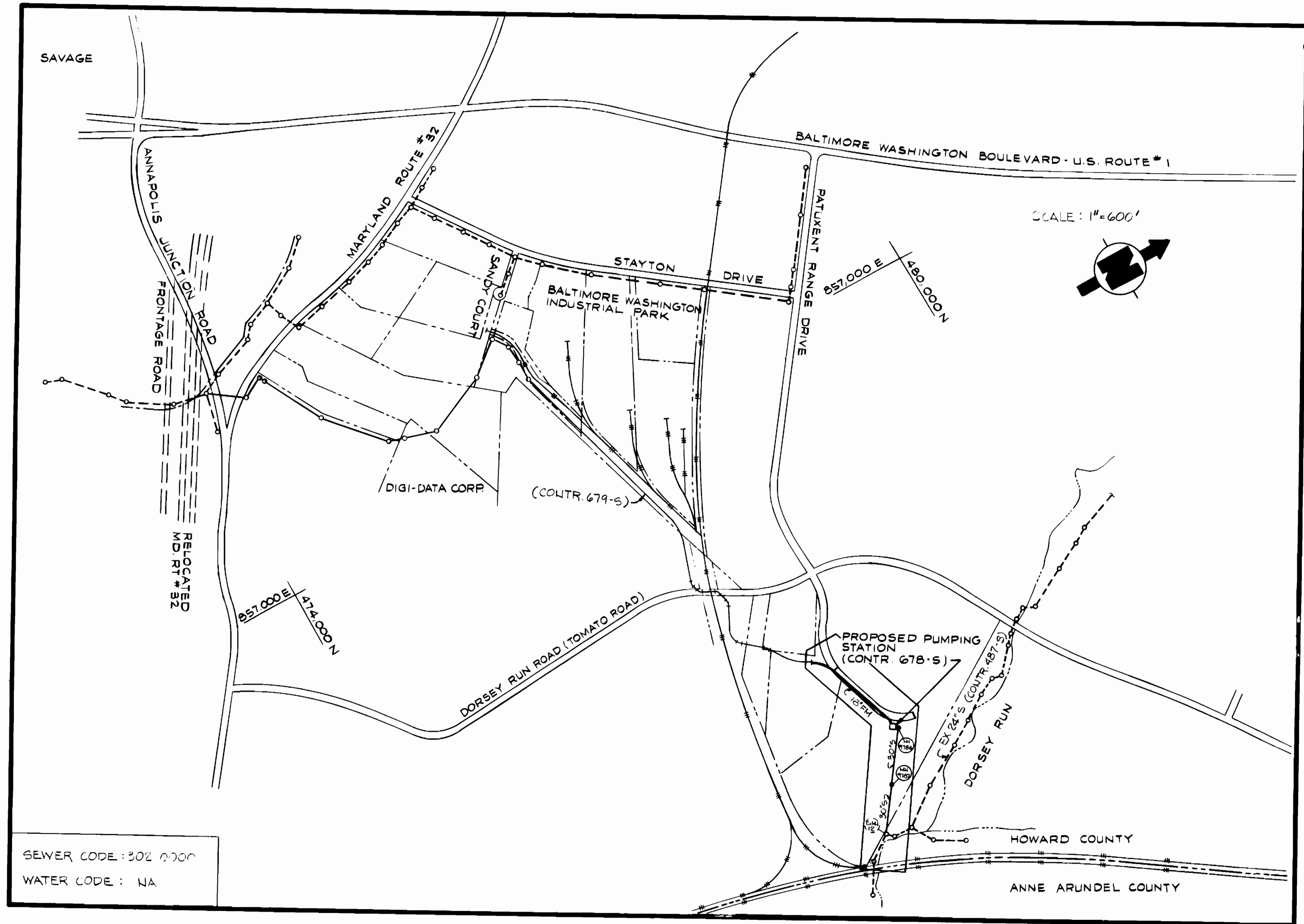


SHEET	DRAWING INDEX
1	COVER SHEET, LOCATION MAP
2	SITE DEVELOPMENT PLAN
3	SEDIMENT CONTROL PLAN
4	SEDIMENT CONTROL DETAILS
5	SITE PLAN, FORCE MAIN, AND GRAVITY SEWER
6	PROFILES AND DETAILS, FORCE MAIN, AND GRAVITY SEWER
7	SITE PLAN, PUMPING STATION
8	ROOF PLAN, SCHEDULES, ELEVATIONS, AND DETAILS
9	FOUNDATION AND INTERMEDIATE FRAMING DETAILS
10	PLAN AT ELEVATION 163'-0"
11	OPERATING LEVEL FLOOR PLAN AND ROOF FRAMING PLAN
12 & 13	SECTIONS AND DETAILS
14	PUMP ROOM AND WET WELL, PIPING AND EQUIPMENT, TYPICAL SECTION
15	PUMP ROOM AND WET WELL, CONTROL ROOM AND GENERATOR ROOM PIPING AND EQUIPMENT PLAN
16	PUMP ROOM AND WET WELL, PIPING AND EQUIPMENT, TYPICAL SECTION
17	CONTROL DETAILS AND PIPING SCHEMATIC
18	ELECTRICAL PLAN AND RISER DIAGRAM
19	SCHEDULES



SEWER CODE: 302 0000
 WATER CODE: NA

NOTE:
 FOR GENERAL NOTES SEE DRAWINGS
 5 OF 19 AND 7 OF 19.

**CONTRACT NO. 678-S
 PROJECT NO. S-6071
 DORSEY RUN PUMPING STATION
 HOWARD COUNTY, MARYLAND
 DEPARTMENT OF PUBLIC WORKS**

ITEM	QUANTITIES		
	BID	AS-BUILT	SUPPLIER
18" F.M.	1060		
30" S.	957'		
MANHOLES	3		
PUMP STATION	LUMP SUM		
12" W	655'		
MODIFY EX. M.H. 12	1		
FIRE HYDRANT	1		
12" GATE VALVE	1		

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Robert M. Bainger
 DIRECTOR OF PUBLIC WORKS
 DATE: 5-84

Allen S. [Signature]
 CHIEF, BUREAU OF ENGINEERING
 DATE: 7/25/84

Robert M. Bainger
 CHIEF - BUREAU OF UTILITIES
 DATE: 5-84

Allen S. [Signature]
 CHIEF - UTILITIES DIVISION
 DATE: 7/25/84

HUS CONSULTING ENGINEERS
 CORPORATION
 910 CLOPPER ROAD GAITHERSBURG, MD.
 301-258-6000 20878



DES:	
DRN:	
CHK:	
DATE: 7/25/84	BY NO. REVISION DATE

LOCATION MAP
 600' SCALE MAP NO. 48 BLOCK NO. 2

DORSEY RUN PUMPING STATION
 ELECTION DISTRICT: UNINCORPORATED HOWARD COUNTY, MARYLAND
 PROJECT NO. S-6071 CONTRACT NO. 678-S

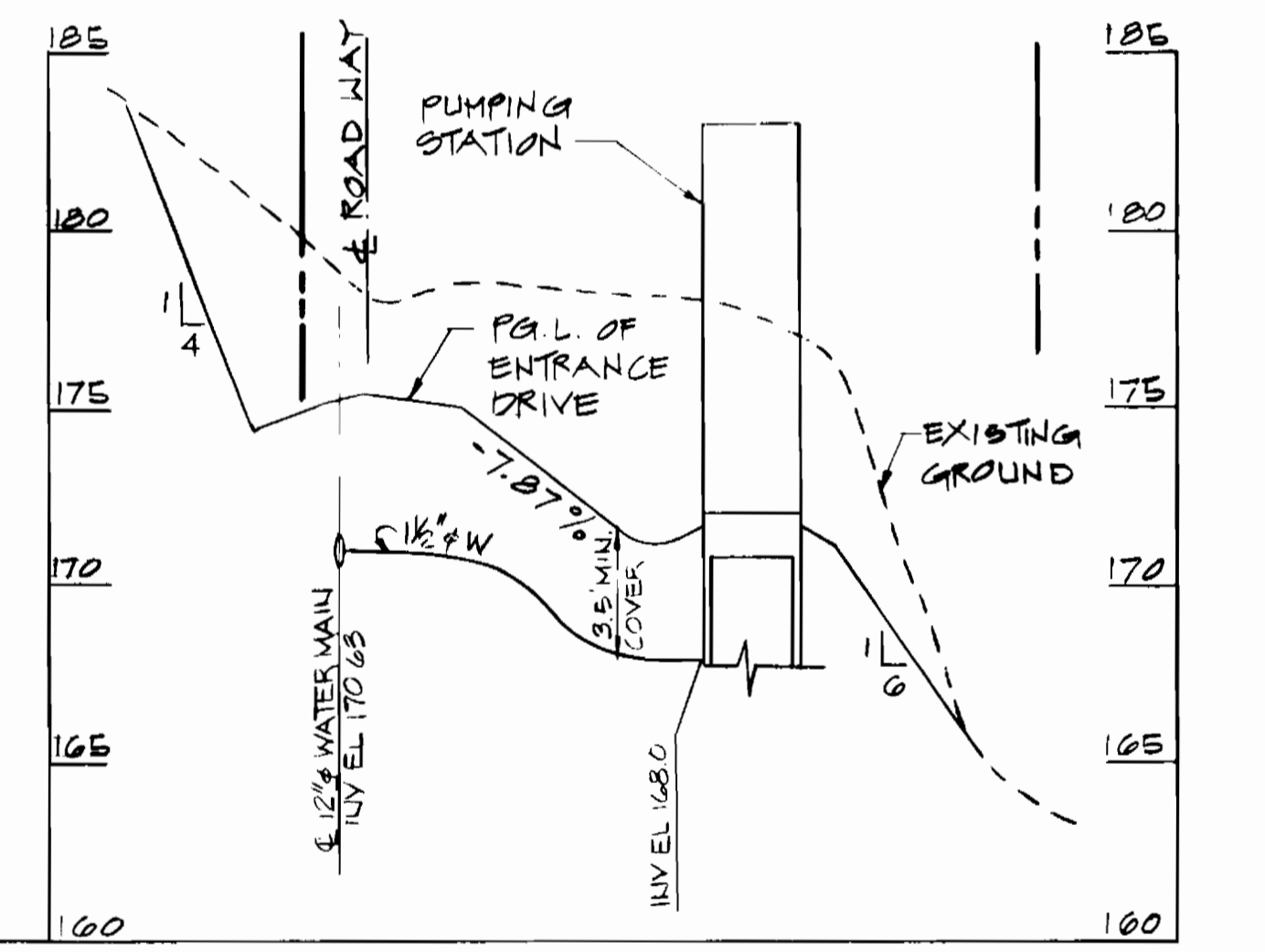
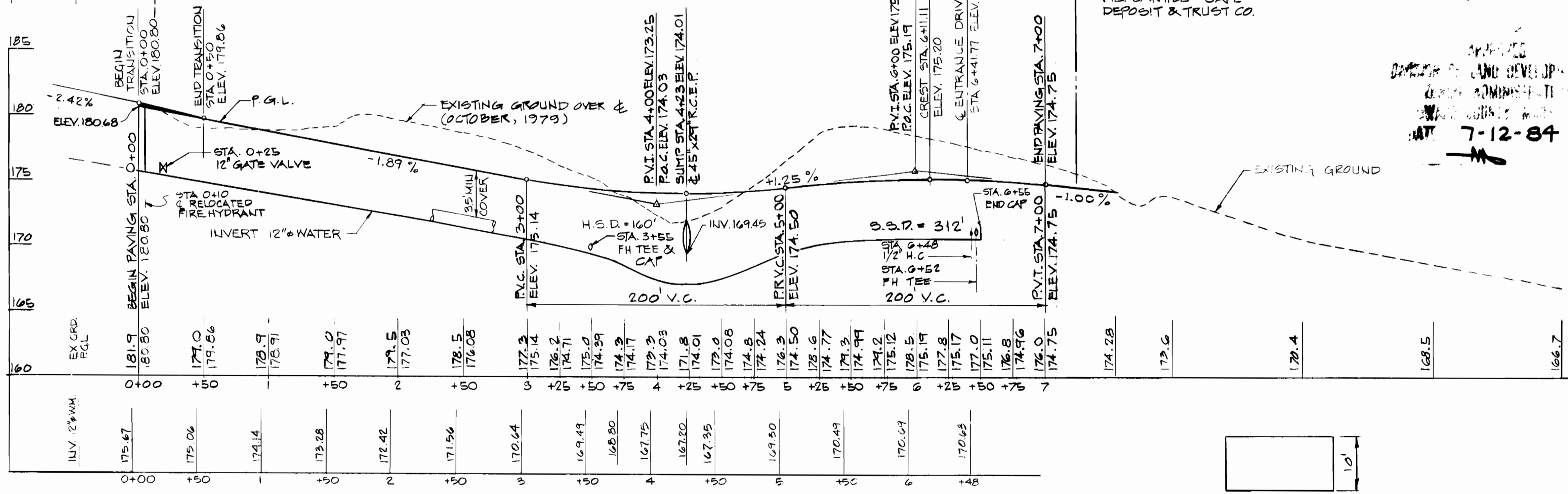
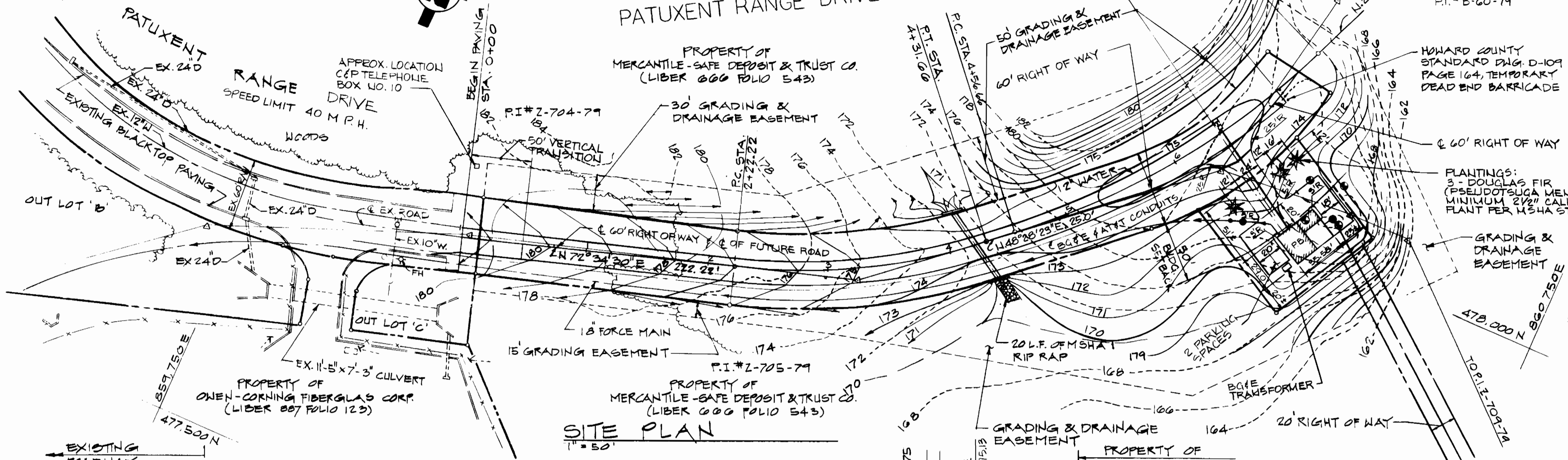
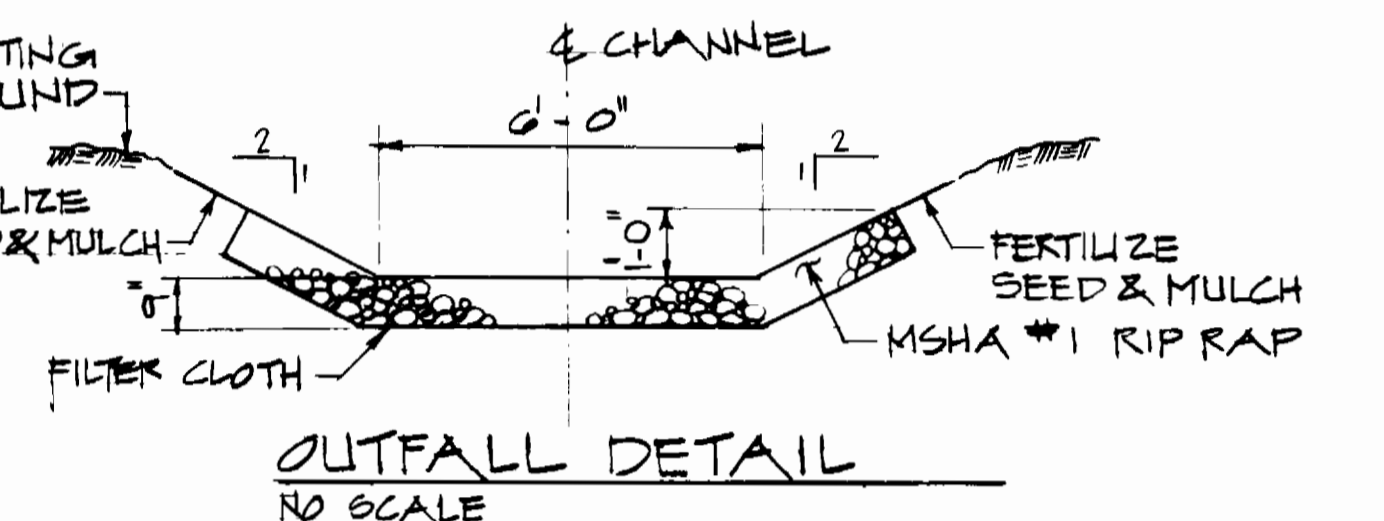
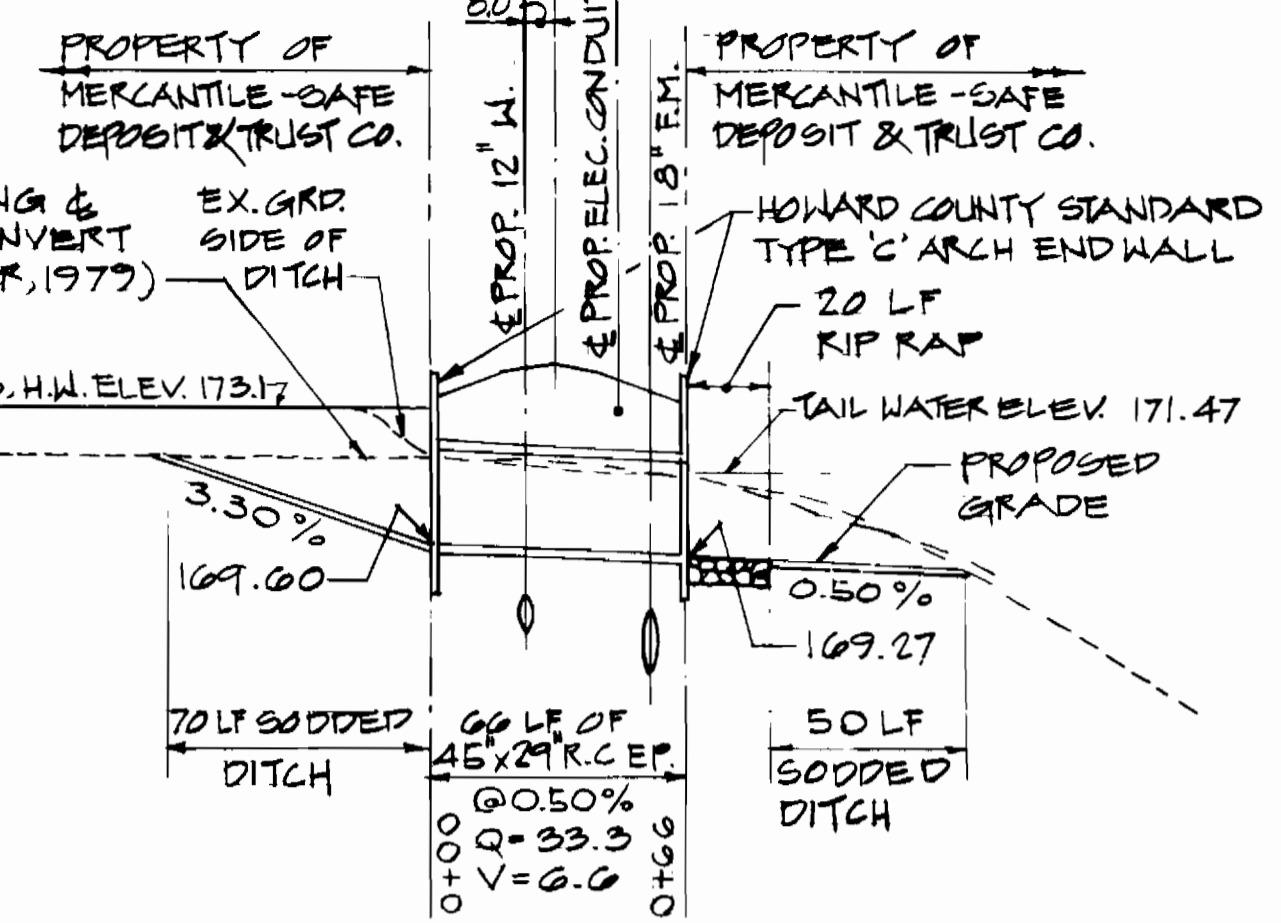
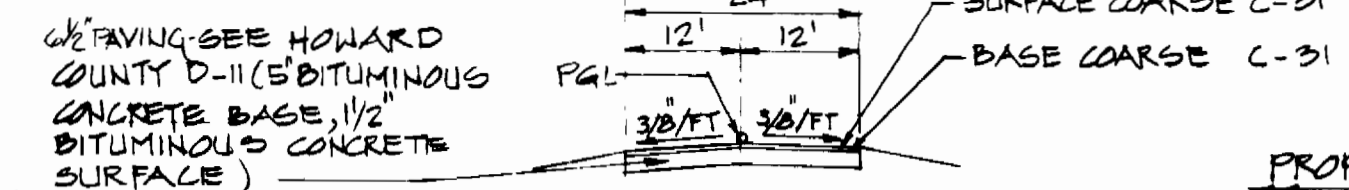
SCALE AS SHOWN
 SHEET 1 OF 19

SITE ANALYSIS

AREA OF SITE	0.69 AC
NUMBER OF EMPLOYEES	0
PARKING REQUIRED	2
PARKING PROVIDED	2
AREA TO BE GRADED	0.58 AC
AREA TO BE ROOTED	0.03 AC
AREA TO BE PAVED	0.04 AC
AREA TO BE SEEDED	0.51 AC
AREA TO BE UNDISTURBED	0.11 AC
ZONED	M-2
TAX MAP NUMBER	48
ROADWAY SPEED LIMIT	25 M.P.H.

CURVE DATA

PC=(2+22.22) TO PT=(4+31.66) Δ=24°00'00" T=100.28' R=500.00' L=209.44' CHD.=207.91' CHD.BRG.=N 60°28'24"W	<td>PC=(4+56.66) TO PT=(7+45.71) Δ=26°00'00" T=147.06' R=637.00' L=289.01' CHD.=286.59' CHD.BRG.=N 35°28'23"E.</td>	PC=(4+56.66) TO PT=(7+45.71) Δ=26°00'00" T=147.06' R=637.00' L=289.01' CHD.=286.59' CHD.BRG.=N 35°28'23"E.
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SUBDIVISION NAME HO. CO. DORSEY RUN PUMPING STATION		SECT./AREA	LOT/PARCEL 109
PLAY # OR L/P 1224/382	BLOCK # 3	TAX/ZONE MAP 48	ELEC. DIST. CENSUS TR. 6th 6054
WATER CODE N/A	SEWER CODE 3020000		

STREET ADDRESS: 8181 PATUXENT RANGE DRIVE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEM
HOWARD COUNTY HEALTH DEPARTMENT
County Health Officer
DATE: 7-12-84

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS
U.S. SOIL CONSERVATION SERVICE
DATE: 7-12-84

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED (HOWARD S.C.D.) DATE: 7/12/84

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
PLANNING DIRECTOR
DATE: 7-17-84

HOWARD COUNTY, MARYLAND
OWNER AND DEVELOPER
LIBER- 1224, FOLIO- 382
TAX MAP 48, PARCEL 109
ZONED M-2

CERTIFICATION BY THE 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 CONDITION AND IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
DATE: 6/4/84

CERTIFICATION BY THE DEVELOPER
"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS OF DEVELOPMENT AND PLANS FOR EROSION AND SEDIMENT CONTROL AND I ALSO AUTHORIZE PERIODIC ON SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY." DEVIATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD SOIL CONSERVATION DISTRICT.
DATE: 7-16-84

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DATE: 7-17-84

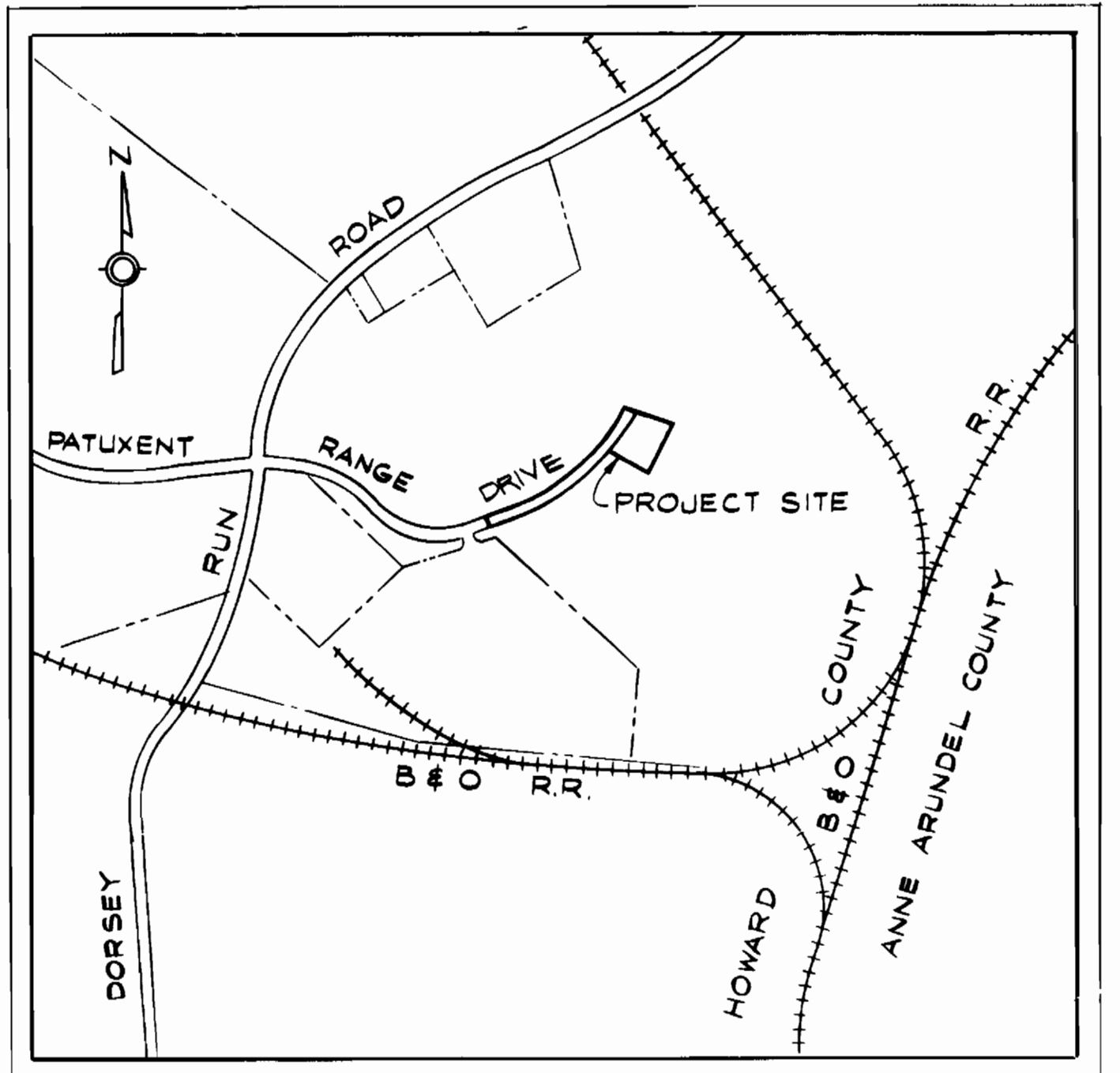
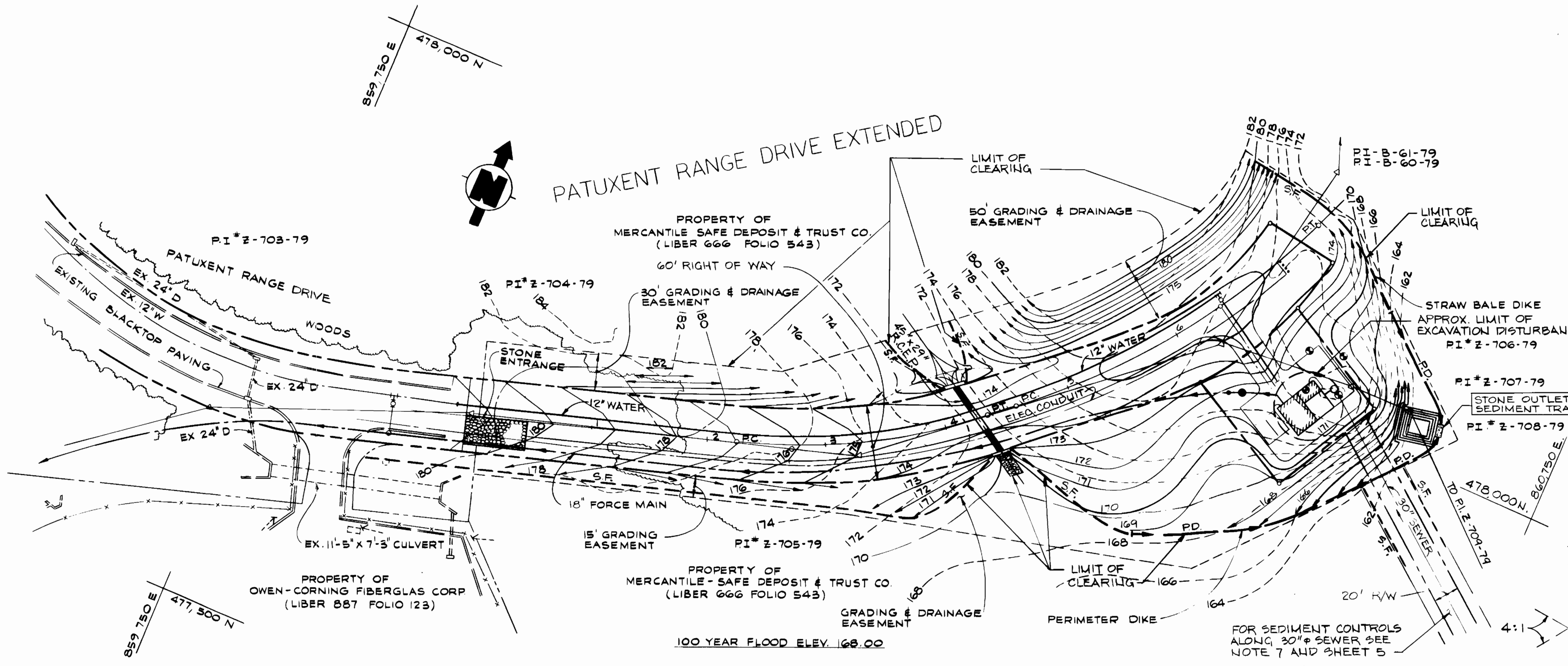
NUS CONSULTING ENGINEERS
910 CLOPPER ROAD GAITHERSBURG, MD. 20878



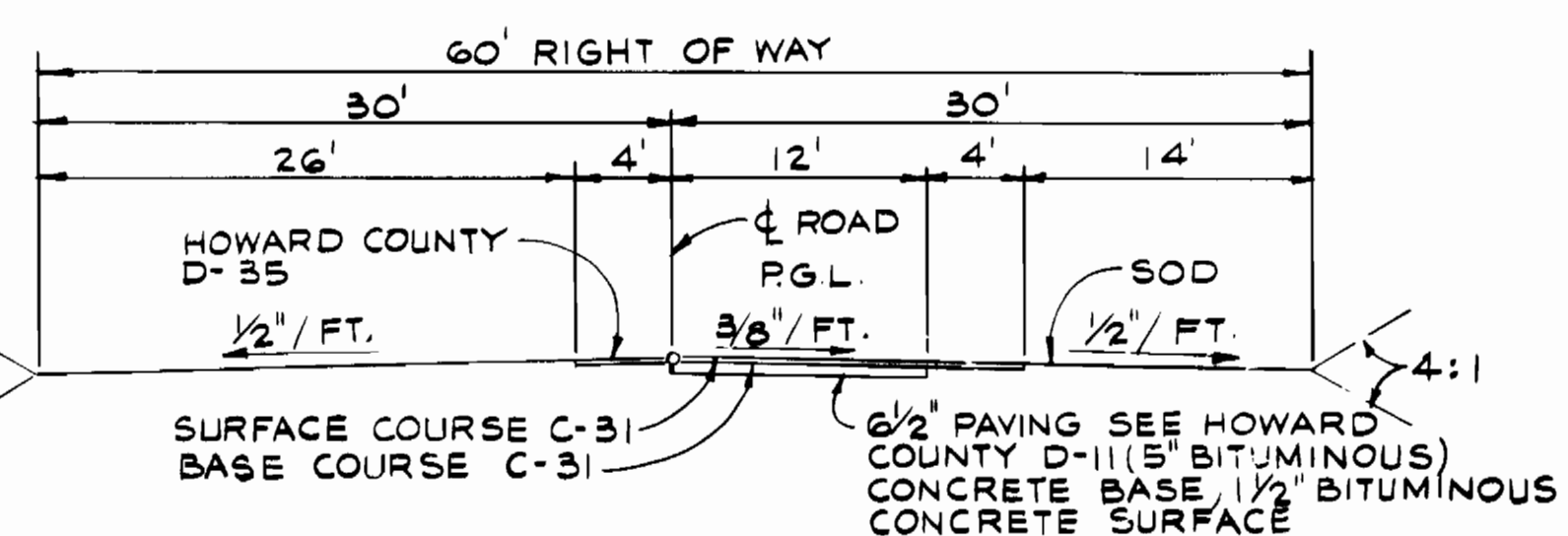
DES:	GA
DRN:	5/4/84
CHK:	WRB 5/29/84
DATE:	7/11/84
BY NO.	
REVISION	

SITE DEVELOPMENT PLAN
SDP SHEET 1 OF 3
600' SCALE MAP NO. 48 BLOCK NO. 2

DORSEY RUN PUMPING STATION
ELECTION DISTRICT: GUILFORD NO.6 HOWARD COUNTY, MARYLAND
PROJECT NO. S-6011 CONTRACT NO. 678-S
SCALE AS SHOWN
SHEET 2 OF 19

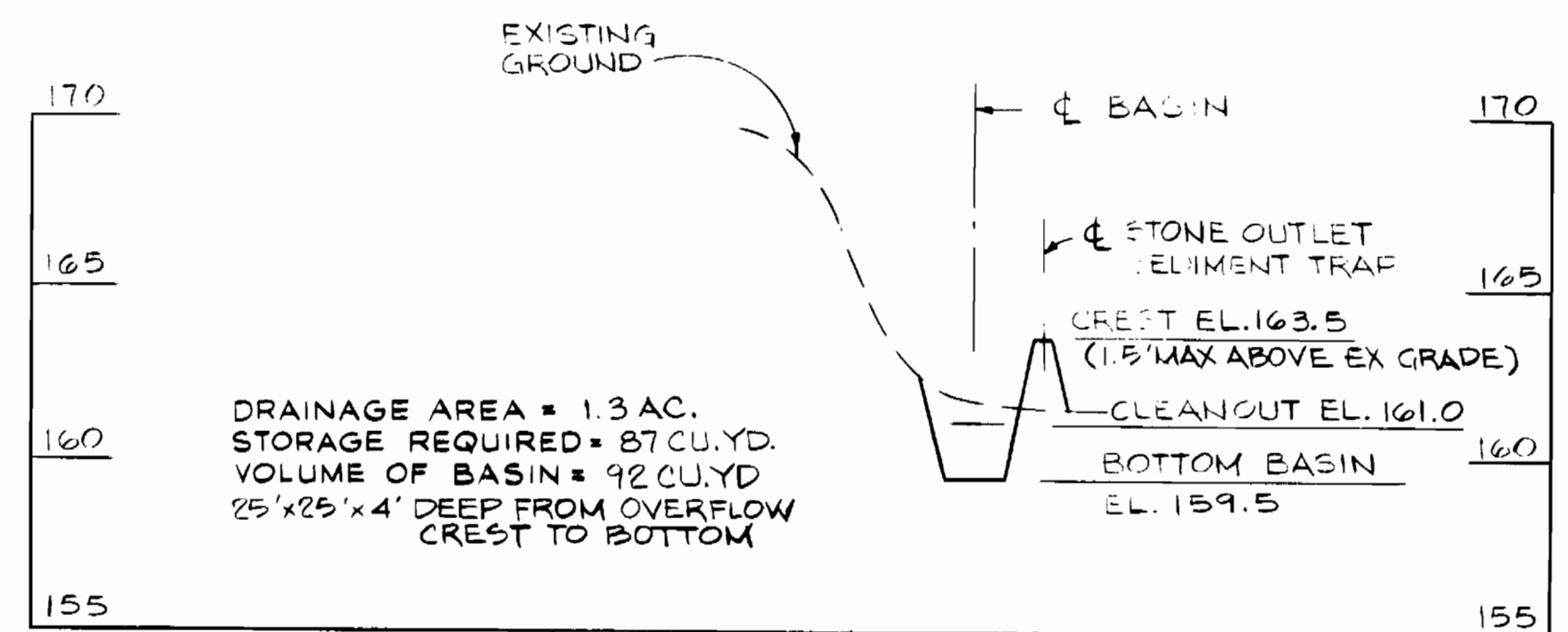


LOCATION MAP
SCALE: 1" = 600'



TYPICAL ROADWAY SECTION
PATUXENT RANGE ROAD
NOT TO SCALE

SITE PLAN
SCALE: 1" = 50'

