

# NEW CUT ROAD WASTEWATER PUMPING STATION

QUANTITY TABLE FOR UTILITY DESIGN				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANF./SUPPLIER
PUMPING STATION COMPLETE AND IN-PLACE	1 EACH	1		
8" SEWER D.I.P.	934 LF	120	D.I.P.	Griffin / Hughes Pipe Supply
MANHOLES	4 EACH	3	Precast	Terra Hill
6" FORCE MAIN	160 LF	66	D.I.P.	Griffin / Hughes Pipe Supply
6" VALVE	2 EACH	2		Kennedy / Hughes Valve Supply
4" PVC	72 LF			
2" PVC	39 LF	45'	"K" Soft	Howell Metal / Hughes Supply
3/4" WATER	42 LF	44'	"K" Soft	Howell Metal / Hughes Supply
4" CAP & BUTTRESS	1 EACH			
SOIL ODOR FILTER	1 EACH	1		

NAME OF UTILITY CONTRACTOR:

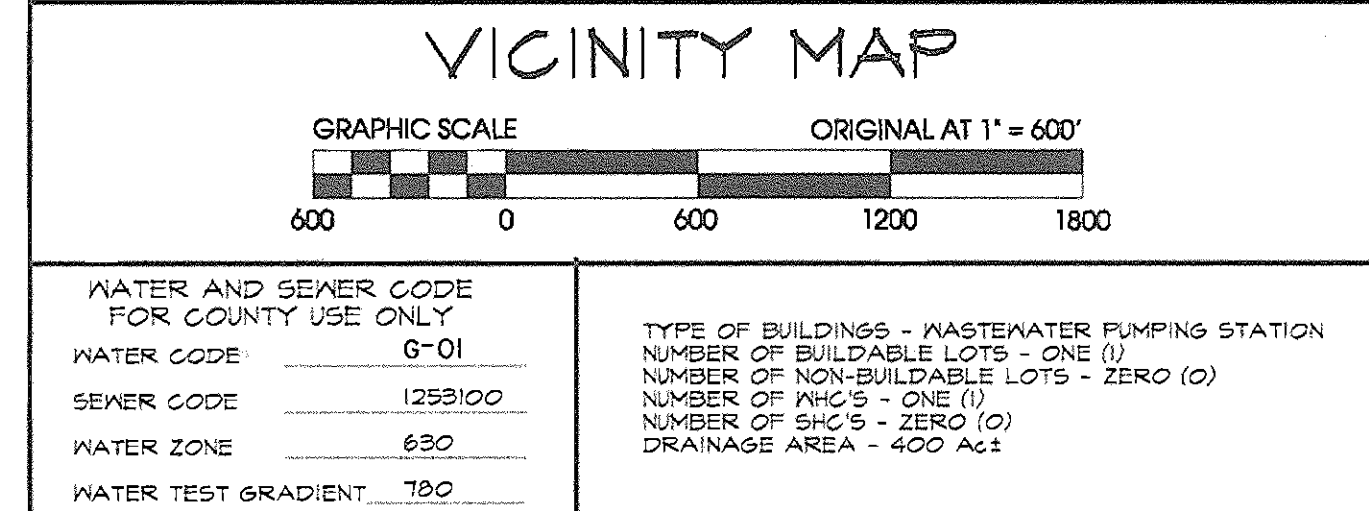
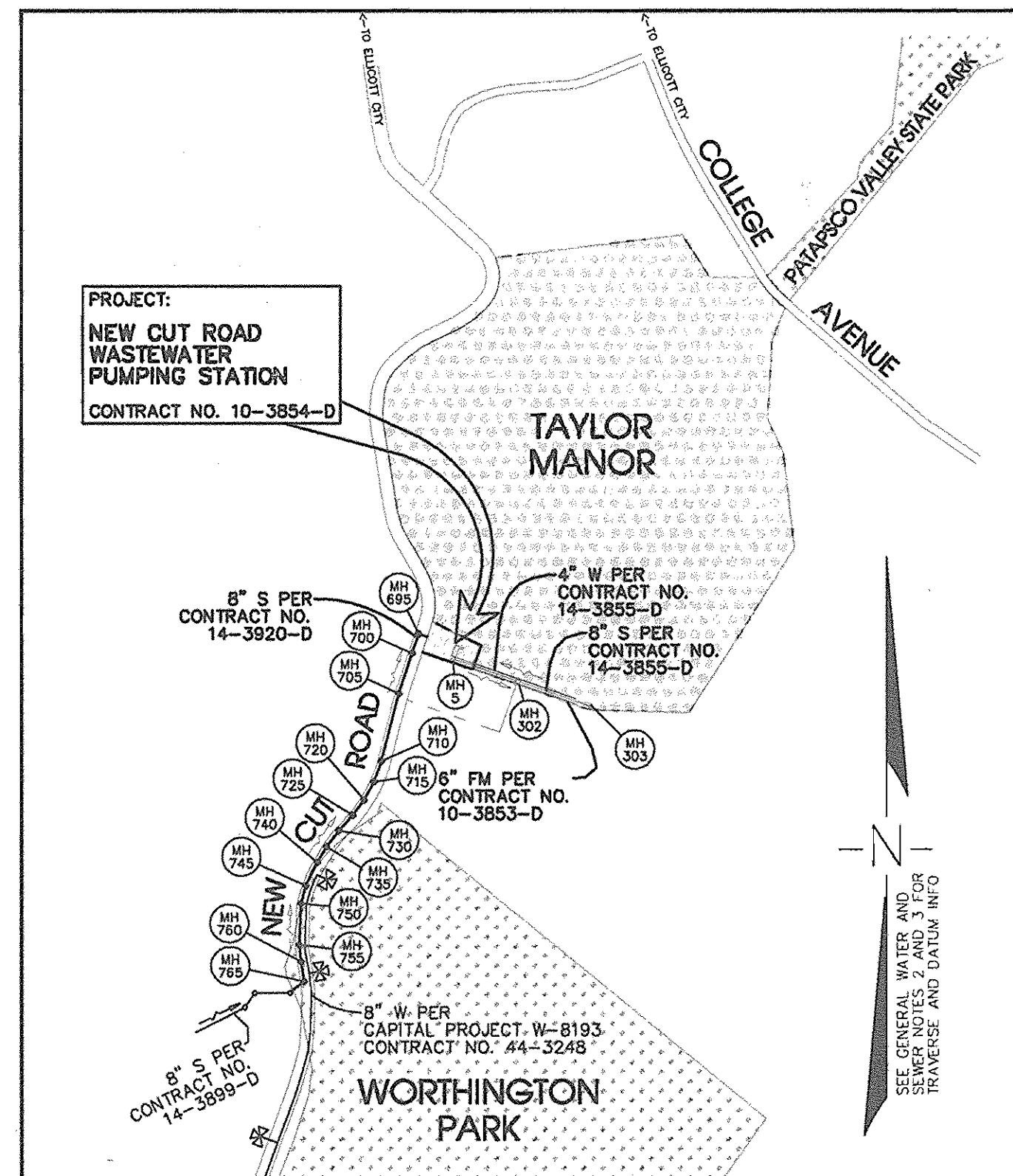
SURVEY AND DRAFTING DIVISION AS-BUILT DATE:

### ADDRESS CHART

LOT NUMBER	STREET ADDRESS
OPEN SPACE LOT 1	4247 NEW CUT ROAD

### GENERAL SITE NOTES:

- SUBJECT PROPERTY IS LOCATED ON TAX MAP NO. 25, GRID 20, PART OF PARCEL T3, AND IS DESIGNATED AS OPEN SPACE LOT #1 ON THE PLAT PREPARED UNDER F-00-184.
- PRESENT ZONING IS FOR (PLANNED OFFICE RESEARCH).
- TOTAL AREA OF PROPERTY: 26,76 SQ. FT. / 0.61 ACRES
- PROPERTY REFERENCE: FUTURE OWNER, HOWARD CO. DEPT. OF PUBLIC WORKS, BUREAU OF ENGINEERING, 3430 COURTHOUSE DRIVE, ELLICOTT CITY, MD 21043 PARENT TRACT DEED REFERENCE: 84/589
- PARKING DATA:
  - INTENDED USE OF STRUCTURE: WASTEWATER PUMPING STATION
  - NUMBER OF SPACES REQUIRED: 2 REGULAR SPACES (4'x8') PER HOWARD COUNTY DESIGN MANUAL, VOLUME II, SECTION 5.2, ITEM 2
  - NUMBER OF SPACES PROVIDED: 2 REGULAR SPACES (10' x 18')
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/DIVISION OF CONSTRUCTION INSPECTION AT (410) 313-1880 AT LEAST FIVE(5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MSS UTILITY" AT 1-800-281-1771 AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO ANY EXCAVATION WORK.
- SEE SHEET 1 FOR SCHEMATIC BUILDING PROFILES.
- STORMWATER MANAGEMENT SHALL BE PROVIDED BY UPSTREAM OVER-MANAGEMENT PER DESIGN BY VOGEL AND ASSOCIATES. REFERENCE WORTHINGTON FIELDS, F-01-60.
- ALL OUTDOOR LIGHTING MUST BE DESIGNED AND LOCATED TO COMPLY WITH THE OUTDOOR LIGHTING REQUIREMENTS OF ZONING SECTION 19.4.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS & SPECIFICATIONS IF APPLICABLE.
- PLAN DIMENSIONS ARE TYPICALLY TO FACE OF BUILDING, CENTERLINE OF PERIMETER CURB, CENTERLINE OF PIPES, OR TO THE PROPERTY LINE.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD SURVEY WITH TWO (2) FOOT CONTOUR INTERVALS PREPARED BY FISHER, COLLINS & CARTER, INC.
- EXISTING UTILITIES ARE BASED ON INFORMATION AND PLANS PROVIDED BY FISHER, COLLINS, & CARTER, INC.
- THE 100-YEAR FLOODPLAIN IS BASED ON A STUDY BY VOGEL & ASSOCIATES PREPARED AS PART OF THE PRELIMINARY PLAN FOR THE WORTHINGTON FIELDS SUBDIVISION.
- THE WETLAND DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY FISHER, COLLINS, AND CARTER, INC.
- NEW CUT ROAD IS CLASSIFIED AS A SCENIC ROAD AND ALL SPECIFICATIONS AND REQUIREMENTS HAVE BEEN ADHERED TO ACCORDING TO RESOLUTION NO. 10-1994, AMENDMENTS TO THE DESIGN MANUAL STANDARDS FOR IMPROVEMENTS TO SCENIC ROADS PER VOL. III HOWARD COUNTY ROADS & BRIDGES DESIGN MANUAL.
- REQUIRED SETBACKS FOR ZONING HAVE BEEN ADDRESSED AS FOLLOWS:  
FRONT SETBACK: REQUIRED = 30'  
PROVIDED = 30'  
SIDE SETBACK FROM RESIDENTIAL ZONE TO SOUTH: REQUIRED = 50'
- SITE CONSISTS OF SOIL CLASSIFICATION: STONY LAND.
- NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE WETLAND LIMITS AND THE 25 FOOT WETLAND BUFFER.
- IN ACCORDANCE WITH SUBDIVISION SECTION 16.1202(b)(1)(i), THIS PLAN IS EXEMPT FROM THE REQUIREMENTS OF THE FOREST CONSERVATION ACT BECAUSE THE LOT IS LESS THAN 40,000 SQUARE FEET IN SIZE.
- FOREST CONSERVATION OBLIGATIONS FOR FOREST CLEARINGS IN THE BOVILITY EASEMENT, ON THE RESIDUE OF PARCEL T3, SHALL BE MET VIA THE WORTHINGTON FIELDS SUBDIVISION, REFERENCE HOWARD COUNTY FILE NUMBER F-01-60.
- THIS PLAN IS SUBJECT TO COUNCIL RESOLUTION NO. 21-2001 WHICH APPROVED THE REDUCTION OF A 50 FOOT USE AND SETBACK REQUIRED IN SECTION 119.D.2 (b) OF THE HOWARD COUNTY ZONING REGULATIONS TO 25 FOOT TO ALLOW CURBING / PAVING, DRIVEWAY, 7 FOOT FENCE AND PARKING SPACES WITHIN THE 50 FOOT USE AND STRUCTURE SETBACK. APPROVED 4/2/01
- REFERENCE HOWARD COUNTY FILE NUMBER: F-00-184



### GENERAL WATER AND SEWER NOTES:

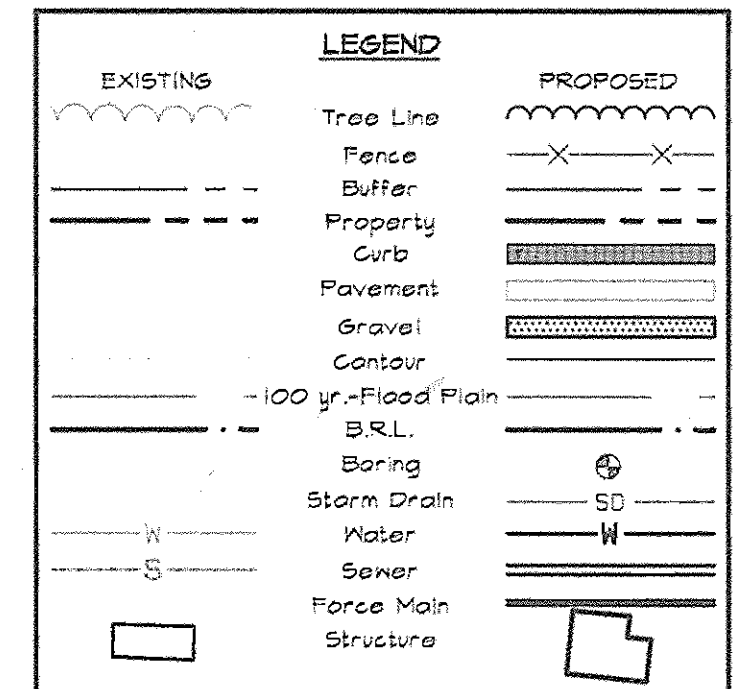
- APPROXIMATE LOCATIONS OF EXISTING MAINS OR POTENTIALLY CONCURRENT WORK BY OTHERS IS SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING OR CONSTRUCTED MAINS AND SERVICES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE TO EXISTING OR CONSTRUCTED MAINS SHALL BE IMMEDIATELY REPAIRED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES, NAD 83, PER SURVEY BY FISHER, COLLINS & CARTER, INC. TRAVERSE POINTS 54 AND 895 FROM THAT SURVEY FALL CLOSEST TO THE PROJECT SITE AS SHOWN ON SHEET 2, AND PERTINENT DATA IS PROVIDED BELOW:  
FCC TRAVERSE POINT 54: N 576.312.35 E 1364.646.01 ELEV. 300.22  
FCC TRAVERSE POINT 895: N 570.545.01 E 1364.771.54 ELEV. 247.44  
FOR DETAILED RECOVERY INFO, SEE DRAWINGS FOR CONTRACT NO. 14-3920-D OR CONTACT FISHER, COLLINS & CARTER AT 410-461-2955.
- ALL VERTICAL CONTROLS ARE BASED ON NAVD 29 PER THE TRAVERSE POINTS NOTED IN ITEM 2 ABOVE.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 12". CLEAR ALL POLES BY A MINIMUM OF 5'-0" OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS NOT MADE ARRANGEMENTS FOR BRACING OF ANY POLES. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES 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 (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
- NO TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN MADE SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:  
AT&T 1-800-526-2000  
BSE (CONTRACTOR SERVICES) 410-850-4620  
BSE (UNDERGROUND DAMAGE CONTROL) 410-101-4068  
BUREAU OF UTILITIES 410-313-4900  
BELL ATLANTIC MARYLAND, INC. 1-800-621-4900  
COLONIAL PIPELINE CO. 410-795-1940  
MISS UTILITY 1-800-281-1771  
STATE HIGHWAY ADMINISTRATION 410-531-5533
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR UNLESS NOTICED BY THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING DEVELOPMENT ENGINEERING DIVISION.
- THE CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-7450 AT LEAST FIVE WORKING DAYS BEFORE OPEN CUTTING OR BORING/LACKING OF ANY COUNTY ROAD FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.14(a) OF THE HOWARD COUNTY CODE.

