INDEX OF DRAWINGS

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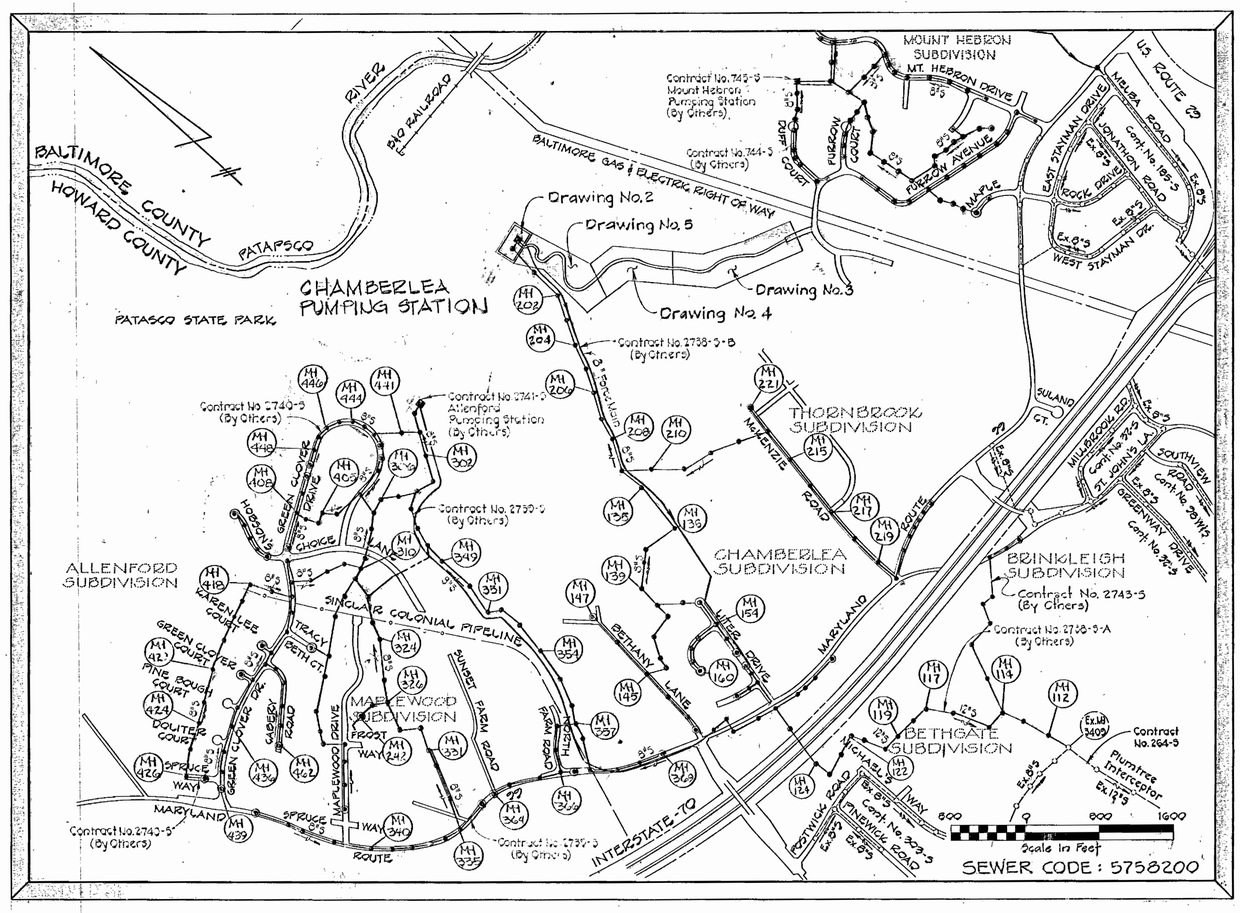
1	Vicinity Map
2	Site Development Plan
3	Site Development Plan
4	Site Development Plan
5	Site Development Plan
6	Site Development Plan
7	Architectural Details
8	Structural Plans
9	Structural Sections
10	Structural Details
11	Mechanical Plans
12	Mechanical Sections
13	Mechanical Details
14	Mechanical Details
15	Miscellaneous Details
16	Electrical Plans
17	Electrical Details



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 at 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 at least five (5) working days before starting work shown on these plans;
   State Highway Administration: 531-5533
   Baltimore Gas & Electric Company - Underground Electric Distribution
   Customer Service: 685-0123
   Baltimore Gas & 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 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 wall.
17. All manholes shall be 4'-0" inside diameter, unless otherwise noted.
18. Force mains shall be D.I.P. Class 54.
19. Manholes shown with 12" and 16" walls are brick manholes only.
20. Manholes designated W.T. in plan and profile shall have watertight frame 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.

CONTRACT NO. 2742-S

CHAMBERLEA SANITARY SEWERS
CHAMBERLEA PUMPING STATION
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS

EPA NO. C-240594-01 (.14)
CONTRACT NO. 2742-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
CHAMBERLEA PUMPING STATION

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS	DATE 8-28-81	CHIEF BUREAU OF ENGINEERING	DATE 8/28/81
CHIEF BUREAU OF UTILITIES	DATE 8-28-81	CHIEF UTILITY DIVISION	DATE 8/28/81

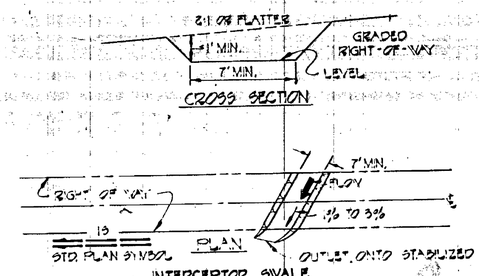
PURDUM & JESCHKE ENGINEERS 1023 N. CALVERT ST. BALTIMORE, MARYLAND	CONTRACT NO. 2742-S CAPITAL PROJECT NO. S-4-6067	VICINITY MAP	CHAMBERLEA SANITARY SEWERS CHAMBERLEA PUMPING STATION ELECTION DISTRICT NO. 2	DRAWING NO. 1 OF 17	SCALE 1" = 800'

W.O. # 2224-29

K&E BALTIMORE 17 0453 PHOENIX MC 3343

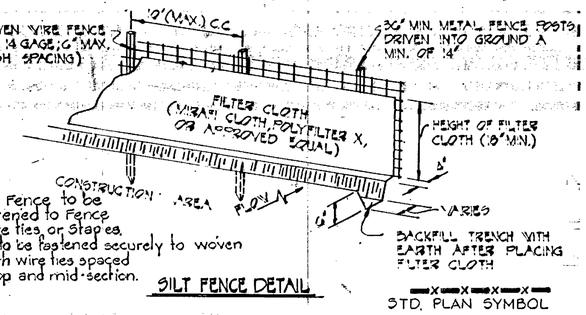
SEDIMENT CONTROL NOTES

1. 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."
2. The developer shall notify the Howard County Office of Inspection and Permits at least 24 hours prior to beginning any construction shown hereon (992-2435 or 992-2436).
3. 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 (992-2435 or 992-2436).
4. All graded areas shall be stabilized in accordance with the following requirements:
   1. Site Preparation:
      A. Harrow or disc the areas to be seeded with the following materials at the specified rate to a depth of 3".
         1) Pulverized limestone at 1½ tons/acre.
         2) Commercial fertilizer 10-10-10 at 3/4 tons/acre.
         3) Super phosphate at 600 lbs./acre.
   2. Seeding:
      A. Sow the following seed mixture at the specified rate with a mechanical spreader
         1) Temporary - Italian or Perennial Ryegrass. (1LB/1000 sq. ft.)
         2) Permanent - (Slopes Flatter than 3:1) - Common Kentucky Bluegrass 40% Merion Bluegrass-40%, Red Fescue 20% (3 lb./1000 sq. ft.)
            Slopes steeper than 3:1 - Ground Cover
      B. The seeded area shall be raked with a York Rake (minimum of 2 passes), covered and compacted with a cultipacker or other approved method.
   3. Mulching:
      A. Seeded areas shall be uniformly mulched immediately after seeding with unweathered small grain straw at the rate of 1½ to 2 tons/acre.
      B. Tie mulch down with liquid asphalt at 0.1 gal./s.y. or emulsified asphalt at 0.04 gal./s.y.
   4. Sodding:
      A. Apply 10-10-10 fertilizer at 1000 lbs./acre. (25 lbs./1000 s.f.)
      B. Apply ground agricultural limestone at 2000 lbs./acre. (50 lbs./1000 s.f.)
      C. Incorporate both lime and fertilizer into soil by diseing. Firm up after incorporation.
      D. 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.
   5. Ground Cover:
      A. Crown vetch (innoculated) at 15 lbs./acre, and Kentucky 31 Tall Fescue (certified) at 40 lbs./acre. (2:1 maximum slope)
5. The contractor shall place plywood braced with sand bags at the inlet end of unfinished drain pipes at the end of each work day.
6. All stockpiles shall be protected with straw bale dikes, silt fences, or other approved sediment control devices.



INTERCEPTOR SWALE

1. All trees, brush, stumps, and other objectionable material shall be removed.
2. Swale shall be excavated or shaped to line, grade and cross section.
3. Swale shall have a minimum grade of 1 percent and the bottom shall be level.
4. Run off shall be diverted to a sediment control device.
5. Stabilization shall be in accordance with the Sediment Control Notes. Stone if required as shown on plan shall be MSHA No. 2 placed in a layer at least 3 inches in thickness. It shall extend across the bottom and up both sides of the channel at least 8 inches.



NOTES:
1. Woven Wire Fence to be Securely Fastened to Fence Posts with wire ties or staples.
2. Filter cloth to be fastened securely to woven wire fence with wire ties spaced every 24" at top and mid-section.

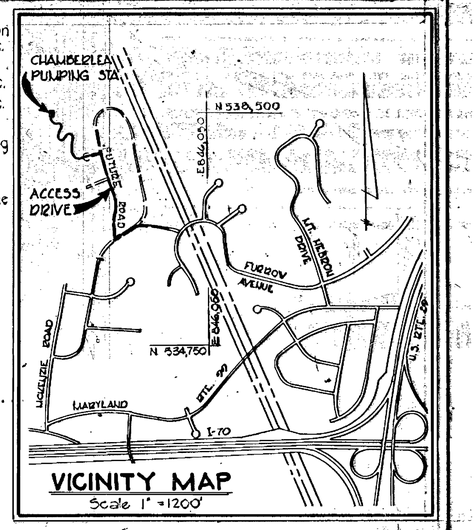
SILT FENCE DETAIL

SITE ANALYSIS

Total Area of Pumping Station Site	0.397 Ac.
Total Area Disturbed	0.236 Ac.
Total Area Paved	0.076 Ac.
Present Zoning	R-20
Proposed Use	Pumping Station

PARKING ANALYSIS

Maximum Number of Service Vehicles	2
Required Parking Spaces	2
Parking Spaces Provided	2

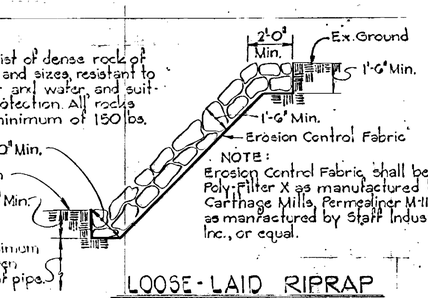


VICINITY MAP
Scale 1" = 1200'

℄ CURVE DATA
STA 37+02.19 TO 37+60.65
R = 50.00'
Δ = 66°52'29"
L = 58.46
T = 33.09'
CHD = N 27°00'16" W
55.18'

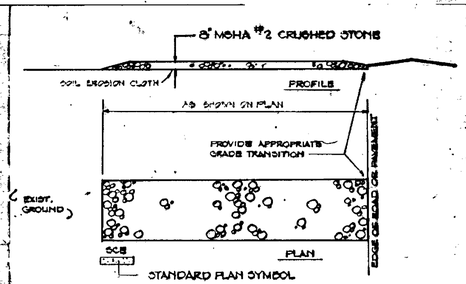
℄ CURVE DATA
STA 36+73.60 TO 37+02.19
R = 49.55'
Δ = 33°00'00"
L = 28.59'
T = 14.68
CHD = N 44°00'00" W
28.14'

Riprap to consist of dense rock 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 150 lbs.



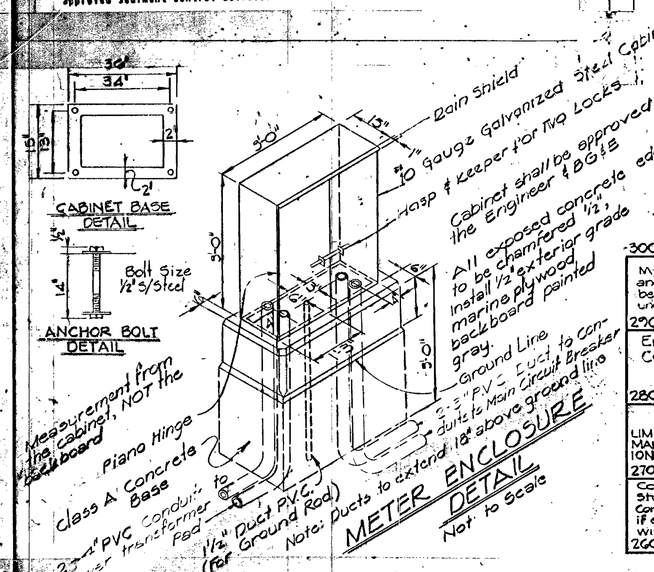
NOTE:
Erosion Control Fabric shall be Poly-Filter X as manufactured by Carthage Mills, Permeliner M-1199 as manufactured by Staff Industries Inc., or equal.

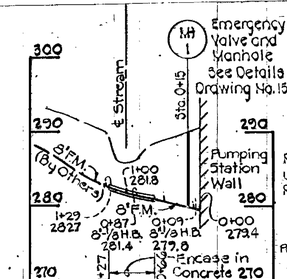
LOOSE-LAID RIPRAP DETAIL
Not to Scale

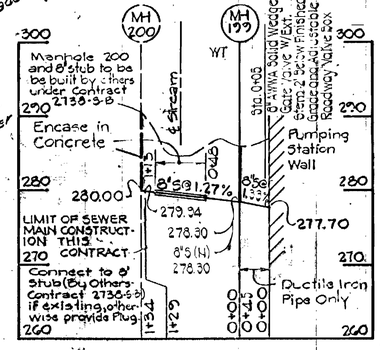


STABILIZED CONSTRUCTION ENTRANCE

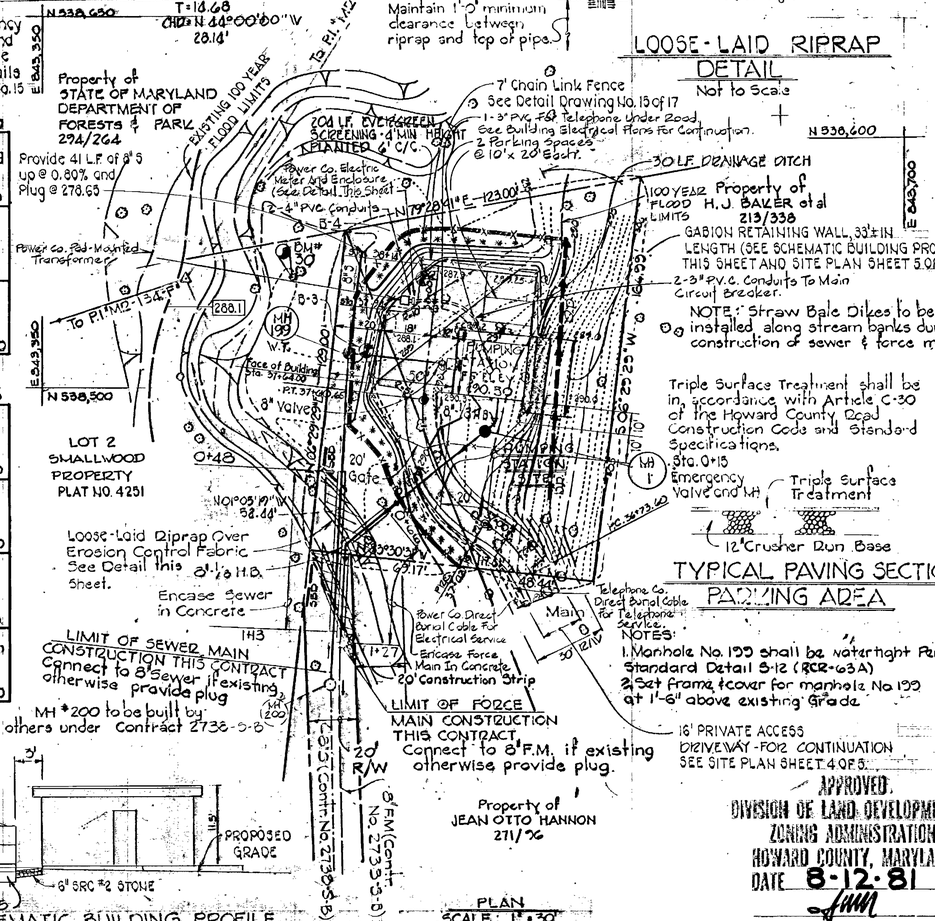
1. Stone size - MSHA No. 2 or AASHTO designation M43 size No. 2.
2. Place stone on soil erosion cloth for its entire width and length.
3. When necessary, wheels shall be washed to remove sediment prior to entering public road.

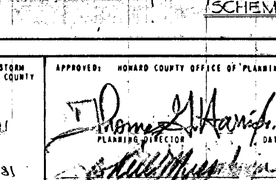




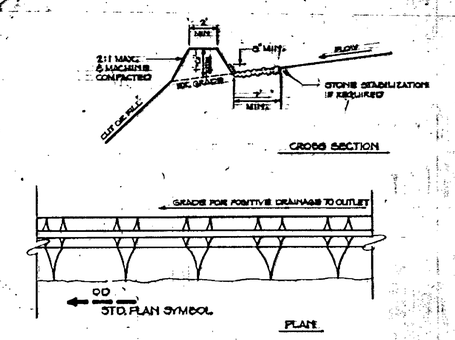


PROFILES
Scale: Horiz: 1" = 100'
Vert: 1" = 10'





SCHEMATIC BUILDING PROFILE
Not to Scale



DIVERSION DIKE

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

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT.
COUNTY HEALTH OFFICER — DATE 8-28-81

HOWARD SOIL CONSERVATION DISTRICT
REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS
SIGNATURE — DATE 8-28-81
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED: HOWARD SOIL CONSERVATION DISTRICT — DATE 8-28-81

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 8-12-81

EPA NO. C-240594-01 (14)

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.
DIRECTOR — DATE 8-28-81
CHIEF, BUREAU OF ENGINEERING — DATE 8/27/81

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
PLANNING DIRECTOR — DATE 8-28-81
CHIEF, DIVISION OF LAND DEVELOPMENT & ZONING ADMIN. — DATE 8-28-81

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 — DATE 8-28-81

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 SOIL CONSERVATION DISTRICT.
WILLIAM G. KASCH JR. — DATE 5/27/80

STATE OF MARYLAND — WILLIAM G. KASCH JR. — No. 10278 — REGISTERED PROFESSIONAL ENGINEER & LAND SURVEYOR

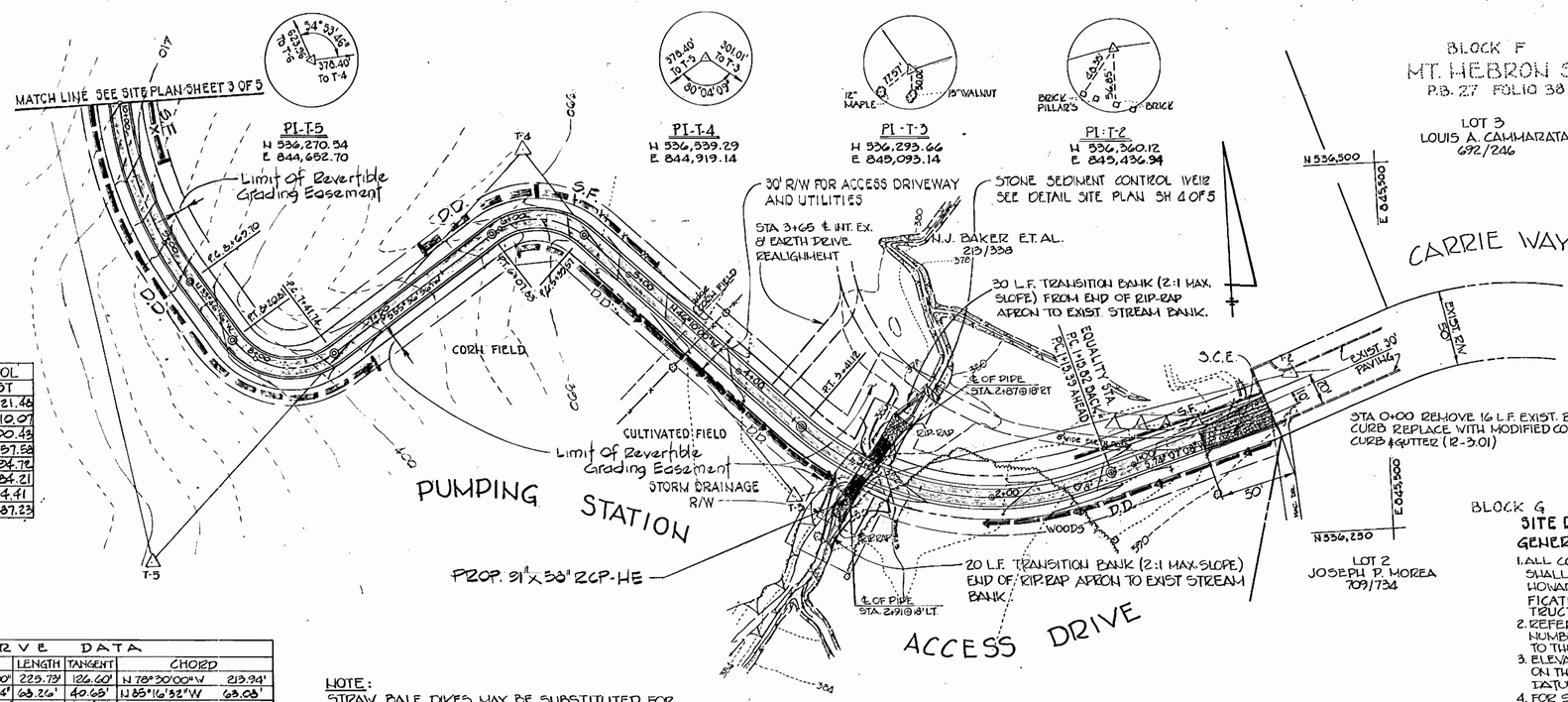
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. S-4-6067
CONTRACT NO. 2742-S