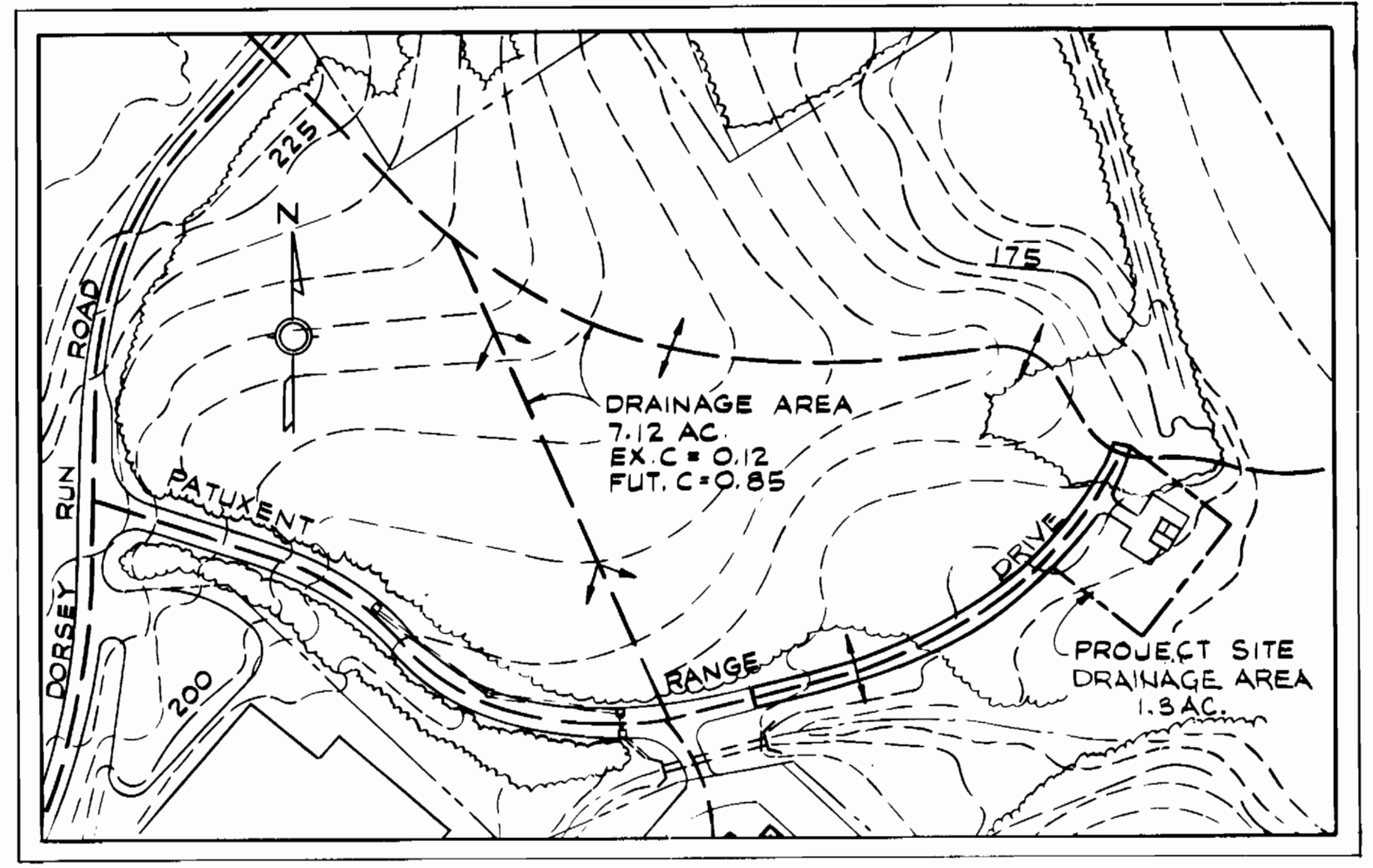


PROFILE AT SEDIMENT TRAP
SCALE: HORIZ: 1" = 50'
VERT: 1" = 5'

SEDIMENT CONTROL NOTES

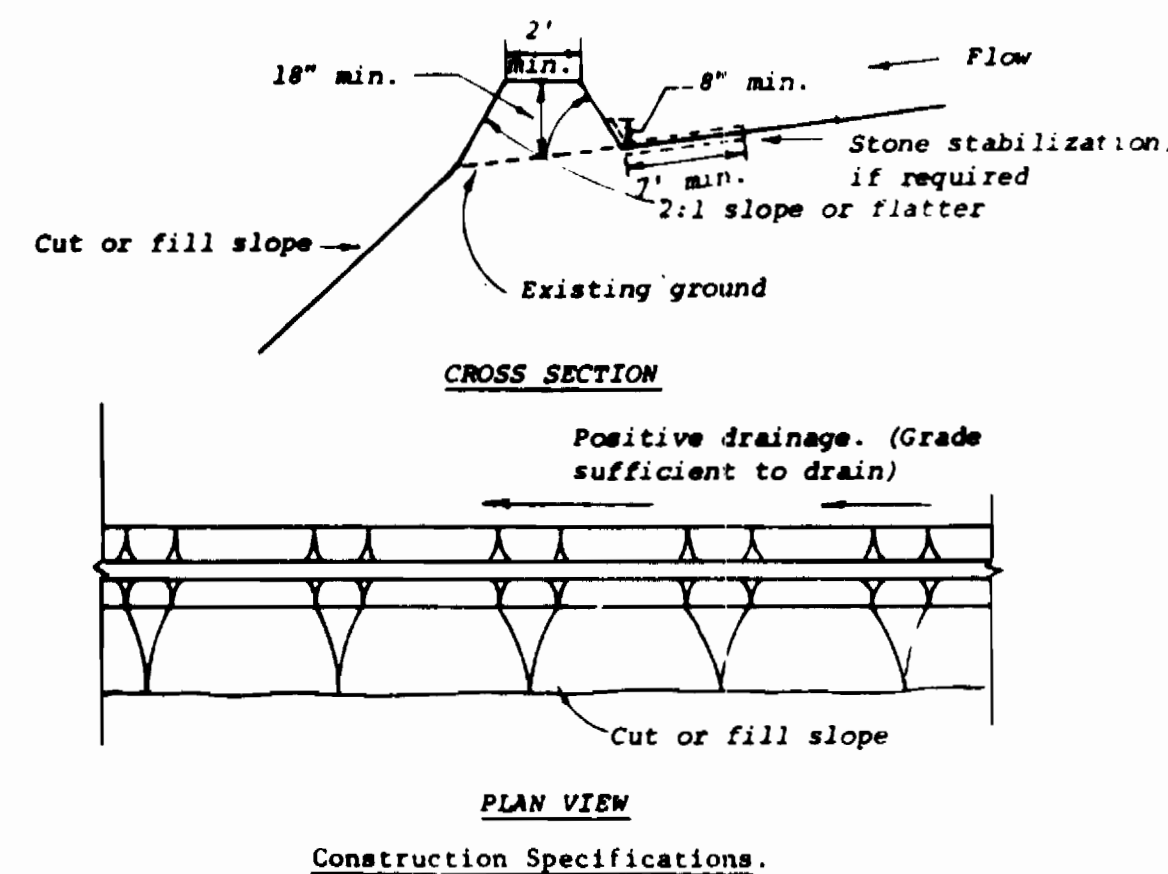
1. THE DEVELOPER SHALL NOTIFY THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS AT LEAST 24 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION SHOWN HEREON (992-2433).
2. DIKES, SEDIMENT TRAPS, ETC. TO BE CONSTRUCTED PRIOR TO ANY ONSITE GRADING OR DISTURBANCE TO ANY EXISTING SURFACE MATERIAL AND ARE TO BE STABILIZED AS SOON AS CONSTRUCTED.
3. ALL SEDIMENT STRUCTURES TO REMAIN IN PLACE UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS (992-2433).
4. ALL GRADED AREAS SHALL BE STABILIZED BY SEEDING AND MULCHING IN ACCORDANCE WITH THE FOLLOWING:
 - A. SITE PREPARATION:
 - 1) HARROW OR DISC IN AREAS PROPOSED TO BE SEEDED WITH THE FOLLOWING MATERIALS AT THE SPECIFIED RATE, TO A DEPTH OF 3".
 - a) PULVERIZED LIMESTONE AT 1-1/2 TONS/ACRE.
 - b) COMMERCIAL FERTILIZER 5-10-5 AT 3 TONS/ACRE.
 - c) SUPER PHOSPHATE OF 600 LBS./ACRE.
 - 2) SEEDING:
 - a) SOW THE FOLLOWING SEED MIXTURE:
 - a) TEMPORARY: ITALIAN RYE GRASS (60 LBS./ACRE.
 - b) PERMANENT: KY. 31 TALL FESCUE 100% (125 LBS./ACRE.
 - b) THE SEEDED AREA SHALL THEN BE RAKED WITH A YOKE RAKE (MINIMUM OF 2 PASSES), COVERED AND COMPACTED WITH CULTIPACKER OR OTHER APPROVED METHOD.
 - 3) C. MULCHING:
 - 1) SEEDED AREAS SHALL BE UNIFORMLY MULCHED IMMEDIATELY AFTER SEEDING WITH UNWEATHERED STRAW AT THE RATE OF 1-1/2 TO 2 TONS/ACRE.
 - 2) TIE-MULCH SOWN WITH LIQUID ASPHALT OR EMULSIFIED ASPHALT AT 0.04 GAL/SY. ON MULCH NETTING.
 - 5. ACCESS ROAD SHALL BE GRAVEL SURFACE IMMEDIATELY AFTER GRADING TO PREVENT SOIL EROSION.
 - 6. ALL AREAS DISTURBED BY GRADING SHALL BE SEEDED AND MULCHED WITH TEMPORARY SEED MIXTURE.

7-12-84



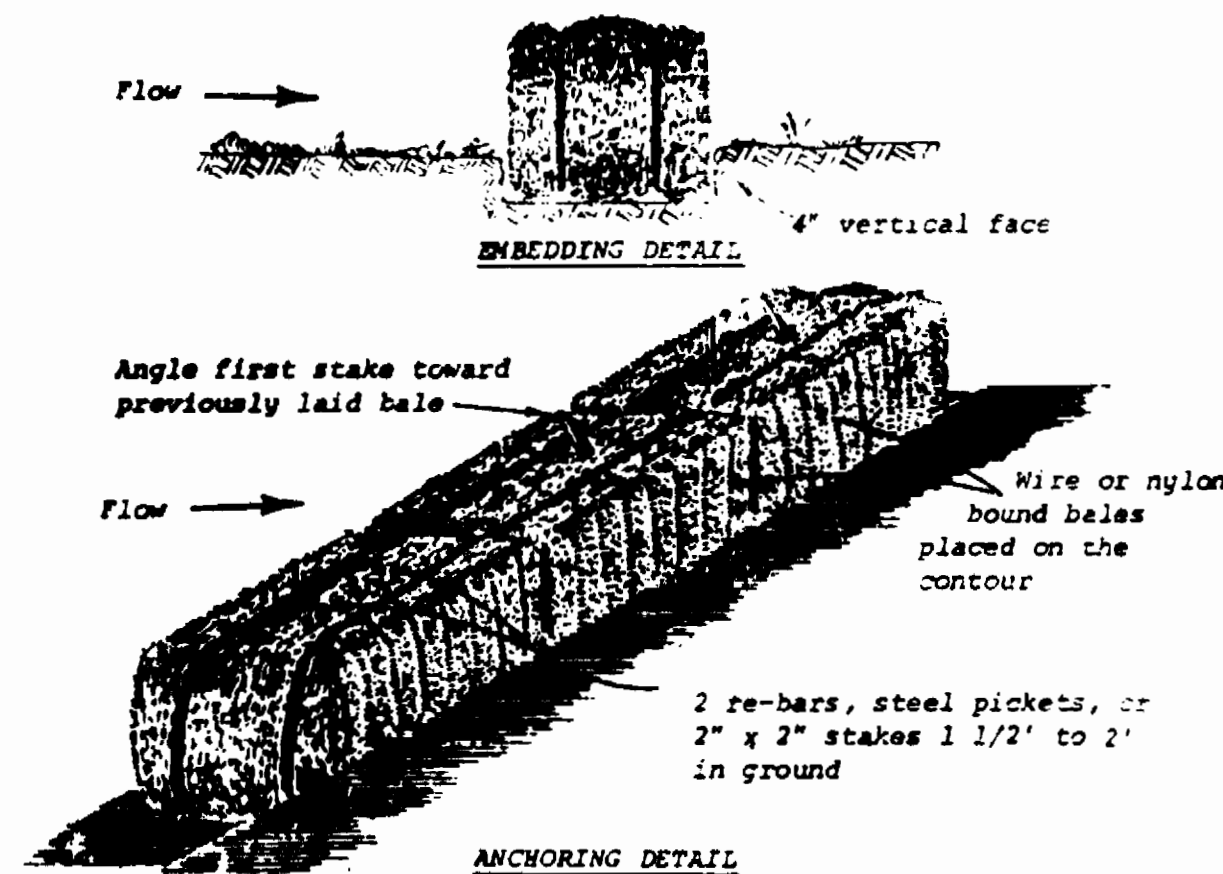
DRAINAGE AREA MAP
SCALE: 1" = 200'

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEM HOWARD COUNTY HEALTH DEPARTMENT County Health Officer Date: 7-12-84	REVIEWED FOR HOWARD COUNTY S.C.D. NAME AND MEETS TECHNICAL REQUIREMENTS SIGNATURE: [Signature] DATE: 7-12-84 U.S. SOIL CONSERVATION SERVICE	THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. APPROVED (HOWARD S.C.D.) DATE: 7/12/84	APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING PLANNING DIRECTOR DATE: 7-11-84 CHIEF, DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION	HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER LIBER- 1224, FOLIO- 382 TAX MAP 48, PARCEL 109 ZONED M-2	CERTIFICATION BY THE 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 CONDITION AND IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT." DATE: 6/4/84	CERTIFICATION BY THE DEVELOPER "I CERTIFY THAT ALL DEVELOPMENT, AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS OF DEVELOPMENT AND PLANS FOR EROSION AND SEDIMENT CONTROL AND I ALSO AUTHORIZE PERIODIC ON SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVIATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD SOIL CONSERVATION DISTRICT." DATE: 7/16/84
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS Director of Public Works Date: 7/16/84	NUS CONSULTING ENGINEERS CORPORATION 910 CLOPPER ROAD GAITHERSBURG, MD 20878 301-258-6000	DES: [Signature] DRN: 3/24/84 CHK: WRS DATE: 7/11/84	SEDIMENT CONTROL PLAN GDP SHEET 2 OF 3	DORSEY RUN PUMPING STATION ELECTION DISTRICT: GUILFORD NO.6 HOWARD COUNTY, MARYLAND PROJECT NO. S-6071 CONTRACT NO. 678-5	SCALE AS SHOWN SHEET 3 OF 19	



- Construction Specifications**
- All dikes shall be machine compacted.
 - All diversion dikes shall have positive drainage to an outlet.
 - 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.
 - 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.
 - Periodic inspection and required maintenance shall be provided.
- Standard Symbol DD
- * Drainage area less than 5 acres

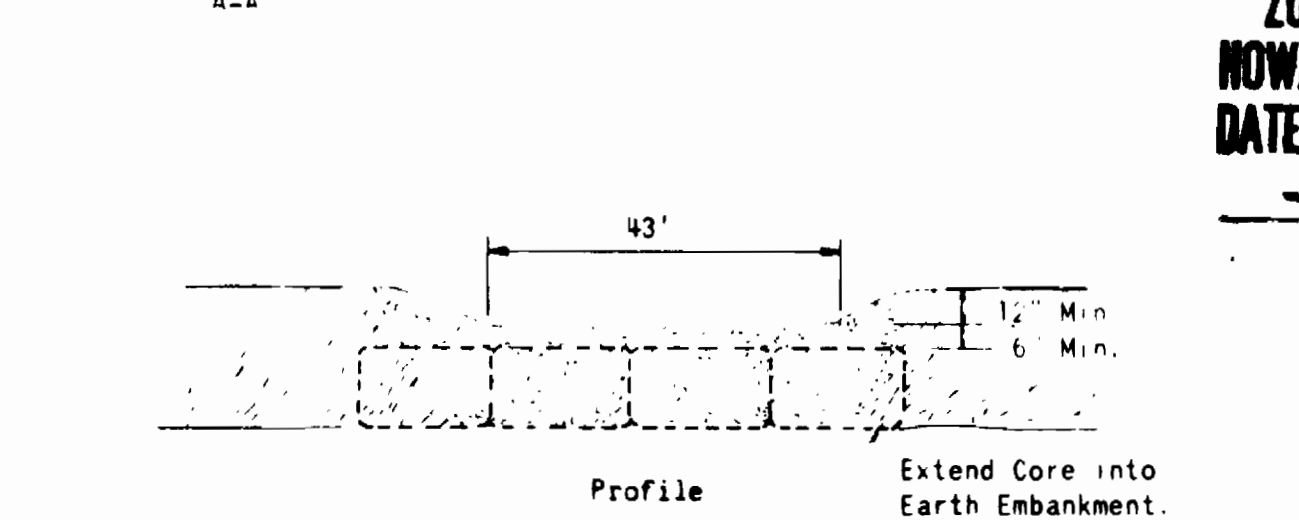
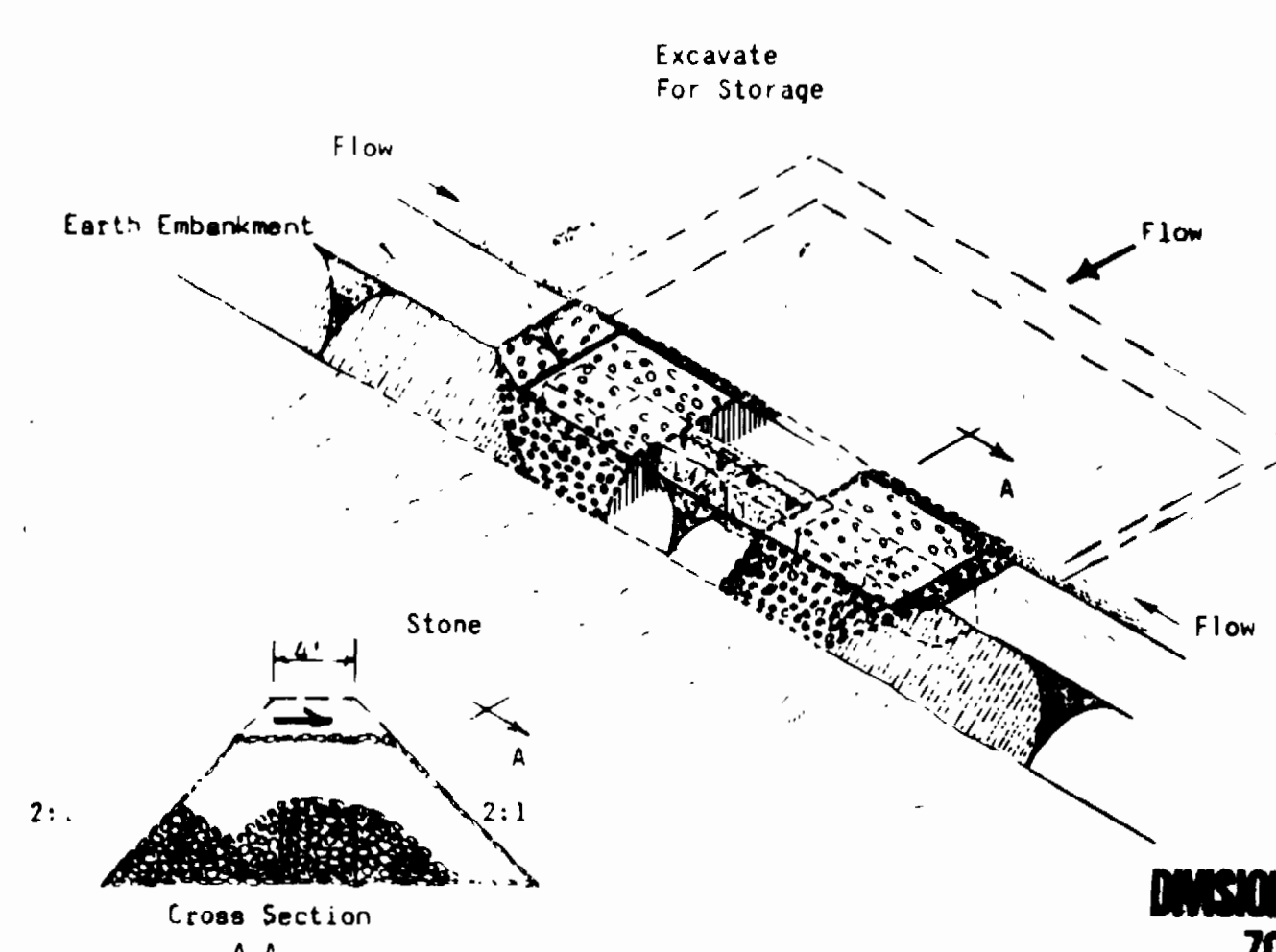
DIVERSION DIKE



- Construction Specifications**
- Bales shall be placed in a row with ends tightly abutting the adjacent bales.
 - Each bale shall be embedded in the soil a minimum of 4".
 - Bales shall be securely anchored in place by stakes or re-bars driven through the bales. The first stake in each bale shall be angled toward previously laid bale to force bales together.
 - Inspection shall be frequent and repair or replacement shall be made promptly as needed.
 - Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.

Standard Symbol SBD

STRAW BALE DIKE

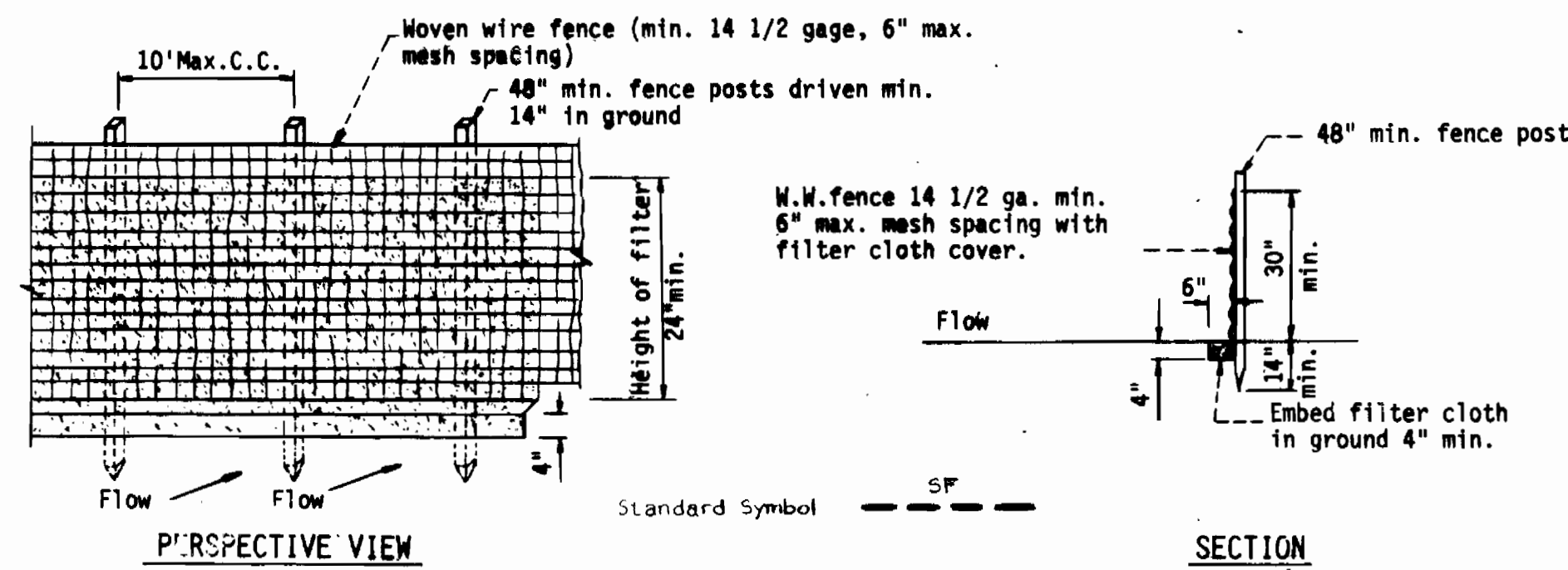


NOTE - Drawings show straw bales used for core. Bales are anchored as per Standard and Specifications for Straw Bale Dike. Other materials (e.g., timber or concrete blocks) may also be used for core. Firmly anchor all core material to ground.

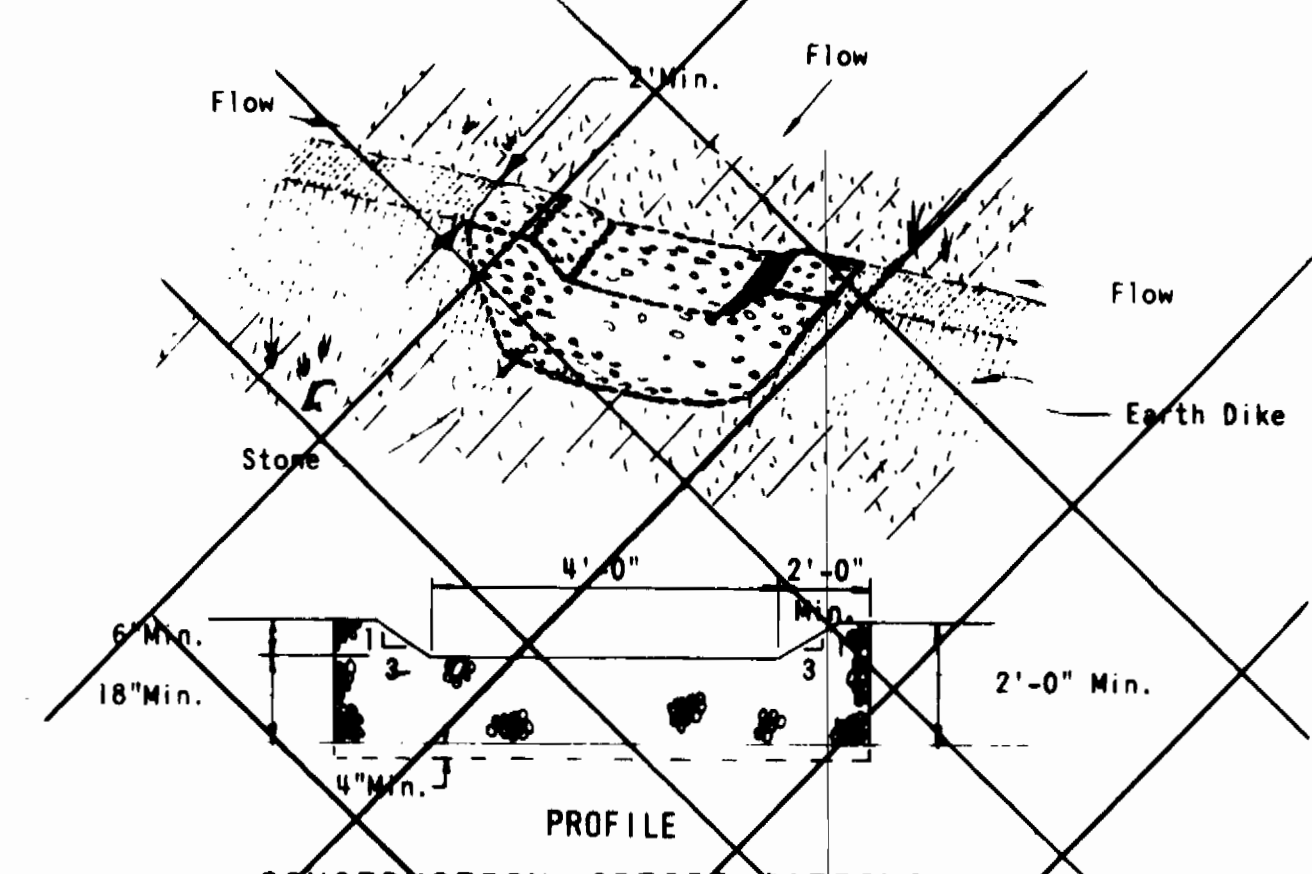
CONSTRUCTION SPECIFICATIONS

- Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The soil area shall be cleared.
 - The fill material for the embankment shall be free of roots or other woody vegetation as well as over sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
 - Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
 - The structure shall be inspected after each rain and repairs made as needed.
 - Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
 - The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
 - All cut and fill slopes shall be 2:1 or flatter.
 - The crushed stone used in the outlet shall meet AASHTO designation M43, Size No. 2 or 24 or its equivalent such as MSHA NO. 2. Gravel, meeting the above gradation, may be used if crushed stone is not available. Crusher run is not acceptable.
- * Drainage area less than 5 acres.

STONE OUTLET SEDIMENT TRAP



SILT FENCE



- CONSTRUCTION SPECIFICATIONS**
- The stone shall be crushed stone. Gravel may be used if crushed stone is not available. The stone shall meet MSHA size No. 2 or AASHTO designation M43 Size No. 2 or 24.
 - The crest of the stone dike shall be at least six inches lower than the lowest elevation of the top of the earth dike and shall be level.
 - The stone outlet structure shall be embedded into the soil a minimum of four inches.
 - The minimum length, in feet, of the crest of the stone outlet structure shall be equal to six times the number of acres of contributing drainage area.
 - The stone outlet structure shall be inspected after each rain, and the stone shall be replaced when the structure ceases to function as intended due to silt accumulation among the stone, washout, construction traffic damage, etc.
- Standard Symbol SOS

* Drainage area less than 5 acres.

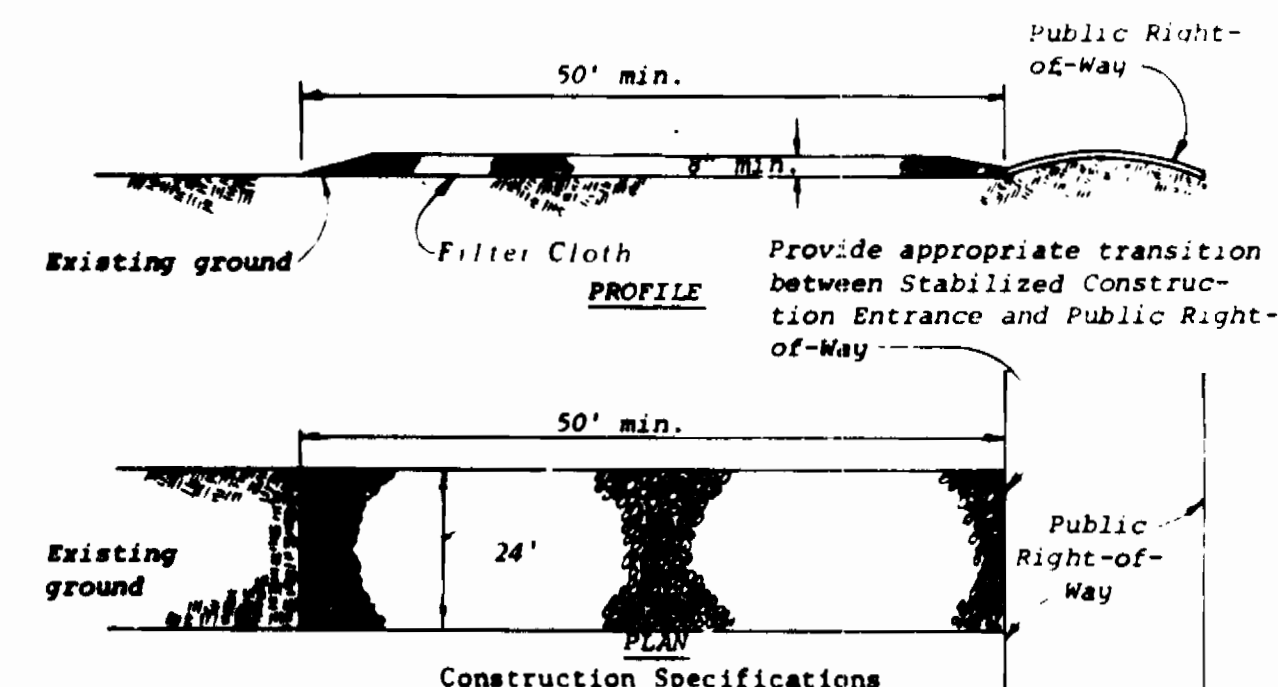
STONE OUTLET STRUCTURE
NOT USED THIS PROJECT

SEQUENCE OF CONSTRUCTION

- Clear, grub and strip area required for Stone Outlet Sediment Trap.
- Construct Stone Outlet Sediment Trap and stabilize. Excess excavated material shall be disposed of off-site.
- Construct Straw Bale Dike, Perimeter Dikes, Stabilized Construction Entrance and Stone Outlet Structure.
- Construct Storm Drain.
- Construct Building and Pipe Lines.
- Complete site work within confines of Perimeter Dike.
- Remove Stabilized Construction Entrance and construct road.
- Remove temporary sediment trap after ground cover is established in the contributing drainage area.
- Complete drainage ditch as shown on Site Development Plan and sod.

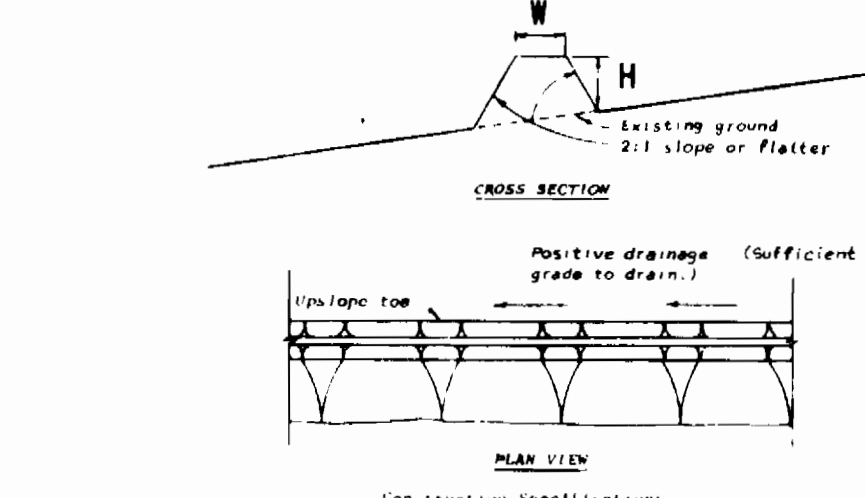
SILT FENCE CONSTRUCTION SPECIFICATIONS

- Woven wire fence to be fastened securely to fence posts with wire ties or staples.
 - Filter cloth to be fastened securely to woven wire fence with wire ties spaced every 24" at top and mid section.
- Posts: Steel either T or U type or 2" hardwood
Fence: Woven wire, 14 1/2 ga. max. 6" mesh opening.
Filter cloth: Woven or non woven.
- * Drainage area less than 1/2 acre



- Construction Specifications**
- 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.
 - Length - As effective, but not less than 50 feet.
 - Thickness - Not less than eight (8) inches.
 - Width - Not less than full width of all points of ingress or egress.
 - 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.
 - 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




- Construction Specifications**
- All dikes shall be machine compacted.
 - All diversion dikes shall have positive drainage to an outlet.
 - A. Diverted runoff from a protected or stabilized upland 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.
 - Stabilization, when required, shall be done in accordance with Standard and Specifications for Grassed Waterway. The minimum depth of the stabilization shall be the channel flow depth.
 - Periodic inspection and required maintenance shall be provided.
- Standard Symbol PD
- * Drainage area less than 5 acres

LOCATION	W	H
Stone Outlet Structure	24"	18"
Stone Outlet Sediment Trap	48"	30"

PERIMETER DIKE

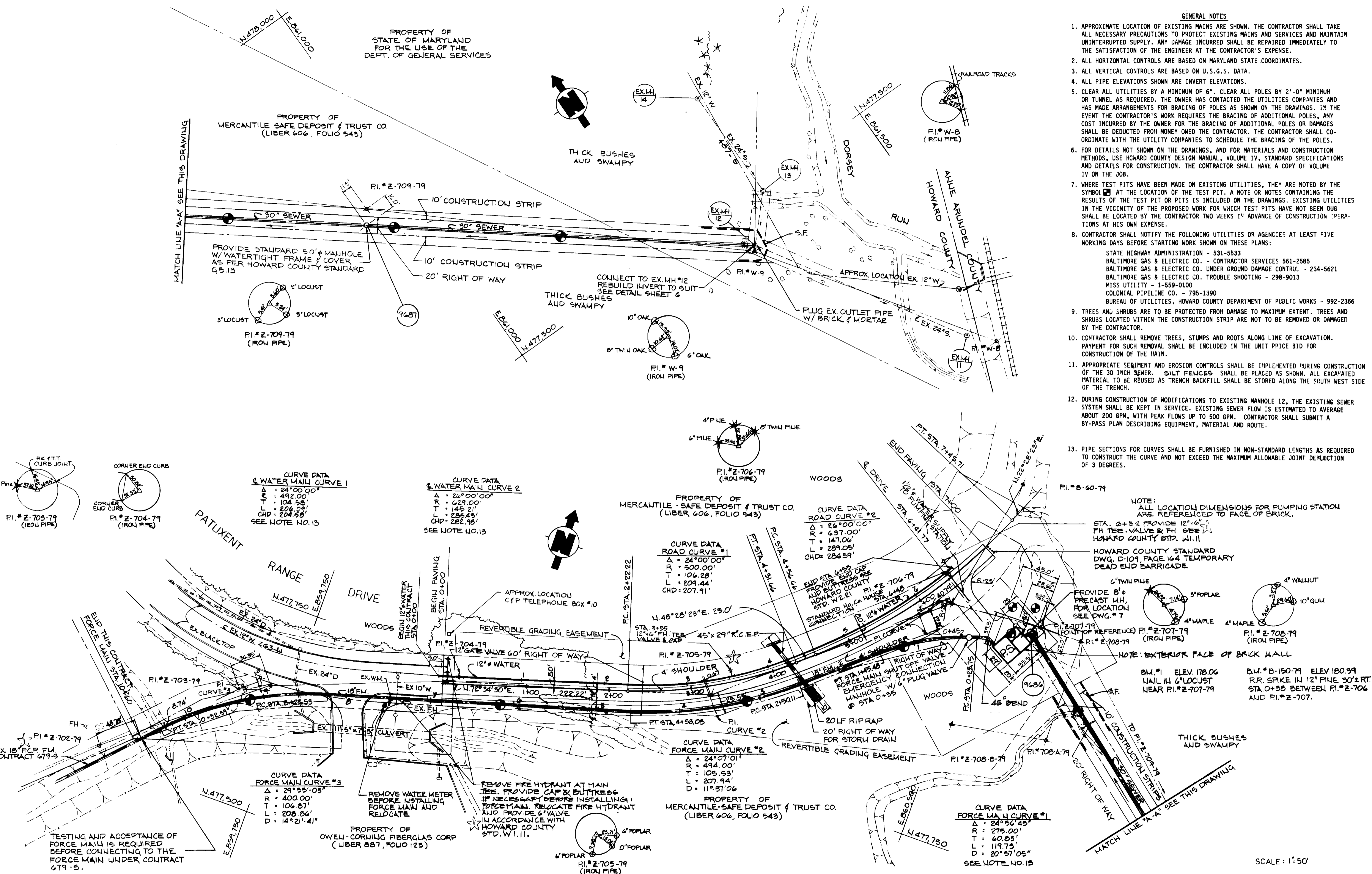
<p>APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEM</p> <p>HOWARD COUNTY HEALTH DEPARTMENT</p> <p><i>James B. ...</i> 7-12-84 COUNT HEALTH OFFICER DATE</p>	<p>REVIEWED FOR HOWARD S.C.D. NAME</p> <p>AND MEETS TECHNICAL REQUIREMENTS</p> <p><i>James ...</i> 7-12-84 SIGNATURE DATE U.S. SOIL CONSERVATION SERVICE</p>	<p>THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.</p> <p><i>Stephen L. ...</i> 7/13/84 APPROVED (HOWARD S.C.D.) DATE</p>	<p>APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING</p> <p><i>Thomas ...</i> 7-17-84 PLANNING DIRECTOR DATE</p> <p><i>William ...</i> 7-17-84 CHIEF, DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION DATE</p>	<p>HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER</p> <p>LIBER- 1224, FOLIO- 302</p> <p>TAX MAP 48, PARCEL 109</p> <p>ZONED M-2</p>	<p>CERTIFICATION BY THE ENGINEER</p> <p>"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITION AND IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."</p> <p><i>William R. ...</i> 6/14/84 SIGNATURE OF ENGINEER DATE</p>	<p>CERTIFICATION BY THE DEVELOPER</p> <p>"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS OF DEVELOPMENT AND PLANS FOR EROSION AND SEDIMENT CONTROL, AND I ALSO AUTHORIZE PERIODIC ON SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY." DEVIATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD SOIL CONSERVATION DISTRICT.</p> <p><i>William ...</i> 7-16-84 SIGNATURE OF DEVELOPER DATE</p>
<p>APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS</p> <p><i>John F. ...</i> 7-12-84 Director of Public Works DATE</p> <p><i>Allen ...</i> 7-16-84 Chief - Division of Utilities DATE</p>	<p>NUS CONSULTING ENGINEERS</p> <p>910 CLOPPER ROAD GAITHERSBURG, MD. 20878</p> <p>301-288-6000</p>	<p>DES: _____</p> <p>DRN: _____</p> <p>CHK: <i>W. ...</i> 7/1/84</p> <p>DATE: 7/1/84 BY NO _____</p>	<p>REVISION</p> <p>DATE 600 SCALE MAP NO 48 BLOCK NO. 2</p>	<p>SEDIMENT CONTROL DETAILS</p> <p>SDP SHEET 3 OF 3</p>	<p>DORSEY RUN PUMPING STATION</p> <p>ELECTION DISTRICT: GUILFORD NO. 6 HOWARD COUNTY, MARYLAND</p> <p>PROJECT NO. S-6071 CONTRACT NO. 678-S</p>	<p>SCALE AS SHOWN</p> <p>SHEET 4 OF 19</p>

GENERAL NOTES

- 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.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. THE OWNER HAS CONTACTED THE UTILITIES COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
- WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL  AT THE LOCATION OF THE TEST PIT. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - STATE HIGHWAY ADMINISTRATION - 531-5533
 - BALTIMORE GAS & ELECTRIC CO. - CONTRACTOR SERVICES 561-2585
 - BALTIMORE GAS & ELECTRIC CO. UNDER GROUND DAMAGE CONTR. - 234-5621
 - BALTIMORE GAS & ELECTRIC CO. TROUBLE SHOOTING - 298-9013
 - MISS UTILITY - 1-559-0100
 - COLONIAL PIPELINE CO. - 795-1390
 - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 992-2366
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- APPROPRIATE SEDIMENT AND EROSION CONTROLS SHALL BE IMPLEMENTED DURING CONSTRUCTION OF THE 30 INCH SEWER. SILT FENCES SHALL BE PLACED AS SHOWN. ALL EXCAVATED MATERIAL TO BE REUSED AS TRENCH BACKFILL SHALL BE STORED ALONG THE SOUTH WEST SIDE OF THE TRENCH.
- DURING CONSTRUCTION OF MODIFICATIONS TO EXISTING MANHOLE 12, THE EXISTING SEWER SYSTEM SHALL BE KEPT IN SERVICE. EXISTING SEWER FLOW IS ESTIMATED TO AVERAGE ABOUT 200 GPM, WITH PEAK FLOWS UP TO 500 GPM. CONTRACTOR SHALL SUBMIT A BY-PASS PLAN DESCRIBING EQUIPMENT, MATERIAL AND ROUTE.
- PIPE SECTIONS FOR CURVES SHALL BE FURNISHED IN NON-STANDARD LENGTHS AS REQUIRED TO CONSTRUCT THE CURVE AND NOT EXCEED THE MAXIMUM ALLOWABLE JOINT DEFLECTION OF 3 DEGREES.