### GENERAL WATER NOTES:

- ALL WATER MAINS SHALL BE D.I.P. CLASS B2 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.

### GENERAL SEWER NOTES:

- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- FORCE MAINS SHALL BE D.I.P. ONLY.



SHEET INDEX*		
UTILITY NUMBER	SDP NUMBER	DESCRIPTION
1 OF 30	SDP 1 OF 8	TITLE SHEET
2 OF 30	SDP 2 OF 8	SITE PLAN
3 OF 30	SDP 3 OF 8	GRADING PLAN
4 OF 30	SDP 4 OF 8	UTILITY PLAN
5 OF 30	SDP 5 OF 8	PROFILES
6 OF 30	SDP 6 OF 8	SEDIMENT CONTROL PLAN, NOTES, AND DETAILS
7 OF 30	SDP 7 OF 8	SITE DETAILS
8 OF 30	SDP 8 OF 8	LANDSCAPE PLAN, SCHEDULE, AND DETAILS
9 OF 30		STRUCTURAL PLAN
10 OF 30		STRUCTURAL SECTIONS
11 OF 30		ELEVATIONS
12 OF 30		SECTIONS
13 OF 30		PIPING PLAN
14 OF 30		MECHANICAL SECTIONS
15 OF 30		DETAILS
16 OF 30		DETAILS
17 OF 30		SOIL ODOR FILTER
18 OF 30		PAVILION DETAILS
19 OF 30		SCHEMATICS
20 OF 30		DRAINAGE AREA MAP
21 OF 30		MECHANICAL PLAN (M-1)
22 OF 30		MECHANICAL SECTIONS (M-2)
23 OF 30		MECHANICAL DETAILS (M-3)
24 OF 30		ABBREVIATIONS AND SYMBOLS (E-1)
25 OF 30		ELECTRICAL PLAN (E-2)
26 OF 30		ELECTRICAL SECTIONS (E-3)
27 OF 30		SCHEDULES AND SINGLE LINE DIAGRAMS (E-4)
28 OF 30		LIGHTING PLAN (E-5)
29 OF 30		SCHEMATICS (E-6)
30 OF 30		ELECTRICAL DETAILS (E-7)

\*NOTE: SHEETS 1 THROUGH 8 PRESENT CIVIL SITE DESIGN ELEMENTS THAT MUST BE REVIEWED FOR BOTH SITE DEVELOPMENT AND UTILITY DESIGN APPROVAL. CONSEQUENTLY, SHEETS 1 THRU 8 HAVE BEEN PREPARED USING THE STANDARD PLANNING AND ZONING TITLE BLOCK, WITH TITLES AND SHEET NUMBERING PROVIDED FOR BOTH SETS OF DRAWINGS. AS INDICATED ON THE SHEET INDEX PROVIDED ON THIS COMBINED COVER SHEET, THE SITE DEVELOPMENT PLAN INCLUDES ONLY SHEETS 1 THROUGH 8.

**OWNER/DEVELOPER INFORMATION**

CURRENT OWNER OF PARENT TRACT:  
HOWARD COUNTY SANITARIUM COMPANY  
4100 COLLEGE AVENUE  
ELLICOTT CITY, MARYLAND 21041

DEVELOPER OF ADJACENT PROPERTIES AND WASTEWATER PUMPING STATION ON OPEN SPACE LOT 1:  
WORTHINGTON FIELDS, LLC  
c/o LAND DESIGN AND DEVELOPMENT, LLC  
6300 MAIN STREET  
ELLICOTT CITY, MARYLAND 21043  
ATTN: MR. DONALD R. REUWER, JR.

ULTIMATE OWNER/OPERATOR OF WASTEWATER PUMPING STATION ON OPEN SPACE LOT 1:  
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING DEVELOPMENT ENGINEERING DIVISION  
8300 COURTHOUSE DRIVE  
ELLICOTT CITY, MD 21043  
ATTN: MR. HASSAN/PROJECT ENGINEER

**DEPARTMENT OF PLANNING AND ZONING**  
HOWARD COUNTY, MARYLAND

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

**DEPARTMENT OF PUBLIC WORKS**  
HOWARD COUNTY, MARYLAND

PROJECT: HOWARD SANITARIUM CO. - OPEN SPACE LOT 1 NEW CUT ROAD WASTEWATER PUMPING STATION

SECTION/AREA: OPEN SPACE LOT 1

LOT NO.: 6027

PLAT NO.: 1459A

BLOCK NO.: 20

ZONE: POR

TAX/ZONE: 25

ELEC. DIST.: 2nd

CENSUS TR.: 6027

WATER CODE: G-01

SEWER CODE: 1253100

**HOWARD COUNTY HEALTH DEPARTMENT**  
APPROVED FOR PUBLIC WATER AND PUBLIC SEWER.

COUNTY HEALTH OFFICER: N/A

DATE: 1-23-01

CHEF, BUREAU OF UTILITIES

**TITLE SHEET**

**SITE DEVELOPMENT PLAN FOR HOWARD COUNTY SANITARIUM COMPANY OPEN SPACE LOT 1 / SDP-00-141 AND UTILITY DESIGN DRAWINGS NEW CUT ROAD WASTEWATER PUMPING STATION CONTRACT 10-3854-D**

TAX MAP 25 GRID 20 P/O PARCEL 73 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: OCTOBER 16, 2000 SDP SHEET 1 OF 8 / UTILITY DESIGN SHEET 1 OF 30

SHEET 1

**McCRONE**  
ENGINEERING & ENVIRONMENTAL SCIENCES

LAND PLANNING & SURVEYING & CONSTRUCTION SERVICES

20 ROOSEVELT AVENUE  
ANAPOLIS, MARYLAND 21401  
(410) 287-8821

**ENGINEER'S CERTIFICATION**

I HEREBY 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.

STATE OF MARYLAND  
REGISTERED PROFESSIONAL ENGINEER  
SIGNATURE OF ENGINEER: [Signature]  
DATE: 1/22/01

**DEVELOPER'S CERTIFICATION**

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR SEDIMENT AND EROSION CONTROL BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY. SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 19 OF THE HOWARD COUNTY DESIGN MANUAL AND STANDARDS & SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AS SHOWN ON THESE PLANS.

MR. DONALD R. REUWER, JR.  
DATE: 1-23-01

**DEPARTMENT OF PLANNING AND ZONING**  
HOWARD COUNTY, MARYLAND

DATE: 4/14/01

DATE: 4/4/01

DATE: 2/5/01

**DEPARTMENT OF PUBLIC WORKS**  
HOWARD COUNTY, MARYLAND

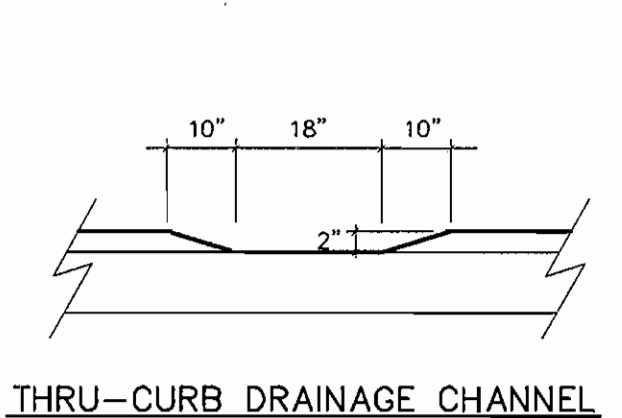
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DATE: 2/2/01

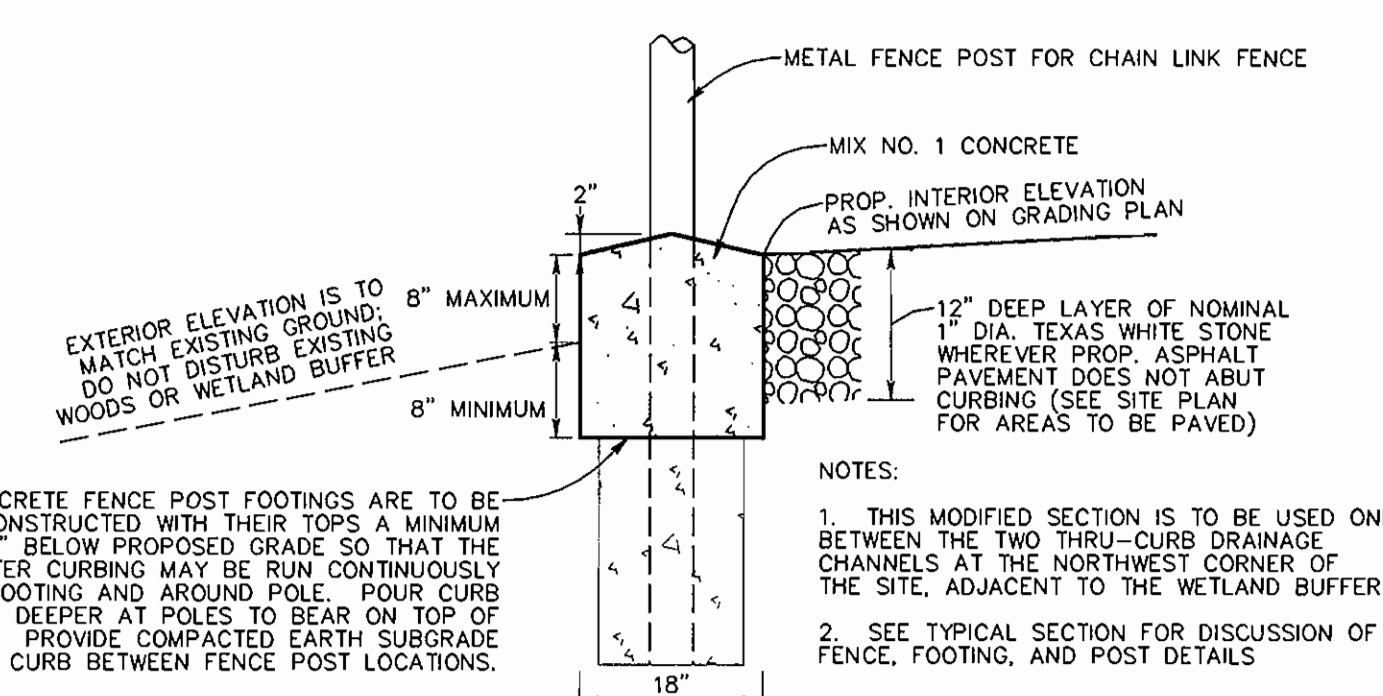
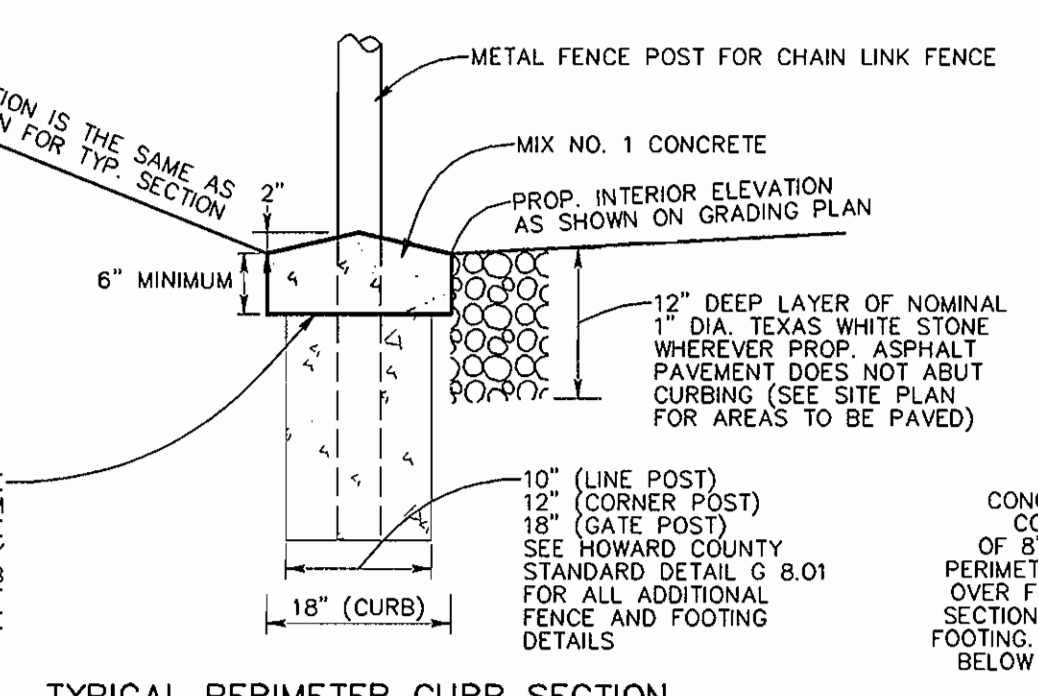




