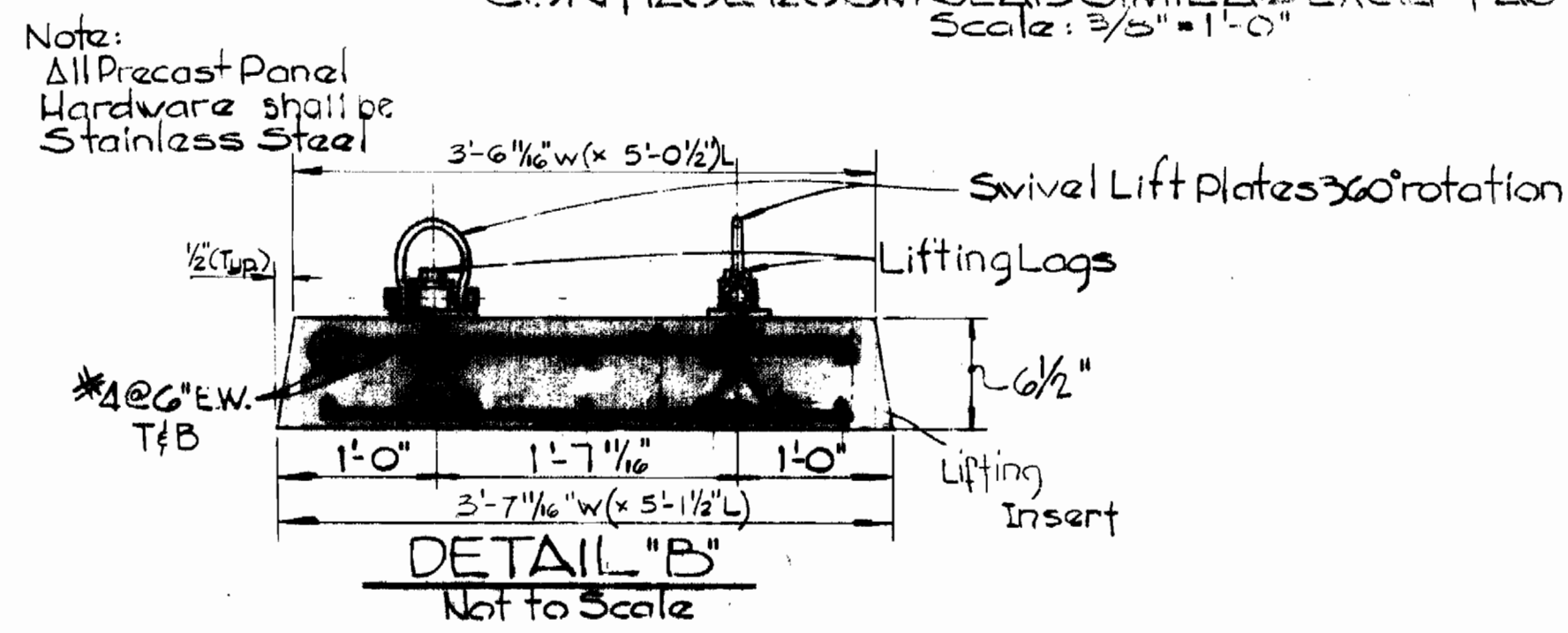


PLAN BELOW ELEVATION 295.00  
PUMP ROOM SLAB REINFORCING  
Scale: 3/8" = 1'-0"

TOP SLAB REINFORCING  
CONTROL ROOM SLAB SIMILAR EXCEPT AS NOTED  
Scale: 3/8" = 1'-0"

**GENERAL STRUCTURAL NOTES**

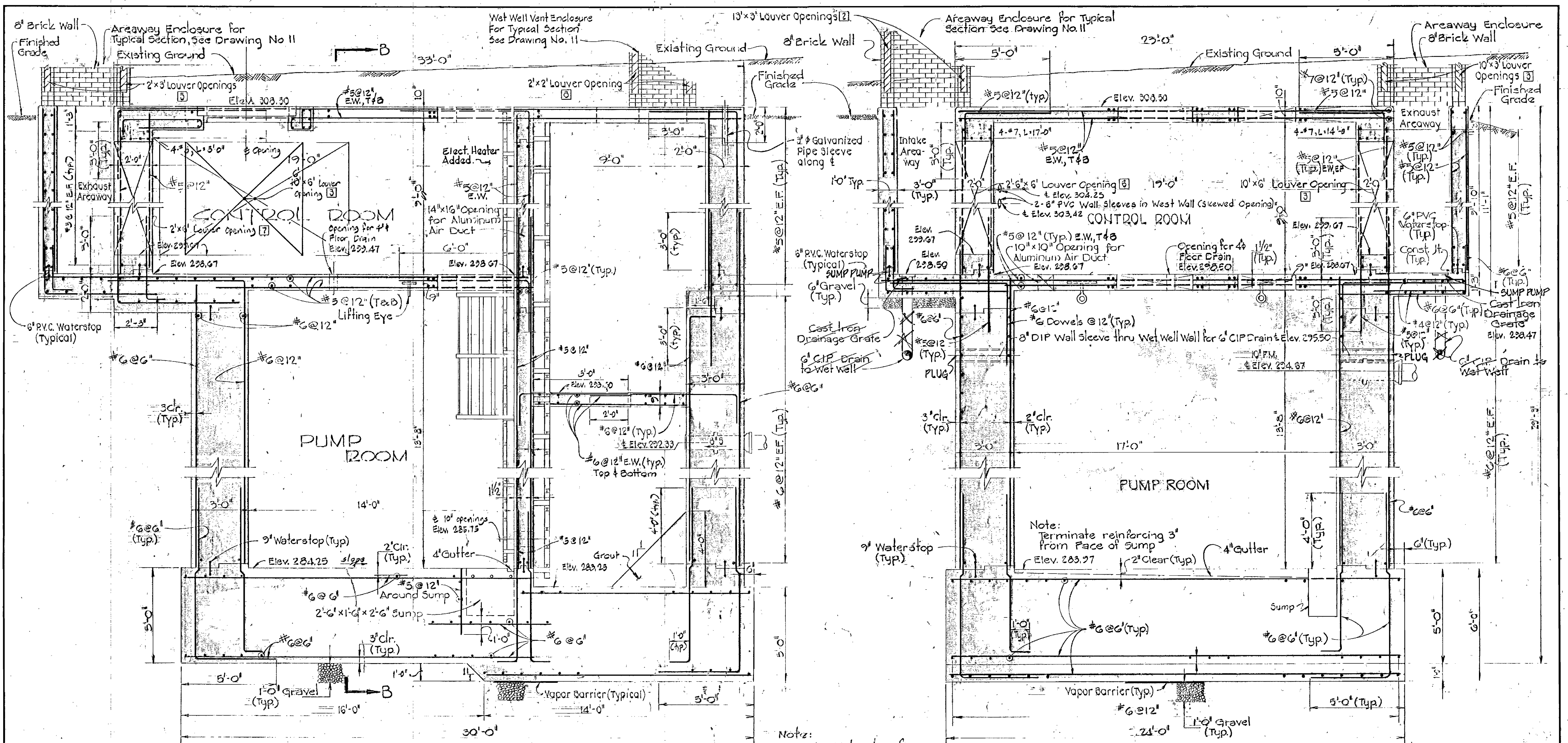
1. DESIGN LIVE LOADS:  
Slabs 100 P.S.F. + Concentrated Equipment Loads. Grating 100 P.S.F.
2. CONCRETE: All concrete work, both plain and reinforced shall be in accordance with the latest A.C.I. Specifications. All Structural Concrete shall have a minimum 28 day strength of 3,500 P.S.I. Class "C" shall 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" x 1" unless otherwise noted. All Pipe Sleeves, Conduits, Floor Boxes, Frames, etc. shall be placed before concrete is placed. All openings thru concrete shall be watertight. See Mechanical and Electrical Drawings for openings not shown or located on Structural Plans.
3. 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 95% of maximum density in accordance with A.A.S.H.T.O. designation T-100 Method-C. Contractor shall adequately protect all walls during backfill operations.
4. 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 anchor bolts, nuts and washers shall be Alloy No. 300.
5. FLOATATION:  
The entire structure, complete in place, is required to offset uplift due to hydrostatic pressure.
6. MISCELLANEOUS:  
All Aluminum Surfaces in contact with concrete or steel shall be coated prior to erection (See specifications). There shall be no contact between dissimilar metals or aluminum and concrete.
7. 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. 318-77.



STATE OF MARYLAND  
JAMES M. HEBRON, JR.  
PROFESSIONAL ENGINEER  
EPA NO. C-240593-01  
CONTRACT NO. 745-S  
CAPITAL PROJECT S-4-6037  
MOUNT HEBRON SEWER MAINS  
PATAPSCO PARK PUMPING STATION

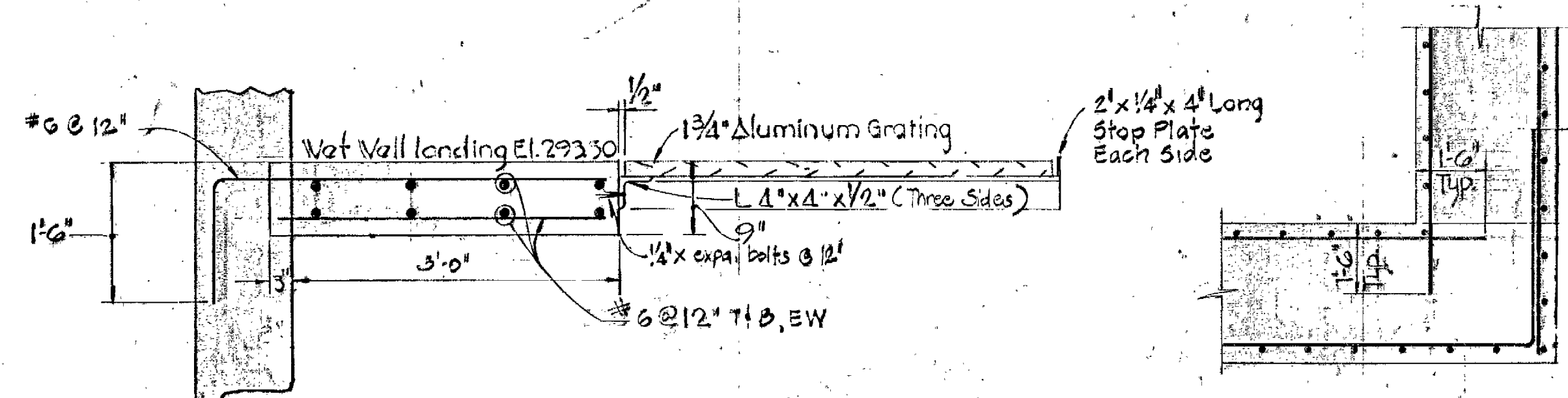
PURDUM & JESCHKE ENGINEERS 1023 N. CALVERT ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 2-5-81	CONTRACT NO. 745-S CAPITAL PROJECT NO. S-4-6037	STRUCTURAL PLANS AND DETAIL PATAPSCO PARK PUMPING STATION	MOUNT HEBRON SEWER MAINS ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND	DRAWING NO. 18 OF 25	SCALE AS SHOWN	Designed: BCC Drafted: JFT Checked: BCC NOV. 9, 1979
	DATE: 2-5-81 CHIEF-BUREAU OF ENGINEERING	DATE: 2-3-81 CHIEF-BUREAU OF ENGINEERING					





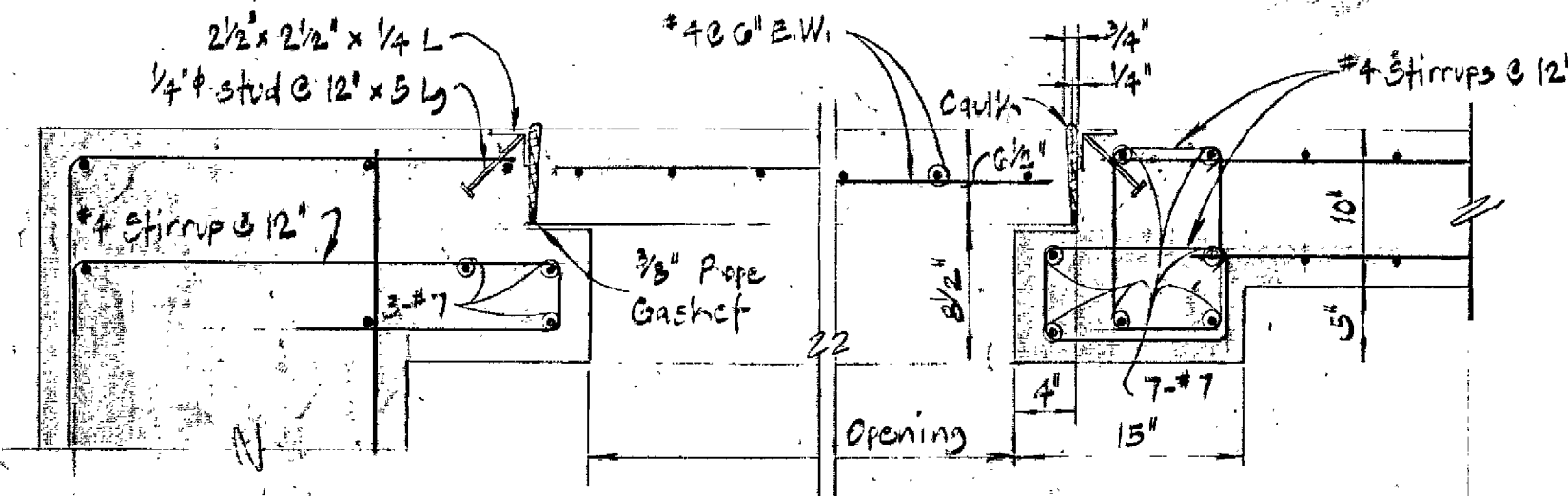
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Scale: 3/8" = 1'-0"

SECTION "B-B"  
Scale: 3/8" = 1'-0"



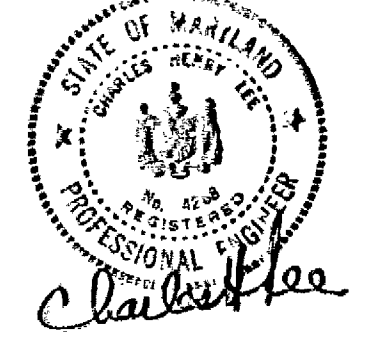
DETAIL - F  
No Scale

TYPICAL REINFORCING DETAIL AT WALL CORNERS  
Scale: 3/8" = 1'-0"



SECTION X-X

SECTION C-C



EPA NO. C-240593-01  
CONTRACT NO. 745-S  
CAPITAL PROJECT S-4-6037  
MOUNT HEBRON SEWER MAINS  
PATAPSCO PARK PUMPING STATION

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

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
Date: 2-2-81  
Director of Public Works

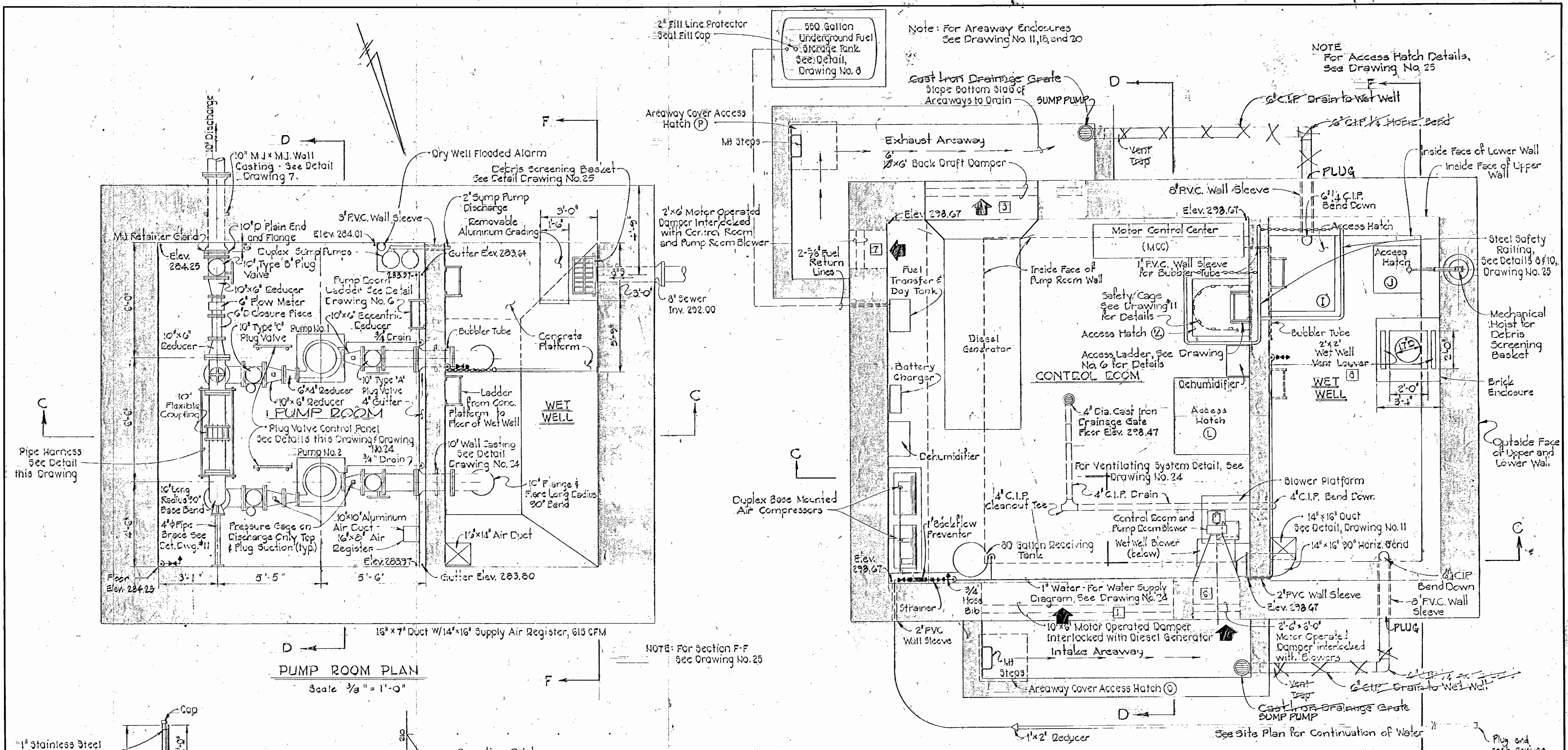
CONTRACT NO. \_\_\_\_\_  
CAPITAL PROJECT NO. \_\_\_\_\_