CHAMBERLEA SEWERS
CHAMBERLEA PUMPING STATION
SITE DEVELOPMENT PLAN

ELECTION DISTRICT NO. 2 — HOWARD COUNTY, MD.
TAX MAP 17 — PARCEL

Designed:	P.W.K.
Drawn:	P.W.R.
Checked:	P.W.K.
DRWG. NO. 2 OF 17	
SITE PLAN SH. 1 OF 5	
SCALE: AS SHOWN	

2/3/81 SDP-81-174



HORIZONTAL CONTROL		
STA	NORTH	EAST
0+00	536329.57	845421.46
1+15.82	536297.67	845310.07
3+41.55	536310.33	845100.43
5+39.51	536477.47	844957.58
6+07.83	536652.66	844894.78
7+41.74	536607.04	844784.21
8+20.81	536620.51	844714.41
8+69.70	536661.15	844687.23

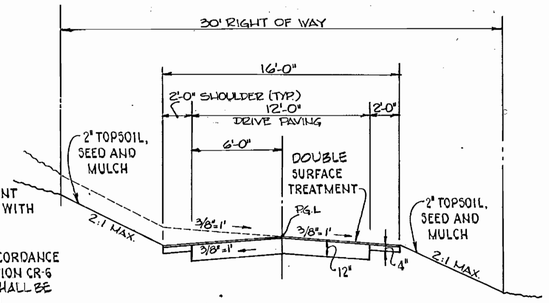
CURVE DATA							
STA	STA	RADIUS	Δ	LENGTH	TANGENT	CHORD	
1+15.82	2+41.55	200.00'	64°40'00"	225.73'	126.60'	N 78°30'00"W	213.94'
5+39.51	6+07.83	50.00'	78°19'04"	68.26'	40.65'	N 85°16'32"W	63.08'
7+41.74	8+20.81	50.00'	90°36'46"	79.07'	50.53'	N 79°04'40"W	71.09'
8+69.70	10+31.66	250.00'	38°25'22"	167.56'	87.28'	N 16°31'35"W	164.50'

NOTE: DRIVEWAY ℄ FROM 0+00 TO 1+15.82 NOT TANGENT TO CURVE

NOTE:
STRAW BALE DIKES MAY BE SUBSTITUTED FOR SILT FENCE SHOWN ON THIS SHEET.

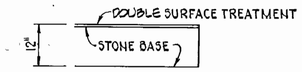
PLAN
SCALE 1" = 50'

NOTES:
1. DOUBLE SURFACE TREATMENT SHALL BE IN ACCORDANCE WITH ARTICLE 33.04
2. STONE BASE SHALL BE IN ACCORDANCE WITH ARTICLE 33.15 GRADATION CR-6
3. GRAVEL SURFACING SHALL BE IN ACCORDANCE WITH ARTICLE 33.02.

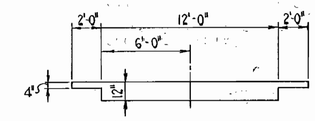


NOTE: DASHED LINE INDICATES FULL CROSS SLOPE IN DIRECTION OF NATURAL DRAINAGE AS SHOWN IN PLANS. USE 50' TRANSITIONS BETWEEN CHANGE IN CROSS SECTION.

TYPICAL DRIVE SECTION - STA. 26+15.68 TO 37+60
NOT TO SCALE



TYPICAL ON-SITE PAVEMENT SECTION
NOT TO SCALE



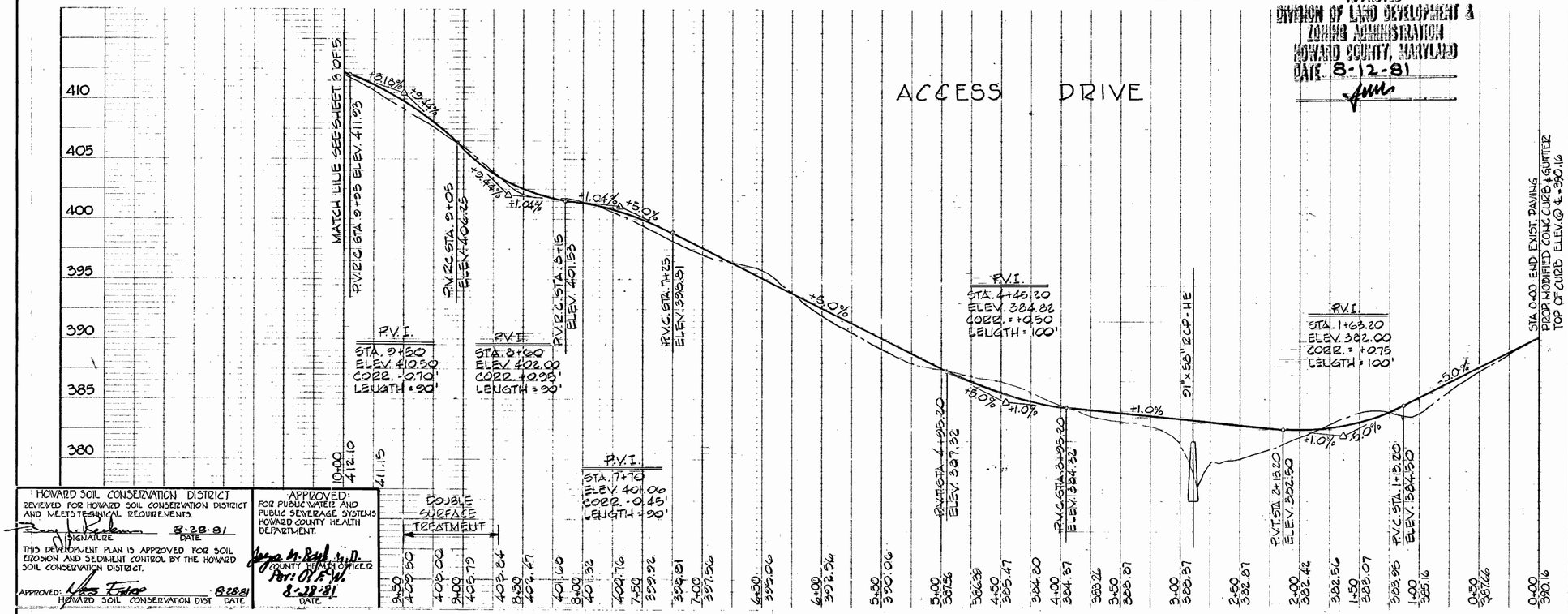
Note: Provide Double Surface Treatment When Grades Exceeds ± 6% And Other Areas As Shown.

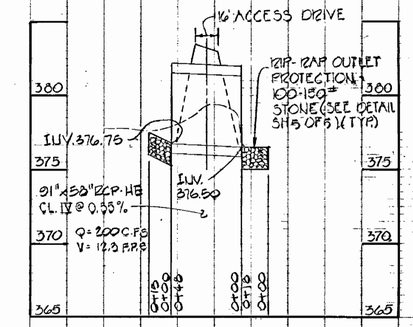
TYPICAL GRAVEL SURFACED ACCESS DRIVE
STA. 0+00 TO 25+12.57
NOT TO SCALE

SITE DEVELOPMENT PLAN GENERAL NOTES

1. ALL CONSTRUCTION SHOWN HEREON SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
2. REFERENCE TO PAGE AND DRAWING NUMBERS SHOWN HEREON ARE REFERRED TO THE ABOVE MENTIONED STANDARDS.
3. ELEVATIONS SHOWN HEREON ARE BASED ON THE HOWARD COUNTY TOPOGRAPHIC DATUM.
4. FOR SEDIMENT CONTROL DETAILS AND SEQUENCE OF OPERATIONS SEE SITE PLAN SH. 2 OF 5 AND SH 5 OF 5.

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 8-12-81





PROFILE CULVERT STA. 2+89
Note: Provide Granular Bedding, 6" Min. Below Bottom Of Pipe And Extending Up To Spring Line Of Pipe.

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

EPA NO. C-240594-01 (.14)

Rev. Alignment 3/9/82 From STA. 5+39.51 To STA. 23+01.22 Revised culvert Sta. 2+89

REVISIONS

HOWARD SOIL CONSERVATION DISTRICT
REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
SIGNATURE — DATE 8-28-81
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED: HOWARD SOIL CONSERVATION DIST — DATE 8-28-81

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT.
COUNTY HEALTH OFFICER — DATE 8-28-81

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1023 North Calvert Street
Baltimore, Maryland 21202
301/837-0134

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
DIRECTOR — DATE 8-28-81
CHIEF BUREAU OF ENGINEERING — DATE 8/27/81

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.
DIRECTOR OF PLANNING — DATE 8-28-81
CHIEF DIVISION OF LAND DEVELOPMENT & ZONING ADMIN. — DATE 8-28-81

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 COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS DEEMED NECESSARY. DEVIATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD SOIL CONSERVATION DISTRICT.
SIGNATURE — DATE 8-28-81

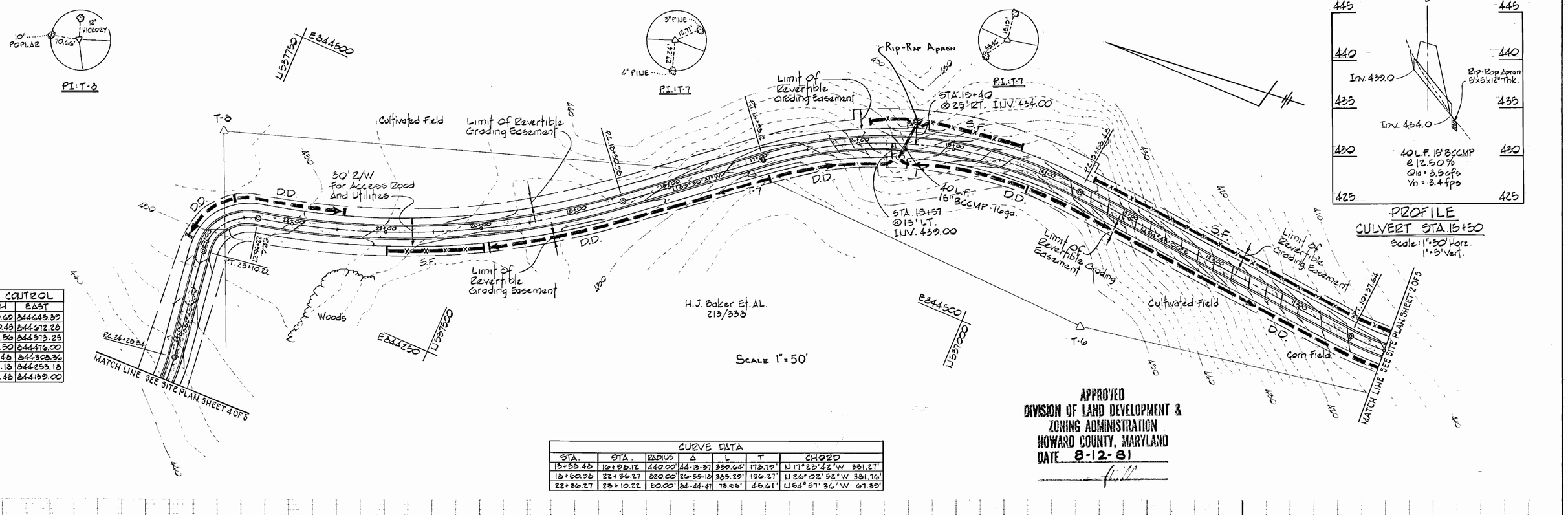
PROFESSIONAL ENGINEER:
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
WILLIAM G. RASCH II — REG. NO. 4575 — DATE 2/3/81

STATE OF MARYLAND — WILLIAM G. RASCH — No. 4575 — PROFESSIONAL ENGINEER

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT 5-d-6067
CONTRACT 4/82-3
CHAMBERLEA SEWERS
CHAMBERLEA PUMPING STATION
SITE DEVELOPMENT PLAN
ACCESS DRIVE
ELECTION DISTRICT NO. 2
TAX MAP 17
HOWARD COUNTY, MD.
PARCEL
2/3/81

DESIGNED: R.T.
DRAWN: C.O.P.
CHECKED: R.T.
DRWG. NO. 3 OF 17
SITE PLAN SH. 2 OF 5
SCALE: AS SHOWN

SDP-81-174

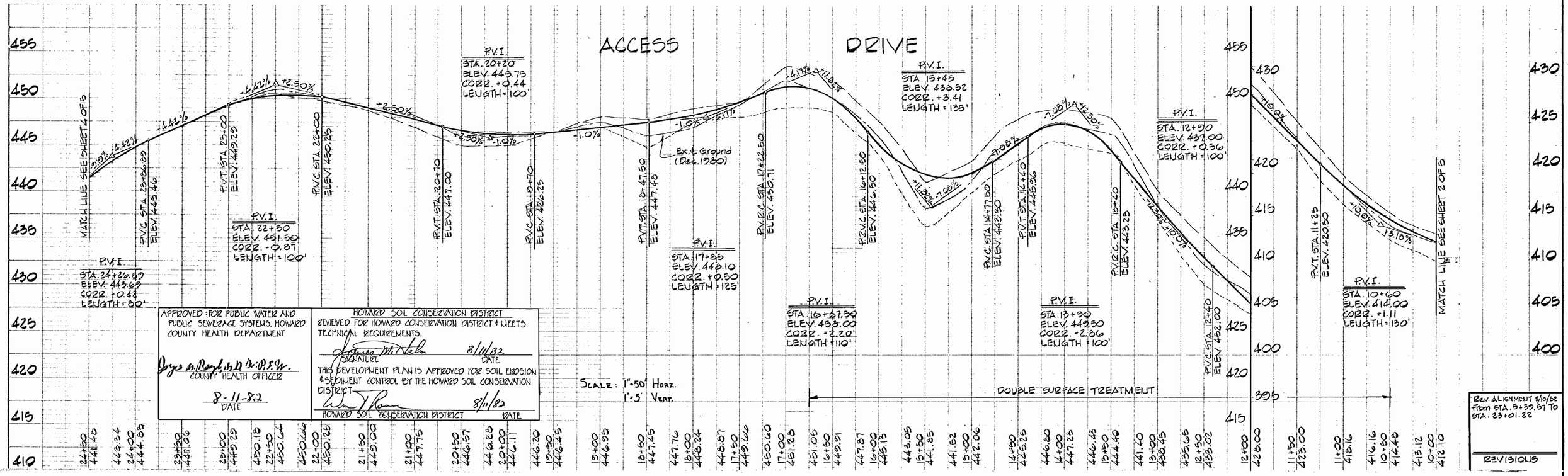


HORIZONTAL CONTROL		
STA.	NORTH	EAST
10+37.64	536620.69	844645.87
13+58.48	536840.48	844612.28
16+58.12	537256.56	844573.25
18+50.98	537374.50	844476.00
22+36.27	537717.48	844308.36
23+10.22	537756.18	844259.18
24+25.34	537741.48	844139.00

CURVE DATA						
STA.	STA.	RADIUS	Δ	L	T	CHORD
13+58.48	16+98.12	440.00'	44-13-37	339.64'	178.79'	N 17°23'42"W 331.27'
18+50.98	22+36.27	820.00'	26-55-18	385.29'	196.27'	N 26°02'52"W 381.76'
22+36.27	23+10.22	50.00'	84-44-41	73.95'	45.61'	N 54°57'36"W 67.39'

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 8-12-81

PROFILE
CULVERT STA. 15+50
Scale: 1" = 50' Horz. 1" = 5' Vert.



APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER — 8-11-82 DATE

HOWARD SOIL CONSERVATION DISTRICT

REVIEWED FOR HOWARD CONSERVATION DISTRICT & MEETS TECHNICAL REQUIREMENTS.

SIGNATURE — 8/11/82 DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION & SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT

HOWARD SOIL CONSERVATION DISTRICT — 8/11/82 DATE

Rev. ALIGNMENT 8/10/82 From STA. 5+32.57 TO STA. 23+01.22

REVISIONS

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1023 North Calvert Street
Baltimore, Maryland 21202 — 301/837-0134

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

DIRECTOR — 8-11-82 DATE

CHIEF, BUREAU OF ENGINEERING — 8-11-82 DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

For the PLANNING DIRECTOR — 8-11-82 DATE

CHIEF, DIV. OF LAND DEV. & ZONING ADMIN. — 8-11-82 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 AUTHORIZED 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 — 8-11-82 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 REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

WILLIAM G. ZASCH II — REG. NO. 4575 — 8/3/82 DATE

STATE OF MARYLAND — WILLIAM G. ZASCH — No. 4575 — PROFESSIONAL ENGINEER

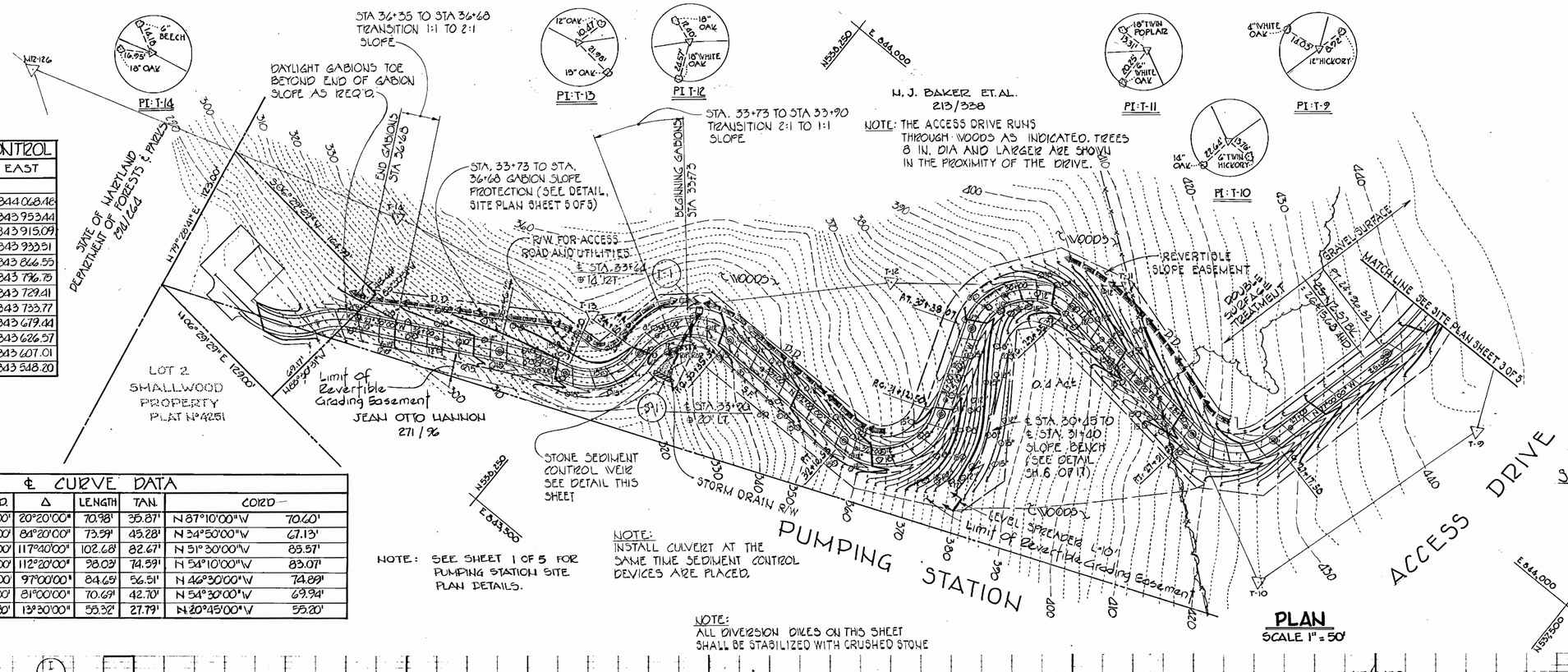
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT 5-4-6067
CONTRACT 2742-S
CHAMBERLEA SEWERS
CHAMBERLEA PUMPING STATION
SITE DEVELOPMENT PLAN
ACCESS DRIVE

ELECTION DISTRICT NO. 2 — HOWARD COUNTY, MD.
TAX MAP 17 — PARCEL

DESIGNED:
DRAWN:
CHECKED:
DRWG. NO. 4 OF 17
SITE PLAN SH. 3 OF 5
SCALE: AS SHOWN

SDP-81-174

HORIZONTAL CONTROL		
STA.	NORTH	EAST
24+96.32	537 744.97	844 068.46
27+17.50	537 771.53	843 953.44
27+91.09	537 826.63	843 915.09
29+35.39	537 969.75	843 933.51
30+38.07	538 023.02	843 866.55
31+12.50	537 997.16	843 796.75
32+10.53	538 045.79	843 729.41
33+35.36	538 170.74	843 733.77
34+20.21	538 222.30	843 679.44
34+90.90	538 260.01	843 626.57
35+46.22	538 311.63	843 607.01
36+73.60	538 421.61	843 548.20



℄ CURVE DATA						
STA.	STA.	RAD.	Δ	LENGTH	TAN.	CORD
24+23.34	24+96.32	200.00'	20°20'00"	70.98'	35.87'	N 87°10'00"W 70.60'
27+17.30	27+91.09	50.00'	84°20'00"	73.59'	45.28'	N 34°50'00"W 67.13'
29+35.39	30+38.07	50.00'	117°40'00"	102.68'	82.67'	N 51° 30'00"W 85.51'
31+12.50	32+10.53	50.00'	112°20'00"	98.03'	74.59'	N 54°10'00"W 83.07'
33+35.36	34+20.21	50.00'	97°00'00"	84.65'	56.51'	N 46°30'00"W 74.89'
34+20.21	34+90.90	50.00'	81°00'00"	70.69'	42.70'	N 54°30'00"W 69.94'
34+90.90	35+46.22	234.80'	13°30'00"	55.32'	27.79'	N 20°45'00"W 55.20'

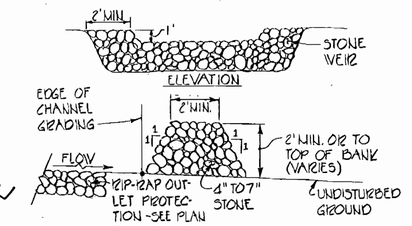
NOTE: SEE SHEET 1 OF 5 FOR PUMPING STATION SITE PLAN DETAILS.