PROPERTY OF STATE OF MARYLAND FOR THE USE OF THE DEPT. OF GENERAL SERVICES

PROPERTY OF MERCANTILE SAFE DEPOSIT & TRUST CO. (LIBER 606, FOLIO 543)



CURVE DATA WATER MAIN CURVE 1
 Δ = 24°00'00"
 R = 492.00'
 T = 104.58'
 L = 204.09'
 CHD = 204.50'
 SEE NOTE NO. 13

CURVE DATA WATER MAIN CURVE 2
 Δ = 26°00'00"
 R = 429.00'
 T = 145.21'
 L = 285.43'
 CHD = 286.96'
 SEE NOTE NO. 13

CURVE DATA ROAD CURVE #1
 Δ = 24°00'00"
 R = 500.00'
 T = 106.28'
 L = 209.44'
 CHD = 207.91'

CURVE DATA ROAD CURVE #2
 Δ = 26°00'00"
 R = 437.00'
 T = 147.06'
 L = 289.05'
 CHD = 286.59'

CURVE DATA FORCE MAIN CURVE #2
 Δ = 24°07'01"
 R = 494.00'
 T = 105.53'
 L = 207.94'
 D = 11°31'06"

CURVE DATA FORCE MAIN CURVE #1
 Δ = 24°56'45"
 R = 275.00'
 T = 60.83'
 L = 119.75'
 D = 20°57'05"
 SEE NOTE NO. 13

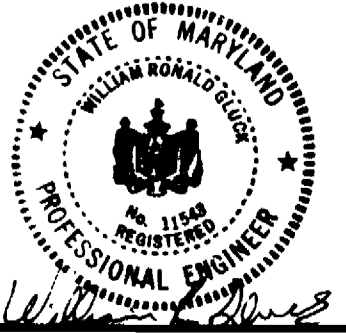
NOTE:
 ALL LOCATION DIMENSIONS FOR PUMPING STATION ARE REFERENCED TO FACE OF BRICK.
 STA. 0+32 PROVIDE 12" x 6" FH VALVE & FH SEE HOWARD COUNTY STD. W.11
 HOWARD COUNTY STANDARD DWG. D-109 PAGE 164 TEMPORARY DEAD END BARRICADE

NOTE: EXTERIOR FACE OF BRICK WALL
 B.M. #1 ELEV. 178.06
 NAIL IN 6" LOCUST NEAR PI # Z-707-79
 B.M. # B-150-79 ELEV. 180.99
 R.R. SPIKE IN 12" PINE 30'± RT. STA. 0+38 BETWEEN PI # Z-706 AND PI # Z-707.

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Director of Public Works: *[Signature]* DATE: 7/25/84
 Chief, Bureau of Engineering: *[Signature]* DATE: 7/25/84
 Chief, Bureau of Utilities: *[Signature]* DATE: 7/25/84
 Chief, Utilities Division: *[Signature]* DATE: 7/25/84

ENUS CONSULTING ENGINEERS
 910 CLOPPER ROAD GAITHERSBURG, MD. 20878
 301-258-6000



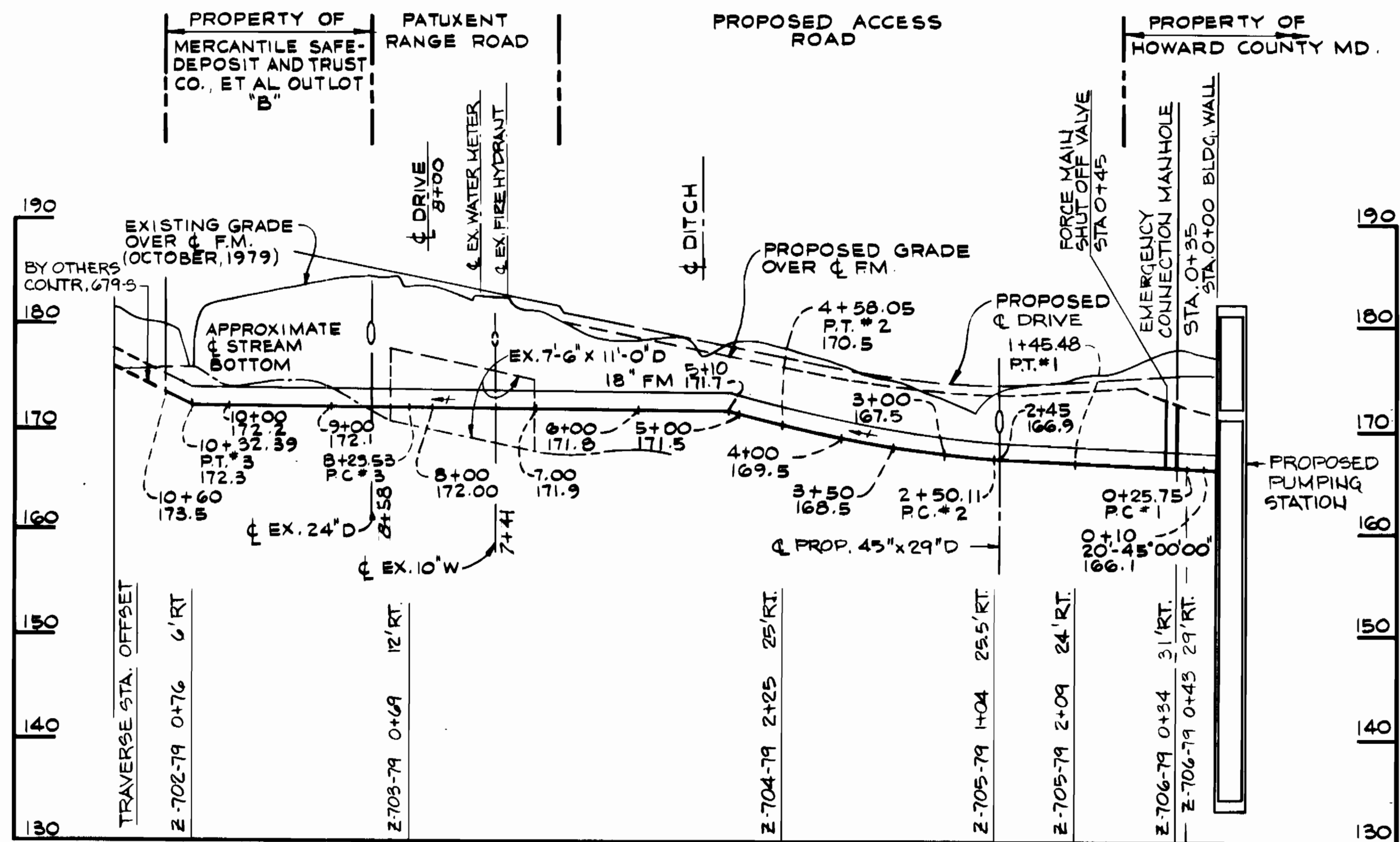
DES:	
DRN:	J.Tkac
CHK:	
DATE:	7/15/84
BY:	J.T.
NO.:	1
REVISION:	ADD EXST. 8" FM. WAT'L; ADD 6" VALVE
DATE:	8/1/84

SITE PLAN
 18" FORCE MAIN, PUMPING STATION
 AND 30" GRAVITY SEWER

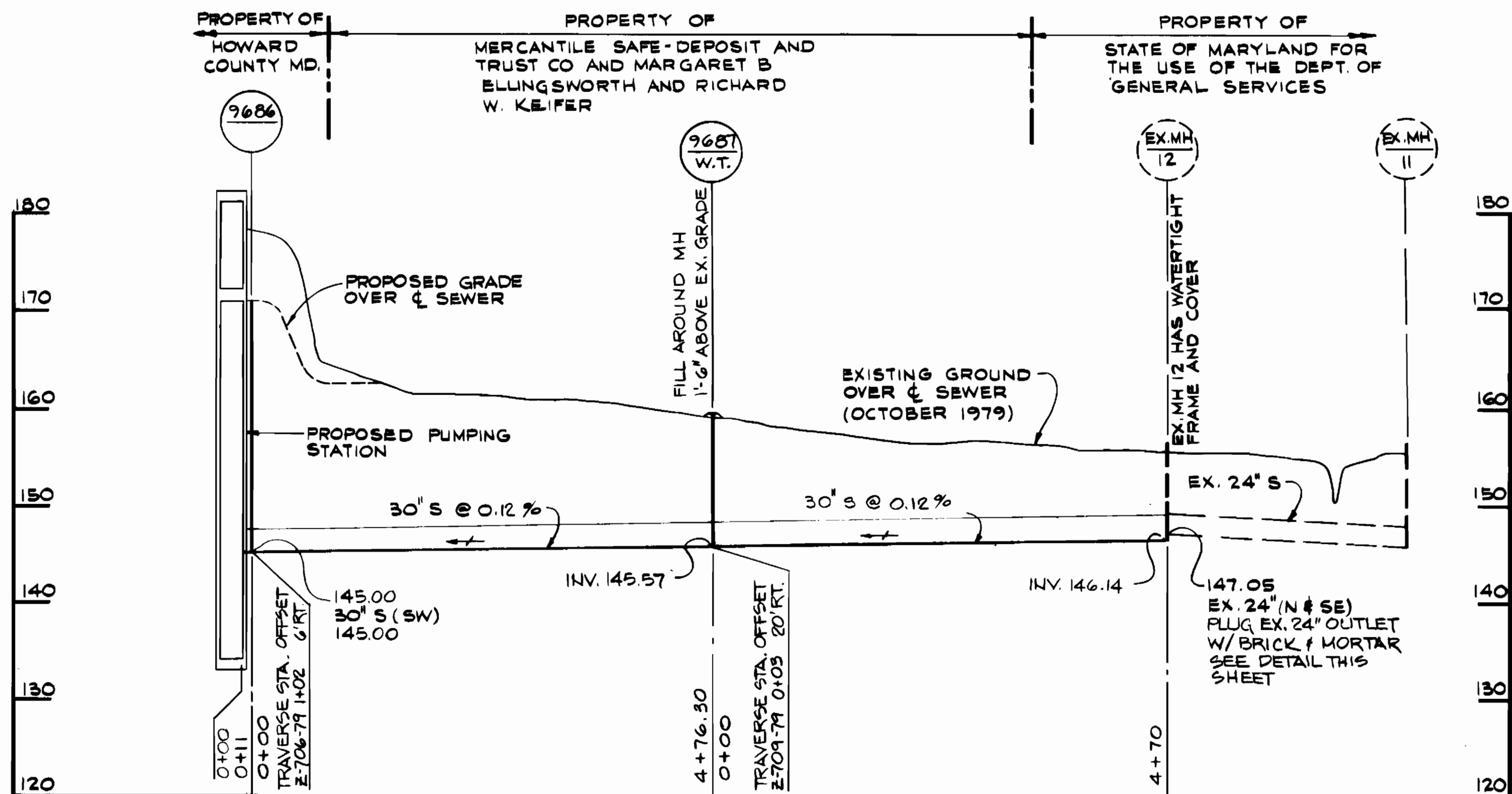
DORSEY RUN PUMPING STATION
 ELECTION DISTRICT: GUILFORD NO. 6 HOWARD COUNTY, MARYLAND
 PROJECT NO. S-6071 CONTRACT NO. 678-5

SCALE AS SHOWN
 SHEET 2 OF 12

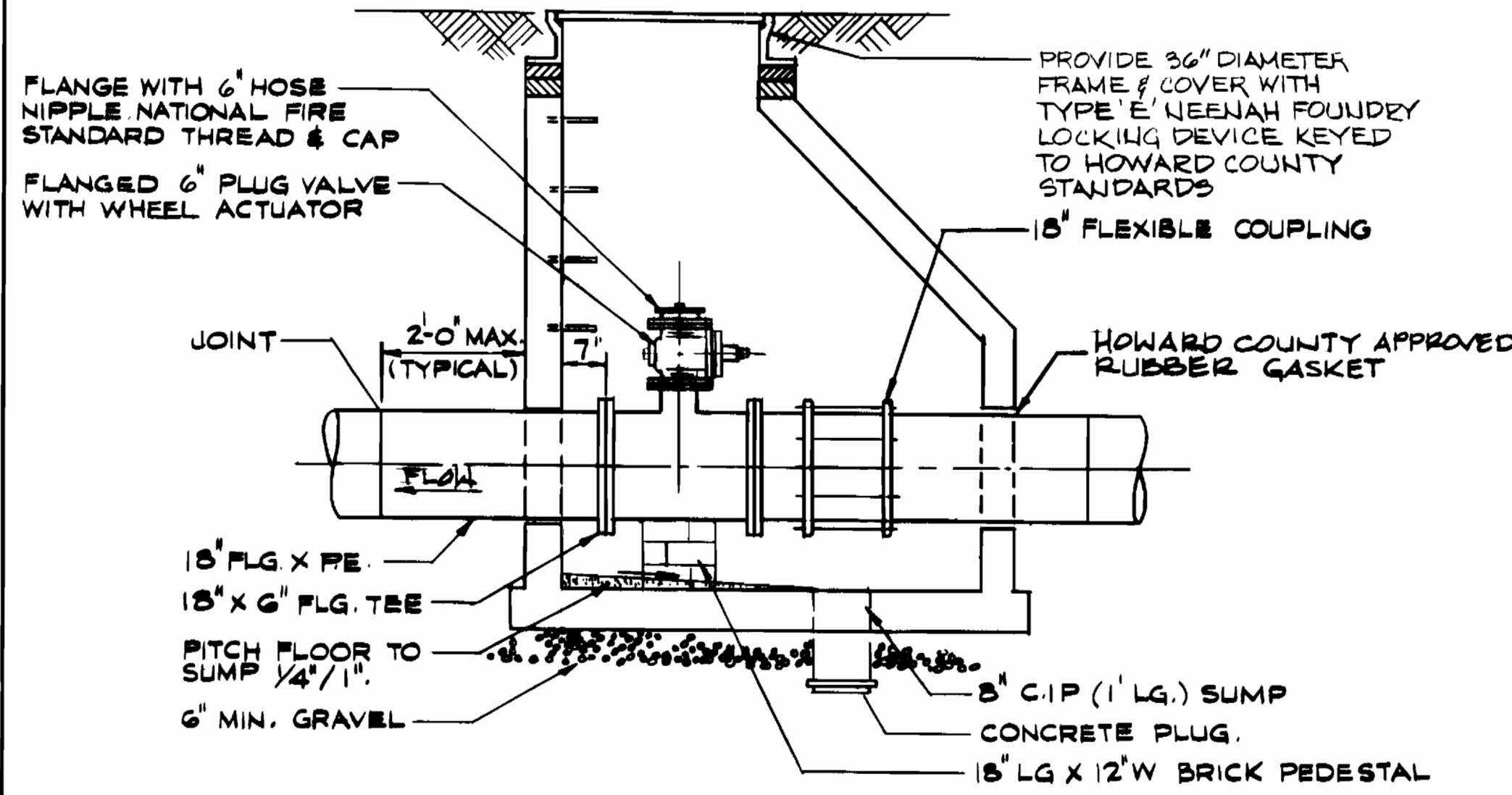
REISSUED 8/2/84 WITH ADDENDUM NO. 1



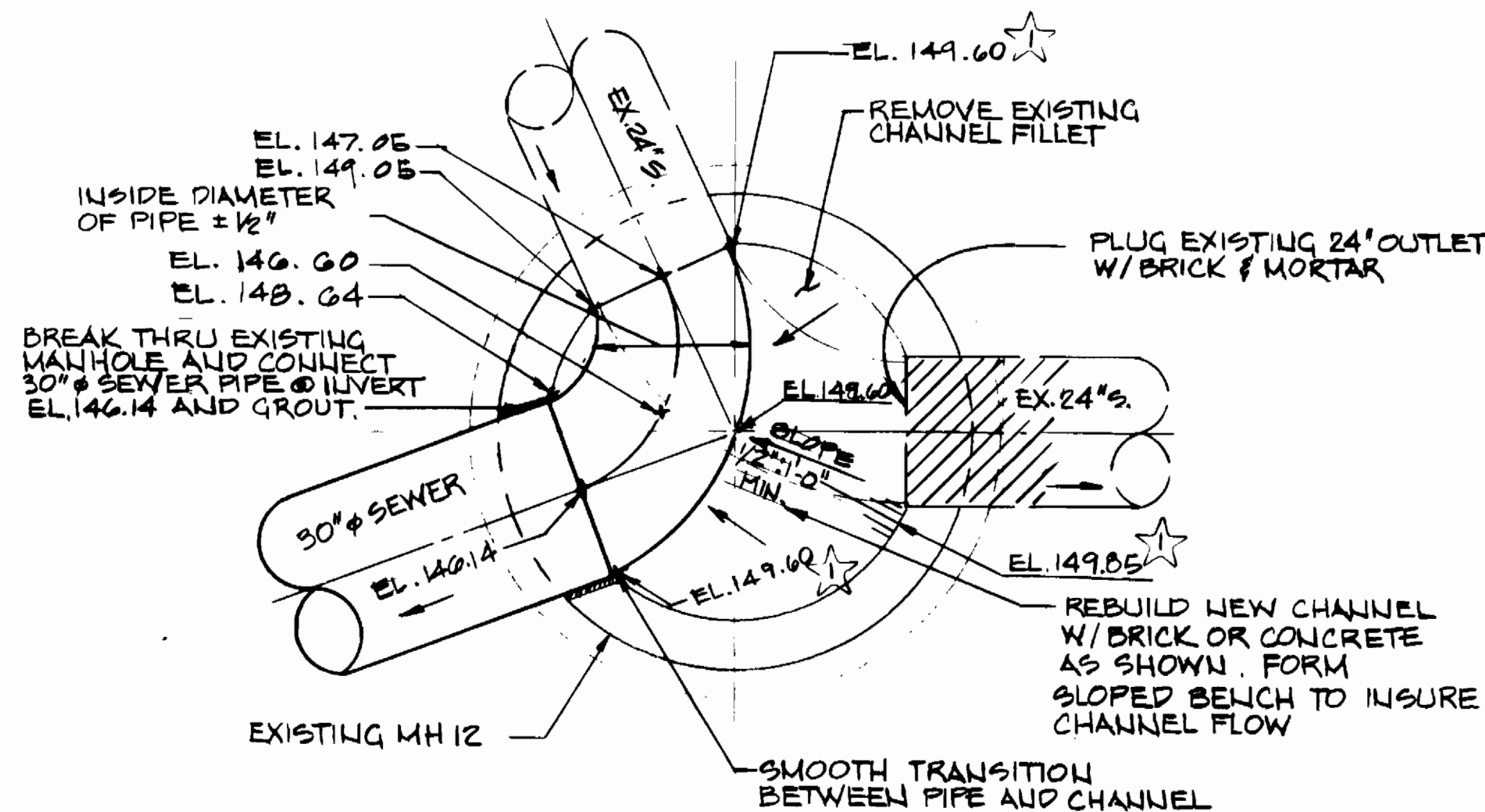
PROFILE
18" FORCE MAIN
SCALE: HOR. 1"=100'
VERT. 1"=10'



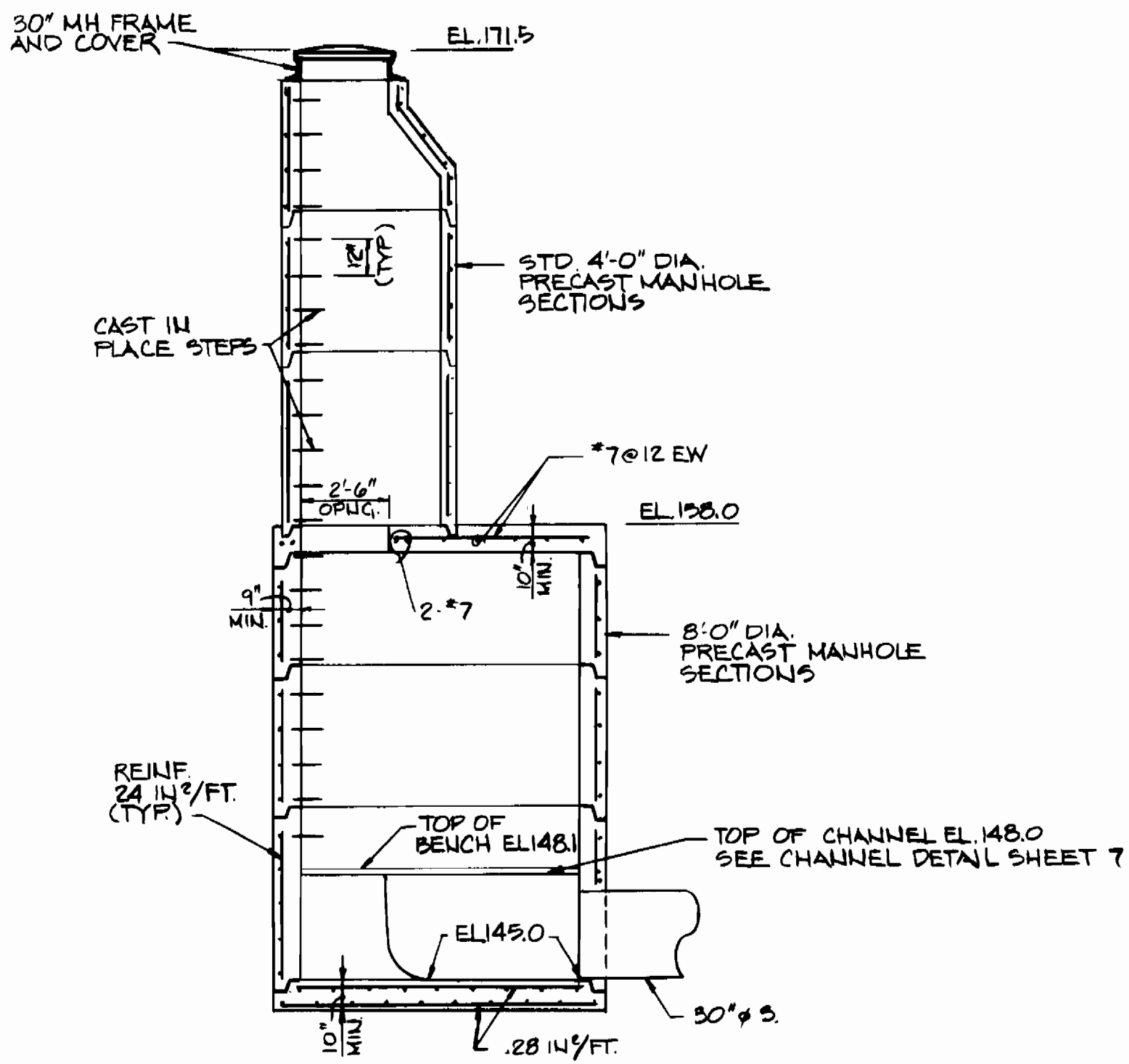
PROFILE
30" GRAVITY SEWER
SCALE: HOR. 1"=100'
VERT. 1"=10'



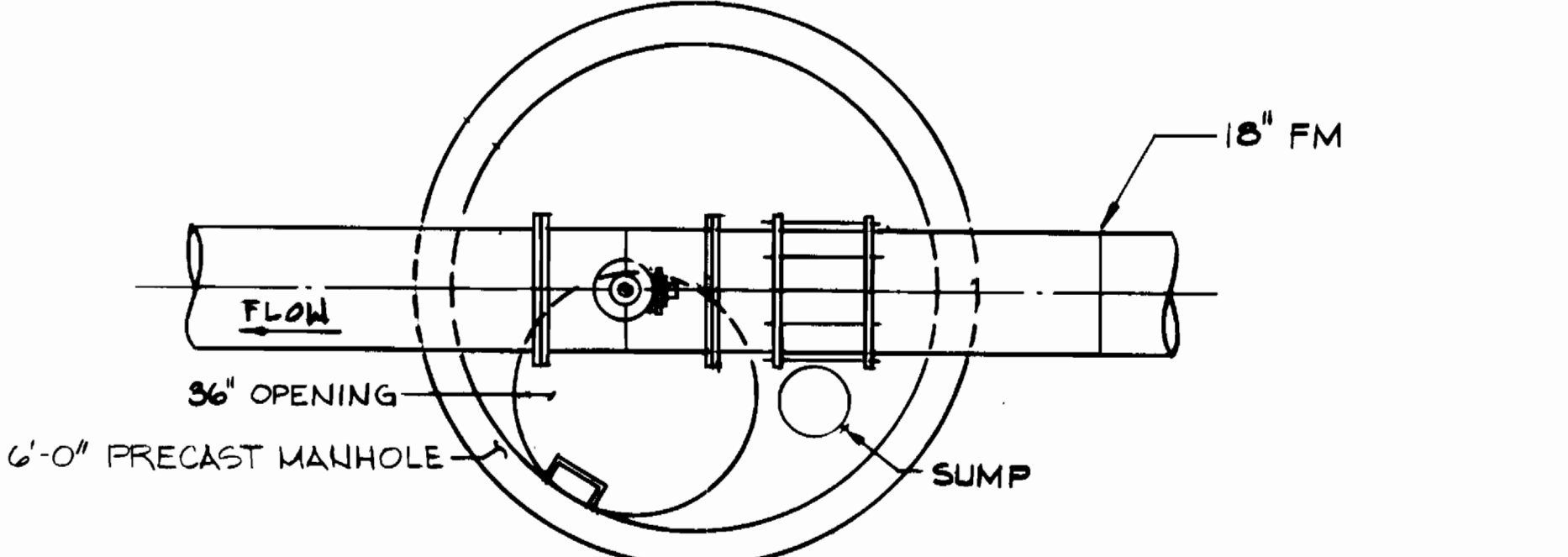
ELEVATION



DETAIL
CONNECTION TO EXISTING MANHOLE 12
SCALE: 1/2"=1'-0"



DETAILED SECTION
MANHOLE 9686
SCALE: 1/4"=1'-0"

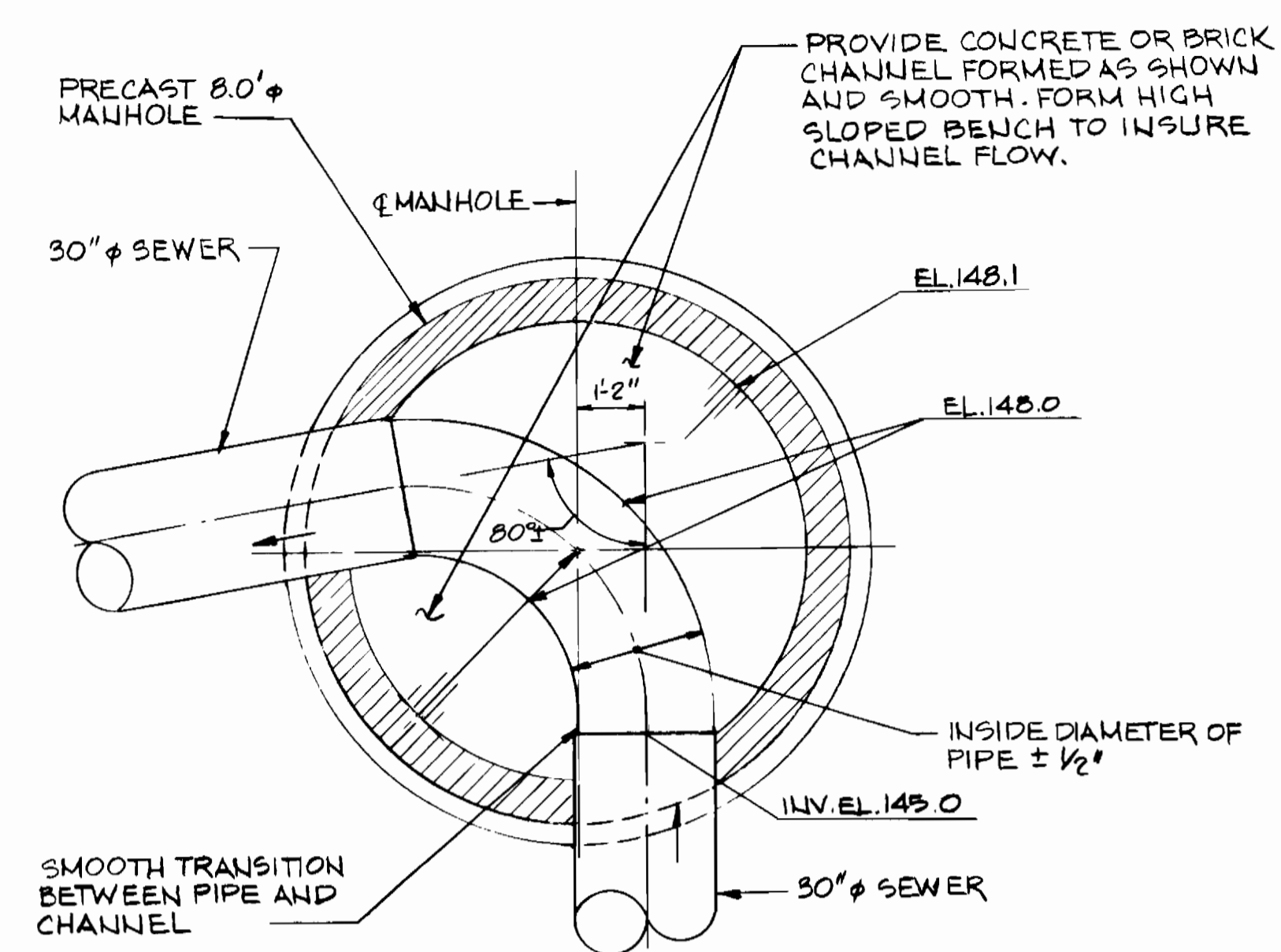


PLAN EMERGENCY CONNECTION VALVE DETAIL
SCALE: 1/2"=1'-0"

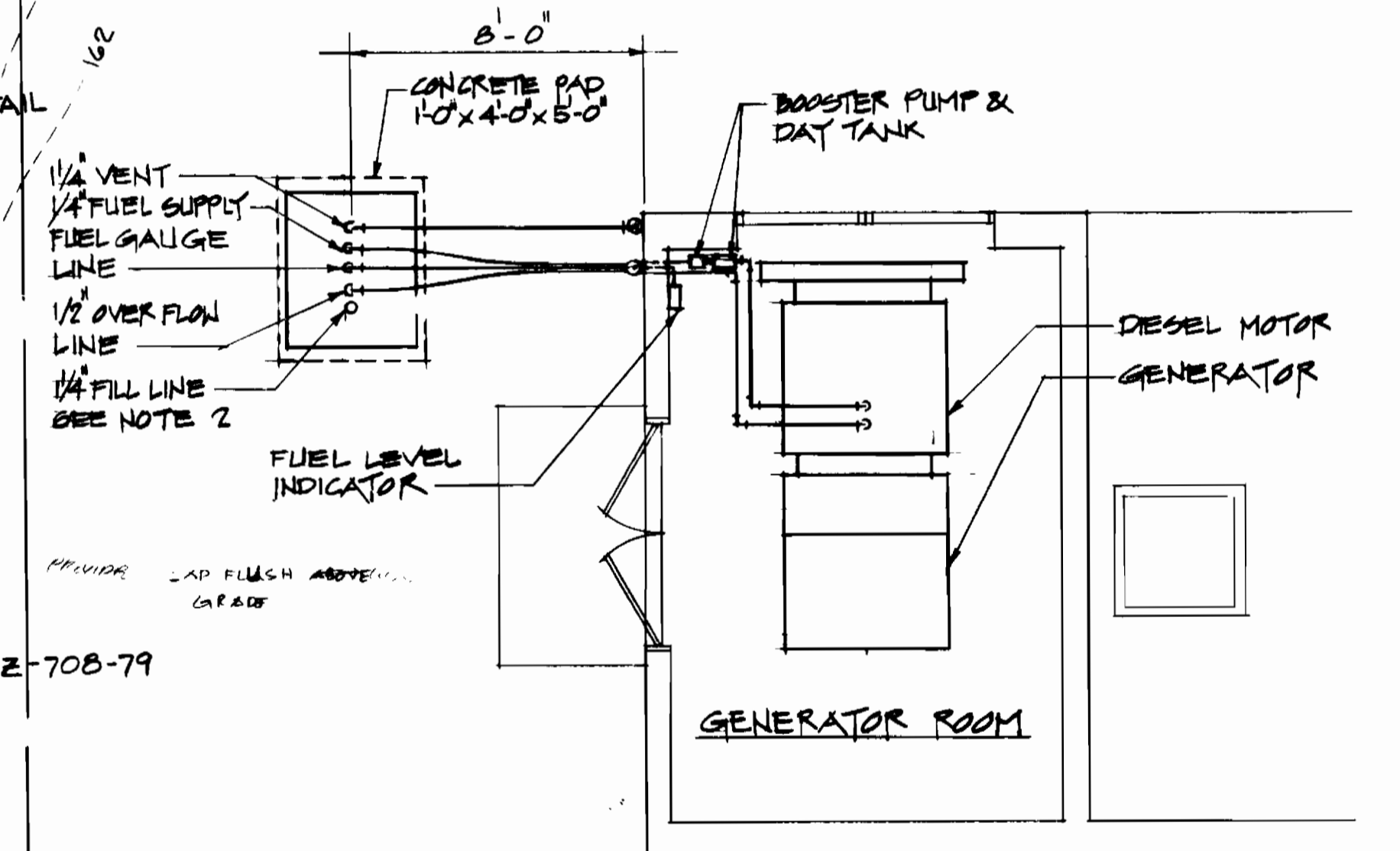
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works: <i>[Signature]</i> DATE: 7/25/84 Chief - Bureau of Engineering: <i>[Signature]</i> DATE: 7/25/84 Chief - Bureau of Utilities: <i>[Signature]</i> DATE: 7/25/84 Chief - Utilities Division: <i>[Signature]</i> DATE: 7/25/84		NUS CONSULTING ENGINEERS CORPORATION 910 CLOPPER ROAD GAITHERSBURG, MD. 301-258-6000 20878	DES: _____ DRN: _____ CHK: _____ DATE: 7/25/84 BY: JT NO. 1 REVISION: REV. ELEV. DETAIL MH 12; ADD SECTION MH 9686 DATE: 8/1/84	PROFILE & DETAILS 18" FORCE MAIN & 30" GRAVITY SEWER 600' SCALE MAP NO. 48 BLOCK NO. 2	DORSEY RUN PUMPING STATION ELECTION DISTRICT GUILFORD NO. 6 HOWARD COUNTY, MARYLAND PROJECT NO. S-6071 CONTRACT NO. 678-S	SCALE AS SHOWN SHEET 19 OF 19 REISSUED 8/2/84 WITH ADDENDUM NO. 1
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- WATER SPECIFICATIONS**
1. ALL WATER MAINS TO BE D.I.P. UNLESS OTHERWISE NOTED.
 2. TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3-1/2' COVER UNLESS OTHERWISE NOTED.
 3. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
 4. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
 5. FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1003 THE STANDARD SPECIFICATIONS.
 6. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.

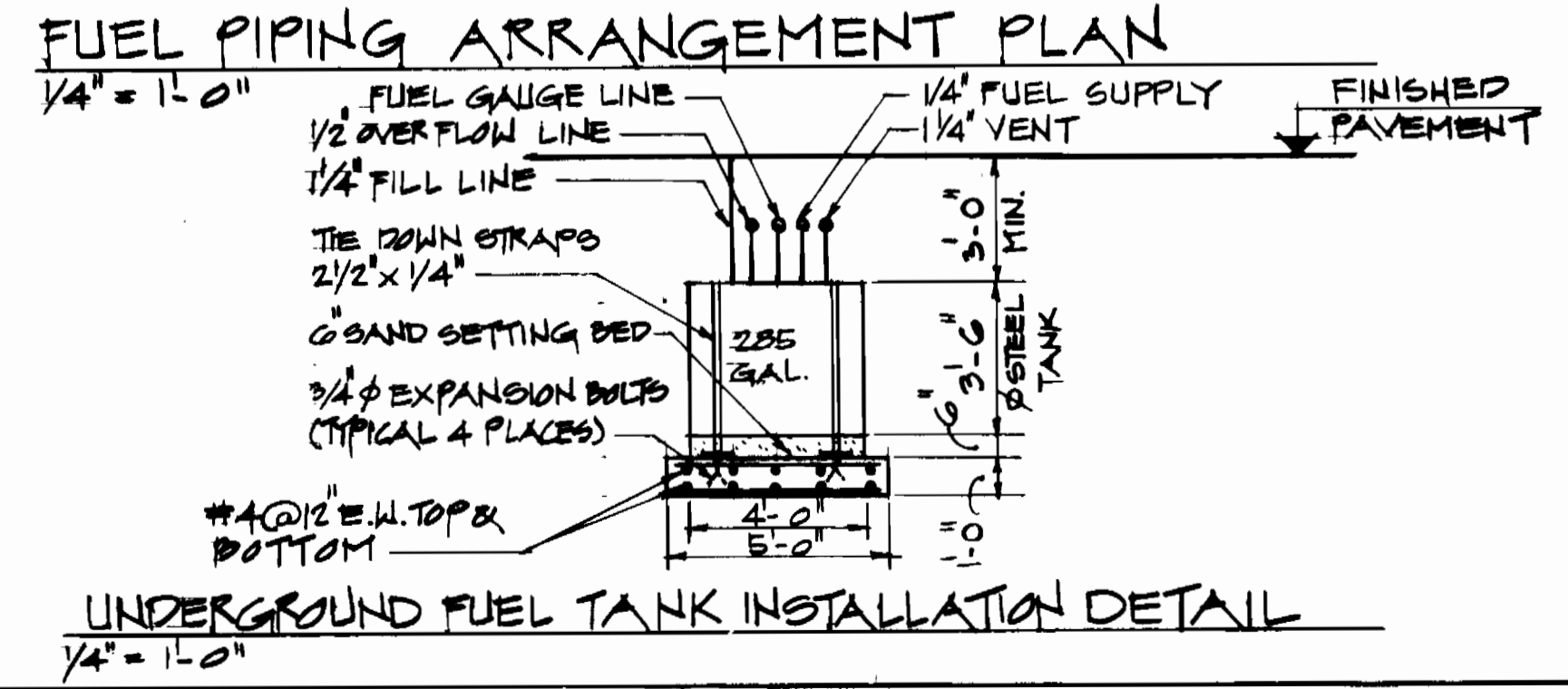
- SEWER SPECIFICATIONS**
1. ALL SEWER MAINS SHALL BE C.S.P.X., R.C.S.P., V.C.P.X., A.C.P. CLASS 2400 OR P.V.C. UNLESS OTHERWISE NOTED.
 2. THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
 3. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
 4. FORCE MAINS SHALL BE D.I.P. OR P.C.P.
 5. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
 6. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL S1.45. WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
 7. D.I.P. FOR 30" SEWER SHALL BE CLASS S2 EXCEPT FOR STA. 0+00 TO 0+700 UPSTREAM FROM MH9686 WHICH SHALL BE CLASS S6.
 8. R.C.P. FOR 30" SEWER SHALL BE CLASS III AND SHALL BE DESIGNED TO WITHSTAND ALL EXTERNAL LOADS FROM OVERBURDEN AS INDICATED BY THE DEPTH OF SEWER FROM FINISHED GRADE SHOWN ON THE DRAWINGS.