STRUCTURAL SECTIONS  
PATAPSCO PARK  
PUMPING STATION

MOUNT HEBRON SEWER MAINS  
ELECTION DISTRICT NO. 2  
HOWARD COUNTY MARYLAND

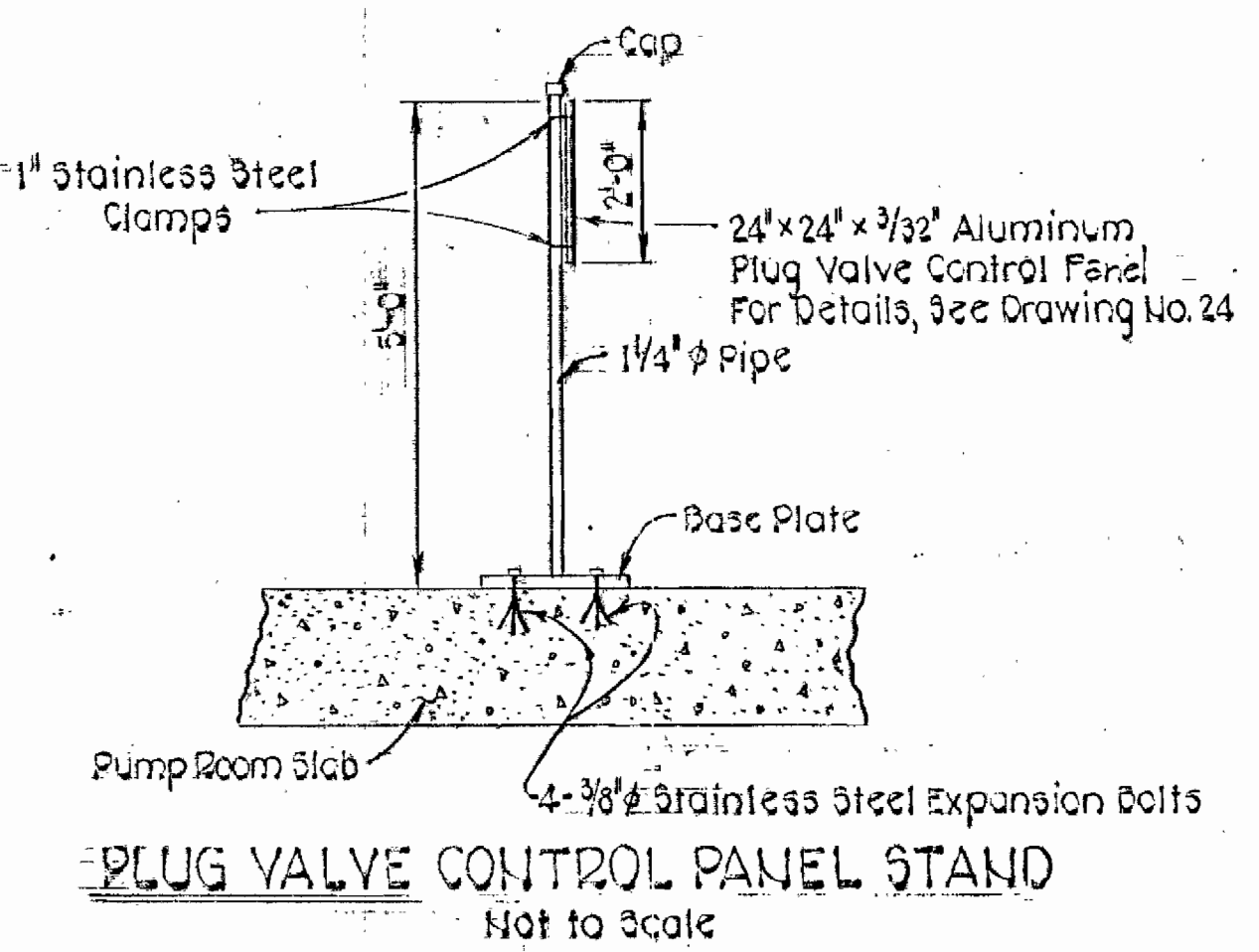
DRAWING NO. 19 OF 25	SCALE AS SHOWN	Designed: BCC Drafted: JFT Checked: BCC
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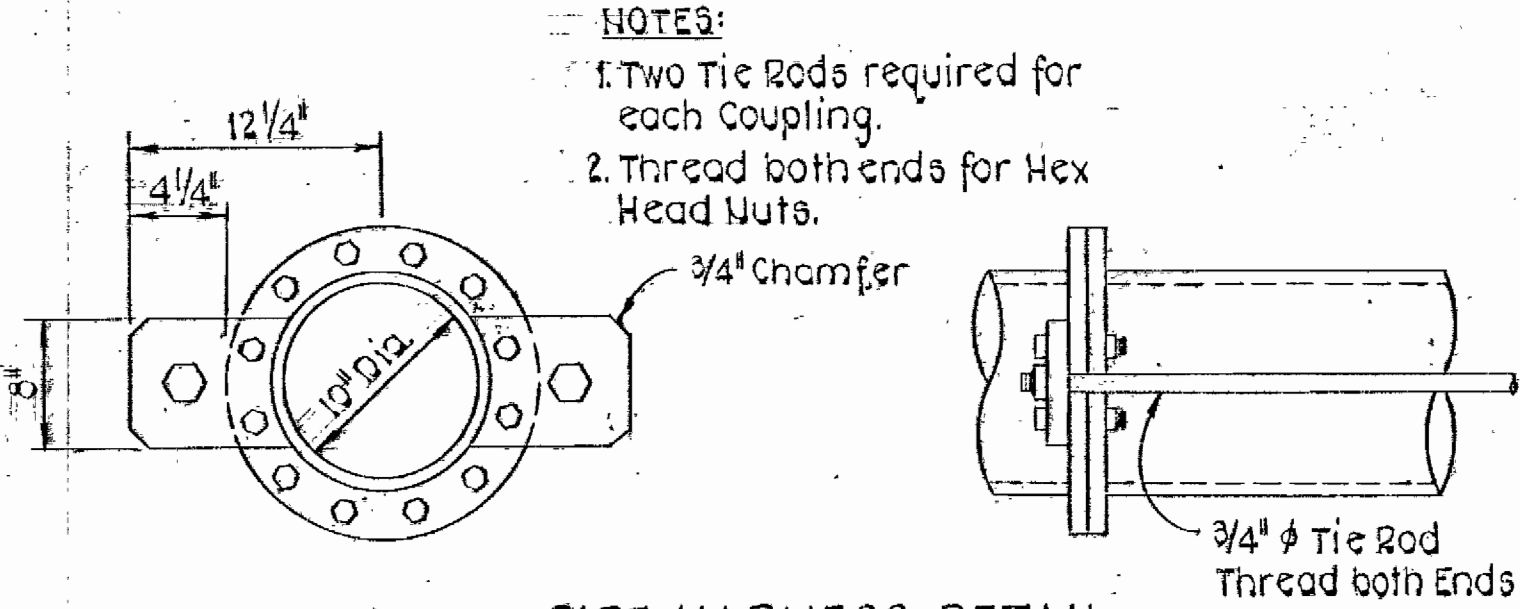
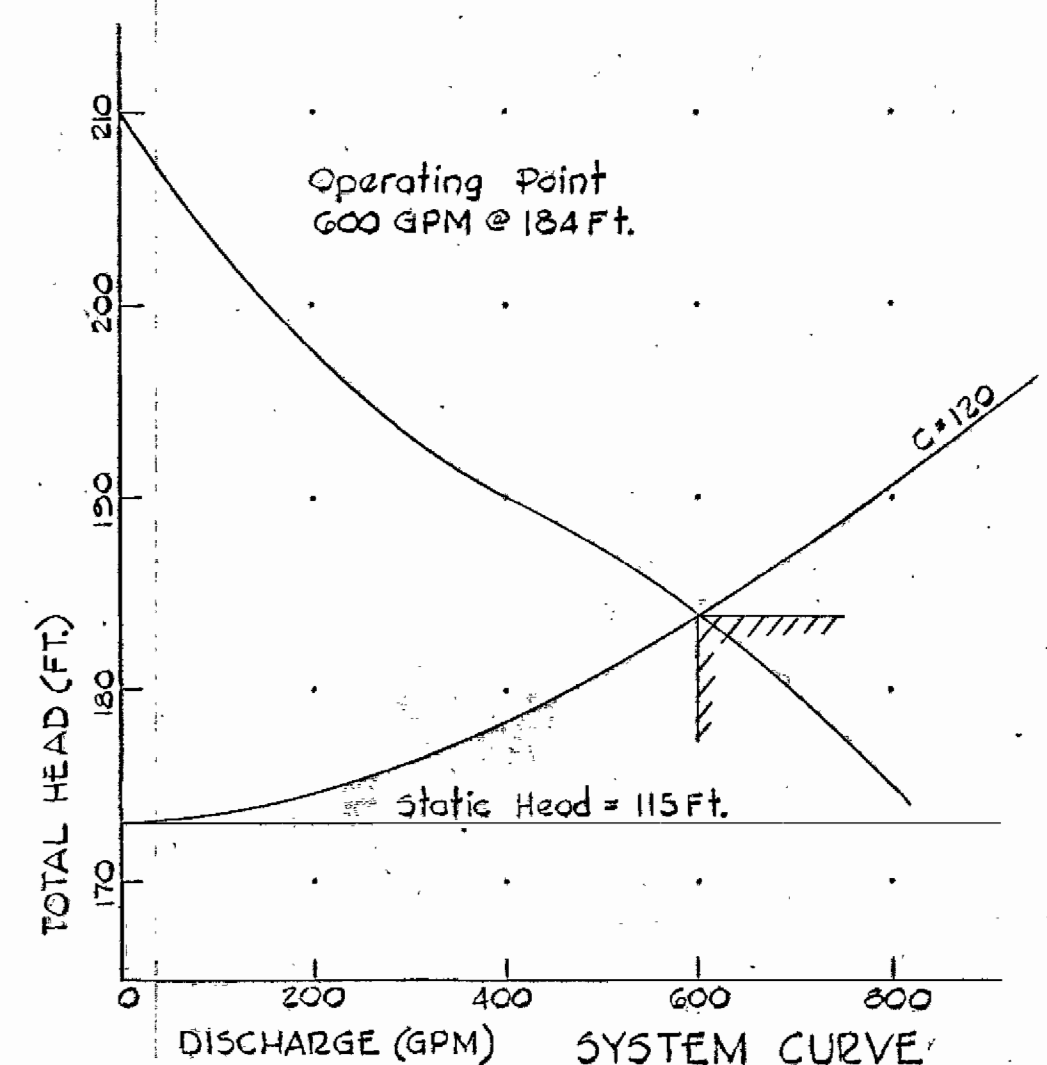


**PUMP ROOM PLAN**  
Scale: 3/8" = 1'-0"

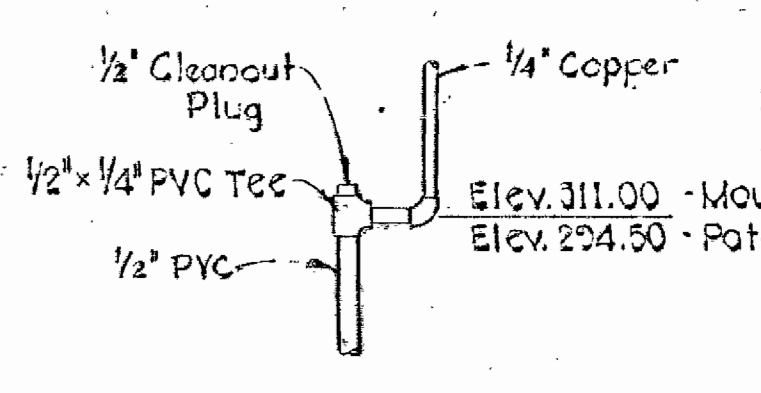
**CONTROL ROOM PLAN**  
Scale: 3/8" = 1'-0"



**PLUG VALVE CONTROL PANEL STAND**  
Not to Scale



**PIPE HARNESS DETAIL**  
Not to Scale



**BUBBLER TRANSITION DETAIL**  
Not to Scale

- NOTES:**
- Two Tie Rods required for each Coupling.
  - Thread both ends for Hex Head Nuts.

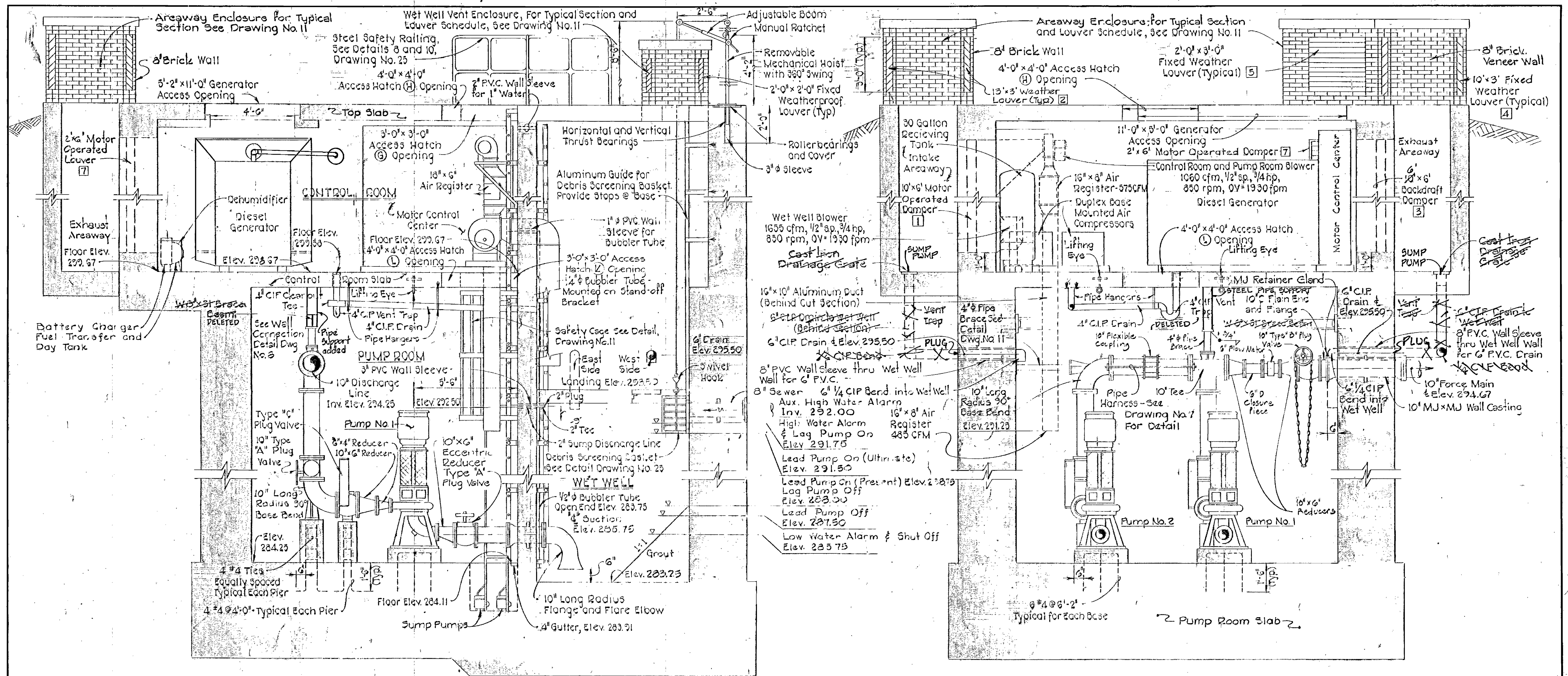
**NOTE:** Bubblers shall terminate at a point 6" above the bottom of the Wet Well.



