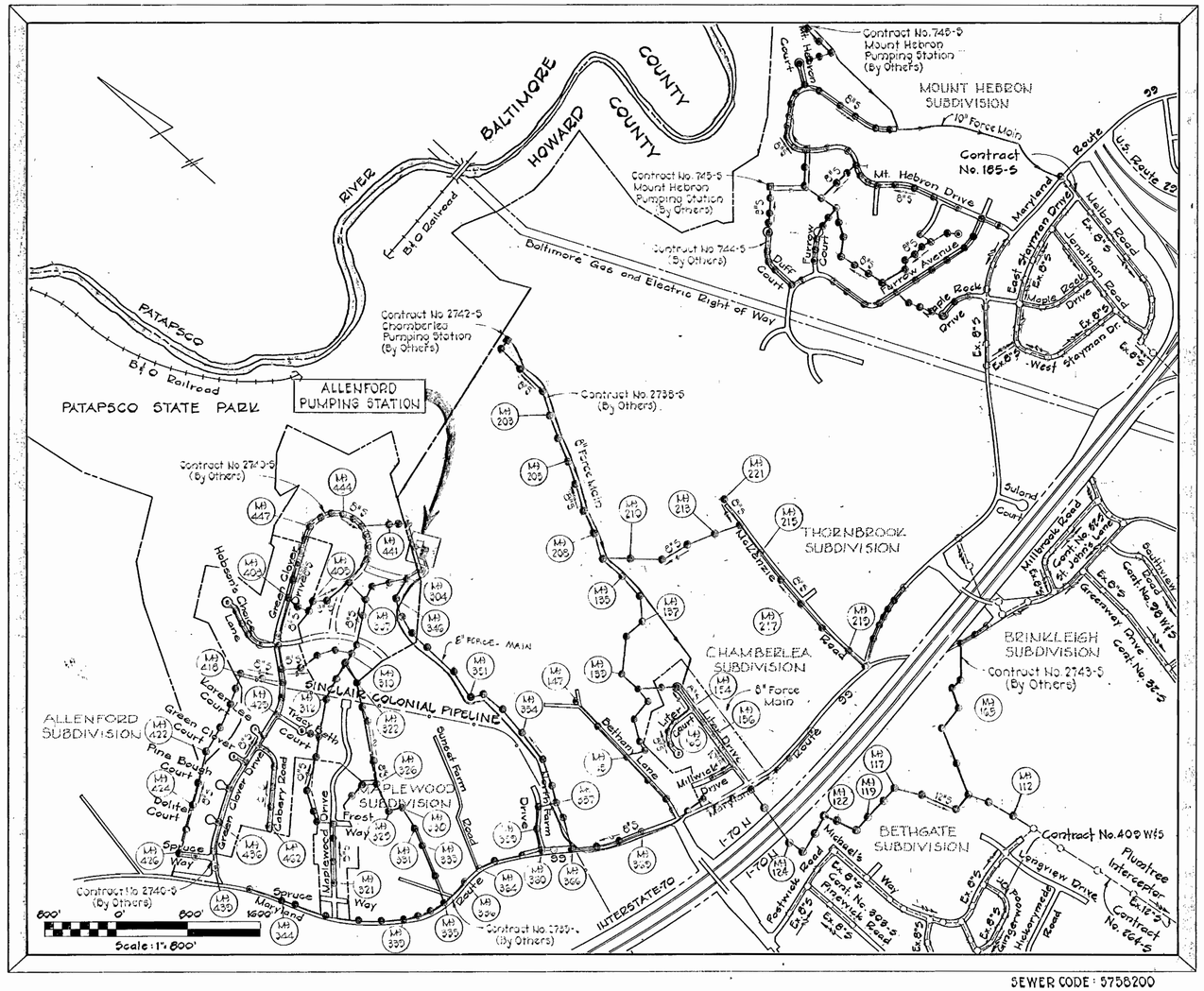
INDEX OF DRAWINGS

NO.	DESCRIPTION
1	Vicinity Map
2	Site Development Plan
3	Site Development Plan
4	Site Development Plan
5	Architectural Details
6	Architectural Details
7	Structural Plans
8	Structural Sections
9	Structural Details
10	Mechanical Plans
11	Mechanical Sections
12	Mechanical Details
13	Mechanical Details
14	Miscellaneous Details
15	Electrical Plans
16	Electrical Details



SEWER CODE: 5758200

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 price; 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": 231-5621
   "Miss Utility": 1-559-0100
   Chesapeake & Potomac (C & P) Telephone Company: 725-9076
   American Telephone and Telegraph: Cable Location Division: 393-3553
   Colonial Pipeline Company: 931-4641
   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 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 18" walls are brick manholes only, unless precast manholes are approved by the Engineer for the full depth of the manhole.
20. Manholes designated W.T. in plan and shall have watertight frame and covers, Standard Detail S-12 (RCR-63A). Where watertight frame and cover is used, set top of frame 1'-6" above finished grade.

ITEM	AS-BUILT	TYPE	SUPPLIER
SEWER MHS	82.7'	PRECAST	CP&P CO.
8" SEWER	1659.3'	DIP	A&P
6" SCH	280.0'	PVC	A&P

CONTRACT NO. ~~2~~741-S

CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS

AS-BUILTS

EPA NO. C-240594-01 (:14)
CONTRACT NO. 2741-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
ALLENFORD 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

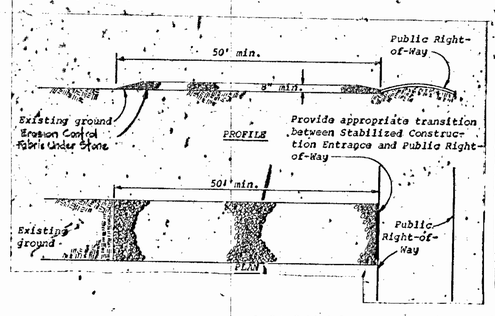
PURDUM & JESCHKE ENGINEERS 1023 N. CALVERT ST. BALTIMORE, MARYLAND	CONTRACT NO. ~~2~~741-S CAPITAL PROJECT NO. S-4-6067	VICINITY MAP	CHAMBERLEA SANITARY SEWERS ALLENFORD PUMPING STATION ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND	DRAWING NO. 1 OF 16 / SCALE 1" = 800"

W.O. 3394-20

K&E BALTIMORE 17 6453 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 (1 lb./1000 sq. ft.)
         2) Permanent - (Slopes flatter than 3:1) - Common Kentucky Bluegrass 40%, Menon 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 discing. 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 ensure 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.



Construction Specifications

1. Stone size - Use MSHA size No. 2 (2-1/2" to 1") or AASHTO designation M43, size No. 2 (2-1/2" to 1-1/2"). Use crushed stone.
2. Length - As effective, but not less than 50 feet.
3. Thickness - Not less than eight (8) inches.
4. Width - Not less than full width of all points of ingress or egress.
5. Washing - When necessary, wheels shall be cleaned to remove sediment prior to entrance onto public right-of-way. When washing is required, it shall be done on an area stabilized with crushed stone which drains into an approved sediment trap or sediment basin. All sediment shall be prevented from entering any storm drain, ditch, or watercourse through use of sand bags, gravel, boards or other approved methods.
6. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.

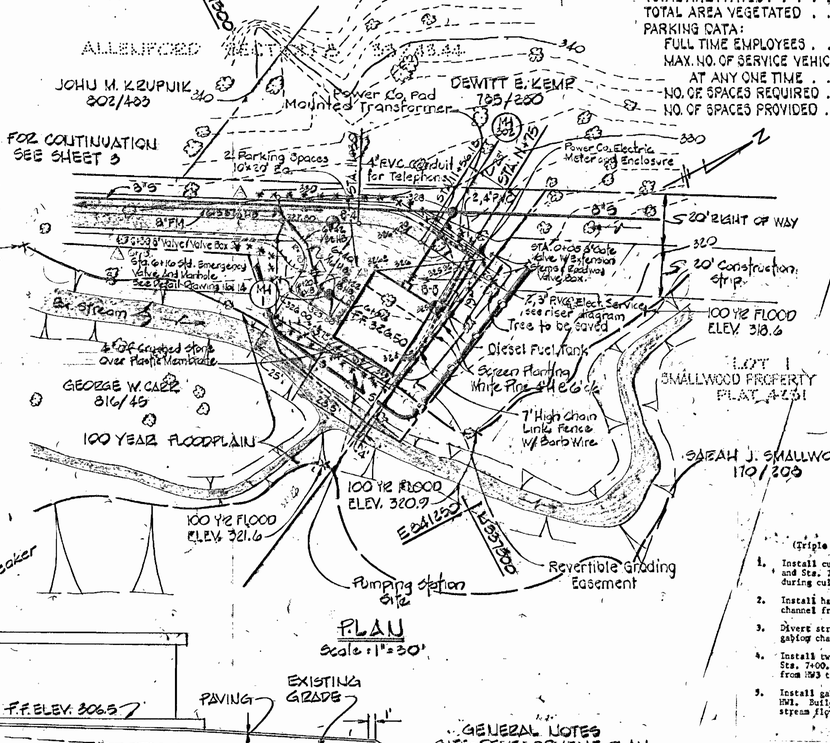
Standard Symbol SCE

STABILIZED CONSTRUCTION ENTRANCE

Not To Scale

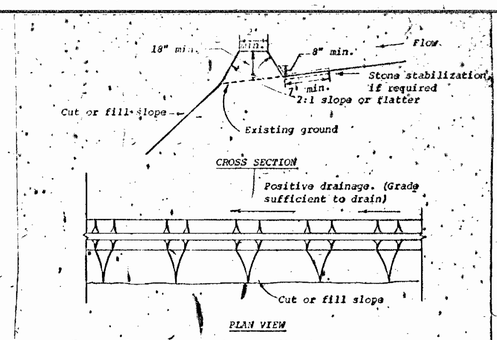
SITE ANALYSIS

PRESENT ZONING	R-20
PROPOSED USE	PUMPING STATION
TOTAL AREA OF SITE	1.715 Ac.±
TOTAL AREA DISTURBED	1.544 Ac.±
TOTAL AREA PAVED	0.353 Ac.±
TOTAL AREA VEGETATED	1.191 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



PLAN

Scale: 1"=30'

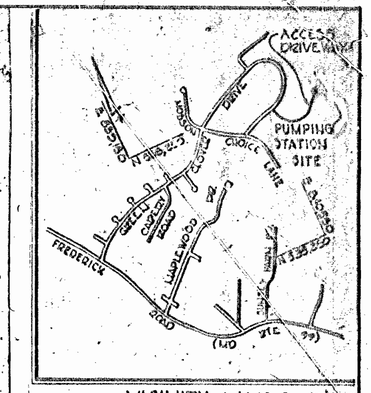


Construction Specifications

1. All dikes shall be machine compacted.
2. All diversion dikes shall have positive drainage to an outlet.
3. A. Diverted runoff from a protected or stabilized area shall outlet directly to an undisturbed stabilized area or into a level spreader or grade stabilization structure.
   B. Diverted runoff from a disturbed or exposed upland area shall be conveyed to a sediment trapping device such as a sediment trap or a sediment basin or to an area protected by any of these practices.
4. Stabilization, as specified by the plans, shall be: (1) in accordance with Standard and Specifications for Grassed Waterway, and the area to be stabilized shall be the channel (flow area); or (2) the flow area shall be lined with stone that meets MSHA size No. 2 or AASHTO M43 size No. 2 or 24 which is placed in a 3 inch thick layer and pressed into the soil. The area covered by the stone shall be as shown on the drawing above.
5. Periodic inspection and required maintenance shall be provided.

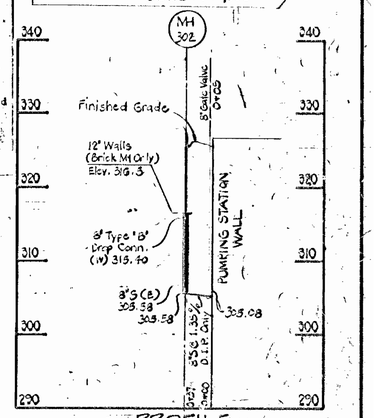
Standard Symbol DD

* Drainage area less than 5 acres



VICINITY MAP

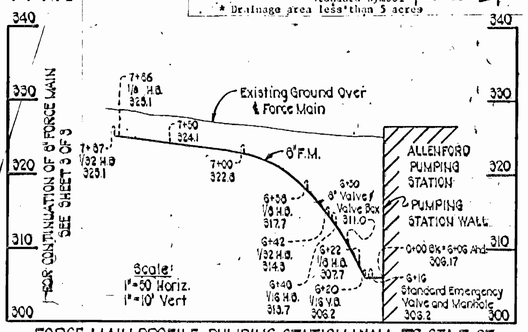
SCALE 1" = 1200'



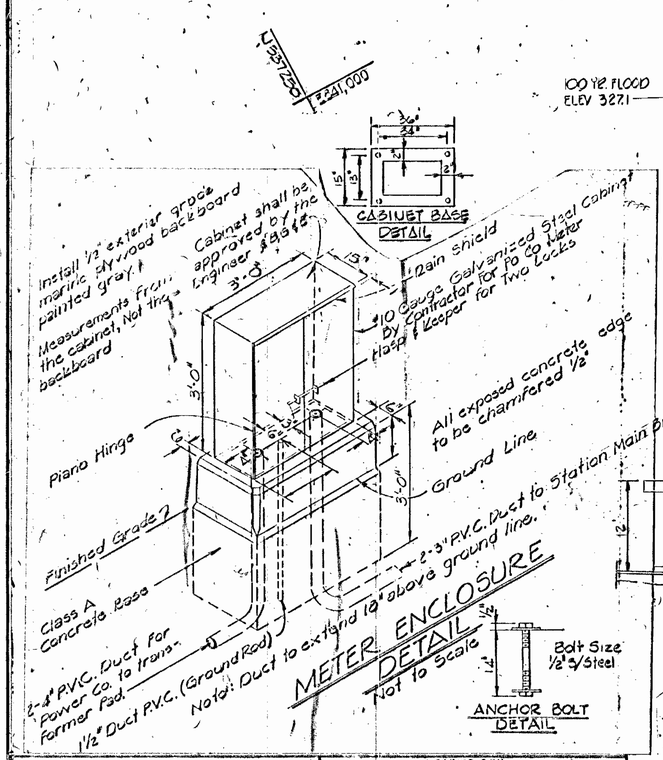
PROFILE

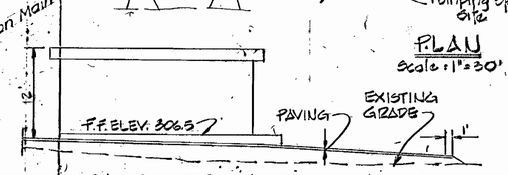
Scale: 1"=10' Vert
1"=100' Horz.

INTERCEPTOR SWALE



FORCE MAIN PROFILE-PUMPING STATION WALL TO STA. 7+87





EAST SIDE BUILDING SCHEMATIC & PAVING SECT.

Scale: 1"=30'

CONSTRUCTION SEQUENCE

1. Obtain grading permits.
2. Clear and grub for installation of sediment control devices.
3. Install stabilized construction entrance sediment traps, diversion dikes, and silt fence.
4. Grade roadway to subgrade elevation, stabilize finished cut and fill slopes in accordance with Sediment Control Notes.
5. Install culverts and gabion slope protection.
6. Begin construction of pumping station.
7. Install utilities. Repair any sediment control devices disturbed during installation of utilities.
8. Finish roadway construction and stabilize all disturbed areas in accordance with the Sediment Control Notes. Complete construction at Pumping Station Site. Upon approval of the Office of Inspections and Permits, remove sediment control devices.

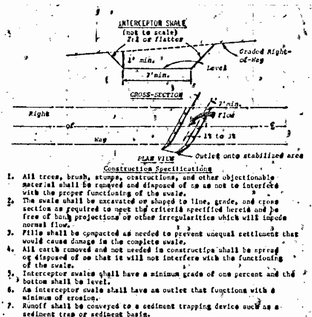
GENERAL NOTES SITE DEVELOPMENT PLAN

1.) Total Property Area 0.204 Ac.
2. Drawing And Page Numbers Shown Hereon Are Referenced To Howard County Design Manual Vol. IV Standard Specification and Details for Construction.
3. 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.
4.) The Contractor Shall Notify Miss Utility At Least (3) Days Prior To Beginning Any Work Shown Hereon.
5.) All Workmanship And Materials Shall Be In Accordance With The Howard County Design Manual Vol. IV Standard Specification and Details for Construction.

CULVERT CONSTRUCTION SEQUENCE

(Triple 48" Culverts, Sta. 5+75 and Sta. 7+00)

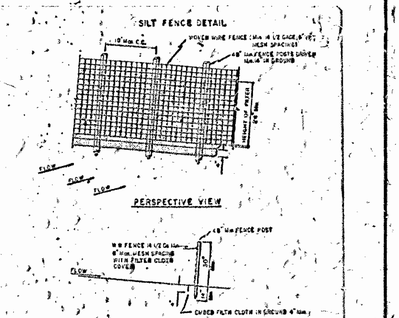
1. Install culverts on left side of channel at Sta. 5+75 and Sta. 7+00. Maintain stream in existing channel during culvert installation.
2. Install half-width gabion channel lining on left side channel from HW3 to HW2.
3. Divert stream through culverts. Maintain stream flow in gabion channel from HW3 to HW2.
4. Install two remaining culverts at Sta. 5+75 and at Sta. 7+00. Install remaining gabion channel lining from HW3 to HW2.
5. Install gabion aprons upstream of HW4 and downstream of HW1. Build half-width of apron while maintaining stream flow out of construction area.