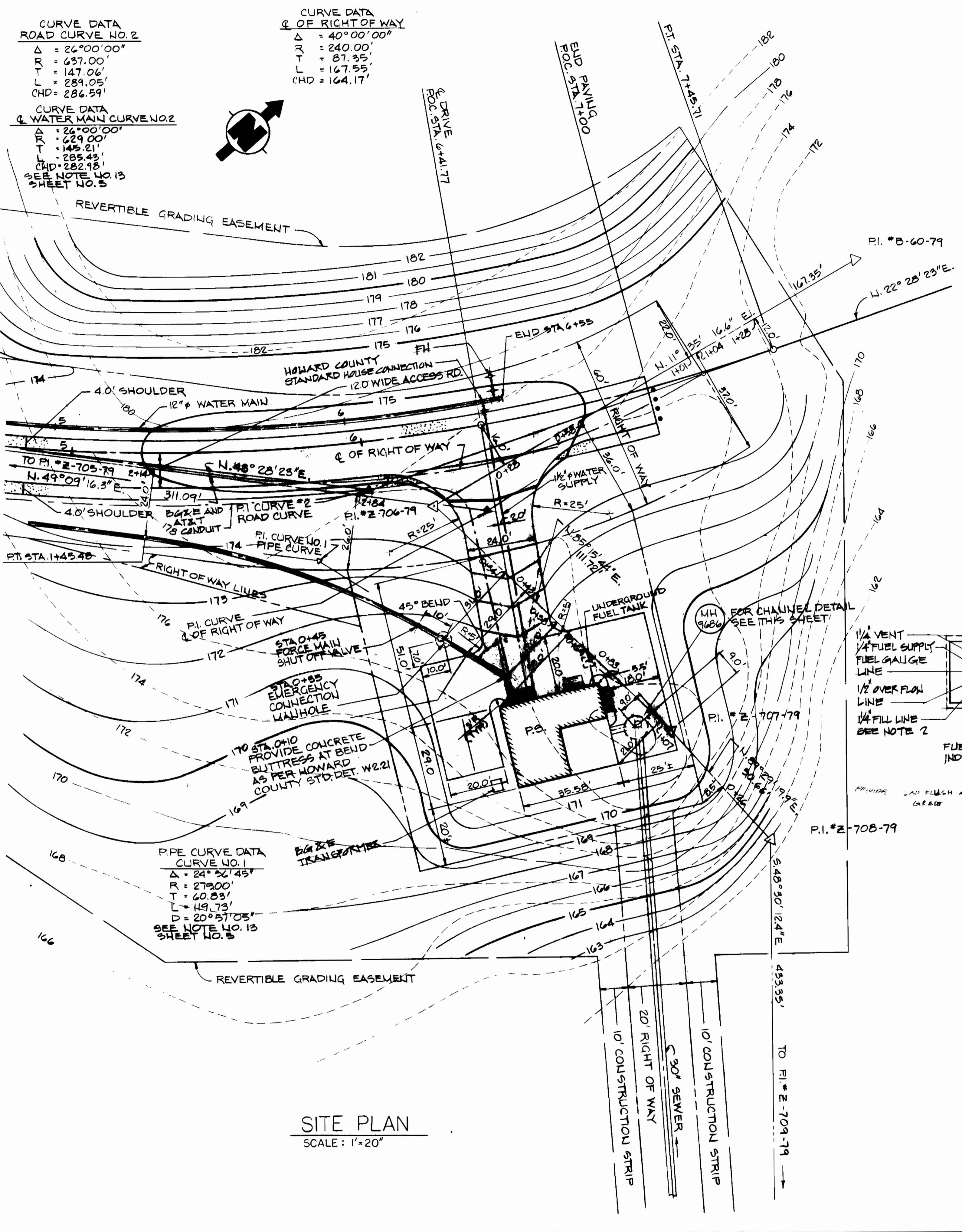
CHANNEL DETAIL
MANHOLE 9686
SCALE: 3/8"=1'-0"



- NOTES:**
- 1 - ACTUAL ARRANGE OF FUEL SYSTEM AS PER MANUFACTURER
 - 2 - PROVIDE LOCKING CAP FOR FILL LINE FLUSH WITH GRADE



UNDERGROUND FUEL TANK INSTALLATION DETAIL
1/4" = 1'-0"



SITE PLAN
SCALE: 1"=20'

CURVE DATA ROAD CURVE NO. 2
 $\Delta = 26^{\circ}00'00''$
 $R = 637.00'$
 $T = 147.06'$
 $L = 289.05'$
 $CHD = 286.59'$

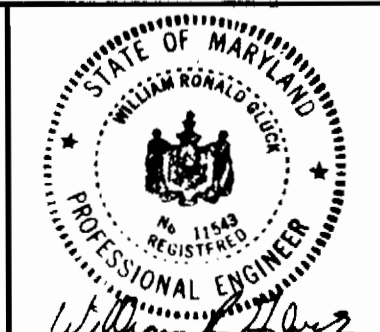
CURVE DATA Q OF RIGHT OF WAY
 $\Delta = 40^{\circ}00'00''$
 $R = 240.00'$
 $T = 87.35'$
 $L = 167.55'$
 $CHD = 164.17'$

CURVE DATA WATER MAIN CURVE NO. 2
 $\Delta = 26^{\circ}00'00''$
 $R = 637.00'$
 $T = 147.06'$
 $L = 289.05'$
 $CHD = 286.59'$
 SEE NOTE NO. 13 SHEET NO. 5

PIPE CURVE DATA CURVE NO. 1
 $\Delta = 24^{\circ}52'45''$
 $R = 27300'$
 $T = 60.83'$
 $L = 119.73'$
 $D = 20^{\circ}57'03''$
 SEE NOTE NO. 13 SHEET NO. 5

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

NUS CONSULTING ENGINEERS
CORPORATION
910 CLOPPER ROAD GAITHERSBURG, MD. 20878
301-258-6000

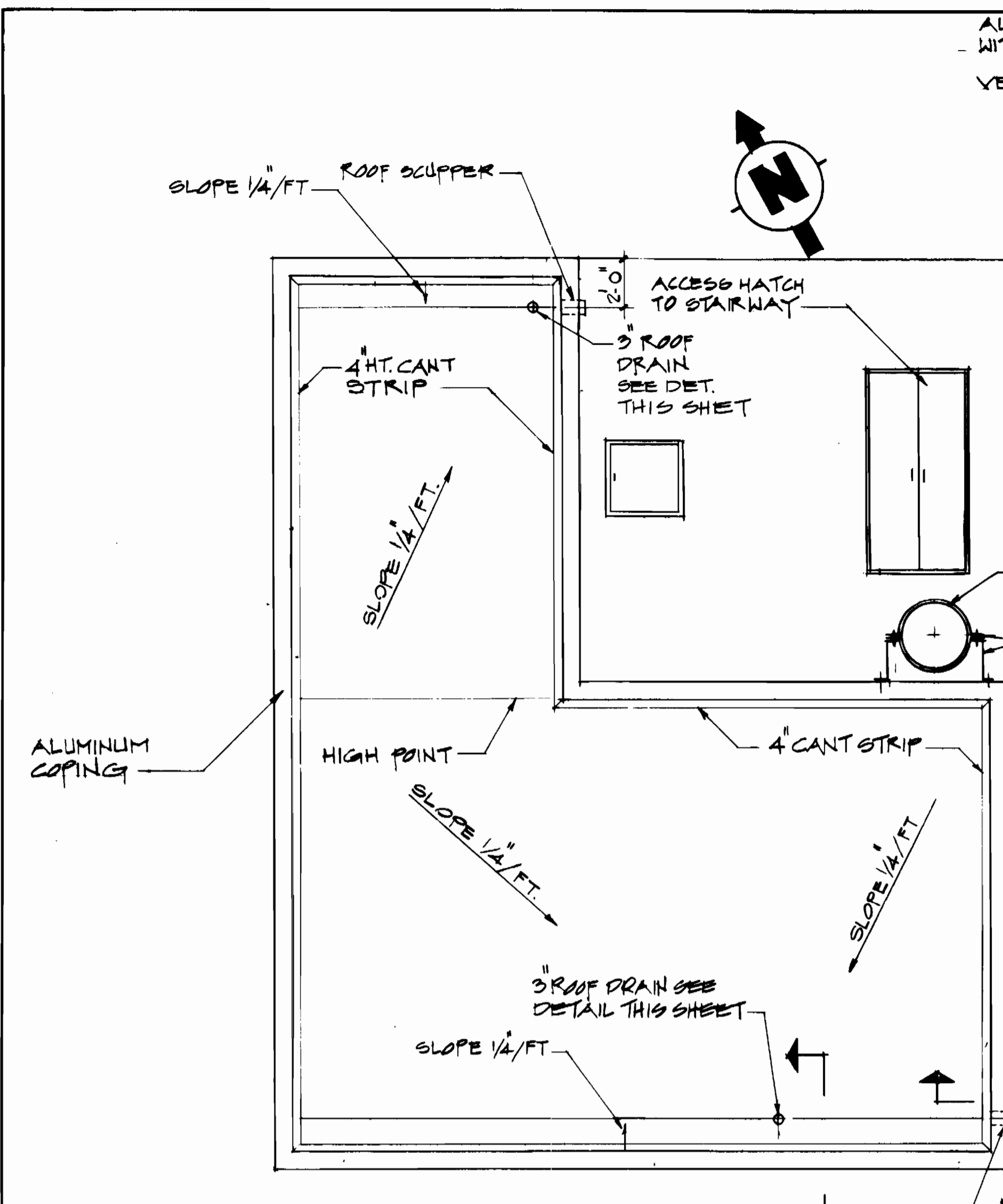


DES:	
DRN:	J. Tean 5/30/04
CHK:	
DATE:	7/29/04
BY:	R.G.
NO.	1
REVISION	ADD P.C.P. TO SEWER NOTE 4; ADD SEWER NOTE 4; 9-19-04
DATE	

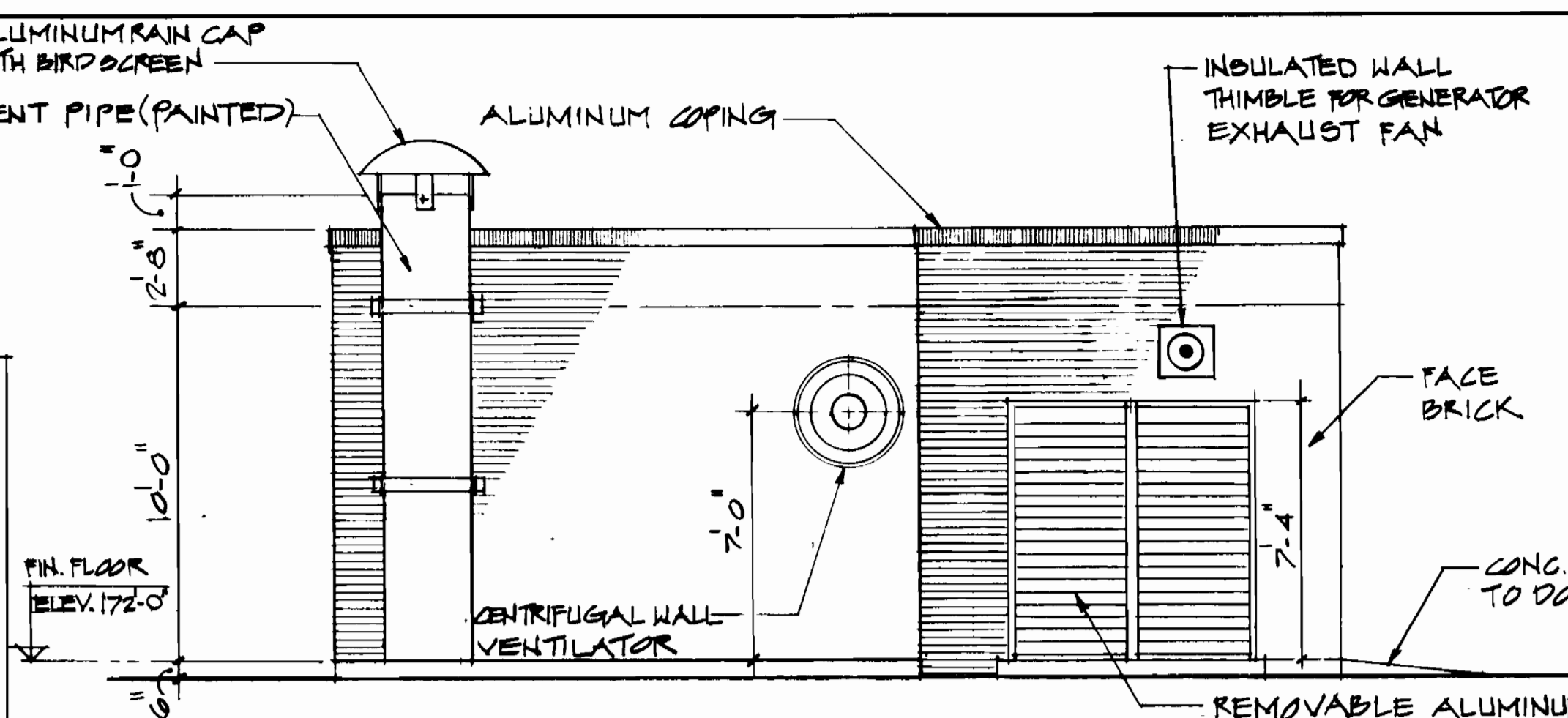
SITE PLAN - PUMPING STATION

DORSEY RUN PUMPING STATION
ELECTION DISTRICT: GUILFORD NO. 6 HOWARD COUNTY, MARYLAND
PROJECT NO. S-6071 CONTRACT NO. 678-S

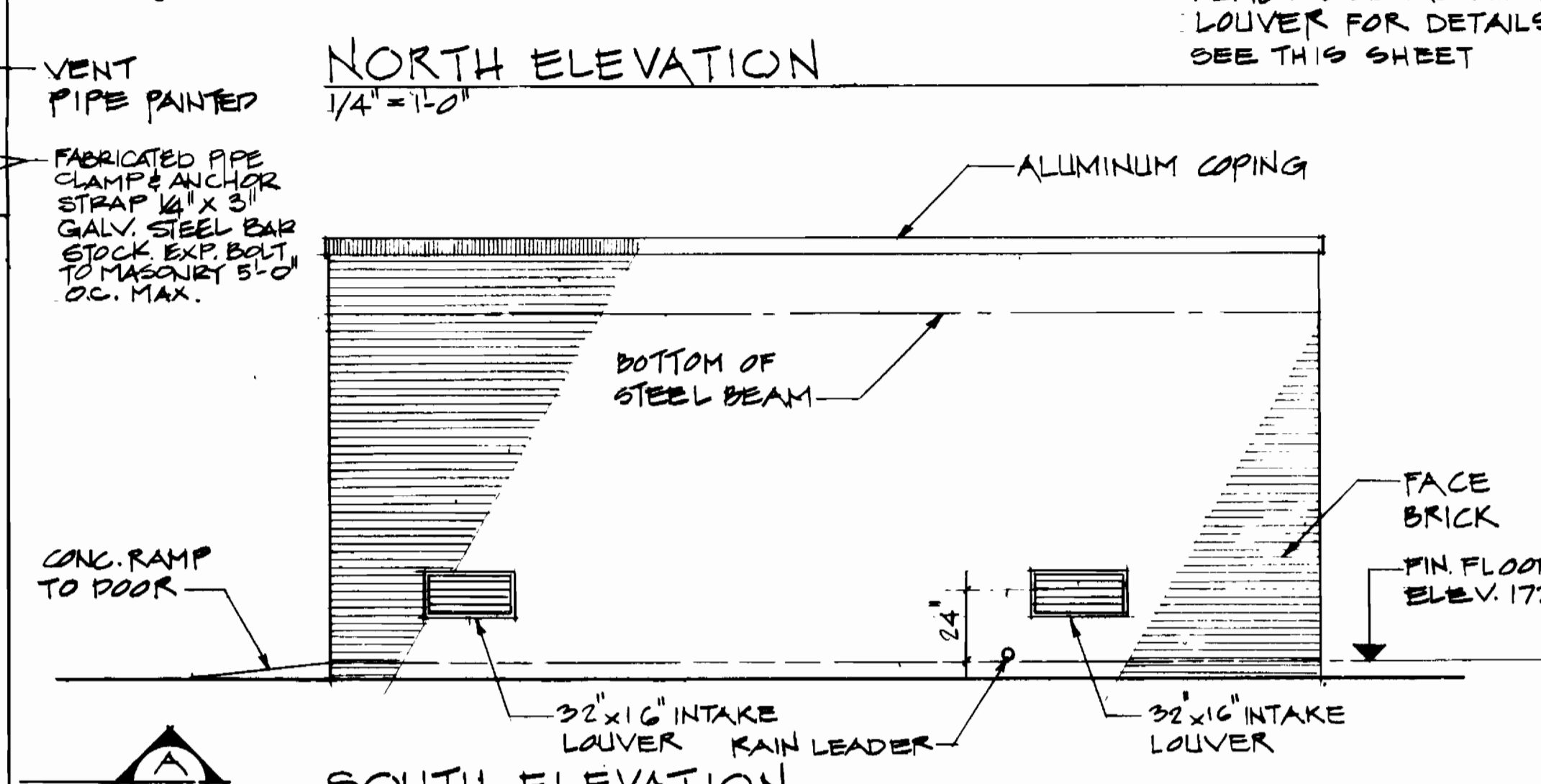
SCALE AS SHOWN
SHEET 2 OF 19



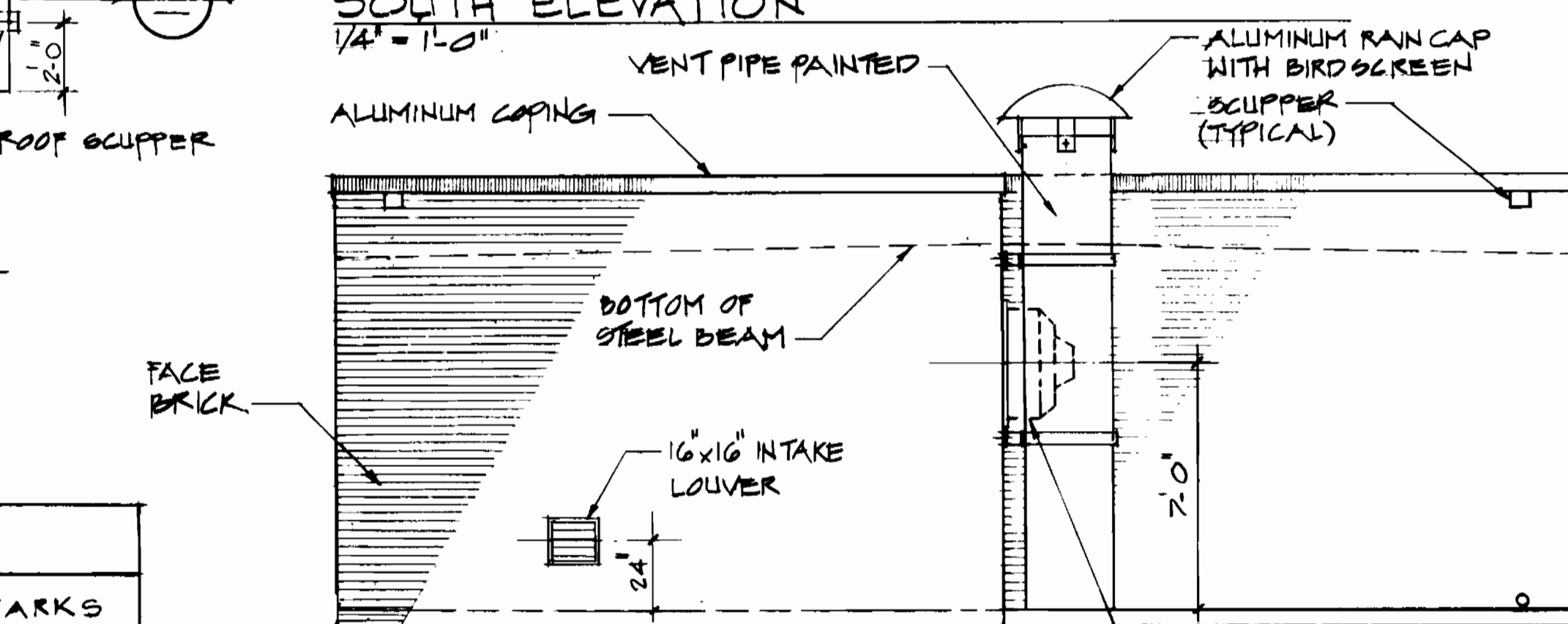
ROOF PLAN
1/4" = 1'-0"



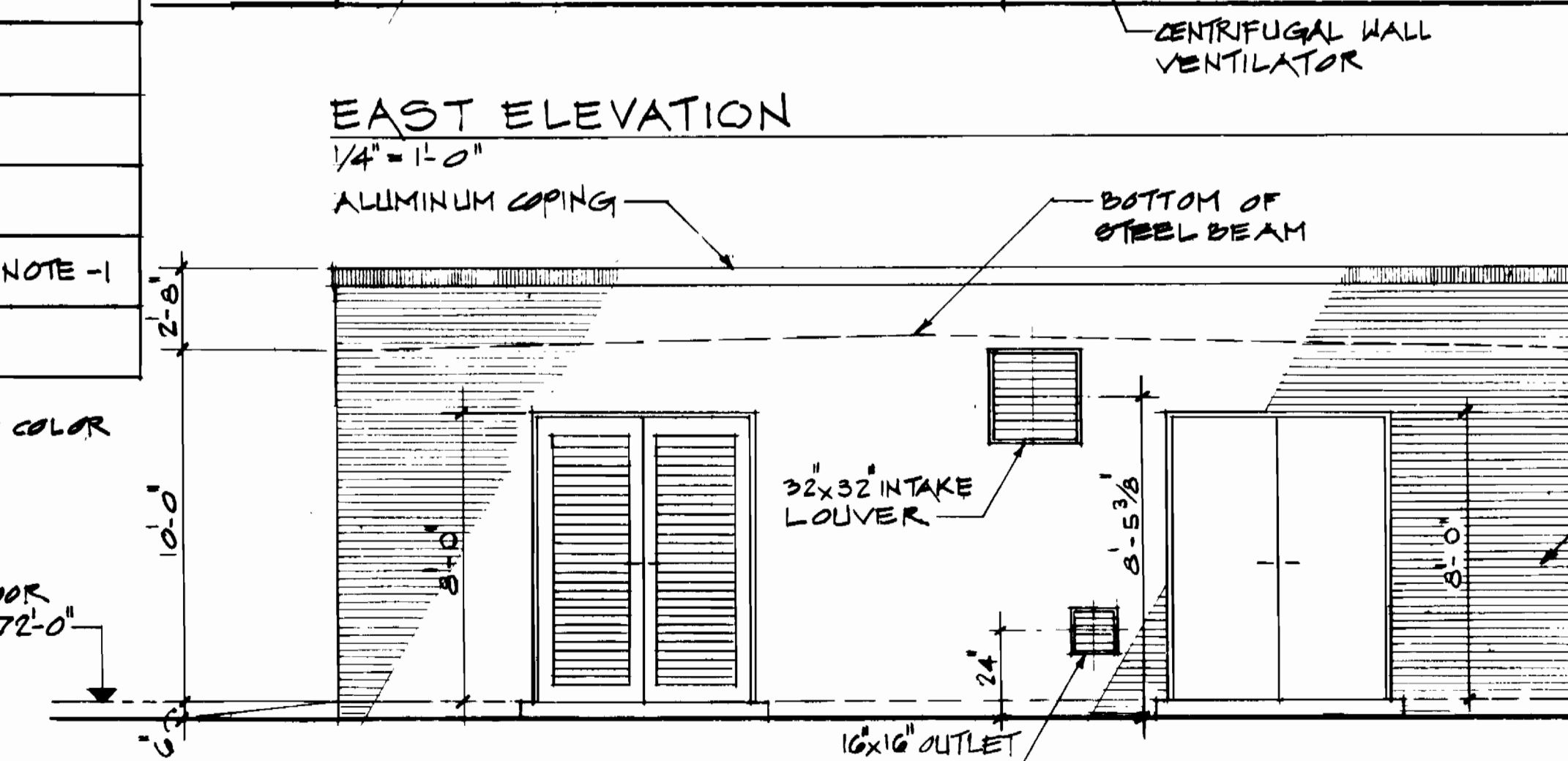
NORTH ELEVATION
1/4" = 1'-0"



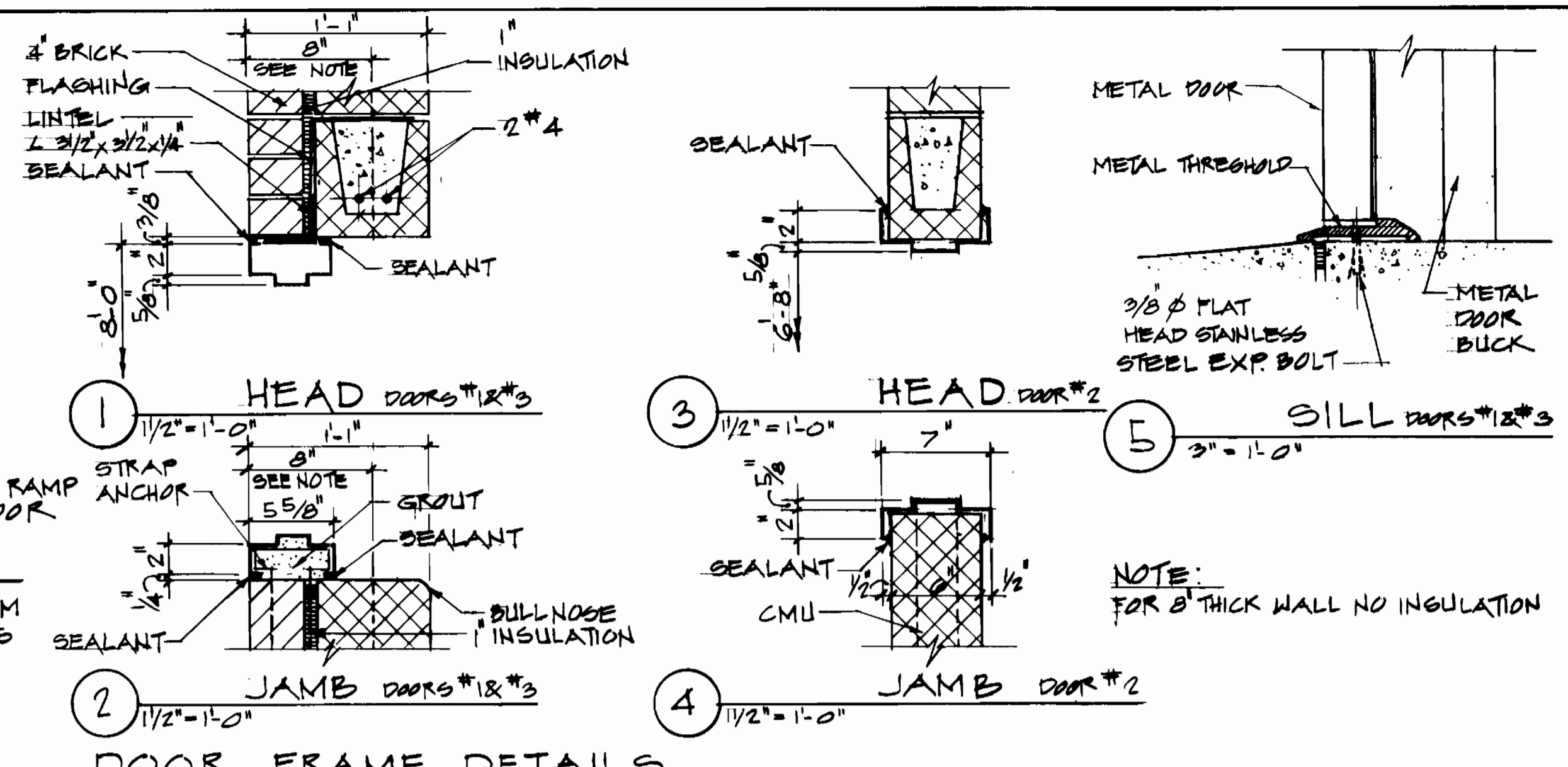
SOUTH ELEVATION
1/4" = 1'-0"



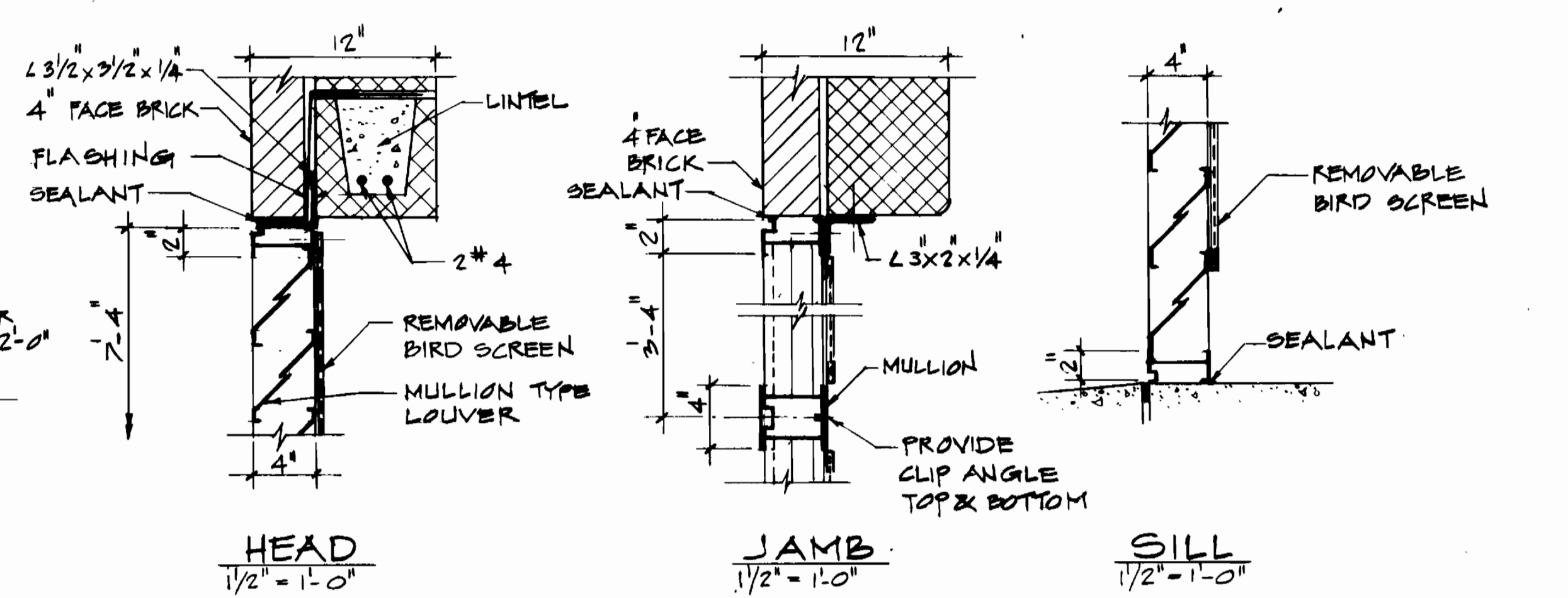
EAST ELEVATION
1/4" = 1'-0"



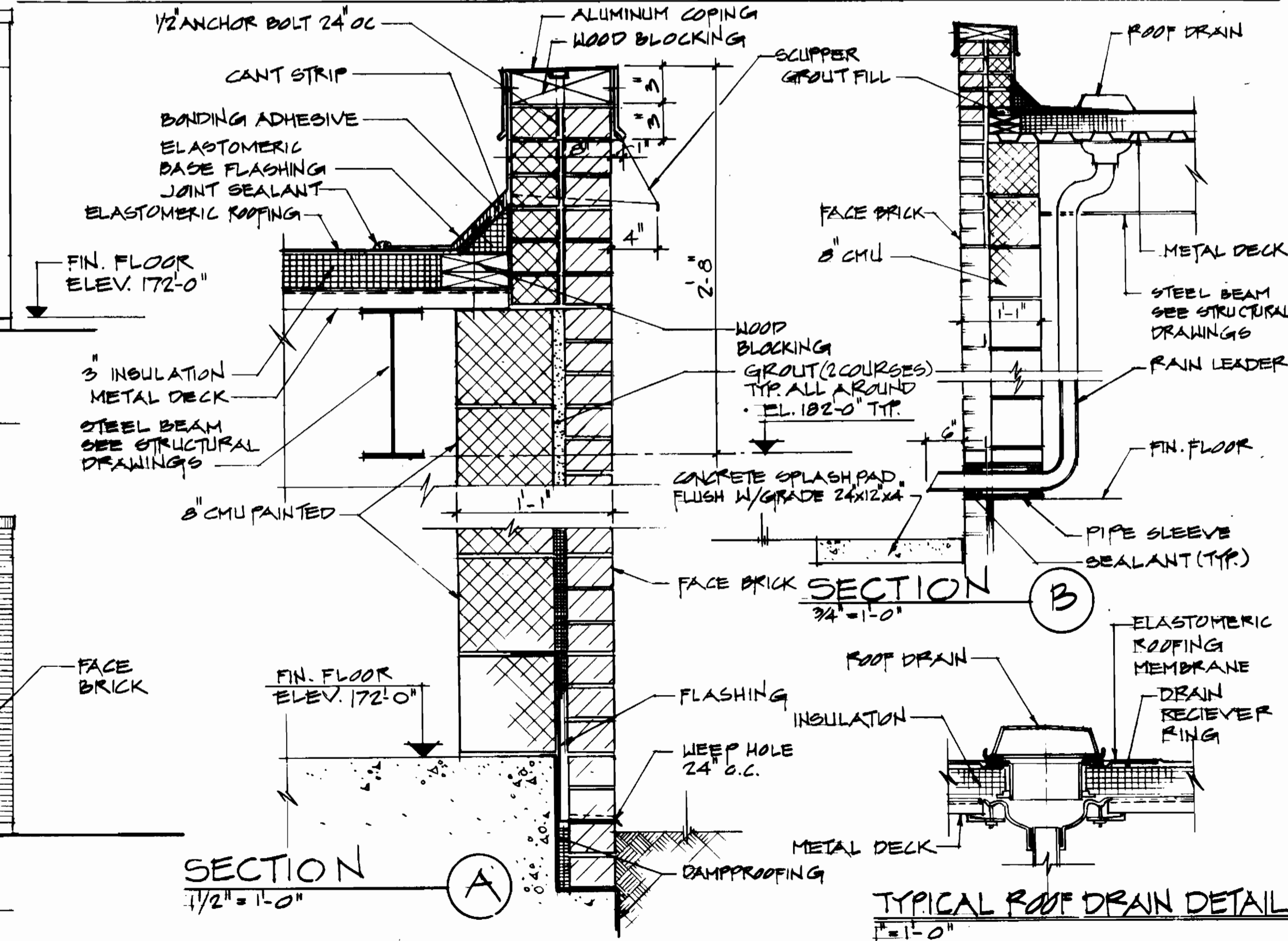
WEST ELEVATION
1/4" = 1'-0"



DOOR FRAME DETAILS



REMOVABLE MULLION TYPE LOUVER DETAILS



TYPICAL ROOF DRAIN DETAIL
1/2" = 1'-0"

FINISH SCHEDULE									
ROOMS	FLOOR		BASE		WALLS		CEILING	REMARKS	
	MATERIAL	COLOR	MATERIAL	COLOR	MATERIAL	COLOR	MATERIAL		COLOR
CONTROL ROOM			CMU PAINT	BEIGE	CMU PAINT	BEIGE	MET. DECK PAINT	BROWN	
GENERATOR ROOM			CMU PAINT	BEIGE	CMU PAINT	BEIGE	MET. DECK PAINT	BROWN	
DRY WELL			CONCRETE PAINT	BEIGE	CONCRETE PAINT	BEIGE	CONCRETE PAINT	BEIGE	
WET WELL	CONCRETE PAINT	BLACK	CONCRETE PAINT	BLACK	CONCRETE PAINT	BEIGE	CONCRETE PAINT	BEIGE	SEE NOTE -1

NOTE
1- PAINT CONC. WALLS BELOW GRATING BLACK. PAINT CONC. WALLS ABOVE GRATING COLOR

DOOR SCHEDULE							
NO.	SIZE	MATERIAL	HEAD	JAMB	SILL	HARDWARE	REMARKS
1	PAIR 3'-0" x 7'-10" x 1 3/4"	METAL	1	2	5	HW-1	
2	SINGLE 3'-0" x 6'-6" x 1 3/4"	METAL	3	4		HW-2	
3	PAIR 3'-0" x 7'-10" x 1 3/4"	METAL	1	2	5	HW-1	LOUVERED

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert Benjamin / H/GPN 7-25/84
DIRECTOR OF PUBLIC WORKS DATE