EPA NO. C-240593-01  
CONTRACT NO. 745-S  
CAPITAL PROJECT S-4-6037  
MOUNT HEBRON SEWER MAINS  
PATAPSCO PARK PUMPING STATION

<b>PURDUM &amp; JESCHKE</b> ENGINEERS 1023 N. CALVERT ST. BALTIMORE, MARYLAND	<b>DEPARTMENT OF PUBLIC WORKS</b> HOWARD COUNTY, MARYLAND 2-4-81 DATE	CONTRACT NO. 745-S CAPITAL PROJECT NO. S-4-6037	MECHANICAL PLANS AND DETAILS PATAPSCO PARK PUMPING STATION	MOUNT HEBRON SEWER MAINS ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND	<b>DRAWING</b> NO. 20 OF 25	<b>SCALE</b> AS SHOWN	Designed: DJD Drafted: NLS Checked: REP
					W.O. 3367 20		





SECTION 'C-C'  
Scale: 3/8" = 1'-0"

SECTION 'D-D'  
Scale: 3/8" = 1'-0"



*Robert B. ...*  
 CHIEF - BUREAU OF UTILITIES  
 DATE: 2-4-81

*...*  
 DIRECTOR OF PUBLIC WORKS DATE: 2-5-81  
 CHIEF - BUREAU OF ENGINEERING DATE: 2-23-81

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

CONTRACT NO. 745-S  
 CAPITAL PROJECT NO. S-4-6037

MECHANICAL SECTIONS  
 PATAPSCO PARK  
 PUMPING STATION

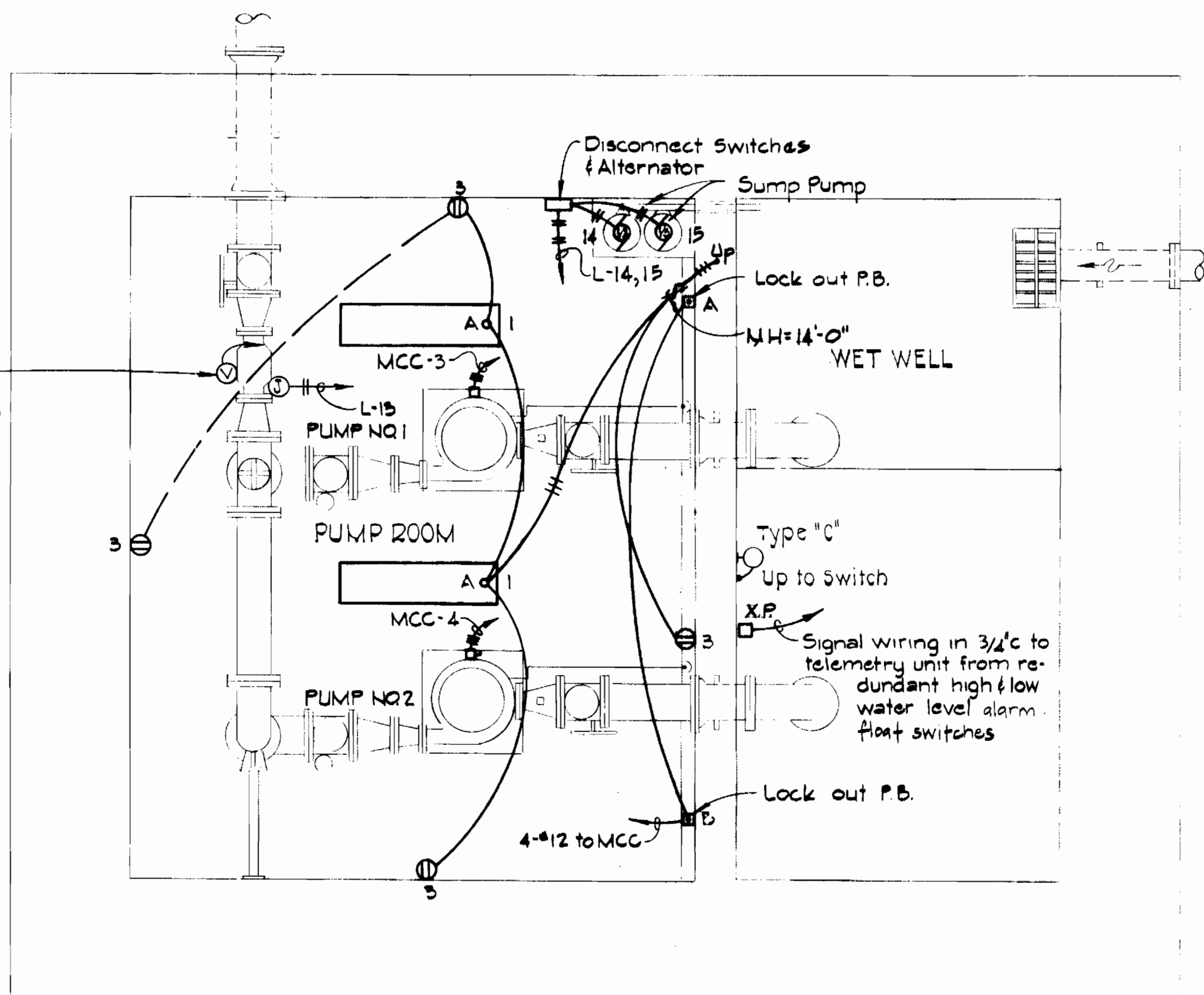
MOUNT HEBRON SEWER MAINS  
 ELECTION DISTRICT NO. 2  
 HOWARD COUNTY, MARYLAND

DRAWING NO. 21	SCALE AS SHOWN	Designed: D.J.D.
OF 25		Drafted: N.L.S.
		Checked: REP

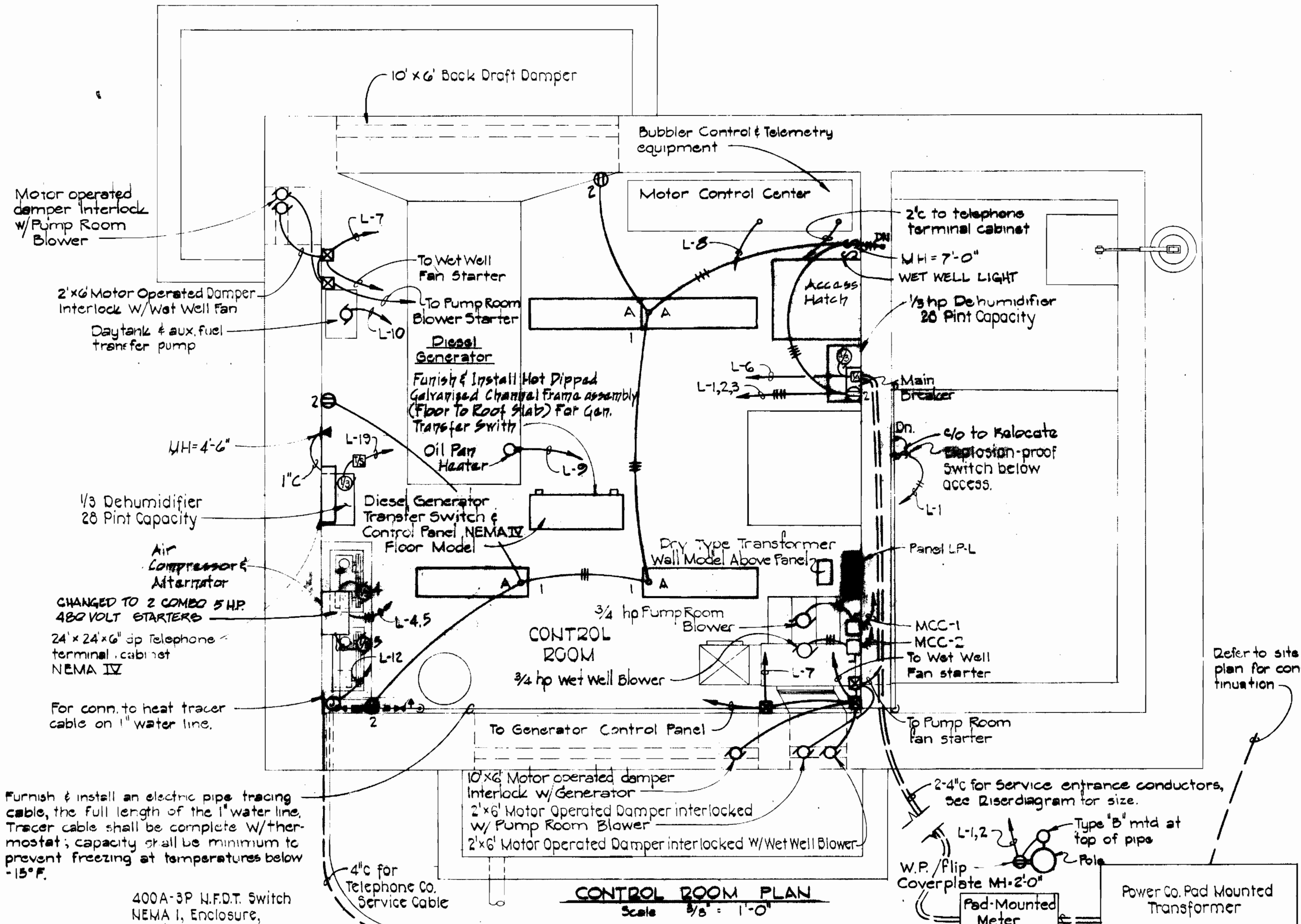
EPA NO. C-240593-01  
 CONTRACT NO. 745-S  
 CAPITAL PROJECT S-4-6037  
 MOUNT HEBRON SEWER MAINS  
 PATAPSCO PARK PUMPING STATION



Coaxial cable  
2G-50U in 3/4" C  
to Magnetic Flow  
Meter in MCC

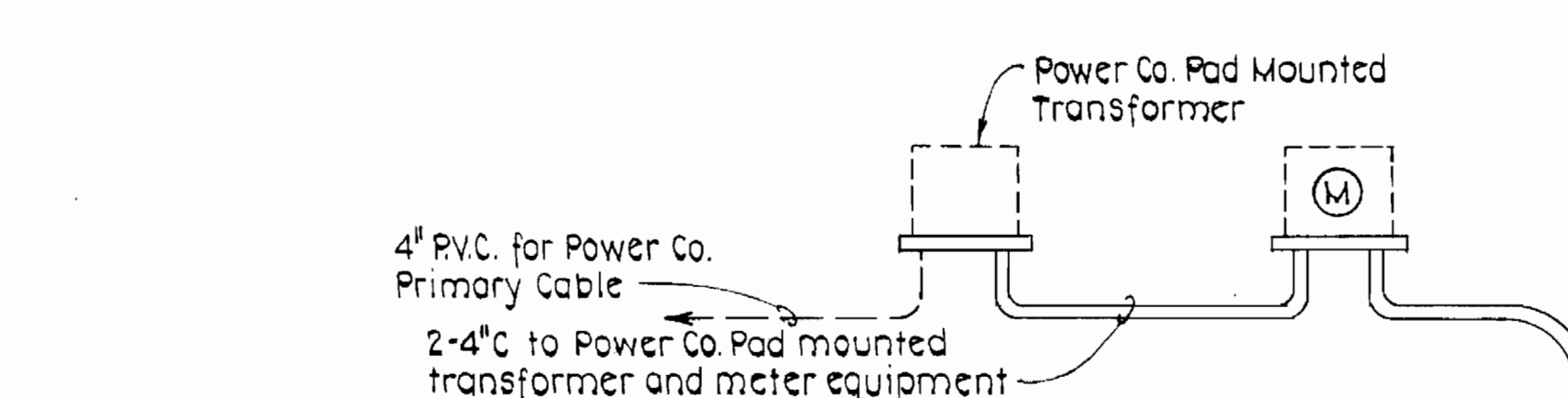


PUMP ROOM PLAN  
Scale 3/8" = 1'-0"



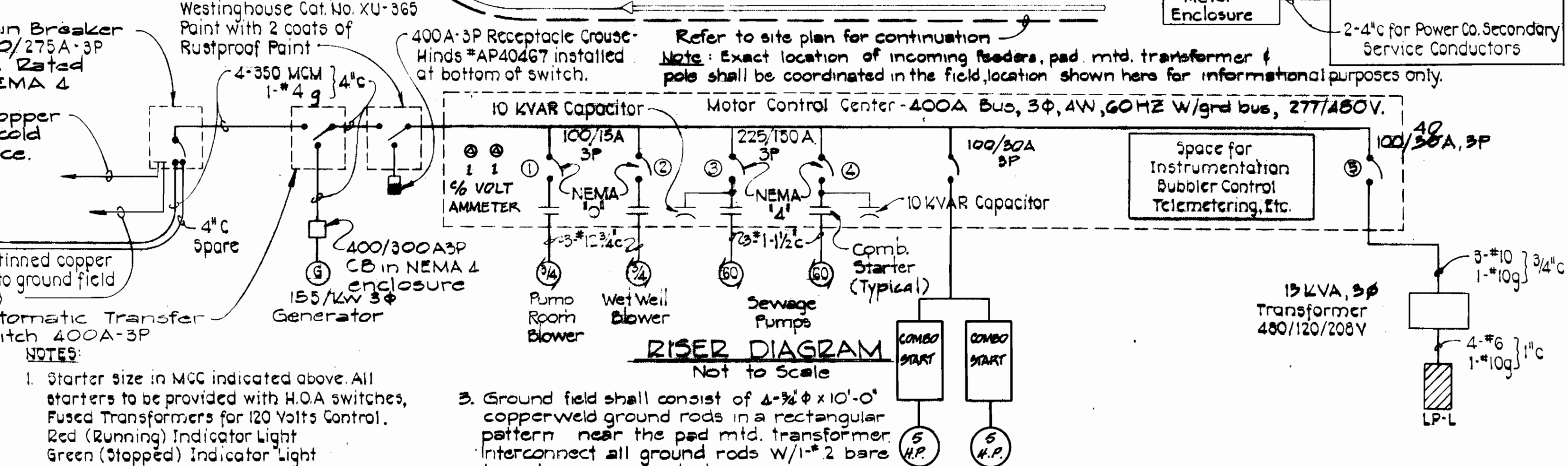
Furnish & install an electric pipe tracing cable, the full length of the 1" water line. Tracer cable shall be complete w/thermostat; capacity shall be minimum to prevent freezing at temperatures below -15°F.

Refer to site plan for continuation



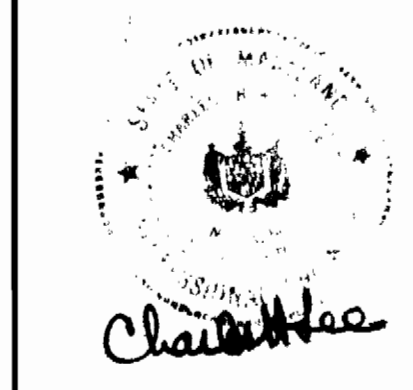
LIGHTING FIXTURE SCHEDULE				
TYPE	DESCRIPTION	LAMP	MOUNTING	CATALOG NO.
A	4' Fluorescent U.L. listed enclosed and gasketed with clear acrylic diffuser & 0°F ballast	2-40W T-12	Stem Mtg.	Benjamin FA-2224-4R, Paybrite TR 4124, or Equal.
B	Incandescent, U.L. listed enclosed and gasketed with red glass globe and guard w/ lamp life extenders	1-200W A-23	Wall Mtg.	Crouse-Hinds YX HBF-22G Appleton YPWB-1079 G, or Equal.
C	Incandescent Explosion-Proof	1-200W A-23	Wall Mtg.	Benjamin 7604-BX Appleton AN 15150 or equal.

NOTE: 1) Time Clocks shall be Paragon 4001-00, Torq. or Equal  
2) Pole for Type B Fixture shall be Wood, 1 1/2" Class A w/ Pentachlorothane Treatment.



- NOTES:
- Starter size 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
  - Starters for Sewage Pumps to be provided with alternator similar to BUL 700 Type "B" (Allen-Bradley), Square D Co, or equal installed in MCC.
  - Ground field shall consist of 4-#6 x 10'-0" copperweld ground rods in a rectangular pattern near the pad mtd. transformer. Interconnect all ground rods w/1-#2 bare tinned copper conductor.

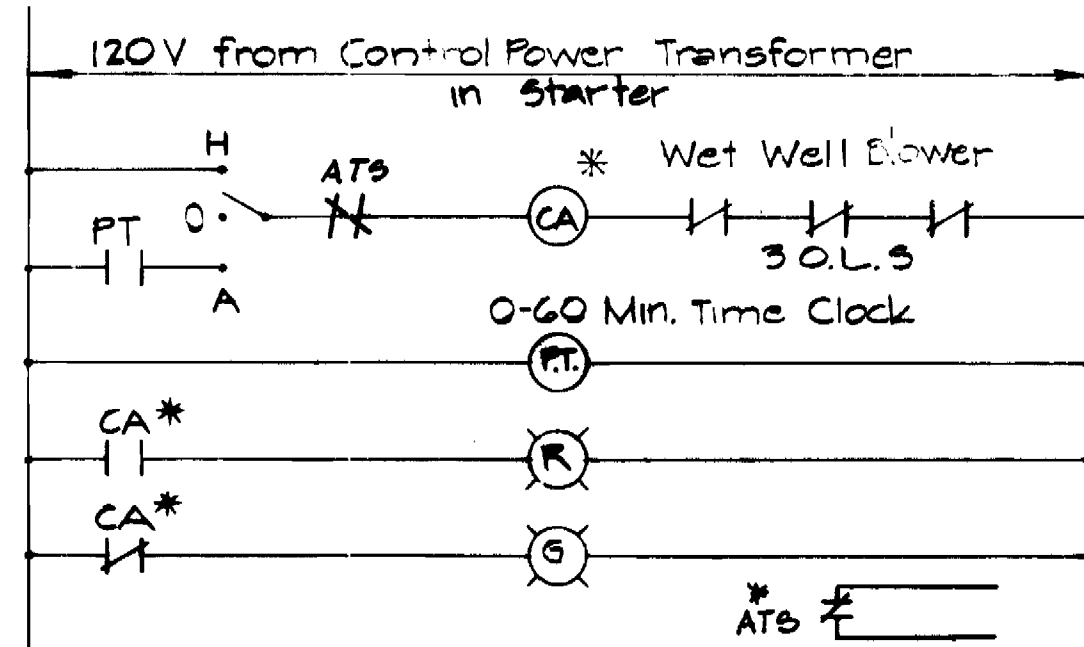
EPA NO. C-240593-01  
CONTRACT NO. 745-S  
CAPITAL PROJECT S-4-6037  
MOUNT HEBRON SEWER MAINS  
PATAPSCO PARK PUMPING STATION