NOTE: INSTALL CULVERT AT THE SAME TIME SEDIMENT CONTROL DEVICES ARE PLACED.

NOTE: ALL DIVERSION DIKES ON THIS SHEET SHALL BE STABILIZED WITH CRUSHED STONE

PLAN
SCALE 1" = 50'

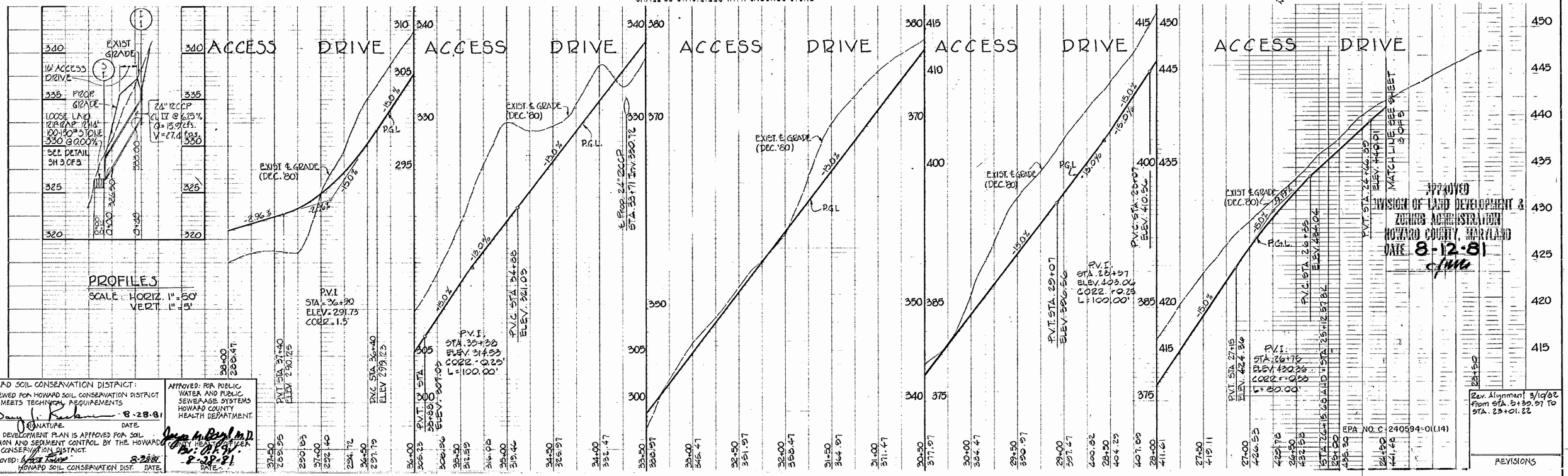
STA 25+00 TO PUMPING STATION SITE FULL CROSS SLOPE TO LEFT.



SECTION - STONE SEDIMENT CONTROL WEIR
NO SCALE

CONSTRUCTION SPECIFICATIONS

1. STONE WEIR SHALL BE CONSTRUCTED AT THE DOWN STREAM END OF THE DISTURBED CHANNEL.
2. WEIR SHALL EXTEND THE FULL WIDTH OF THE UNDISTURBED CHANNEL OR FOR THE FULL WIDTH OF THE RIP-RAP OUTLET PROTECTION AS APPLICABLE.
3. STONE SHALL BE PLACED SO AS TO PROVIDE A STABLE STRUCTURE WITH NO LARGE VOIDS.



APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 8-12-81

HOWARD SOIL CONSERVATION DISTRICT: REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS
SIGNATURE — DATE 8-28-81
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED: HOWARD SOIL CONSERVATION DIST. — DATE 8-28-81

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT.
COUNTY HEALTH OFFICER — DATE 8-28-81

Rev. Alignment 3/10/82 From STA. 3+39.37 TO STA. 23+01.22

EPA NO. C-240594-01(.14)

REVISIONS

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1023 North Calvert Street
Baltimore, Maryland 21202 — 301/837-0134

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND ROADS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
DIRECTOR — DATE 8-28-81
CHIEF BUREAU OF ENGINEERING — DATE 8/27/81

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
PLANNING DIRECTOR — DATE
CHIEF DIVISION OF LAND DEVELOPMENT & ZONING ADMIN. — DATE 8-28-81

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 — DATE 8-28-81

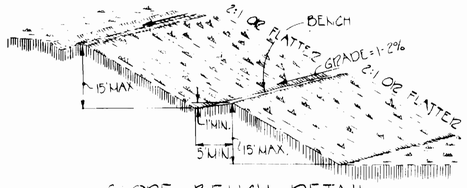
PROFESSIONAL ENGINEER:
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
WILLIAM G. PASCH II — REG. NO. 4575 — DATE 2/3/81

STATE OF MARYLAND — WILLIAM G. PASCH — REGISTERED PROFESSIONAL ENGINEER & LAND SURVEYOR

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT S-4-6007
CONTRACT 3742-S
CHAMBERLEA SEWERS
CHAMBERLEA PUMPING STATION
SITE DEVELOPMENT PLAN
ACCESS DRIVE
ELECTION DISTRICT NO. 2 — HOWARD COUNTY, MD.
TAX MAP 17 — PARCEL

DESIGNED: R.T.
DRAWN: C.O.P.
CHECKED: R.T.
DRWG. NO. 5 OF 17
SITE PLAN SH. 4 OF 5
SCALE: AS SHOWN

SDP-81-174 — 2/3/81



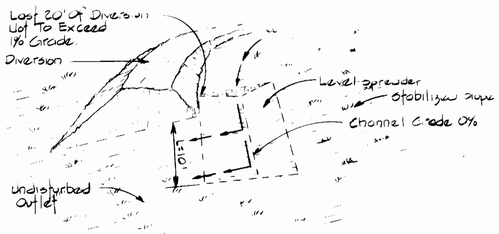
SLOPE BENCH DETAIL

NO SCALE

NOTES

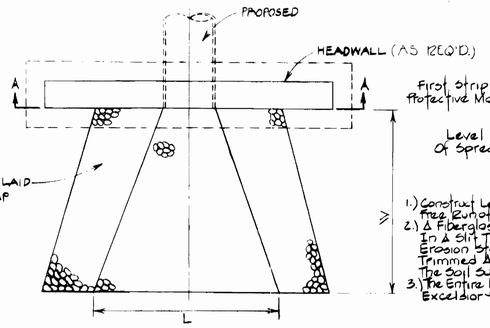
1. ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED SEDIMENT CONTROL PLAN UNTIL THEY ARE PERMANENTLY STABILIZED.
2. ALL BENCHES SHALL BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF DEVELOPMENT.
3. SEEPS OR SPRINGS **ENCOUNTERED** DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.

STRUCTURE SCHEDULE					
I.D.	TYPE	INV. ELEV.	TOP ELEV.	DETAIL I.D.	RIP RAP APRON
I-1	V	330.50	336.00	D-93 Pg. 148	-
S-1	C	326.50		D-52 Pg. 107	12'L x 14'W @ 00%

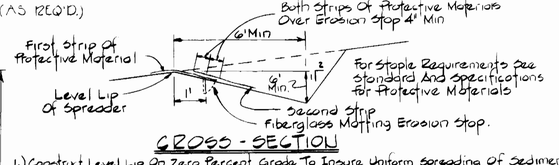


LEVEL SPREADER

Not To Scale

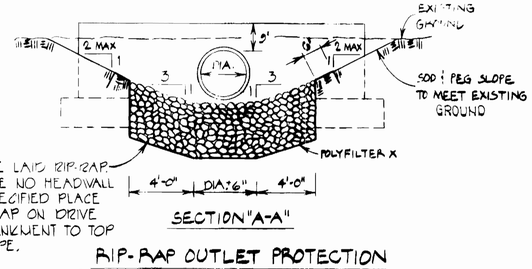


PLAN



CROSS - SECTION

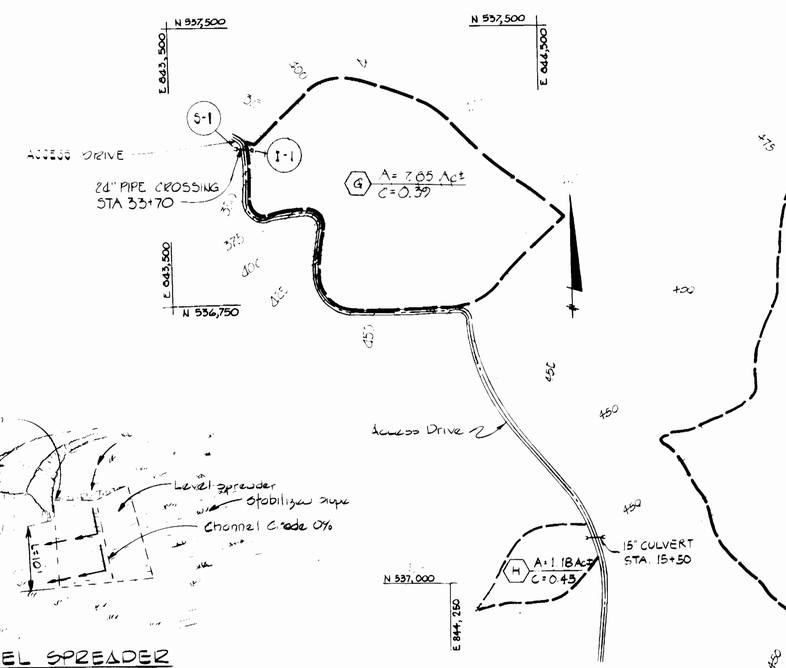
1.) Construct Level Lip On Zero Percent Grade To Insure Uniform Spreading Of Sediment Free Runoff (Converting Channel Flow To Sheet Flow.
2.) A Fiberglass Matting Erosion Stop Shall Be Vertically And At Least Six Inches Deep In A Slit Trench One Foot Back Of The Level Lip And Parallel With The Lip. This Erosion Stop Shall Extend The Entire Length Of The Level Lip And Shall Be Trimmed After Backfilling With Tamped Soil So That The Upper Edge Is Flush With The Soil Surface
3.) The Entire Level Lip Area Shall Be Protected By Placing Two Strips Of Jute Or Excelsior Protective Material As Shown.



SECTION "A-A"

RIP-RAP OUTLET PROTECTION

Not to Scale



DRAINAGE AREA MAP

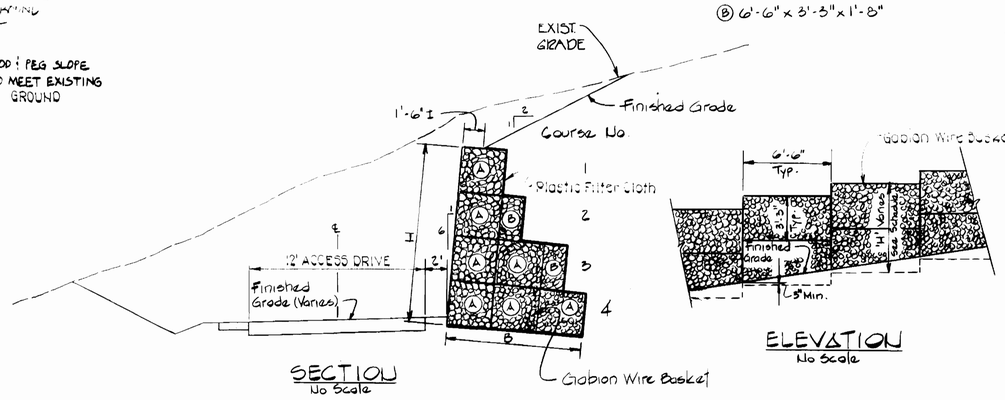
SCALE: 1"=200'

GABION WALL SCHEDULE				
STA.	TO STA.	NO. OF COURSES	H	B
33+73	33+89.50	1	3'-3"	3'-3"
33+89.50	34+35	2	6'-6"	4'-11"
34+35	34+80.50	3	9'-9"	6'-6"
34+80.50	35+32.50	4	13'-0"	12'-5"
35+32.50	36+17	3	9'-9"	6'-6"
36+17	36+43	2	6'-6"	4'-11"
36+43	36+69	1	3'-3"	3'-3"
Pumping Station Site		3	9'-9"	6'-6"

APPROXIMATE GABION BASKET DIMENSIONS

(A) 6'-6" x 3'-3" x 3'-3"

(B) 6'-6" x 3'-3" x 1'-8"

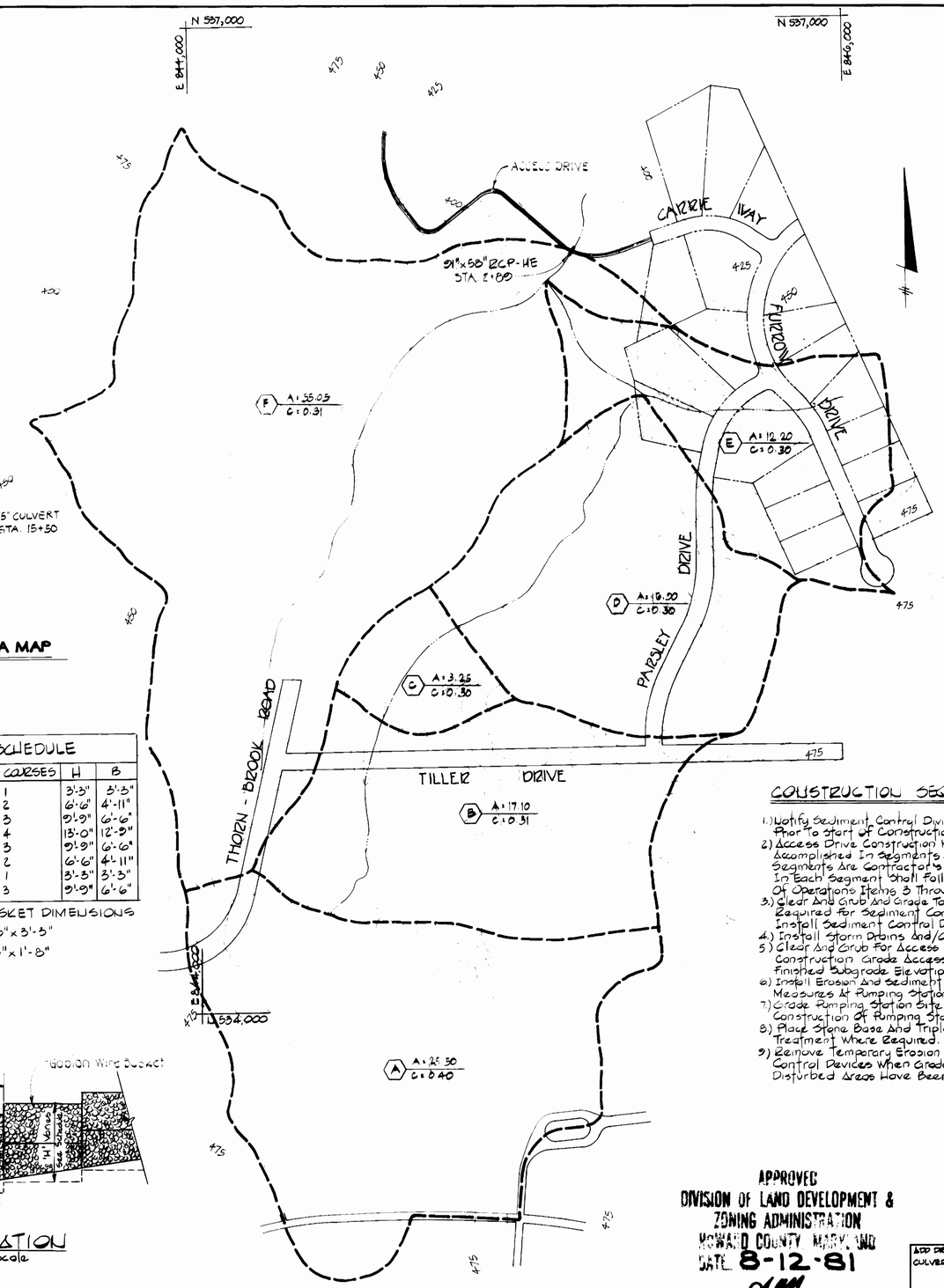


SECTION
No Scale

ELEVATION
No Scale

GABION RETAINING WALL

No Scale



DRAINAGE AREA MAP

FOR CULVERT CROSSING AT STA. 2+85
SCALE 1"=200'

CONSTRUCTION SEQUENCE

1.) Notify Sediment Control Division 24 Hours Prior To Start of Construction.
2.) Access Drive Construction May Be Accomplished In Segments. Length of Segments Are Contractor's Option. Work In Each Segment Shall Follow Sequence Of Operations Items 3 Through 5 Below
3.) Clear And Grub And Grade To Extent Required For Sediment Control Devices. Install Sediment Control Devices
4.) Install Storm Drains And/Or Culverts.
5.) Clear And Grub For Access Drive. Construction Grade Access Drive To Finished Subgrade Elevation.
6.) Install Erosion And Sediment Control Measures At Pumping Station Site.
7.) Grade Pumping Station Site. Begin Construction Of Pumping Station.
8.) Place Stone Base And Triple Surface Treatment Where Required.
9.) Remove Temporary Erosion And Sediment Control Devices When Graded And Disturbed Areas Have Been Stabilized.