Michael S. Riley 7/25/84
CHIEF, BUREAU OF ENGINEERING DATE

NUS CONSULTING ENGINEERS CORPORATION
910 CLOPPER ROAD GAITHERSBURG, MD. 20878
301-258-8000



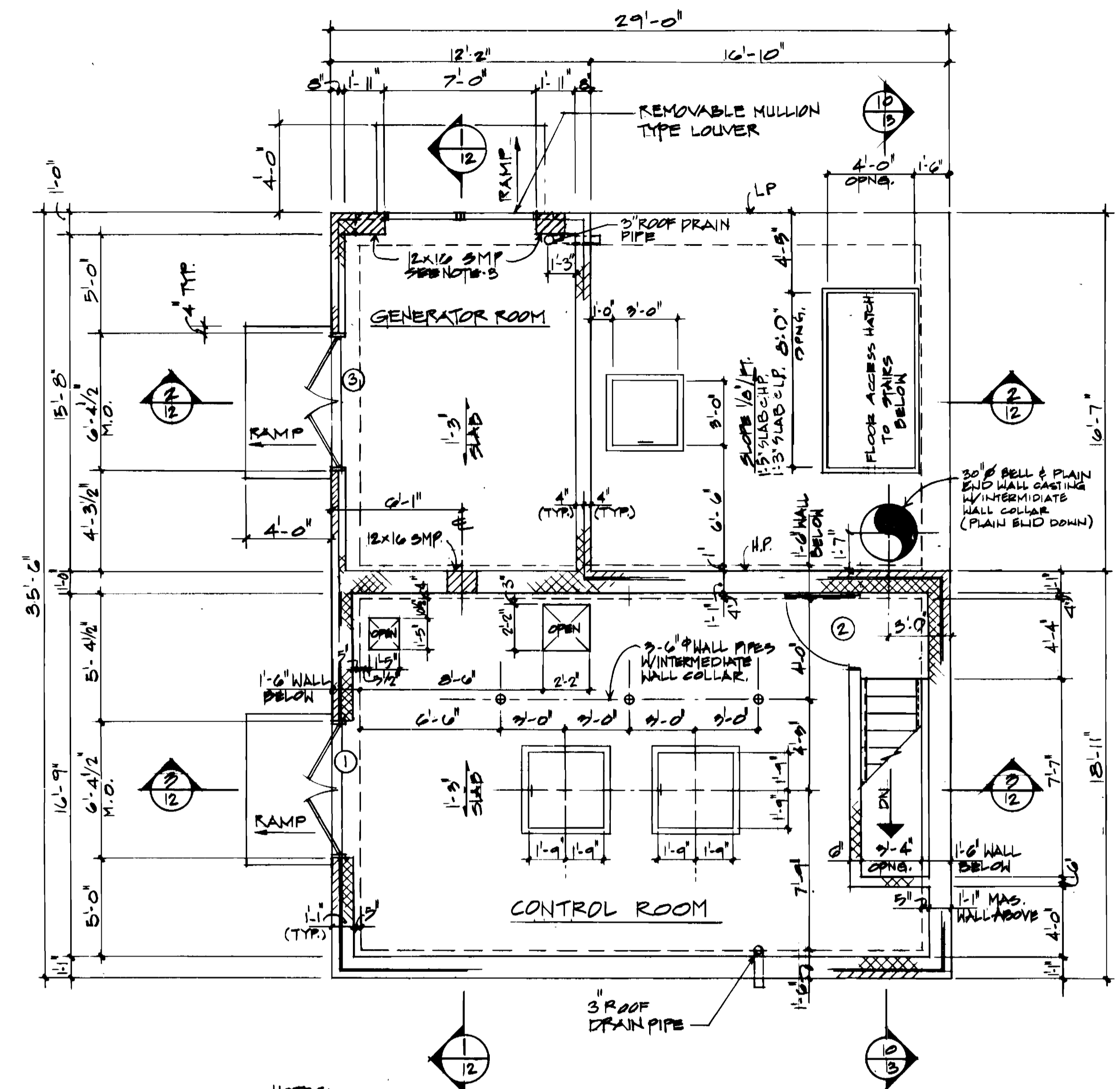
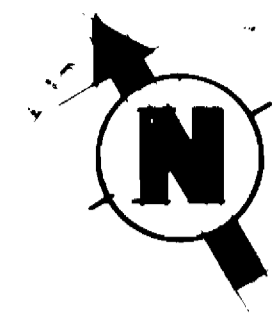
DES:					
DRN:					
CHK:					
DATE: 7/25/84	BY NO.	REVISION	DATE	600' SCALE MAP NO. 48	BLOCK NO. 2

ARCHITECTURAL
ROOF PLAN, SCHEDULES,
ELEVATIONS & DETAILS

DORSEY RUN PUMPING STATION
ELECTION DISTRICT GUILFORD NO.6
PROJECT NO. 5-6071

HOWARD COUNTY, MARYLAND
CONTRACT NO. 678-S

SCALE
AS SHOWN
SHEET
8 OF 19

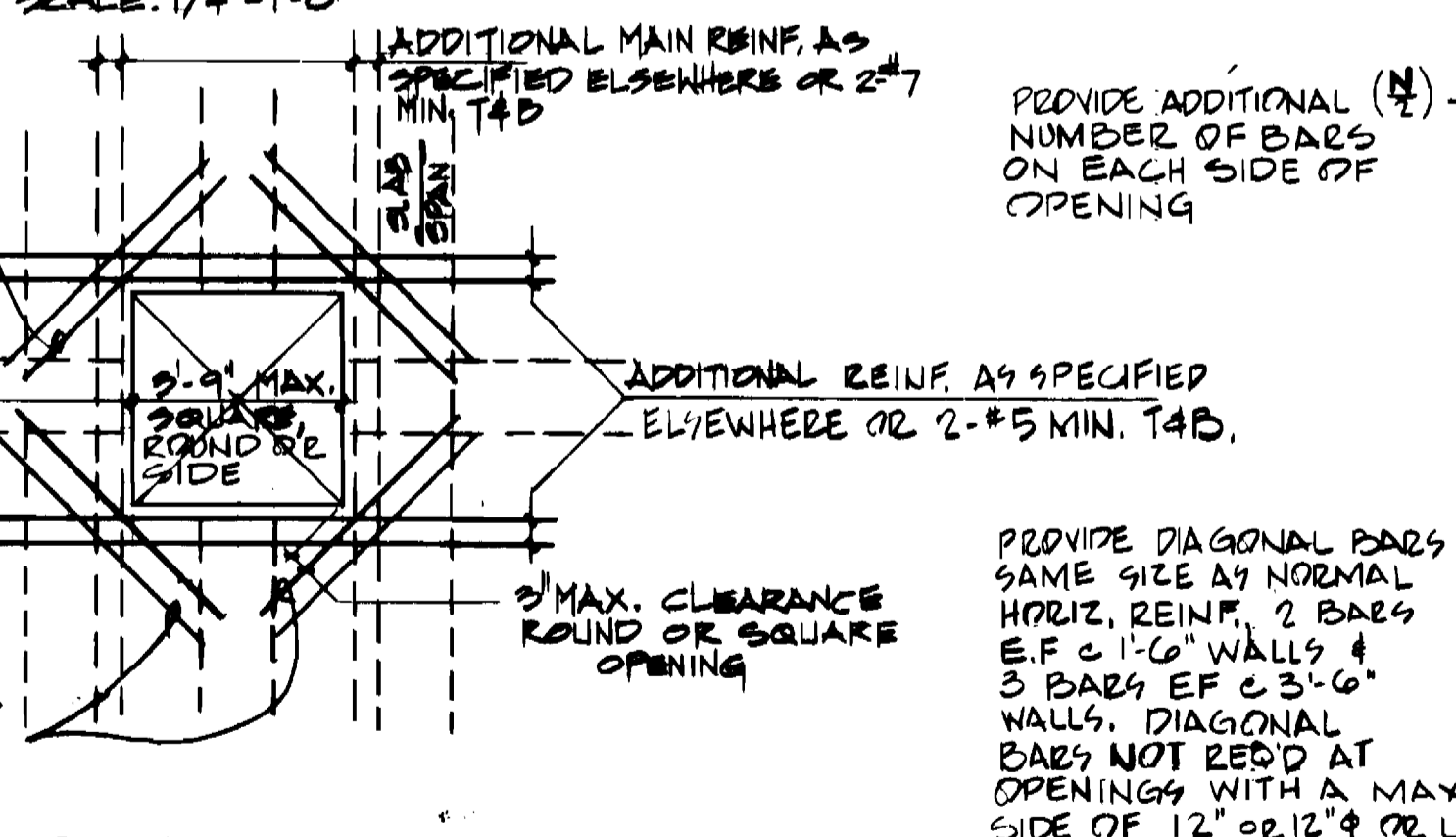


NOTES:
 1. FOR GENERAL NOTES SEE SHEET 10
 2. FOR FLOOR SLAB REINF. SEE SHEET 12
 3. S.M.P. DESIGNATES SOLID MASONRY PIER AND SHALL BE CONSTRUCTED OF 100% SOLID MASONRY UNITS - HOLLOW MASONRY UNITS FILLED WITH SOLID MASONRY UNITS AND SHALL BE FULL HEIGHT OF A BUILT INTEGRALLY WITH SURROUNDING MASONRY WALLS.

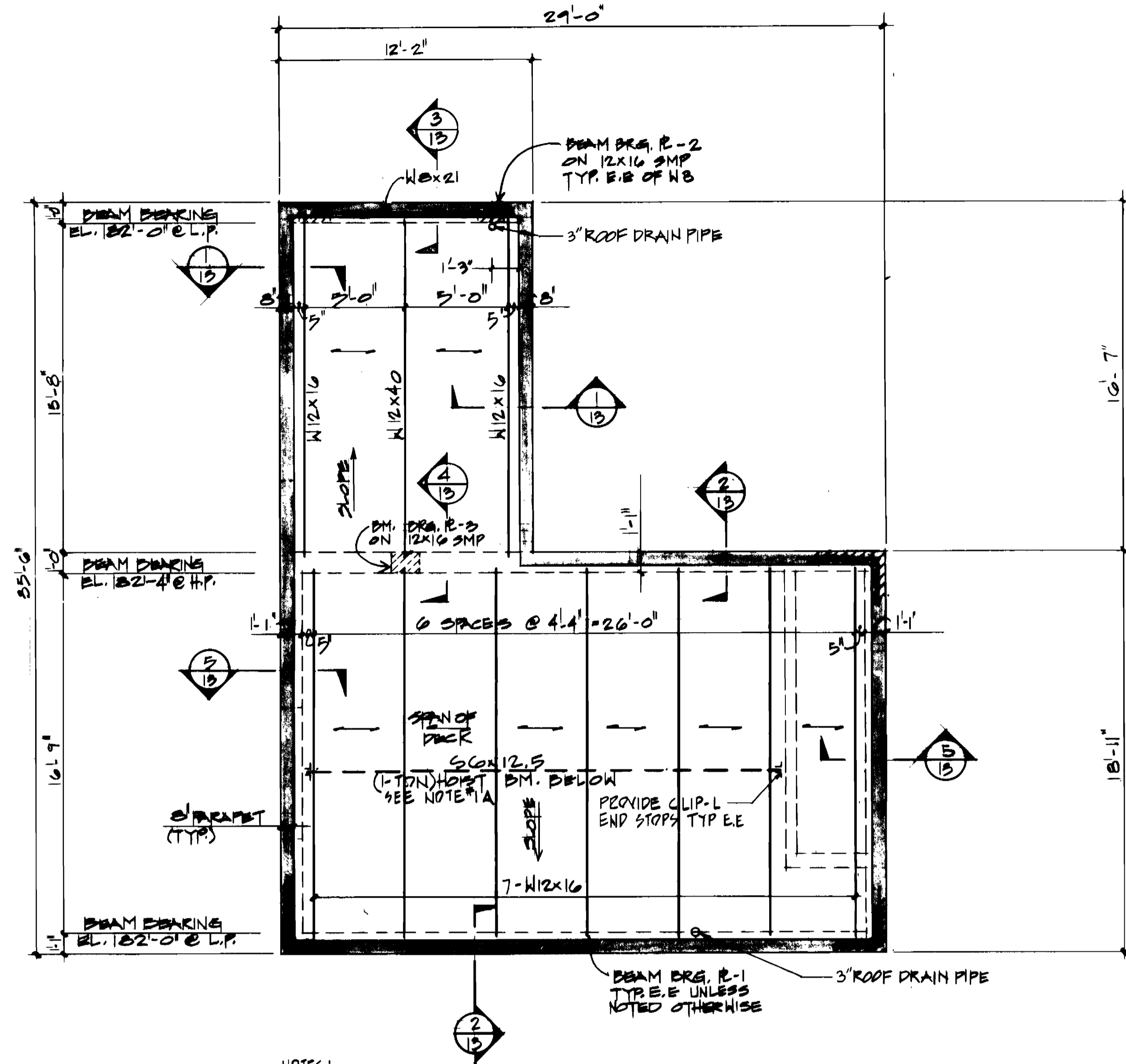
OPERATING LEVEL FLOOR PLAN AT EL. 172'-0"
 SCALE: 1/4" = 1'-0"

WHERE STRAIGHT LENGTH CANNOT BE OBTAINED EXTENDED BARS AS FAR AS POSSIBLE AND PROVIDE HOOK OR BOND.

2'-5" x 4'-0" TOP & BOTT. DIAGONAL BARS TYP. @ EACH CORNER. DIAGONAL REINF. PROVIDE DIAGONAL BARS TYP. @ ALL FLOOR SLAB OPENINGS EXCEPT @ OPENINGS WITH A MAX. SIDE OF 12" OR 12" φ OR LESS

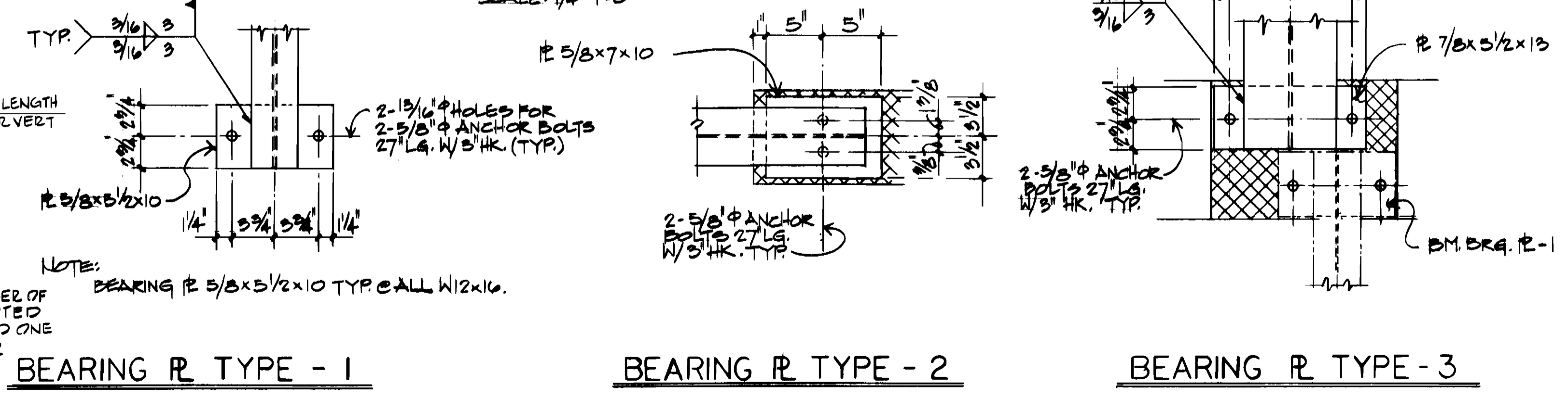


SLAB PENETRATIONS
WALL PENETRATIONS
ADDITIONAL REINF. AT FLOOR SLAB AND WALL OPENINGS



NOTES:
 1A. CONTRACTOR TO COORDINATE HOIST BEAM SIZE w/ HOIST SELECTED FOR MOUNTING AND OPERATIONAL COMPATIBILITY

ROOF FRAMING PLAN
 SCALE: 1/4" = 1'-0"

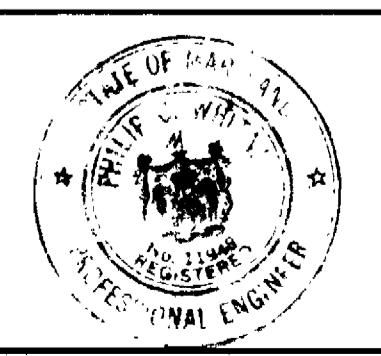


BEARING PLATE TYPE - 1
BEARING PLATE TYPE - 2
BEARING PLATE TYPE - 3
BEAM BEARING PLATE DETAILS
 SCALE: 1/2" = 1'-0"

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Director of Public Works: *Robert M. ...* DATE: 7-25-84
 Chief, Bureau of Engineering: *Robert M. ...* DATE: 7-25-84
 Chief, Bureau of Utilities: *Robert M. ...* DATE: 7-25-84
 Chief, Utilities Division: *Allen L. Brown* DATE: 1/25/84

NUS CONSULTING ENGINEERS
 CORPORATION
 910 CLOPPER ROAD GAITHERSBURG, MD. 20878
 301-258-6000



DES: <i>JKL</i>	ARCHITECTURAL & STRUCTURAL OPERATING LEVEL FLOOR AND ROOF FRAMING PLANS
DRN: <i>JKL</i>	
CHK: <i>JKL</i>	
DATE: 7/25/84	
BY: NO.	REVISION
	DATE
	600' SCALE MAP NO. 48 BLOCK NO. 2

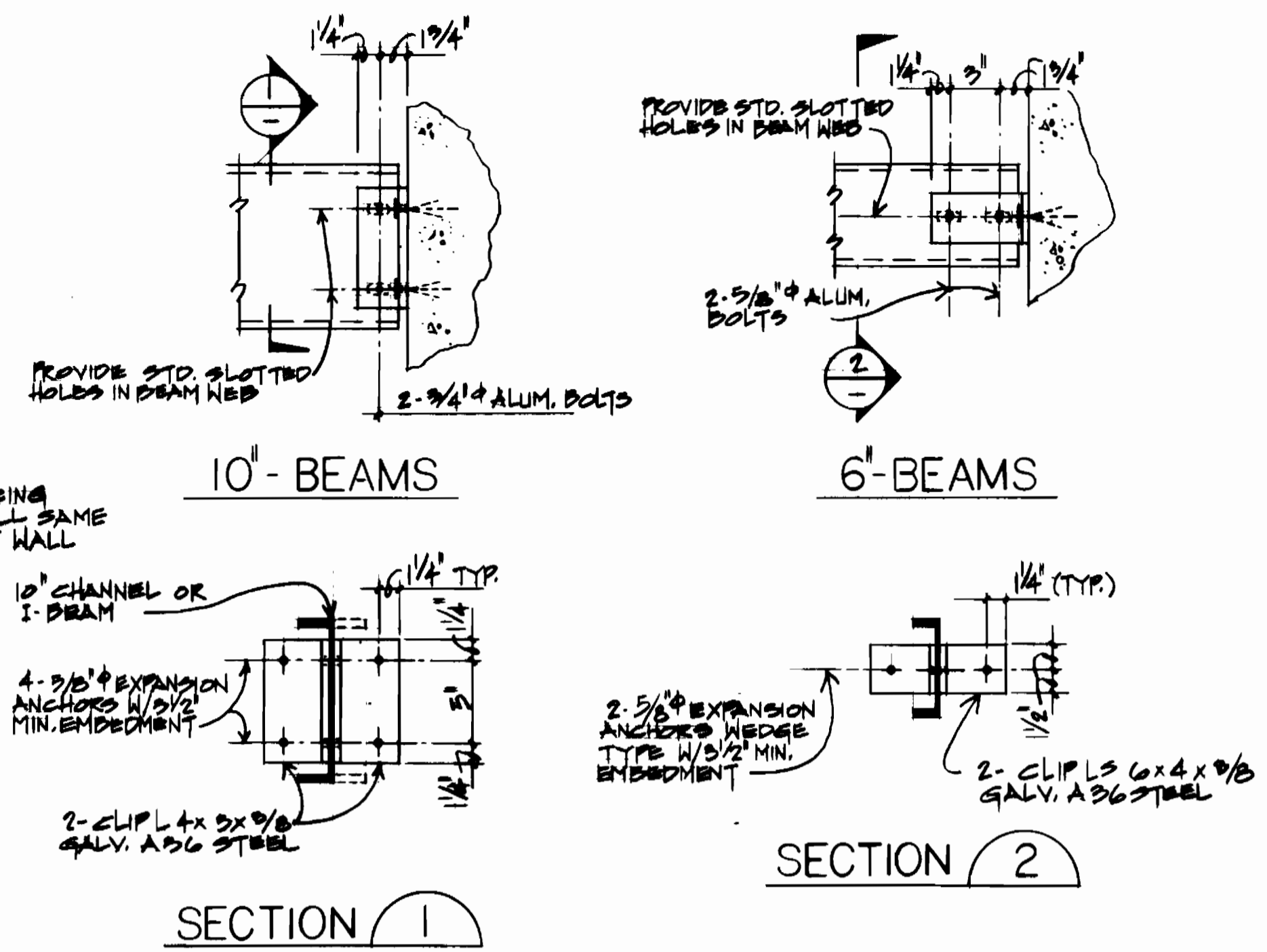
ARCHITECTURAL & STRUCTURAL
 OPERATING LEVEL FLOOR
 AND ROOF FRAMING PLANS

DORSEY RUN PUMPING STATION
 ELECTION DISTRICT GUILFORD NO. 6 HOWARD COUNTY, MARYLAND
 PROJECT NO. 5-6071 CONTRACT NO. 678-S

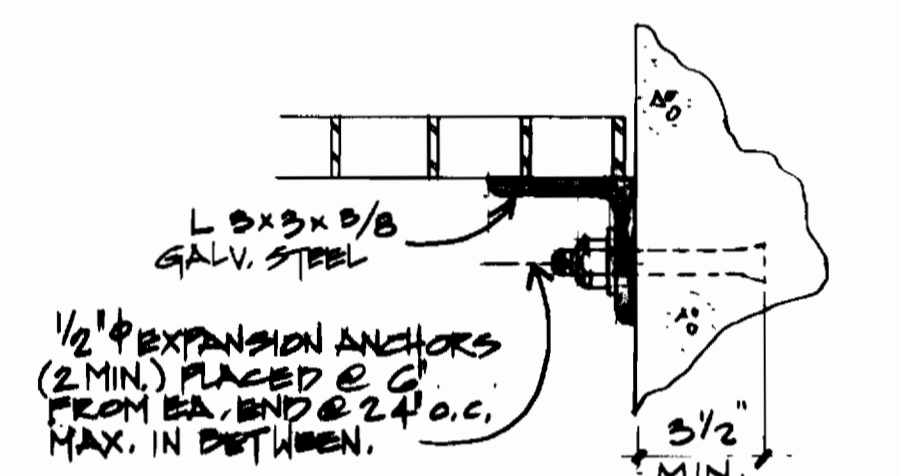
SCALE AS SHOWN
 SHEET 9 OF 19

GENERAL NOTES

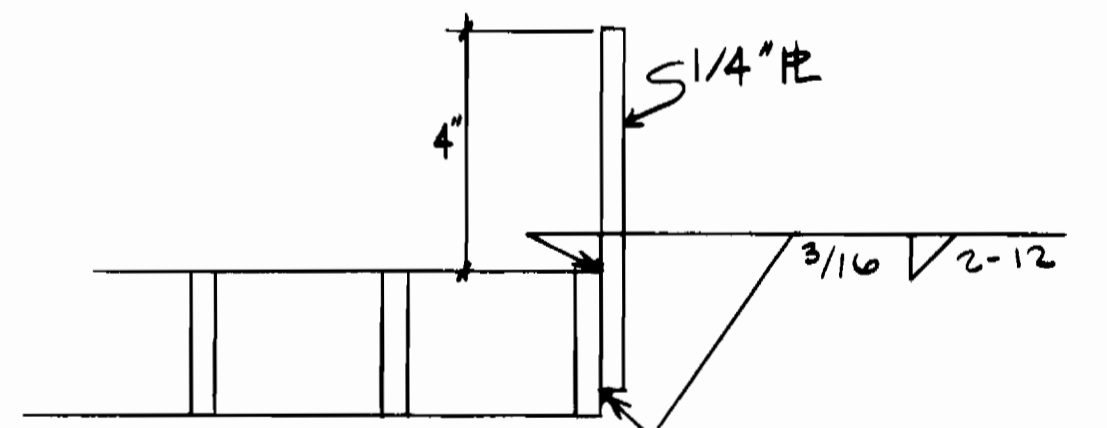
- DESIGN LIVE LOADS
OPERATING LEVEL FLOOR SLAB 250 PSF
STAIRS & PLATFORMS 100 PSF
ROOFS 30 PSF
- FOUNDATION BEARING
FOUNDATION HAS BEEN DESIGNED FOR A GROSS BEARING PRESSURE OF 4000 PSF.
- CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS. ALL EXPOSED CORNERS OF SLABS, BEAMS & WALLS SHALL BE CHAMFERED 1". ALL CONCRETE SURFACES THAT ARE TO RECEIVE A PROTECTIVE SURFACE COATING SHALL NOT BE CURED WITH ANY CURING COMPOUND.
- REINFORCING SHALL CONFORM TO ASTM A615 GRADE 60.
- STRUCTURAL STEEL
ALL SHAPES & PLATES SHALL CONFORM TO ASTM A36 AND SHALL BE HOT DIPPED GALVANIZED UNLESS SPECIFIED OTHERWISE.
- STRUCTURAL ALUMINUM
ALL FRAMING FOR PLATFORMS AND STAIRS SHALL BE OF ALUMINUM UNLESS NOTED OTHERWISE AND SHALL CONFORM TO THE FOLLOWING:
STRUCTURAL SHAPES
AMERICAN STANDARD SERIES ASTM B308 6061-T6
PLATES ASTM B209 6061-T651
BOLTS HEX HEAD 5/8" Ø MIN. ALUM. ASTM B211 6061-T6
- CONNECTIONS
CONNECTIONS FOR STAIRS & PLATFORMS NOT DETAILED SHALL BE DESIGNED AND FABRICATED IN CONFORMANCE TO REQUIREMENTS OF SPECIFICATIONS FOR ALUMINUM STRUCTURES, CONSTRUCTION MANUAL SERIES SECTION 1 OF THE ALUMINUM ASSOCIATION, INC. END REACTIONS SHALL BE DESIGNED FOR SHEAR ONLY AND CAPABLE OF SAFELY SUPPORTING A MINIMUM LOAD OF 8 KIPS AT ALL 10" BEAMS AND 3 KIPS AT ALL 6" BEAMS. A MINIMUM OF TWO BOLTS SHALL BE PROVIDED AT EACH CONNECTION.
- CONCRETE EXPANSION ANCHORS SHALL BE WEDGE TYPE GALVANIZED OR STAINLESS STEEL. ANCHORS SHALL BE INSTALLED IN ACCORDANCE TO MANUFACTURER'S SPECIFICATIONS. SIZE AND MINIMUM EMBEDMENT SHALL BE AS SPECIFIED ON DRAWINGS.
- GRATING SHALL BE 1-1/2" ALUMINUM ALLOY 6063-T6 AND SHALL HAVE THE MINIMUM FOLLOWING PROPERTIES:
 $S = .773 \text{ IN.}^3$ $I = .580 \text{ IN.}^4$
GRATING SHALL BE ANCHORED TO SUPPORTING MEMBERS AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- WELDING SHALL BE DONE IN ACCORDANCE WITH A.W.S. SPECIFICATIONS
- ROOF DECK SHALL BE 1-1/2" DEEP 22 GAUGE STEEL GALVANIZED NARROW RIB WITH THE FOLLOWING MINIMUM PROPERTIES:
 $S = 0.124 \text{ IN.}^3$ $I = .146 \text{ IN.}^4$
- NO BACKFILLING SHALL BE PLACED AGAINST WALL UNTIL OPERATING FLOOR IS IN PLACE AND FLOOR FORMS HAVE BEEN REMOVED.
- SURFACES IN CONTACT WITH ALUMINUM SHALL BE COATED AS FOLLOWS:
CONCRETE OR CONCRETE MASONRY UNITS - BITUMASTIC NO. 50 BY KOPPERS CO., INC., OR EQUAL.
NON-GALVANIZED STEEL - ZINC CHROMATE PAINT



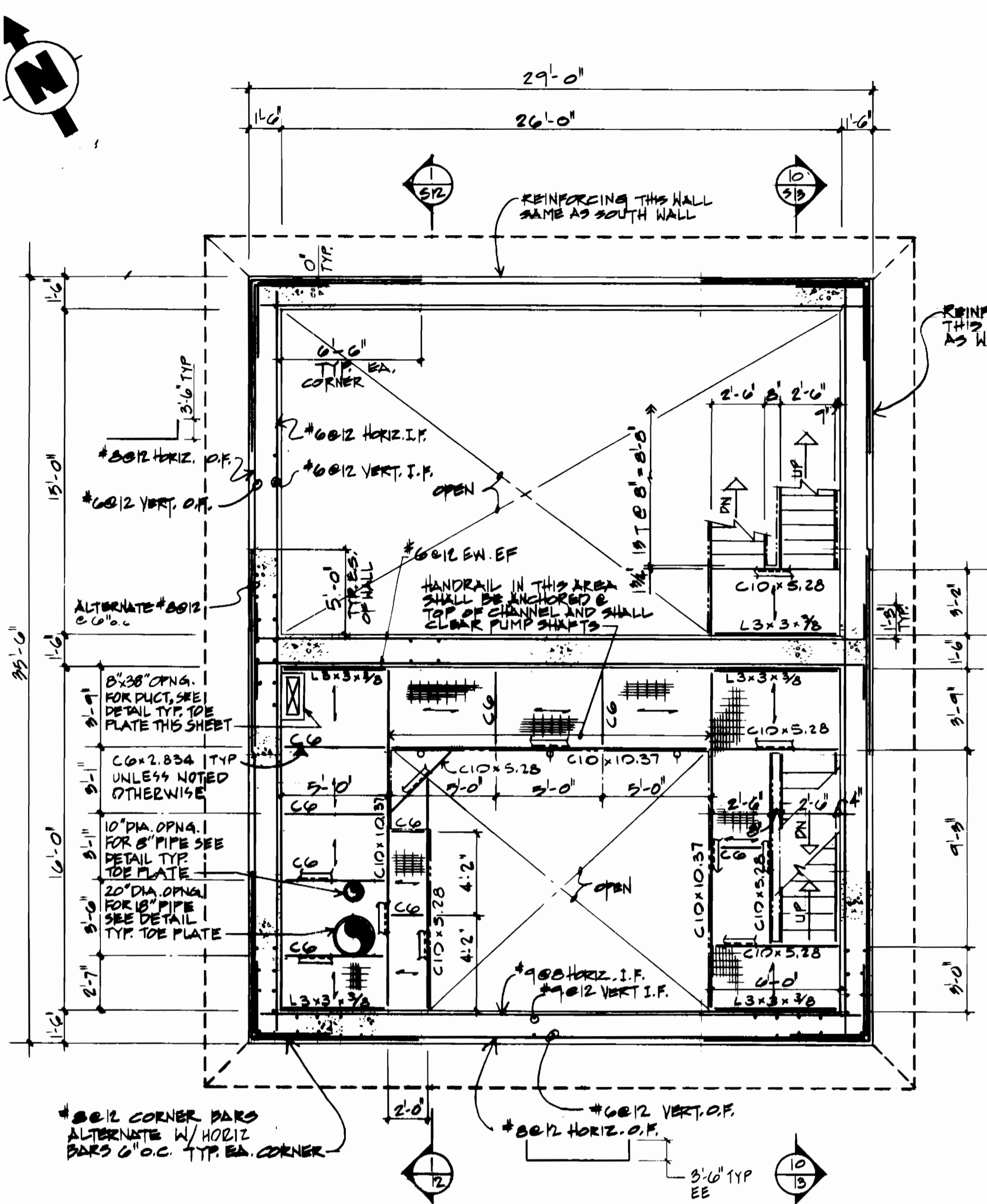
TYPICAL BEAM TO CONCRETE CONNECTIONS
SCALE: 1 1/2" = 1'-0"



TYPICAL GRATING SUPPORT AT WALL
SCALE 3" = 1'-0"



TYP. GRATING TOE PLATE
NO SCALE



PLAN AT EL. 161'-6"
SCALE: 1/4" = 1'-0"

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Director of Public Works: [Signature]
Chief, Bureau of Engineering: [Signature]
Chief - Bureau of Utilities: [Signature]
Chief - Utilities Division: [Signature]

NUS CONSULTING ENGINEERS CORPORATION
910 CLOPPER ROAD GAITHERSBURG, MD. 20878
301-258-6000

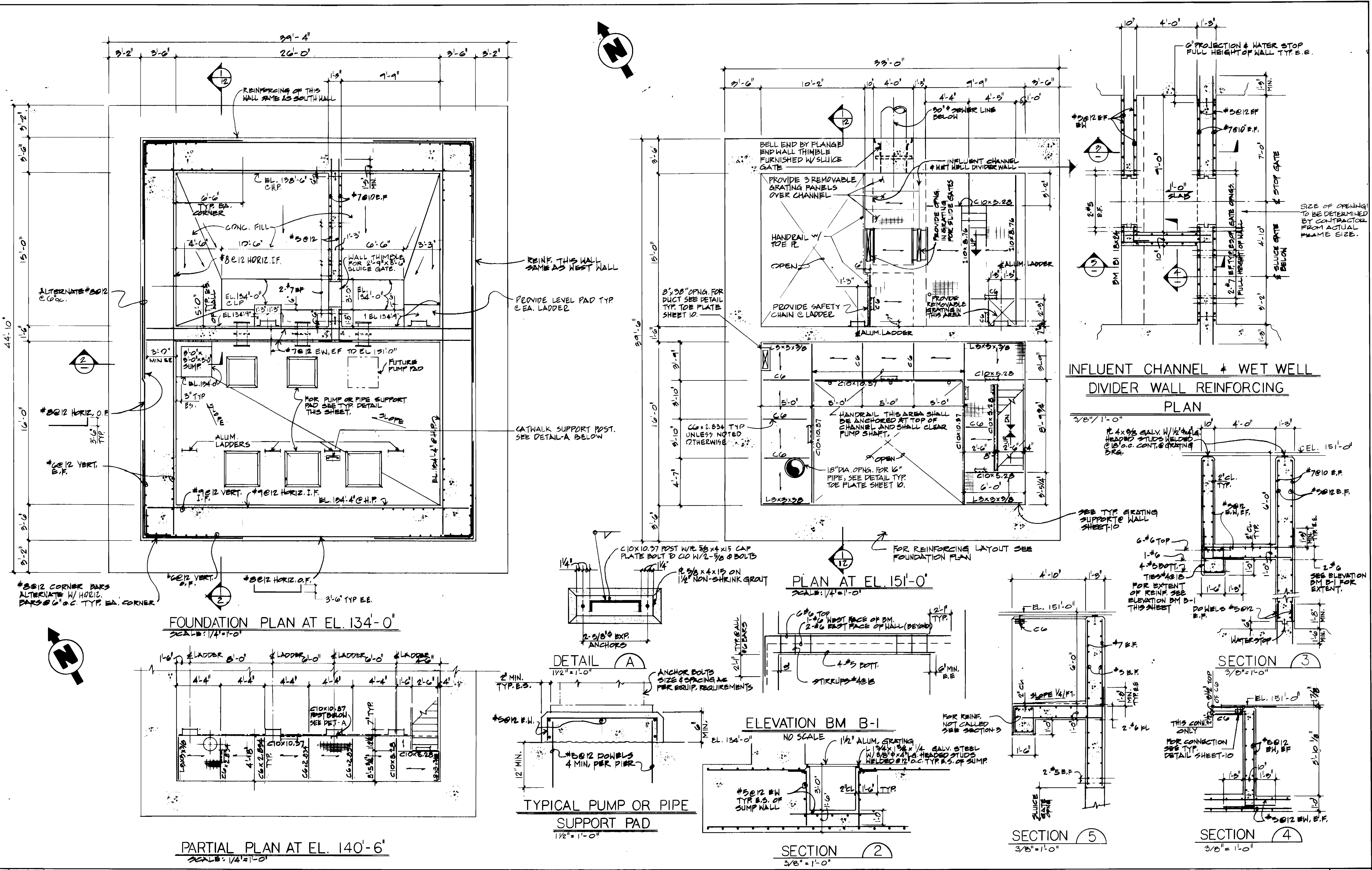


DES: [Signature]	DRN: KJL	CHK: [Signature]	DATE: 7/19/84
BY: NO.	REVISION	DATE	600' SCALE MAP NO. 48 BLOCK NO. 2

STRUCTURAL PLAN AT EL. 161'-6"

DORSEY RUN PUMPING STATION
ELECTION DISTRICT GUILFORD NO. 6 HOWARD COUNTY, MARYLAND
PROJECT NO. S-6071 CONTRACT NO. 678-5

SCALE AS SHOWN
SHEET 10 OF 19



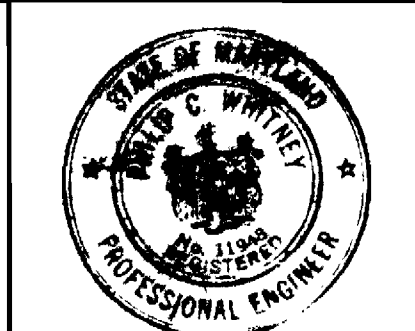
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert B. ...
DIRECTOR OF PUBLIC WORKS
DATE: 1/25/84

Allen S. Brown
CHIEF, BUREAU OF ENGINEERING
DATE: 7/25/84

Allen S. Brown
CHIEF-UTILITIES DIVISION
DATE: 7/25/84

NUS CONSULTING ENGINEERS
CORPORATION
910 CLOPPER ROAD GAITHERSBURG, MD. 20878
301-258-8000



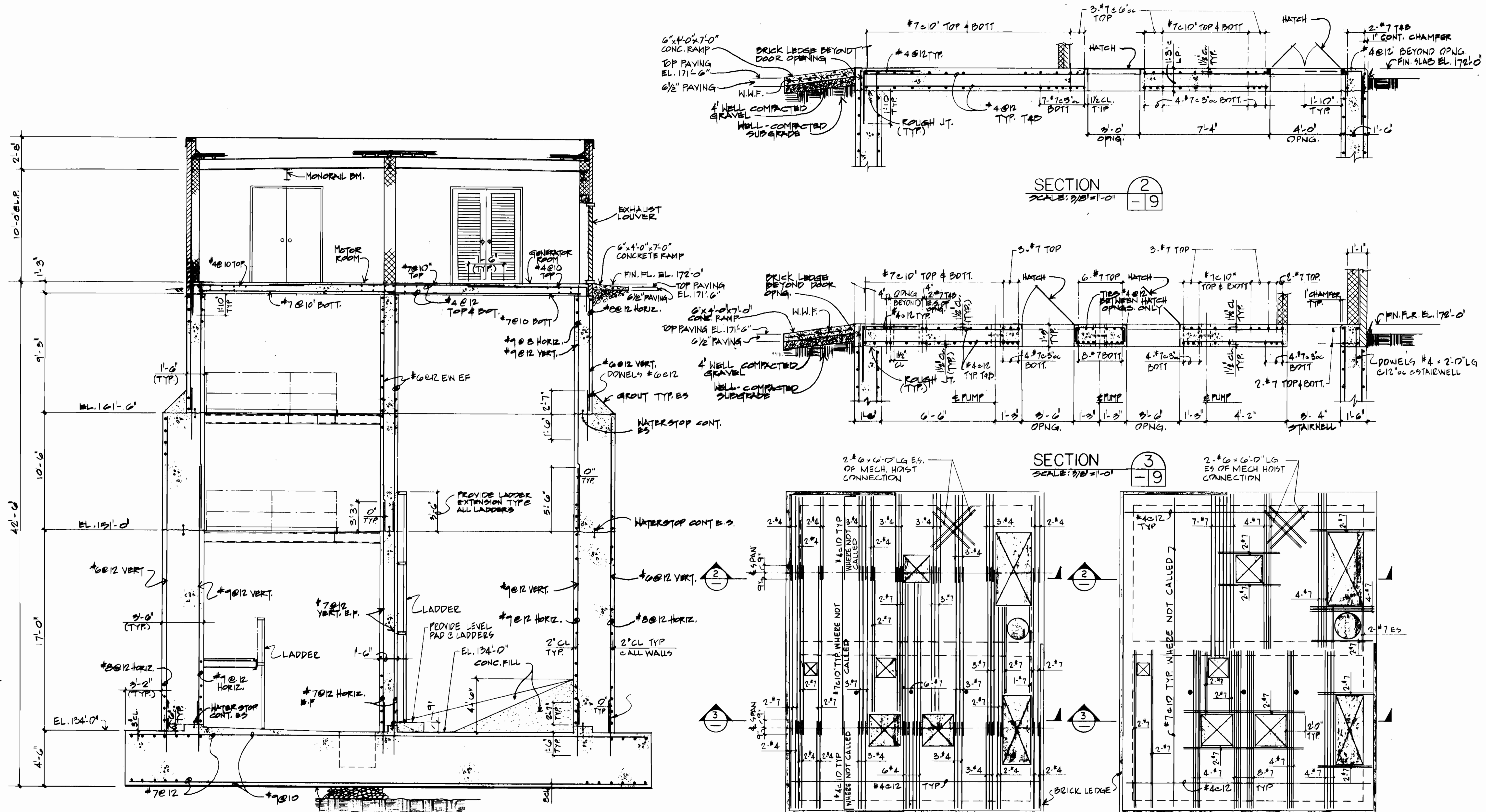
DES: <i>JKL</i>	DRN: <i>JKL</i>	CHK: <i>JKL</i>	DATE: 7/25/84	BY: NO.	REVISION	DATE: 600'S SCALE MAP NO. 48	BLOCK NO. 2
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STRUCTURAL
FOUNDATION & INTERMEDIATE
FRAMING PLANS