ELECTRICAL LEGEND	
SYMBOL	DESCRIPTION
	Fixture-Fluorescent, Letter indicates Type
	Fixture-Incandescent-Ceiling/Wall Bracket
S, S <sub>a</sub>	Switch - Single Pole - M.H. 4'-0" Subscript Denotes Outlets Controlled
	Receptacle - 20A, 125V - Duplex - M.H. 3'-0"
	Receptacle - 20A, 125V - Single - M.H. 3'-0"
	Receptacle - Clock Hanger 15A, 125V, M.H. 7'-6"
	Junction Box
	Motor - Horsepower As Indicated
	Thermostat - M.H. 5'-0"
	Percentage Timer
	Time Clock - M.H. 5'-6" To Top
	Control Device As Indicated On Plans
	Baseboard Electric Heater
	Panelboard - 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 - On Ceiling Or Wall 2" x 1/2" 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. 1'-0" Above Floor
	Ground Rod, 3/4" x 10'-0" Copper-clad Steel
	Exothermically Welded Connection
	Solenoid Valve
	Fixture - Mercury Vapor
	Combination Magnetic Starter (MCS), All 3Φ Starters
	Contact
	Starter Coil (One Line Diagram)
	Indicating Light - Red - Heavy Duty Type
T.C.	Time Relay Contact (One Line Diagram)
	Time Delay Relay

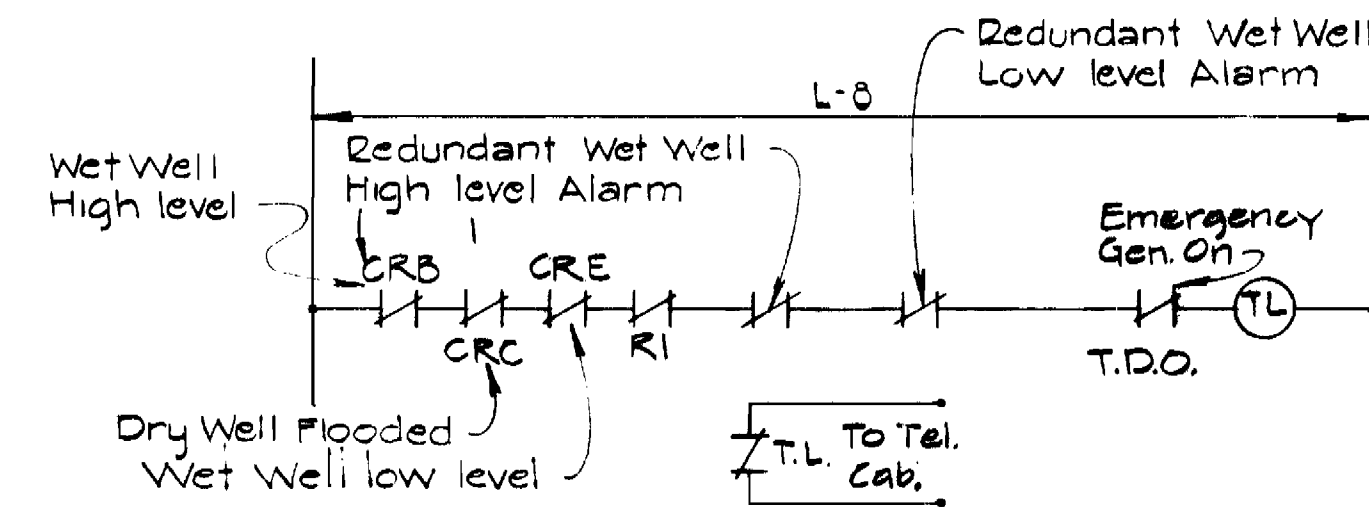
\* Ground Conductor not indicated



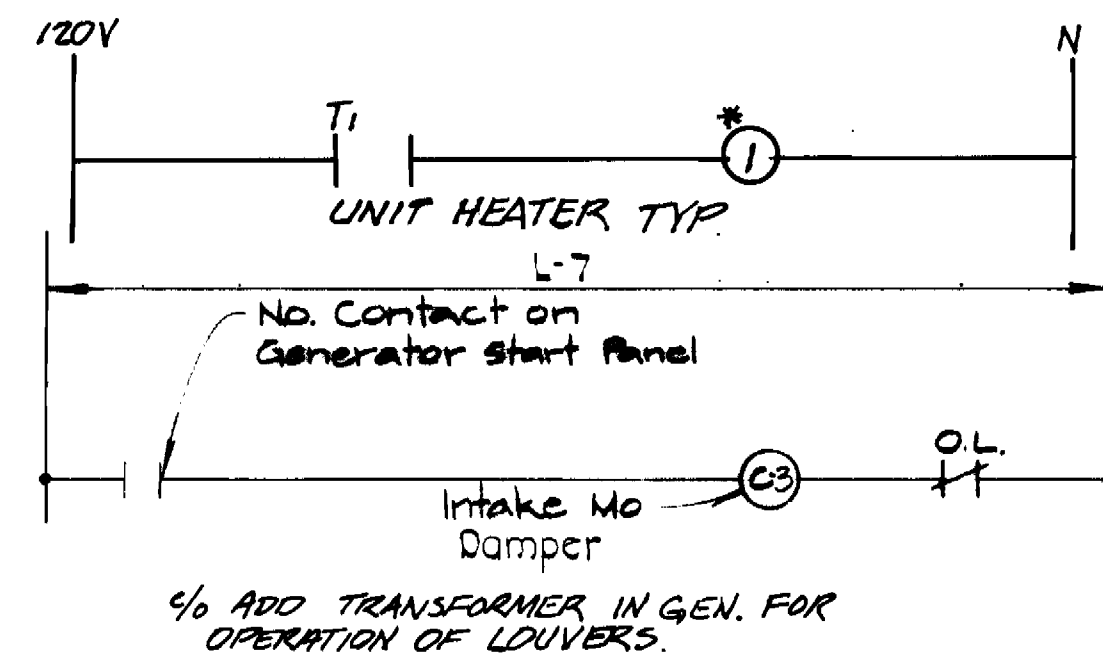
**PUMP ROOM AND WET WELL VENT BLOWERS**

\* C.B. for Pump Room Blower

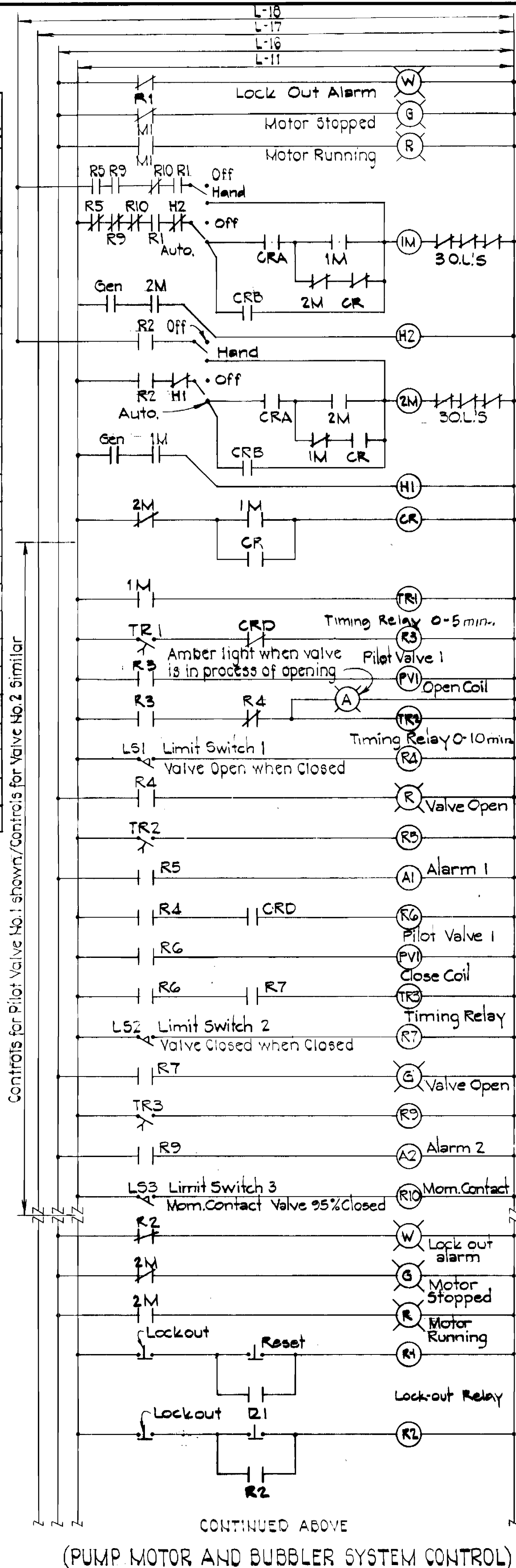
SCHEDULE OF PANEL					
208/120 VOLTS, 3 PHASE, 4 WIRE, 60 AMP MAIN BREAKER, W/EQUIPT GROUND BAR					
NO.	EQUIPMENT SERVED	CIRCUIT BREAKER			REMARKS
		POLES	TRIP	FRAME	
1	Lights Motor Room	1	20A	100	
2	Receptacles Control Room	1	20A	100	
3	Receptacles Pump Room	1	20A	100	
4	Air Compressor DELETED	1	15A	100	
5	Air Compressor DELETED	1	15A	100	
6	Dehumidifier	1	15A	100	
7	Motor Operated Dampers	1	20A	100	
8	Bubbler and Telemetry Control	1	20A	100	
9	Oil Pan Heater	1	20A	100	
10	Fuel Transfer Pump	1	20A	100	
11	Control	1	20A	100	
12	Tracer Cable	1	20A	100	
13	Flowmeter	1	20A	100	
14-15	Sump Pump	1	15A	100	
16-18	Controls	1	20A	100	
19	Dehumidifier	1	15A	100	
20-24	Spares	1	20A	100	
	BREAKER FOR W-1 Heater	2	20A	100	
	" " W-2 "	2	20A	100	



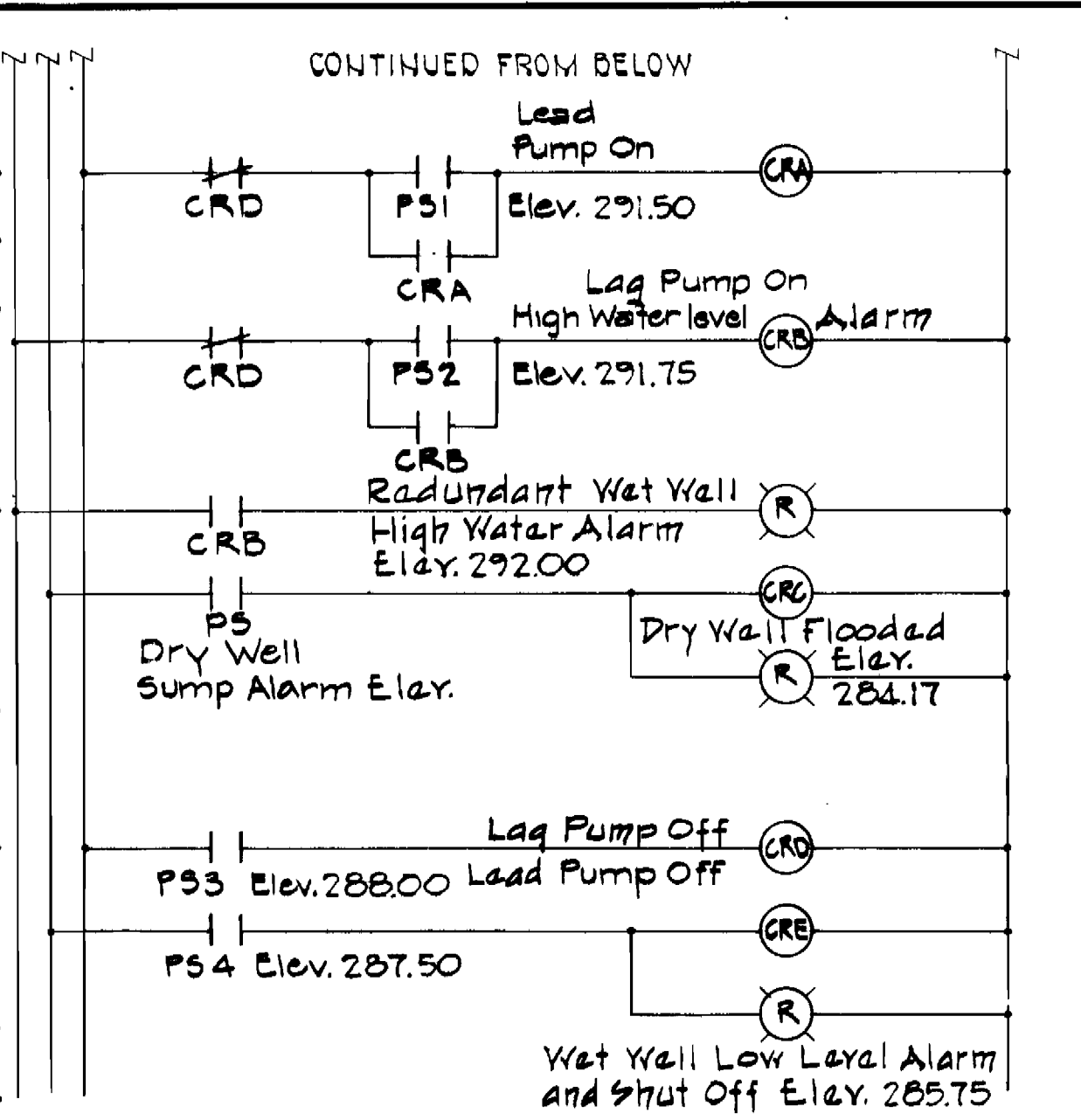
**TELEMETERING ALARM DIAGRAM**



**MOTOR OPERATED DAMPER FOR DIESEL GENERATOR**

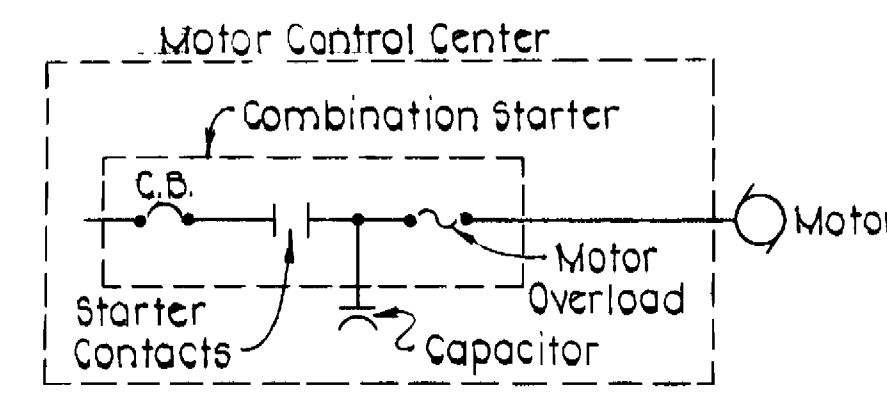


**(PUMP MOTOR AND BUBBLER SYSTEM CONTROL)**

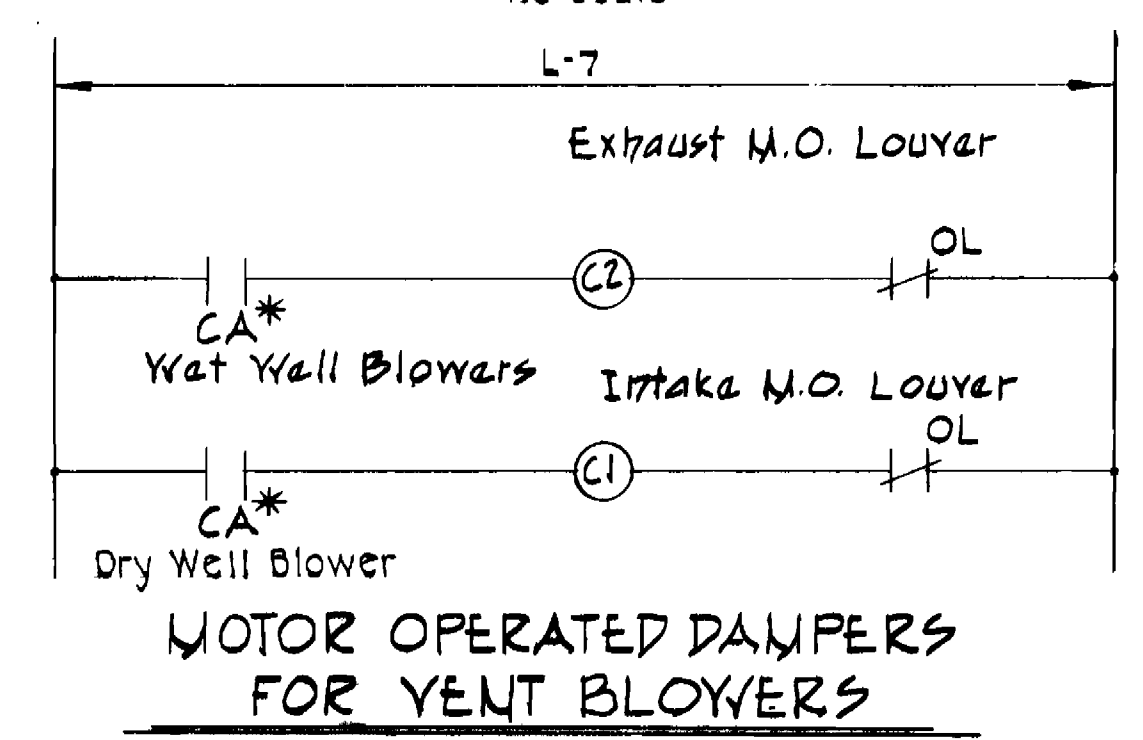


**PUMP MOTOR AND BUBBLER SYSTEM CONTROL**

- NOTES**
- The Contractor shall verify with equipment manufacturers the exact number of control wire meters installing conduits.
  - Check working drawing 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" knockout 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 exposed in the wet well shall be heavy wall aluminum.