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 8-12-81

HOWARD SOIL CONSERVATION DISTRICT:
REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
SIGNATURE — DATE 8-28-81
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED: HOWARD SOIL CONSERVATION DIST. — DATE 8-28-81

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT.
COUNTY HEALTH OFFICER — DATE 8-28-81

ADD DRAINAGE AREA MAP CULVERT STA. 15+50 8/6/82
REVISIONS

EPA NO. C-240594-01 (.14)

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.
DIRECTOR — DATE 8-28-81
CHIEF BUREAU OF ENGINEERING — DATE 8/27/81

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
PLANNING DIRECTOR — DATE 9-8-81
CHIEF DIVISION OF LAND DEVELOPMENT & ZONING ADMIN. — 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.
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WILLIAM G. RASCH — REG. NO. 4575 — DATE 2/3/81

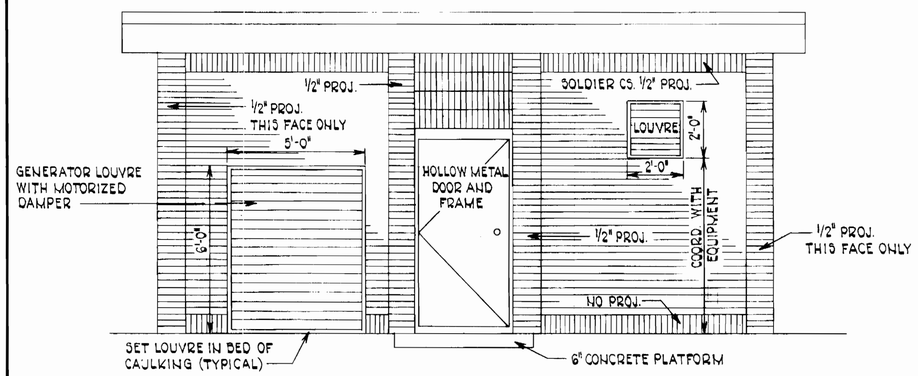
STATE OF MARYLAND — WILLIAM G. RASCH — REG. NO. 4575 — PROFESSIONAL ENGINEER

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT S-4-6007
CONTRACT 3742-S
CHAMBERLEA SEWERS
CHAMBERLEA PUMPING STATION
SITE DEVELOPMENT PLAN
ACCESS DRIVE
ELECTION DISTRICT NO. 2 — HOWARD COUNTY, MD.
TAX MAP 17 — PARCEL

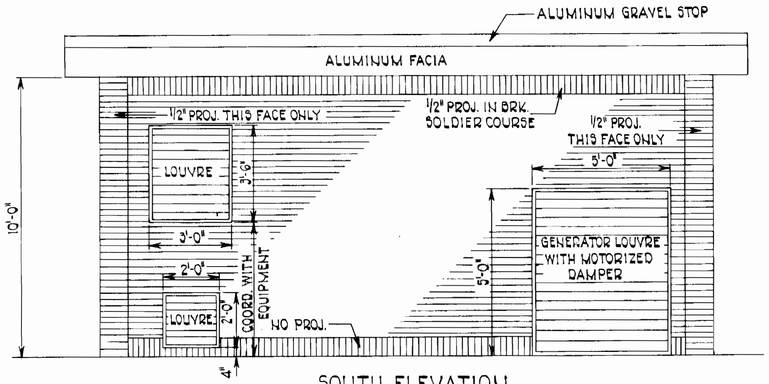
DESIGNED: RT.
DRAWN: SKB.
CHECKED: RT.
DRWG. NO. 6 OF 17
SITE PLAN SH. 5 OF 5
SCALE AS SHOWN

SDP-81-174 — 2/3/81

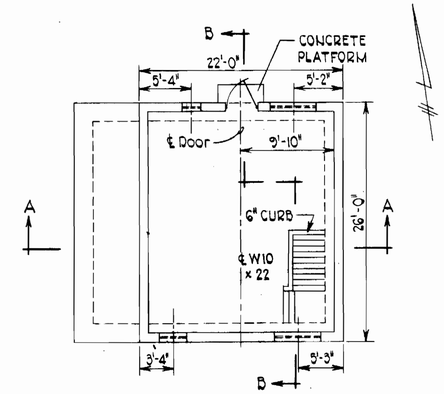
BRUNING ANE 1M3-2



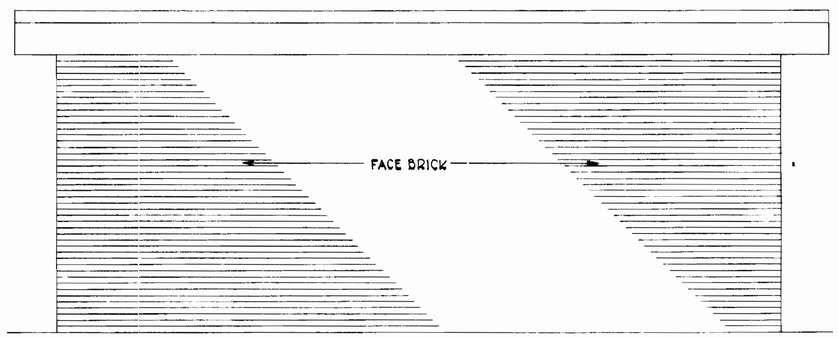
NORTH ELEVATION
SCALE: 3/8" = 1'-0"



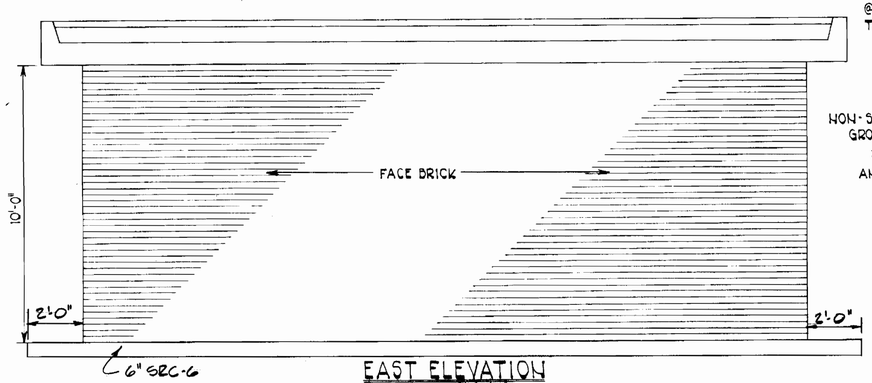
SOUTH ELEVATION
SCALE: 3/8" = 1'-0"



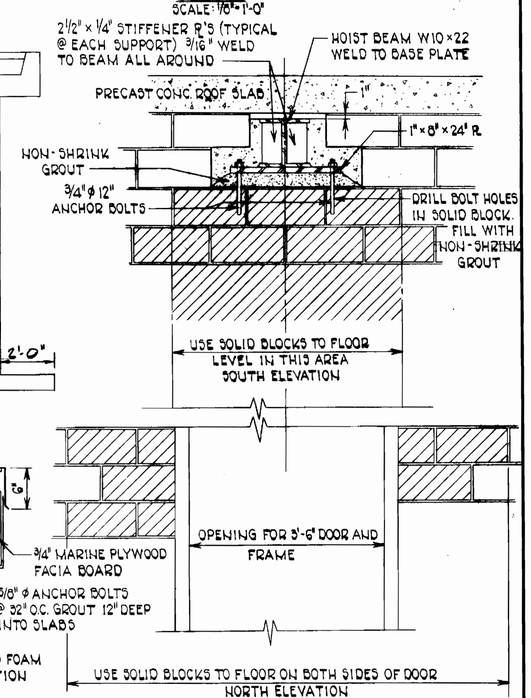
PLAN
SCALE: 1/8" = 1'-0"



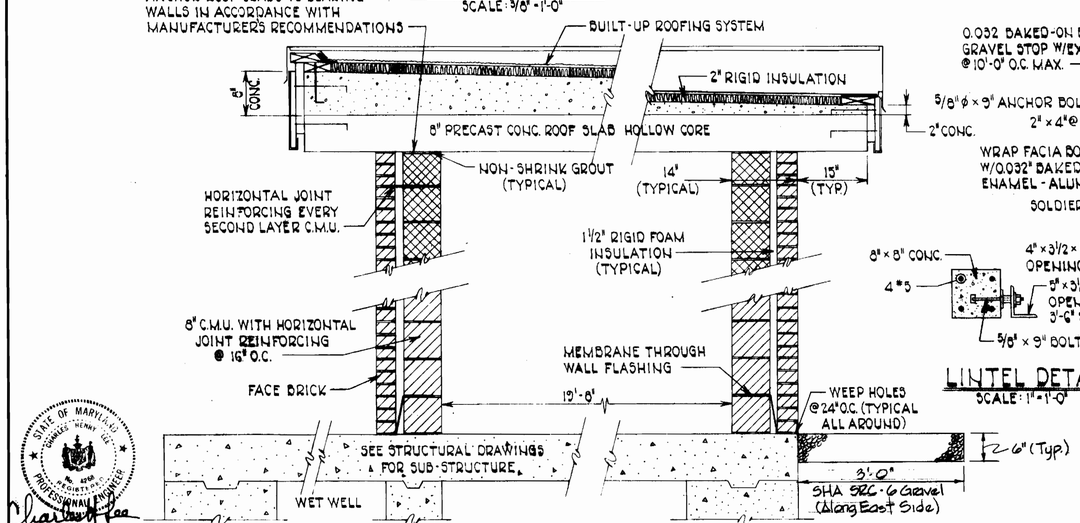
WEST ELEVATION
SCALE: 3/8" = 1'-0"



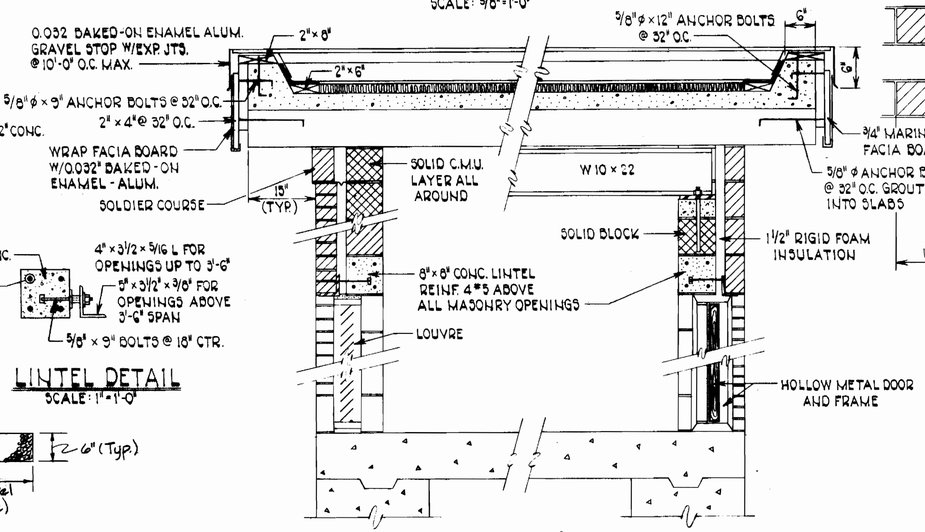
EAST ELEVATION
SCALE: 3/8" = 1'-0"



HOIST BEAM SUPPORT DETAILS
SCALE: 3/4" = 1'-0"



SECTION A-A
SCALE: 3/4" = 1'-0"



SECTION B-B
SCALE: 3/4" = 1'-0"

LINTEL DETAIL
SCALE: 1" = 1'-0"

EPA NO. C-240594-01(.14)
CONTRACT NO. 2742-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
CHAMBERLEA PUMPING STATION

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Gary F. Nemeyer 8-28-81	Dolores Z. Kelly 8/28/81
DIRECTOR OF PUBLIC WORKS DATE	CHIEF BUREAU OF ENGINEERING DATE
Robert Bennett 8-28-81	Lawrence J. Ferris 8/28/81
CHIEF BUREAU OF UTILITIES DATE	CHIEF UTILITY DIVISION DATE

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

CONTRACT NO. 2742-S
CAPITAL PROJECT NO. S-4-6067

ARCHITECTURAL DETAILS

CHAMBERLEA SANITARY SEWERS
CHAMBERLEA PUMPING STATION
ELECTION DISTRICT NO. 2

DRAWING NO. 7 OF 17

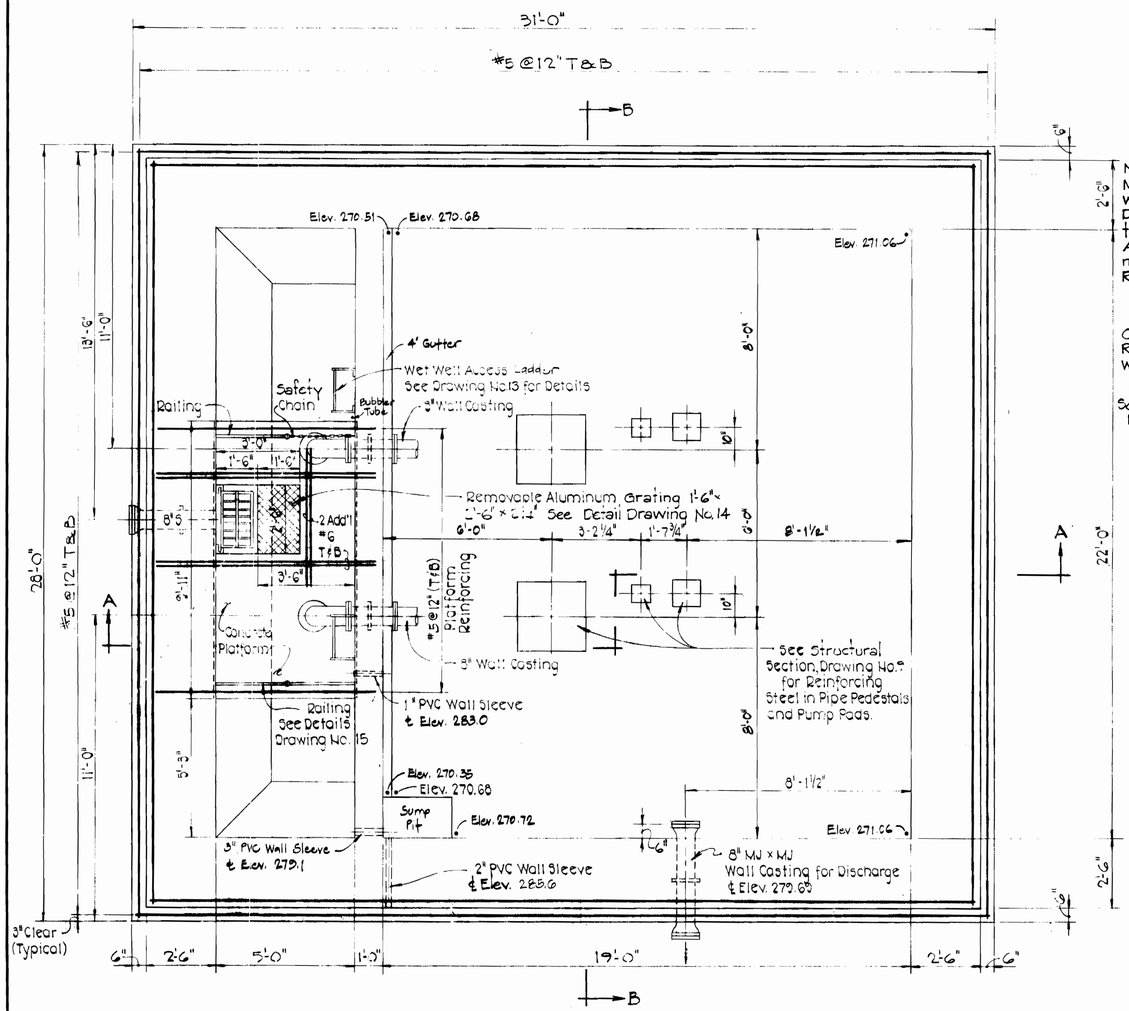
SCALE AS SHOWN

Designed: H.B.S.
Drafted: P.W.R.
Checked: H.B.S.

K&E BALTIMORE 17 0453 PHOENIX MC 1215

W.O.

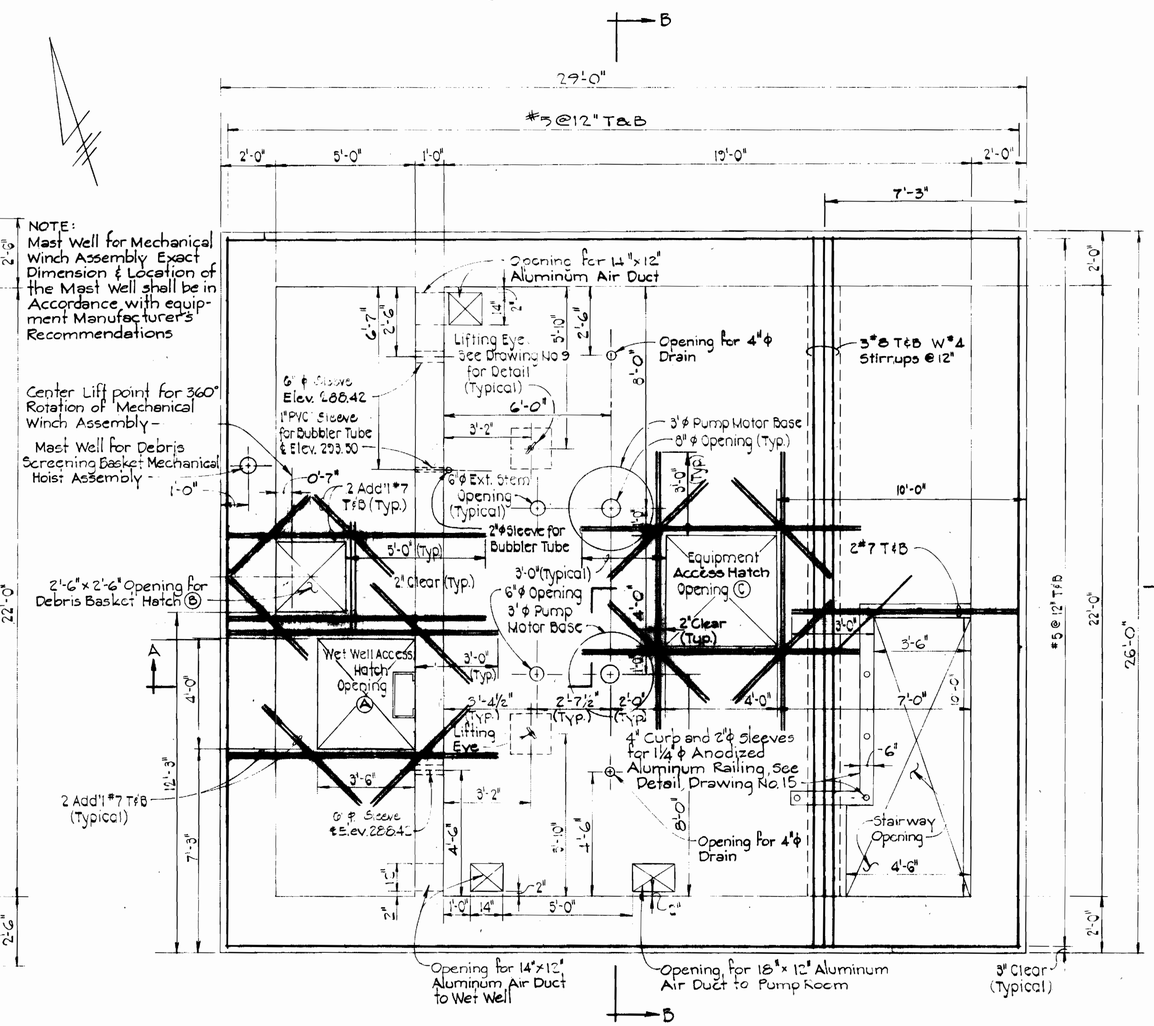
WS 742 S/7



PUMP ROOM SLAB REINFORCING

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

NOTE:
Mast Well for Mechanical Winch Assembly Exact Dimension & Location of the Mast Well shall be in Accordance with equipment Manufacturer's Recommendations



TOP SLAB REINFORCING

Scale 3/8" = 1'-0"

GENERAL STRUCTURAL NOTES

1. DESIGN LIVE LOADS: Precast Concrete Roof Panels 50 PSF, 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"x1" unless otherwise noted. All Pipe Sleeves, Conduit, Floor Boxes, Frames, etc. shall be placed before concrete is poured. All openings thru concrete shall be watertight. See Mechanical and Electrical Drawings for openings not shown or located on Structural Plans.
3. EARTHWORK: All excavation for structures shall be kept free of water until backfill is property tamped in place to finished 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-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. 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: Reinforcing Steel shall be free from mud, oil, or other non-metallic coatings that adversely affect bonding capacity. Bars are to be securely tied to prevent displacement during the concreting operation and all dowels are to be wired in place before depositing concrete. All splicing of bars, placing tolerances and bar spacings shall conform to A.C.I. 318-71

STATE OF MARYLAND — CHARLES HENRY LEE — No. 4298 — REGISTERED PROFESSIONAL ENGINEER

Charles H. Lee

EPA NO. C-240594-01 (.14)
CONTRACT NO. 2742-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
CHAMBERLEA PUMPING STATION

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS	DATE 8-28-81	CHIEF BUREAU OF ENGINEERING	DATE 8/28/81
CHIEF BUREAU OF UTILITIES	DATE 8-28-81	CHIEF UTILITY DIVISION	DATE 8/28/81