Construction Specifications

1. All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of in a manner not to interfere with the proper functioning of the swale.
2. The swale shall be excavated or shaped to line, grade, and cross section as required to meet the criteria specified herein and be free of any irregularities or other irregularities which will impede normal flow.
3. Fills shall be compacted as needed to prevent unequal settlement that would cause damage in the complete swale.
4. All earth removed and not needed in construction shall be spread or disposed of so that it will not interfere with the functioning of the swale.
5. Interceptor swales shall have a minimum grade of one percent and the bottom shall be level.
6. An interceptor swale shall have an outlet that functions with a minimum of erosion.
7. Runoff shall be conveyed to a sediment trapping device such as a sediment trap or sediment basin.
8. The on-site location may need to be adjusted to meet field conditions in order to utilize the most suitable outlet.
9. Stabilization shall be: (1) in accordance with the Standard and Specifications for Grassed Waterways or (2) by lining the flow area with stone that meets MSHA size No. 2 or AASHTO M43 size No. 2 or 24 in a layer at least 3 inches in thickness and pressed into the soil. The lining shall extend across the bottom and up both sides of the channel a height of at least 6 inches vertically above the bottom.
10. Periodic inspection and required maintenance shall be provided.

Standard Symbol IS



APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING
HOWARD COUNTY, MD
DATE 12-10-82

APPROVED: For public water and public sewerage systems Howard County Health Department.

Joyce M. Beard MD/F.S. 12/30/82
COUNTY HEALTH OFFICER DATE

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

SIGNATURE DATE 1-21-83

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

APPROVED: HOWARD SOIL CONSERVATION DIST. DATE 1-21-83

REV.	DATE	DESCRIPTION
Δ	8-85	AS-BUILTS

EFA No. C-240824-01 (.14)

AS-BUILTS

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

CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: Howard County Office of Planning and Zoning

CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

PLANNING DIRECTOR 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.

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 Soil Conservation District.

WILLIAM G. RASCH II 1/11/83 DATE

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT S-4-6007
CONTRACT 2741-3

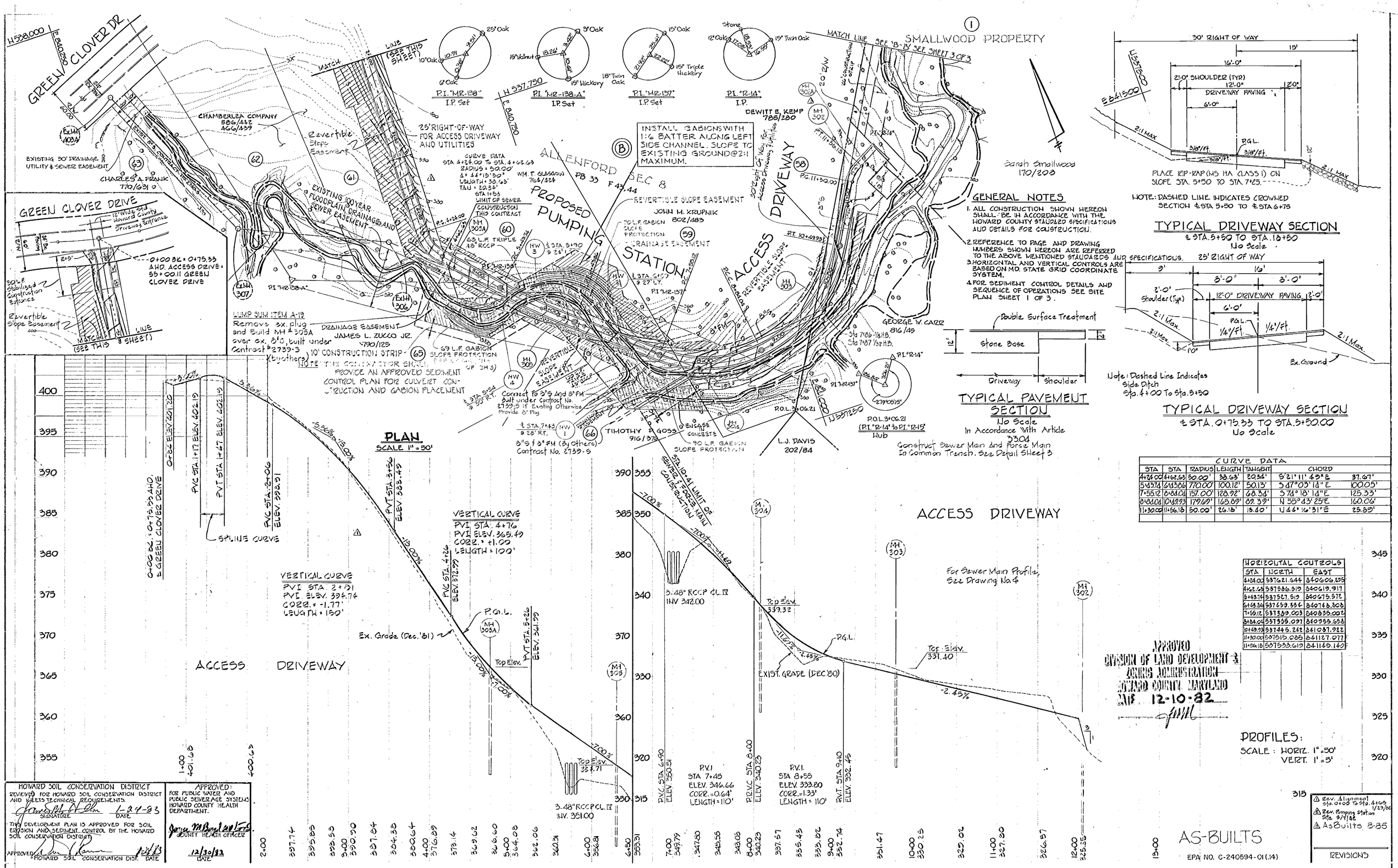
CHAMBERLEA SEWERS
ALLENFORD PUMPING STATION
SITE DEVELOPMENT PLAN

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

Designed: BCE
Drawn: JRB
Checked: BCE
DRWG. NO. 2 OF 16
SITE PLAN SH. 10 OF 3
Scale: As Shown

SDP-83-54

GROUNDING AWG 1810-2



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 AND SPECIFICATIONS.
3. HORIZONTAL AND VERTICAL CONTROLS ARE BASED ON MD. STATE GRID COORDINATE SYSTEM.
4. FOR SEDIMENT CONTROL DETAILS AND SEQUENCE OF OPERATIONS SEE SITE PLAN SHEET 1 OF 3.

TYPICAL DRIVEWAY SECTION

℄ STA. 5+50 TO STA. 10+50
No Scale

NOTE: DASHED LINE INDICATES CROWNED SECTION ℄ STA 5+50 TO ℄ STA 6+75

TYPICAL PAVEMENT SECTION

No Scale
In Accordance With Article 3304

Construct Sewer Main And Force Main In Common Trench. See Detail Sheet 3

TYPICAL DRIVEWAY SECTION

℄ STA. 0+75.33 TO STA. 5+50.00
No Scale

Note: Dashed Line Indicates Side Ditch Sta. 4+00 To Sta. 5+50

CURVE DATA						
STA	STA	RADIUS	LENGTH	TANGENT	CHORD	
4+24.00	4+62.63	50.00'	38.63'	20.34'	S 21° 11' 49" E	37.67'
5+43.74	6+43.86	770.00'	100.12'	50.13'	S 47° 05' 14" E	100.05'
7+55.12	8+83.04	157.00'	128.92'	68.36'	S 74° 18' 14" E	125.33'
8+83.04	10+62.93	179.67'	165.89'	89.39'	N 55° 43' 25" E	160.06'
11+30.00	11+56.18	50.00'	26.18'	13.40'	N 44° 16' 31" E	25.89'

HORIZONTAL CONTROLS		
STA	NORTH	EAST
4+24.00	537621.644	840606.895
4+62.63	537586.319	840619.917
5+43.74	537527.519	840675.572
6+43.86	537459.554	840763.808
7+55.12	537389.003	840839.002
8+83.04	537355.097	840959.658
10+62.93	537445.242	841087.922
11+30.00	537515.085	841127.077
11+56.18	537533.619	841146.145

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 12-10-82

REVISIONS
1 Rev. Alignment Sta. 0+00 To Sta. 4+62.63 1/23/86
2 Rev. Pumping Station Site 9/7/82
3 As Builts 8-85

HOWARD SOIL CONSERVATION DISTRICT
REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
SIGNATURE — DATE 1-24-83
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED: HOWARD SOIL CONSERVATION DIST. — DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT.
COUNTY HEALTH OFFICER — DATE 12/30/82

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1023 North Calvert Street
Baltimore, Maryland 21202
301/837-0133

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
DIRECTOR — DATE 1-28-83
CHIEF BUREAU OF ENGINEERING — DATE 12/29/82

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.
CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTATION — DATE 1-26-83
PLANNING DIRECTOR — DATE 1-26-83

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 1-11-83

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 1/8/81

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT 5-6-6067
CONTRACT #741-5
CHAMBERLEA SEWERS
ALLENFORD PUMPING STATION
SITE DEVELOPMENT PLAN
ACCESS DRIVE

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

DESIGNED: R.J.T.
DRAWN: O.P.
CHECKED: R.J.T.
DRWG. NO. 3 OF 16
SITE PLAN SH 2 OF 3
SCALE: AS SHOWN

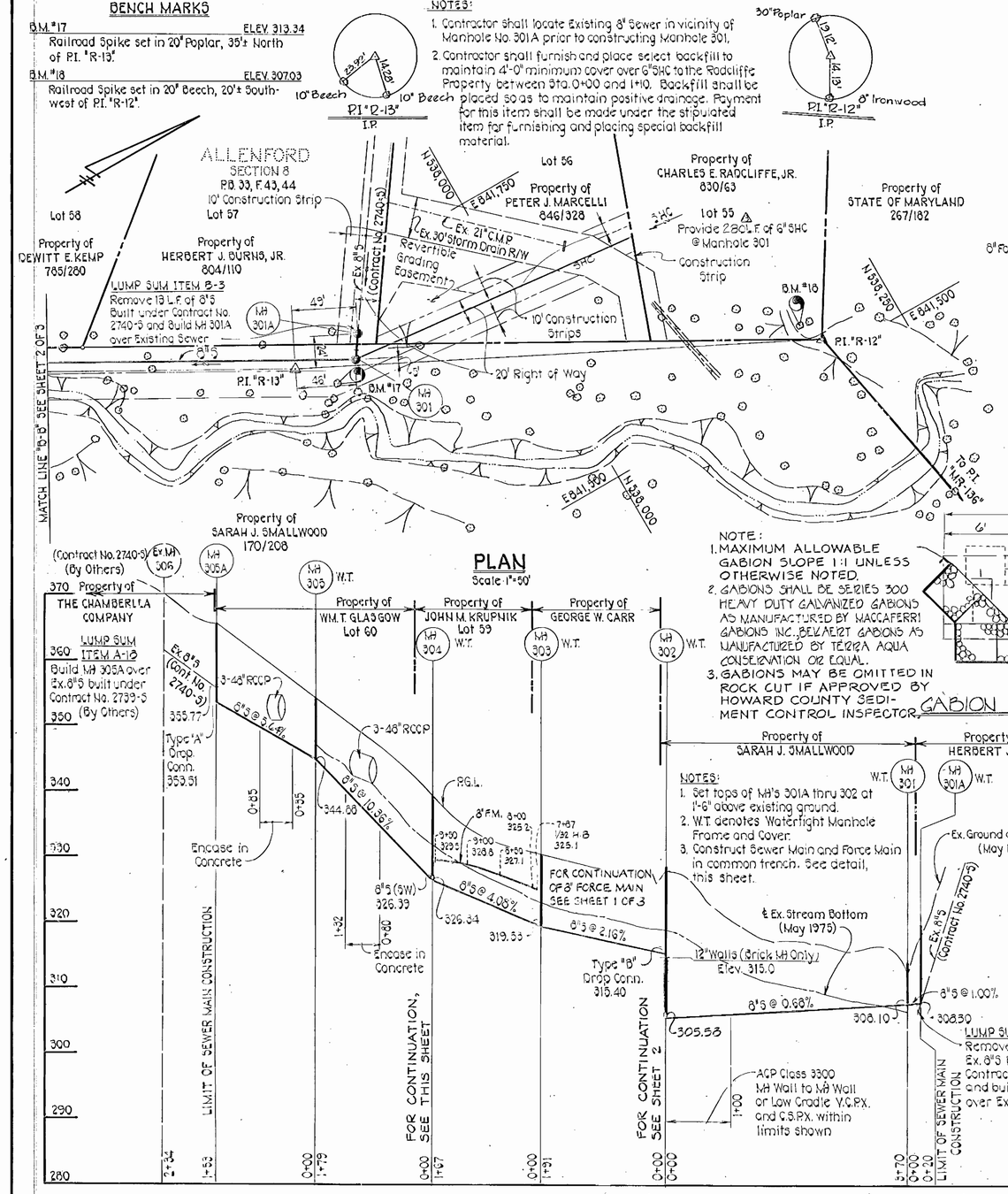
1-8-81 SDP-83-54

BENCH MARKS

B.M. #17 — ELEV. 313.34
Railroad Spike set in 20" Poplar, 35'± North of P.I. "R-13".

B.M. #18 — ELEV. 307.03
Railroad Spike set in 20" Beech, 20'± Southwest of P.I. "R-12".

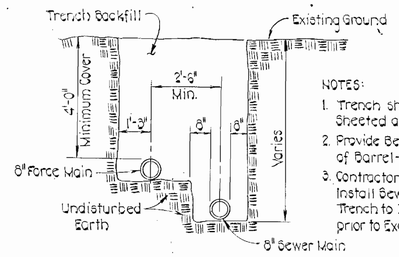
NOTES:
1. Contractor shall locate Existing 8" Sewer in vicinity of Manhole No. 301A prior to constructing Manhole 301.
2. Contractor shall furnish and place select backfill to maintain 4'-0" minimum cover over 6" SHC to the Radcliffe Property between Sta. 0+00 and 1+10. Backfill shall be placed so as to maintain positive drainage. Payment for this item shall be made under the stipulated item for furnishing and placing special backfill material.



PLAN
Scale: 1" = 50'

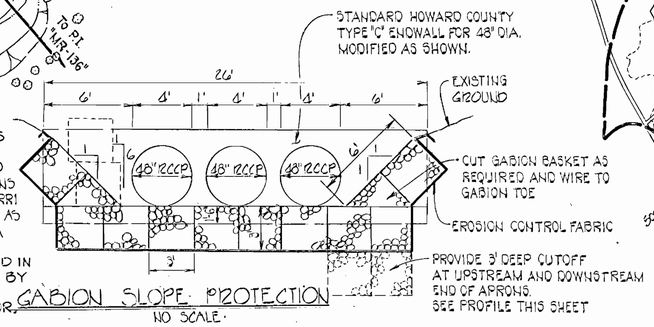
NOTES:
1. Set tops of MH's 301A thru 302 at 1'-6" above existing ground.
2. W.T. denotes Waterfight Manhole Frame and Cover.
3. Construct Sewer Main and Force Main in common trench. See detail, this sheet.

PROFILE
SCALE: HORIZ: 1" = 50'
VERT: 1" = 10'



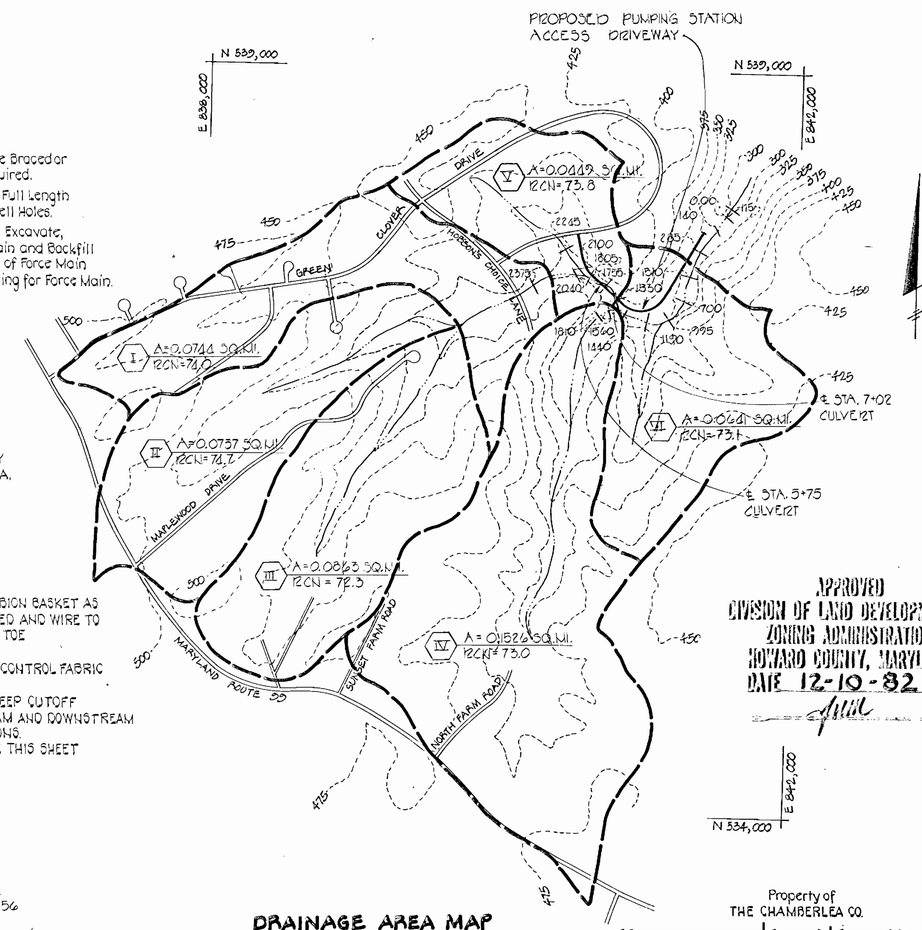
NOTES:
1. Trench shall be Braced or Sheeted as Required.
2. Provide Bearing Full Length of Barrel - Dig Bell Holes.
3. Contractor shall Excavate, Install Sewer Main and Backfill Trench to Invert of Force Main prior to Excavating for Force Main.