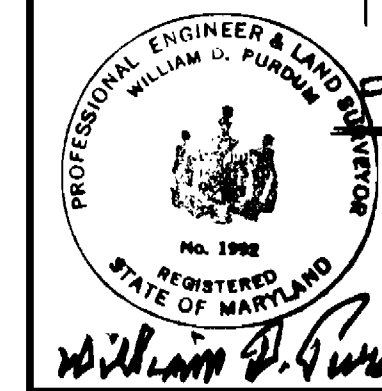


**POWER CORRECTION CAPACITOR INSTALLATION**



**MOTOR OPERATED DAMPERS FOR VENT BLOWERS**

\* C.B. for Pump Room Vent Blower  
EPA NO. C-240593-01  
CONTRACT NO. 745-S  
CAPITAL PROJECT S-4-6037  
MOUNT HEBRON SEWER MAIN  
PATAPSCO PARK PUMPING STATION



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

**DEPARTMENT OF PUBLIC WORKS**  
HOWARD COUNTY, MARYLAND  
DIRECTOR OF PUBLIC WORKS  
DATE: 2-5-81

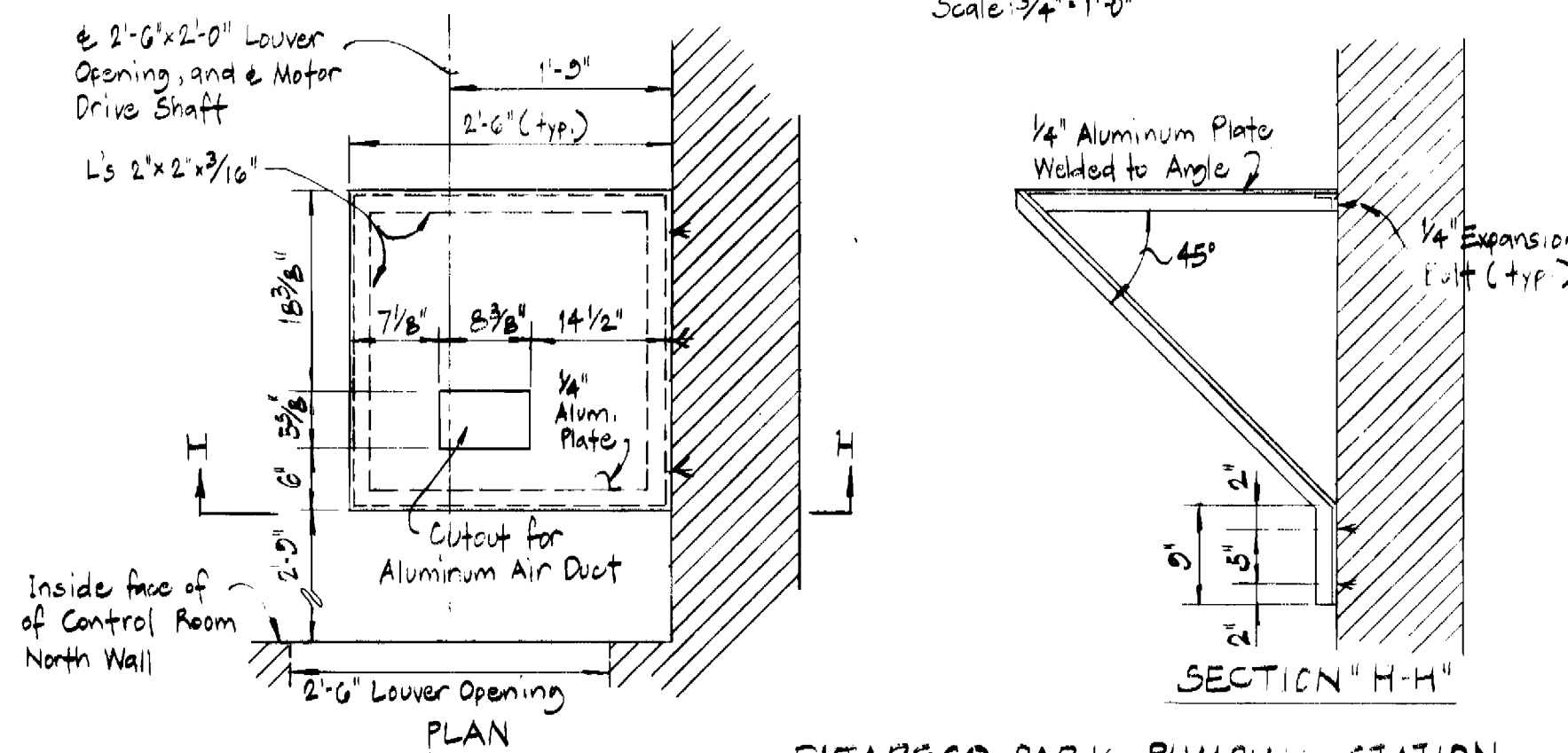
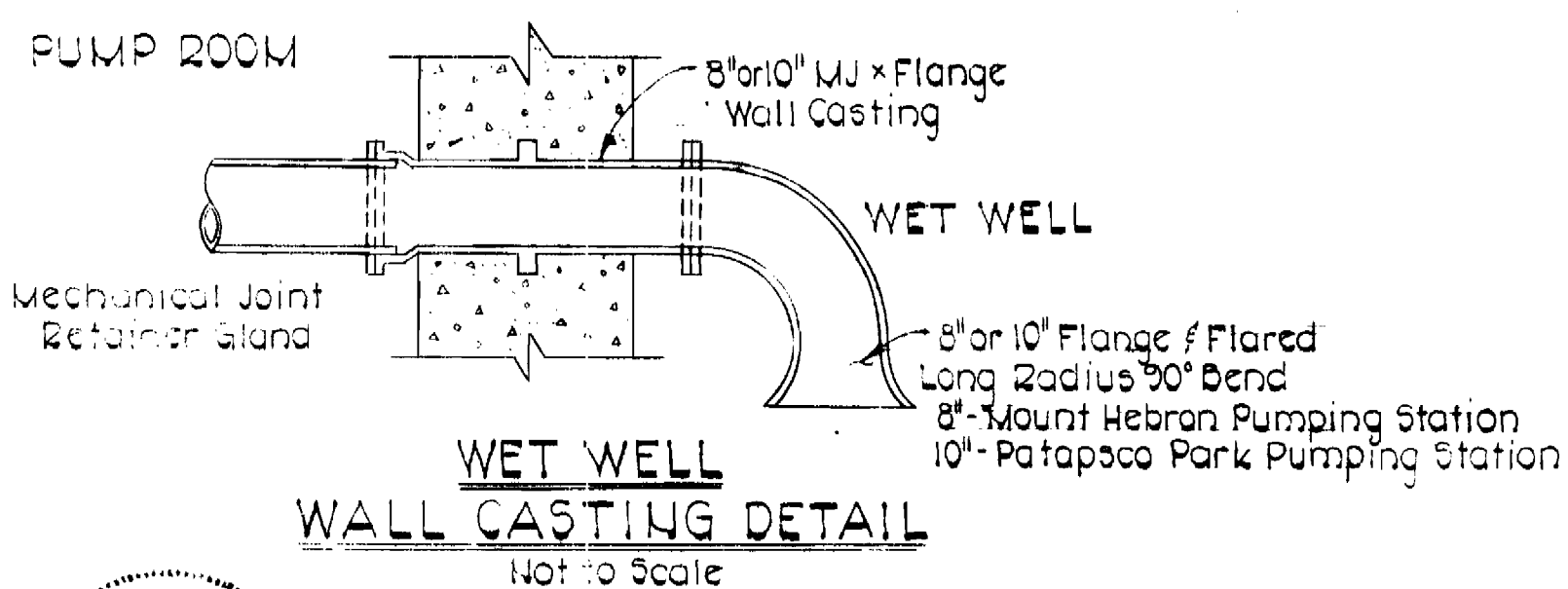
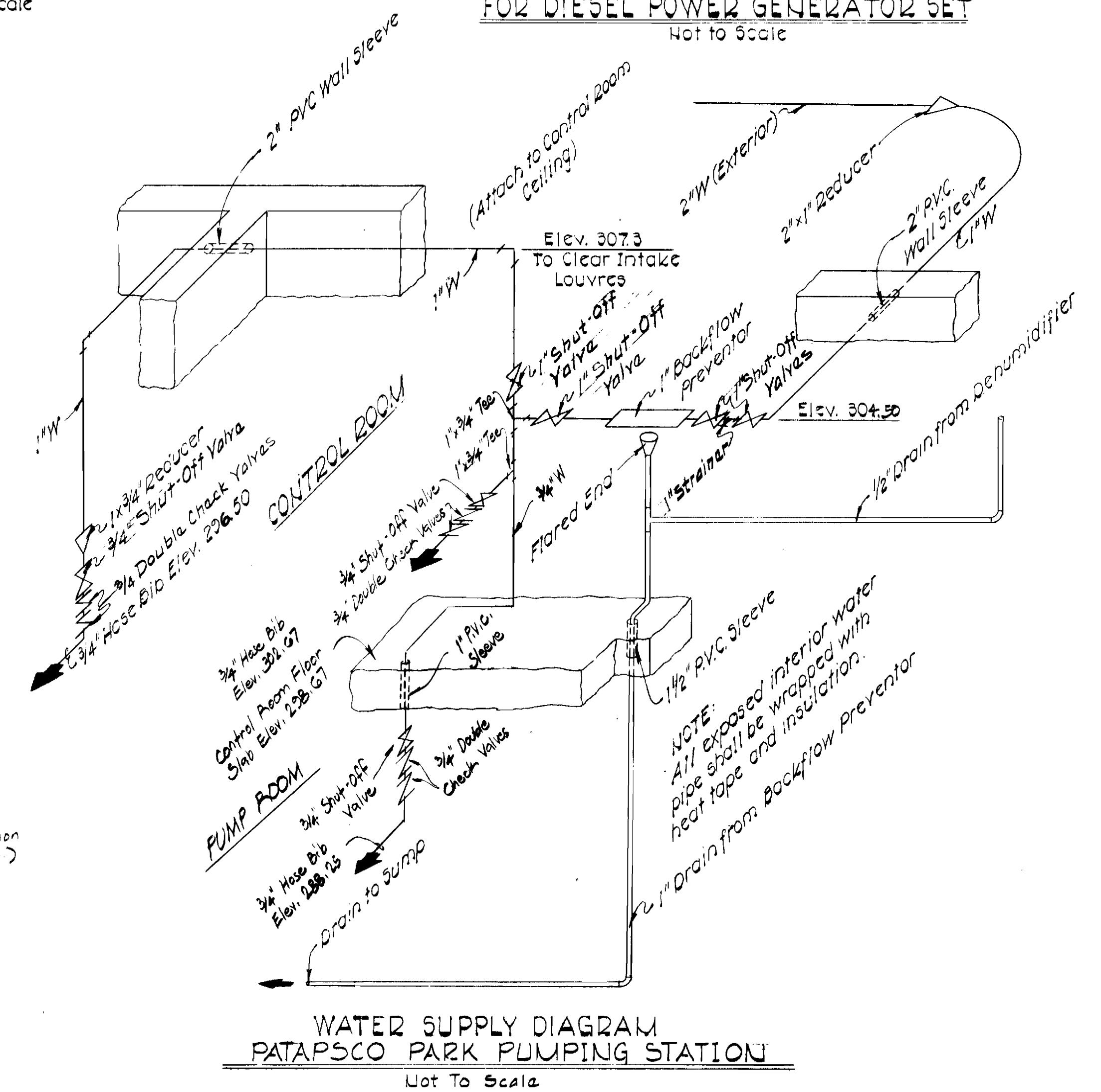
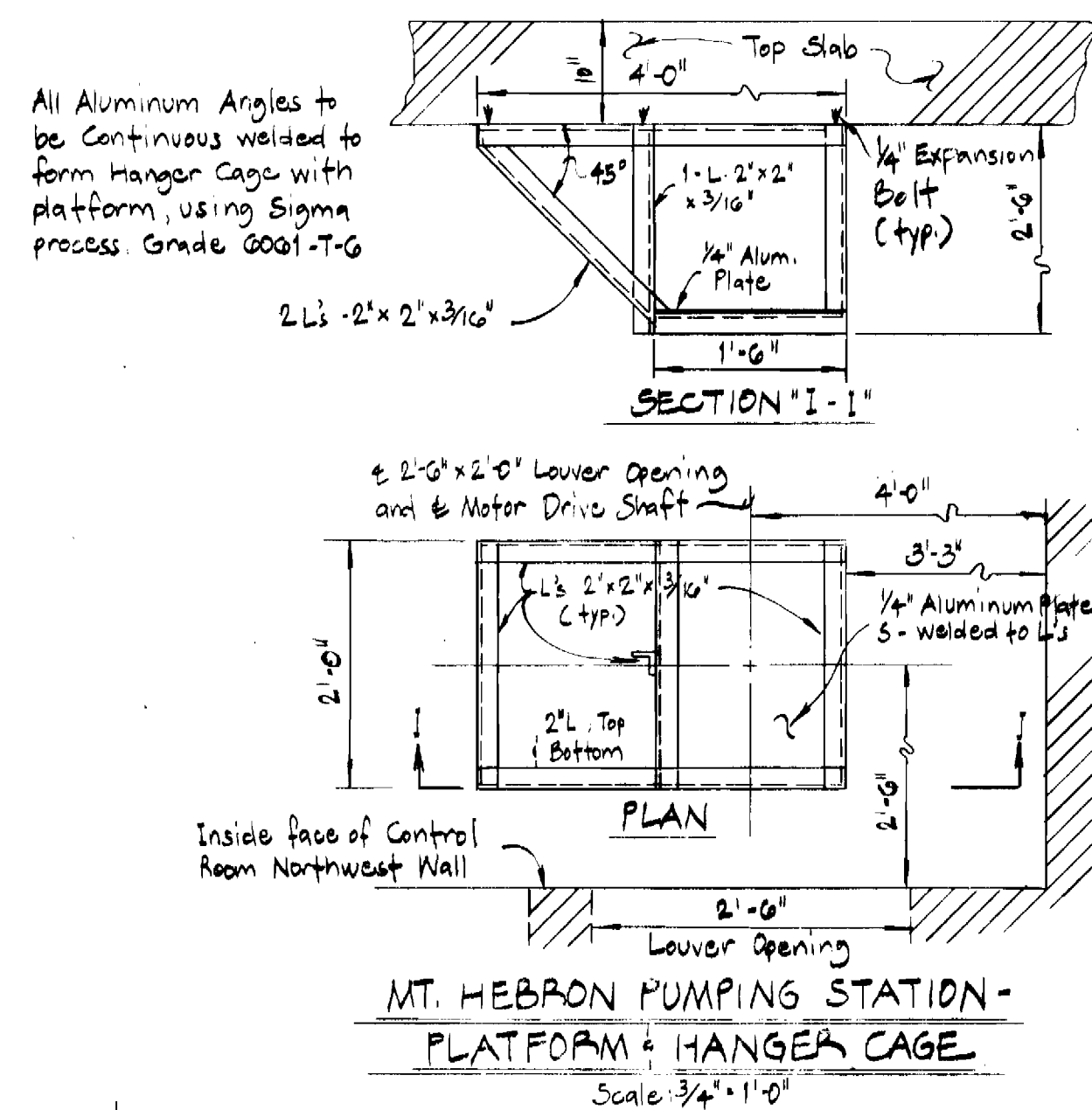
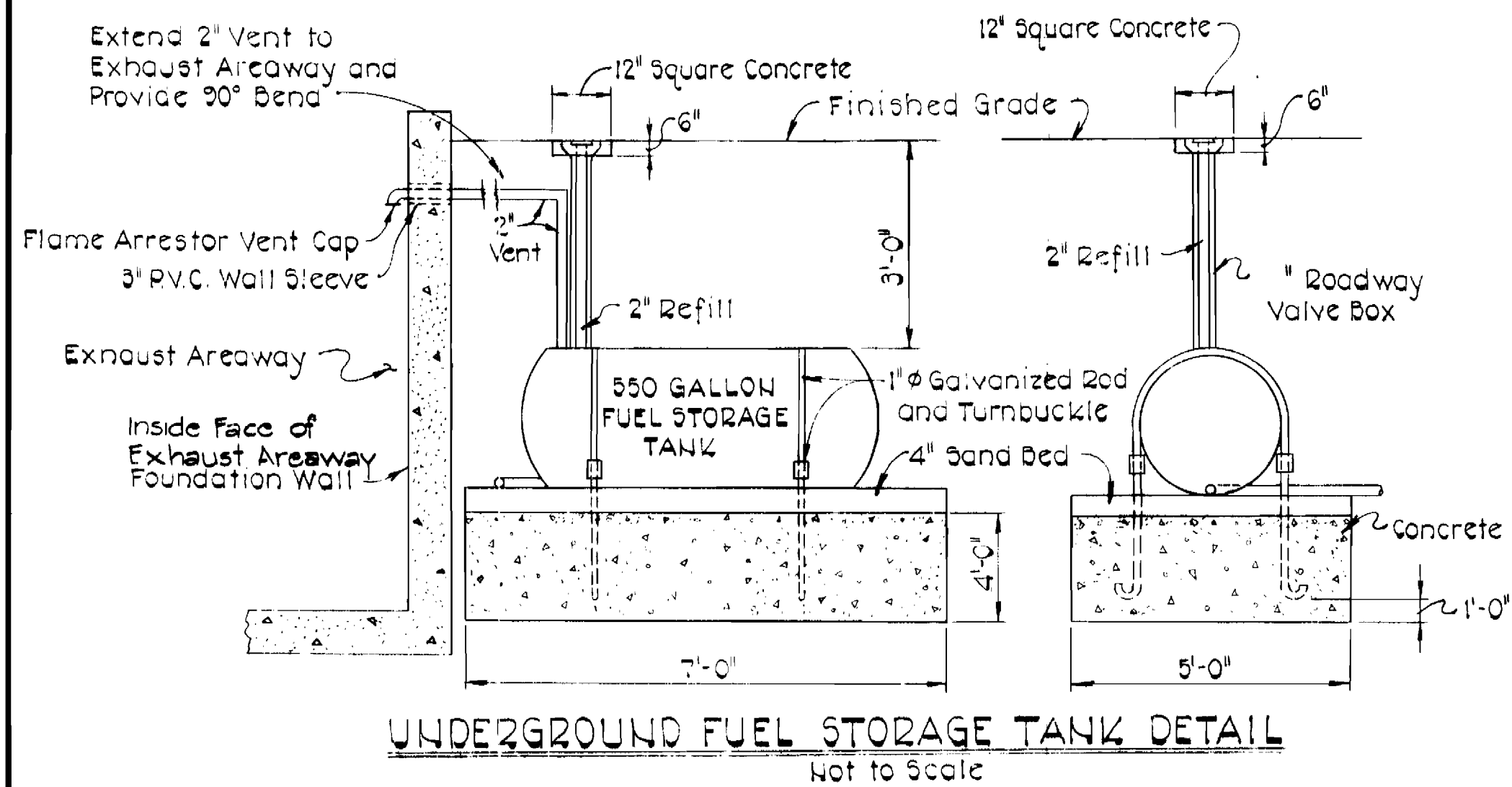
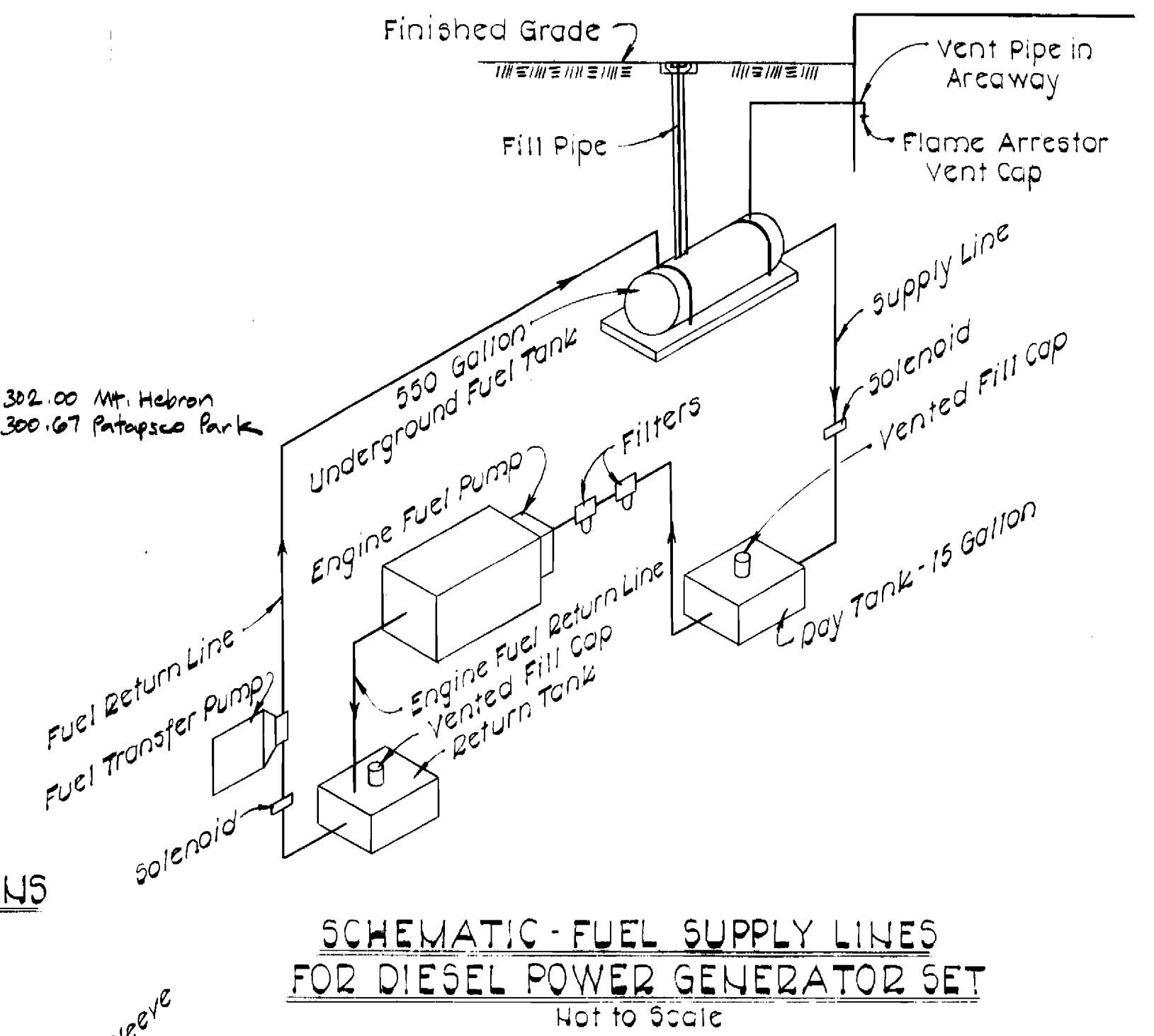
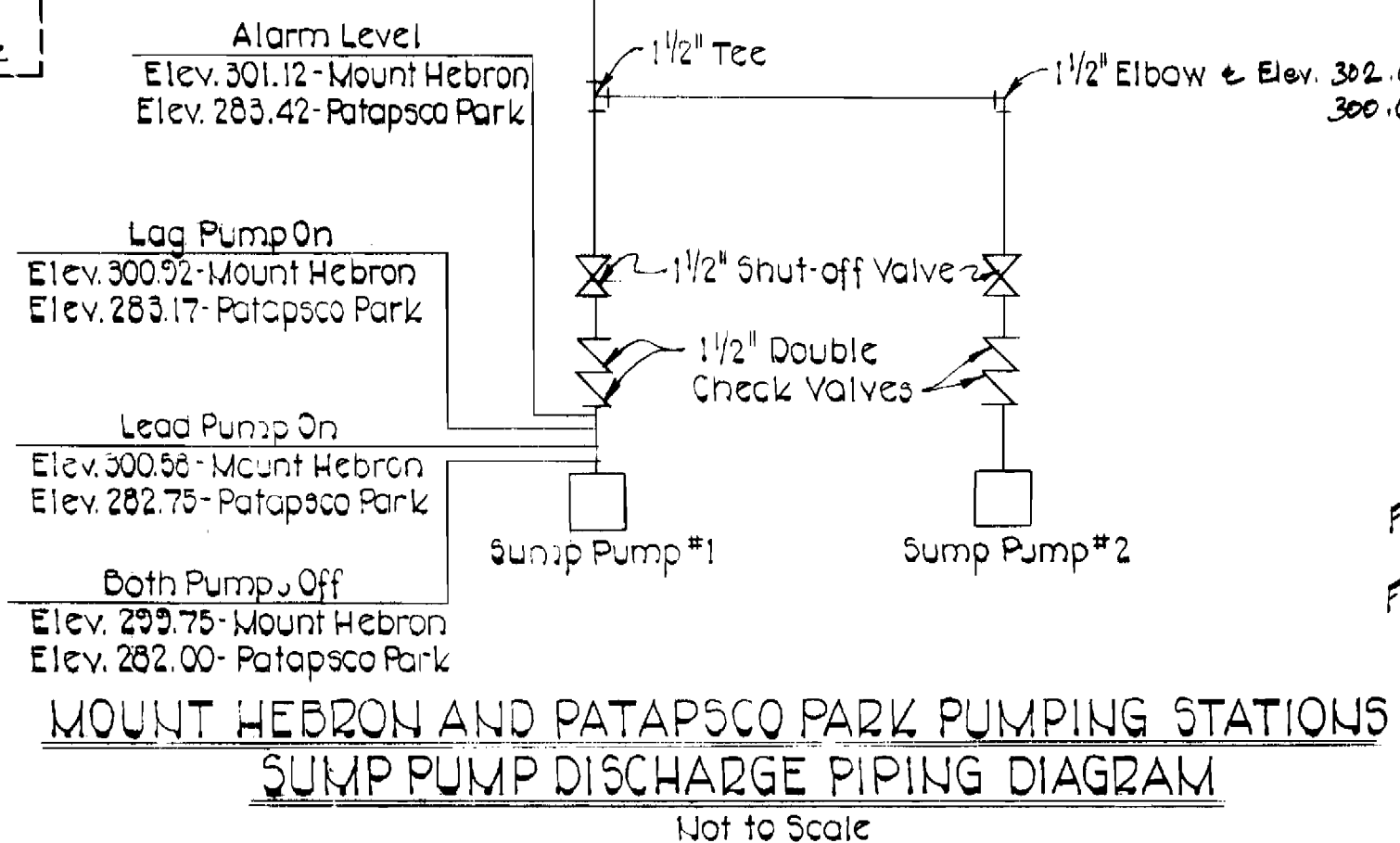
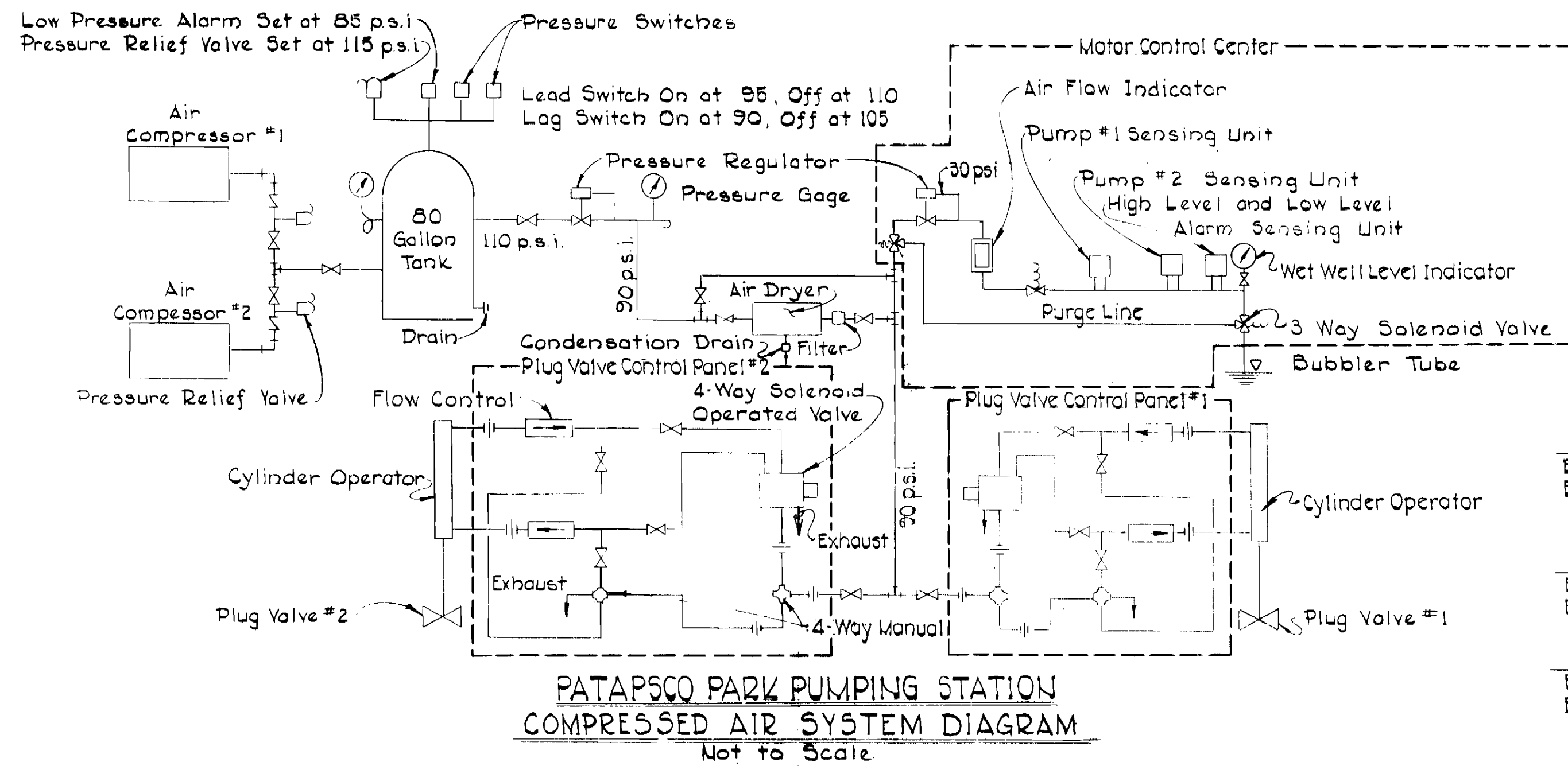
CONTRACT NO. 745-S  
CAPITAL PROJECT NO. S-4-6037