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

CONTRACT NO. 2742-S
CAPITAL PROJECT NO. S-4-6067

STRUCTURAL PLANS

CHAMBERLEA SANITARY SEWERS
CHAMBERLEA PUMPING STATION
ELECTION DISTRICT NO. 2

DRAWING NO. 8 OF 17

SCALE AS SHOWN

Designed: BCC
Drafted: PWR
Checked: REP

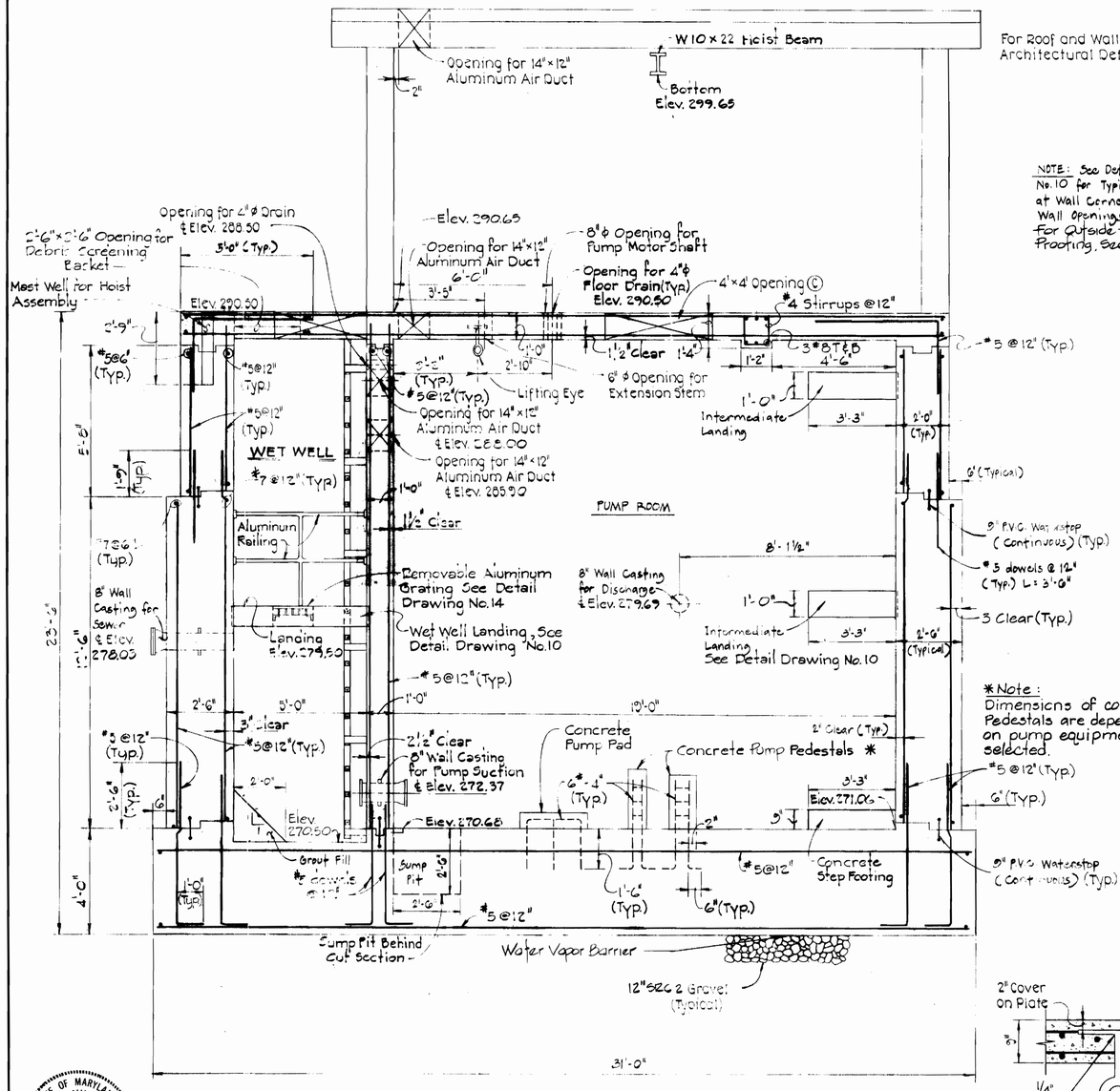
W.O. 3394-20

K&E BALTIMORE 17 0453 PHOENIX MC 1319

WS 742 S/8

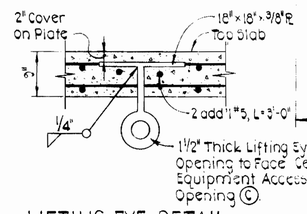
For Roof and Wall Details, See Architectural Details, Drawing No.7

NOTE: See Details on Drawing No.10 for Typical Reinforcing at Wall Corners and at Wall Openings.
For Outside Foundation Damp Proofing, See Specifications.

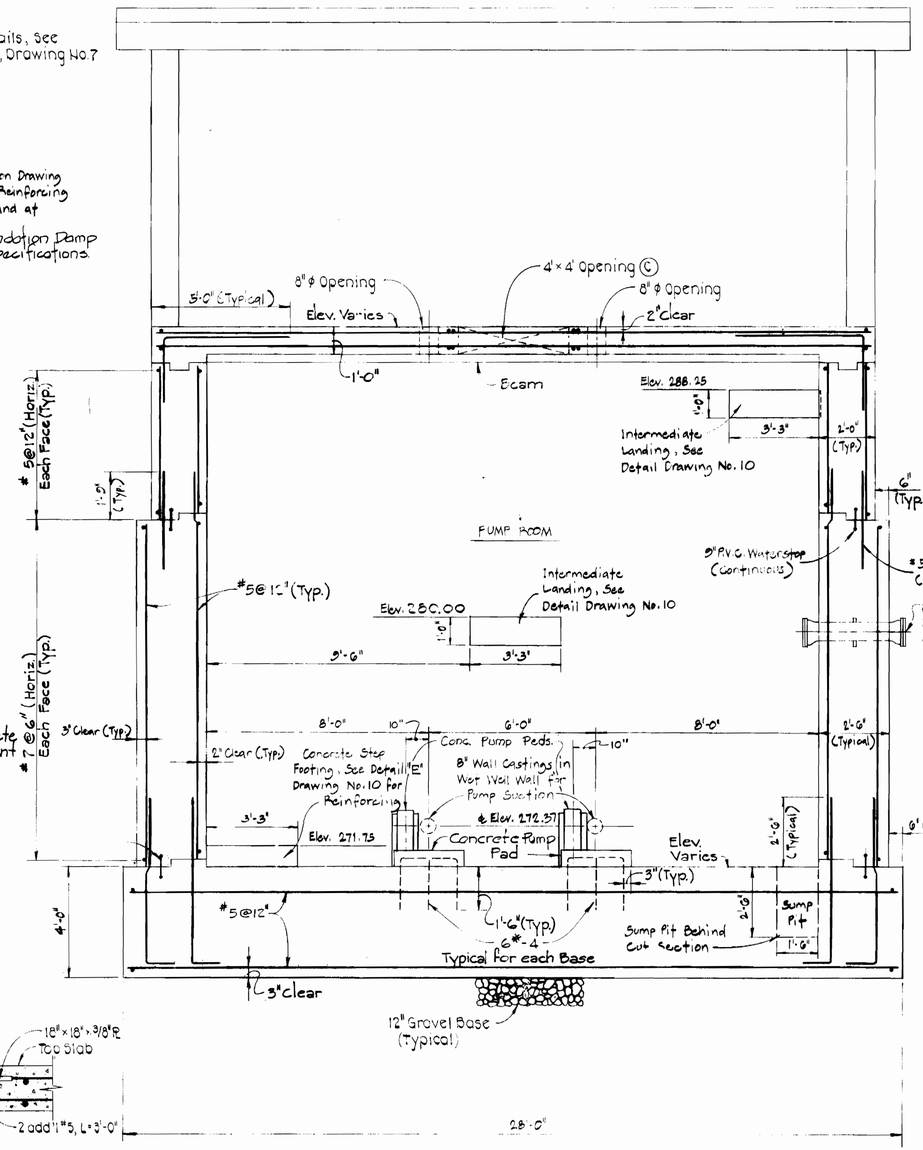


SECTION "A-A"
Scale 3/8" = 1'-0"

*Note: Dimensions of concrete Pedestals are dependent on pump equipment selected.



LIFTING EYE DETAIL
Not to Scale



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

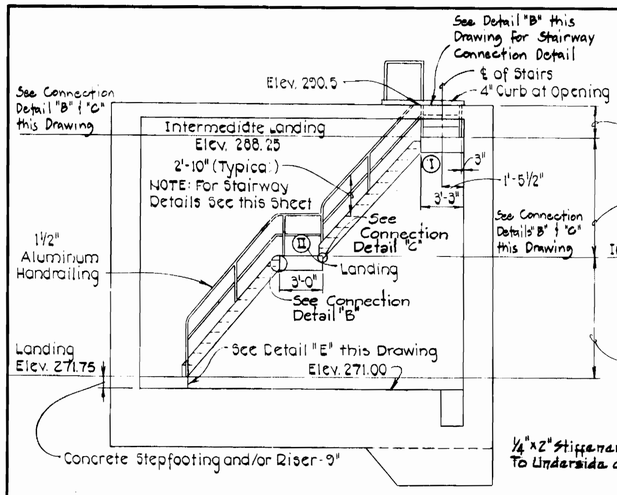
EPA NO. C-240594-01 (.14)
CONTRACT NO. 2742-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
CHAMBERLEA PUMPING STATION

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND				PURDUM & JESCHKE ENGINEERS 1023 N. CALVERT ST. BALTIMORE, MARYLAND	CONTRACT NO. 2742-S CAPITAL PROJECT NO. S-4-6067	STRUCTURAL SECTIONS	CHAMBERLEA SANITARY SEWERS CHAMBERLEA PUMPING STATION ELECTION DISTRICT NO. 2	DRAWING NO. 9 OF 17	SCALE AS SHOWN	Designed: BCC Drafted: PWR Checked: REP
DIRECTOR OF PUBLIC WORKS	DATE 8-28-81	CHIEF BUREAU OF ENGINEERING	DATE 8/28/81							
CHIEF BUREAU OF UTILITIES	DATE 8-28-81	CHIEF UTILITY DIVISION	DATE 8/28/81							

W.O. 3394-20

K&E BALTIMORE 17 0693 PHOENIX MC 1316

WS 174 S/7



PUMP ROOM STAIRWAY
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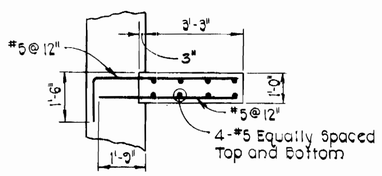
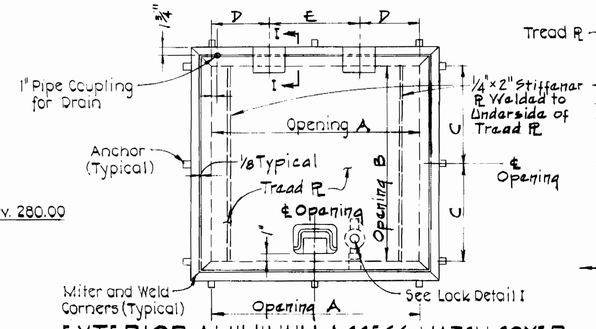
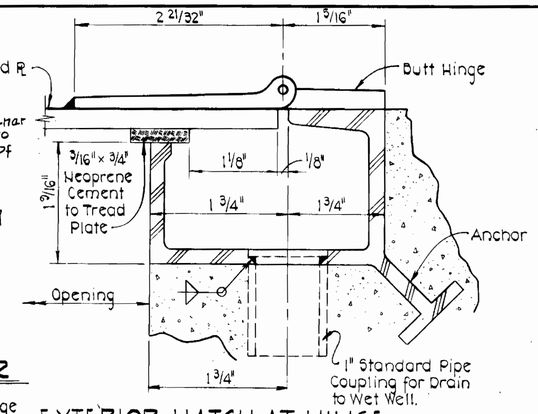


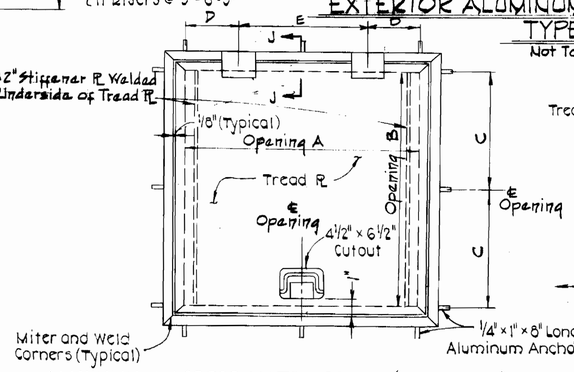
Ⓘ Ⓘⓘ LANDING DETAIL
Scale: 3/8" = 1'-0"



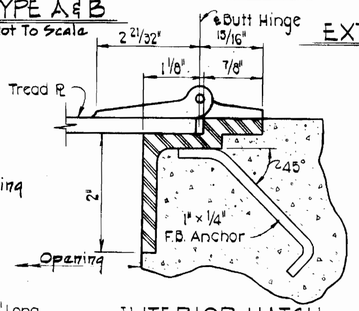
EXTERIOR ALUMINUM ACCESS HATCH COVER
TYPE A & B
Not To Scale



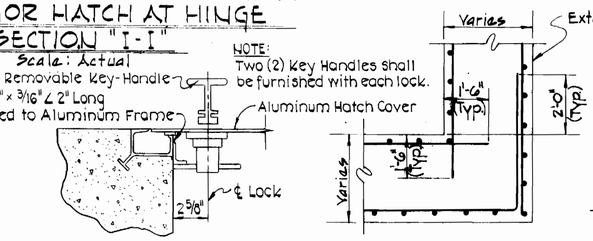
EXTERIOR HATCH AT HINGE
SECTION "I - I"
Scale: Actual



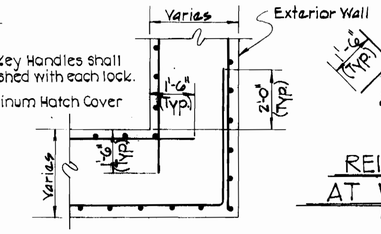
ALUMINUM ACCESS HATCH COVER (INTERIOR)
TYPE C
Not To Scale



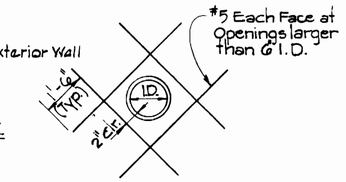
INTERIOR HATCH
SECTION "J - J"
Not To Scale



LOCK DETAIL - I
Not to Scale



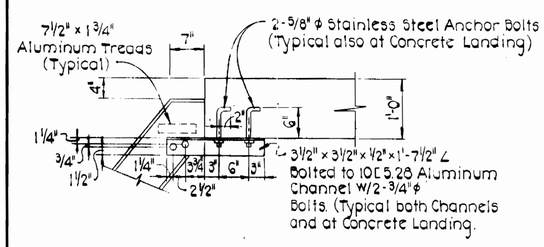
TYPICAL REINFORCING DETAIL
AT WALL CORNERS
Not to Scale



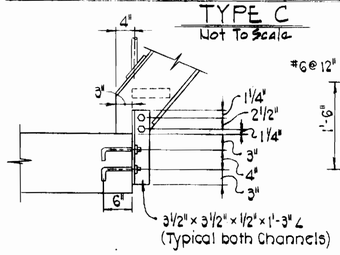
REINFORCING
AT WALL OPENINGS
Not to Scale

ACCESS HATCH DESIGNATION	ACCESS HATCH LOCATION	ACCESS HATCH FUNCTION	ACCESS HATCH DIMENSIONS-IN. A	B	C	D	E	TREAD PLATE	ADDITIONAL APPLICABLE REQUIREMENTS
A	Top Slab of Wet Well	Personnel Access to Wet Well	4'-0"	3'-6"	1'-9"	1'-0"	2'-0"	3/8"	Exterior, Watertight Hatch See Section I-I & Lock Detail
B	Top Slab of Wet Well	Operation of Debris Basket	2'-6"	2'-6"	1'-3"	0'-10"	0'-10"	¼"	Exterior, Watertight Hatch See Section I-I & Lock Detail
C	Control Room Slab	Equipment Access to Pump Room	4'-0"	4'-0"	2'-0"	1'-0"	2'-0"	3/8"	Interior Hatch See Section J-J

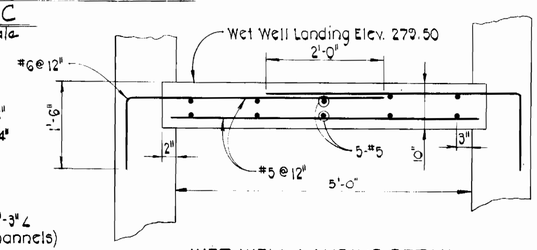
ACCESS HATCH SCHEDULE



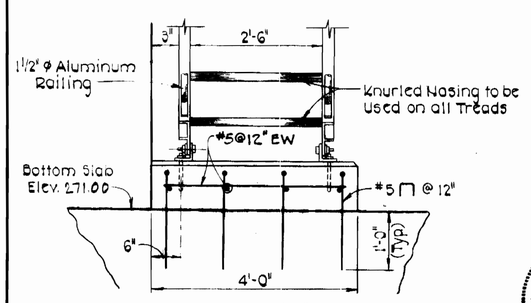
DETAIL "B"



DETAIL "C"



WET WELL LANDING DETAIL
Scale: 3/4" = 1'-0"
For Detail & Removable Aluminum Grate See Drawing No. 14



DETAIL "E"
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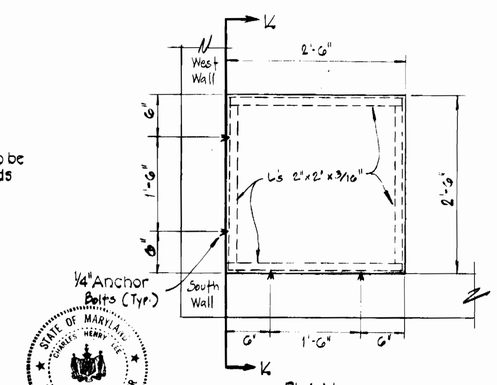
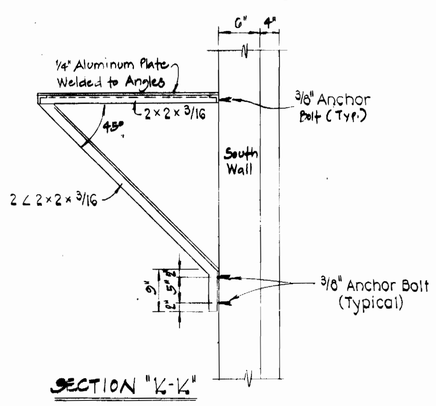


PLAN



SECTION "K-K"

BLOWER PLATFORM DETAILS
Not to Scale

STATE OF MARYLAND
CLYDE E. HEMPE
No. 4268
REGISTERED
PROFESSIONAL ENGINEER

EPA NO. C-240594-01 (.14)
CONTRACT NO. 2742-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
CHAMBERLEA PUMPING STATION

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS	DATE 8-28-81	CHIEF BUREAU OF ENGINEERING	DATE 8/28/81
CHIEF BUREAU OF UTILITIES	DATE 8-28-81	CHIEF UTILITY DIVISION	DATE 8/28/81