FORCE MAIN AND SEWER MAIN IN COMMON TRENCH
Not to Scale



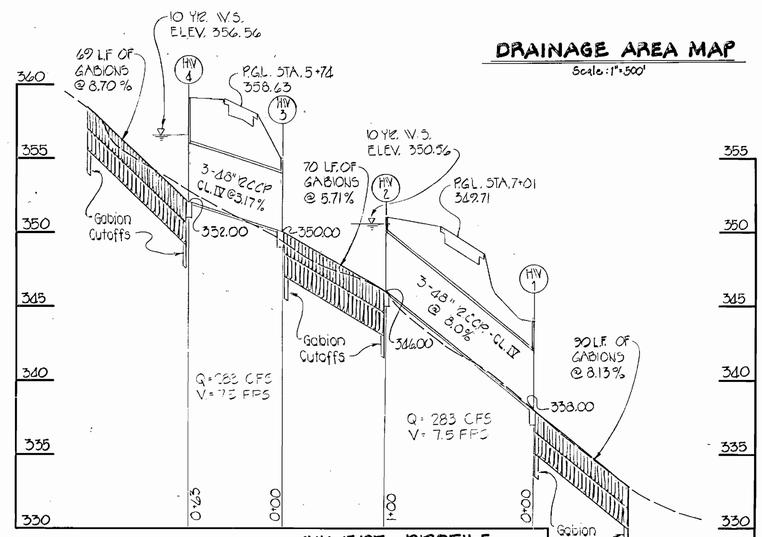
NOTE:
1. MAXIMUM ALLOWABLE GABION SLOPE 1:1 UNLESS OTHERWISE NOTED.
2. GABIONS SHALL BE SERIES 300 HEAVY DUTY GALVANIZED GABIONS AS MANUFACTURED BY MACCAFERRI GABIONS INC., BEKAERT GABIONS AS MANUFACTURED BY TERRA AQUA CONSERVATION OR EQUAL.
3. GABIONS MAY BE OMITTED IN ROCK CUT IF APPROVED BY HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

GABION SLOPE PROTECTION
NO SCALE

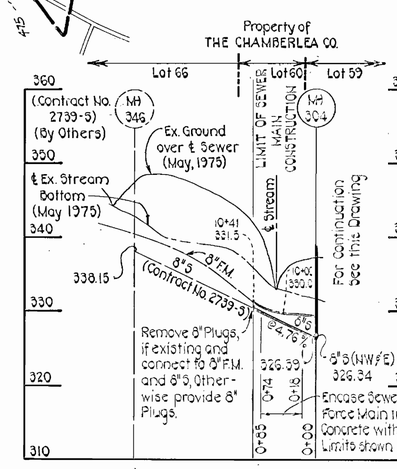


DRAINAGE AREA MAP
Scale: 1" = 500'

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 12-10-82



CULVERT PROFILE
SCALE: HORIZ: 1" = 50'
VERT: 1" = 5'



STRUCTURE SCHEDULE			
NO.	INV. ELEV.	TOP ELEV.	TYPE
1	338.00	343.00	"C" (C12.02-52, PG. 107)
2	346.00	351.00	" " "
3	350.00	355.00	" " "
4	352.00	357.00	" " "

HOWARD SOIL CONSERVATION DISTRICT
REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
SIGNATURE — DATE 1-28-83
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED: HOWARD SOIL CONSERVATION DIST — DATE 1/31/83

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 12/20/82

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

REVISED PUMPING STATION SITE - 5/7/82
As-Builts 8-85
REVISIONS

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
DIRECTOR — DATE 1-20-83
CHIEF BUREAU OF ENGINEERING — DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.
CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 1-26-83
PLANNING DIRECTOR — DATE 1-26-83

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 1-20-83

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

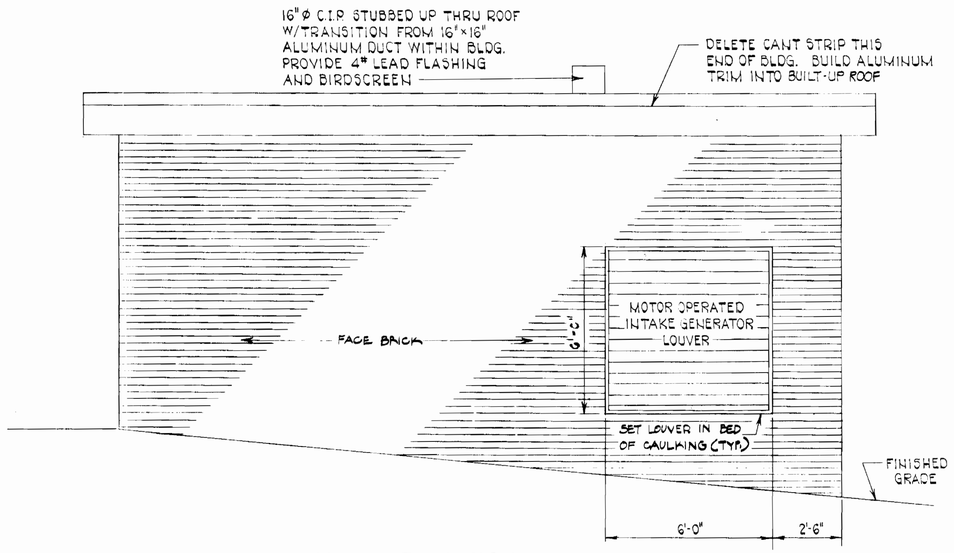
PROFESSIONAL ENGINEER:
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
WILLIAM G. RASCH II — REG. NO. 4575 — DATE 1/8/81

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT S-4-6007
CONTRACT 2741-S
CHAMBERLEA SEWERS
ALLENFORD PUMPING STATION
SITE DEVELOPMENT PLAN
ACCESS DRIVE
ELECTION DISTRICT NO. 2 — HOWARD COUNTY, MD.
TAX MAP 17 — PARCEL

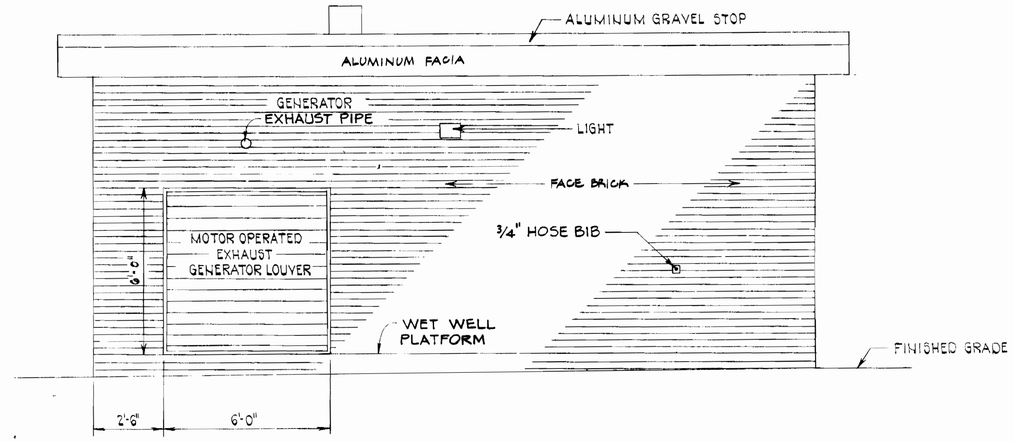
DESIGNED: D.E.
DRAWN: S.R.B.
CHECKED: D.E.
DRWG. NO. 4 OF 16
SITE PLAN SH. 3 OF 3
SCALE: AS SHOWN

1-8-81 SDP-83-54

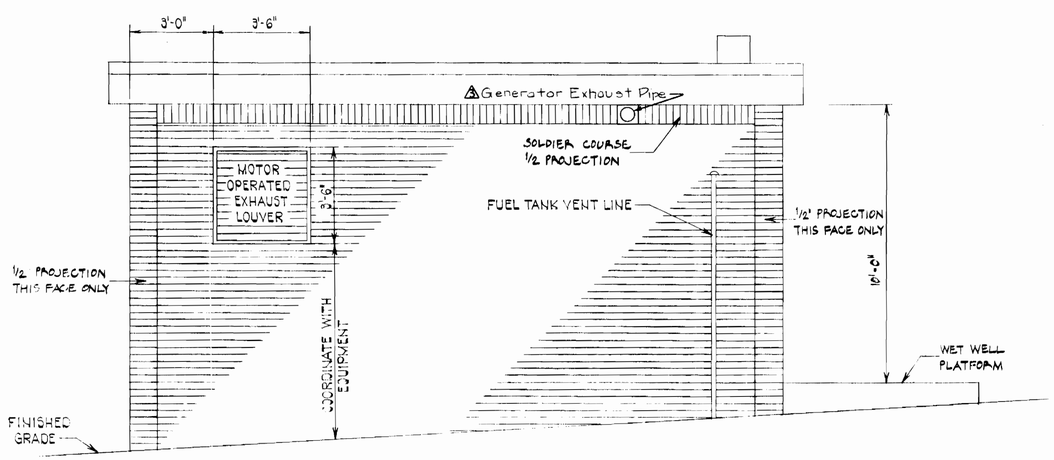
BRUNING 44-132 23442-1



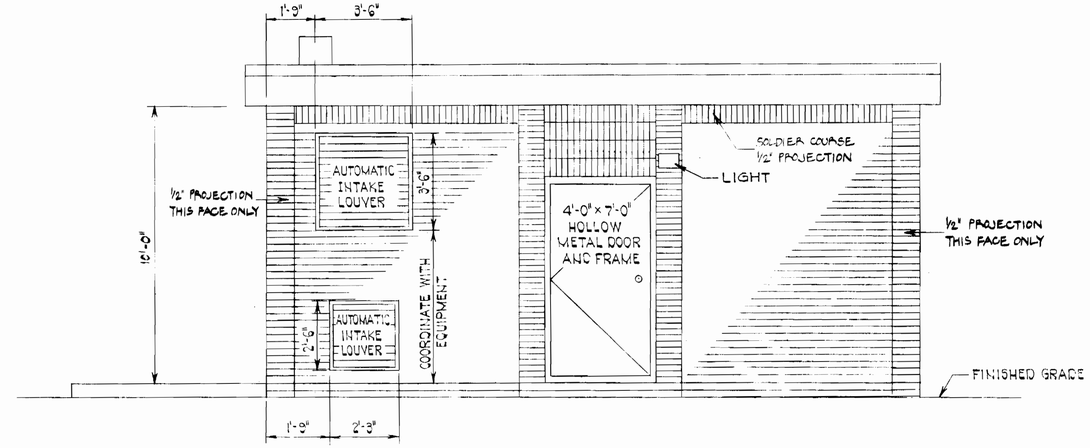
SOUTH ELEVATION
SCALE: 3/8"=1'-0"



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



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



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

NOTE:
EXACT LOCATIONS OF LOUVERS TO BE COORDINATED WITH LOCATION OF EQUIPMENT IN STATION.

STATE OF MARYLAND
CHARLES HENRY LEE
No. 4268
REGISTERED PROFESSIONAL ENGINEER

Charles H. Lee

EPA NO. C-240594-01 (.14)
CONTRACT NO. 2741-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION

AS-BUILTS

REVISED PUMPING STATION LOCATION 5-2-82

REV.	DATE	DESCRIPTION
1	8-85	AS-BUILTS

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

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

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

CONTRACT NO. 2741-S
CAPITAL PROJECT NO. S-4-6067

ARCHITECTURAL DETAILS

CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION
ELECTION DISTRICT NO. 2

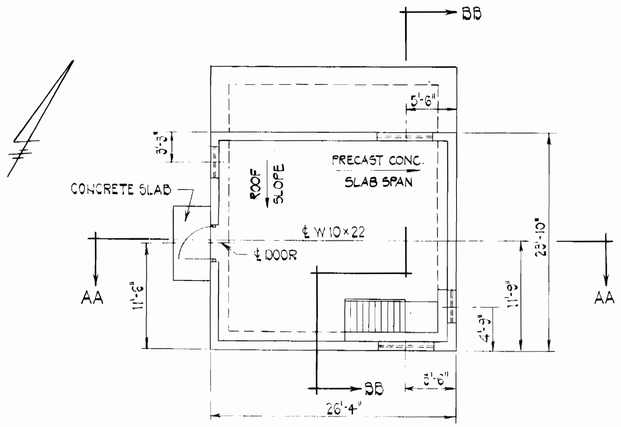
DRAWING NO. 5 OF 16

SCALE AS SHOWN

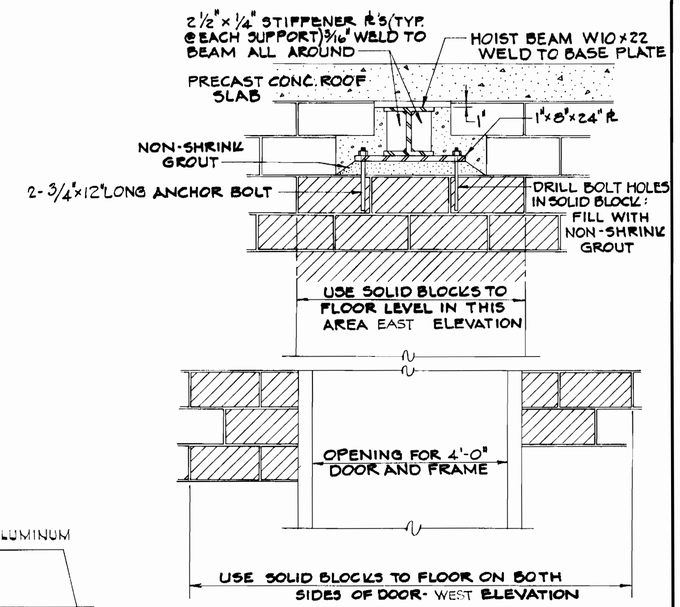
Designed: REP
Drafted:
Checked: REP

K&E BALTIMORE 17 0483 PHOENIX MC 1318

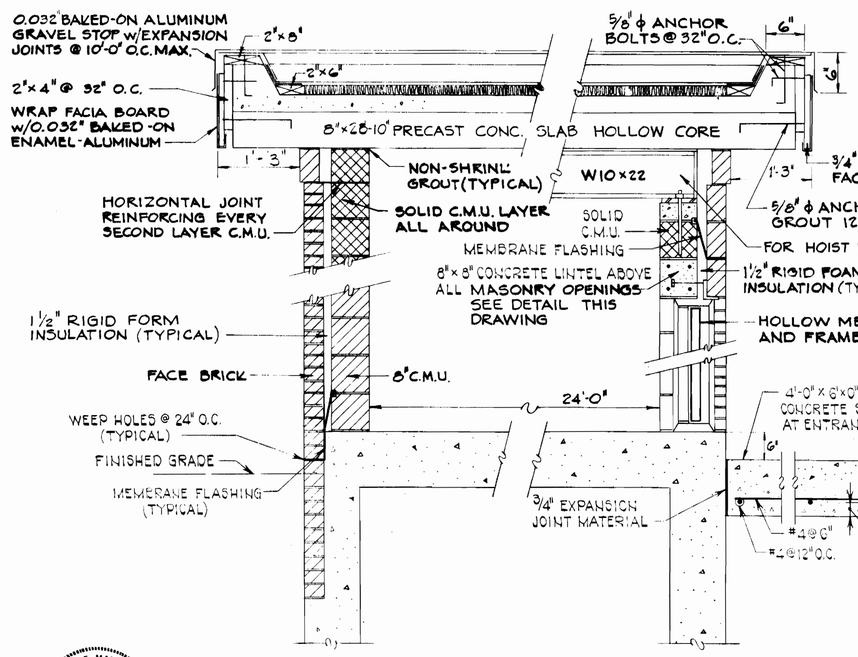
W.O. 3394-20



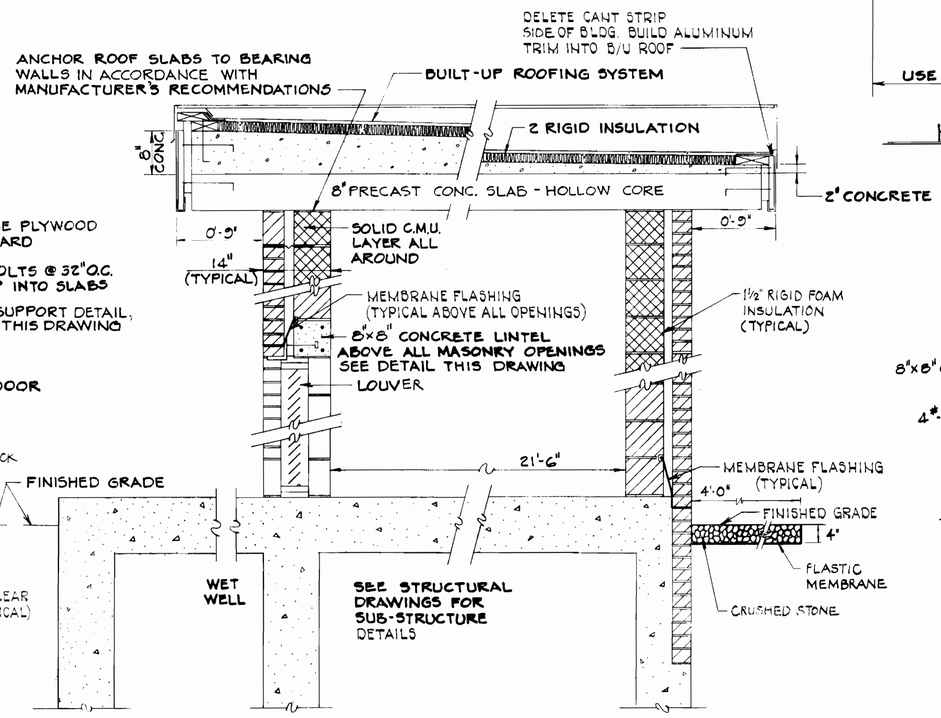
PLAN
SCALE : 1/8" = 1'-0"