DORSEY RUN PUMPING STATION
ELECTION DISTRICT GUILFORD NO. 6
PROJECT NO. S-6071

HOWARD COUNTY, MARYLAND.
CONTRACT NO. 678-5

SCALE AS SHOWN
SHEET 11 OF 19



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

SECTION 2
SCALE: 3/8" = 1'-0"

SECTION 3
SCALE: 3/8" = 1'-0"

TOP REINFORCING
OPERATING LEVEL FLOOR SLAB REINFORCING PLANS NTS

- NOTES: 1. PROVIDE ADDITIONAL TOP & BOTT REINF. AROUND ALL OPENINGS AS CALLED FOR ON SHEET -9
2. ALL #4 TOP BARS AT END SUPPORTS SHALL BE TURNED INTO SUPPORTING WALL SEE SECTION -1 THIS SHEET

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

NUS CONSULTING ENGINEERS CORPORATION
910 CLOPPER ROAD GAITHERSBURG, MD. 20878
301-258-6000

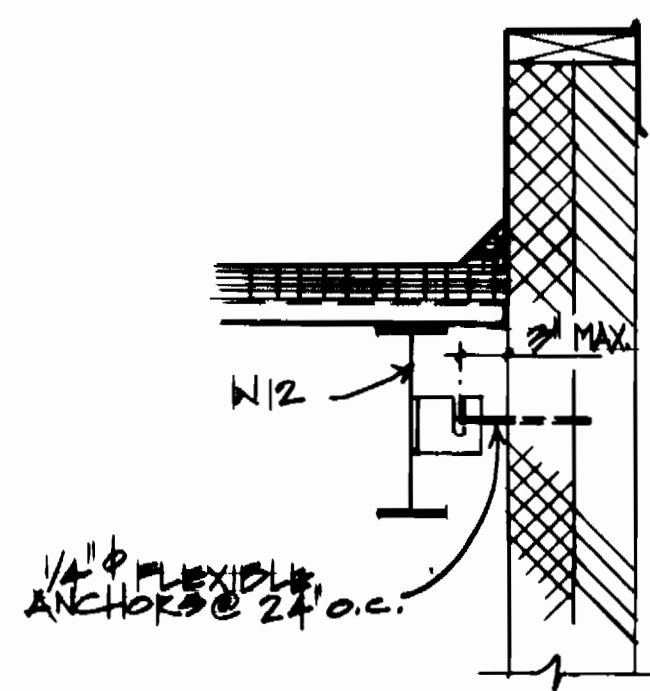


DES: <i>JK</i>	BY: NO.	REVISION	DATE
DRN: <i>KIL</i>			
CHK: <i>JK</i>			
DATE: 7/25/84			

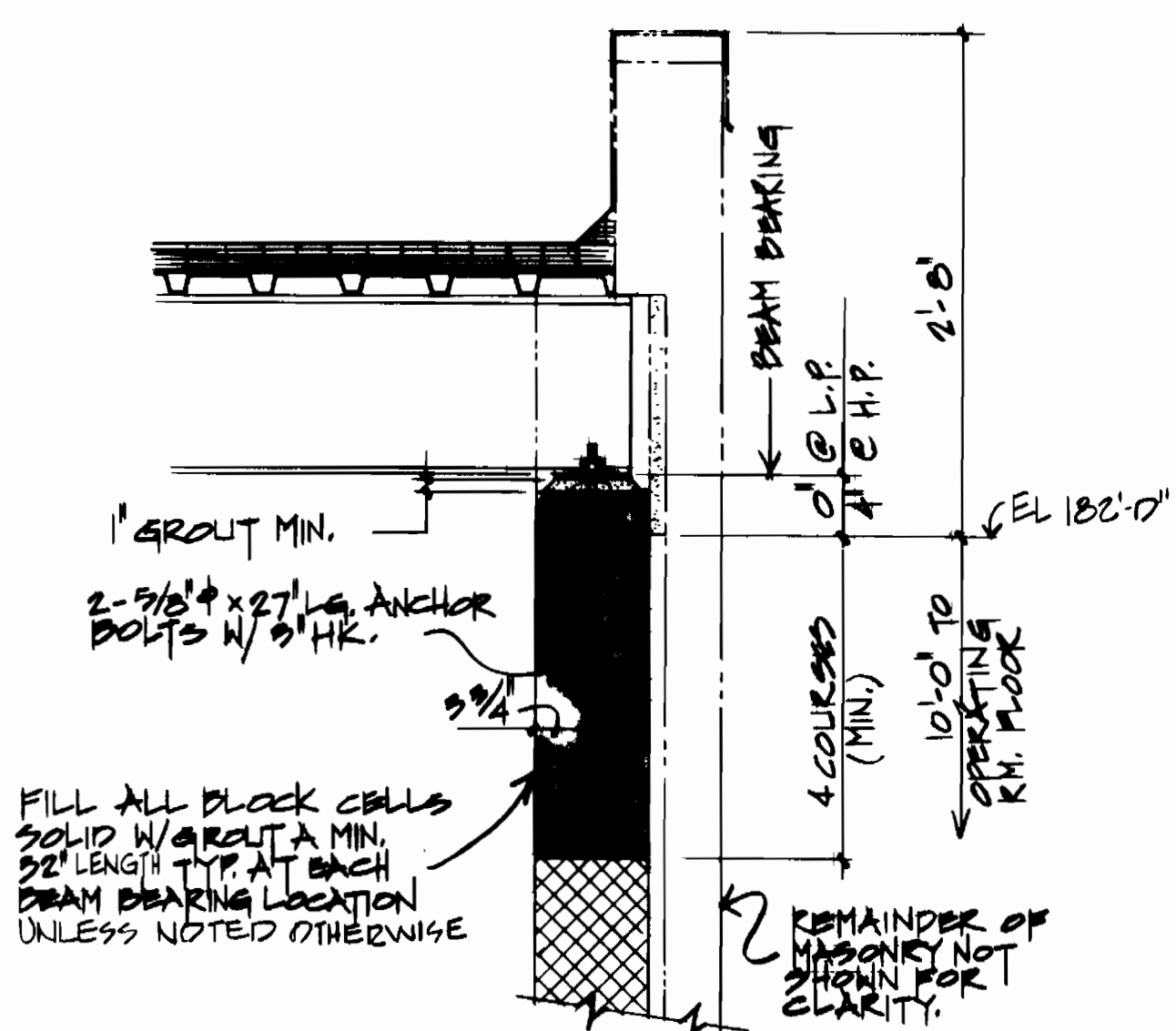
STRUCTURAL SECTIONS & DETAILS
600'S SCALE MAP NO. 48 BLOCK NO. 2

DORSEY RUN PUMPING STATION
ELECTION DISTRICT GUILFORD NO.6
PROJECT NO. S-6071
HOWARD COUNTY, MARYLAND.
CONTRACT NO. 678-5

SCALE AS SHOWN
SHEET 12 OF 19

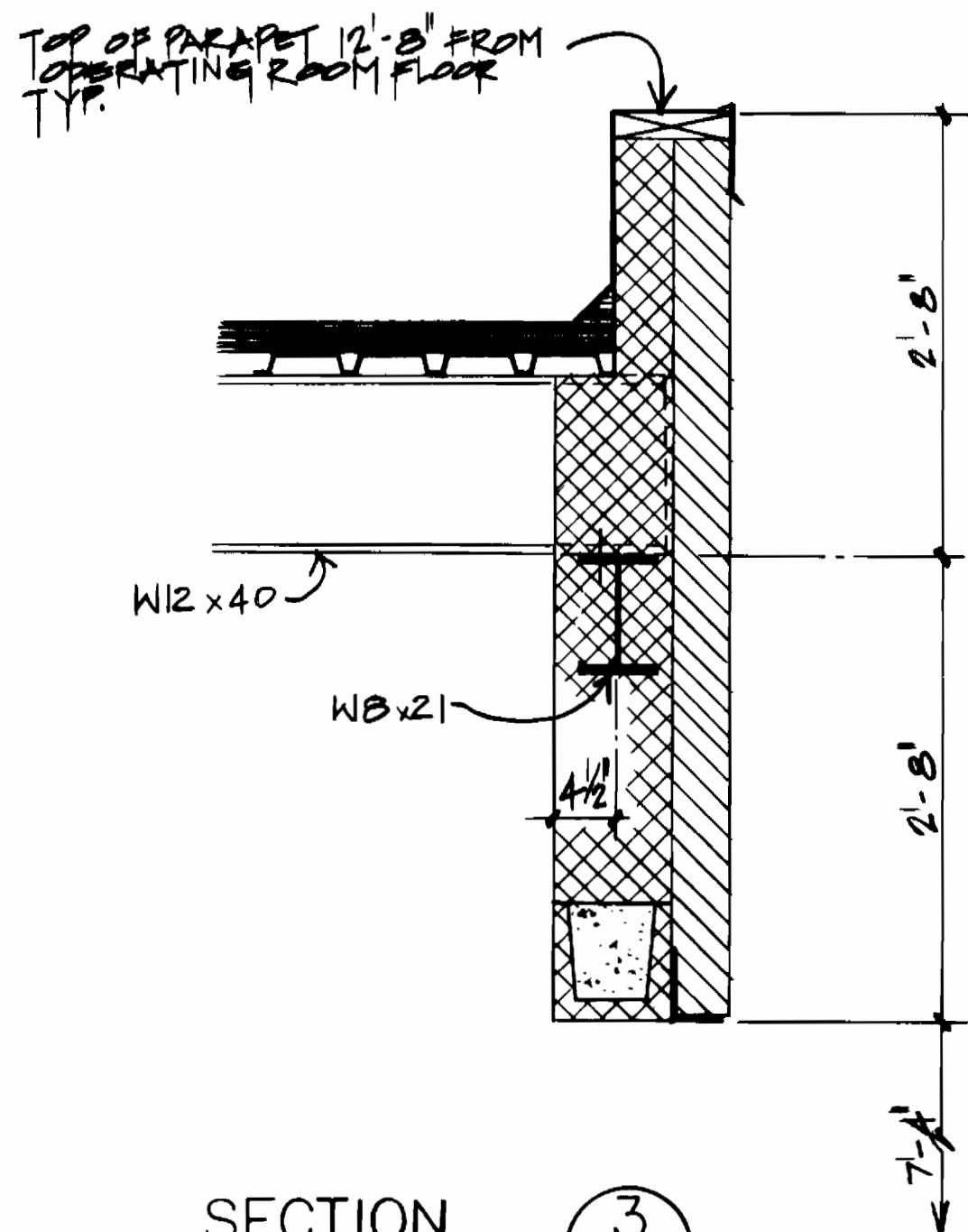


SECTION 1
SCALE: 1"=1'-0"

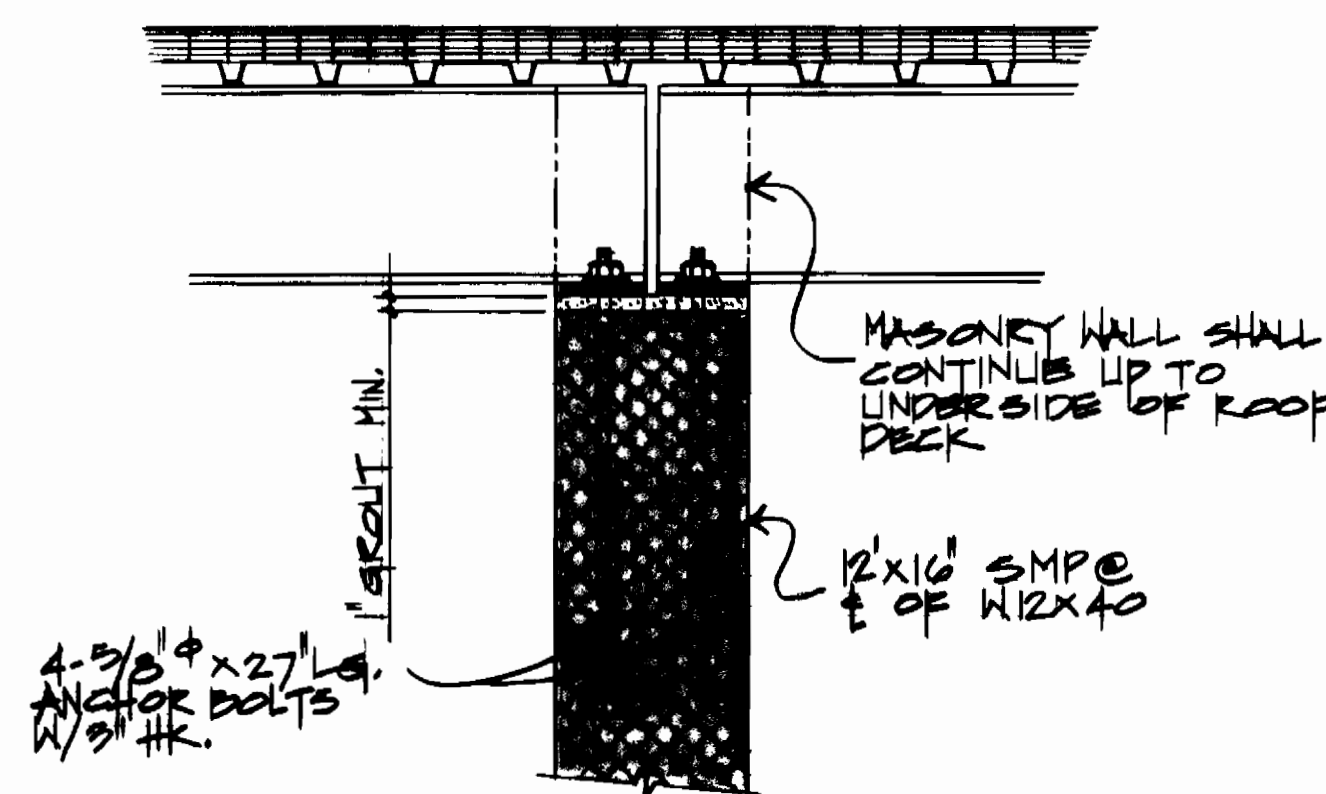


FILL ALL BLOCK CELLS SOLID W/ GROUT A MIN. 22' LENGTH TYP. AT EACH DRAIN BEARING LOCATION UNLESS NOTED OTHERWISE

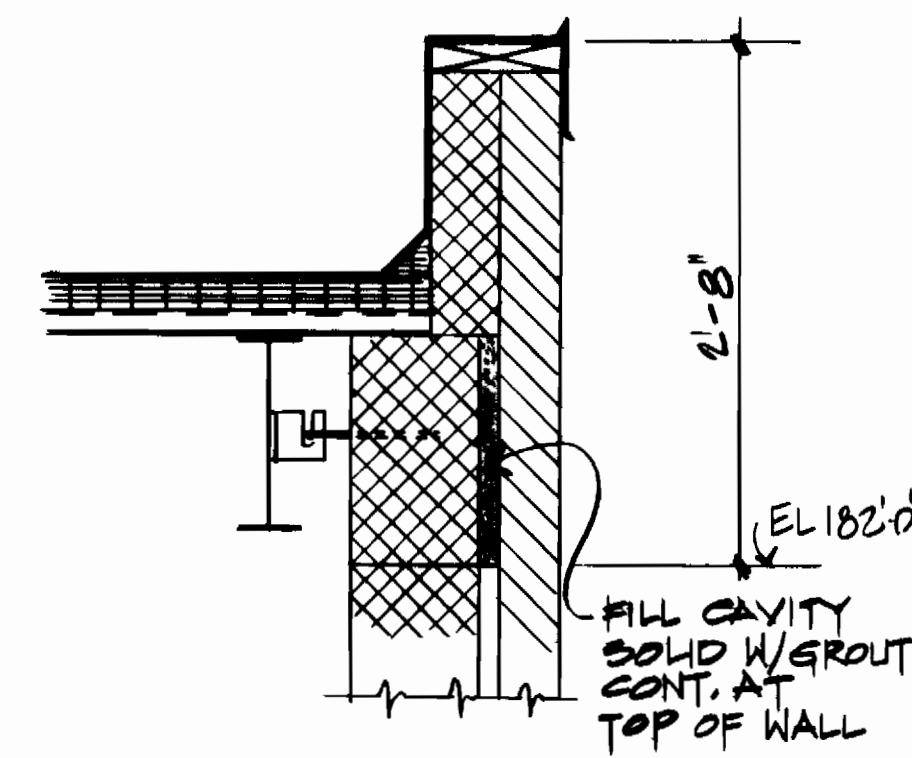
SECTION 2
SCALE: 1"=1'-0"



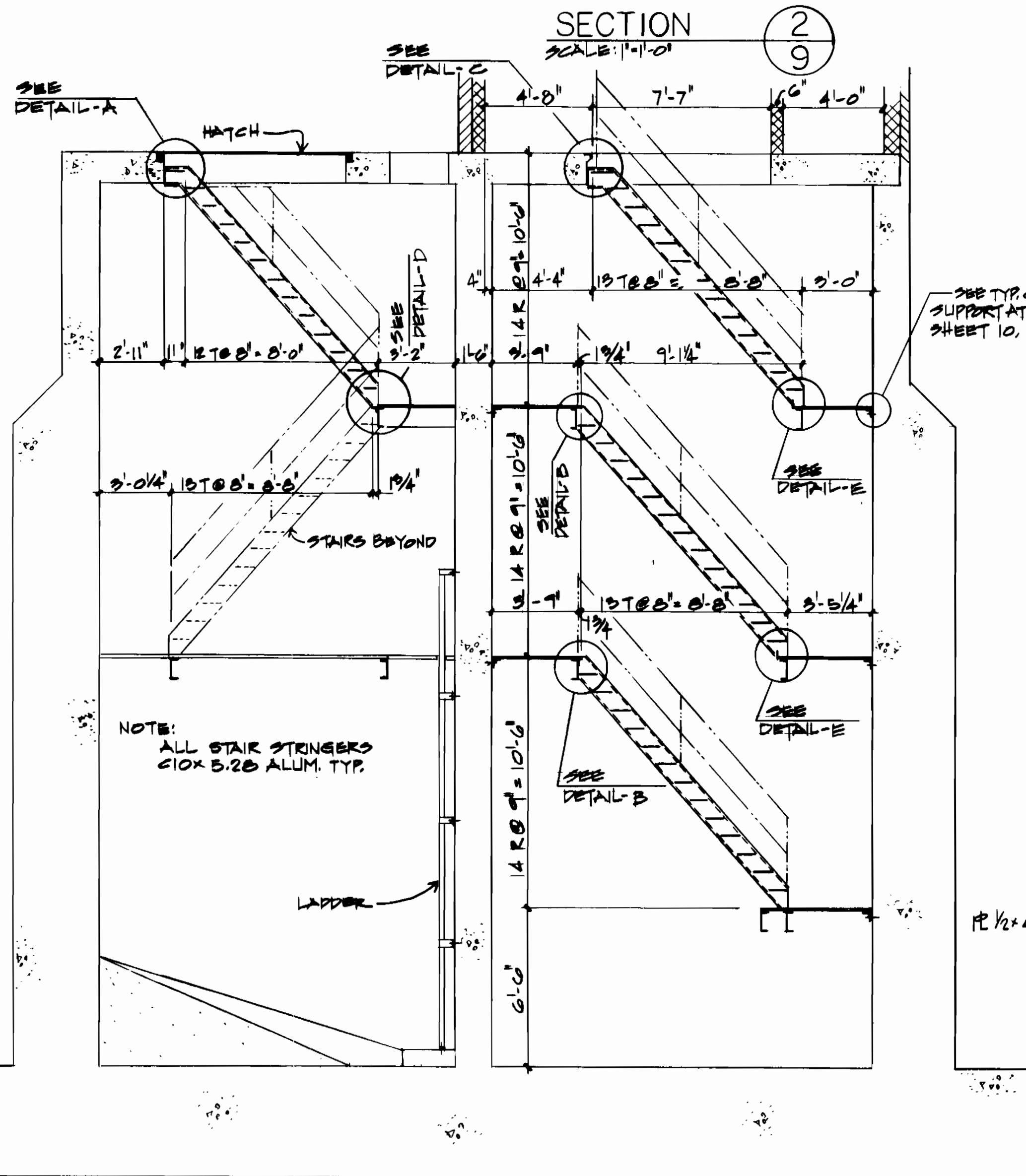
SECTION 3
SCALE: 1"=1'-0"



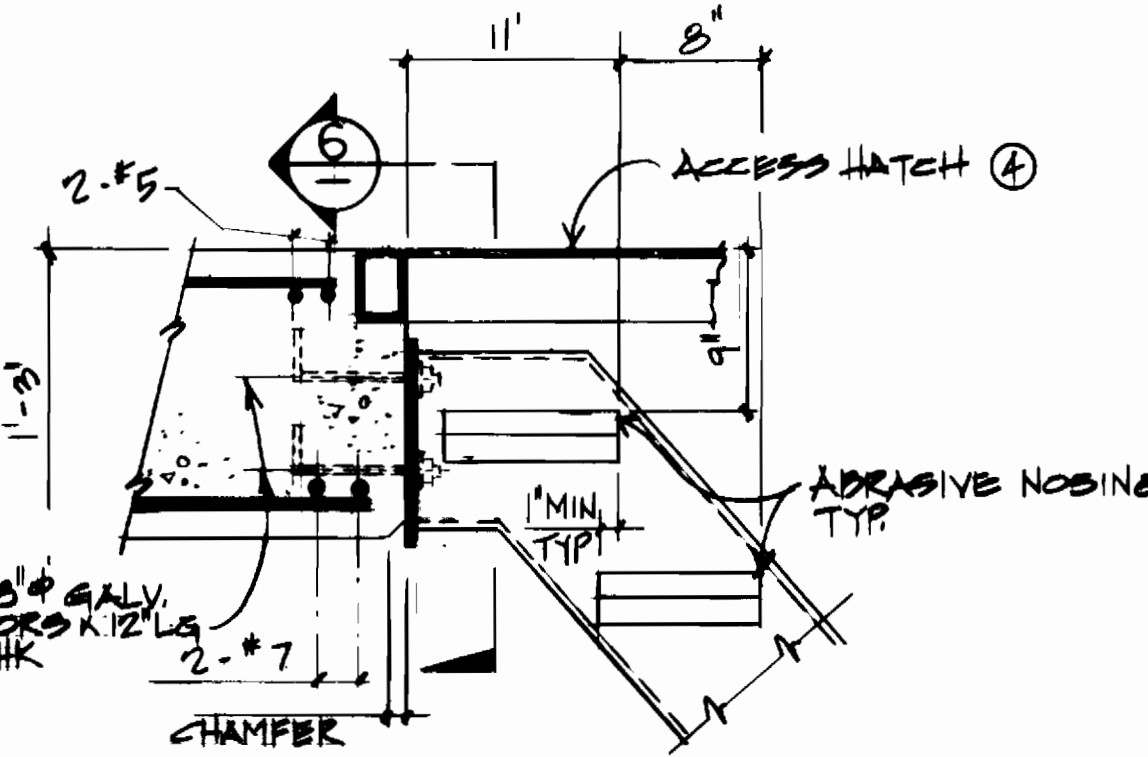
SECTION 4
SCALE: 1"=1'-0"



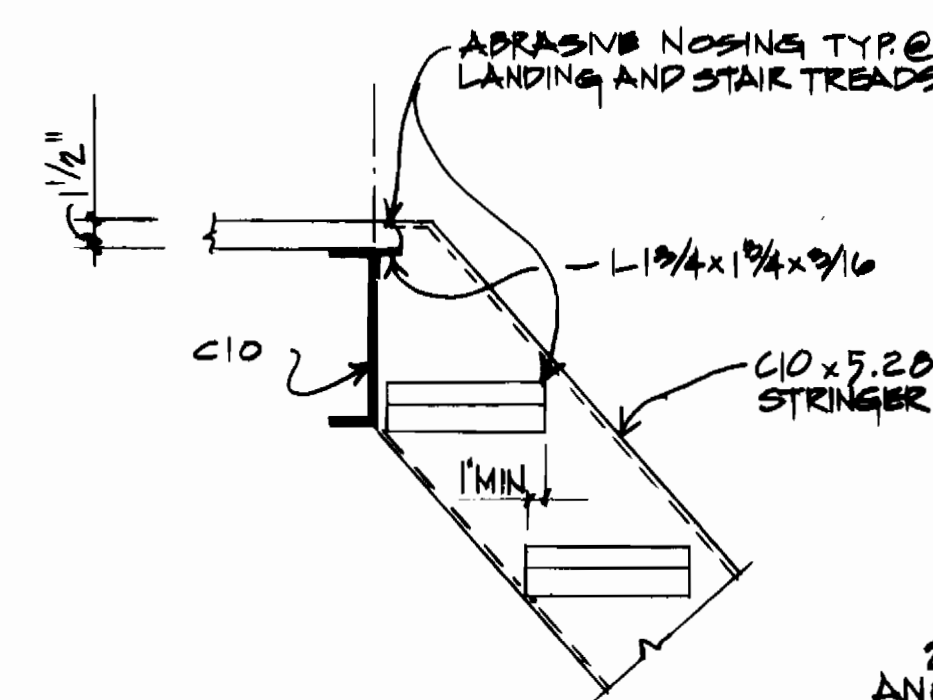
SECTION 5
SCALE: 1"=1'-0"



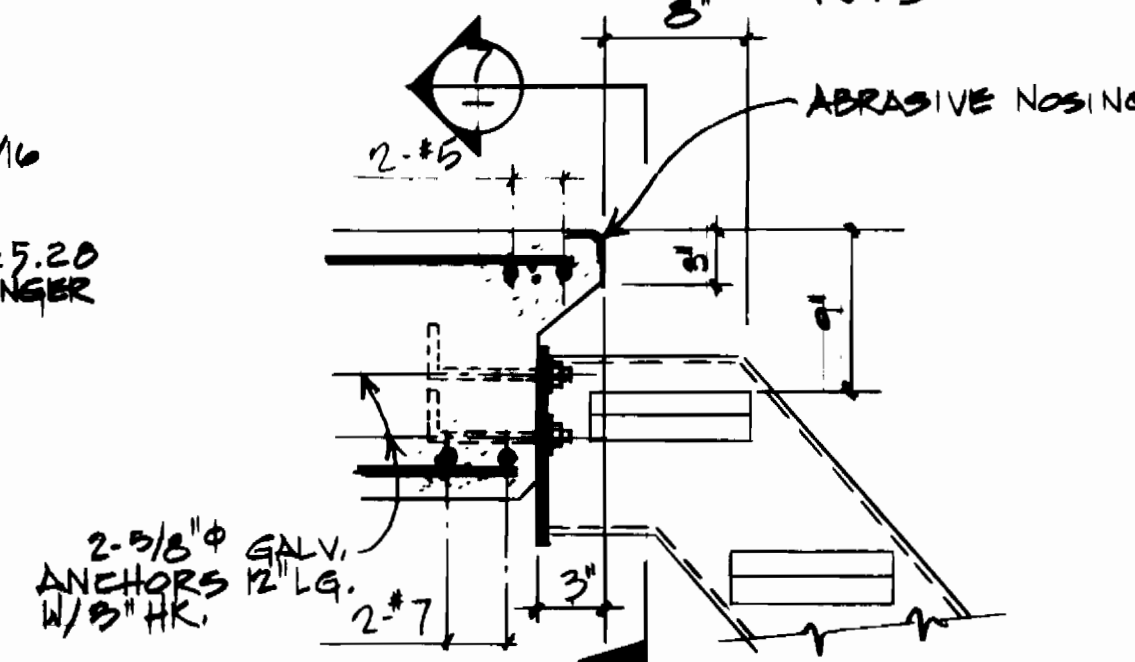
SECTION 10
SCALE: 1/4"=1'-0"



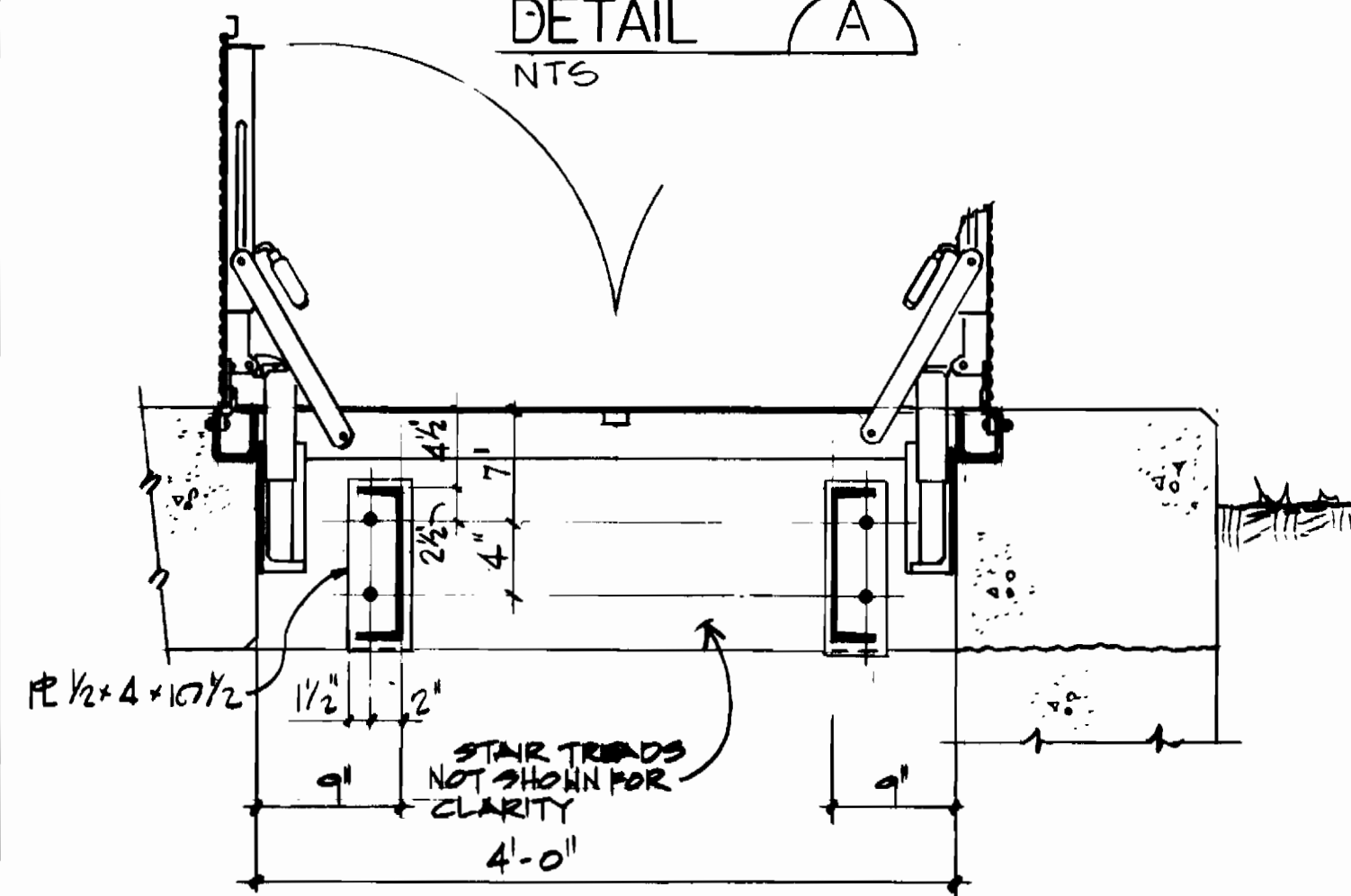
DETAIL A
NTS



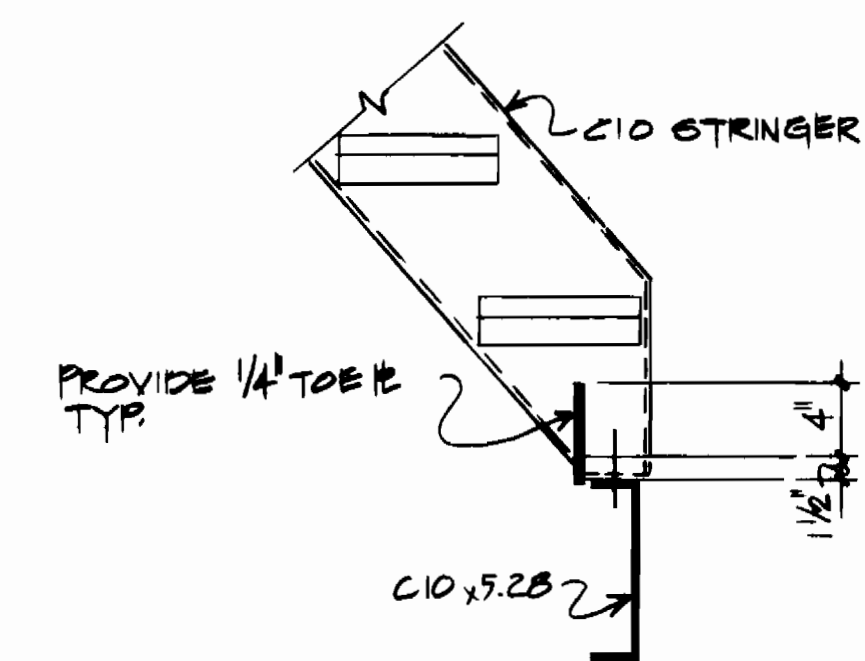
DETAIL B
SCALE: 1/2"=1'-0"



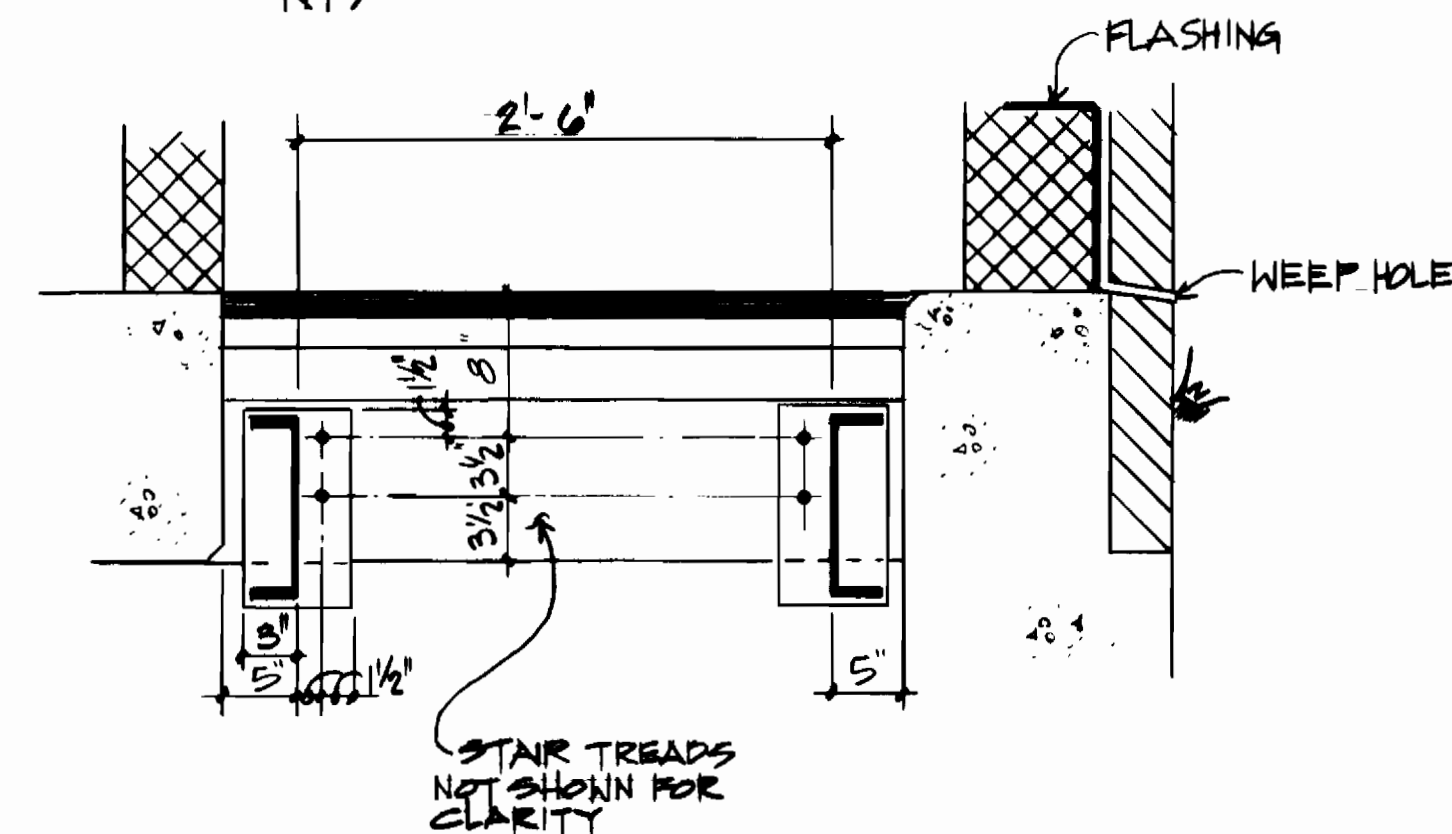
DETAIL C
NTS



(SEE DETAIL A)
SECTION 6
NTS



DETAIL E
NTS



(SEE DETAIL C)
SECTION 7
NTS

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works: *Robert M. Reinger* 1-25-84
 Chief, Bureau of Engineering: *John J. Brown* 7/25/84
 Chief, Bureau of Utilities: *Robert M. Reinger* 1-25-84
 Chief, Utilities Division: *John J. Brown* 7/25/84

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 910 CLOPPER ROAD GAITHERSBURG, M.D. 20878
 301-258-6000



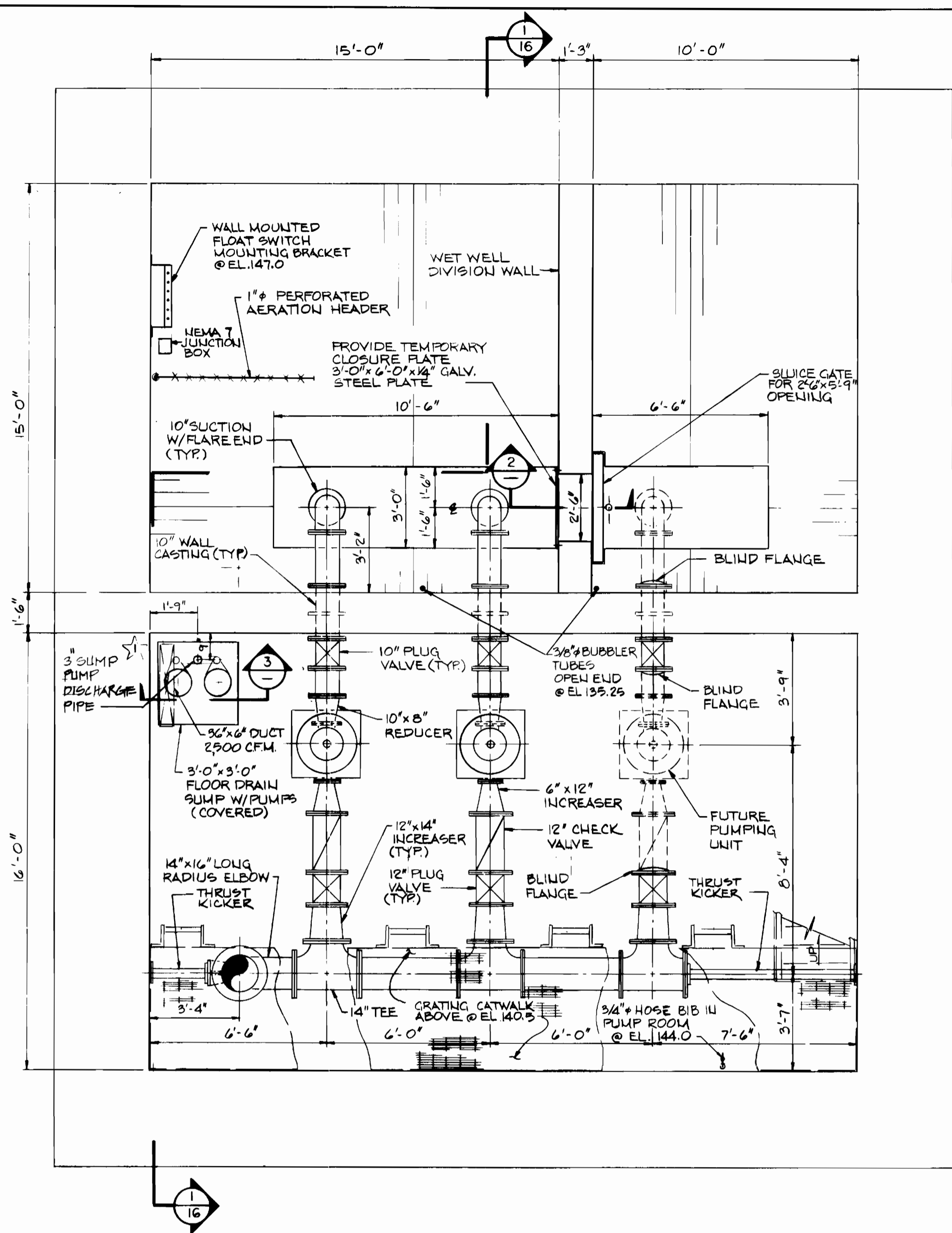
DES: <i>JR</i>			
DRN: <i>JR</i>			
CHK: <i>JR</i>			
DATE: 7/25/84	BY: NO.	REVISION	DATE