**ELECTRICAL DETAILS**  
PATAPSCO PARK  
PUMPING STATION

**MOUNT HEBRON SEWER MAINS**  
ELECTION DISTRICT NO. 2  
HOWARD COUNTY, MARYLAND

DRAWING NO. 23 OF 25  
SCALE AS SHOWN  
Designed: JAH  
Drafted: ARZ  
Checked: JAH

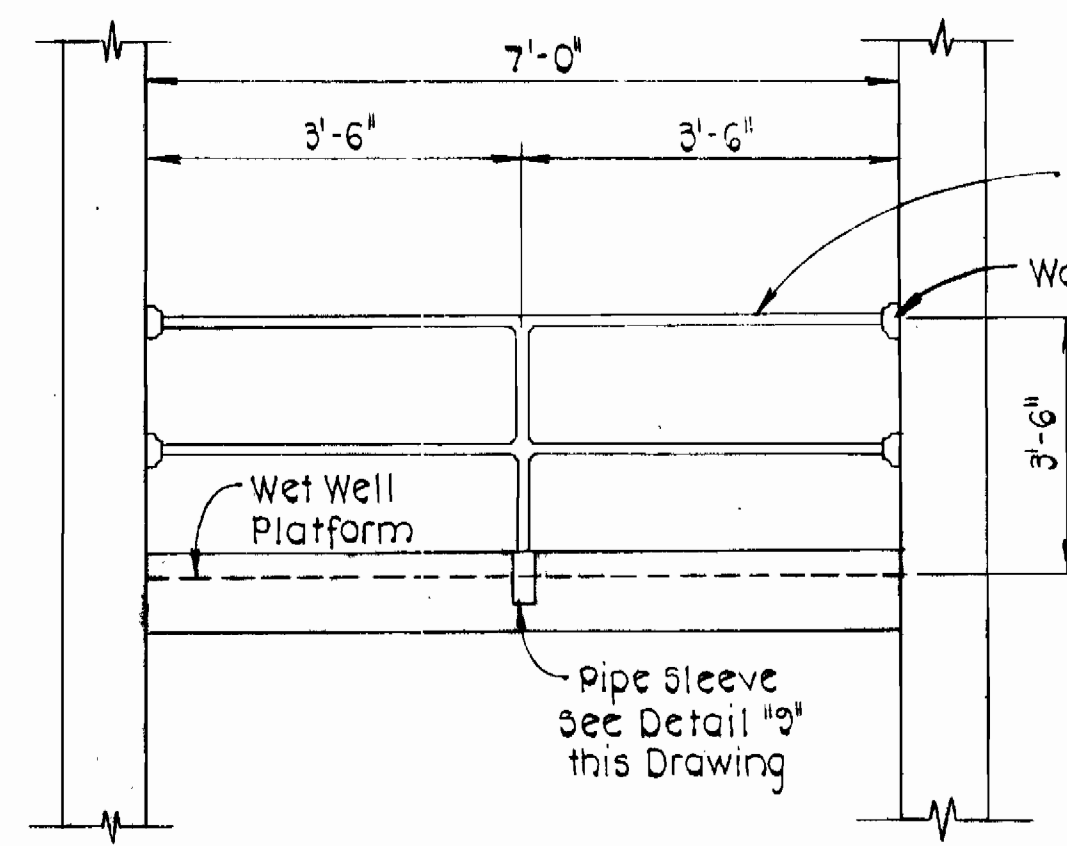




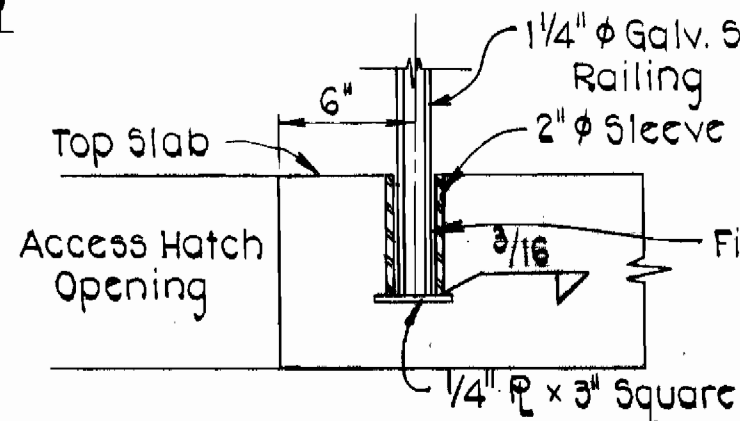
EPA NO. C-240593-01  
CONTRACT NO. 745-S  
CAPITAL PROJECT S-4-6037  
MOUNT HEBRON SEWER MAINS  
PATAPSCO PARK PUMPING STATION