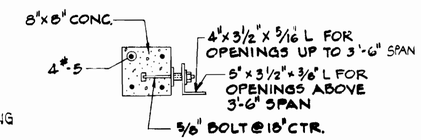
HOIST BEAM SUPPORT DETAIL
SCALE : 3/4" = 1'-0"



SECTION "AA-AA"
Scale : 3/4" = 1'-0"



SECTION "BB-BB"
Scale : 3/4" = 1'-0"



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

STATE OF MARYLAND — CHARLES HENRY LEE — No. 4268 — REGISTERED PROFESSIONAL ENGINEER

EPA NO. C-240594-01 (.14)
CONTRACT NO. 2741-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION

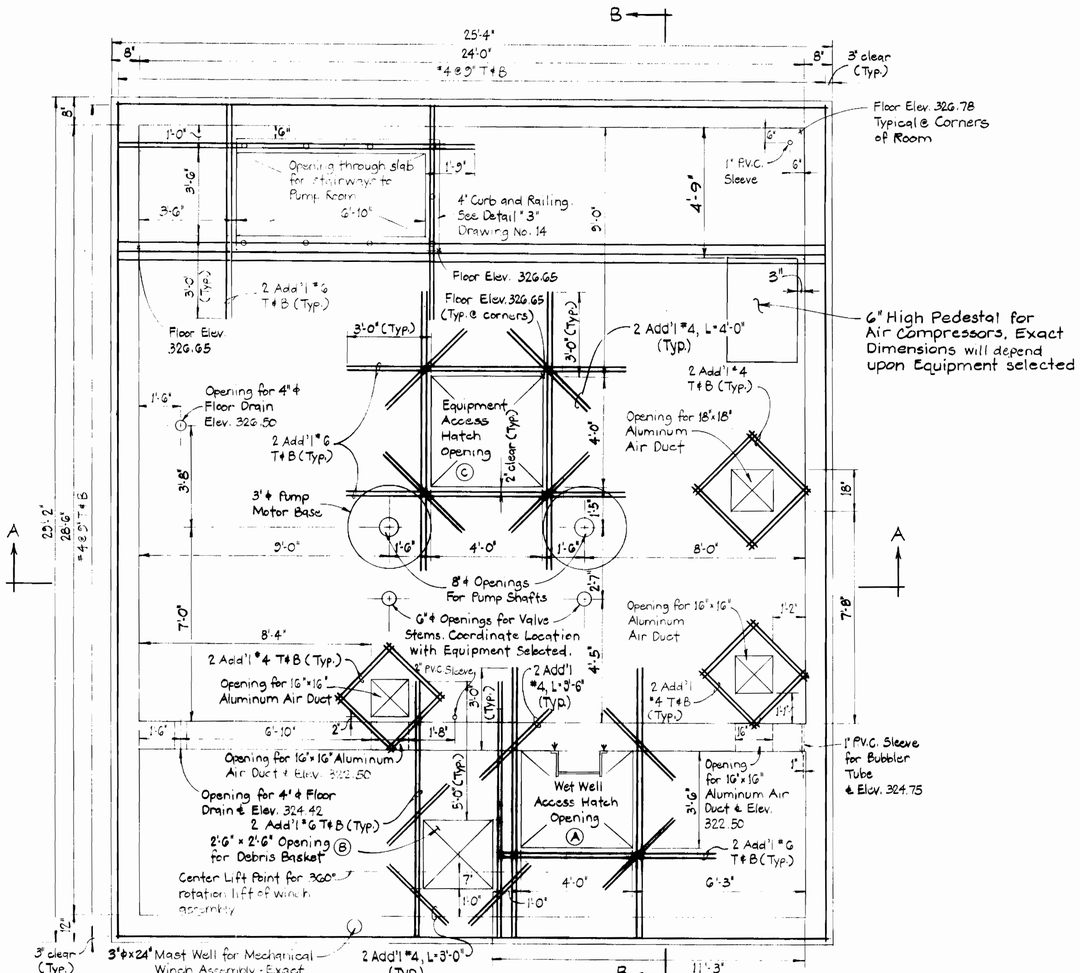
DEPARTMENT OF PUBLIC WORKS — HOWARD COUNTY, MARYLAND							
DIRECTOR OF PUBLIC WORKS	DATE	CHIEF BUREAU OF ENGINEERING	DATE	PURDUM & JESCHKE ENGINEERS 1023 N. CALVERT ST. BALTIMORE MARYLAND	CONTRACT NO. 2741-S CAPITAL PROJECT NO. S-4-6067	ARCHITECTURAL DETAILS	CHAMBERLEA SANITARY SEWERS ALLENFORD PUMPING STATION ELECTION DISTRICT NO. 2
CHIEF BUREAU OF UTILITIES	DATE	CHIEF UTILITY DIVISION	DATE				

REVISED PUMPING STATION LOCATION 5-7-82

DRAWING NO. 6 OF 16	SCALE AS SHOWN	Designed: REP Drafted: Checked: REP

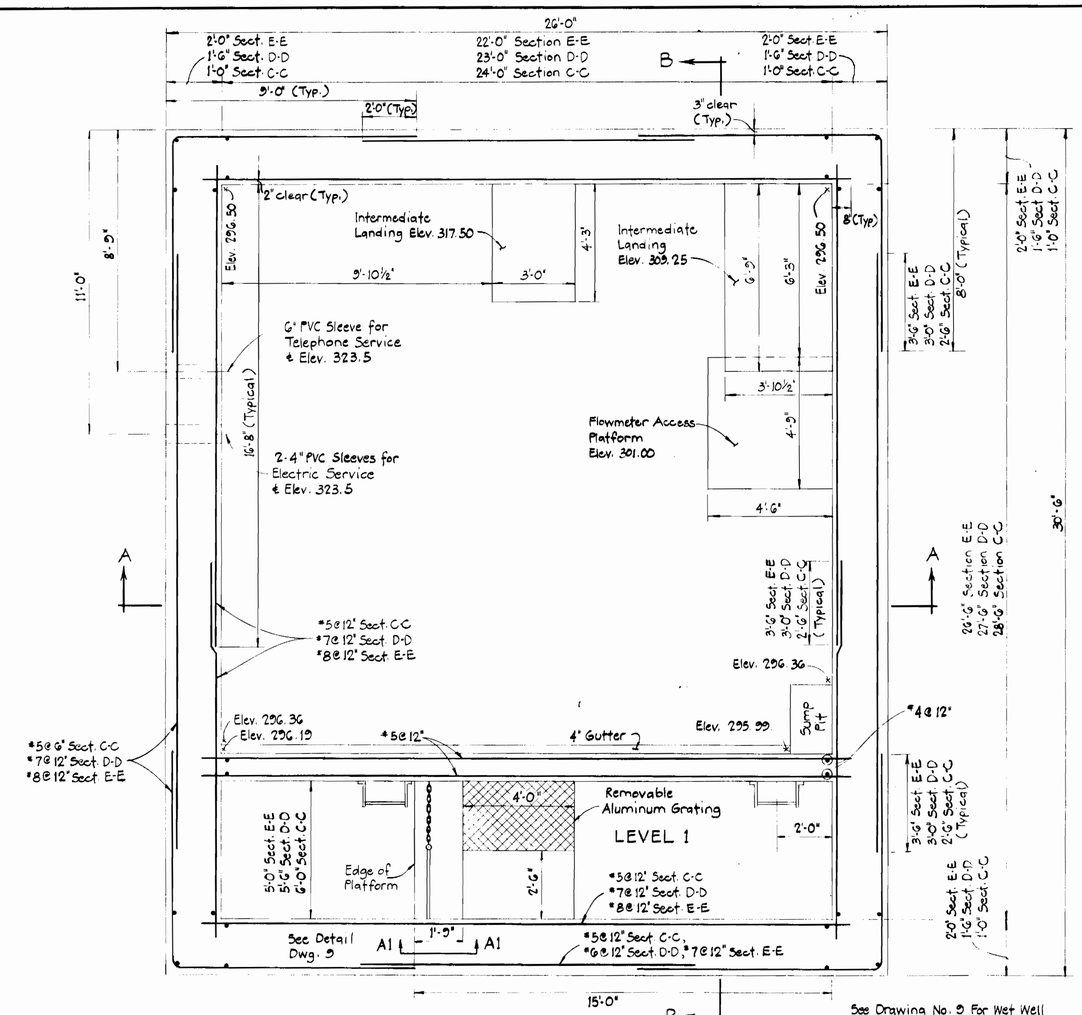
W.O. 3394-20

K&E BALTIMORE 17 0483 PHOENIX MC 1316



CONTROL ROOM SLAB REINFORCING

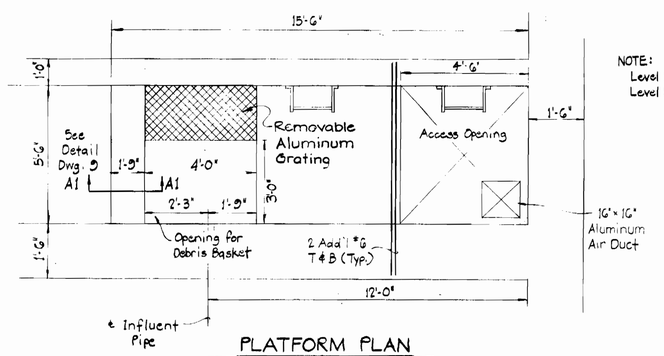
Scale: 3/8" = 1'-0"



SECTIONS C-C, D-D & E-E

Not to Scale

See Drawing No. 9 For Wet Well Landing Details and Drawing No. 14 For Wet Well Section and Grating.



PLATFORM PLAN

LEVEL 2 (ELEV. 316.5)

Not to Scale

NOTE:
Level 1 Elev. - 306.5
Level 2 Elev. - 316.5

GENERAL STRUCTURAL NOTES

1. DESIGN LIVE LOADS: Precast Concrete Roof Panels - 50 P.S.F.; Slabs - 100 P.S.F. + Concentrated Equipment Load; 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 3500 P.S.I. Class "C" shall have a minimum 28 day strength of 2000 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, conduit, floor boxes, frames, etc. shall be placed before concrete is cast. All openings thru concrete shall be watertight. See Mechanical and Electrical Drawings for openings not shown or located on the Structural Plans.
3. EARTHWORK: All excavation for structures shall be kept free of water until backfill is properly tamped in place to finished grade. Back fill 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 non-headed anchor bolts shall be A.S.T.M. A-325 High Strength Bolts. All non-headed anchor bolts shall be A.S.T.M. A-307. All Structural Aluminum shall be A.S.T.M. B-221. Alloy bolts in contact with aluminum shall be stainless steel. Anchor bolts, nuts and washers shall be Alloy No. 300
5. FLOATATION: The entire sub-structure complete in place and backfilled, is required to offset uplift due to hydrostatic pressure.
6. MISCELLANEOUS: All aluminum surfaces in contact with steel or concrete shall be coated prior to erection - See Specifications. There shall be no contact between dissimilar metals or between 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 placing of concrete, and all dowels are to be wired in place before placing concrete. All splicing of bars, placing tolerances, and bar spacings shall conform to A.C.I. 318-77.

STATE OF MARYLAND — CHARLES HENRY LEE — No. 6158 — REGISTERED PROFESSIONAL ENGINEER

EPA NO. C-240594-01 (.14)
CONTRACT NO. 2741-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION

REVISED PUMPING STATION LOCATION 5-7-82

DEPARTMENT OF PUBLIC WORKS — HOWARD COUNTY, MARYLAND		
DIRECTOR OF PUBLIC WORKS — DATE 1-20-83	CHIEF BUREAU OF ENGINEERING — DATE 12/20/82	
CHIEF BUREAU OF UTILITIES — DATE 1-6-83	CHIEF UTILITY DIVISION — DATE 12/20/82	

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

CONTRACT NO. 2741-S
CAPITAL PROJECT NO. S-4-6067

STRUCTURAL PLAN AND SECTIONS

CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION
ELECTION DISTRICT NO. 2
HOWARD COUNTY, MARYLAND

DRAWING NO. 7 OF 16

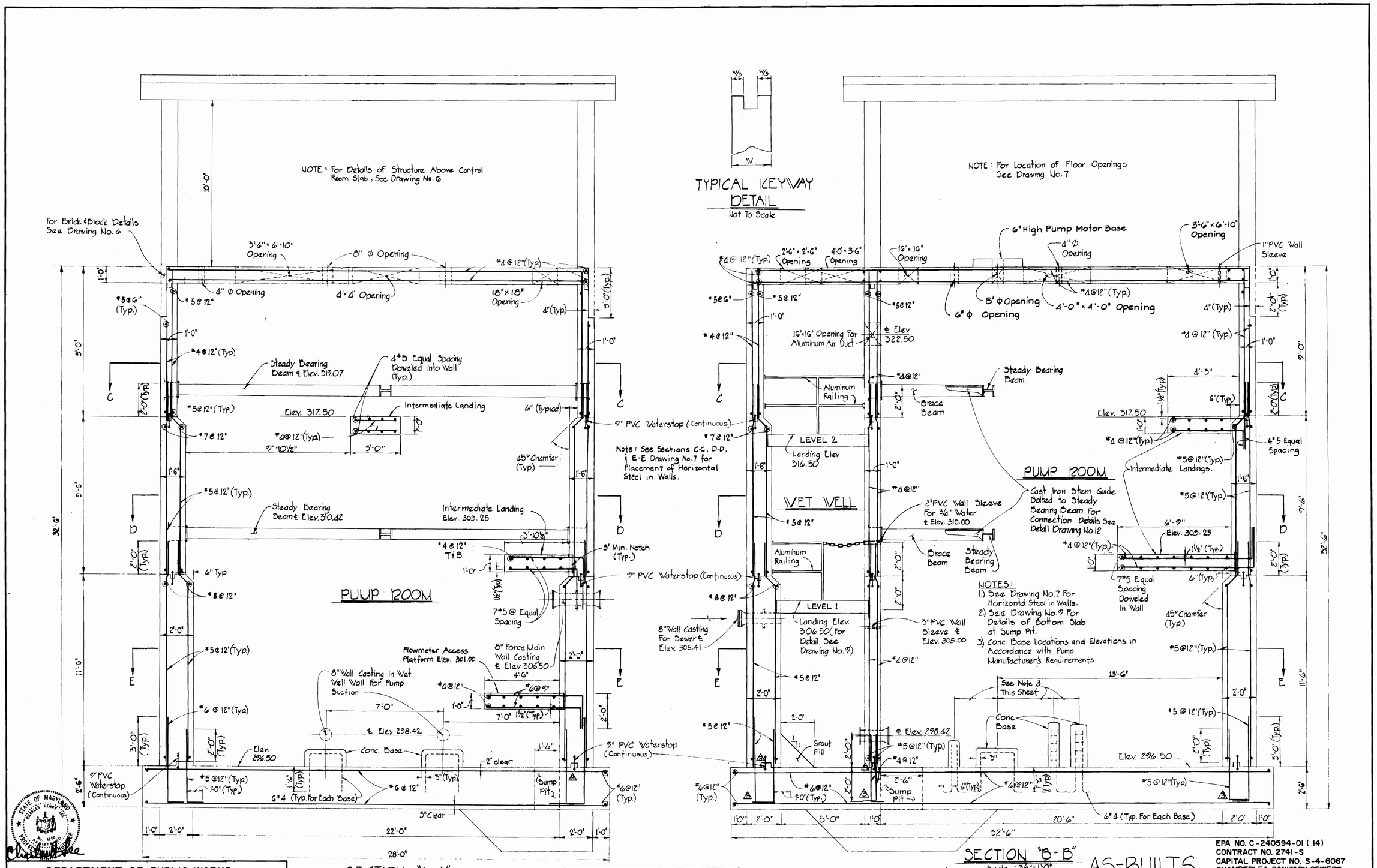
SCALE AS SHOWN

Designed: BCC
Drafted: REC
Checked: BCC

W.O. 3394-21

K&E BALTIMORE 17 0483 PHOENIX MC 1316

MS 171 3/1



EPA NO. C-240594-01 (.14)
CONTRACT NO. 2741-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION