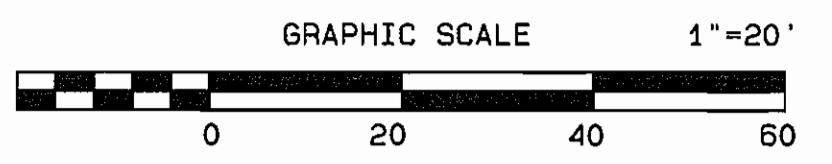
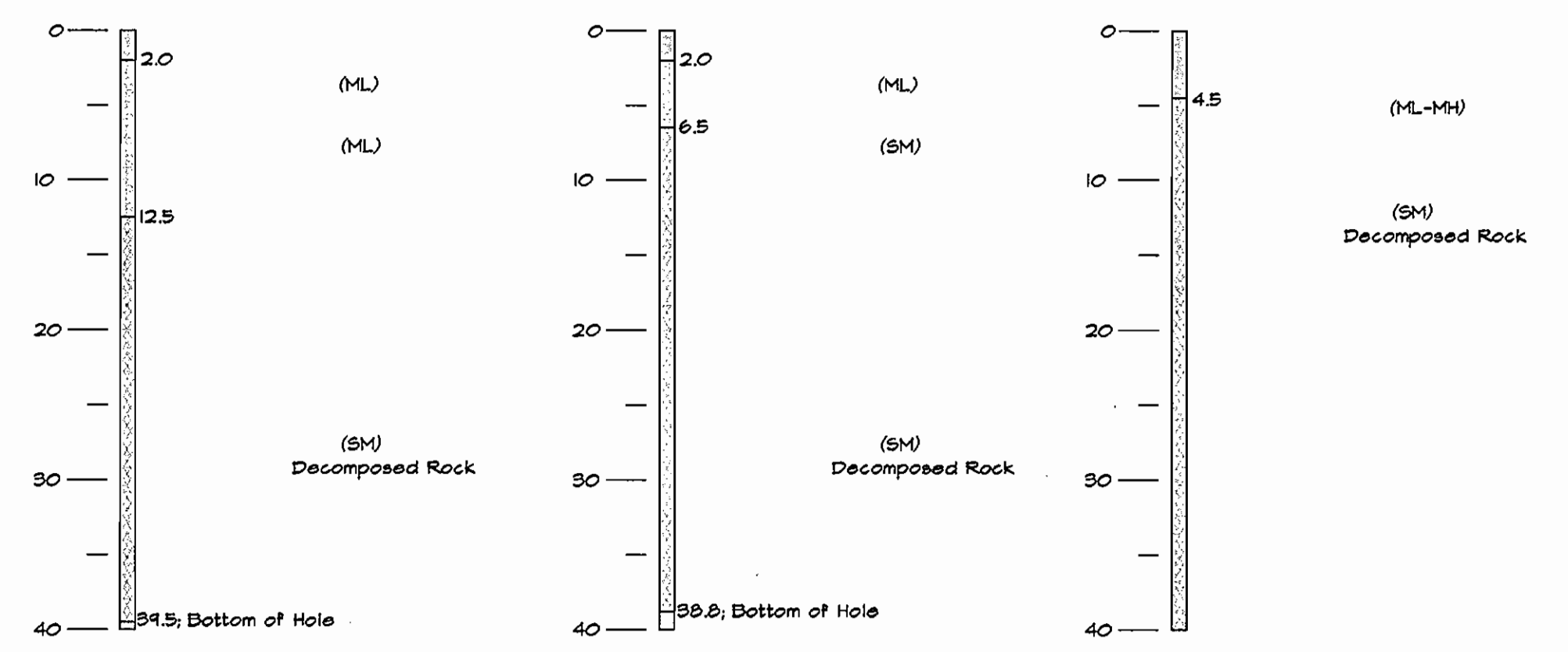




CONCRETE FENCE POST FOOTINGS ARE TO BE CONSTRUCTED WITH THEIR TOPS A MINIMUM OF 6" BELOW PROPOSED GRADE SO THAT THE PERIMETER CURBING MAY BE RUN CONTINUOUSLY OVER FOOTING AND AROUND POLE. POUR CURB SECTION DEEPER AT POLES TO BEAR ON TOP OF FOOTING. PROVIDE COMPACTED EARTH SUBGRADE BELOW CURB BETWEEN FENCE POST LOCATIONS.



PERIMETER CURBING DETAILS



LEGEND

[Symbol]	15 to 24.99% Slopes
[Symbol]	25 and greater Slopes

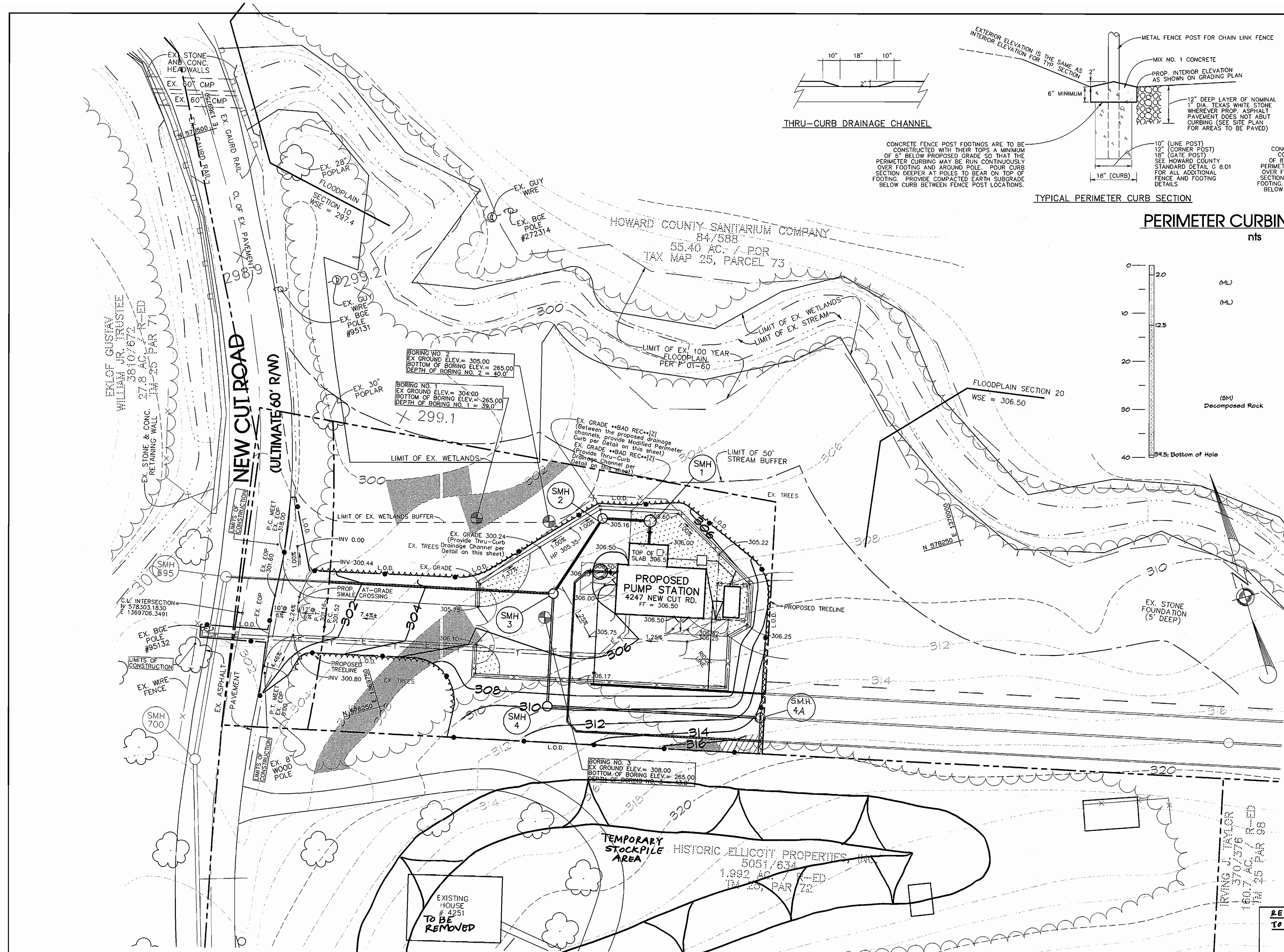
OWNER/DEVELOPER INFORMATION

CURRENT OWNER OF PARENT TRACT:  
HOWARD COUNTY SANITARIUM COMPANY  
4100 COLLEGE AVENUE  
P.O. BOX 396  
ELICOTT CITY, MARYLAND 21041

DEVELOPER OF ADJACENT PROPERTIES AND WASTEWATER PUMPING STATION ON OPEN SPACE LOT 1:  
WORTHINGTON FIELDS, LLC  
C/O LAND DESIGN AND DEVELOPMENT, LLC  
8000 MAIN STREET  
ELICOTT CITY, MARYLAND 21043  
ATTN: MR. DONALD R. REIMER, JR.

ULTIMATE OWNER/OPERATOR OF WASTEWATER PUMPING STATION ON OPEN SPACE LOT 1:  
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
DEVELOPMENT ENGINEERING DIVISION  
3430 COURTHOUSE DRIVE  
ELICOTT CITY, MD 21043  
ATTN: MR. HASSAN/PROJECT ENGINEER

REV. 12-15-01 ADD STOCKPILE TO ADJACENT PROPERTY



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LAND PLANNING & SURVEYING • CONSTRUCTION SERVICES

20 RIDLEY AVENUE  
ANNAPOLIS, MARYLAND 21401  
(410) 291-8821

ENGINEER'S CERTIFICATION

"I HEREBY 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."

STATE OF MARYLAND  
REGISTERED PROFESSIONAL ENGINEER

1/22/01  
DATE

DEVELOPER'S CERTIFICATION

"I HAVE CERTIFIED THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR SEDIMENT AND EROSION CONTROL BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR ITS DESIGNATED AGENTS, AS DEEMED NECESSARY. SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL AND STANDARDS & SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AS SHOWN ON THESE PLANS."

MR. DONALD R. REIMER, JR.  
1-23-01  
DATE

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND

4/9/01  
DATE

4/9/01  
DATE

2/5/01  
DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE

2/12/01  
DATE

2/12/01  
DATE

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

1-23-01  
DATE

PROJECT	SECTION/AREA	LOT NO.
HOWARD SANITARIUM CO. - OPEN SPACE LOT 1 NEW CUT ROAD WASTEWATER PUMPING STATION		OPEN SPACE LOT 1
PLAT NO.	BLOCK NO.	ZONE
14694	20	POR
TAX/ZONE	ELEC. DIST.	CENSUS TR.
25	2nd	6027
WATER CODE	SEWER CODE	
G-01	1253100	

GRADING PLAN

SITE DEVELOPMENT PLAN FOR  
HOWARD COUNTY SANITARIUM COMPANY  
OPEN SPACE LOT 1 / SDP-00-141

AND  
UTILITY DESIGN DRAWINGS  
NEW CUT ROAD WASTEWATER PUMPING STATION  
CONTRACT 10-3854-D

TAX MAP 25 GRID 20 P/O PARCEL 73  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
AS SHOWN DATE: OCTOBER 16, 2000  
SDP SHEET 3 OF 8 / UTILITY DESIGN SHEET 3 OF 30

SHEET  
3

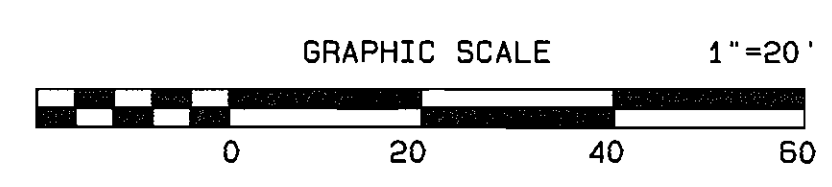
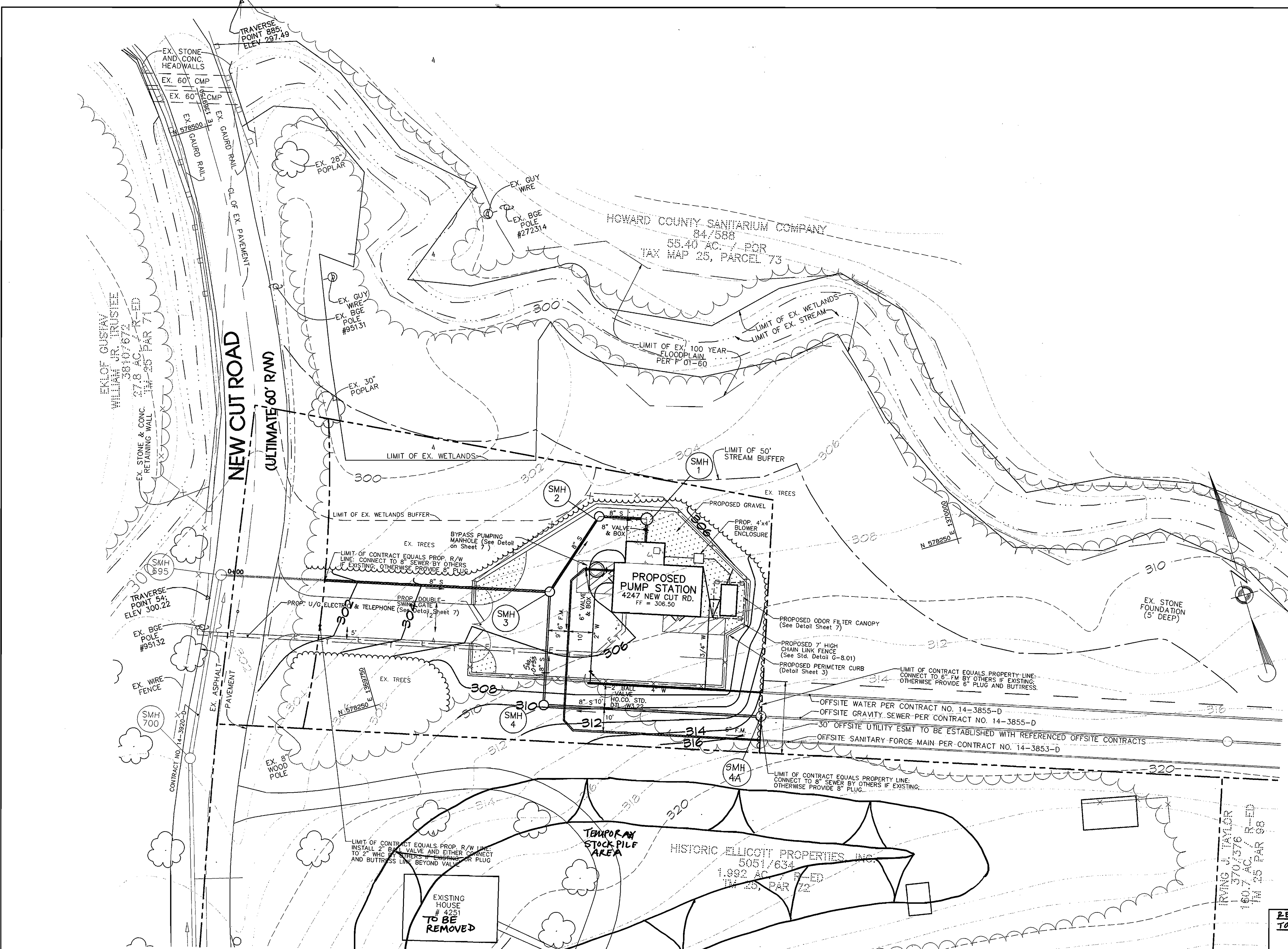


SEWER MANHOLE LOCATION DATA		
SMH	LOCATION	
1	N 578288.9600	E 1864876.8840
2	N 578300.7763	E 1864841.0947
3	N 578275.4258	E 1864892.2784
4	N 578220.5407	E 1864701.4614
5	N 578228.6555	E 1864816.0632

3/4" ODOR FILTER SPRAY LINE HORIZONTAL LAYOUT TABLE			
Description	Station	Northing	Easting
TEE	0+00.00	-	-
45" HB	-	-	-
90" HB	-	-	-
90" HB	-	-	-

2" WATER HOUSE CONNECTION HORIZONTAL LAYOUT TABLE			
Description	Station	Northing	Easting
Tie-in	0+00.00	578245.8877	1864715.2166
45" HB	00+81.72	578269.1268	1864742.4285
45" HB	01+24.50	578287.8025	1864830.4167
Into Bldg	01+55.23	578277.5410	1864860.5294

6" FORCE MAIN HORIZONTAL LAYOUT TABLE			
Description	Station	Northing	Easting
Exit Building	0+00.00	-	-
Isolation Valve	-	-	-
Isolation Valve	-	-	-
CL of Bypass MH	00+12.00	578274.2237	1864846.6738
45" HB	00+14.10	578274.4125	1864844.8862
45" HB	00+20.43	578272.1484	1864838.8407
45" HB	00+59.54	578236.1464	1864826.5126



**OWNER/DEVELOPER INFORMATION**

CURRENT OWNER OF PARENT TRACT:  
 HOWARD COUNTY SANITARIUM COMPANY  
 4100 COLLEGE AVENUE  
 P.O. BOX 356  
 ELLICOTT CITY, MARYLAND 21041

DEVELOPER OF ADJACENT PROPERTIES AND WASTEWATER PUMPING STATION ON OPEN SPACE LOT 1:  
 WORTHINGTON FIELDS, LLC  
 c/o LAND DESIGN AND DEVELOPMENT, LLC  
 8000 MAIN STREET  
 ELLICOTT CITY, MARYLAND 21043  
 ATTN: MR. DONALD R. REUWER, JR.