<b>PURDUM &amp; JESCHKE</b> ENGINEERS 1023 N. CALVERT ST. BALTIMORE, MARYLAND	<b>Department of Public Works</b> HOWARD COUNTY, MARYLAND DIRECTOR OF PUBLIC WORKS	CONTRACT NO. 745-S CAPITAL PROJECT NO. S-4-6037	<b>MECHANICAL - DETAILS</b> PATAPSCO PARK PUMPING STATION	<b>MOUNT HEBRON SEWER MAINS</b> ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND	DRAWING NO. 24 OF 25 SCALE AS SHOWN	Designed: REP Drafted: ARZ Checked: REP
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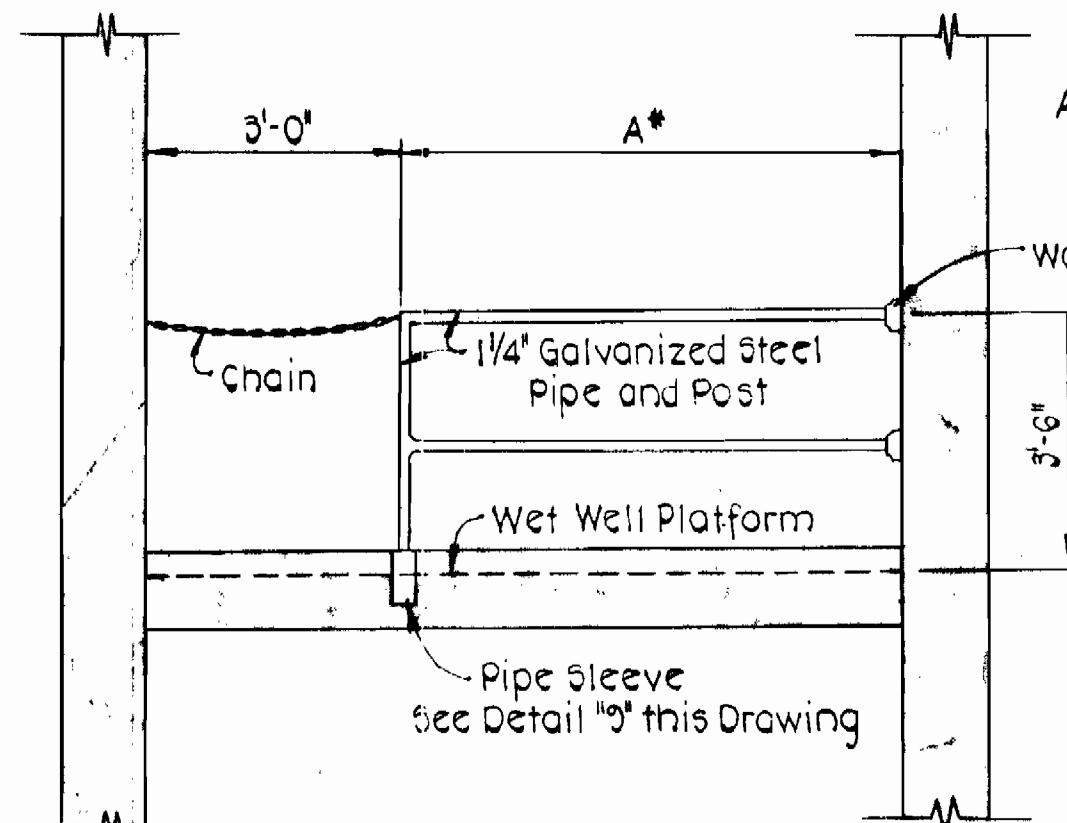




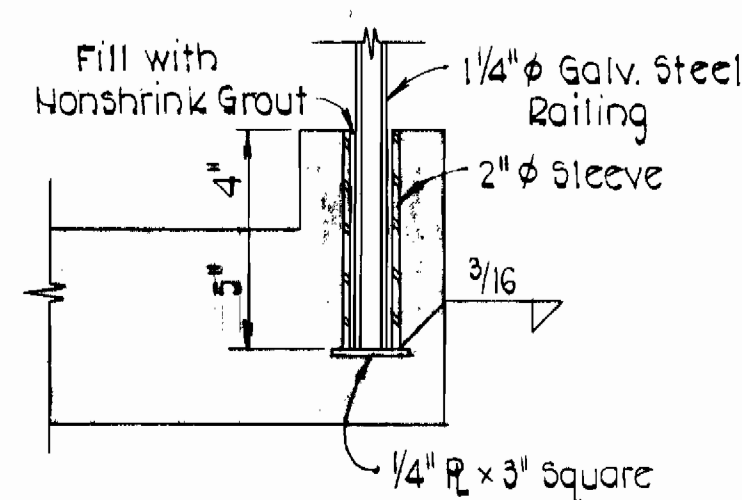
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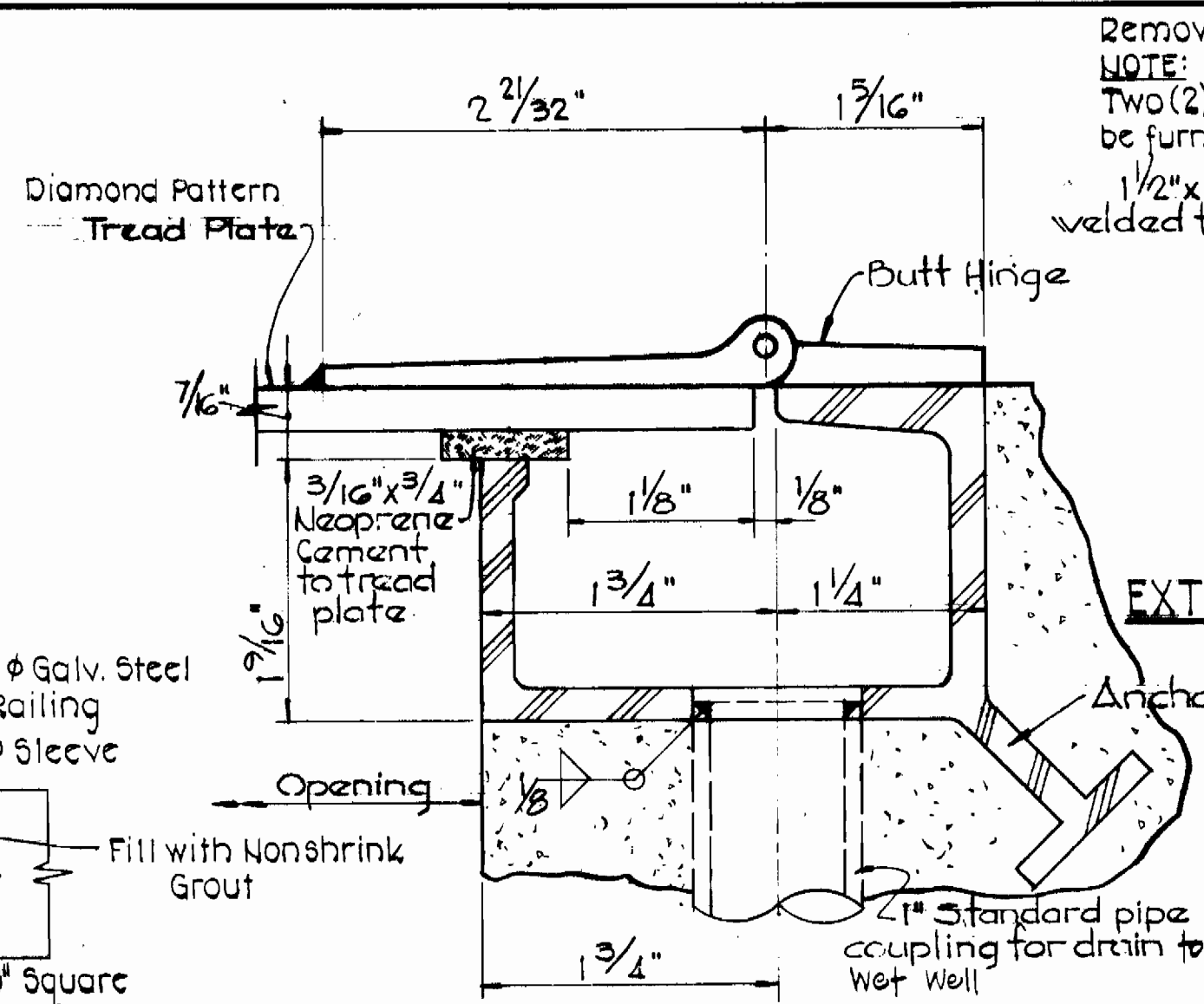
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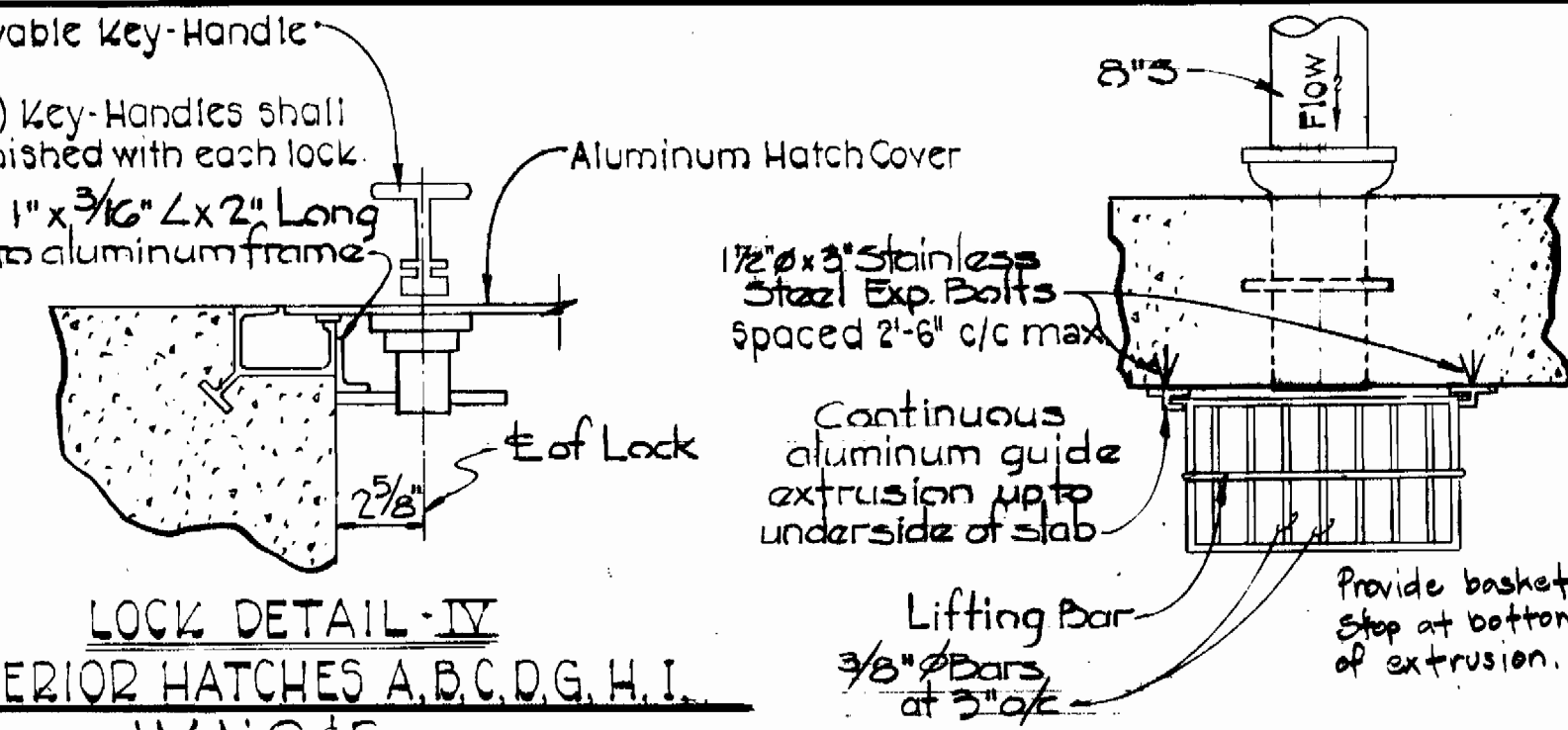
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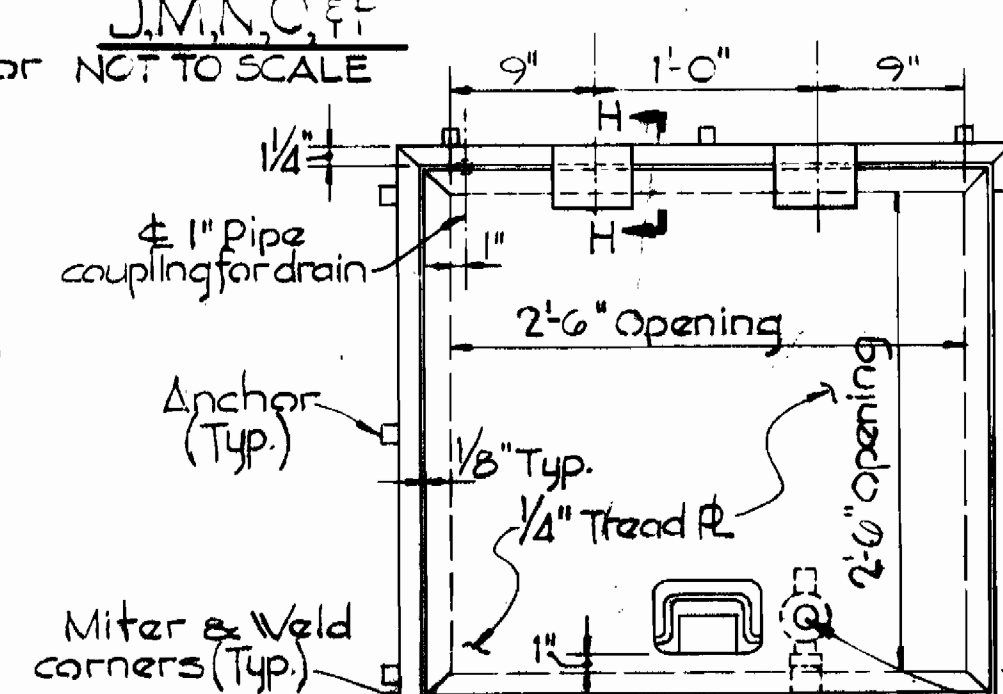
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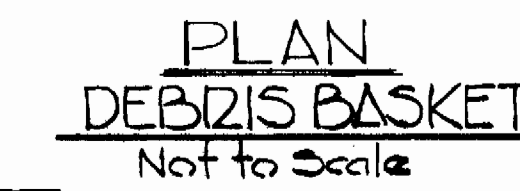
SECTION H-H  
EXTERIOR-WATERTIGHT HATCHES  
A, B, C, D, G, H, I, J, M, N, O, P  
Not to Scale



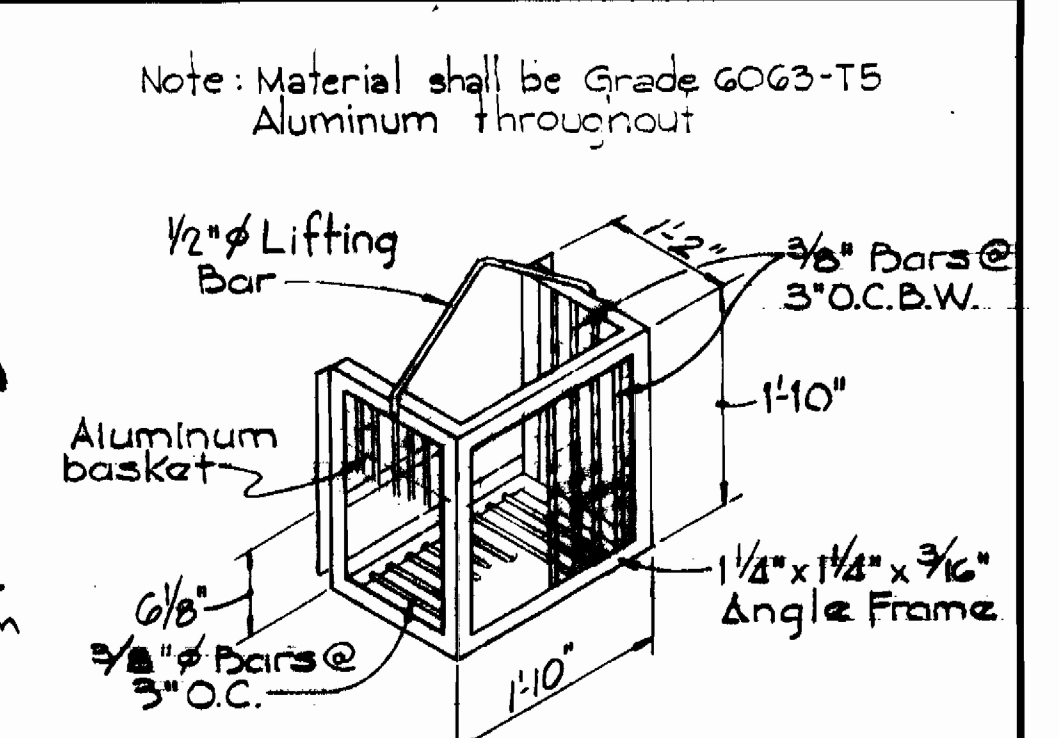
LOCK DETAIL - IV  
EXTERIOR HATCHES A, B, C, D, G, H, I, J, M, N, O, P  
Not to Scale