REVISED PUMPING STATION LOCATION 5-2-82

REV.	DATE	DESCRIPTION
3	8-85	AS-BUILTS

REVISED PUMPING STATION LOCATION 5-7-82

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

	DATE		DATE
DIRECTOR OF PUBLIC WORKS	1-12-83	CHIEF BUREAU OF ENGINEERING	12/29/82
CHIEF BUREAU OF UTILITIES	1-6-83	CHIEF UTILITY DIVISION	12/28/82

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

CONTRACT NO. 2741-S
CAPITAL PROJECT NO. S-4-6067

STRUCTURAL SECTIONS

CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION
ELECTION DISTRICT NO. 2
HOWARD COUNTY, MARYLAND

DRAWING NO. 8 OF 16

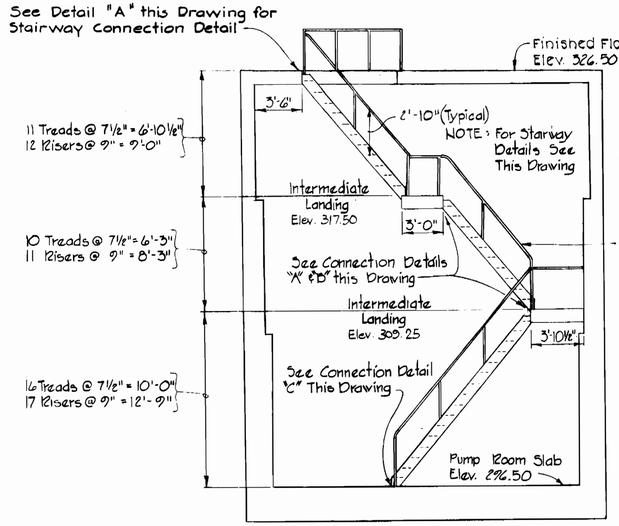
SCALE AS SHOWN

Designed: BCC
Drafted: SRB
Checked: BCC

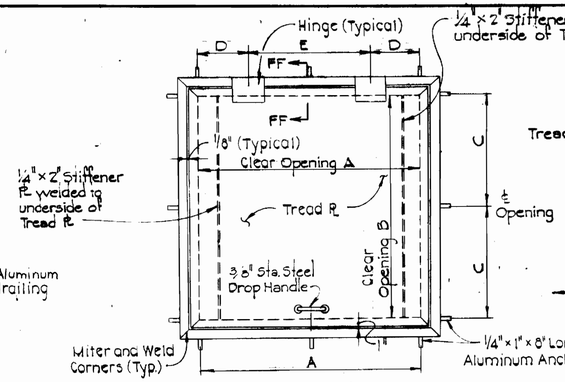
W.O. 3294-21

K&E BALTIMORE 17 0453 PHOENIX MC 1316

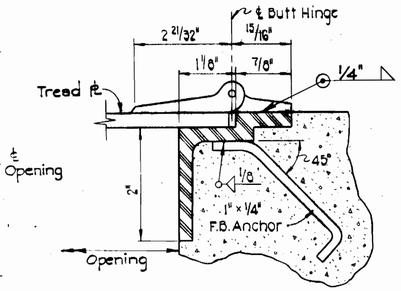
WS 741 S/8



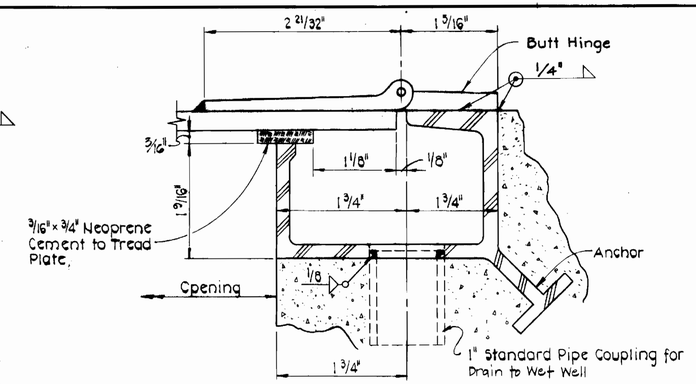
PUMP ROOM STAIRWAY
Scale 3/16" = 1'-0"



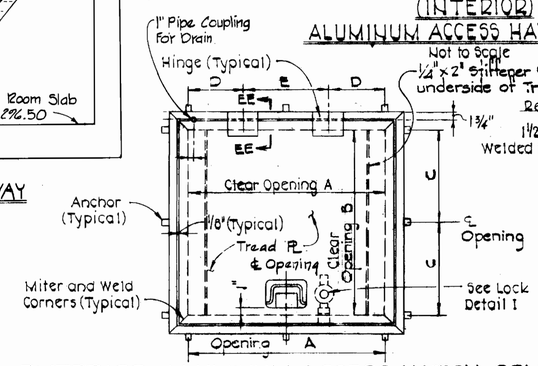
(INTERIOR)
ALUMINUM ACCESS HATCH COVER TYPE "C"
Not to Scale



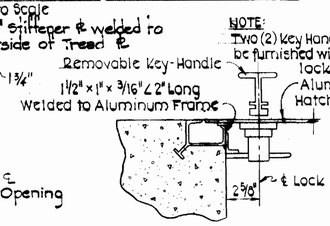
INTERIOR HATCH
SECTION "FF-FF"
Not to Scale



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



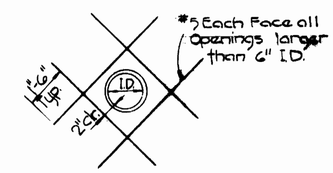
EXTERIOR ALUMINUM ACCESS HATCH COVER
TYPE "A & B"
Not to Scale



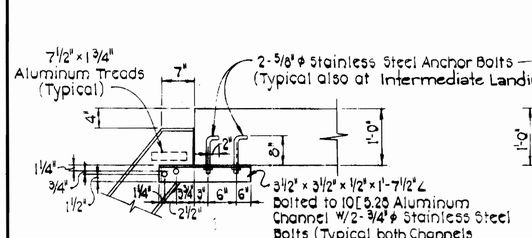
LOCK DETAIL I
Not to Scale

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'-0"	1'-9"	1'-0"	2'-0"	3/8"	Exterior, Watertight Hatch See Section EE-EE & Lock Detail I
B	Top Slab of Wet Well	Operation of Debris Basket	2'-0"	2'-0"	1'-3"	0'-10"	0'-10"	3/8"	Exterior, Watertight Hatch See Section EE-EE & Lock Detail I
C	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 FF-FF

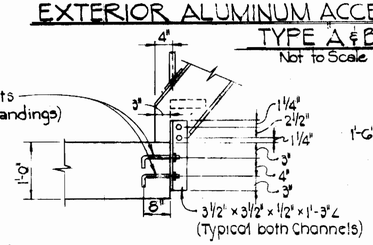
ACCESS HATCH SCHEDULE



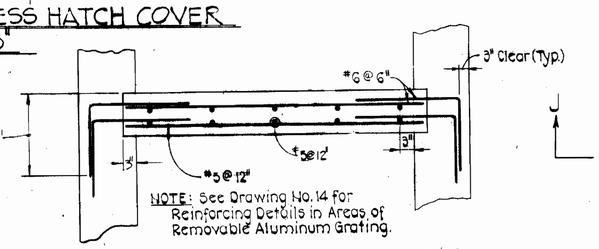
REINFORCING AT WALL OPENINGS
Not to Scale



DETAIL "A"

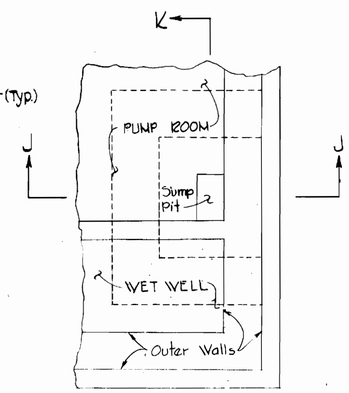


DETAIL "B"

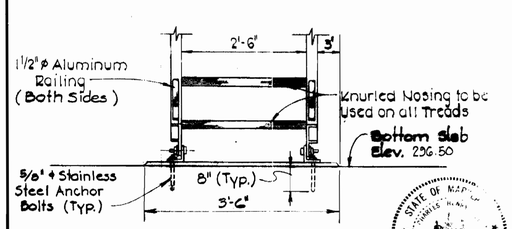


NOTE: See Drawing No. 14 for Reinforcing Details in Areas of Removable Aluminum Grating.

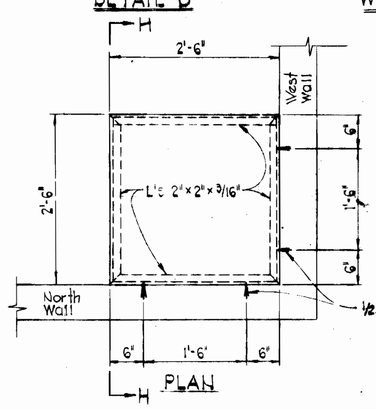
WET WELL LANDING DETAIL - LEVELS 1 & 2
Scale: 3/4" = 1'-0"



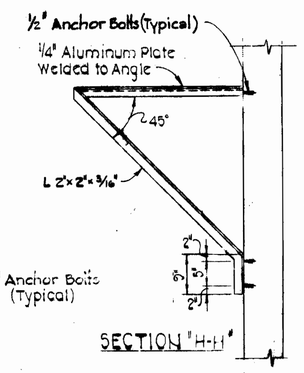
PLAN



DETAIL "C"
Not to Scale

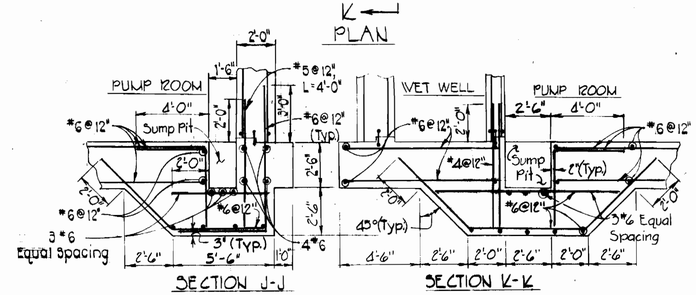


PLAN



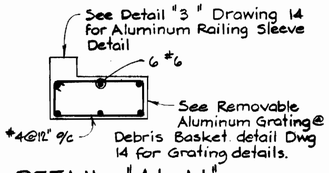
SECTION "H-H"

BLOWER PLATFORM DETAILS
Not to Scale



SECTION J-J
SECTION K-K

SUMP PIT DETAIL
Scale: 1/4" = 1'-0"



DETAIL "A1-A1"
Scale 3/4" = 1'-0"

EPA NO. C-240594-01(J14)
CONTRACT NO. 2741-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 8-25-81	CHIEF BUREAU OF ENGINEERING — DATE 8/28/81
CHIEF BUREAU OF UTILITIES — DATE 8-28-81	CHIEF UTILITY DIVISION — DATE 8/28/81

REVISED PUMPING STATION LOCATION 5-7-82

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

CONTRACT NO. 2741-S
CAPITAL PROJECT NO. S-4-6067

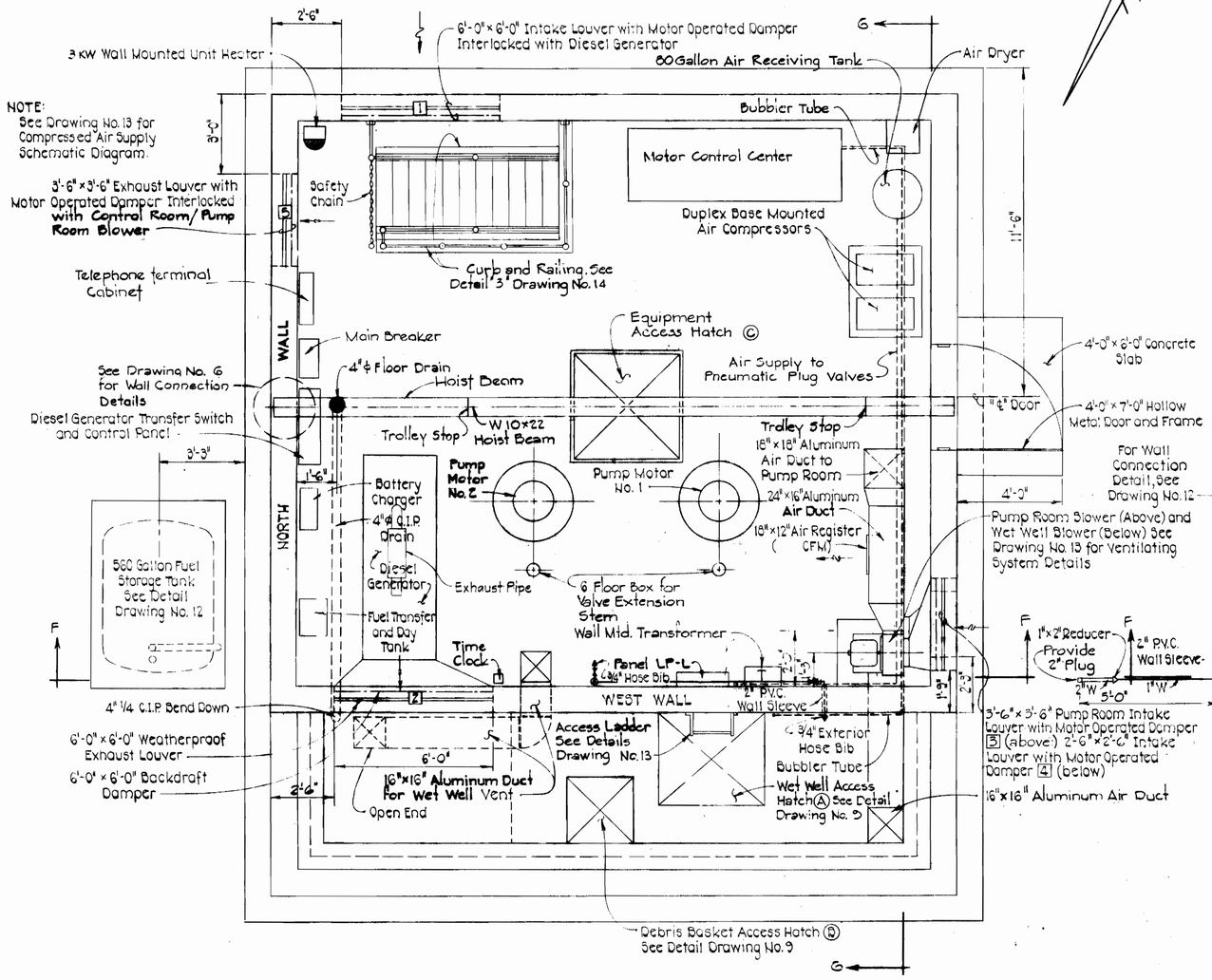
STRUCTURAL DETAILS

CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION
ELECTION DISTRICT NO. 2