ULTIMATE OWNER/OPERATOR OF WASTEWATER PUMPING STATION ON OPEN SPACE LOT 1:  
 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 DEVELOPMENT ENGINEERING DIVISION  
 3430 COURTHOUSE DRIVE  
 ELLICOTT CITY, MD 21043  
 ATTN: MR. HASSAN/PROJECT ENGINEER

**REV. 12-13-01 ADD STOCKPILE TO ADJACENT PROPERTY**

**McCRONE**  
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 LAND PLANNING & SURVEYING • CONSTRUCTION SERVICES  
 20 ROCKY AVENUE  
 ANNAPOLIS, MARYLAND 21401  
 (410) 287-8821

**ENGINEER'S CERTIFICATION**  
 I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]*  
 SIGNATURE OF ENGINEER  
 1/22/01  
 DATE

**DEVELOPER'S CERTIFICATION**  
 I/WE HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR SEDIMENT AND EROSION CONTROL BEFORE BEGINNING THE PROJECT. I/WE AUTOMATICALLY CONSENT TO INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THE MARYLAND DEPARTMENT OF ENVIRONMENTAL AND NATURAL RESOURCES CONSERVATION SERVICE IF DEEMED NECESSARY. SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL AND STANDARDS & SPECIFICATIONS FOR SOIL, EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AS SHOWN ON THESE PLANS.

*[Signature]*  
 MR. DONALD R. REUWER, JR.  
 1-23-01  
 DATE

**DEPARTMENT OF PLANNING AND ZONING**  
 HOWARD COUNTY, MARYLAND

*[Signature]* 4/14/01  
 DIRECTOR

*[Signature]* 4/14/01  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*[Signature]* 2/5/01  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

*[Signature]* 2/2/01  
 U.S.D.A. - NATURAL RESOURCES CONSERVATION SERVICE

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

*[Signature]* 2/2/01  
 HOWARD SOIL CONSERVATION DISTRICT

**DEPARTMENT OF PUBLIC WORKS**  
 HOWARD COUNTY, MARYLAND

*[Signature]* 1-23-01  
 CHIEF, BUREAU OF UTILITIES

PROJECT	SECTION/AREA	LOT NO.
HOWARD SANITARIUM CO. - OPEN SPACE LOT 1 NEW CUT ROAD WASTEWATER PUMPING STATION		OPEN SPACE LOT 1
PLAT NO.	BLOCK NO.	ZONE
14594	20	POR
TAX/ZONE	ELEC. DIST.	CENSUS TR.
25	2nd	6027
WATER CODE	SEWER CODE	
G-01	1253100	

**UTILITY PLAN**

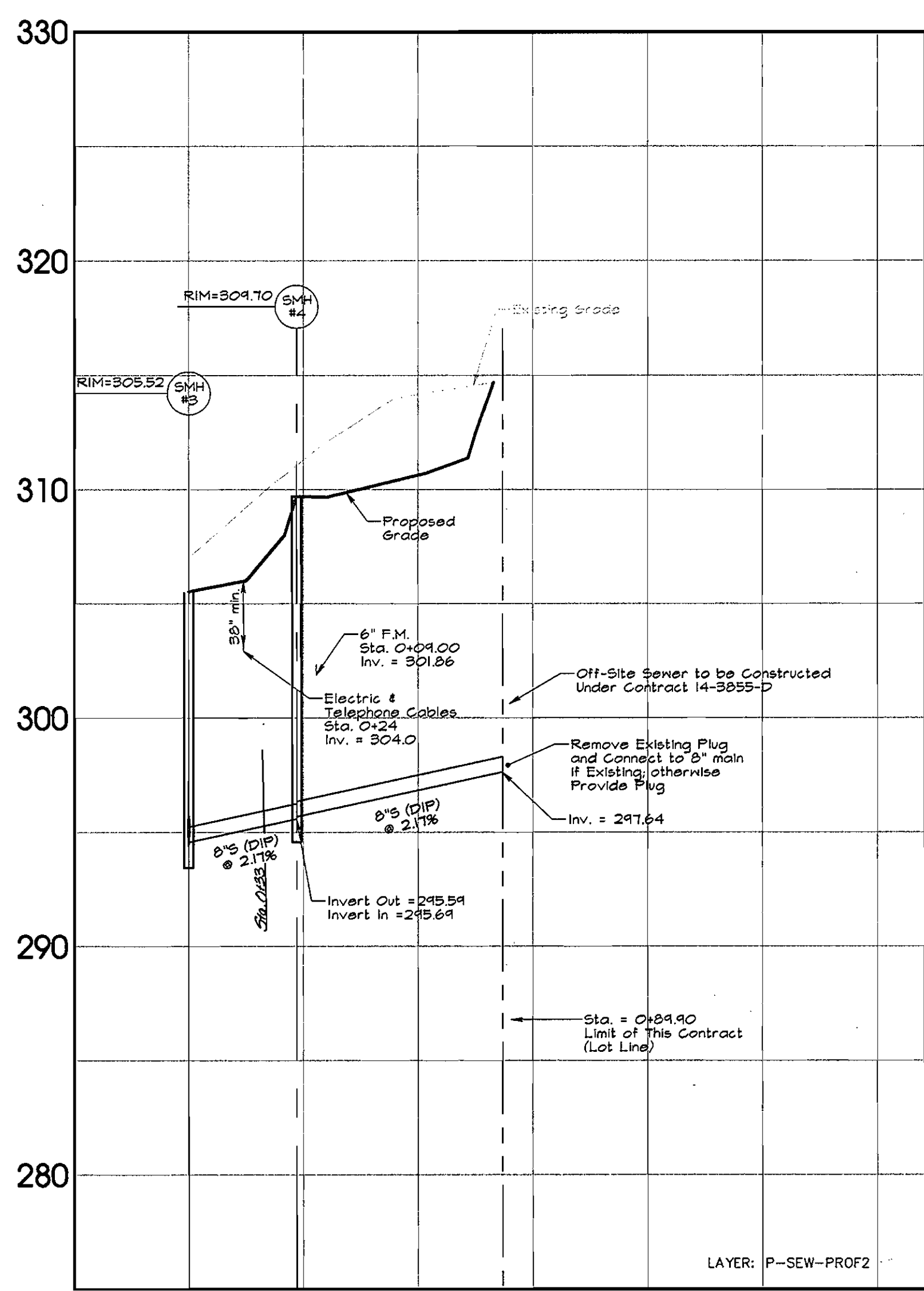
**SITE DEVELOPMENT PLAN FOR**  
**HOWARD COUNTY SANITARIUM COMPANY**  
**OPEN SPACE LOT 1 / SDP-00-141**

AND

**UTILITY DESIGN DRAWINGS**  
**NEW CUT ROAD WASTEWATER PUMPING STATION**  
**CONTRACT 10-3854-D**

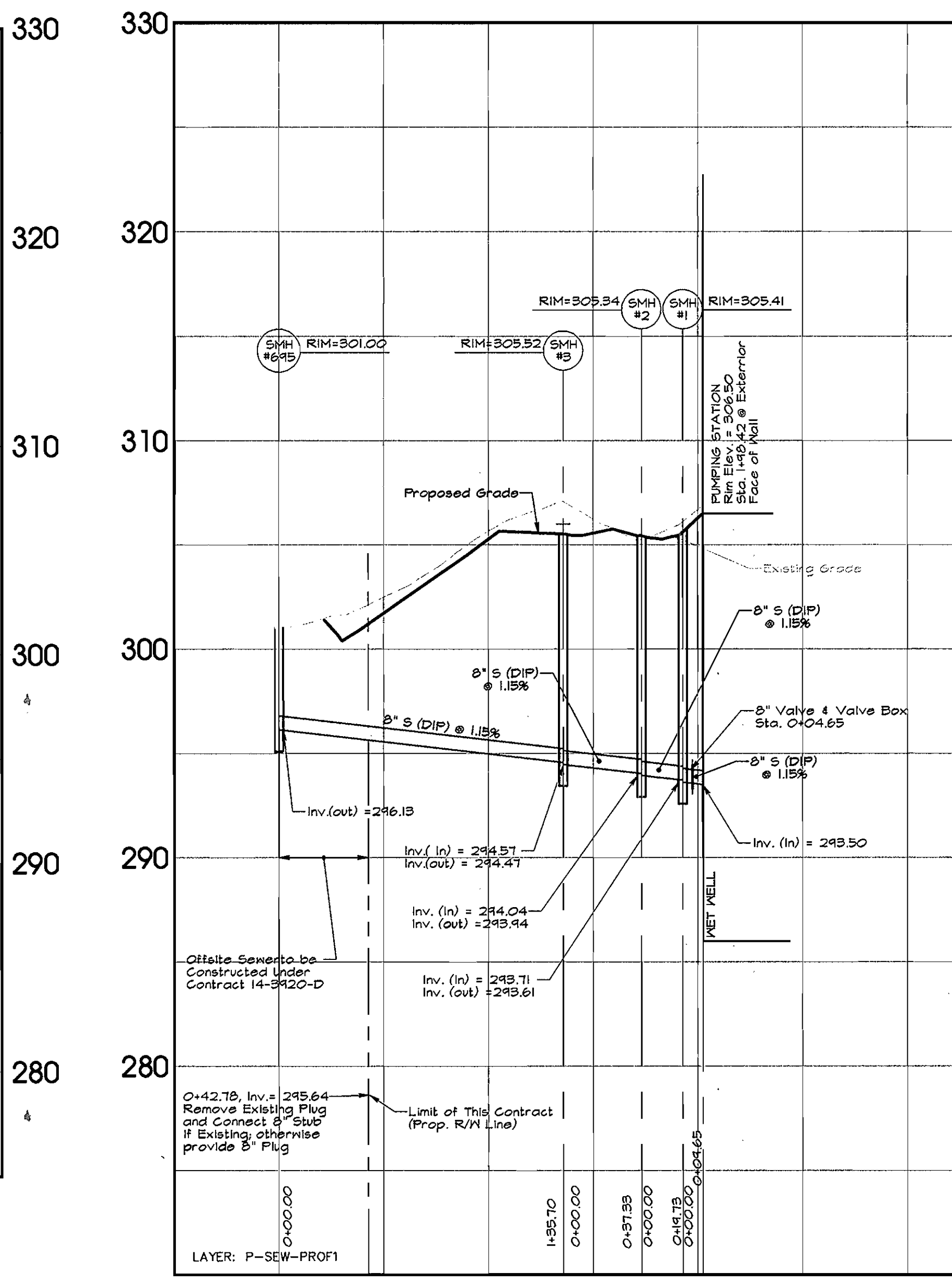
TAX MAP 25 GRID 20 P/O PARCEL 73  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: OCTOBER 16, 2000  
 SDP SHEET 4 OF 8 / UTILITY DESIGN SHEET 4 OF 30

SHEET  
**4**



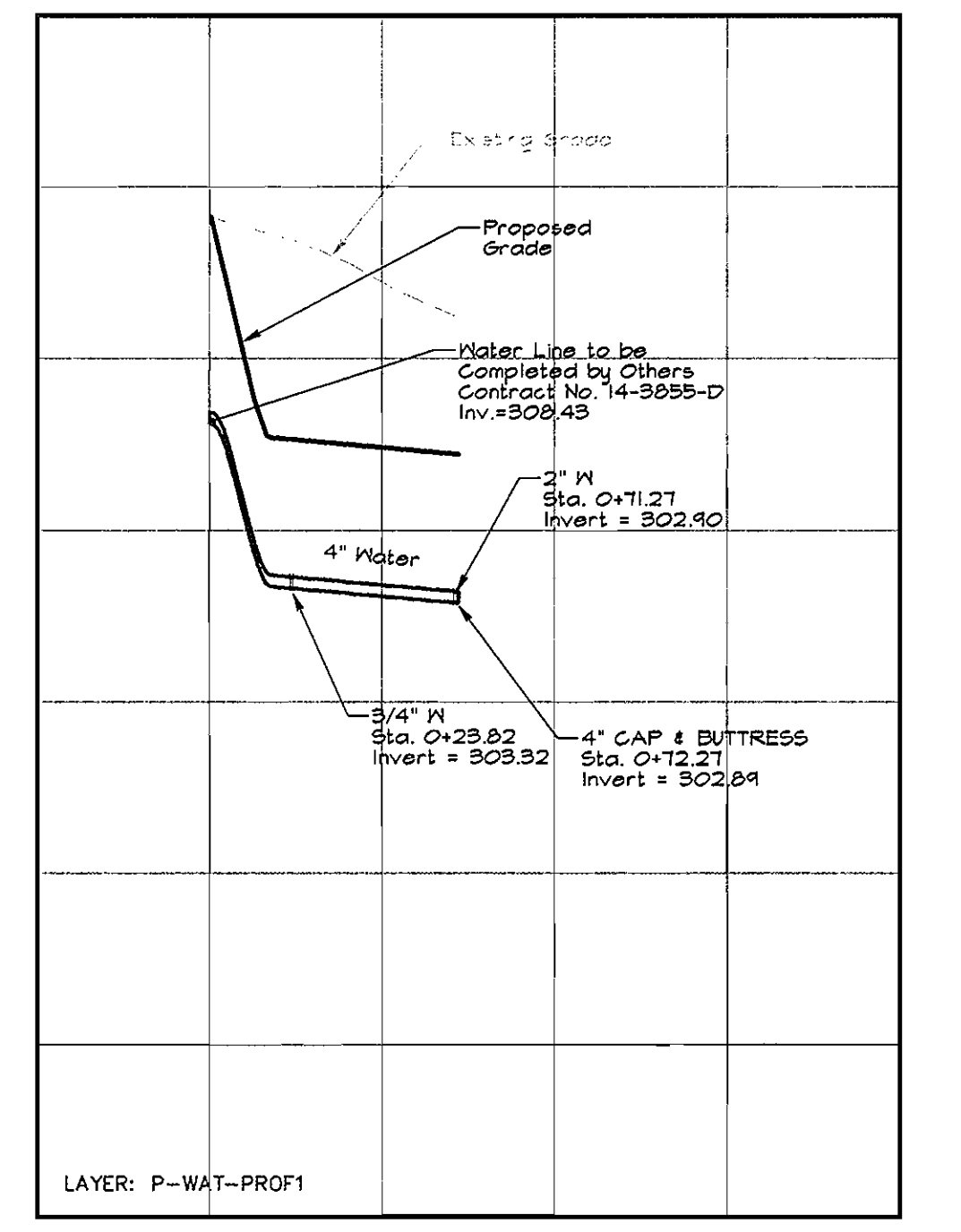
**PROFILE: 8" SEWER FROM REAR PROPERTY**