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

CONTRACT NO. 2742-S
CAPITAL PROJECT NO. S-4-6067

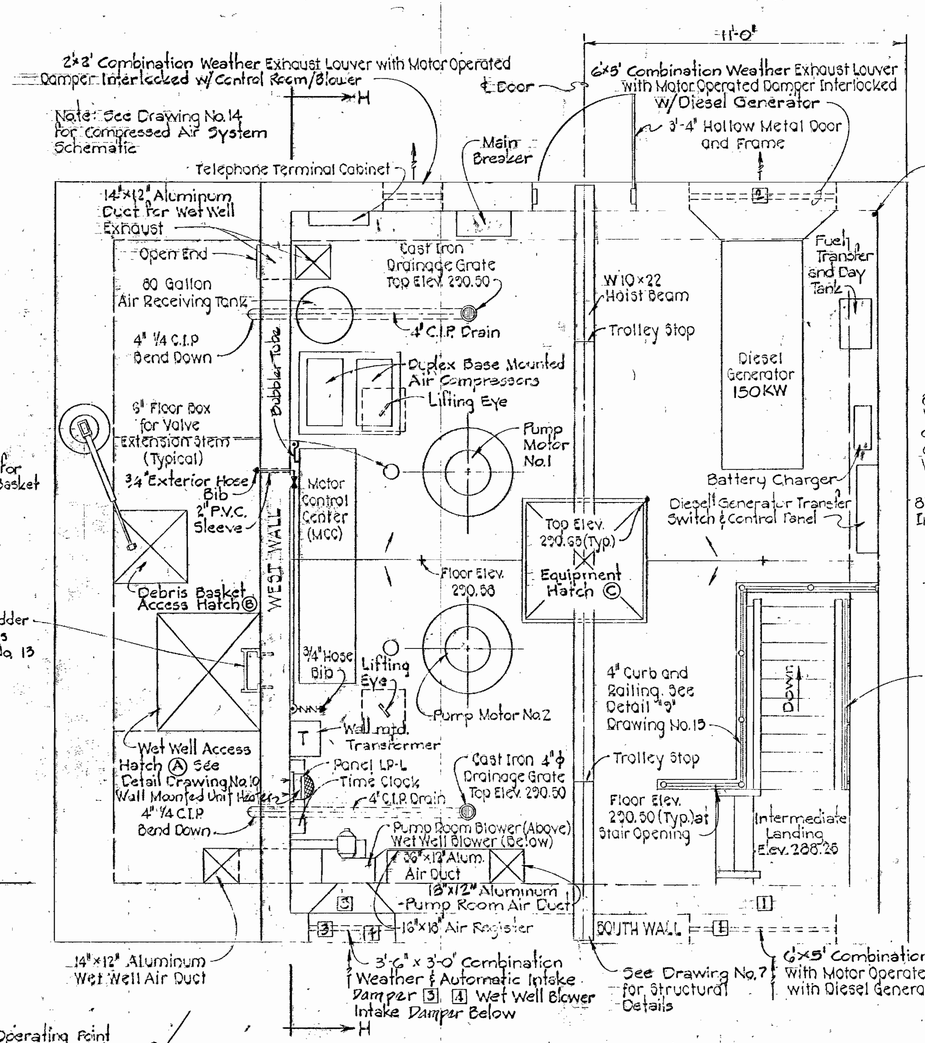
STRUCTURAL DETAILS

CHAMBERLEA SANITARY SEWERS
CHAMBERLEA PUMPING STATION
ELECTION DISTRICT NO. 2

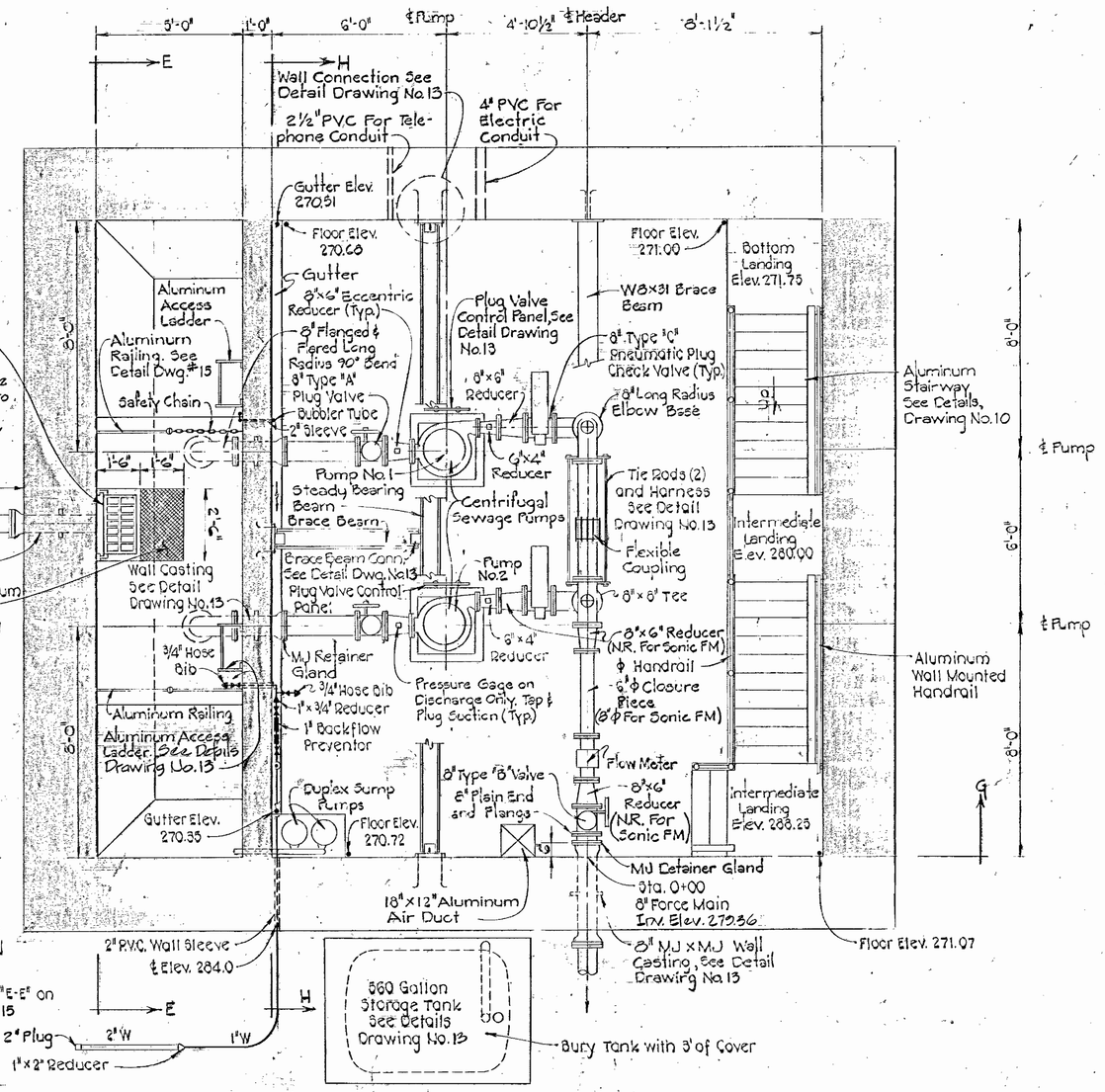
DRAWING NO. 10 OF 17
SCALE AS SHOWN
Designed: DJD
Drafted: ARZ
Checked: REP

W.O. 3394-20

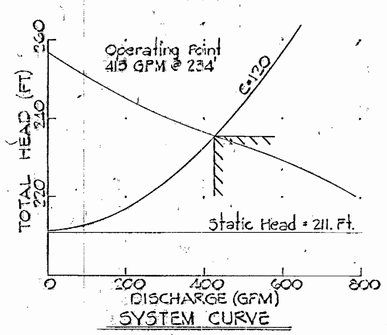
K&E BALTIMORE 17 0453 PHOENIX MC 1316



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



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



SYSTEM CURVE

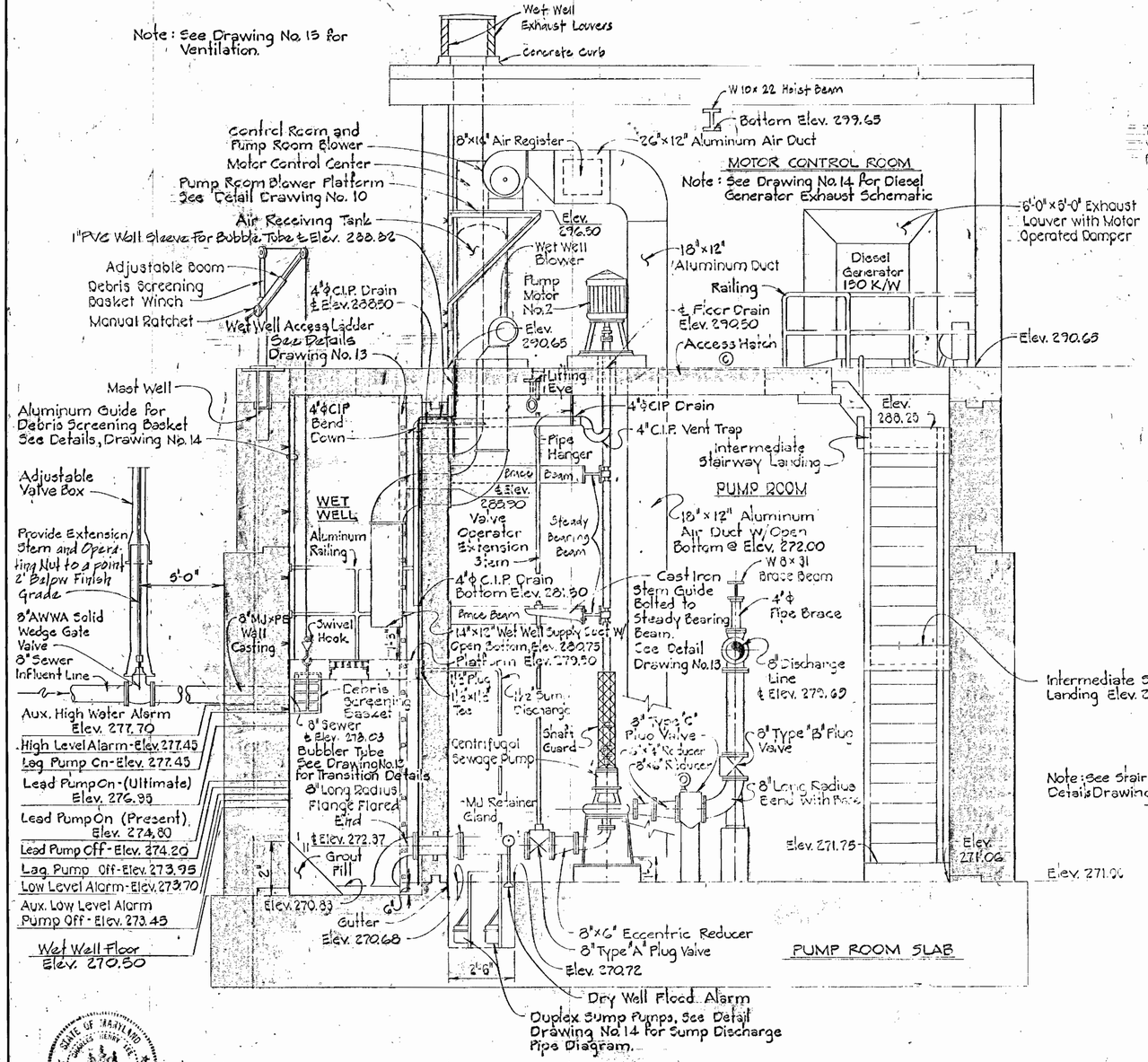
EPA NO. C-240594-01 (.14)
CONTRACT NO. 2742-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
CHAMBERLEA PUMPING STATION

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND	PURDUM & JESCHKE ENGINEERS 1023 N. CALVERT ST. BALTIMORE, MARYLAND	CONTRACT NO. 2742-S CAPITAL PROJECT NO. S-4-6067	MECHANICAL PLANS	CHAMBERLEA SANITARY SEWERS CHAMBERLEA PUMPING STATION ELECTION DISTRICT NO. 2	DRAWING NO. 11 OF 17	SCALE AS SHOWN	Designed: DJD Drafted: ARZ Checked: REP

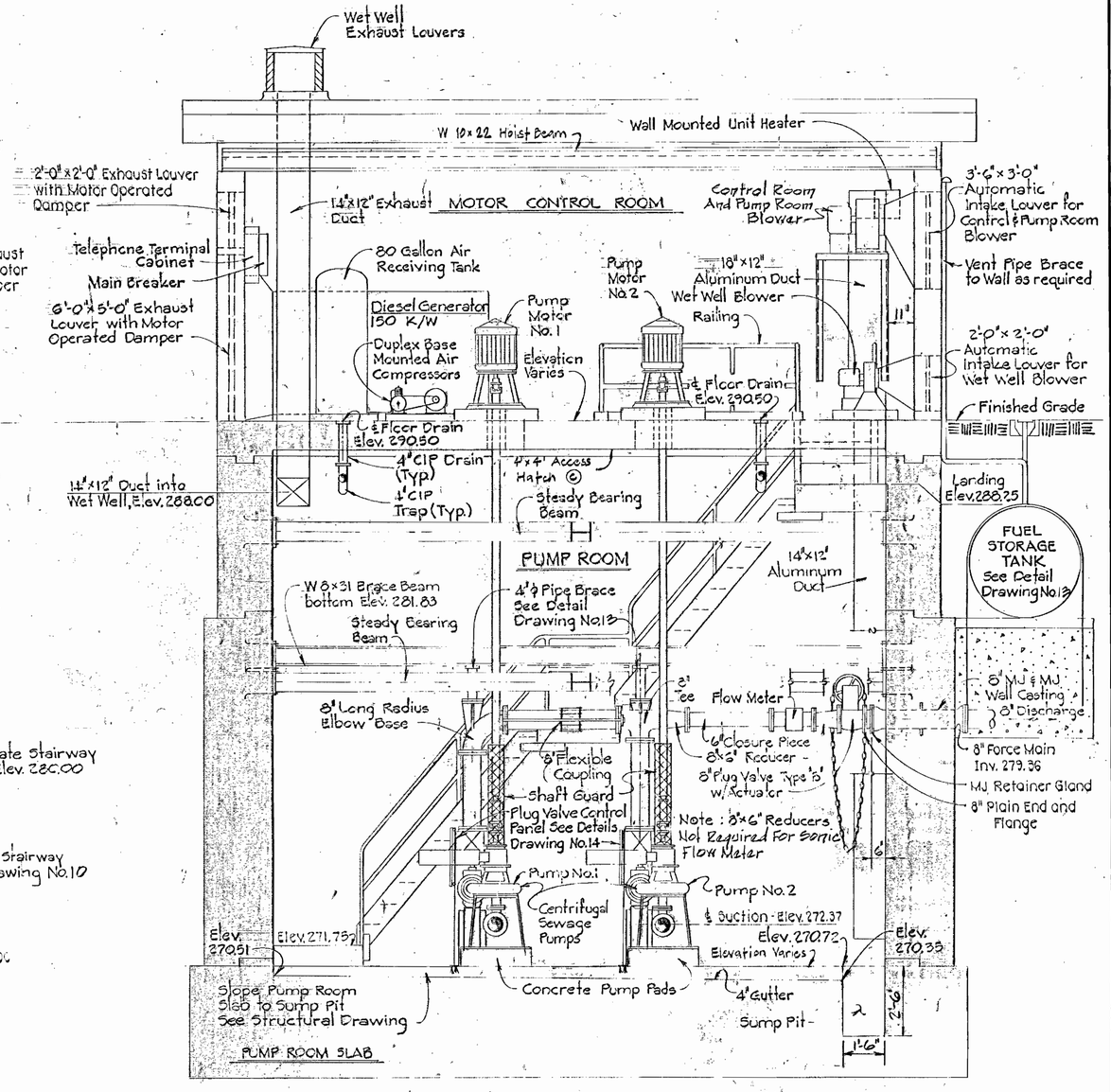
DIRECTOR OF PUBLIC WORKS — DATE 3-27-81 — CHIEF BUREAU OF ENGINEERING — DATE 8/28/81
CHIEF BUREAU OF UTILITIES — DATE 8-28-81 — CHIEF UTILITY DIVISION — DATE 8/28/81

W.O. 3394-20

K&E BALTIMORE 17 0453 PHOENIX MC 1316



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



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

EPA NO. C-240594-01(.14)
CONTRACT NO. 2742-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
CHAMBERLEA PUMPING STATION

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS	DATE 8-28-81	CHIEF BUREAU OF ENGINEERING	DATE 8/28/81
CHIEF BUREAU OF UTILITIES	DATE 8-28-81	CHIEF UTILITY DIVISION	DATE 8/28/81

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

CONTRACT NO. 2742-S
CAPITAL PROJECT NO. S-4-6067

MECHANICAL SECTIONS

CHAMBERLEA SANITARY SEWERS
CHAMBERLEA PUMPING STATION
ELECTION DISTRICT NO. 2

DRAWING NO. 12 OF 17

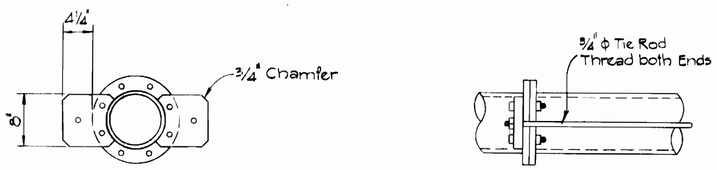
SCALE AS SHOWN

Designed: DJD
Drafted: ARZ
Checked: REP

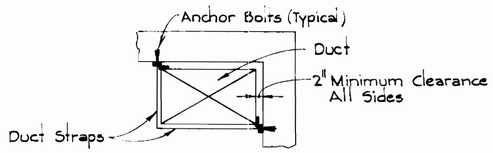
W.O. 3394-20

K&E BALTIMORE 17 0453 PHOENIX MC 1316

NOTES:
1. Two Tie Rods Required for each Coupling.
2. Thread bolt ends for Hex Head Nuts.



PIPE HARNESS DETAILS
Not to Scale



TYPICAL DUCT INSTALLATION
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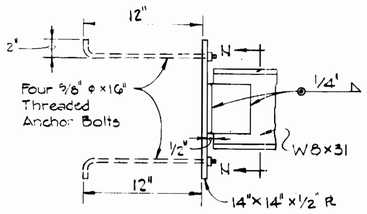
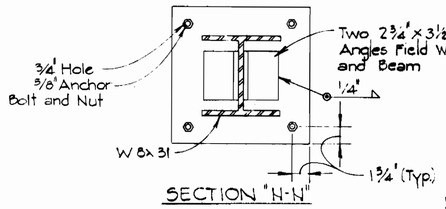
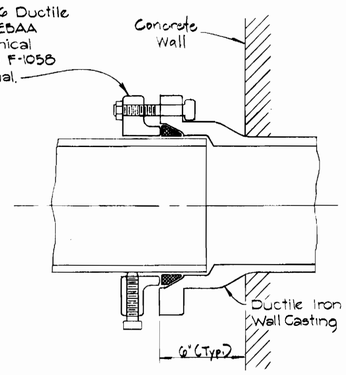


ELEVATION

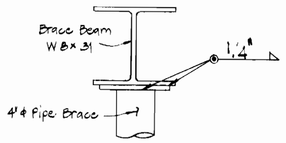


SECTION "N-N"

STEADY BEARING BEAM & BRACE BEAM WALL CONNECTION DETAILS
Scale: 1½" = 1'-0"



MJ RETAINER GLAND DETAIL
Not to Scale



PIPE BRACE CONNECTION
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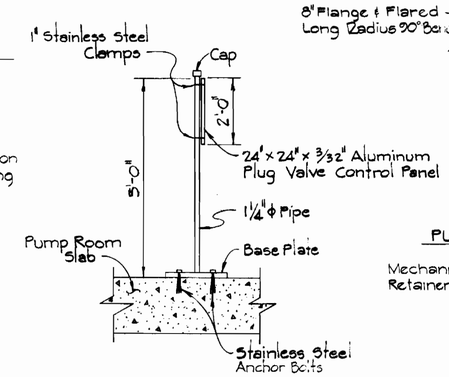
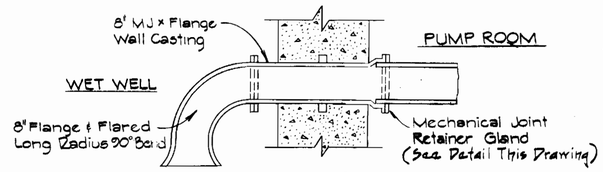
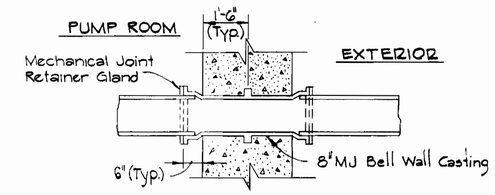


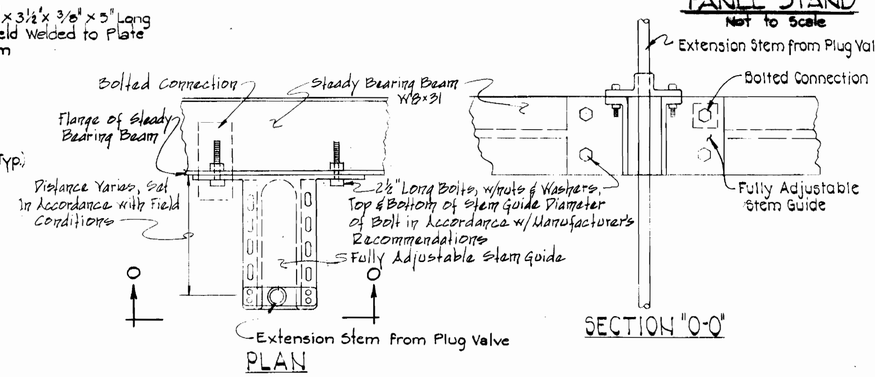
PLUG VALVE CONTROL PANEL STAND
Not to Scale



WET WELL WALL CASTING DETAIL
Not to Scale



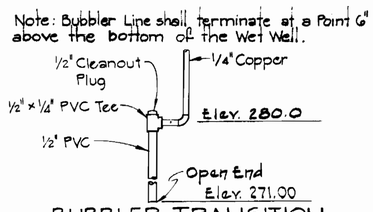
FORCE MAIN WALL CASTING DETAIL
Not to Scale



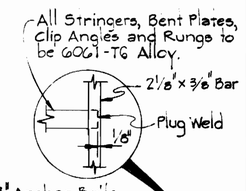
PLAN

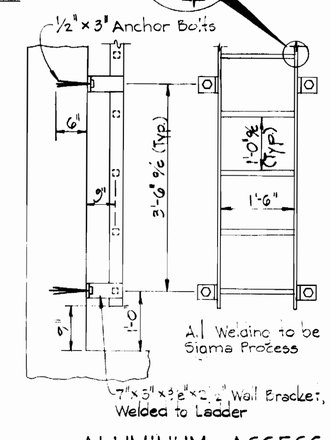
SECTION "O-O"