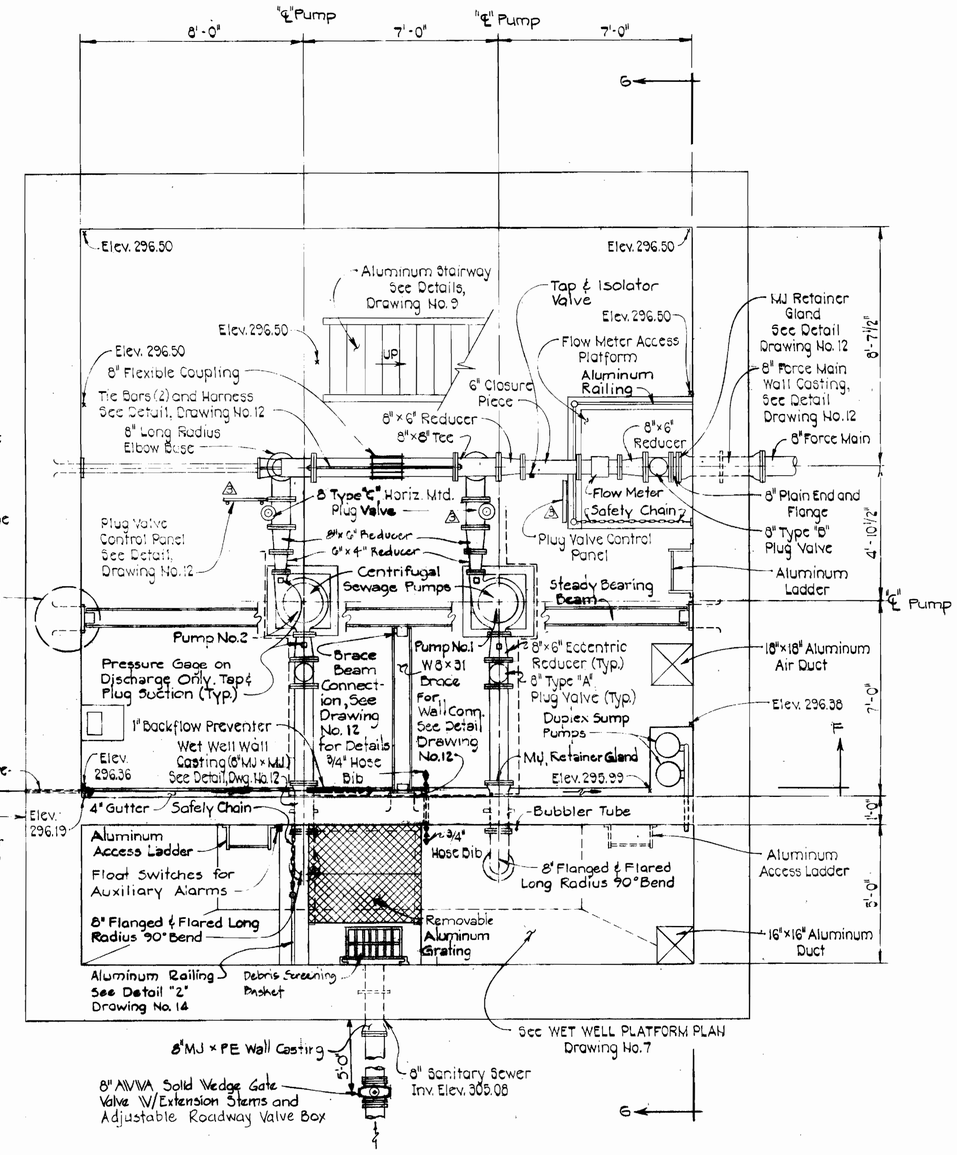
DRAWING NO. 9 OF 16
SCALE AS SHOWN
Designed: DJD
Drafted: ARW
Checked: REP

W.O. 3394-20

K&E BALTIMORE 17 0483 PHOENIX MC 1316



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



PUMP ROOM PLAN
BELOW ELEVATION 307.50
Scale: 3/8" = 1'-0"

EPA NO. C-240594-01 (.14)
CONTRACT NO. 2741-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION

REV.	DATE	DESCRIPTION
4	8-85	AS-BUILTS

REVISED PUMPING STATION LOCATION 5-7-82

AS-BUILTS

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 UTILITY DIVISION DATE 8/28/81

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

CONTRACT NO. 2741-S
CAPITAL PROJECT NO. S-4-6067

MECHANICAL PLANS

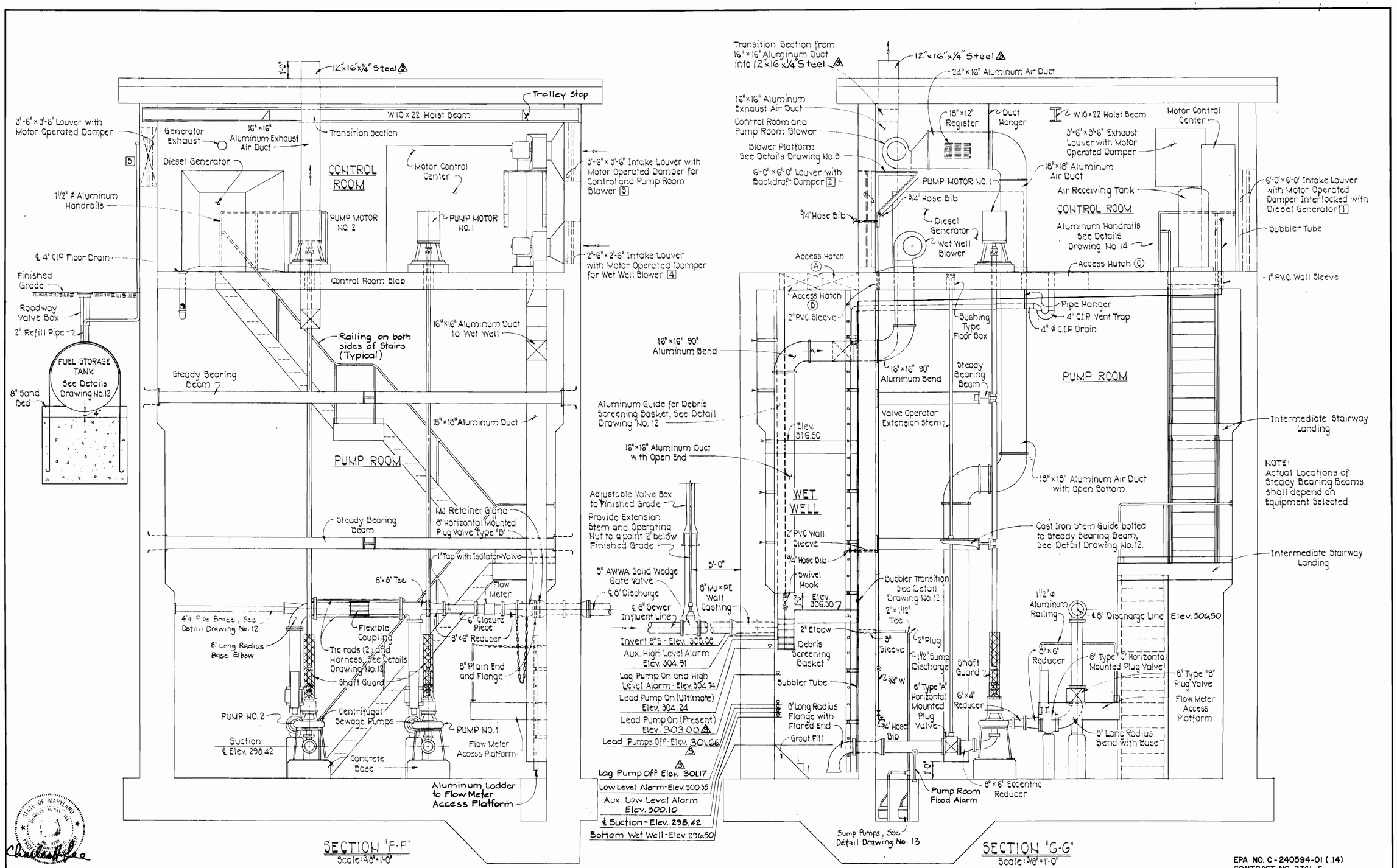
CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION
ELECTION DISTRICT NO. 2

DRAWING NO. 10 OF 16
SCALE AS SHOWN
Designed: DJD
Drafted:
Checked: REP

W.O. 3394-20

K&E BALTIMORE 17 0453 PHOENIX MC 1316

WS 741 S/10



NOTE:
Actual Locations of Steady Bearing Beams shall depend on Equipment Selected.

EPA NO. C-240594-01 (.14)
CONTRACT NO. 2741-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION

AS-BUILTS

REV.	DATE	DESCRIPTIONS
A	8-85	AS-BUILTS

REVISED PUMPING STATION LOCATION 5-7-82

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 1-7-83
CHIEF BUREAU OF ENGINEERING — DATE 12/21/82
CHIEF BUREAU OF UTILITIES — DATE 1-6-83
CHIEF UTILITY DIVISION — DATE 12/20/82

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

CONTRACT NO. 2741-S
CAPITAL PROJECT NO. S-4-6067

MECHANICAL SECTIONS

CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION
ELECTION DISTRICT NO. 2
HOWARD COUNTY, MARYLAND

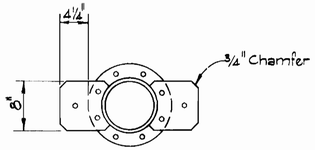
DRAWING NO. 11 OF 16
SCALE AS SHOWN
Designed: REP
Drafted: ARW
Checked: REP

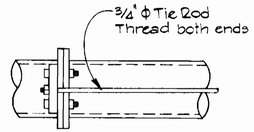
W.O. 3394-21

K&E BALTIMORE 17 0483 PHOENIX MC 1316

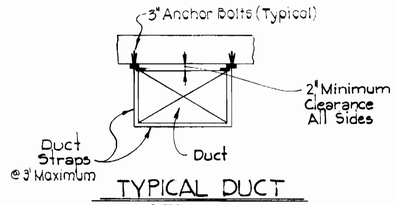
WS 741 S/11

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

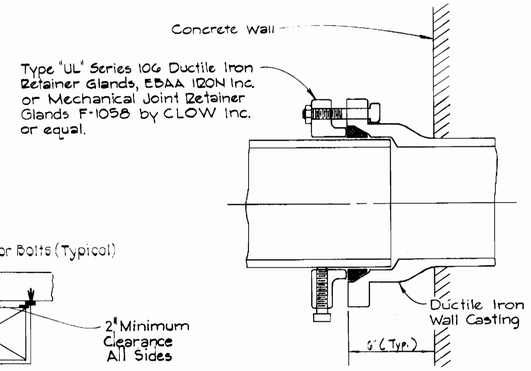




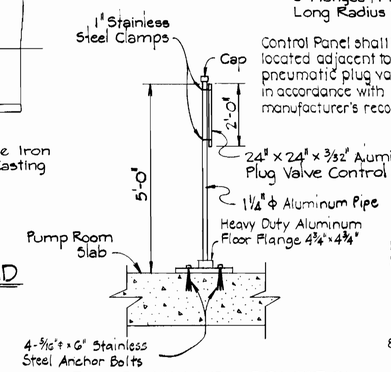
PIPE HARNESS DETAIL
Not to Scale



TYPICAL DUCT INSTALLATION
Not to Scale

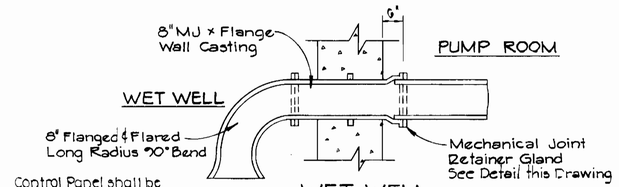


MJ RETAINER GLAND DETAIL
Not to Scale

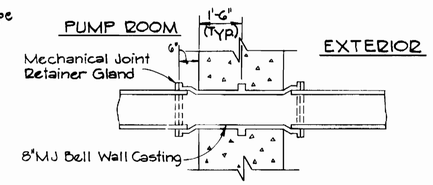


Control Panel shall be located adjacent to pneumatic plug valves in accordance with manufacturer's recommendations.

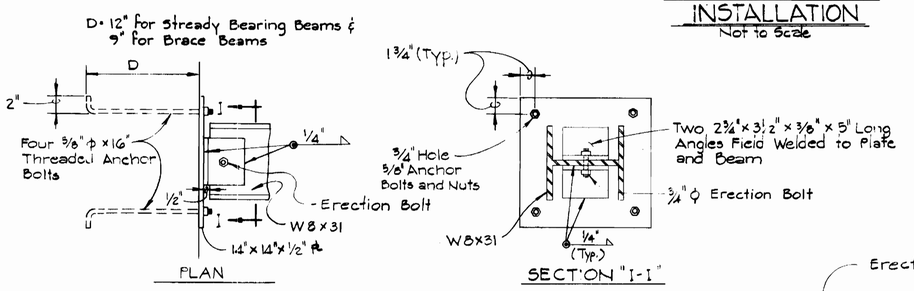
PLUG VALVE CONTROL PANEL STAND
Not to Scale



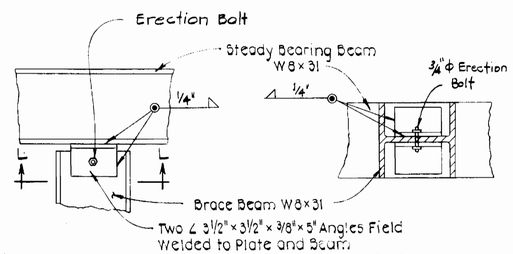
WET WELL WALL CASTING DETAIL
Not to Scale



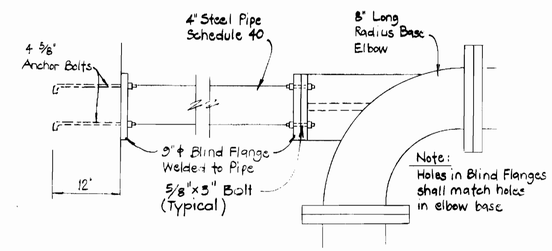
FORCE MAIN WALL CASTING DETAIL
Not to Scale



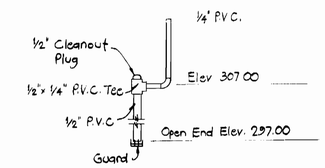
STEADY BEARING BEAM WALL CONNECTION DETAILS
Not to Scale



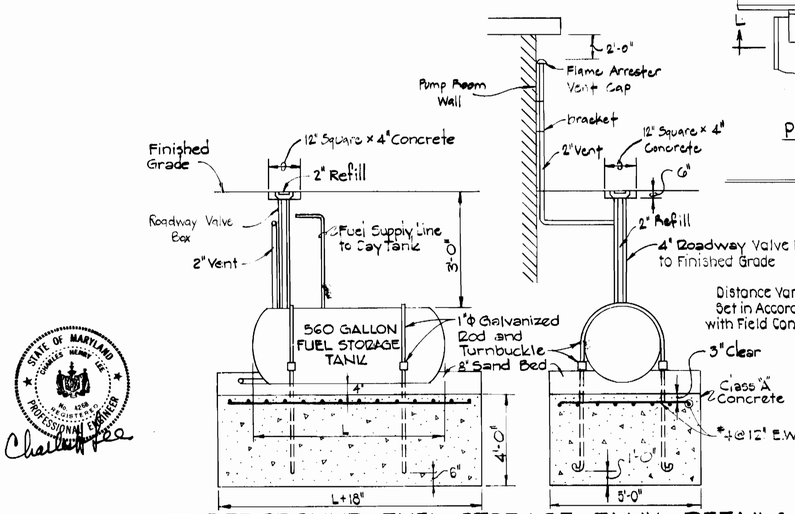
STEADY BEARING BEAM CONNECTION DETAILS
Scale: 1 1/2" = 1'-0"



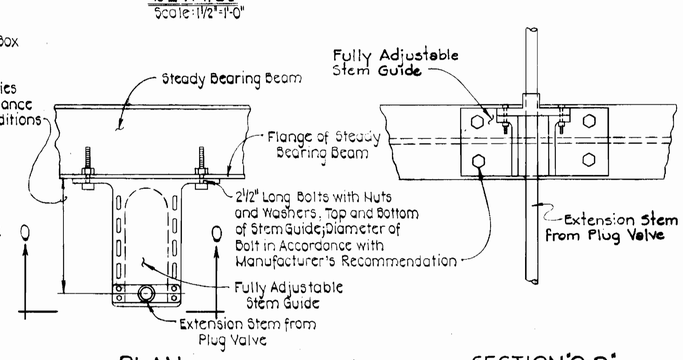
STEEL PIPE BRACE DETAIL
Not to Scale



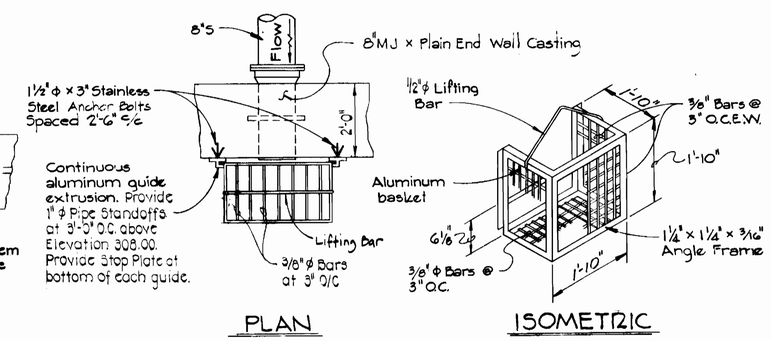
BUBBLER TRANSITION DETAIL
Not to Scale



UNDERGROUND FUEL STORAGE TANK DETAILS
Not to Scale



STEM GUIDE CONNECTION DETAIL
Not to Scale



DEBRIS SCREENING BASKET DETAILS
Not to Scale

EPA NO. C-240594-01(.14)
CONTRACT NO. 2741-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION

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

Charles H. Fee

REVISED PUMPING STATION LOCATION 5-7-82

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. 2741-S
CAPITAL PROJECT NO. S-4-6067