H = 5'  
V = 50'



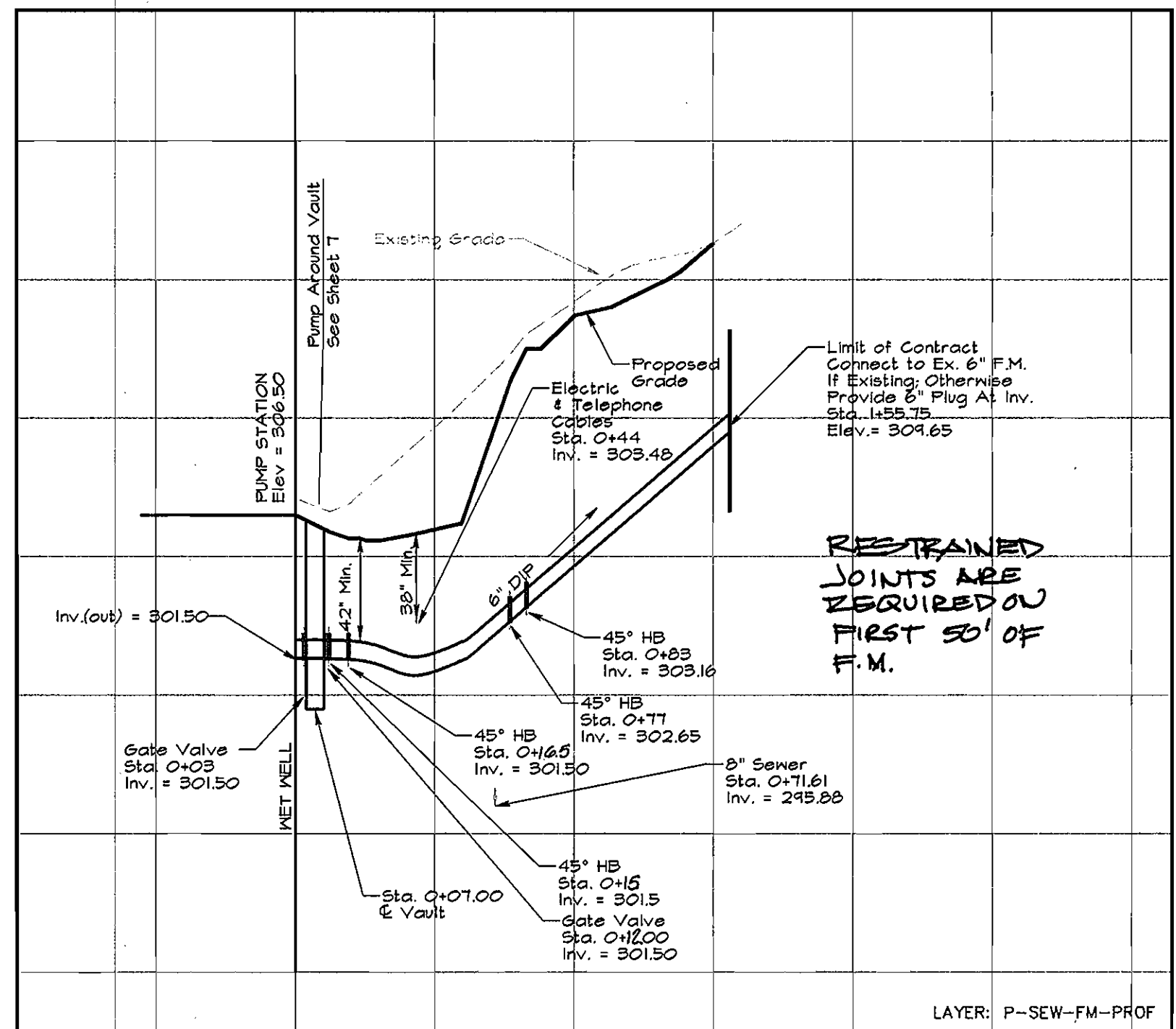
**PROFILE: 8" SEWER FROM NEW CUT ROAD**

H = 5'  
V = 50'



**PROFILE: 2" WATER LINE**

H = 5'  
V = 50'



**PROFILE: 6" FORCE MAIN**

H = 5'  
V = 50'

**NOTE:**  
Manhole 4 to be completed in accordance with design of continued system, done by another Consulting Engineer. Elevation, placement, and invert to be finalized upon approval of these plans and design of sewer system along New Cut Road to Pumping Station at SMH-4.

**OWNER/DEVELOPER INFORMATION**

CURRENT OWNER OF PARENT TRACT:  
HOWARD COUNTY SANITARIUM COMPANY  
4100 COLLEGE AVENUE  
P.O. BOX 396  
ELLCOTT CITY, MARYLAND 21041

DEVELOPER OF ADJACENT PROPERTIES AND WASTEWATER PUMPING STATION ON OPEN SPACE LOT 1:  
WORTHINGTON FIELDS, LLC  
C/O LAND DESIGN AND DEVELOPMENT, LLC  
8000 MAIN STREET  
ELLCOTT CITY, MARYLAND 21043  
ATTN: MR. DONALD R. REUWER, JR.

ULTIMATE OWNER/OPERATOR OF WASTEWATER PUMPING STATION ON OPEN SPACE LOT 1:  
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
DEVELOPMENT ENGINEERING DIVISION  
3431 COURTHOUSE DRIVE  
ELLCOTT CITY, MD 21043  
ATTN: MR. HASSAN/PROJECT ENGINEER

**McCRONE**  
ENGINEERING & ENVIRONMENTAL SCIENCES  
LAND PLANNING & SURVEYING & CONSTRUCTION SERVICES  
20 ROCKLEY AVENUE  
ANNAPOLIS, MARYLAND 21401  
(410) 297-3821

**ENGINEER'S CERTIFICATION**  
"I HEREBY 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."

STATE OF MARYLAND  
MICHAEL BELL  
REGISTERED PROFESSIONAL ENGINEER  
No. 17213  
1/22/01  
DATE

**DEVELOPER'S CERTIFICATION**  
"I HAVE HEREBY CERTIFIED THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR SEDIMENT AND EROSION CONTROL BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."  
"SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL AND STANDARDS & SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AS SHOWN ON THESE PLANS."

1/23/01  
DATE

MR. DONALD R. REUWER, JR.  
DATE

**DEPARTMENT OF PLANNING AND ZONING**  
HOWARD COUNTY, MARYLAND

4/14/01  
DATE

4/16/01  
DATE

2/5/01  
DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

U.S.D.A. - NATURAL RESOURCES CONSERVATION SERVICE  
DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
DATE

**DEPARTMENT OF PUBLIC WORKS**  
HOWARD COUNTY, MARYLAND

1-23-01  
DATE

PROJECT: HOWARD SANITARIUM CO. - OPEN SPACE LOT 1  
NEW CUT ROAD WASTEWATER PUMPING STATION

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
14594	20	POR	25	2nd	6027

WATER CODE: 6-01  
SEWER CODE: 1263100

**PROFILES**

**SITE DEVELOPMENT PLAN FOR HOWARD COUNTY SANITARIUM COMPANY OPEN SPACE LOT 1 / SDP-00-141**

AND  
**UTILITY DESIGN DRAWINGS**

**NEW CUT ROAD WASTEWATER PUMPING STATION CONTRACT 10-3854-D**

TAX MAP 25 GRID 20 P/O PARCEL 73  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: OCTOBER 16, 2000  
SDP SHEET 5 OF 8 / UTILITY DESIGN SHEET 5 OF 30

SHEET 5



**SEQUENCE OF CONSTRUCTION:**

- OBTAIN GRADING PERMIT (2 WEEKS)
- CLEAR FOR AND INSTALL 3.0' CULVERT & CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE (SCE), SILT FENCE (SF), & TREE PROTECTION FENCE (TPF) AS SHOWN ON PLAN (1 DAY)
- THE CONTRACTOR SHALL INSPECT & PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT & EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL & ON A DAILY BASIS
- REMOVE SEDIMENT FROM ROADWAY & DRESS STONE CONSTRUCTION ENTRANCE AS REQUIRED, (1 DAY)
- CLEAR & GRUB SITE, GRADE TO SUBGRADE (3 DAYS)
- CONSTRUCT UTILITIES, PUMPING STATION, APPURTENANCES, (6 MONTHS)
- PAVE DRIVEWAY, (1 WEEK)
- FINE GRADE PERIMETER AREAS AROUND DRIVEWAY & INSTALL FENCE & CURB, STABILIZE W/ PERMANENT SEEDING MIXTURE & STRAW MULCH (3 DAYS)
- STABILIZE ALL REMAINING DISTURBED AREAS W/ PERMANENT SEEDING MIXTURE & STRAW MULCH (2 DAYS)
- AFTER PERMISSION HAS BEEN GIVEN BY THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL MEASURES & STABILIZE REMAINING DISTURBED AREA W/ PERMANENT SEEDING MIXTURE & STRAW MULCH (1 DAY)

**LEGEND**

- SF Silt Fence
- TPF Tree Protection Fence
- Stone Construction Entrance
- Limit of Disturbance

**OWNER/DEVELOPER INFORMATION**

**CURRENT OWNER OF PARENT TRACT:**  
 HOWARD COUNTY SANITARIUM COMPANY  
 4100 COLLEGE AVENUE  
 P.O. BOX 306  
 ELICOTT CITY, MARYLAND 21041

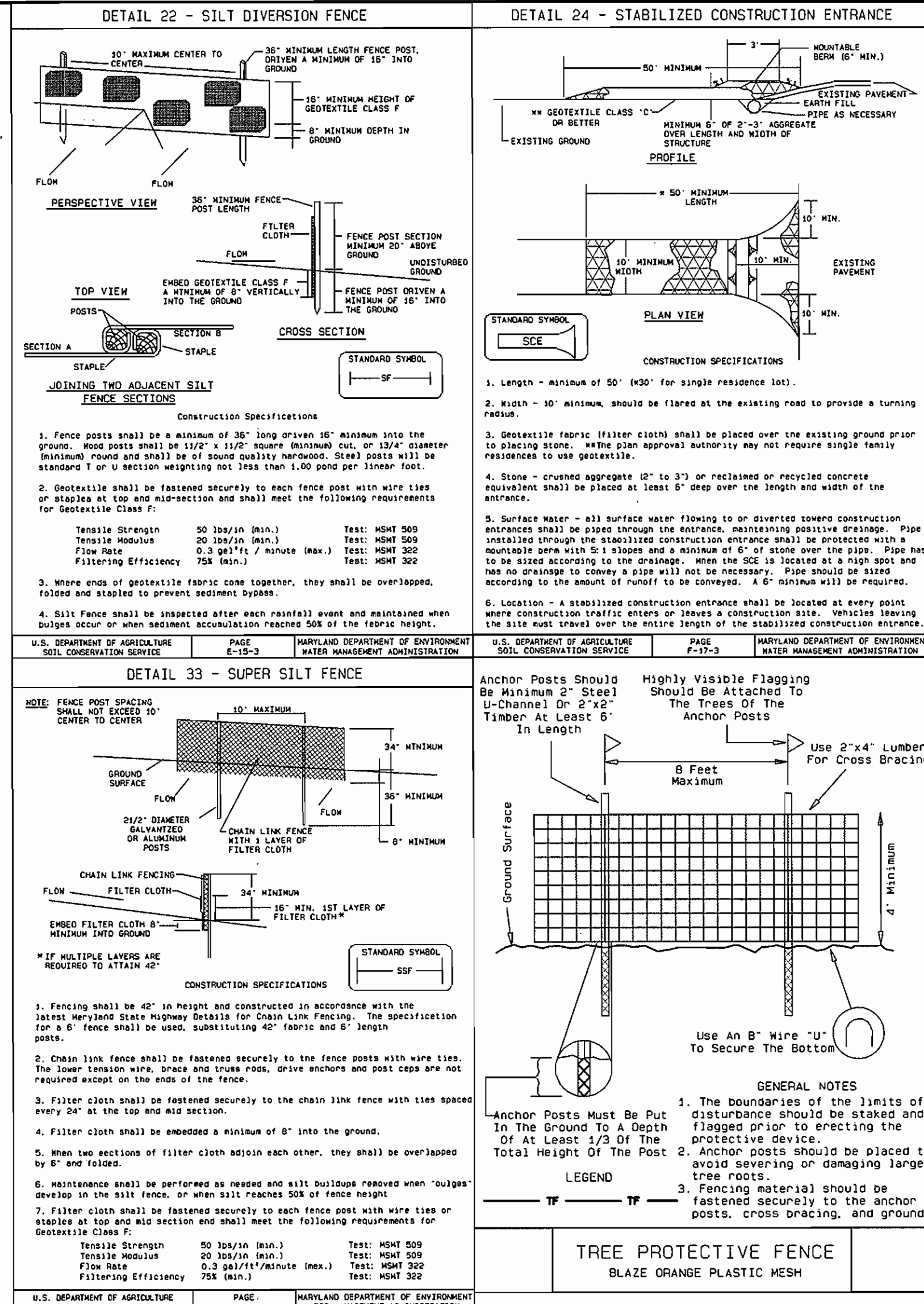
**DEVELOPER OF ADJACENT PROPERTIES AND WASTEWATER PUMPING STATION ON OPEN SPACE LOT 1:**  
 WORTHINGTON FIELDS, LLC  
 C/O LAND DESIGN AND DEVELOPMENT, LLC  
 DEVELOPMENT ENGINEERING DIVISION  
 ELICOTT CITY, MARYLAND 21043  
 ATTN: MR. DONALD R. REIHER, JR.