STEM GUIDE CONNECTION DETAIL
Not to Scale

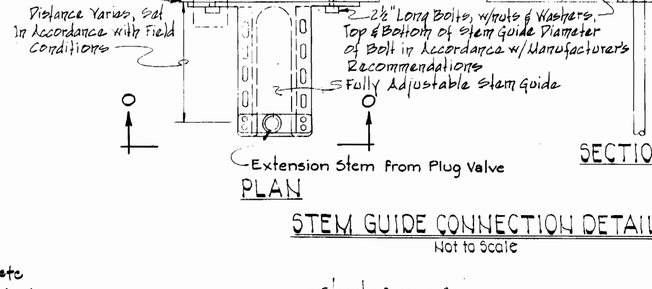


BUBBLER TRANSITION DETAIL
Not to Scale





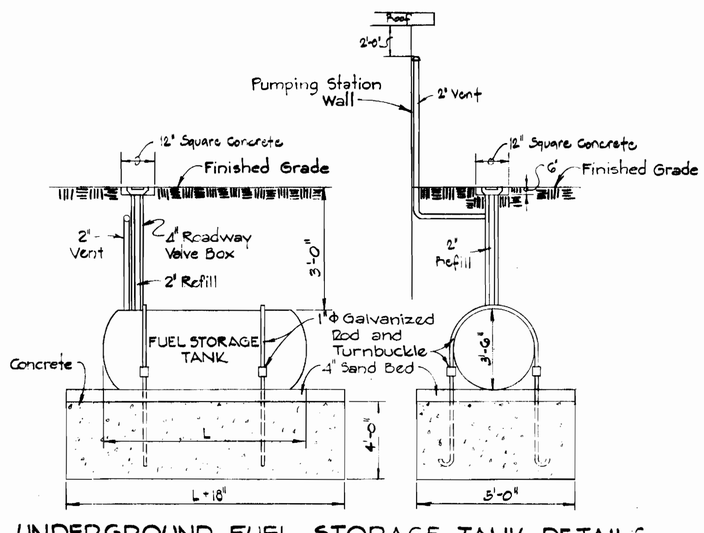
ALUMINUM ACCESS LADDER DETAILS
Scale ¾" = 1'-0"



PLAN

SECTION "M-M"

BRACE BEAM CONNECTION DETAILS
Scale 1½" = 1'-0"



UNDERGROUND FUEL STORAGE TANK DETAILS
Not to Scale

STATE OF MARYLAND — CHARLES HENRY LEE — No. 4298 — PROFESSIONAL ENGINEER

Charles H. Lee

EPA NO. C-240594-01(.14)
CONTRACT NO. 2742-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
CHAMBERLEA PUMPING STATION

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

W. F. Nimmey	8-28-81	Robert Bowen & Kelly	8/28/81
DIRECTOR OF PUBLIC WORKS	DATE	CHIEF BUREAU OF ENGINEERING	DATE
Robert Bowen	8-28-81	Kevin J. Kreis	8/28/81
CHIEF BUREAU OF UTILITIES	DATE	CHIEF LAND-DEVELOPMENT DIVISION	DATE

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

CONTRACT NO. 2742-S
CAPITAL PROJECT NO. S-4-6067

MECHANICAL DETAILS

CHAMBERLEA SANITARY SEWERS
CHAMBERLEA PUMPING STATION
ELECTION DISTRICT NO. 2

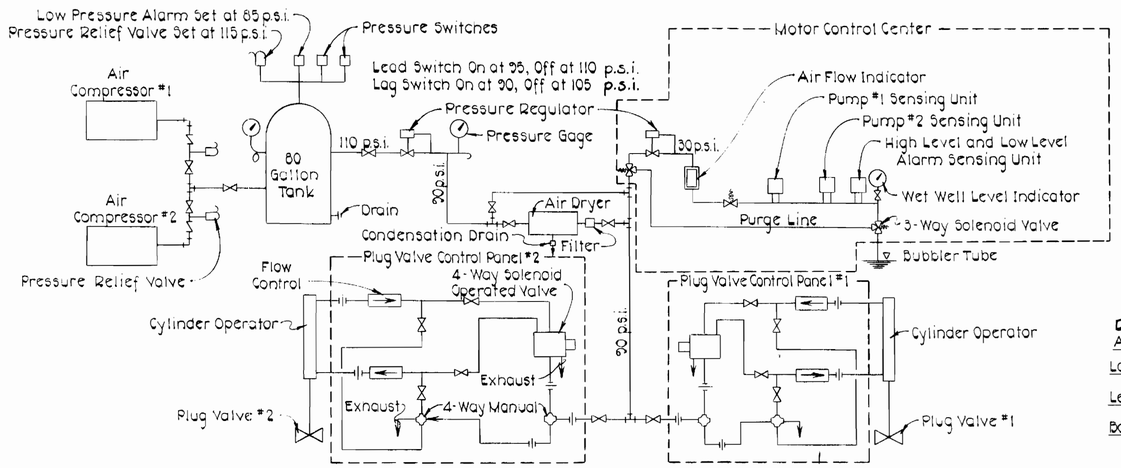
DRAWING NO. 13 OF 17

SCALE AS SHOWN

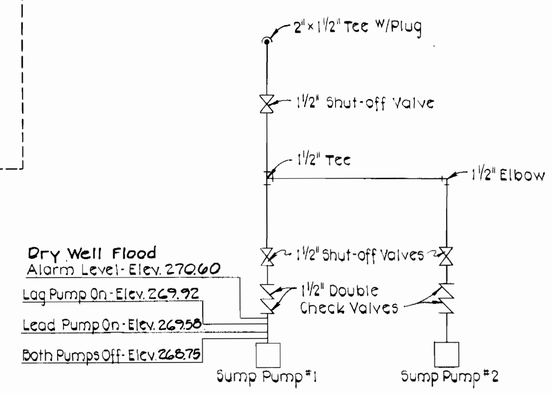
Designed: DJD
Drafted: PWR
Checked: REP

W.O. 3394-20

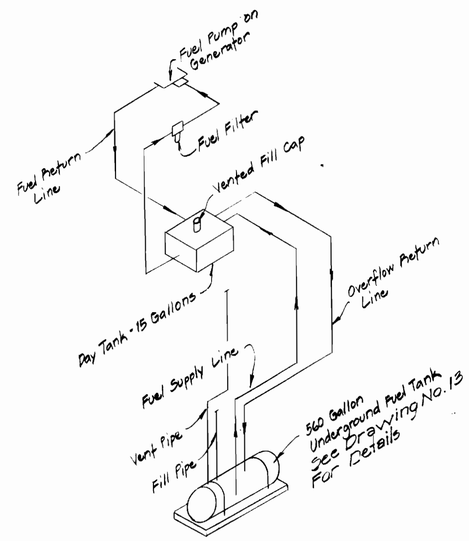
K&E BALTIMORE 17 0483 PHOENIX MC 1316



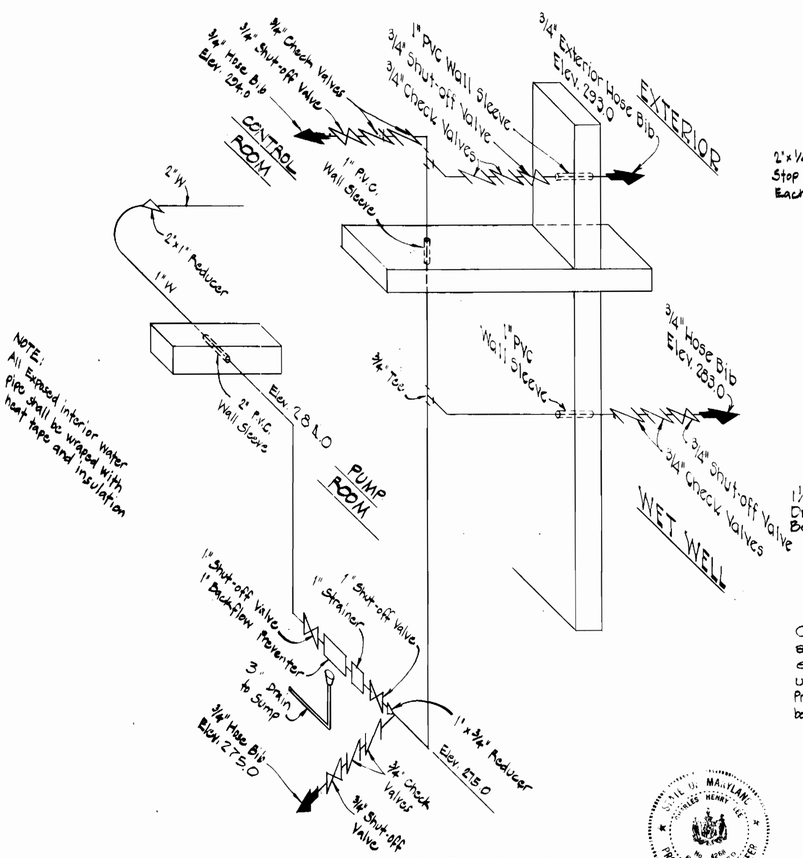
COMPRESSED AIR SYSTEM DIAGRAM
Not to Scale



SUMP PUMP DISCHARGE PIPING DIAGRAM
Not to Scale



SCHEMATIC - FUEL SUPPLY LINES FOR DIESEL POWER GENERATOR SET
Not to Scale



WATER SUPPLY DIAGRAM
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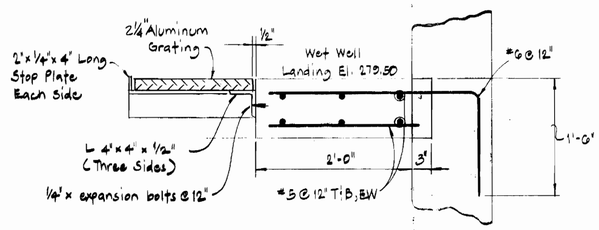
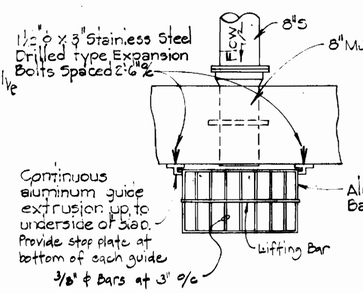
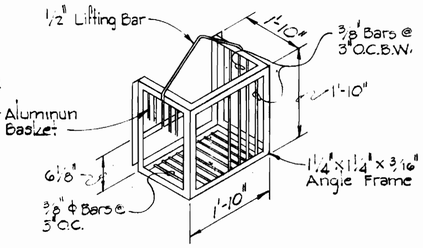


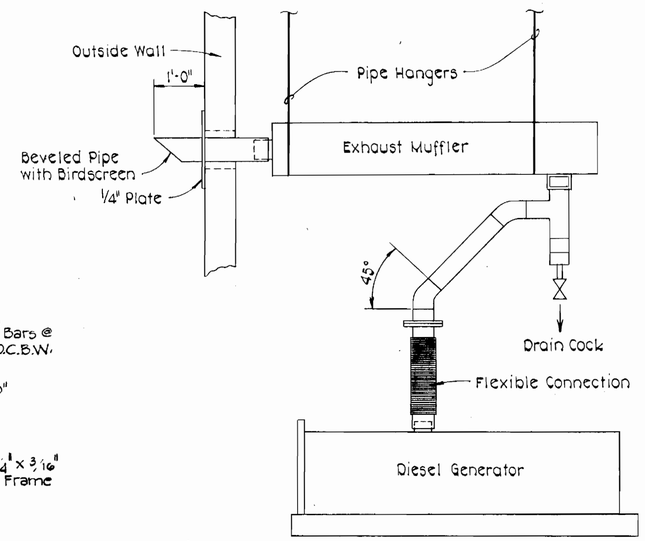
REMOVABLE ALUMINUM WET WELL GRATING
Scale: 1" = 1'-0"



PLAN
DEBRIS SCREENING BASKET
Not to Scale



ISOMETRIC
DEBRIS SCREENING BASKET DETAIL



GENERATOR EXHAUST SCHEMATIC
Not to Scale

EPA NO. C-240594-01(.14)
CONTRACT NO. 2742-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
CHAMBERLEA PUMPING STATION

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS	DATE 8-28-81	CHIEF BUREAU OF ENGINEERING	DATE 8/28/81
CHIEF BUREAU OF UTILITIES	DATE 8-28-81	CHIEF UTILITY DIVISION	DATE 8/28/81

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

CONTRACT NO. 2742-S
CAPITAL PROJECT NO. S-4-6067

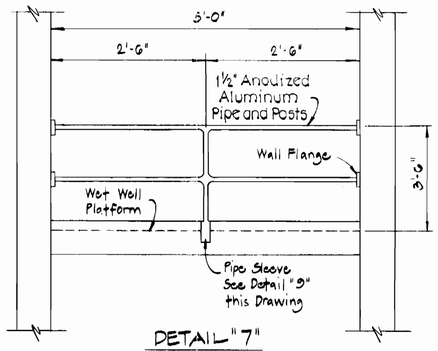
MECHANICAL DETAILS

CHAMBERLEA SANITARY SEWERS
CHAMBERLEA PUMPING STATION
ELECTION DISTRICT NO. 2

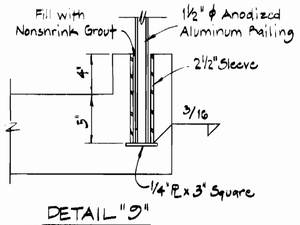
DRAWING NO. 14 OF 17
SCALE AS SHOWN
Designed: DJD
Drafted: ARZ
Checked: REP

W.O. 3394-20

K&E BALTIMORE 17 0483 PHOENIX MC 1818

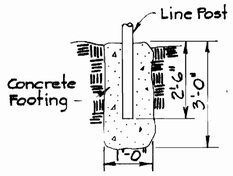


DETAIL "7"
Not to Scale

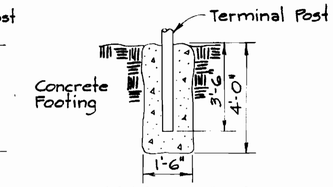


DETAIL "9"
Not to Scale

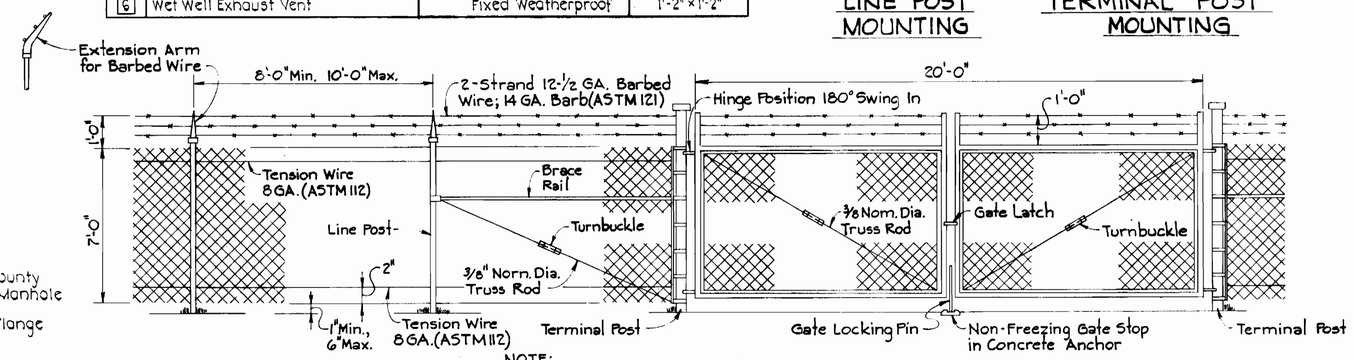
LOUVER SCHEDULE			
NO.	LOCATION	TYPE	SIZE (H×W)
1	Generator Intake	COMB. WEATHER/MOTORIZED DAMPER	6'-0" × 5'-0"
2	Generator Exhaust	COMB. WEATHER/MOTORIZED DAMPER	6'-0" × 5'-0"
3	Control Room, Pump Room, Blower Intake	COMB. WEATHER/AUTOMATIC	3'-6" × 3'-0"
4	Wet Well Blower Intake	COMB. WEATHER/AUTOMATIC	2'-0" × 2'-0"
5	Control Room Exhaust	COMB. WEATHER/MOTORIZED DAMPER	2'-0" × 2'-0"
6	Wet Well Exhaust Vent	Fixed Weatherproof	1'-2" × 1'-2"



LINE POST MOUNTING

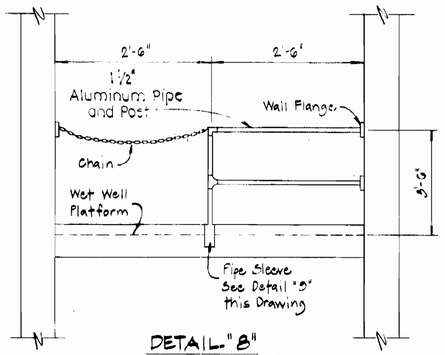


TERMINAL POST MOUNTING

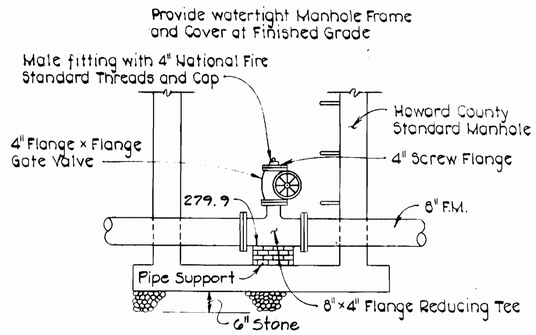


NOTE:
1. Frame Members: Size 1½" Steel Pipe (ASTM A-120)
2. Terminal Post: Size 2½ Steel Pipe (ASTM A-120)
3. Brace Rail: Size 1¼" Steel Pipe (ASTM-120)
4. Line Post: 1½ Steel Pipe (ASTM-120) or 2½" × 1⅞ H Beam @ 4.1 # per L.F.