STRUCTURAL
SECTIONS & DETAILS

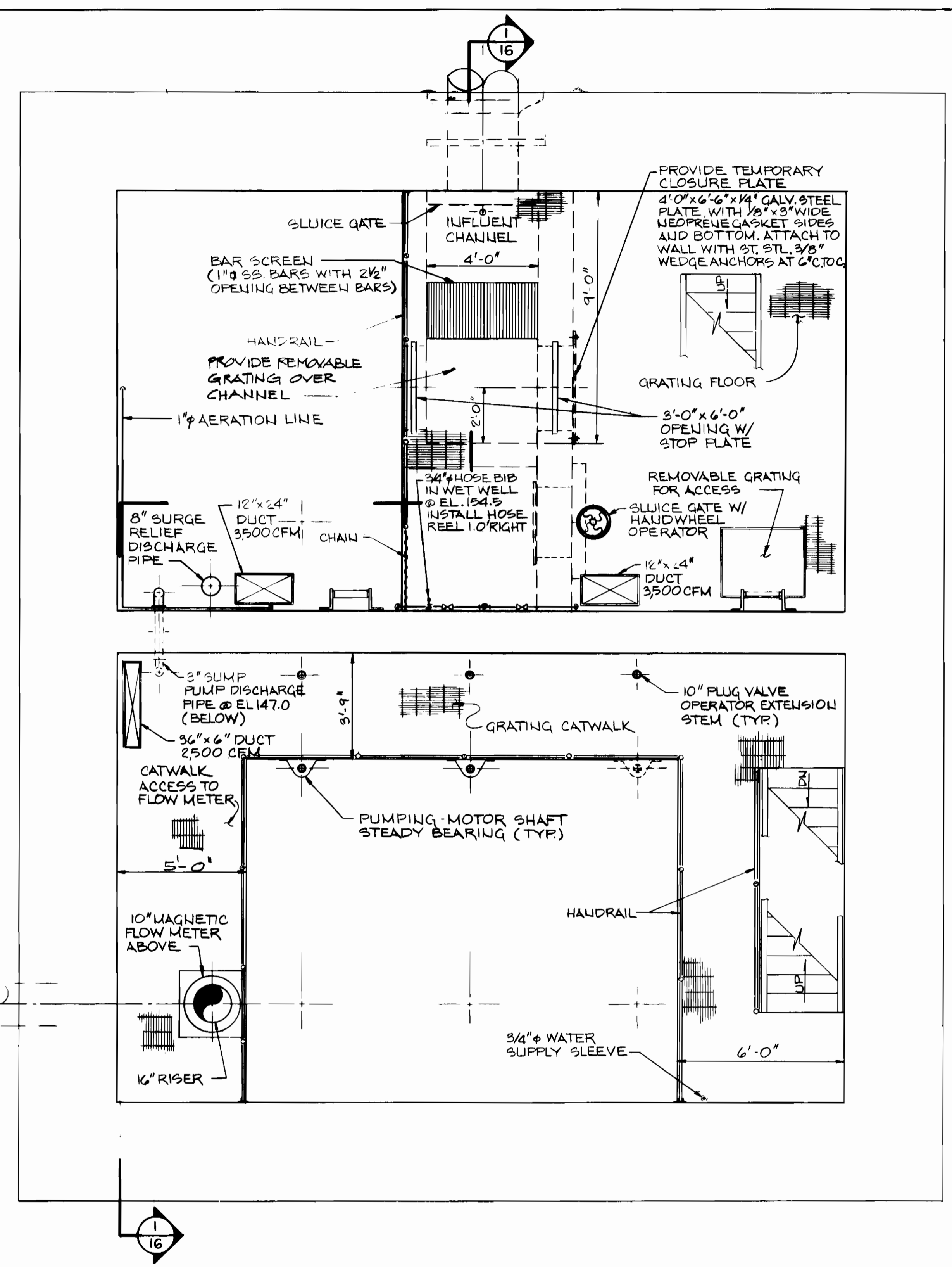
DORSEY RUN PUMPING STATION
 ELECTION DISTRICT GUILFORD NO.6 HOWARD COUNTY, MARYLAND
 PROJECT NO S-6071 CONTRACT NO. 678-S

SCALE AS SHOWN
 SHEET 2 OF 19

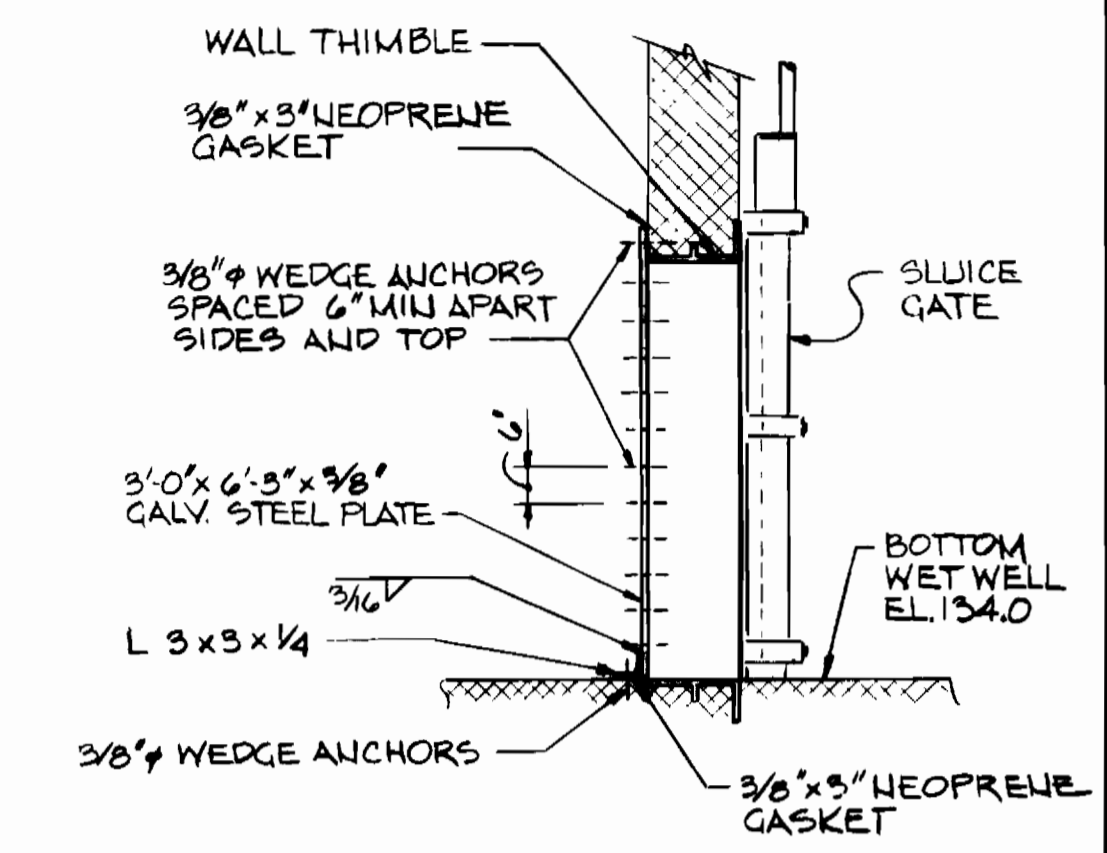
600' SCALE MAP NO. 4B BLOCK NO. 2



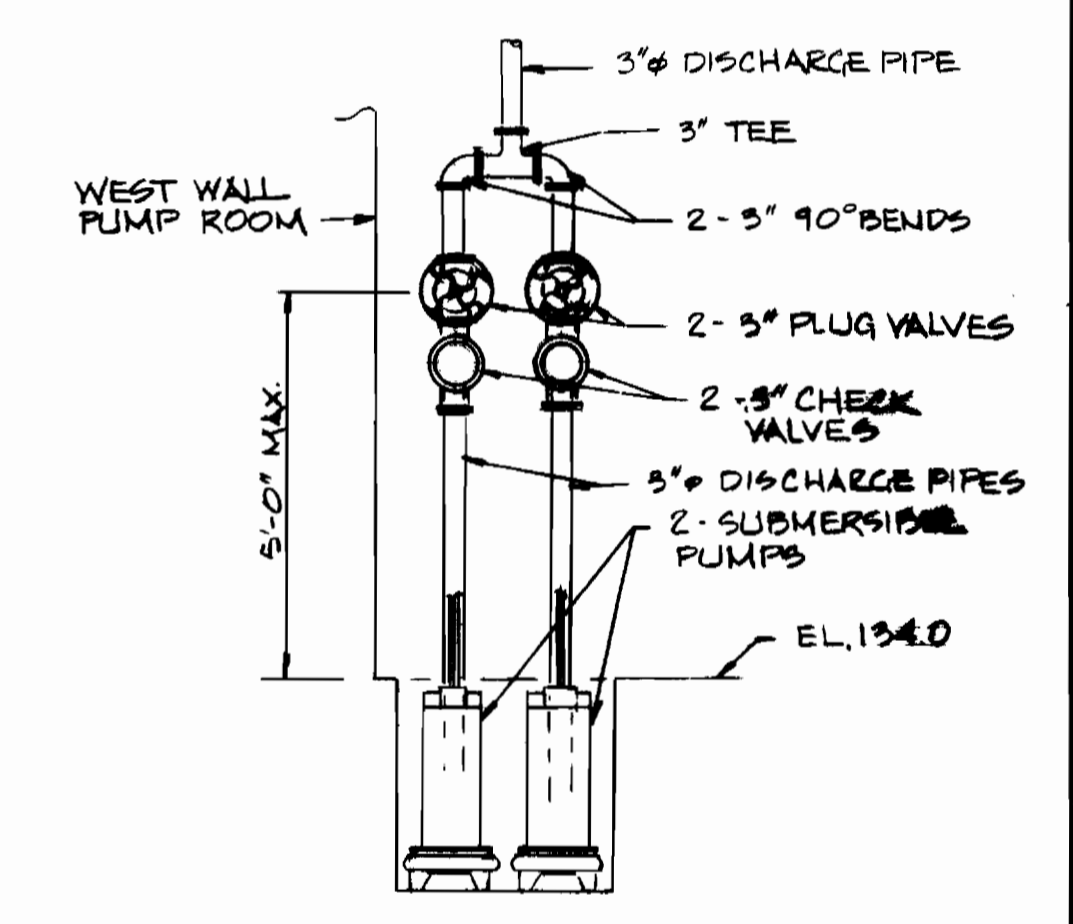
PLAN
BOTTOM ELEV. 134'-0"
SCALE: 3/8" = 1'-0"



PLAN
INTERMEDIATE ELEV. 151'-0"
SCALE: 3/8" = 1'-0"



SECTION 2
SCALE: 3/8" = 1'-0"



SECTION 3
SCALE: 3/8" = 1'-0"



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Richard M. ... 7/25/84
DIRECTOR OF PUBLIC WORKS DATE

Allen S. Brown 7/25/84
CHIEF-UTILITIES DIVISION DATE

NUS CONSULTING ENGINEERS
CORPORATION
910 CLOPPER ROAD GAITHERSBURG, MD.
301-258-6000 20878



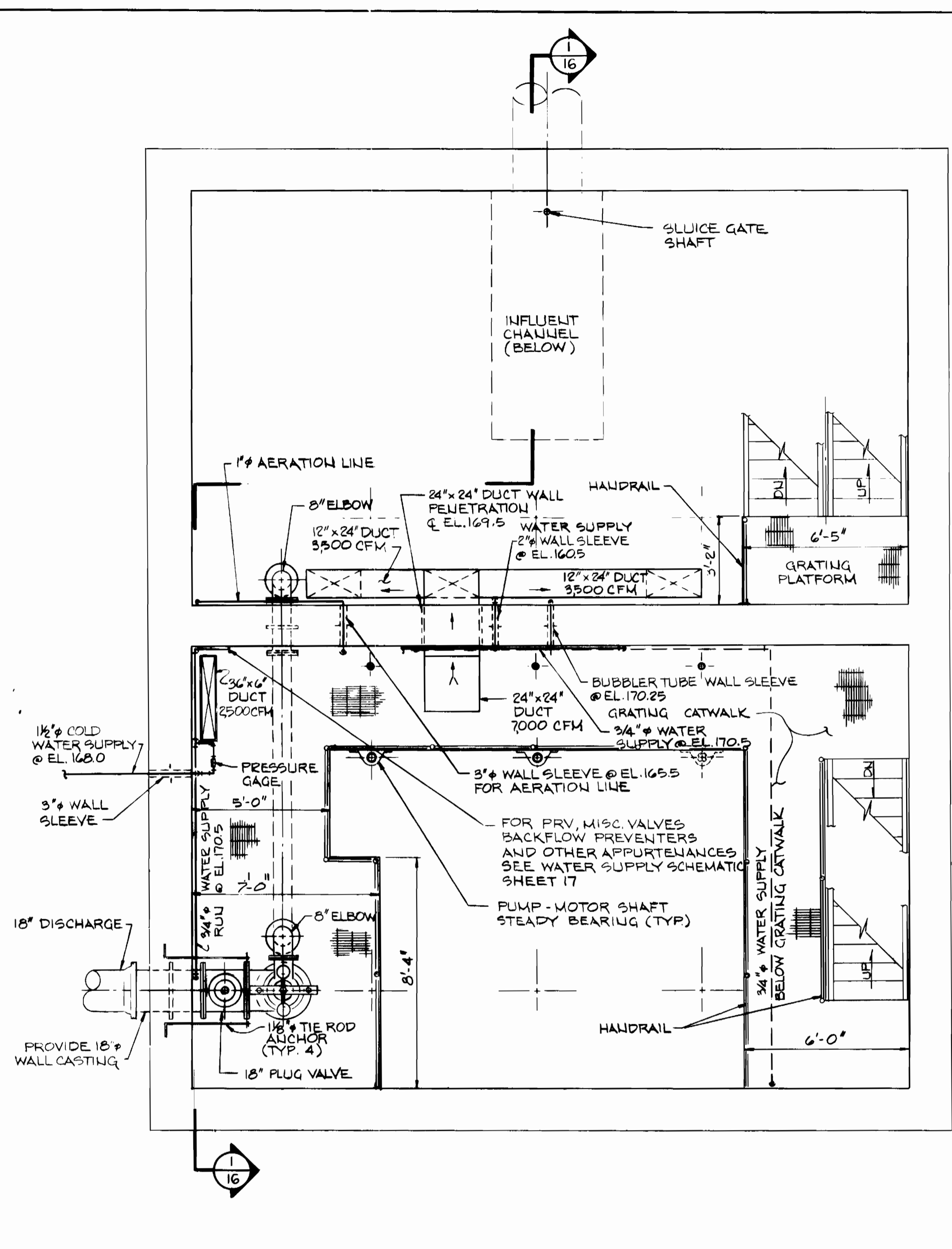
DES:	
DRN:	J. Teac
CHK:	
DATE:	7/25/84
BY:	JT
NO.:	1
REVISION:	ADD DUPLEX SUMP PUMP AND SECT. 3
DATE:	8/1/84

MECHANICAL
PUMP ROOM & WET WELL
PIPING AND EQUIPMENT
TYPICAL SECTION

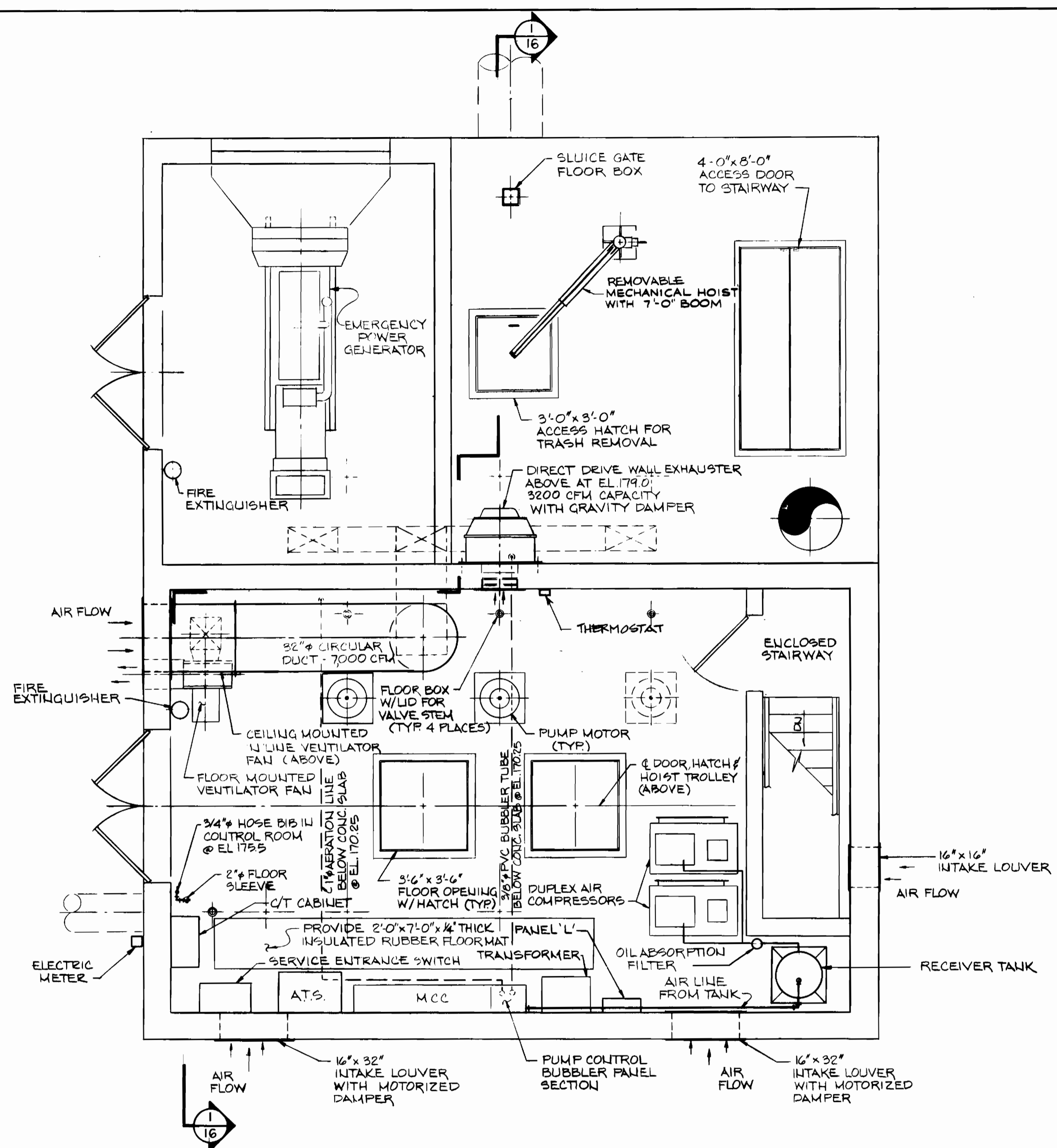
600' SCALE MAP NO. 48 BLOCK NO. 2

DORSEY RUN PUMPING STATION
ELECTION DISTRICT GUILFORD NO. 6 HOWARD COUNTY, MARYLAND
PROJECT NO. S-6071 CONTRACT NO. 678-5

SCALE AS SHOWN
SHEET 14 OF 19



PLAN
 INTERMEDIATE ELEV. 161'-6"
 SCALE: 3/8"=1'-0"



PLAN
 MAIN FLOOR ELEV. 172'-0"
 SCALE: 3/8"=1'-0"



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

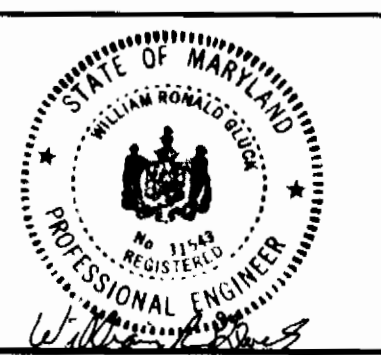
Robert M. Brown 7-25-84
 DIRECTOR OF PUBLIC WORKS DATE

William J. Brown 7/25/84
 CHIEF - BUREAU OF UTILITIES DATE

William J. Brown 7/25/84
 CHIEF, BUREAU OF ENGINEERING DATE

William J. Brown 7/25/84
 CHIEF-UTILITIES DIVISION DATE

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 CORPORATION
 910 CLOPPER ROAD GAITHERSBURG, MD. 20878
 301-258-6000



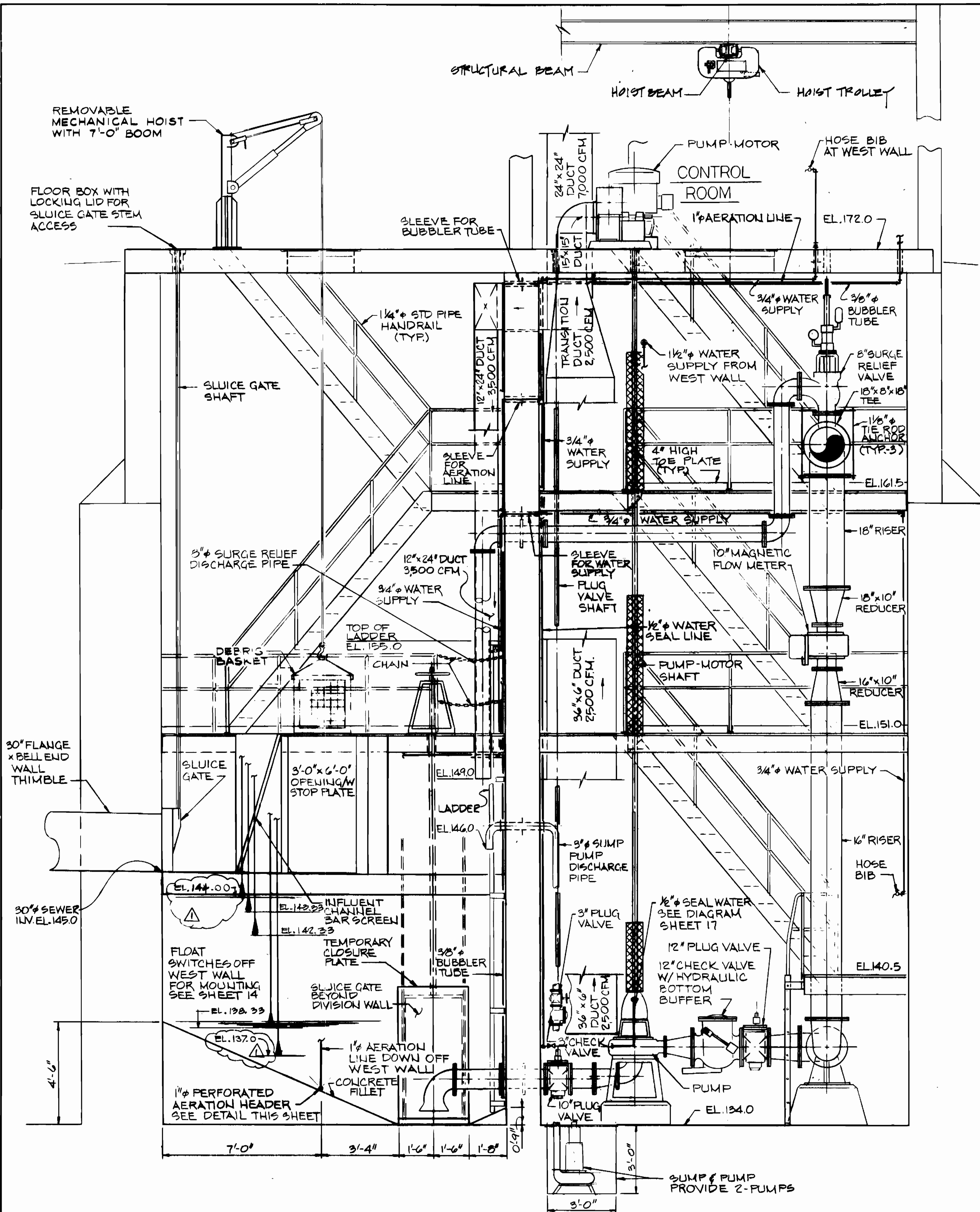
DES:	
DRN: J.T.K.	
CHK:	
DATE: 7/24/84	
BY NO.	
REVISION	
DATE	

MECHANICAL
 PUMP ROOM & WET WELL
 CONTROL ROOM & GENERATOR ROOM
 PIPING AND EQUIPMENT
 PLANS

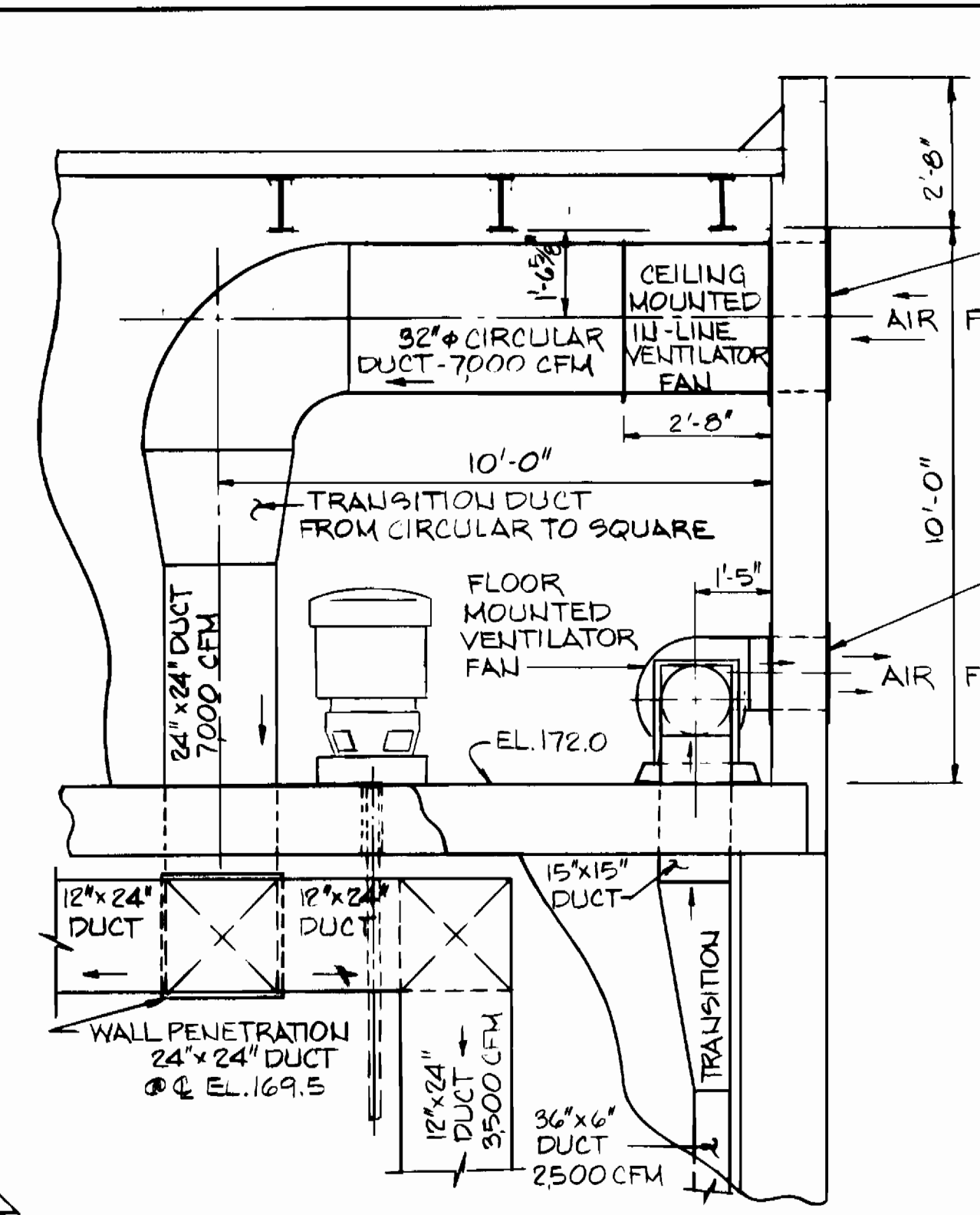
600' SCALE MAP NO. 48 BLOCK NO. 2

DORSEY RUN PUMPING STATION
 ELECTION DISTRICT GUILFORD NO.6 HOWARD COUNTY, MARYLAND
 PROJECT NO. 5-6071 CONTRACT NO. 678-5

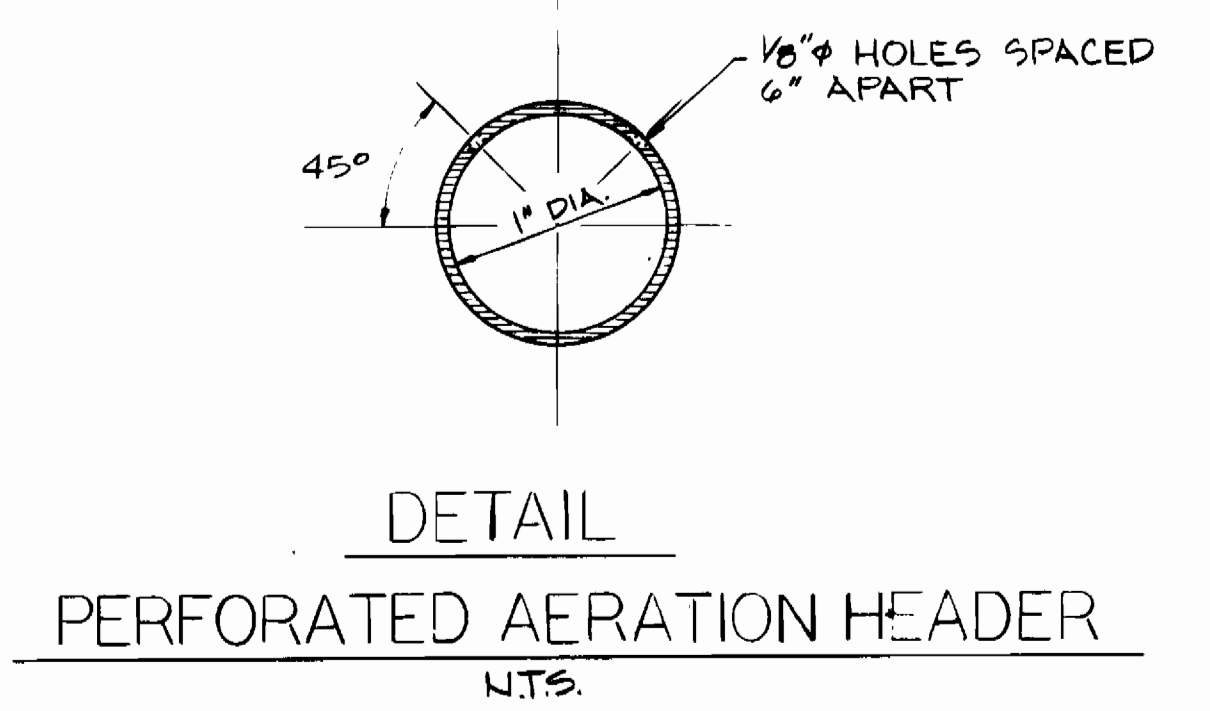
SCALE AS SHOWN
 SHEET 12 OF 14



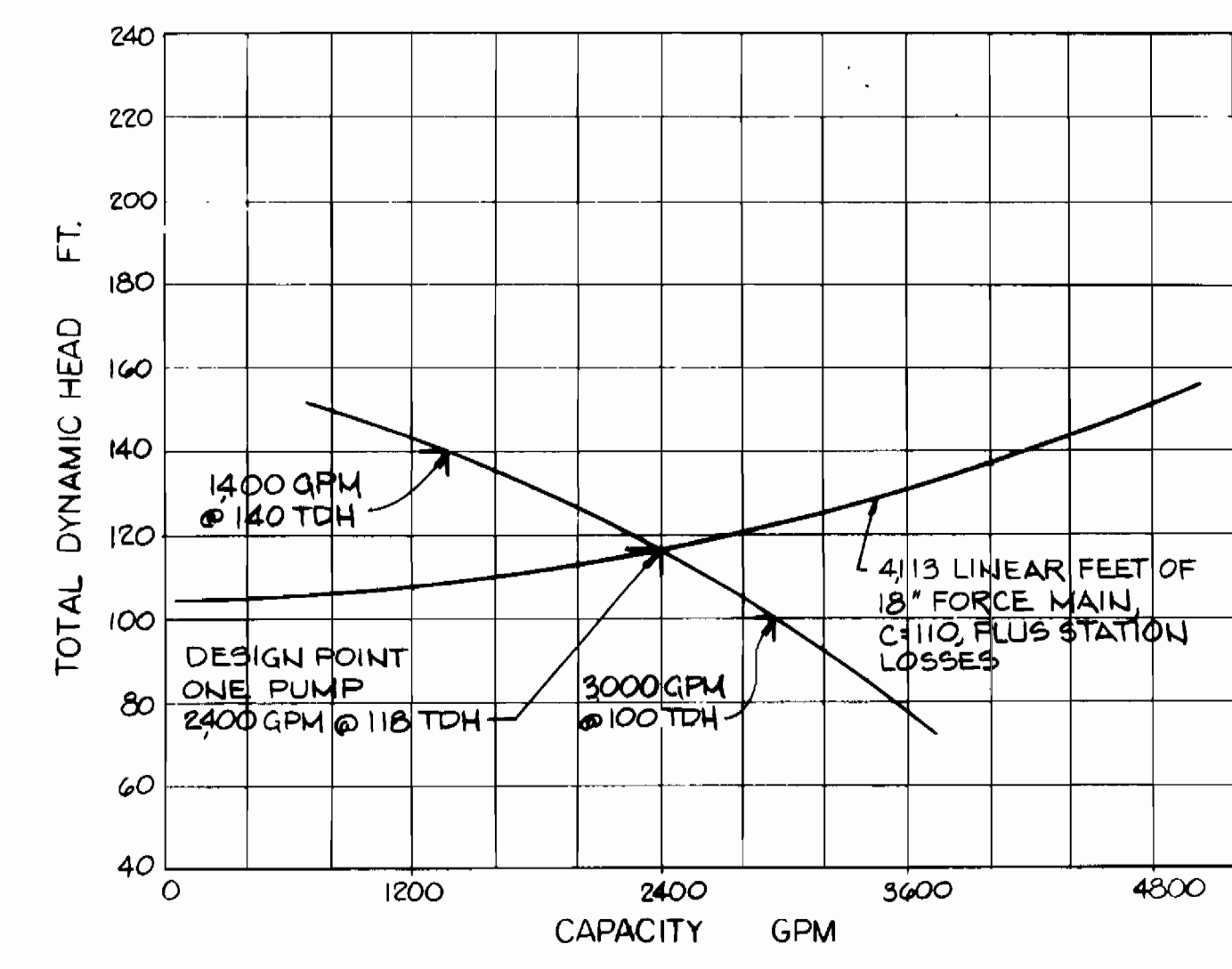
SECTION 1
SCALE: 3/8"=1'-0"



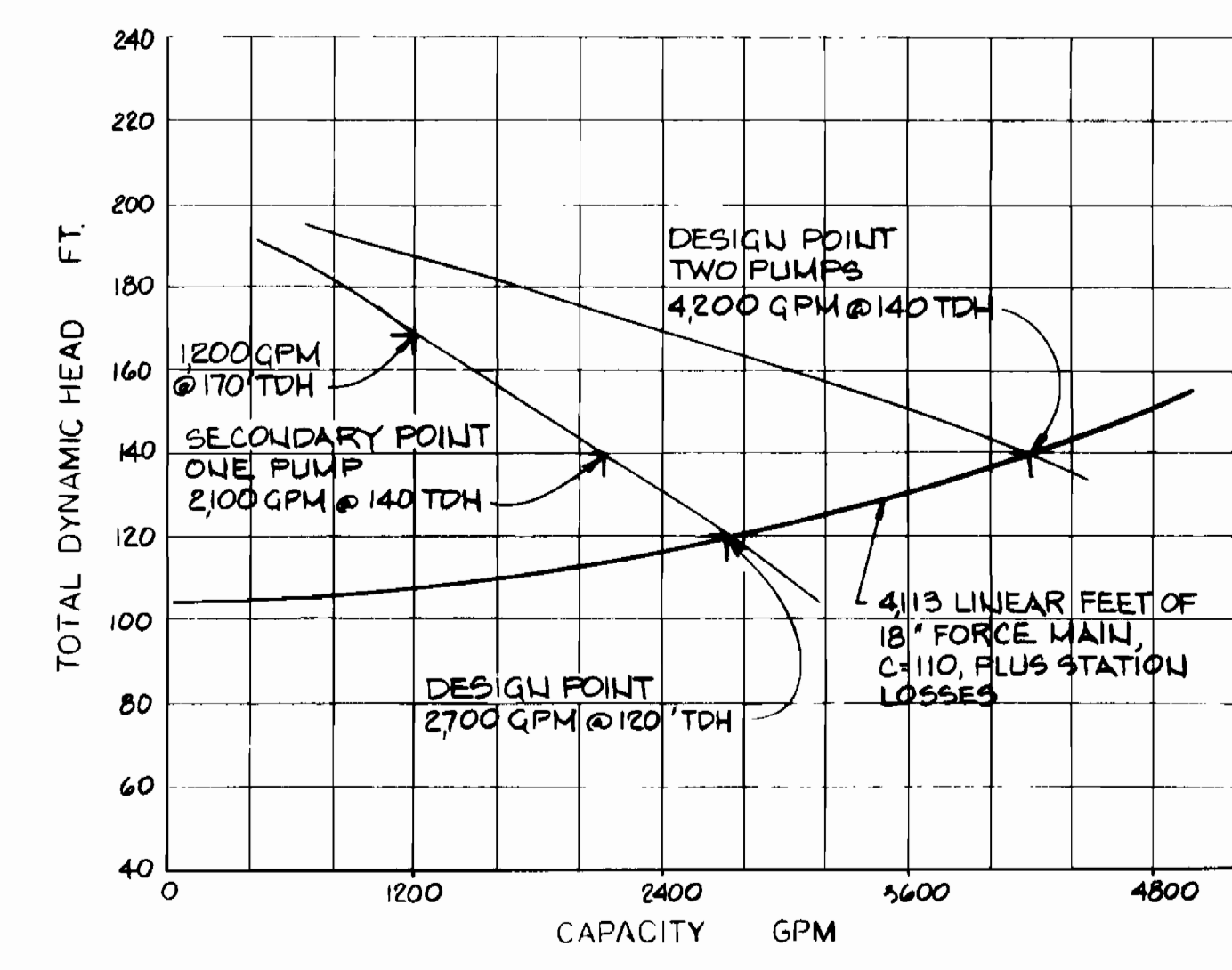
PARTIAL SECTION
NW CORNER OF CONTROL ROOM
SCALE: 3/8"=1'-0"



DETAIL
PERFORATED AERATION HEADER
N.T.S.