**ULTIMATE OWNER/OPERATOR OF WASTEWATER PUMPING STATION ON OPEN SPACE LOT 1:**  
 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 DEVELOPMENT ENGINEERING DIVISION  
 3430 COURTHOUSE DRIVE  
 ELICOTT CITY, MD 21043  
 ATTN: MR. HASSAN/PROJECT ENGINEER

- A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction, (315-1855)
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, ditches, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. I, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOILS EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:
 

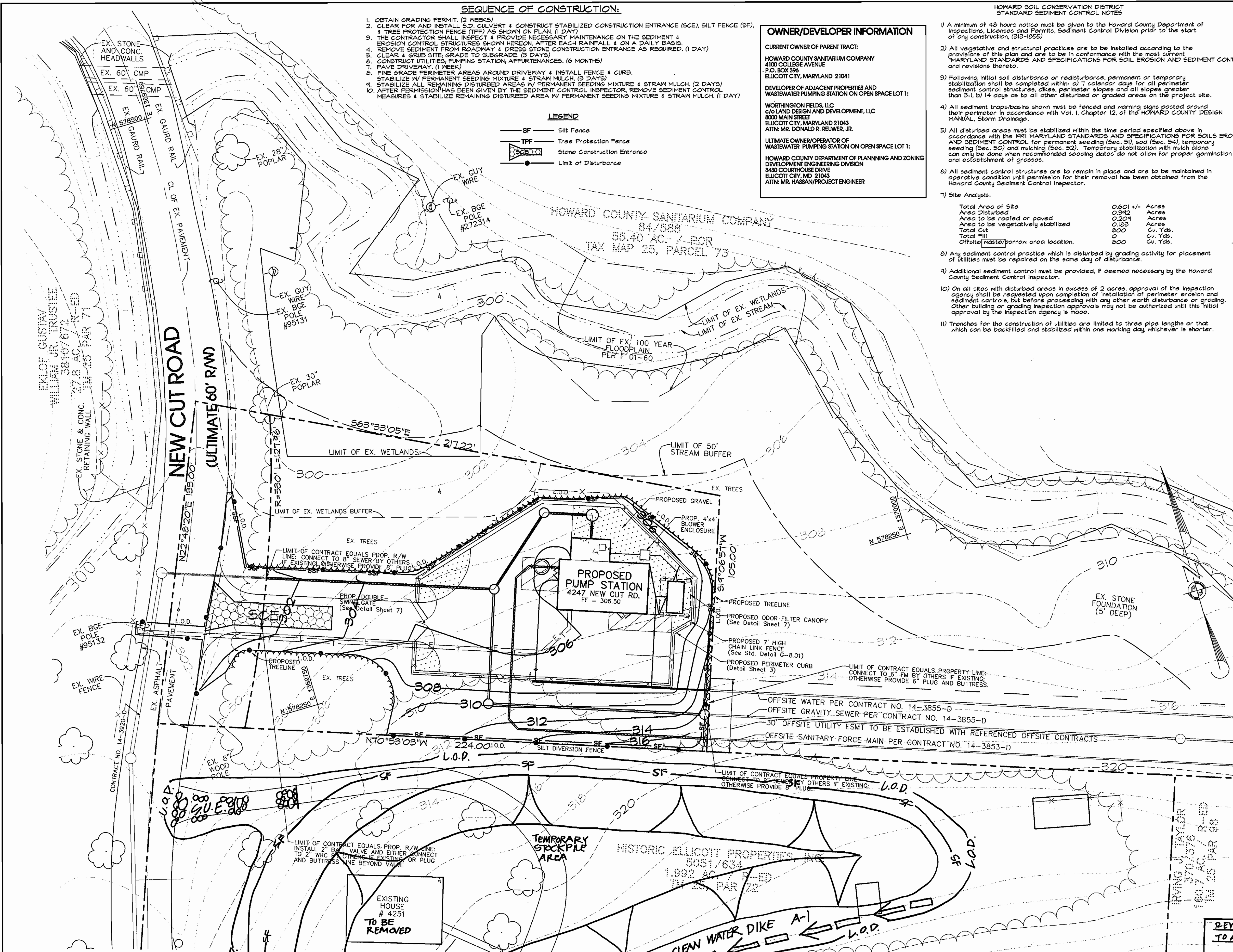
Total Area of Site	0.601 +/- Acres
Area Disturbed	0.204 Acres
Area to be seeded or paved	0.183 Acres
Area to be vegetatively stabilized	800 Cu. Yds.
Total Fill	800 Cu. Yds.
Offsite (paste/borrow area location)	800 Cu. Yds.

- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Trenches for the construction of utilities are limited to three pipe lengths or that which can be backfilled and stabilized within one working day, whichever is shorter.



**HOWARD SOIL CONSERVATION DISTRICT PERMANENT SEEDING NOTES**

- Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.
- Seeded Preparation:** Loosen upper three inches of soil by raking, disking, or other acceptable means before seeding, if not previously loosened.
- Soil Amendments:** In lieu of soil test recommendations, use one of the following schedules:  
 1. Preferred - Apply 2 tons/acre dolomitic limestone (42 lbs/1000 sq. ft.) and 600 lbs/acre 10-10-10 Fertilizer (14 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.  
 2. Acceptable - Apply 2 tons/acre dolomitic limestone (42 lbs/1000 sq. ft.) and 1000 lbs/acre 10-10-10 Fertilizer (25 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.
- Seeding - For the periods March 1 - April 30, and August 15 - October 15, seed with 60 lbs/acre (1.4 lbs/1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 - July 31, seed with 60 lbs/acre Kentucky 31 Tall Fescue per acre and 2 lbs/acre (0.5 lbs/1000 sq. ft.) of creeping lovegrass. During the period of October 16 - February 28, protect site by Option 1 - Two tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option 2 - Fertilizer (25 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.**
- Mulching - Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool of 210 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slope 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq. ft.) for anchoring.**
- Maintenance - Inspect all seeding areas and make needed repairs, replacements and reseedings.**
- TEMPORARY SEEDING NOTES**
- Apply to graded or cleared areas likely to be re-disturbed where a short-term vegetative cover is needed.
- Seeded Preparation - Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.**
- Soil Amendments - Apply 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.)**
- Seeding - For periods March 1 - April 30 and from August 15 - October 15, seed with 2-1/2 bushel per acre of annual rye (3.2 lbs/1000 sq. ft.). For the period May 1 - August 14, seed with 3 lbs/acre of creeping lovegrass (0.7 lbs/1000 sq. ft.). For the period November 16 - February 28, protect site by applying 2 tons/acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.**
- Mulching - Apply 1-1/2 to 2 tons/acre (70 to 90 lbs/1000 sq. ft.) of unrotted need-free, small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool of 210 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gal per acre (8 gal/1000 sq. ft.) for anchoring.**
- Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.



**McCRONE**  
 ENGINEERING & ENVIRONMENTAL SCIENCES  
 LAND PLANNING & SURVEYING A CONSTRUCTION SERVICES  
 20 ROBERT AVENUE  
 ANNAPOLIS, MARYLAND 21401  
 (410) 297-8811

**ENGINEER'S CERTIFICATION**  
 I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]*  
 DATE: 1/22/01

**DEVELOPER'S CERTIFICATION**  
 I HAVE HEREBY CERTIFIED THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT PROTECTIVE TRAINING PROGRAM FOR EROSION AND SEDIMENT CONTROL BEFORE BEGINNING THE PROJECT. I HAVE ALSO HEREBY CERTIFIED THAT I HAVE BEEN ADVISED BY THE HOWARD SOIL CONSERVATION DISTRICT OF THEIR AUTHORIZED AGENCIES AND THE MEASURES NECESSARY TO OBTAIN PERMITS AND THAT THESE MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH THE CITY OF THE HOWARD COUNTY DESIGN MANUAL AND STANDARDS & SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND THE MEASURES SHOWN ON THESE PLANS.

*[Signature]*  
 DATE: 1-23-01

**DEPARTMENT OF PLANNING AND ZONING**  
 HOWARD COUNTY, MARYLAND

*[Signature]* 4/4/01  
 DIRECTOR

*[Signature]* 4/4/01  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*[Signature]* 2/5/01  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

**DEPARTMENT OF PUBLIC WORKS**  
 HOWARD COUNTY, MARYLAND

*[Signature]* 2/6/01  
 CHIEF, BUREAU OF UTILITIES

**PROJECT:** HOWARD SANITARIUM CO. - OPEN SPACE LOT 1  
**SECTION/AREA:** NEW CUT ROAD WASTEWATER PUMPING STATION

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
14594	20	POR	25	2nd	6027

WATER CODE	SEWER CODE
G-01	1283100

**REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS**

*[Signature]* 2/6/01  
 U.S.A. - NATURAL RESOURCES CONSERVATION SERVICE

**THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.**

*[Signature]* 2/6/01  
 HOWARD SOIL CONSERVATION DISTRICT

**REV. 12-13-01 ADD STOCKPILE TO ADJACENT PROPERTY**

**GRAPHIC SCALE 1"=20'**

0 20 40 60

**SEDIMENT CONTROL PLAN, NOTES, AND DETAILS**

**SITE DEVELOPMENT PLAN FOR HOWARD COUNTY SANITARIUM COMPANY OPEN SPACE LOT 1 / SDP-00-141**

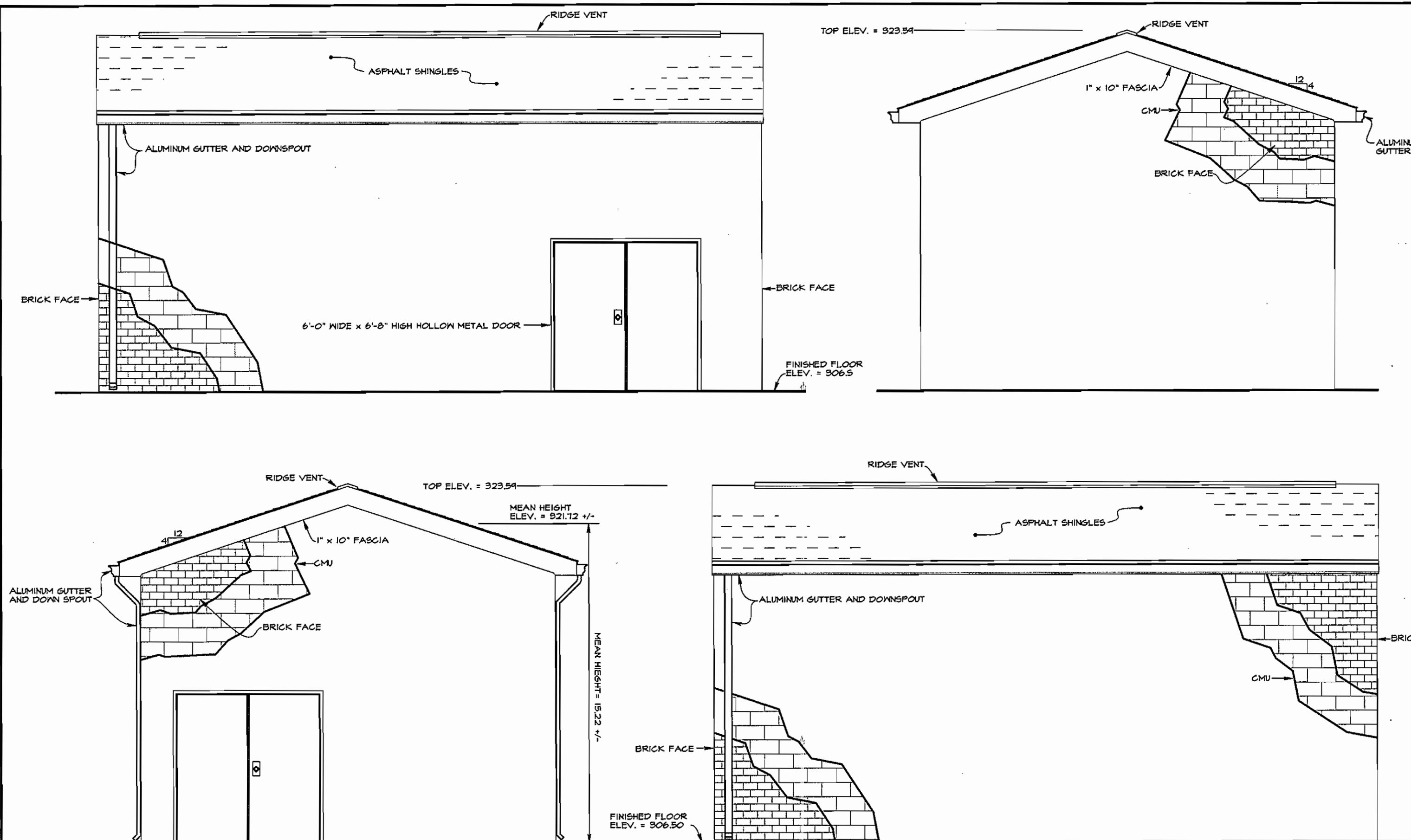
AND

**UTILITY DESIGN DRAWINGS NEW CUT ROAD WASTEWATER PUMPING STATION CONTRACT 10-3854-D**

TAX MAP 25 GRID 20 P/O PARCEL 73  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: OCTOBER 16, 2000  
 SDP SHEET 6 OF 8 / UTILITY DESIGN SHEET 6 OF 30