MECHANICAL DETAILS

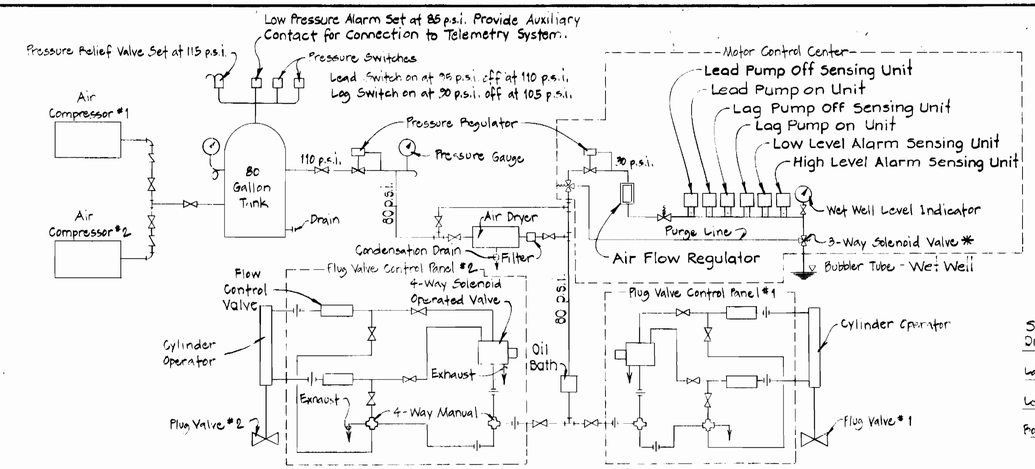
CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION
ELECTION DISTRICT NO. 2

DRAWING NO. 12 OF 16
SCALE AS SHOWN
Designed: DJD
Drafted:
Checked: REP

W.O. 3394-20

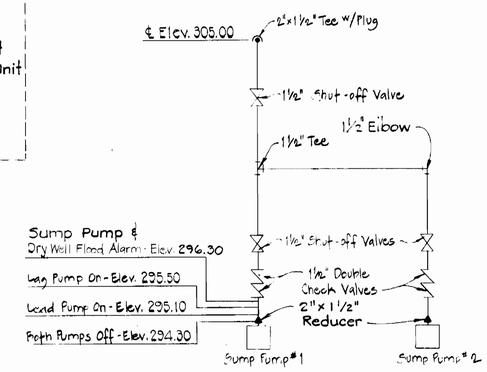
K&E BALTIMORE 17 0453 PHOENIX MC 1316

WS 741 S/12

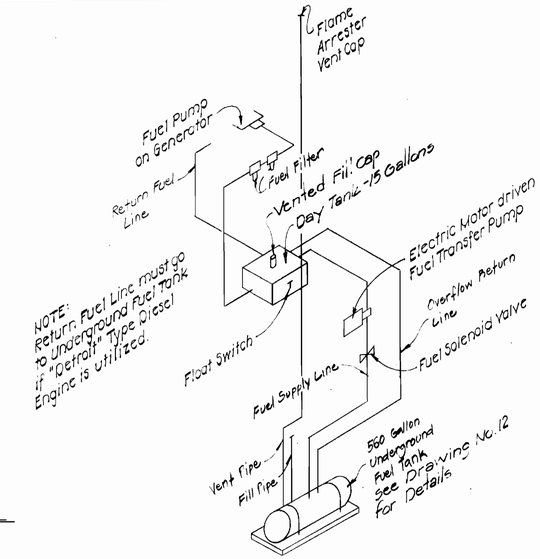


COMPRESSED AIR SYSTEM DIAGRAM
Not to Scale

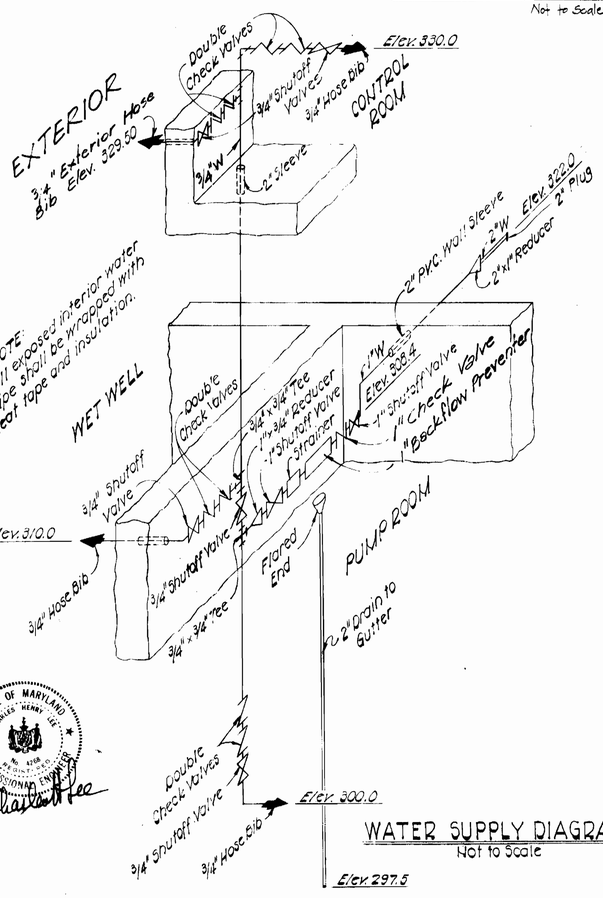
* Provide 3 second time delay control of 3 way solenoids to prevent H.P. air access to sensing units.



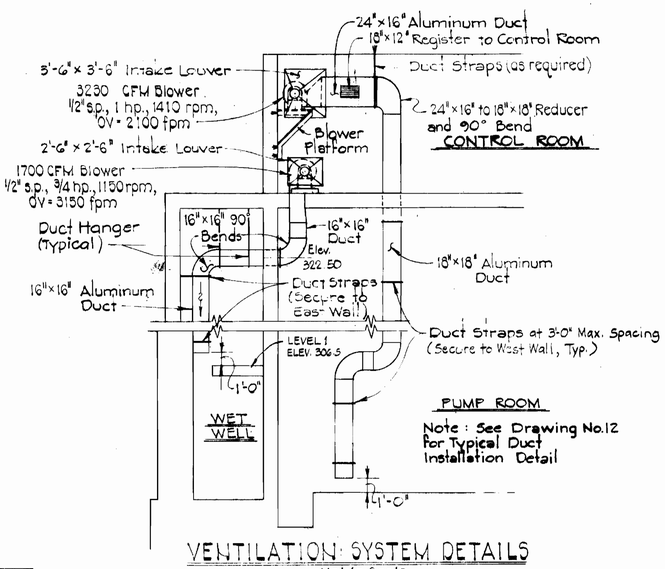
SUMP PUMP DISCHARGE PIPING DIAGRAM
Not to Scale



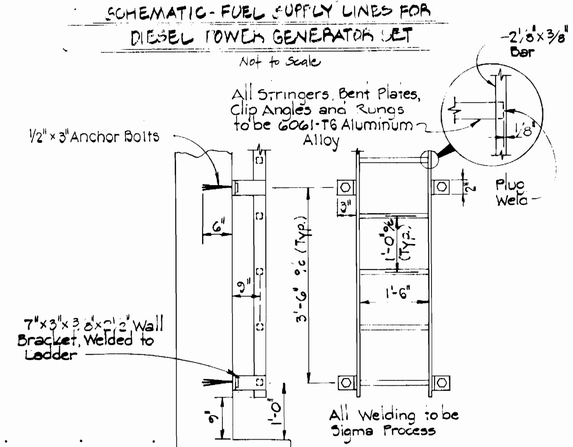
SCHEMATIC - FUEL SUPPLY LINES FOR DIESEL POWER GENERATOR SET
Not to Scale



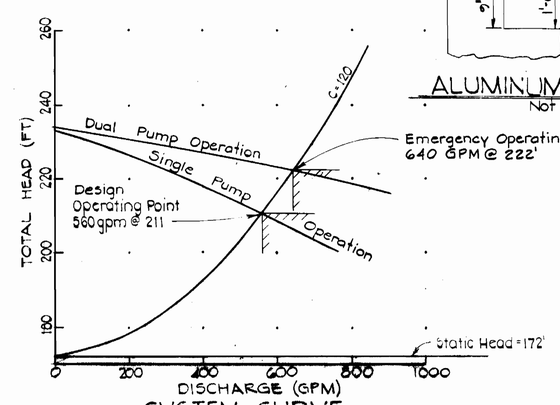
WATER SUPPLY DIAGRAM
Not to Scale



VENTILATION SYSTEM DETAILS
Not to Scale



ALUMINUM ACCESS LADDER
Not to Scale



SYSTEM CURVE

EPA NO. C-240594-01 (.14)
CONTRACT NO. 2741-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
ALLENFORD 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

REVISED PUMPING STATION LOCATION 5-7-82

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

CONTRACT NO. 2741-S
CAPITAL PROJECT NO. S-4-6067

MECHANICAL DETAILS

CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION
ELECTION DISTRICT NO. 2

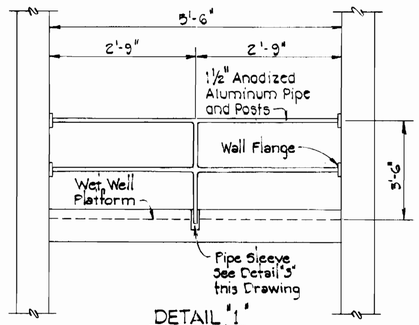
DRAWING NO. 13 OF 16

SCALE AS SHOWN

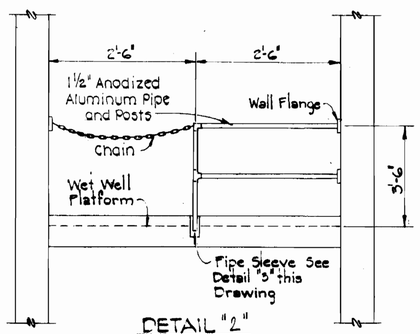
Designed: DJD
Drafted:
Checked: REP

W.O. 3394-20

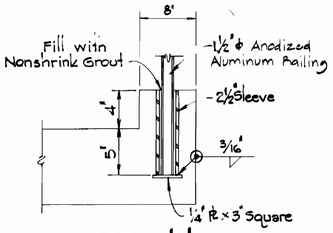
K&E BALTIMORE 17 0453 PHOENIX MC 1816



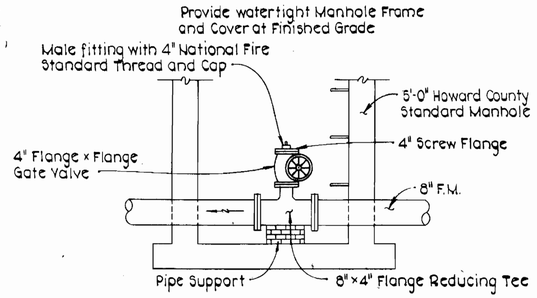
DETAIL "1"
Not to Scale



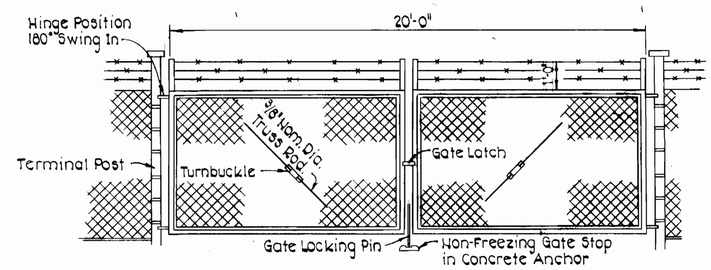
DETAIL "2"
Not to Scale



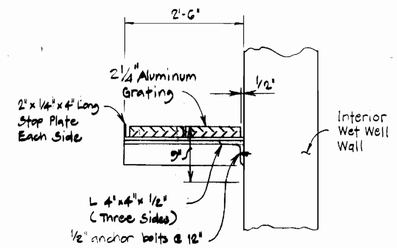
DETAIL "3"
Not to Scale



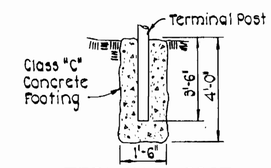
HOWARD COUNTY STANDARD
EMERGENCY CONNECTION
VALVE DETAIL
Scale: 1/2" = 1'-0"



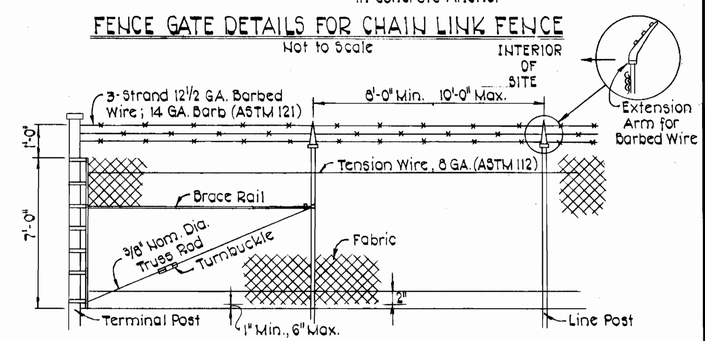
FENCE GATE DETAILS FOR CHAIN LINK FENCE
Not to Scale



REMOVABLE ALUMINUM WET WELL
GRATING @ DEBRIS BASKET OPENING
Not to Scale



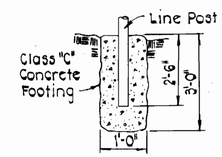
TERMINAL POST
MOUNTING
Not to Scale



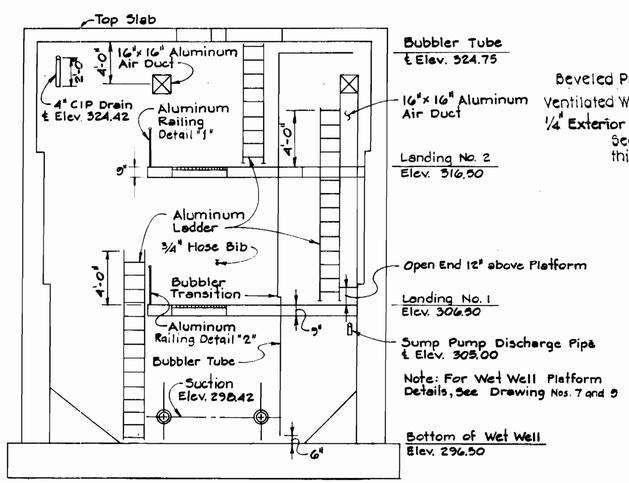
CHAIN LINK FENCE W/TENSION WIRE
TOP AND BOTTOM
Not to Scale

NO.	LOCATION	TYPE	SIZE (H×W)
1	Generator Intake	Weather/Motorized	6'-0"×6'-0"
2	Generator Exhaust	Weather/Motorized	6'-0"×6'-0"
3	Control Room, Pump Room Blower Intake	Weather/Motorized	3'-6"×3'-6"
4	Wet Well Blower Intake	Weather/Motorized	2'-6"×2'-6"
5	Control Room Exhaust	Weather/Motorized	3'-6"×3'-6"

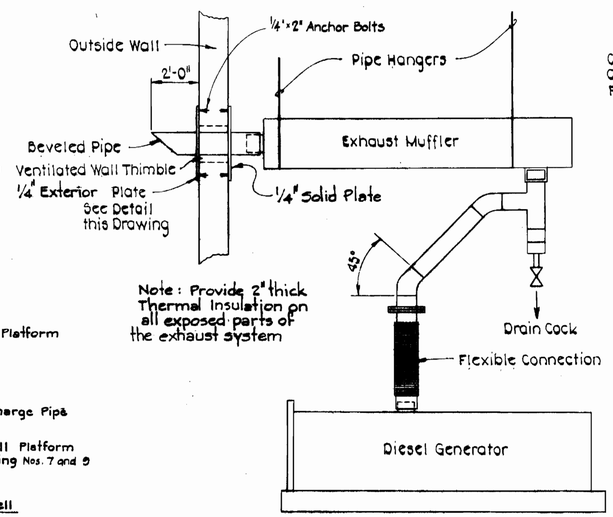
LOUVER SCHEDULE



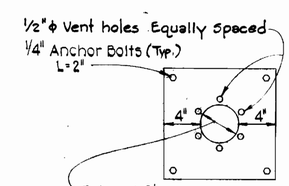
LINE POST
MOUNTING
Not to Scale



WET WELL SECTION
Scale 1" = 3/16"



GENERATOR EXHAUST SCHEMATIC
Not to Scale



EXTERIOR
PLATE DETAIL
Not to Scale

EPA NO. C-240594-01(.14)
CONTRACT NO. 2741-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION

REVISED PUMPING STATION LOCATION 5-7-82

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. 2741-S
CAPITAL PROJECT NO. S-4-6067

MISCELLANEOUS DETAILS

CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION
ELECTION DISTRICT NO. 2