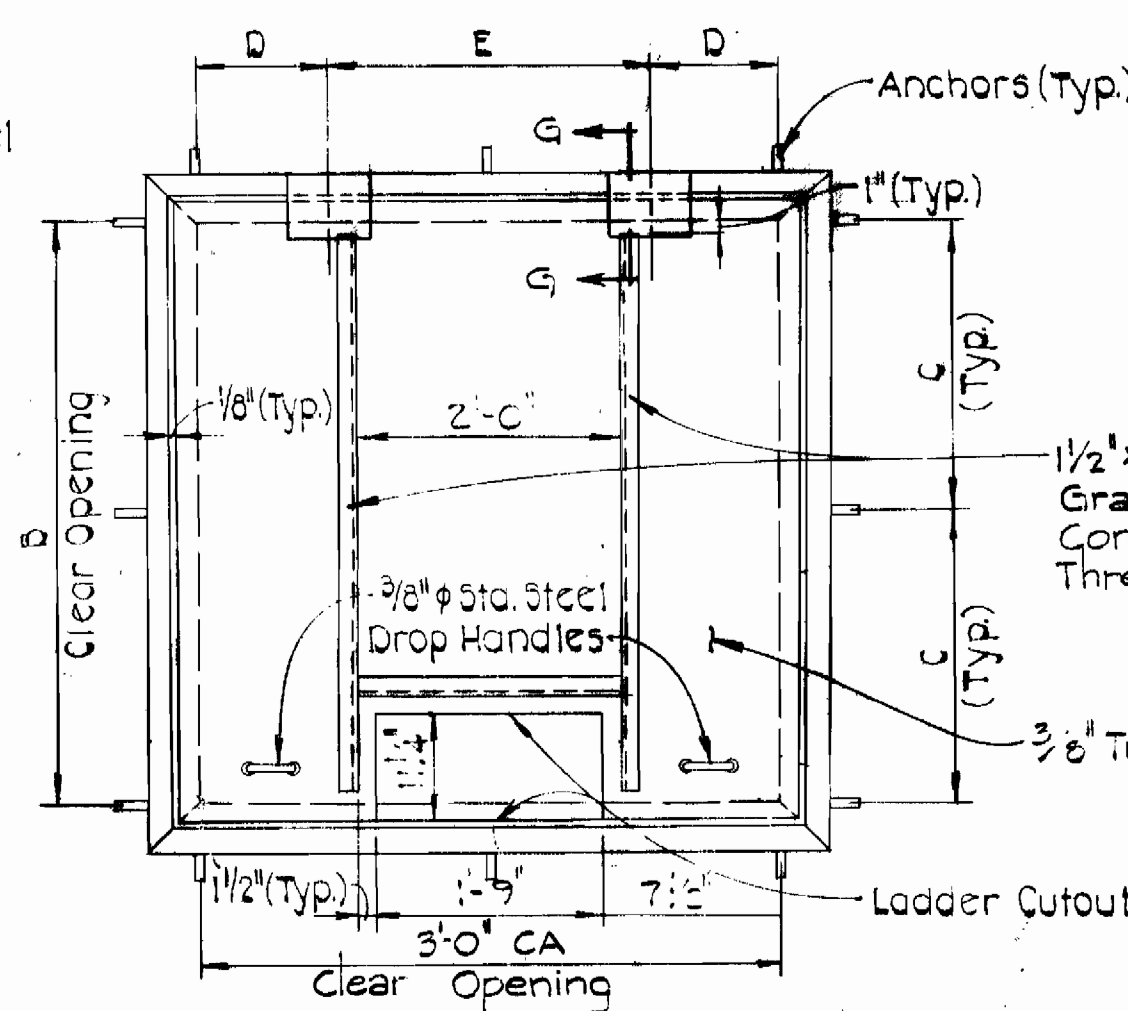
AREAWAY ENCLOSURE OPENING M, N, O, P  
ALUMINUM HATCH COVER -  
BASIS OPENING - D & J  
Scale: 1" = 1'-0"



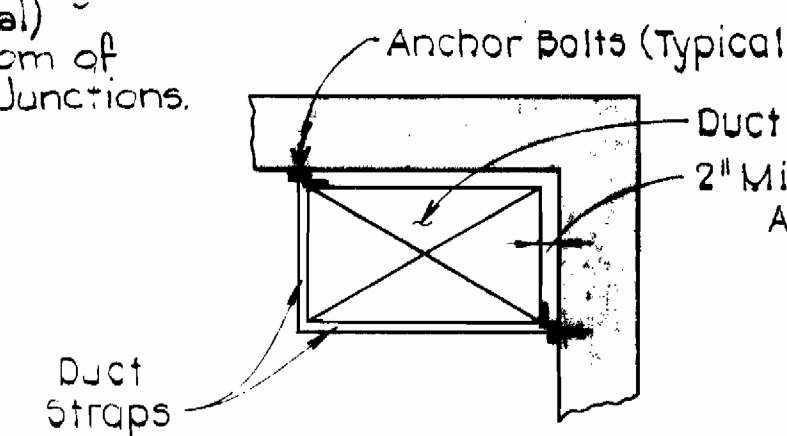
PLAN  
DEBRIS BASKET  
Not to Scale



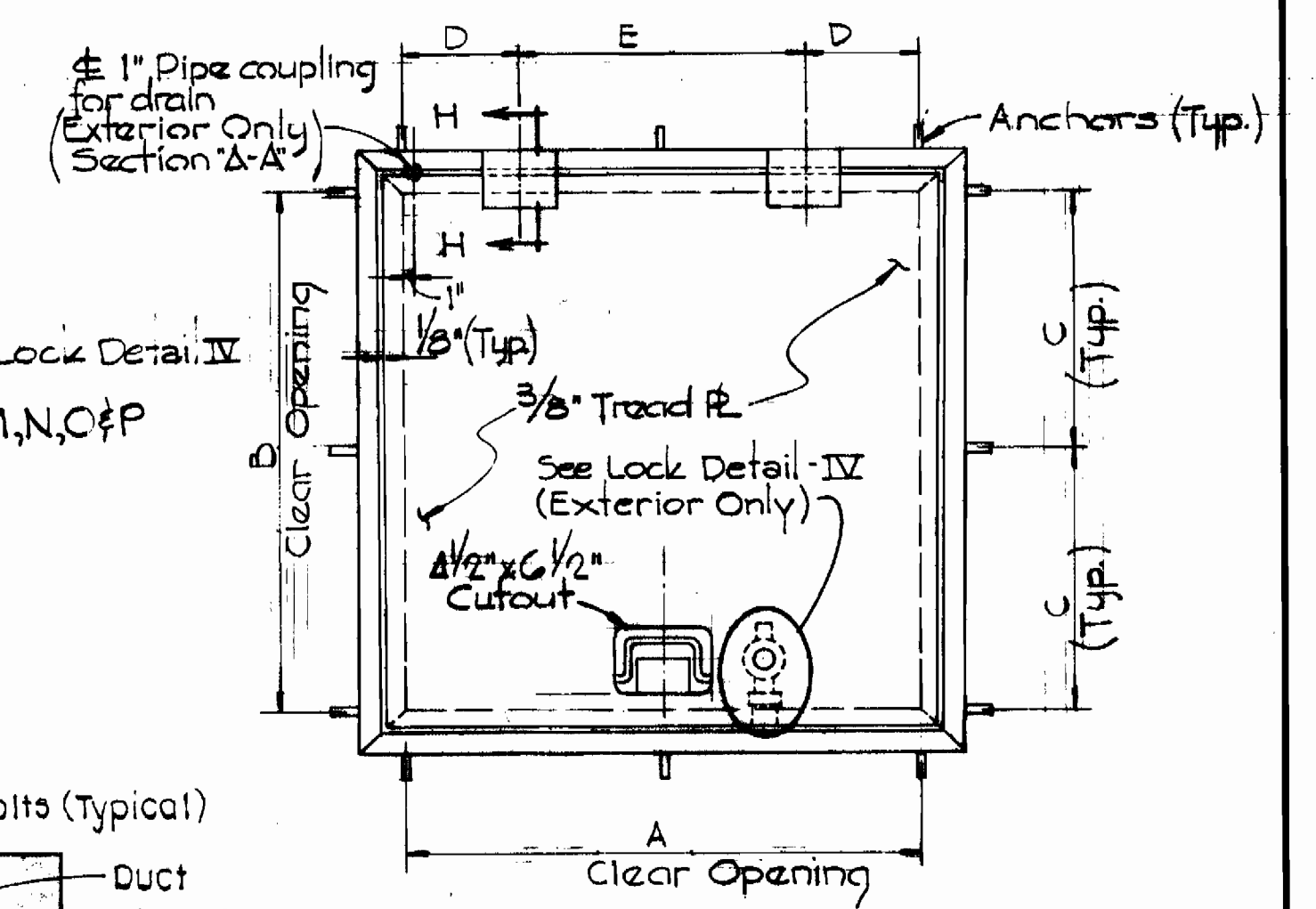
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DEBRIS SCREENING  
BASKET DETAILS  
Not to Scale



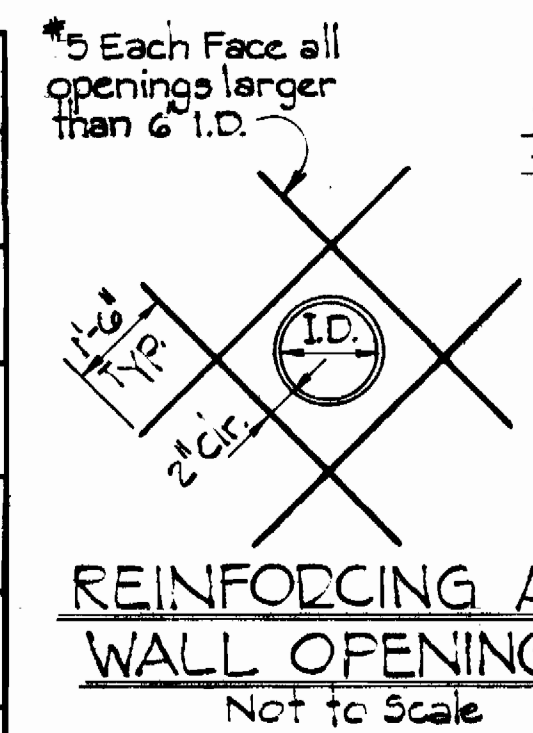
INTERIOR ALUMINUM HATCH COVER - E & K  
Scale: 3/4" = 1'-0"



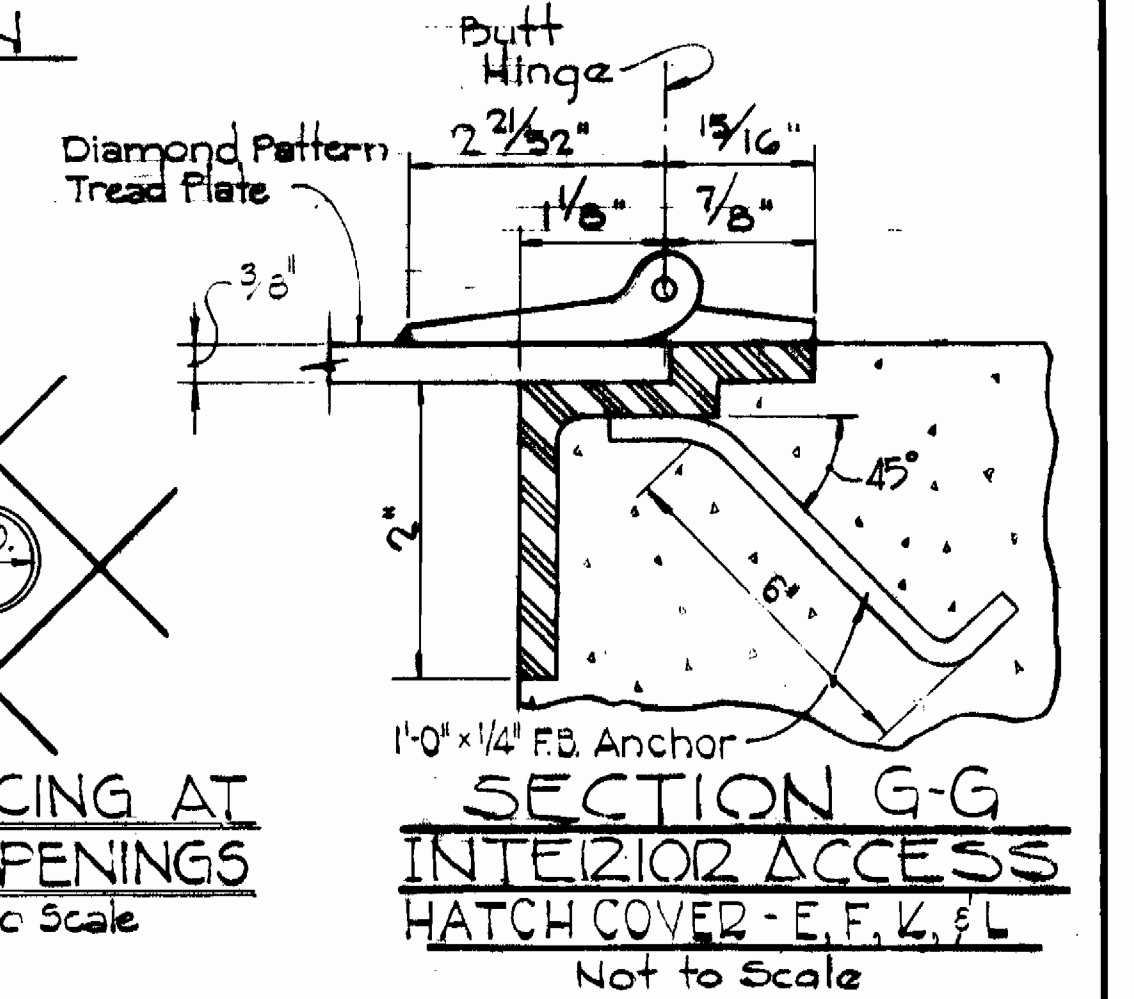
TYPICAL DUCT INSTALLATION  
NOT TO SCALE



ALUMINUM ACCESS  
HATCH COVERS - A, B, C, E, G, H, & L  
Scale: 3/4" = 1'-0"



REINFORCING AT  
WALL OPENINGS  
Not to Scale



SECTION G-G  
INTERIOR ACCESS  
HATCH COVER - E, F, K, & L  
Not to Scale

ACCESS HATCH DESIGNATION	ACCESS HATCH LOCATION	ACCESS HATCH FUNCTION	ACCESS HATCH DIMENSIONS - INCHES					TREAD PLATE	ADDITIONAL APPLICABLE REQUIREMENTS
			A	B	C	D	E		
A*	M.H.P.S. & P.P.S. Top Slab of Control Room	Personnel Access to Control Room	3'-0"	3'-0"	1'-6"	0'-0"	1'-6"	3/8"	Exterior, Watertight Hatch See Section A-A & Lock Detail
G**	M.H.P.S. * Top Slab of Wet Well	Personnel Access to Wet Well	4'-0"	3'-6"	1'-6"	1'-0"	2'-0"	3/8"	Exterior, Watertight Hatch See Section A-A & Lock Detail
C	M.H.P.S. & P.P.S. Bottom Slab of Control Room	Operation of Debris Basket	2'-6"	2'-6"	1'-3"	0'-0"	1'-0"	1/4"	Exterior, Watertight Hatch See Section A-A & Lock Detail
D*	M.H.P.S. & P.P.S. Top Slab of Wet Well	Personnel Access to Wet Well	4'-0"	3'-6"	1'-6"	1'-0"	2'-0"	3/8"	Exterior, Watertight Hatch See Section A-A & Lock Detail
J**	M.H.P.S. * Top Slab of Wet Well	Personnel Access to Wet Well	4'-0"	3'-6"	1'-6"	1'-0"	2'-0"	3/8"	Exterior, Watertight Hatch See Section A-A & Lock Detail
E*	M.H.P.S. & P.P.S. Bottom Slab of Control Room	Personnel Access to Pump Room	3'-0"	3'-0"	1'-6"	0'-0"	1'-6"	3/8"	Interior Hatch See Section B-B
K**	M.H.P.S. & P.P.S. Top Slab of Control Room	Equipment Access to Control Room	4'-0"	4'-0"	2'-0"	1'-0"	2'-0"	3/8"	Exterior, Watertight Hatch See Section A-A & Lock Detail
H**	M.H.P.S. & P.P.S. Top Slab of Control Room	Personnel Access to Control Room	4'-0"	4'-0"	2'-0"	1'-0"	2'-0"	3/8"	Exterior, Watertight Hatch See Section A-A & Lock Detail
I	R.P.P.S. ** Top Slab of Wet Well	Personnel Access to Wet Well	4'-0"	3'-6"	1'-6"	1'-0"	2'-0"	3/8"	Exterior, Watertight Hatch See Section A-A & Lock Detail
M, N *	M.H.P.S. & P.P.S. Top Slab of Areaway Enclosure	Personnel Access to Areaway Enclosure	2'-6"	2'-6"	1'-3"	0'-0"	1'-0"	1/4"	Exterior, Watertight Hatch See Section A-A & Lock Detail
O, F **	M.H.P.S. & P.P.S. Bottom Slab of Control Room	Equipment Access to Pump Room	4'-0"	4'-0"	2'-0"	1'-0"	2'-0"	3/8"	Interior Hatch See Section B-B

GENERAL NOTES:  
 1. Detail "C" Applicable to all above Designated Hatches.  
 \* Mount Hebron Pumping Station  
 \*\* Patapsco Park Pumping Station

ACCESS HATCH SCHEDULE



EPA NO. C-240593-01  
 CONTRACT NO. 745-S  
 CAPITAL PROJECT S-4-6037  
 MOUNT HEBRON SEWER MAINS  
 PATAPSCO PARK PUMPING STATION

WET WELL SECTION F-F  
 PATAPSCO PARK PUMPING STATION  
 Scale: 1" = 3/16"

WET WELL SECTION E-E  
 MT. HEBRON PUMPING STATION  
 Scale: 1" = 3/16"

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

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 CHIEF BUREAU OF UTILITIES  
 DATE: 2-5-81  
 DIRECTOR OF PUBLIC WORKS DATE: 2-11-81  
 CHIEF BUREAU OF ENGINEERS DATE: 2-11-81

CONTRACT NO. 745-S  
 CAPITAL PROJECT NO. S-4-6037

DETAILS  
 MOUNT HEBRON & PATAPSCO PARK  
 PUMPING STATIONS

MOUNT HEBRON SEWER MAINS  
 ELECTION DISTRICT NO. 2  
 HOWARD COUNTY, MARYLAND

DRAWING NO. 25 OF 25  
 SCALE AS SHOWN  
 Designed: REP  
 Drafted: ARZ  
 Checked: REP