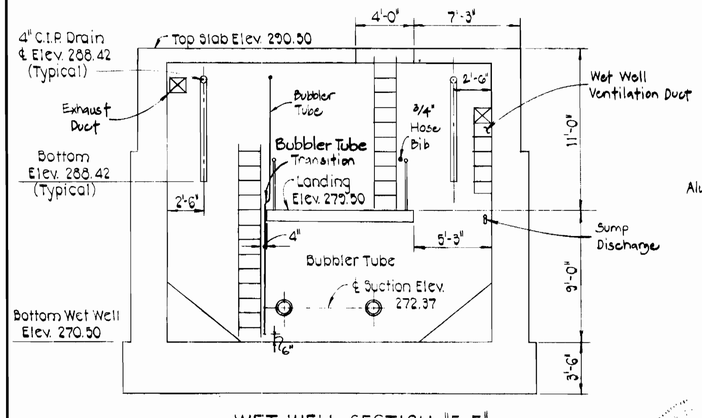
CHAIN LINK FENCE and GATE DETAIL
Not to Scale



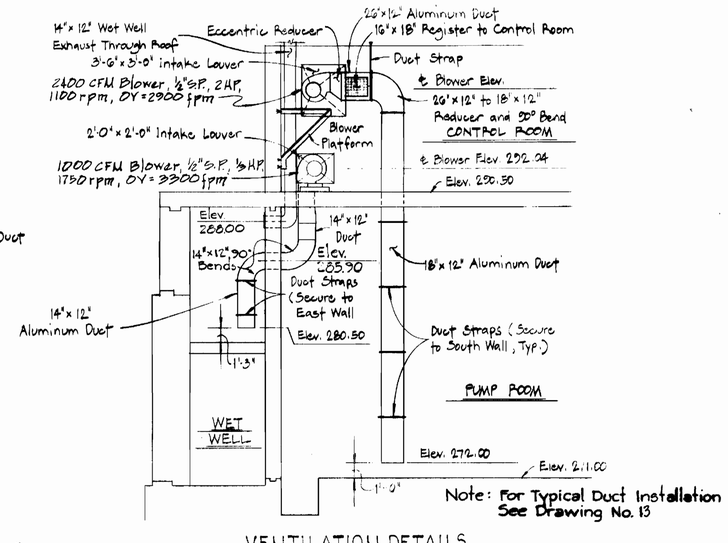
DETAIL "8"
Not to Scale



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



WET WELL SECTION "E-E"
Scale: 3/16" = 1'-0"



Note: For Typical Duct Installation See Drawing No. 13

VENTILATION DETAILS
Not to Scale

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CHAMBERLEA PUMPING STATION

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS	DATE 8-28-81	CHIEF BUREAU OF ENGINEERING	DATE 8/28/81
CHIEF BUREAU OF UTILITIES	DATE 8-28-81	CHIEF UTILITY DIVISION	DATE 8/28/81

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

CONTRACT NO. 2742-S
CAPITAL PROJECT NO. S-4-6067

MISCELLANEOUS DETAILS

CHAMBERLEA SANITARY SEWERS
CHAMBERLEA PUMPING STATION
ELECTION DISTRICT NO. 2

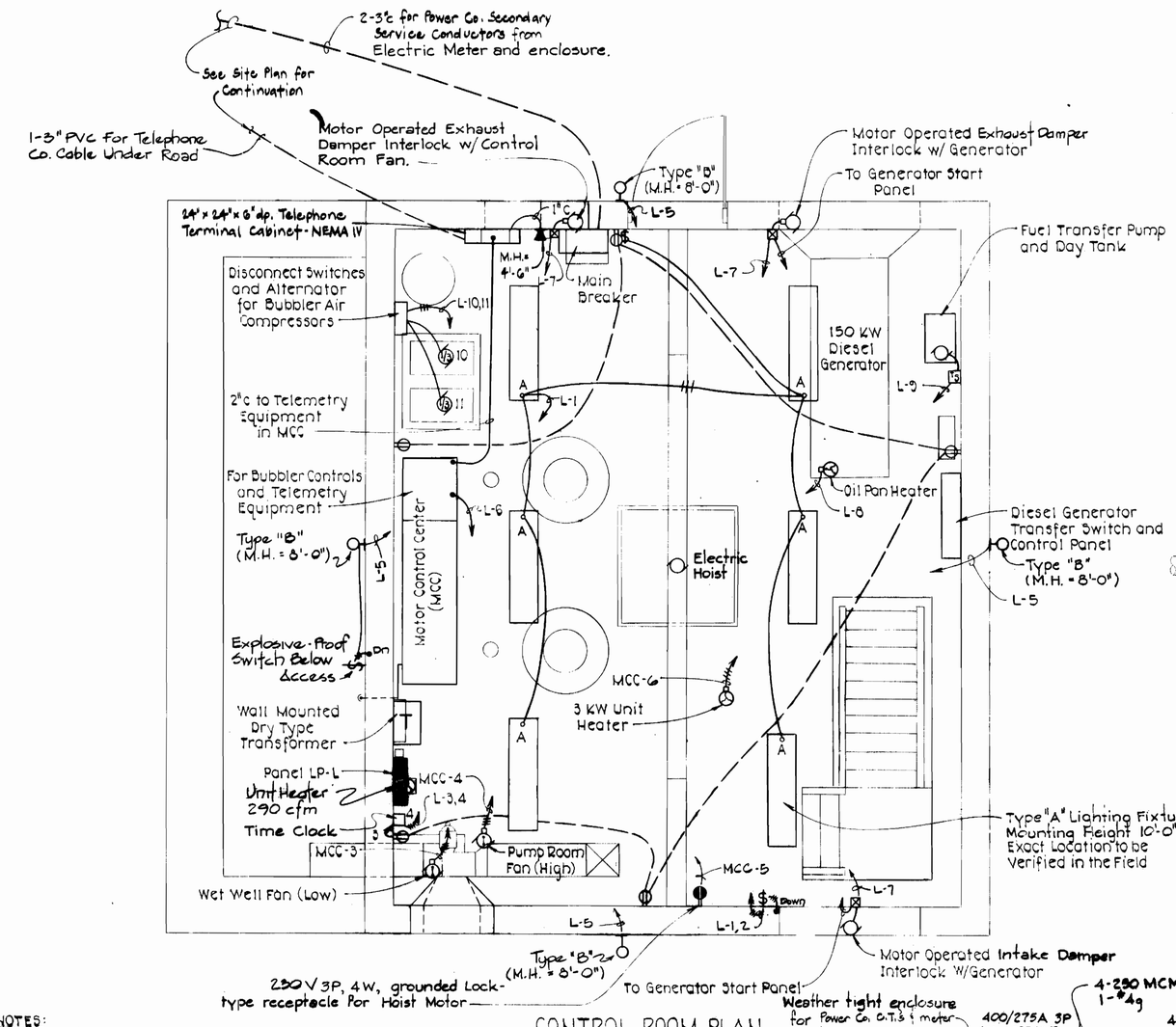
DRAWING NO. 15 OF 17

SCALE AS SHOWN

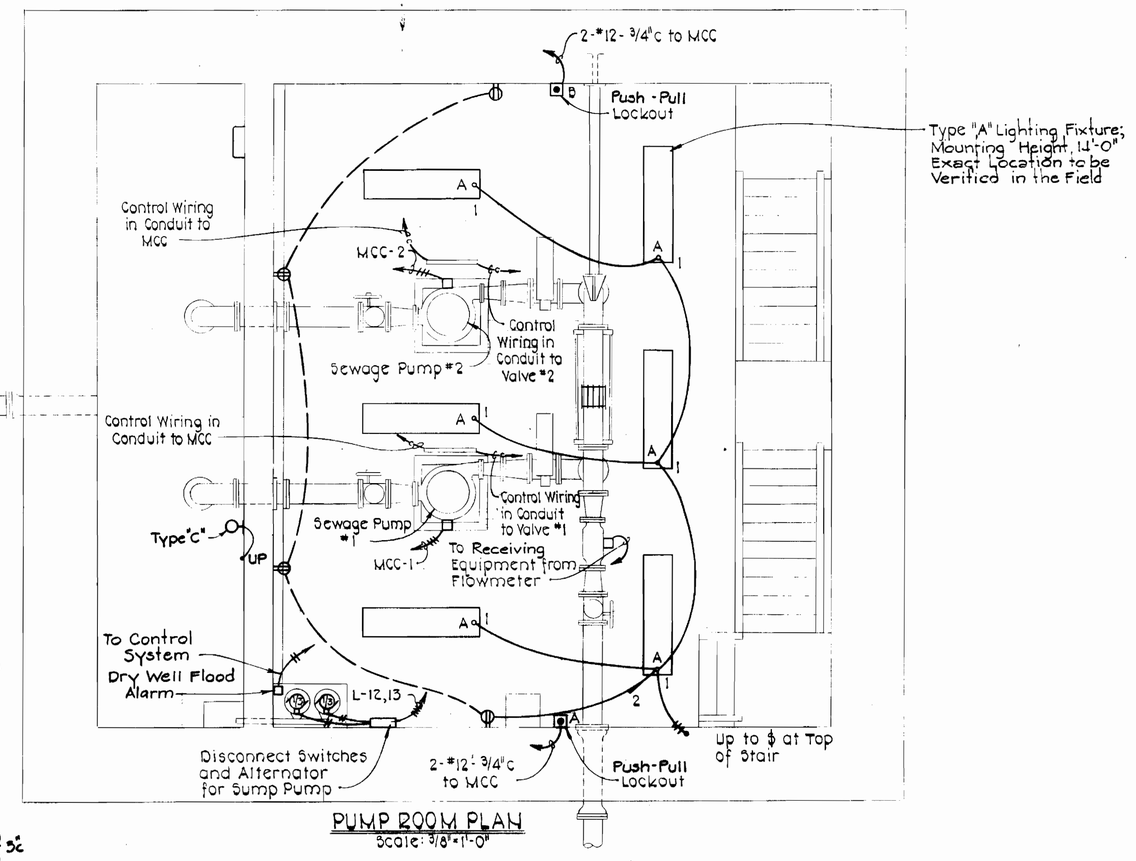
Designed: DJD
Drafted: REC
Checked: REP

W.O. 3394-20

K&E BALTIMORE 17 0483 PHOENIX MC 1318



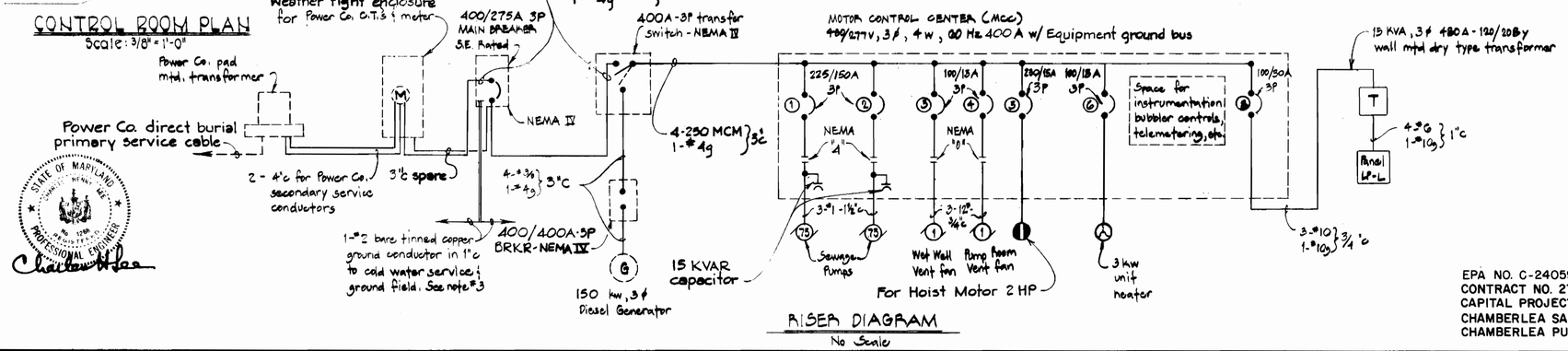
CONTROL ROOM PLAN
Scale: 3/8" = 1'-0"



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

NOTES:

1. Starter size shall be as indicated in MCC; All Starters shall be Combination Circuit Breaker Type. All Starters shall be Complete with H.O.A. Switches, Fused Control Transformers for 120 Volts. Red (running) Indicator Light and Green (stopped) Indicator Light.
2. Starter for Sewage Pumps shall be Complete with Control Relay Similar to Bulletin 700, Type B, Allen-Bradley for Motor Alternation.
3. Ground Field shall consist of 4-3/4" ϕ x 10'-0" Copperweld Ground Rods in a Square Pattern near the Pad Mounted Transformer. Top of Rods shall be 2'-0" below Grade and Interconnected with 1-#1/0 Bare Tinned Copper Ground Conductor.



RISER DIAGRAM
No Scale

EPA NO. C-240594-01(.14)
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CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
CHAMBERLEA PUMPING STATION

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS	DATE	CHIEF BUREAU OF ENGINEERING	DATE 8/28/81
CHIEF BUREAU OF UTILITIES	DATE 8-28-81	CHIEF ~~BUREAU OF DEVELOPMENT~~ Utility DIVISION	DATE 8/28/81

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

CONTRACT NO. 2742-S
CAPITAL PROJECT NO. S-4-6067

ELECTRICAL PLANS

CHAMBERLEA SANITARY SEWERS
CHAMBERLEA PUMPING STATION
ELECTION DISTRICT NO. 2

DRAWING NO. 16 OF 17

SCALE AS SHOWN

Designed: JH
Drafted:
Checked: REP

W.O.3394-20

K&E BALTIMORE 17 0453 PHOENIX MC 1316

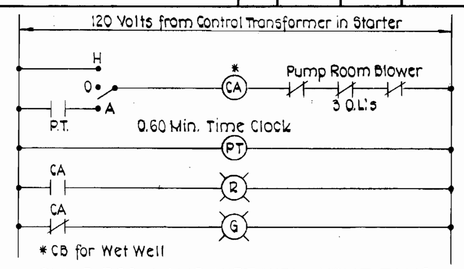
ELECTRICAL LEGEND

SYMBOL	DESCRIPTION	
	Fixture, Flourescent	
	Fixture, Incandescent - Ceiling Wall Bracket	
S, Sa	Switch - Single Pole - M.H. 4'-0" Subscript Denotes Outlets Controlled	
	Receptacle - 20A, 125 V. - Duplex - M.H. 3'-0"	Pump Room M.H. 5'-0"
	Receptacle - 20A, 125 V. - Single - M.H. 3'-0"	
C	Receptacle - Clock Hanger 15 A., 125 V., M.H. 7'-6"	
J, 2 J.B.	Junction Box	
	Motor - Horsepower as Indicated	
T	Thermostat - M.H. 5'-0"	
	Percentage Timer	
	Time Clock - M.H. 5'-6" to Top	
	Control Device as Indicated on Plans	
	Electrical Convector W/Integral Thermostat	
	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 - In or On Ceiling or Wall	2 #12, 3/4"C. Unless Otherwise Noted
	Conduit - In or Under Floor	
	Homerun 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 M.H. 1'-0" Above Floor W/1"C to T.T.C.	
	Ground Rod, 3/4" × 10'-0" Coppercladd	
	Exothermically Welded Connection	
S	Solenoid Valve	
	Fixture - Mercury Vapor	
S	Combination Magnetic Starter (MCC)	
C	Contactor	
G	Starter Coil (One Line Diagram)	
R	Indicating Light - Red - Heavy Duty Type	
T.C.	Timer Relay Contact (One Line Diagram)	
TR	Time Delay Relay	
O.L.	Overload Relay in Starter	
	Aux. Contact Normally Open	
	Aux. Contact Normally Closed	

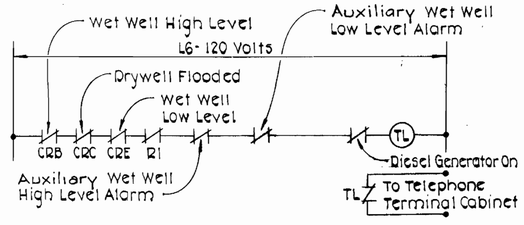
SCHEDULE OF PANEL LP-L

208/120 VOLTS, 3 PHASE, 4 WIRE, 60A MAIN BREAKER W/EQUIPMENT GROUND BUS

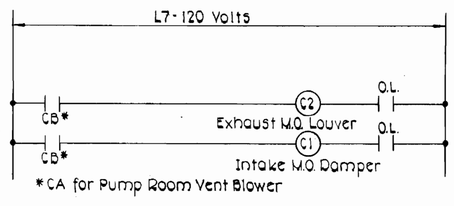
CKT. NO.	DESCRIPTION	CIRCUIT BREAKER POLES	TRIP	FRAME	REMARKS
1	Lights Pump Room and Control Room	1	20A	100A	
2	Pump Room Receptacles	1	20A	100A	Ground Fault Breakers
3	Control Room Receptacles	1	20A	100A	
4	Time Clock	1	20A	100A	
5	Exterior Lights	1	20A	100A	
6	Telemetry/Bubbler Controls	1	20A	100A	
7	Motor Operated Dampers	1	20A	100A	
8	Oil Pan Heater	1	20A	100A	
9	Fuel Transfer Pump	1	15A	100A	
10	Air Compressor	1	15A	100A	
11	Air Compressor	1	15A	100A	
12	Sump Pump	1	15A	100A	
13	Sump Pump	1	15A	100A	
14-17	Controls	1	20A	100A	
18-21	Spares	1	20A	100A	
22-24	Spares	1	15A	100A	



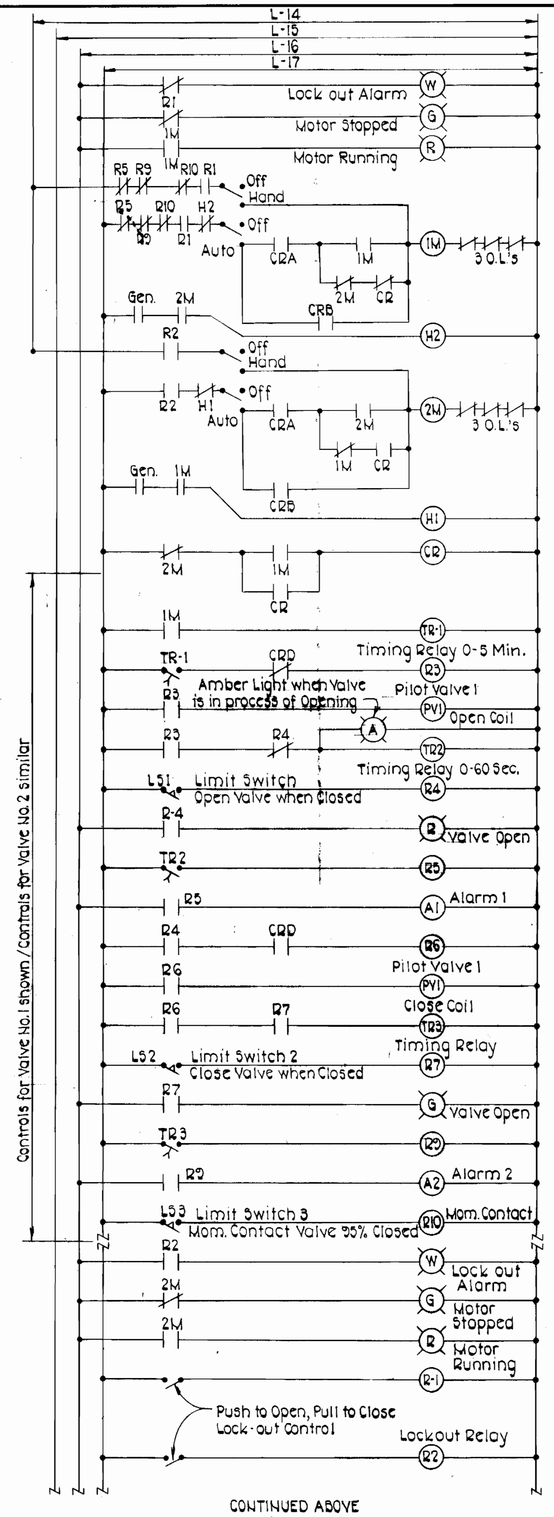
PUMP ROOM AND WET WELL VENT FANS

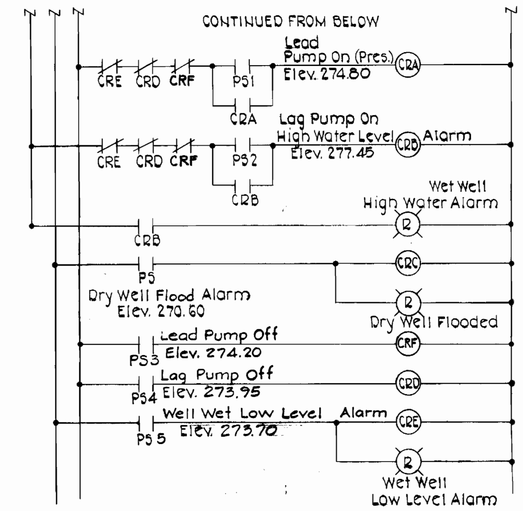


TELEMETERING ALARM DIAGRAM

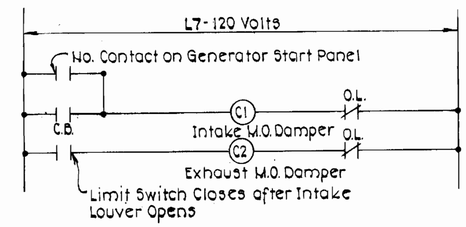


MOTOR OPERATED DAMPERS FOR VENT FANS





PUMP MOTORS, VALVES AND BUBBLER SYSTEM CONTROL



MOTOR OPERATED DAMPERS FOR DIESEL GENERATOR

LIGHTING FIXTURE SCHEDULE

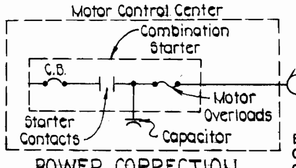
TYPE	DESCRIPTION	LAMP	MOUNTING	CATALOG NO.
A	4' Flourescent U.L. Listed Enclosed and Gasketed with Clear Acrylic Diffuser and 0°F Ballast	2-40W T-12 Cool White	Stem	Benjamin FA-2224-4R Daybrite TR-41241 or equal.
B	M.V.-proof Wall Bracket Cast Al., Prismatic Reflector.	1-100W Hg.	Wall	Holophane 412-120 McPhilben 22A2241JB or equal.
C	Incandescent Explosion-proof	1-200W A-23	Wall	Benjamin 7604-BX Appleton AN15150 or equal.

NOTES:

1. Type "A" Fixtures shall be Complete with Swivel Alignment Hangers. Stems and Hangers shall be painted.
2. Type "B" Fixtures shall be Complete with Tamperproof Hardware.

NOTES:

1. The Contractor shall verify with equipment manufacturers the exact number of control wire before installing conduits.
2. Check working drawing for conduit stub locations.
3. Control diagrams indicate the system of control required. Exact wiring connections shall be installed per manufatturers wiring diagram.
4. All electrical work in Wet Well shall be suitable for Class I Division I Group D areas. Provide seals on all conduits.
5. All panels shall be mounted to wall utilizing 1 1/4" kindorf channel.
6. A green insulated ground conductor (min. #12 AWG) shall be installed in all conduits from panel equipment ground bus to particular items of equipment.
7. All conduit exposed in the Wet Well shall be heavy wall P.V.C.



POWER CORRECTION CAPACITOR INSTALLATION

No Scale

EPA NO. C-240594-01 (.14)
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CHAMBERLEA SANITARY SEWERS
CHAMBERLEA PUMPING STATION

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 8-27-81
CHIEF BUREAU OF ENGINEERING — DATE 8/28/81
CHIEF BUREAU OF UTILITIES — DATE 8-28-81
CHIEF ~~LAND DEVELOPMENT~~ Utility DIVISION — DATE 8/28/81

PURDUM & JESCHKE
ENGINEERS
1023 N. CALVERT ST.
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ELECTRICAL DETAILS

CHAMBERLEA SANITARY SEWERS
CHAMBERLEA PUMPING STATION
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