INITIAL SERVICE AREA DISCHARGE
(THRU YEAR 2000, APPROX.)



ULTIMATE SERVICE AREA DISCHARGE
SYSTEM CURVE

- EL.149.75 OPEN END WET WELL VENT DUCT
- EL.149.00 OPEN END SURGE RELIEF PIPE
- EL.145.00 INVERT 30" SEWER
- EL.144.00 HIGH LEVEL ALARM
- EL.143.33 LAG PUMP STARTS
- EL.142.83 LEAD PUMP STARTS
- EL.139.33 LOW LEVEL RESTORE
- EL.138.33 LEAD & LAG PUMPS STOP
- EL.138.0 OPEN END PUMP ROOM VENT. DUCT
- EL.137.33 IMPELLER & DISCHARGE PIPING
- EL.137.0 LOW LEVEL ALARM & PUMP SHUT OFF
- EL.135.0 BUBBLER TUBE OPEN END
- EL.134.0 WET WELL BOTTOM

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert M. Brumby 7-25-04
DIRECTOR OF PUBLIC WORKS DATE

Allen L. Brown 7/25/04
CHIEF UTILITIES DIVISION DATE

NUS CONSULTING ENGINEERS
CORPORATION
910 CLOPPER ROAD GAITHERSBURG, MD. 20878



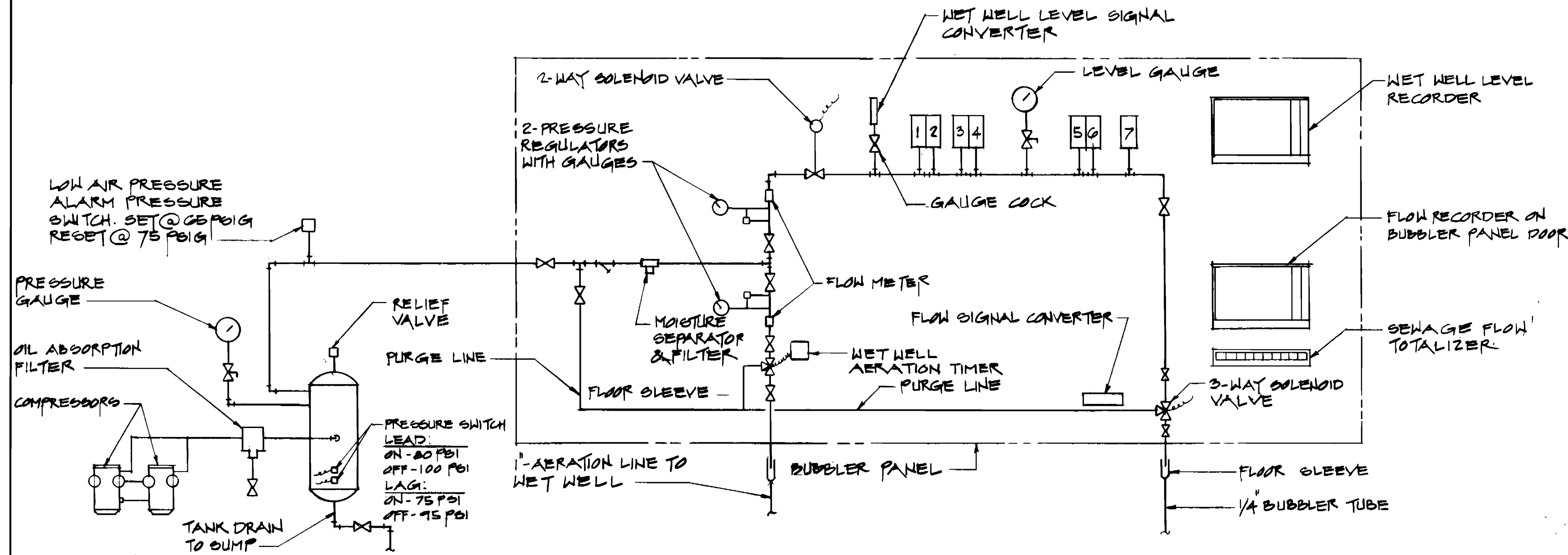
DES:	
DRN:	J. Knecht
CHK:	
DATE:	7/25/04
BY:	
NO.:	
REVISION:	REV. FLOAT LEVEL, ADD & PUMP ELEV. 7/25/04

MECHANICAL
PUMP ROOM & WET WELL
PIPING AND EQUIPMENT
TYPICAL SECTION

600' SCALE MAP NO. 48 BLOCK NO. 2

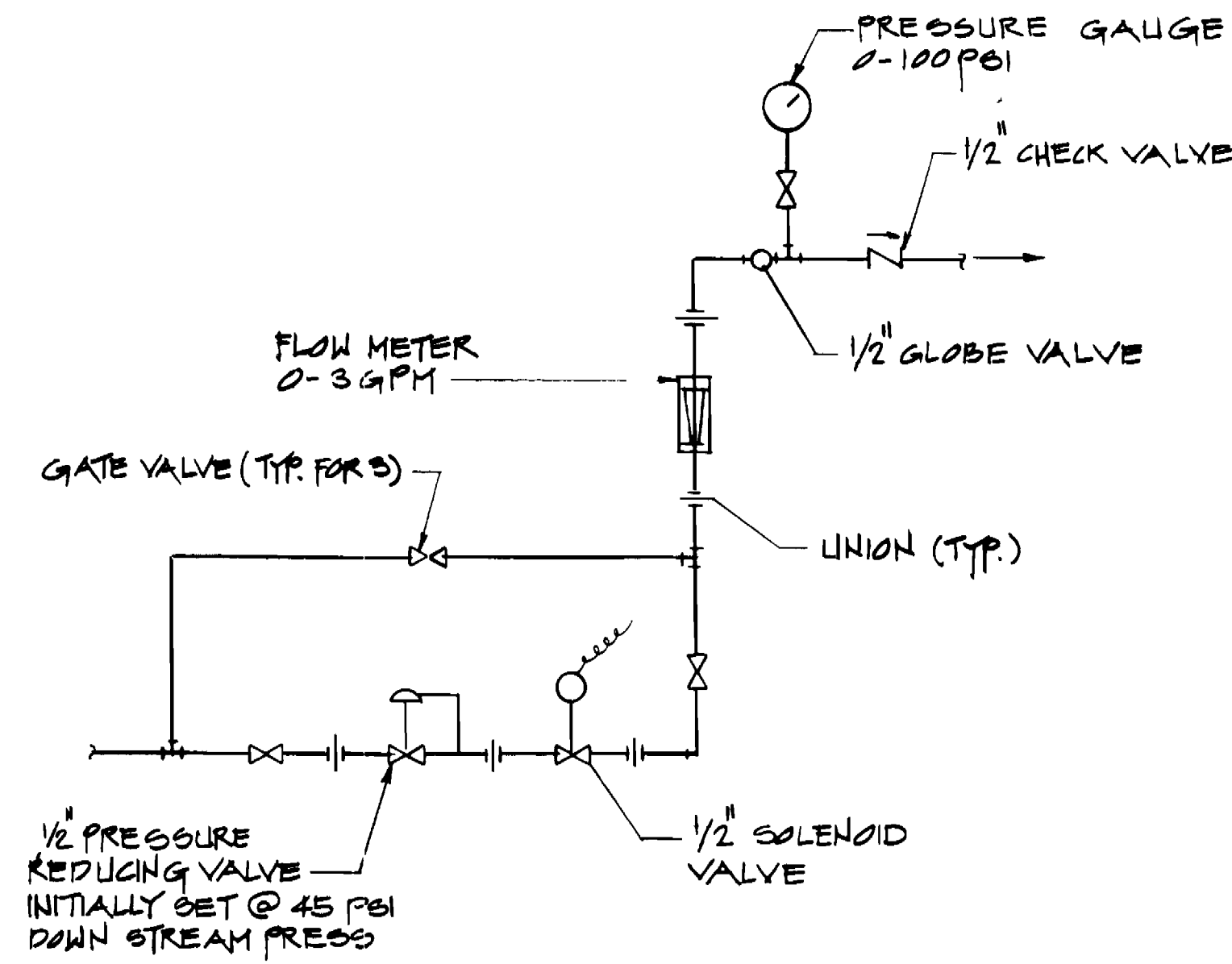
DORSEY RUN PUMPING STATION
ELECTION DISTRICT GUILFORD NO. 6 HOWARD COUNTY, MARYLAND
PROJECT NO. S-6071 CONTRACT NO. 678-S

SCALE AS SHOWN
SHEET 16 OF 19

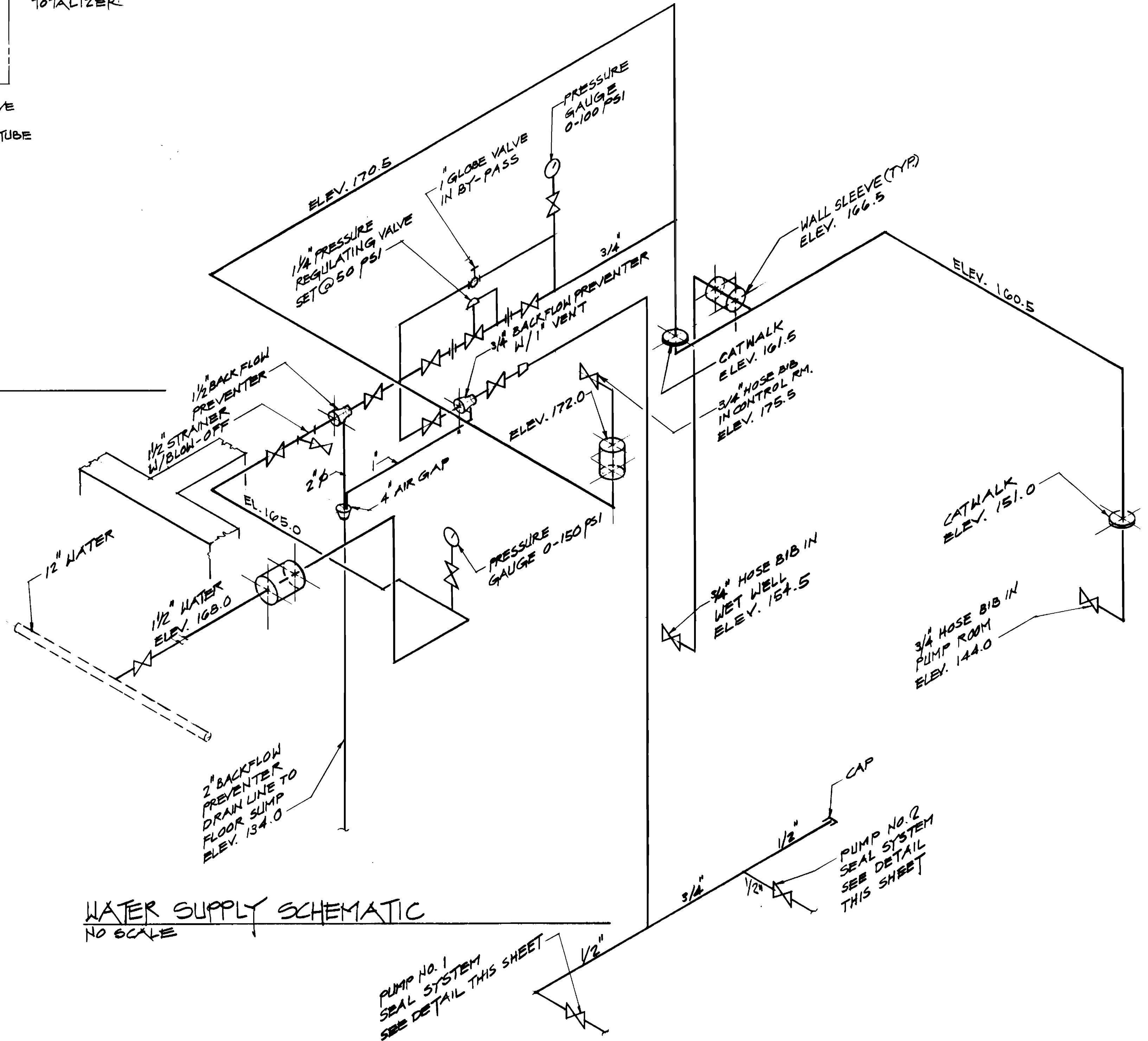


- LEGEND:**
- 1 - LEAD PUMP START
 - 2 - LEAD PUMP STOP
 - 3 - LAG PUMP START
 - 4 - LAG PUMP STOP
 - 5 - LOW LEVEL ALARM & PUMP CUT OFF
 - 6 - LOW LEVEL RESTORE
 - 7 - HIGH LEVEL ALARM

AIR SYSTEM DIAGRAM
NO SCALE



SEALING WATER SYSTEM DETAIL
NO SCALE



WATER SUPPLY SCHEMATIC
NO SCALE

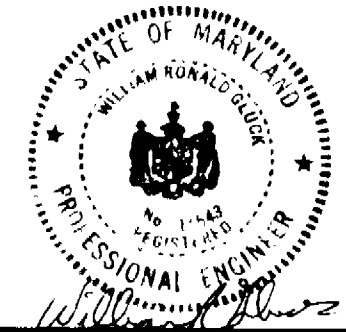
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert Bunting 7/25/84
DIRECTOR OF PUBLIC WORKS DATE

William S. Brown 7/25/84
CHIEF, BUREAU OF ENGINEERING DATE

William S. Brown 7/25/84
CHIEF - UTILITIES DIVISION DATE

NUS CONSULTING ENGINEERS
CORPORATION
910 CLOPPER ROAD GAITHERSBURG, MD. 20878
301-258-6000



DES:					
DRN:	G.A.				
CHK:					
DATE:	7/25/84	BY:	NO.	REVISION	DATE

MECHANICAL CONTROL DETAILS AND PIPING SCHEMATICS

600' SCALE MAP NO. 48 BLOCK NO. 2

DORSEY RUN PUMPING STATION
ELECTION DISTRICT GULFORD NO.6 HOWARD COUNTY MARYLAND
PROJECT NO. S-6071 CONTRACT NO. 678-S

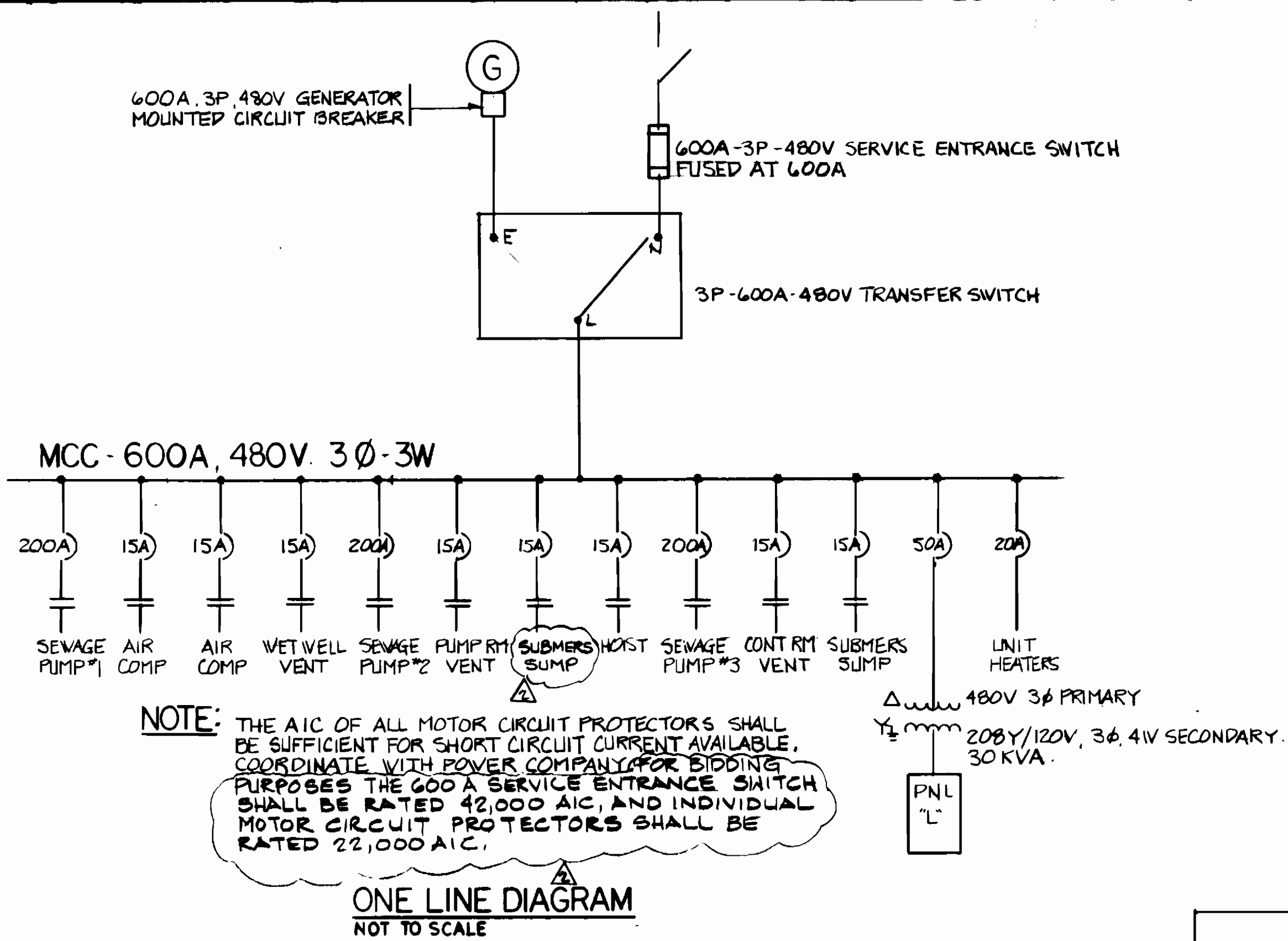
SCALE AS SHOWN
SHEET 17 OF 19

MOTOR CONTROL CENTER SCHEDULE

MCC, 480V, 600A, 3 Ø, 4 WIRE, MLO

CKT. NO.	MOTOR CKT. PROTECTOR ROLE	MOTOR HP	STARTER SIZE	MOTOR HP	DIVICES & ACCESS	CIRCUIT		SERVING
						WIRE	COND.	
1	3	200	5	125	**	3"3/0+1"6 GRD	2"	SEWAGE PUMP #1
2	3	15	1	5		3"12+1"12 GRD	1 1/2"	AIR COMP.
3	3	15	1	5				AIR COMP.
4	3	15	1	5				WET WELL VENT
5	3	200	5	125		3"3/0+1"6 GRD	2"	SEWAGE PUMP #2
6	3	15	1	1		3"12+1"12 GRD	1 1/2"	PUMP ROOM VENT
7	3	15	1	1				SUBMERS. SUMP
8	3	15	1	5.5				HOIST
9	3	200	-	-			2"	SEWAGE PUMP #3
10	3	15	1	3/4		3"12+1"12 GRD	1 1/2"	CONTROL RM. VENT.
11	3	15	1	1				SUBMERS SUMP
12	3	50	-	-		3"8	3/4"	TRANSFORMER
13	3	20	-	-		3"12+1"12 GRD	1 1/2"	UNIT HEATERS
14,15	3	20	-	-				SPARE
16-18	3	-	-	-				SPACE

* THERMAL-MAGNETIC MOLDED CASE CIRCUIT BREAKER ONLY.
 ** AS REQUIRED BY PUMP CONTROL SUPPLIER



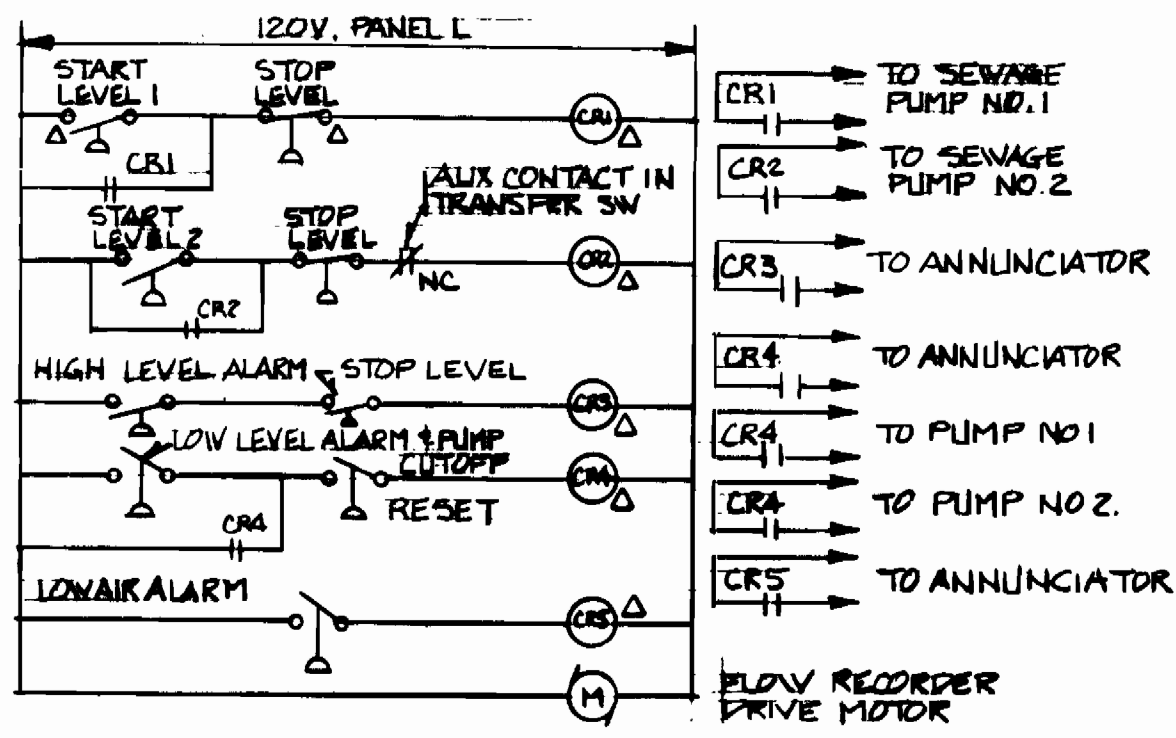
NOTE: THE AIC OF ALL MOTOR CIRCUIT PROTECTORS SHALL BE SUFFICIENT FOR SHORT CIRCUIT CURRENT AVAILABLE. COORDINATE WITH POWER COMPANY FOR BIDDING PURPOSES THE 600 A SERVICE ENTRANCE SWITCH SHALL BE RATED 42,000 AIC, AND INDIVIDUAL MOTOR CIRCUIT PROTECTORS SHALL BE RATED 22,000 AIC.

SYMBOL LIST

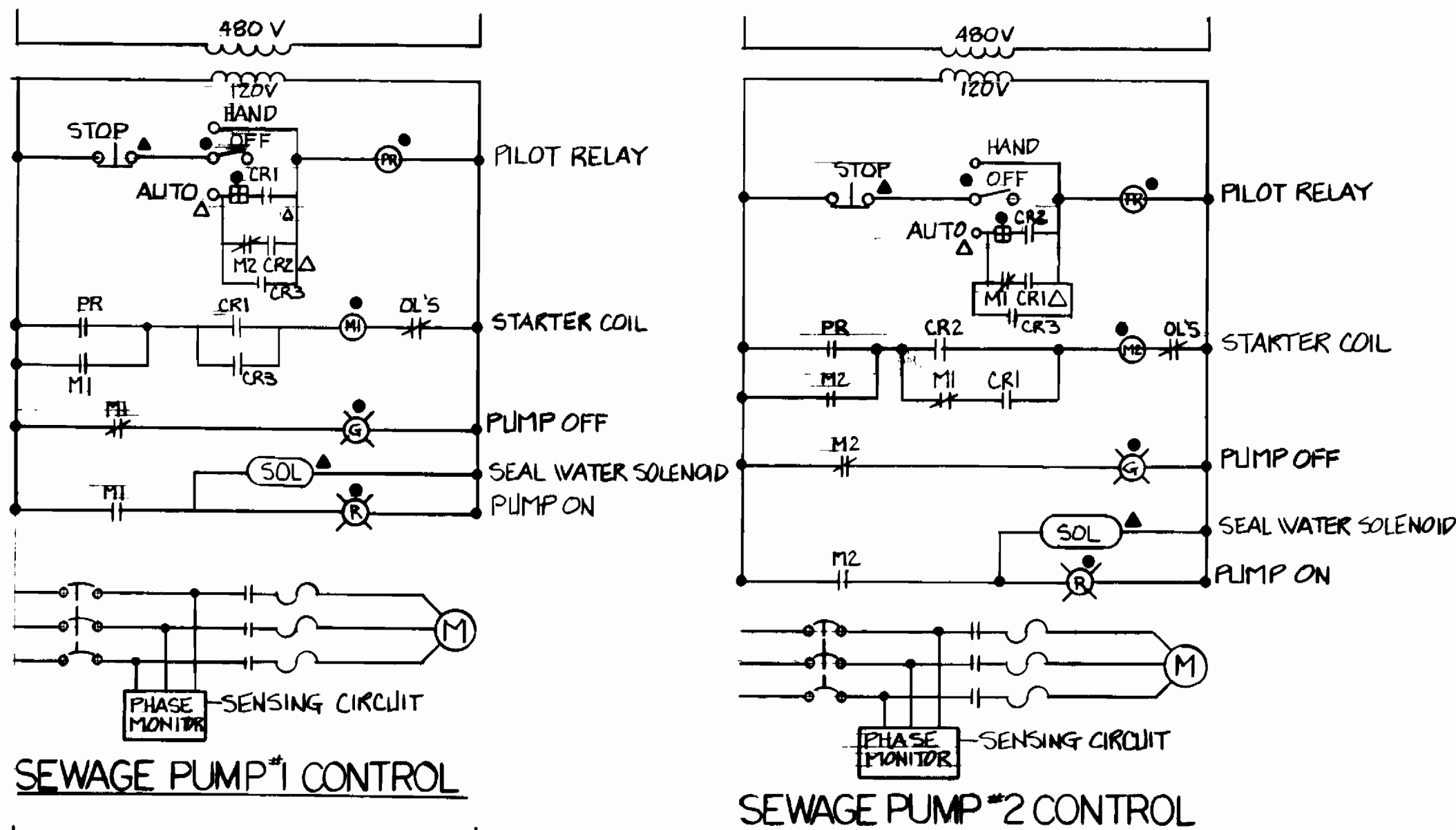
	FLUORESCENT LIGHTING FIXTURE - CEILING MOUNTED
	HID LIGHTING FIXTURE - CEILING MOUNTED
	HID LIGHTING FIXTURE - WALL BRACKET MOUNTED
	SINGLE POLE SWITCH - 1/48" A.F.F.
	SINGLE POLE SWITCH W/PILOT LIGHT - 1/48" A.F.F. SUBSCRIPT 'A', 'B', OR 'C' DENOTES LIGHTS TO BE CONTROLLED.
	HOME RUN TO PANELBOARD OR MOTOR CONTROL CENTER. HASH MARKS INDICATE WIRES WHEN MORE THAN 2.
	DUPLEX RECEPTACLE - 15" A.F.F.
	JUNCTION BOX
	ELECTRIC MOTOR CONNECTION
	3P-30A-480V NON FUSED DISCONNECT SWITCH
	CONDUIT TURNED UP
	CONDUIT TURNED DOWN
	ABOVE FINISHED FLOOR
	AMPERE INTERRUPTING CAPACITY
	UNIT HEATER
	BRANCH CIRCUIT WIRING
	LOCATED IN MOTOR CONTROL CENTER
	LOCATED AT PUMP LOCATION
	LOCATED IN BUBBLER PANEL
	ALTERNATOR
	LOCATED AT GENERATOR

PANEL "L" 100A, 120/208V 3Ø 4 WIRE 100A MAIN CIRCUIT BREAKER, SURFACE MOUNTED.

CIRCUIT NO.	CIRCUIT BREAKER			CIRCUIT		SERVING
	POLE	TRIP	AIC	WIRE	COND.	
1	1	20	10K	2"12+1"12 GRD	1 1/2"	CONTROL RM. LTG.
2					1 1/2"	GENERATOR RM. LTG.
3					1 1/2"	WATER JACKET
4					1 1/2"	BATTERY CHARGER
5					3/4"	CATWALK LIGHTING
6					3/4"	LOWER LEVEL LTG.
7					1 1/2"	RECEPTABLES
8					3/4"	WET PIT LTG.
9					1 1/2"	OUTDOOR LTG.
10	2	30		2"12+1"12 GRD	1 1/2"	CRANKCASE HTR. 4 KW.
11	1	20		2"12+1"12 GRD	1 1/2"	FUEL OIL PUMP.
13	1	20				MOTORIZED DAMPERS
12, 14-19	1	20				SPARE
20-23	-	-				SPACE

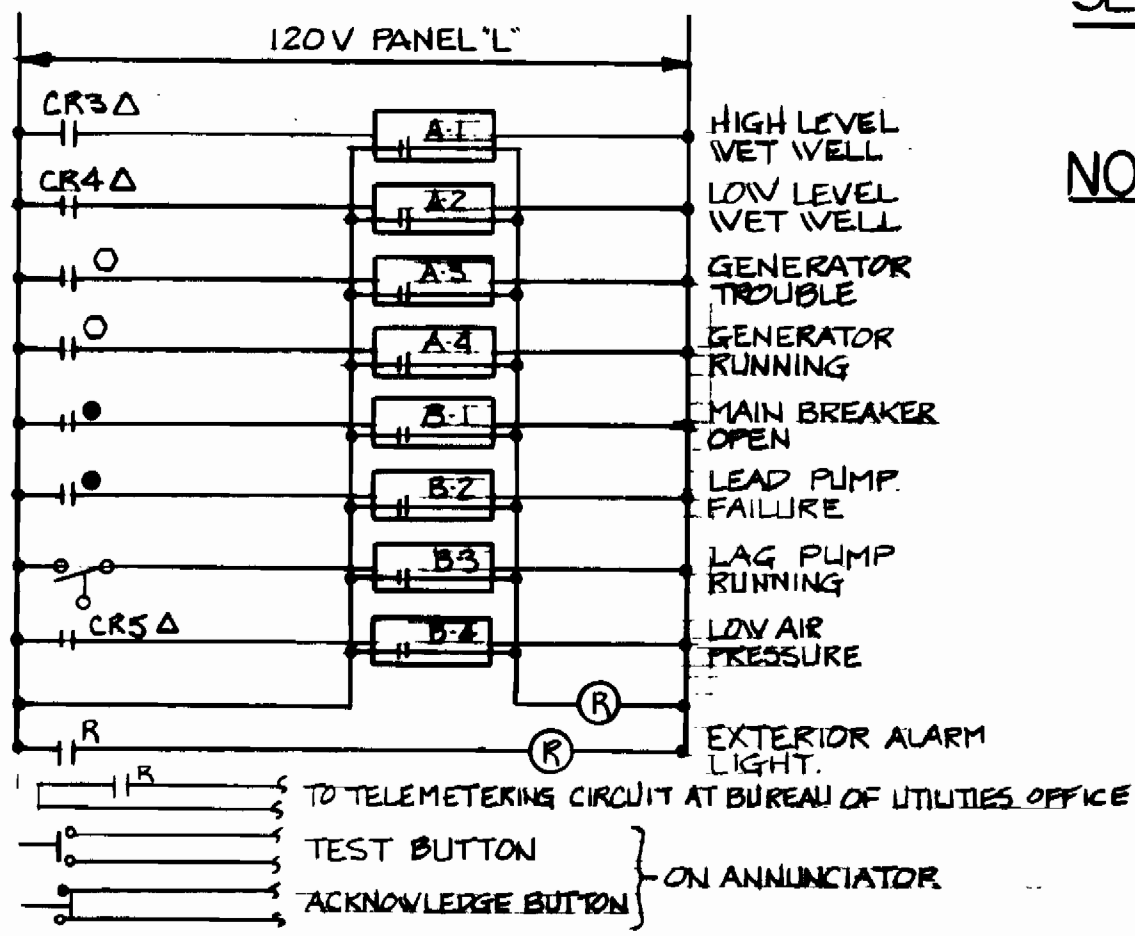


BUBBLER PANEL CONTROL



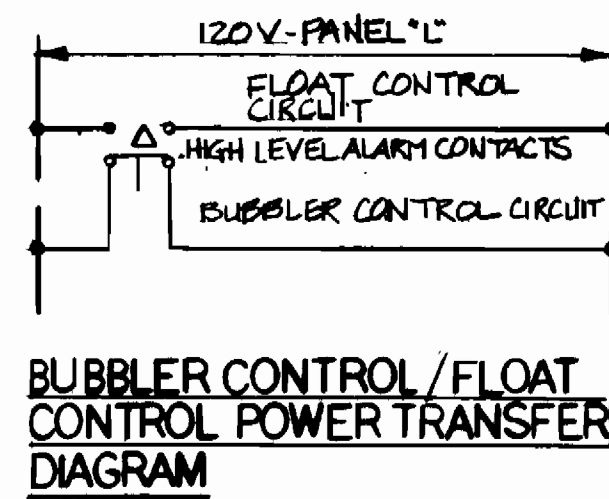
SEWAGE PUMP #1 CONTROL

SEWAGE PUMP #2 CONTROL



ANNUNCIATOR ALARM WIRING

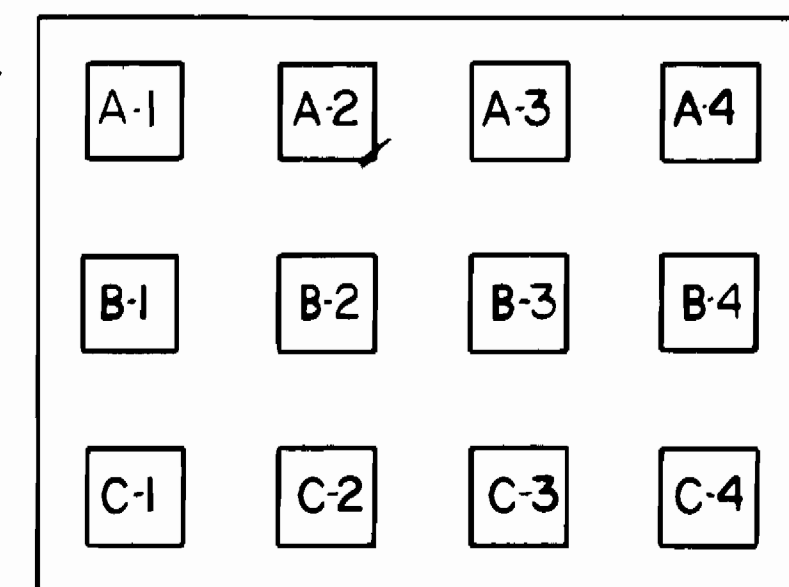
NOTE: IN CASE OF HIGH LEVEL ALARM CONTROL OF SEWAGE PUMPS SHALL BE TRANSFERRED TO FLOAT CONTROL (SIMILAR TO BUBBLER PANEL) AND ONLY MANUALLY TO BE RESET BACK TO BUBBLER CONTROL PANEL. FLOAT CONTROL SHALL BE A SEPARATE PANEL.



BUBBLER CONTROL/FLOAT CONTROL POWER TRANSFER DIAGRAM

LIGHTING FIXTURE SCHEDULE

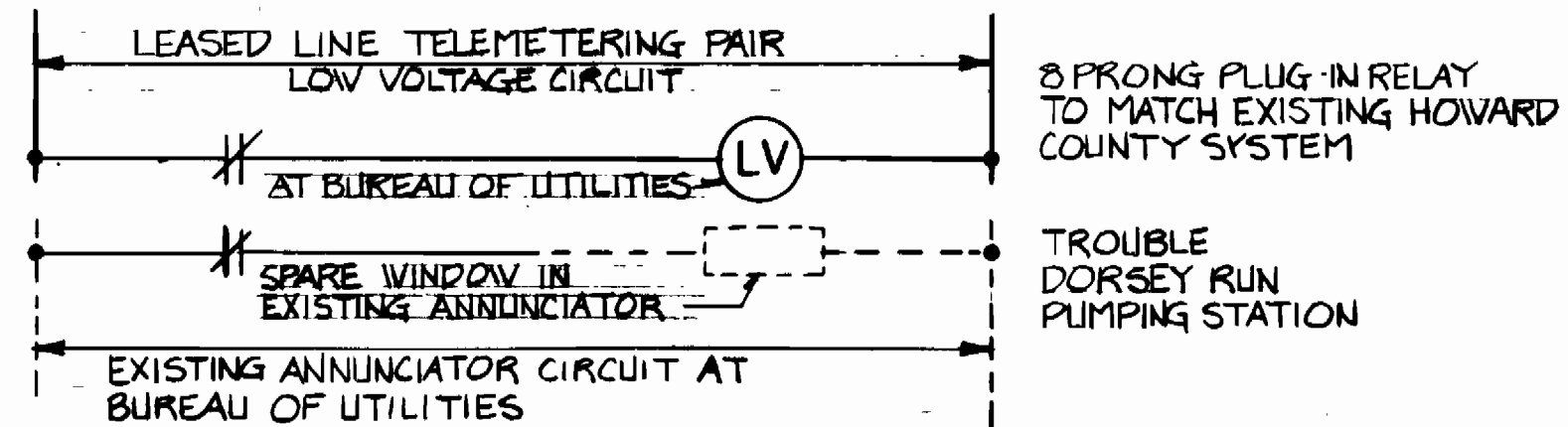
TYPE	MANUFACTURER	CATALOG NO	LAMP	V/LAMP	VOLT	REMARKS
1	LITHONIA	LA 240-120	2-F40CWRS	34	120	V 0" BALLAST
2	CRUSE HINDS	VMV52TWO70GP	1-LW 70	70	120	
3	G.E.	HS-1-15L-3C-RE	1-LW 150	150	120	
4	G.E.	HA-1-25S-3C-UJ	1-LW 250	250	120	
5	BENJAMIN	OWW-100-120HX	1-LW 100	100	120	
6	G.E.	HA-1-15S-3W-UJ	1-LW 150	150	120	



ANNUNCIATOR SCHEDULE

- A-1 HIGH LEVEL WET WELL
- A-2 LOW LEVEL WET WELL
- A-3 GENERATOR TROUBLE
- A-4 GENERATOR RUNNING
- B-1 MAIN BREAKER OPEN
- B-2 LEAD PUMP FAILURE
- B-3 LAG PUMP RUNNING
- B-4 PUMP ROOM FLOOD
- C-1 LOW AIR PRESSURE
- C-2 SPARE
- C-3 SPARE
- C-4 SPARE

ANNUNCIATOR
NOT TO SCALE



ALARM INDICATION AT BUREAU OF UTILITIES
NOT TO SCALE

NOTE: CONTRACTOR SHALL COORDINATE VOLTAGE REQUIREMENTS WITH THE TELEPHONE COMPANY AND FIELD VERIFY THE EXTENT OF WORK AT THE BUREAU OF UTILITIES, B250 OLD MONTGOMERY RD, ELLICOTT CITY, MARYLAND 21043

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert M. Reinger 7/25/04
DIRECTOR OF PUBLIC WORKS DATE

William E. Reig 7/25/04
CHIEF, BUREAU OF ENGINEERING DATE

Robert M. Reinger 7/25/04
CHIEF - BUREAU OF UTILITIES DATE

Allen A. Brown 7/25/04
CHIEF - UTILITIES DIVISION DATE

ENUS CONSULTING ENGINEERS
CORPORATION
910 CLOPPER ROAD GAITHERSBURG, MD. 20878
301-258-8000



DES: SZ					
DRN: C.T.T.					
CHK: SZ	KAC	Δ	REV. ONE LINE CKT. TO READ SUBMERS. SUMP. NOTE	ADD TO 7/1/04	
DATE: 7/25/04	BY: NO.	REVISION	REVISOR	DATE	600' SCALE MAP NO. _____ BLOCK NO. _____

SCHEDULES

DORSEY RUN PUMPING STATION
ELECTION DISTRICT: GUILFORD NO. 6 HOWARD COUNTY, MARYLAND
PROJECT NO. S-6071 CONTRACT NO. 678-S

SCALE AS SHOWN
SHEET 19 OF 19