DRAWING NO. 14 OF 16

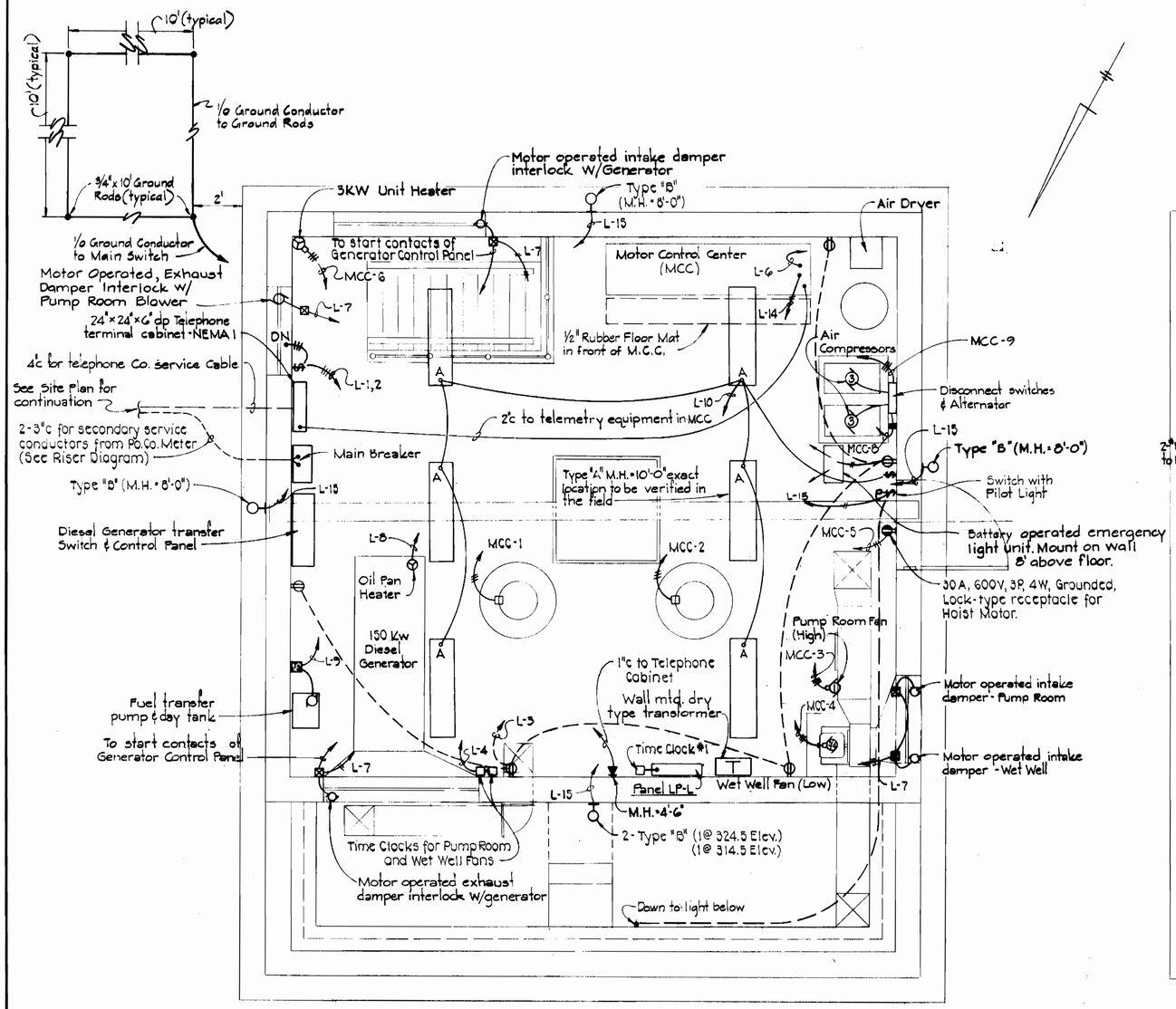
SCALE AS SHOWN

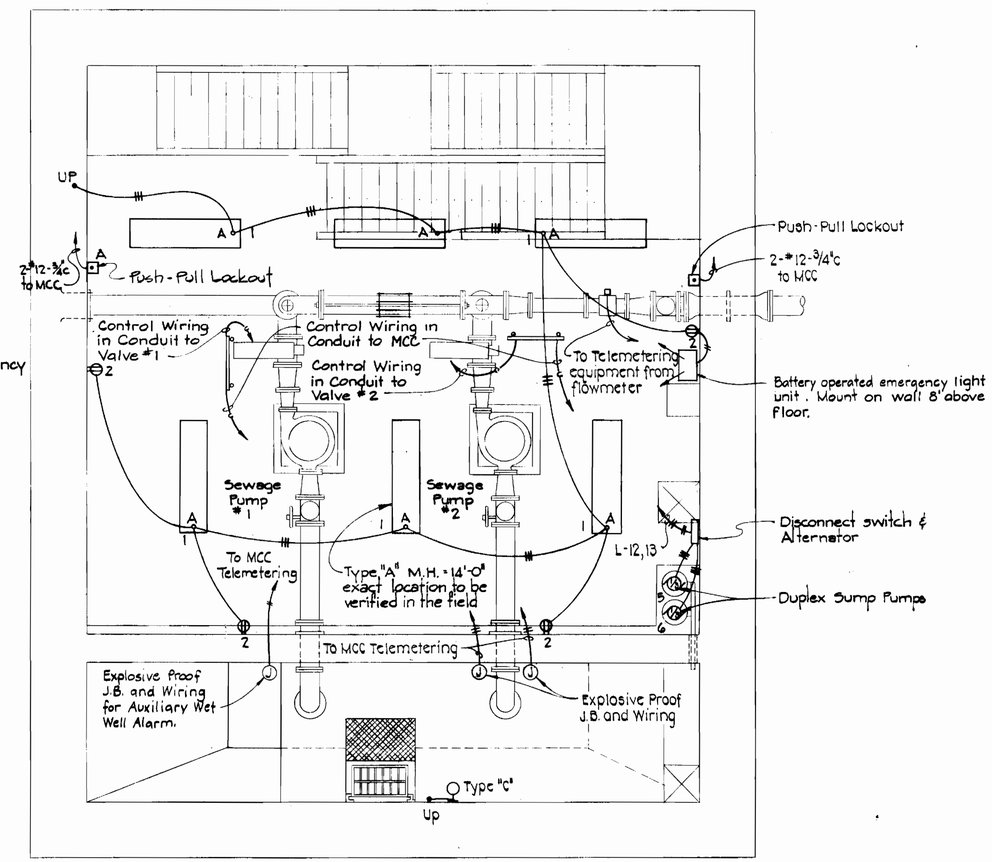
Designed: DJD
Drafted:
Checked: REP

W.O. 3394-20

K&E BALTIMORE 17.0652 PHOENIX MC 1816

WS 741 S/14





PUMP ROOM PLAN

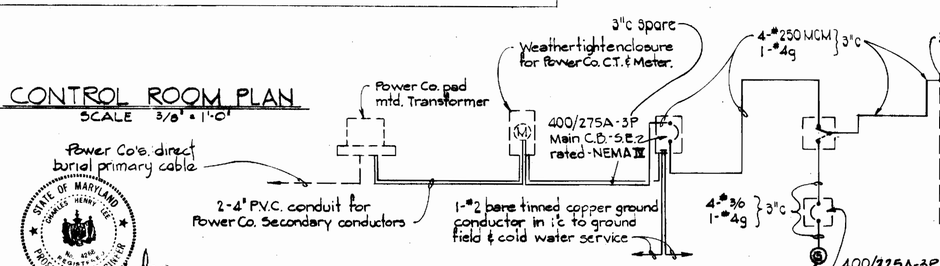
SCALE 3/8" = 1'-0"

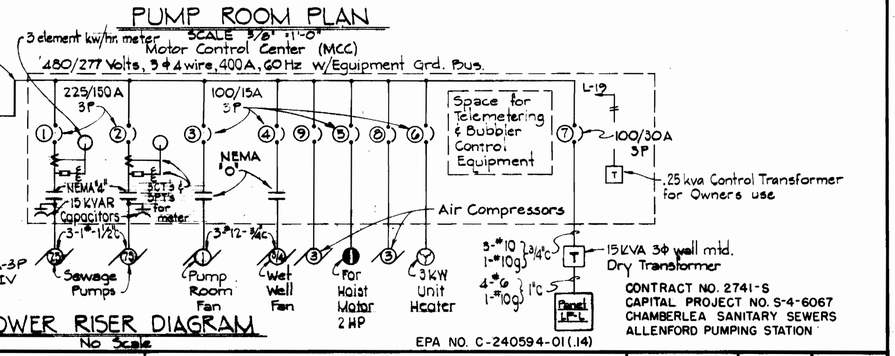
NOTES:

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. Starters 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 × 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 W/1-#1/0 bare tinned copper ground conductor.
4. Exterior lights to be connected through Time Clock #1.

CONTROL ROOM PLAN

SCALE 3/8" = 1'-0"





POWER RISER DIAGRAM

No Scale

CONTRACT NO. 2741-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION

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

DEPARTMENT OF PUBLIC WORKS	HOWARD COUNTY, MARYLAND		
DIRECTOR OF PUBLIC WORKS	DATE	CHIEF BUREAU OF ENGINEERING	DATE
CHIEF BUREAU OF UTILITIES	DATE	CHIEF UTILITY DIVISION	DATE

PURDUM & JESCHKE ENGINEERS 1023 N CALVERT ST. BALTIMORE, MARYLAND	CONTRACT NO. 2741-S CAPITAL PROJECT NO. S-4-6067	ELECTRICAL PLANS	CHAMBERLEA SANITARY SEWERS ALLENFORD PUMPING STATION ELECTION DISTRICT NO. 2	DRAWING NO. 15 OF 16	SCALE AS SHOWN	Designed: JH Drafted: F.T. Checked: REP

W.O. 3394-20

K&E BALTIMORE 17 0483 PHOENIX MC 1316

ELECTRICAL LEGEND

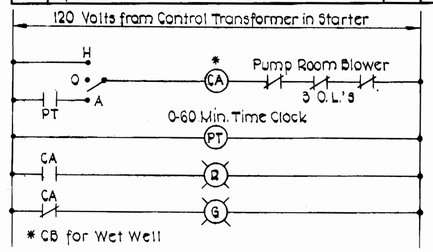
SYMBOL	DESCRIPTION
	Fixture, Flourescent
	Fixture, Incandescent - Ceiling Wall Bracket
$, Sa	Switch - Single Pole - M.H. 4'-0" Subscript Denotes Outlets Controlled
	Receptacle - 20 A, 125 V. - Duplex - M.H. 3'-0" (Pump Room M.H. 5'-0")
	Receptacle - 20A, 125V. - Single - M.H. 3'-0" (Pump Room M.H. 5'-0")
	Receptacle - Clock Hanger 15A., 125 V., M.H. 7'-6"
J.B.	Junction Box
	Motor - Horsepower as Indicated
T	Thermostat - M.H. 5'-0"
PT	Percentage Timer
TC	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
M3	Thermal Manual Motor Starter W/ Hand-Off-Auto Selector Switch - M.H. 5'-0"
	Conduit - In or On Ceiling or Wall (2 #12, ¾"C. Unless Otherwise Noted)
	Conduit - In or Under Floor
	Homerun to Panel. No. 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.C.C.
	Ground Rod, ¾" × 10'-0" Copperclad
	Exothermically Welded Connection
S	Solenoid Valve
	Fixture, Mercury Vapor
M	Combination Magnetic Starter (MCC)
C	Contactor
C	Starter Coil (One Line Diagram)
	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

* Ground Conductor not indicated

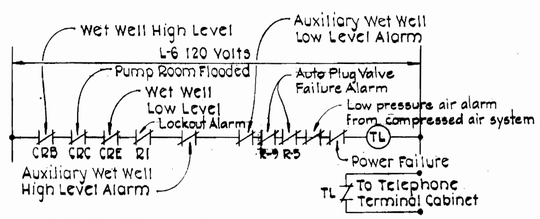
SCHEDULE OF PANEL LP-L

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

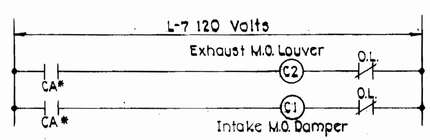
CKT. NO.	DESCRIPTION	CIRCUIT BREAKER POLES	TRIP	FRAME	REMARKS
1	Lights Pump Room	1	20 A	100 A	
2	Pump Room Receptacles	1	20A	100A	Ground Fault Breakers
3	Control Room Receptacles	1	20A	100A	Ground Fault Breakers
4	Time Clocks for Pump Room and Wet Well Fans	1	20A	100A	
5	Spare	1	20A	100A	
6	Telemetry	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	Lights Control Room	1	15A	100A	
11	Spare	1	15A	100A	
12	Sump Pump	1	15A	100A	
13	Sump Pump	1	15A	100A	
14	Bubbler Controls	1	20A	100A	
15	Exterior and Wet Well Lights	1	20A	100A	
16-19	Controls (see schematic)	1	20A	100A	
20-24	Spares	1	20A	100A	



PUMP ROOM AND WET WELL VENT FANS



TELEMETERING ALARM DIAGRAM



MOTOR OPERATED DAMPERS FOR VENT FANS

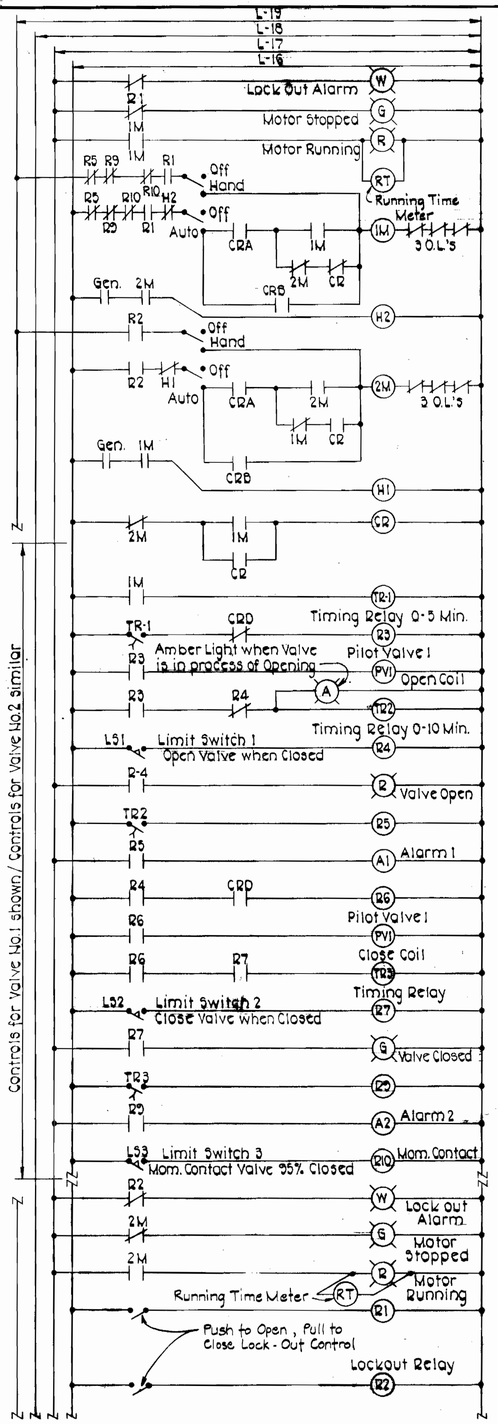
* CB for Pump Room Vent Blower

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	2-40 W. T-12 Cool White	Stem	Benjamin FA-2224-42 Daybrite T12-41241 or equal.
B	Mercury Vapor-Proof Wall Bracket Cast Al., Prismatic Reflector.	1-100W Hg	Wall Mounting	McPhilben 224Z241U8 Holophane 412-120 or Equal.
C	Incandescent Explosive-Proof	1-200W/A-23	Wall Mounting	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" Fixture shall be Complete with Tamperproof Hardware.



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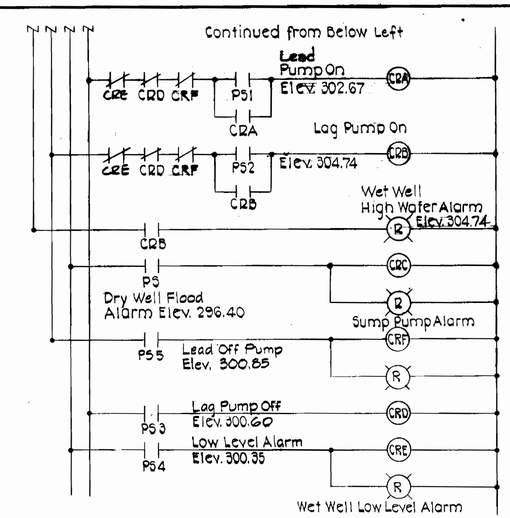
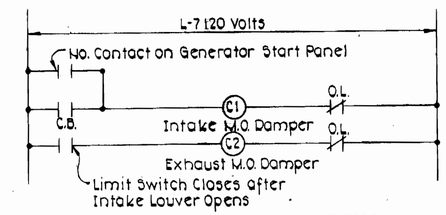


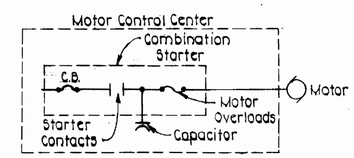
PUMP MOTORS, VALVES AND BUBBLER SYSTEM CONTROL



MOTOR OPERATED DAMPERS FOR DIESEL GENERATOR

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 manufacturers wiring diagram.
4. All electrical work in the Wet Well shall be suitable for Class 1 Division 1 Group D areas. Provide seals on all conduits.
5. All panels shall be mounted to wall utilizing 1¼ kindorf channels.
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

CONTRACT NO. 2741-S
CAPITAL PROJECT NO. S-4-6067
CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION

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

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. 2741-S
CAPITAL PROJECT NO. S-4-6067

ELECTRICAL DETAILS

CHAMBERLEA SANITARY SEWERS
ALLENFORD PUMPING STATION
ELECTION DISTRICT NO. 2

DRAWING NO. 16 OF 16

SCALE AS SHOWN

Designed: DJD
Drafted:
Checked: REP

W.O. 3394-20

WS 741 S/16