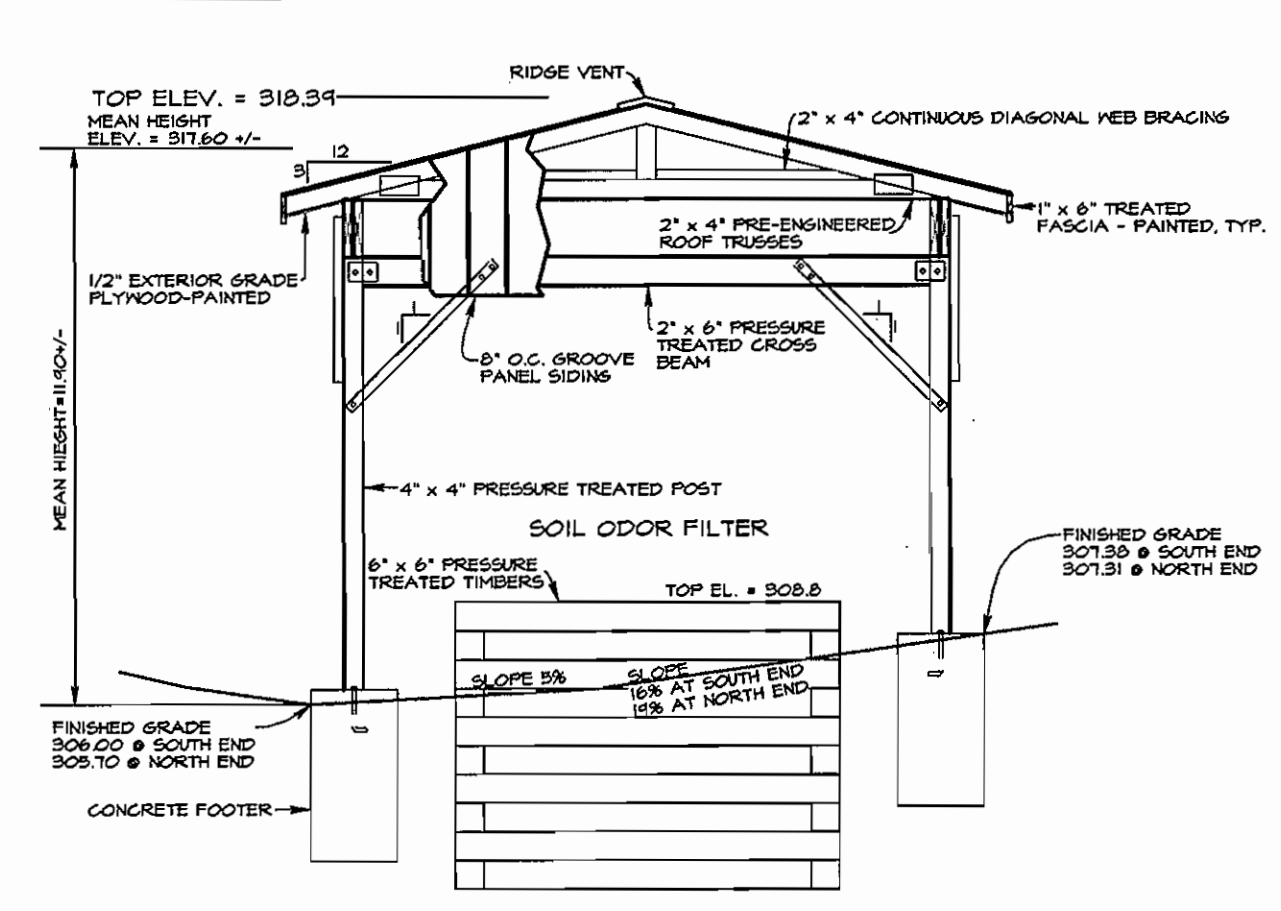
SHEET 6





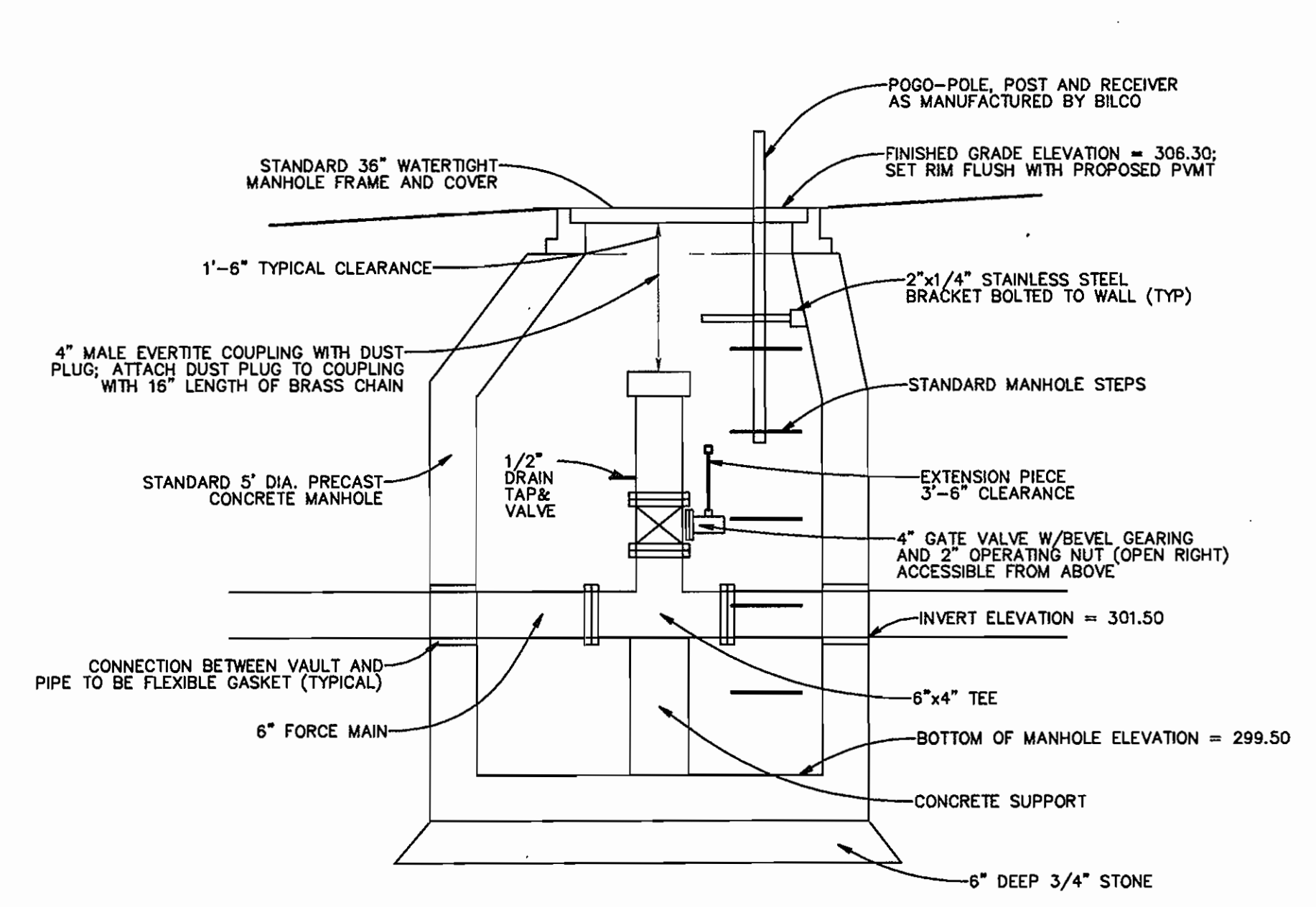
**SCHEMATIC BUILDING PROFILES**  
nts

NOTE: THIS DETAIL IS PROVIDED TO PRESENT A GENERAL ELEVATION VIEW FOR AESTHETIC ZONING AND ARCHITECTURAL REVIEW IN CONJUNCTION WITH SDP ONLY. FOR CONSTRUCTION DETAILS, SEE APPROPRIATE UTILITY DESIGN SHEETS 9 THRU 30.

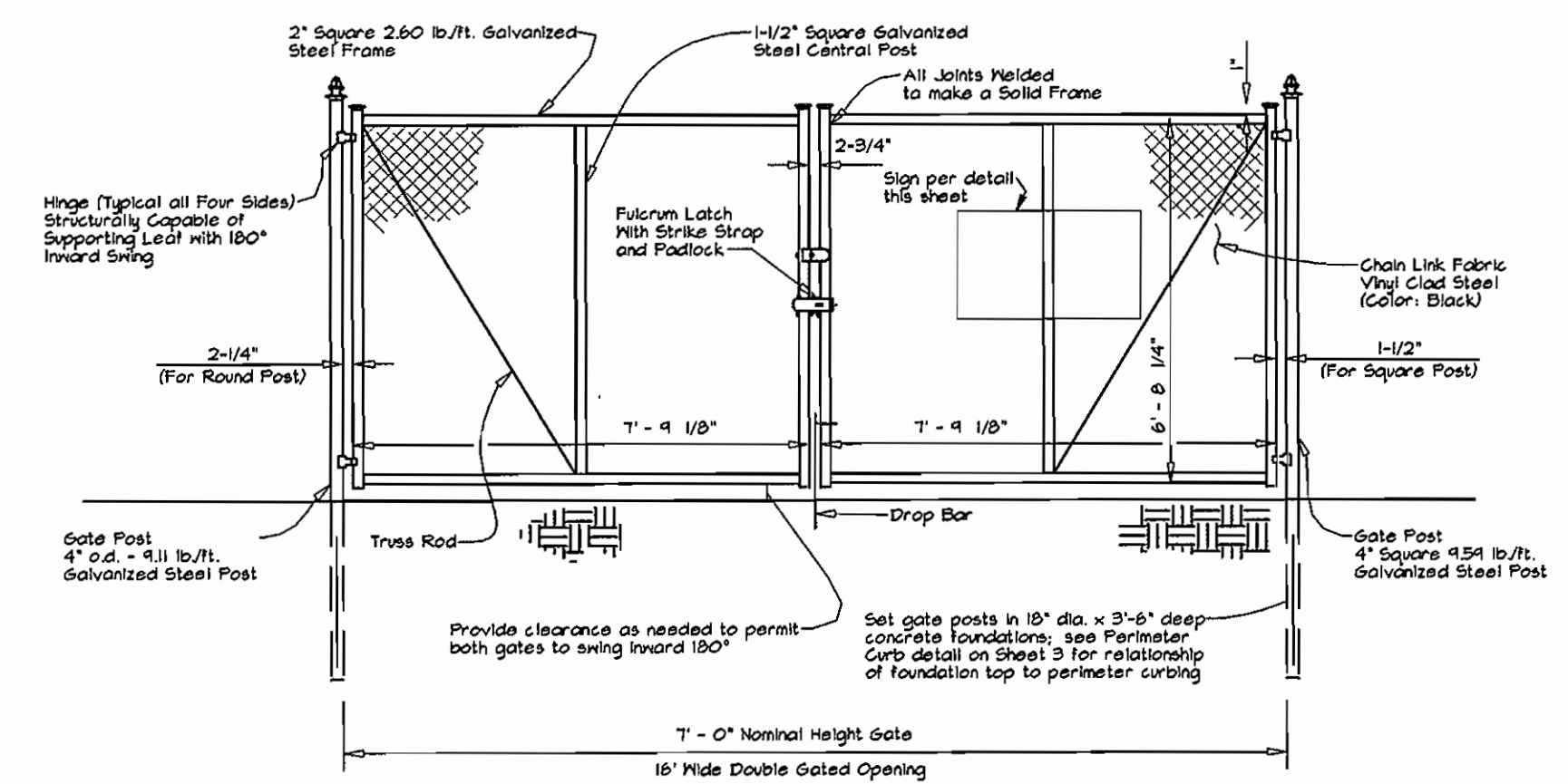


**SOIL ODOR FILTER**  
nts

NOTE: THIS DETAIL IS PROVIDED TO PRESENT A GENERAL ELEVATION VIEW FOR AESTHETIC ZONING AND ARCHITECTURAL REVIEW IN CONJUNCTION WITH SDP ONLY. FOR CONSTRUCTION DETAILS, SEE APPROPRIATE UTILITY DESIGN SHEETS 9 THRU 30.



**BYPASS PUMPING MANHOLE**  
nts



**CHAIN LINK FENCE DOUBLE GATE DETAIL**  
nts

- NOTES:
- CONTRACTOR SHALL PROVIDE AND SECURELY MOUNT SIGN ON CHAIN LINK GATE AT APPROXIMATE LOCATION SHOWN ON DETAIL FOR GATE.
  - SIGN MATERIAL TO BE 0.080\"/>

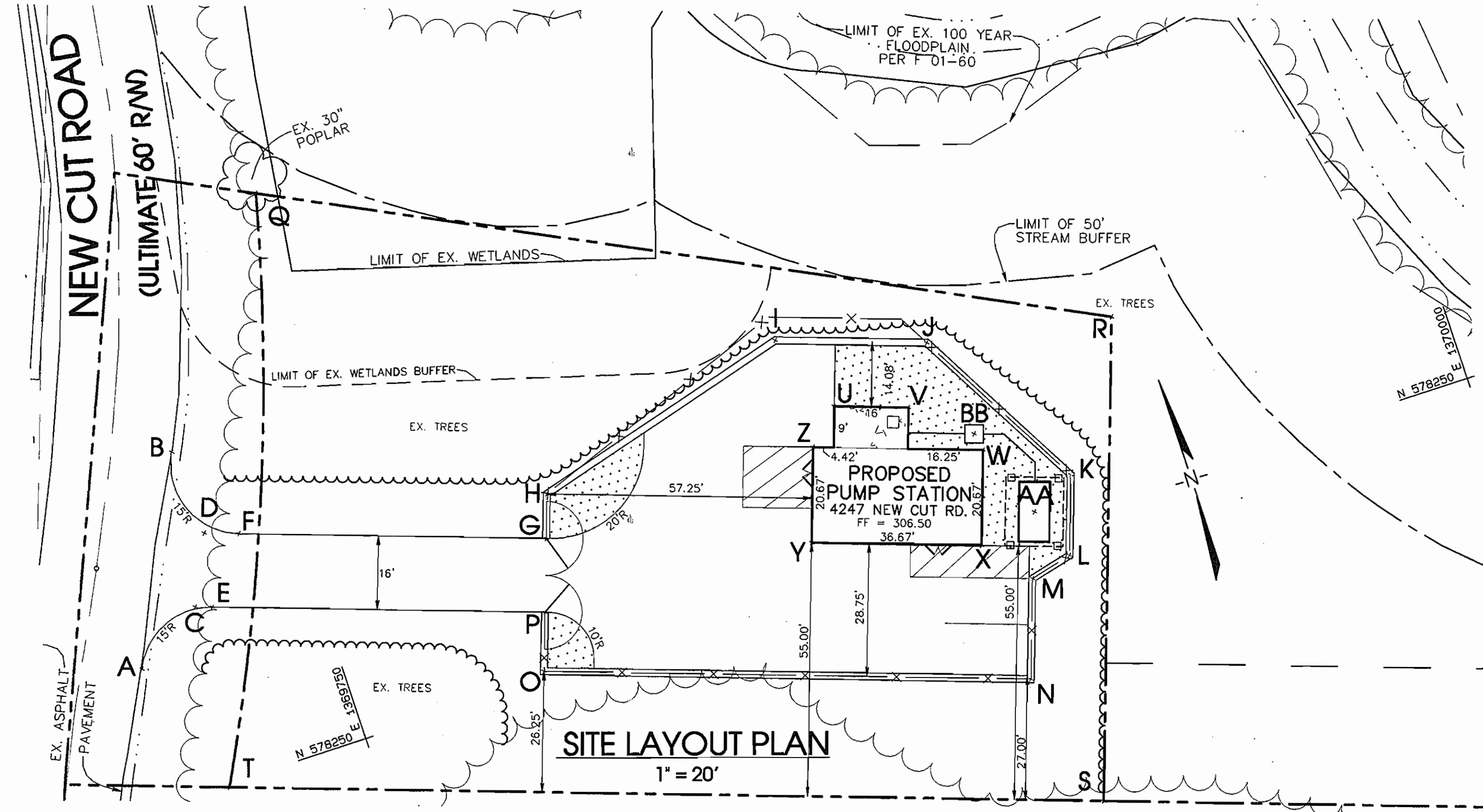
**GATE SIGN DETAIL**  
nts

**OWNER/DEVELOPER INFORMATION**

CURRENT OWNER OF PARENT TRACT:  
HOWARD COUNTY SANITARIUM COMPANY  
4100 COLLEGE AVENUE  
P.O. BOX 395  
ELLCOTT CITY, MARYLAND 21041

DEVELOPER OF ADJACENT PROPERTIES AND WASTEWATER PUMPING STATION ON OPEN SPACE LOT 1:  
WORTHINGTON FIELDS, LLC  
LAND DESIGN AND DEVELOPMENT, LLC  
8000 MAIN STREET  
ELLCOTT CITY, MARYLAND 21043  
ATTN: MR. DONALD R. REUWER, JR.

ULTIMATE OWNER/OPERATOR OF WASTEWATER PUMPING STATION ON OPEN SPACE LOT 1:  
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
DEVELOPMENT ENGINEERING DIVISION  
3430 COURTHOUSE DRIVE  
ELLCOTT CITY, MD 21043  
ATTN: MR. HASSAN/PROJECT ENGINEER



**SITE LAYOUT COORDINATES**

Point	Northing	Easting	Description
A	578278.9714	1364708.8469	E.O.P.
B	578321.4465	1364724.6653	E.O.P.
C	578288.6030	1364724.0054	SWALE
D	578303.1616	1364730.8751	SWALE
E	578287.3447	1364727.4422	E.O.P.
F	578300.7064	1364737.4571	E.O.P.
G	578279.0455	1364800.4542	CL OF FENCE @ END
H	578289.1255	1364803.6012	CL OF FENCE @ CORNER
I	578304.4368	1364860.7402	CL OF FENCE @ CORNER
J	578245.7285	1364841.6863	CL OF FENCE @ CORNER
K	578256.8036	1364912.2405	CL OF FENCE @ CORNER
L	578240.3515	1364906.5384	CL OF FENCE @ CORNER
M	578238.0462	1364847.9720	CL OF FENCE @ CORNER
N	578217.4455	1364840.2443	CL OF FENCE @ CORNER
O	578251.8808	1364741.0342	CL OF FENCE @ CORNER
P	578263.4278	1364745.2145	CL OF FENCE @ END
Q	578364.6437	1364764.3425	PROPERTY CORNER
R	578286.6141	1364931.2487	PROPERTY CORNER
S	578187.4040	1364846.4135	PROPERTY CORNER
T	578244.1254	1364718.8315	PROPERTY CORNER
U	578286.8850	1364868.4365	WET WELL CORNER
V	578281.6455	1364883.5542	WET WELL CORNER
W	578267.8202	1364845.4605	BUILDING CORNER
X	578248.2400	1364884.1415	BUILDING CORNER
Y	578260.2473	1364854.5474	BUILDING CORNER
Z	578274.8275	1364861.3164	BUILDING CORNER
AA	578251.6545	1364902.2642	CENTER ODOR FILTER
BB	578271.7822	1364845.2170	CENTER BLOWER

**McCRONE**  
ENGINEERING • ENVIRONMENTAL SCIENCES  
LAND PLANNING & SURVEYING • CONSTRUCTION SERVICES  
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STATE OF MARYLAND  
REGISTERED PROFESSIONAL ENGINEER  
DONALD R. REUWER, JR.  
1/22/01  
DATE

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MR. DONALD R. REUWER, JR.  
1-23-01  
DATE

**DEPARTMENT OF PLANNING AND ZONING**  
HOWARD COUNTY, MARYLAND

4/4/01  
DATE

4/4/01  
DATE

2/5/01  
DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

U.S.D.A. - NATURAL RESOURCES CONSERVATION SERVICE  
DATE

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

HOWARD SOIL CONSERVATION DISTRICT  
DATE

**DEPARTMENT OF PUBLIC WORKS**  
HOWARD COUNTY, MARYLAND

1-23-01  
DATE

PROJECT: HOWARD SANITARIUM CO. - OPEN SPACE LOT 1  
NEW CUT ROAD WASTEWATER PUMPING STATION

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
14594	20	POR	25	2nd	6027

WATER CODE: 6-01  
SEWER CODE: 1253100

**SITE DETAILS**

**SITE DEVELOPMENT PLAN FOR HOWARD COUNTY SANITARIUM COMPANY OPEN SPACE LOT 1 / SDP-00-141**

AND  
**UTILITY DESIGN DRAWINGS**

**NEW CUT ROAD WASTEWATER PUMPING STATION CONTRACT 10-3854-D**

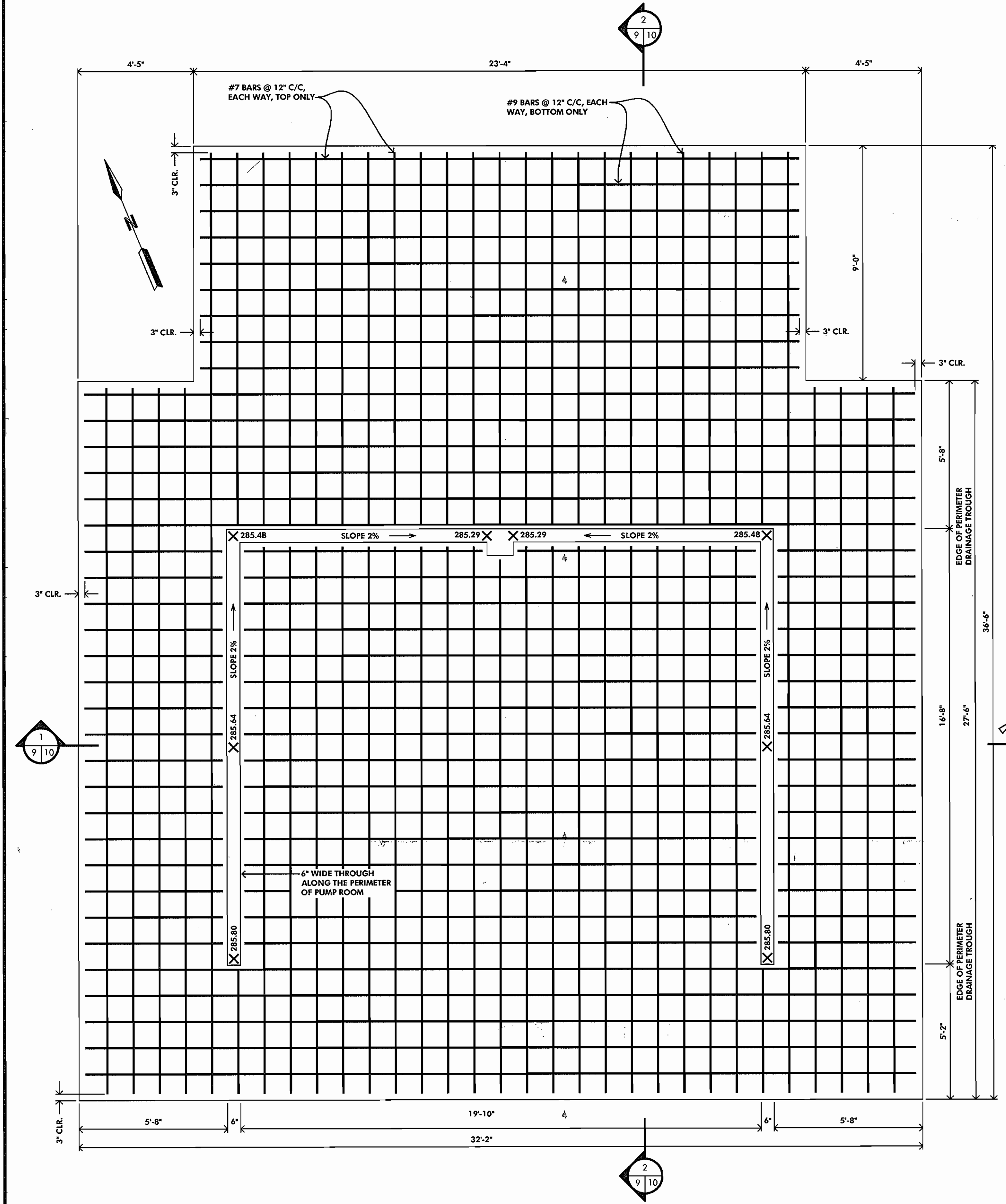
TAX MAP 25 GRID 20 P/O PARCEL 73  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: OCTOBER 16, 2000  
SDP SHEET 7 OF 8 / UTILITY DESIGN SHEET 7 OF 30

SHEET 7

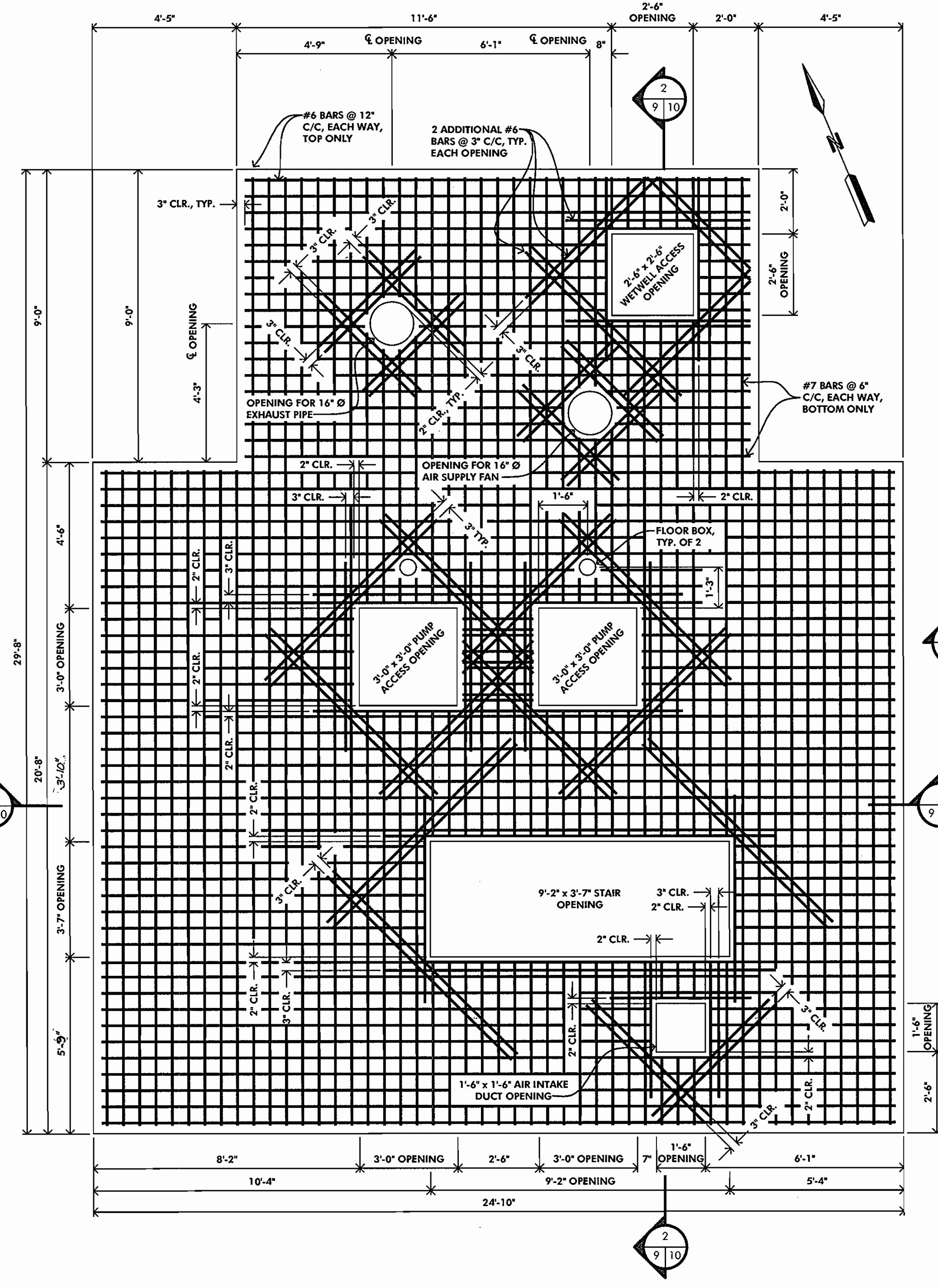




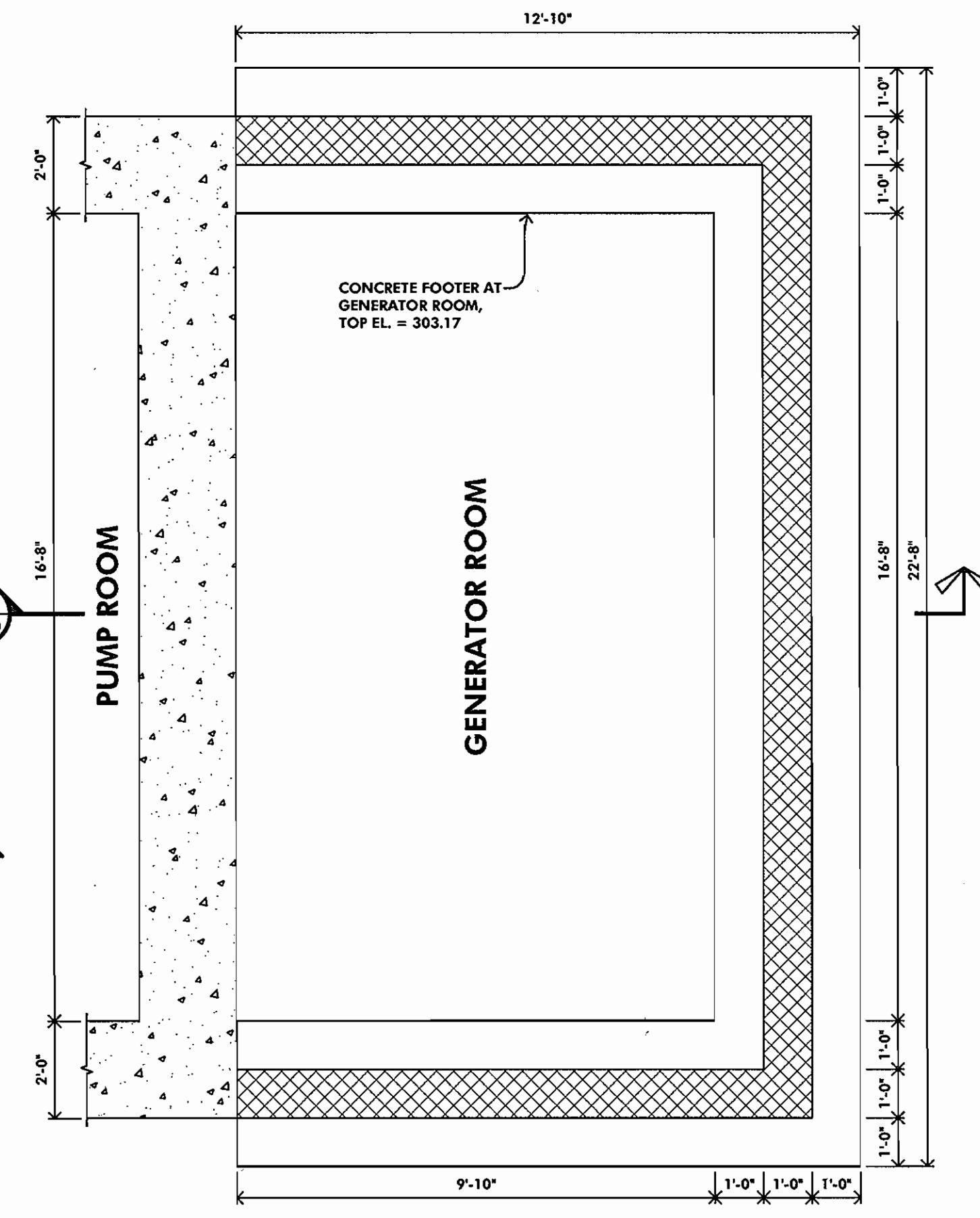




**FOUNDATION PLAN**  
SCALE: 3/8" = 1'-0"



**TOP SLAB PLAN**  
SCALE: 3/8" = 1'-0"



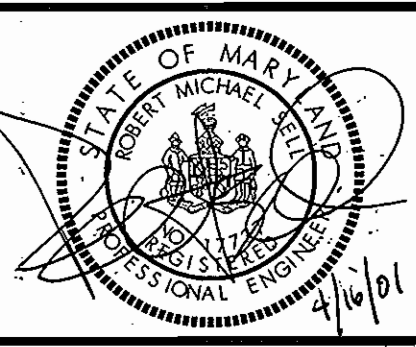
**FOUNDATION PLAN**  
SCALE: 3/8" = 1'-0"  
AT GENERATOR ROOM

THIS SHEET # 9 OF 30 WILL SUPERSEDE SHEET 9 OF 30 APPROVED AND SIGNED BY CHIEF OF LAND DEVELOPMENT DIVISION ON APRIL 4, 2001

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
Robert Bainger 4-24-01  
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND  
4/26/01  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

**McCRONE**  
ENGINEERING ENVIRONMENTAL SCIENCES  
LAND PLANNING & SURVEYING CONSTRUCTION SERVICES  
20 RIDGELY AVENUE  
ANNAPOLIS, MARYLAND 21401  
(410) 267-8621  
FAX (410) 267-9932  
ANNAPOLIS CENTREVILLE ELKTON PRINCE FREDERICK SALISBURY



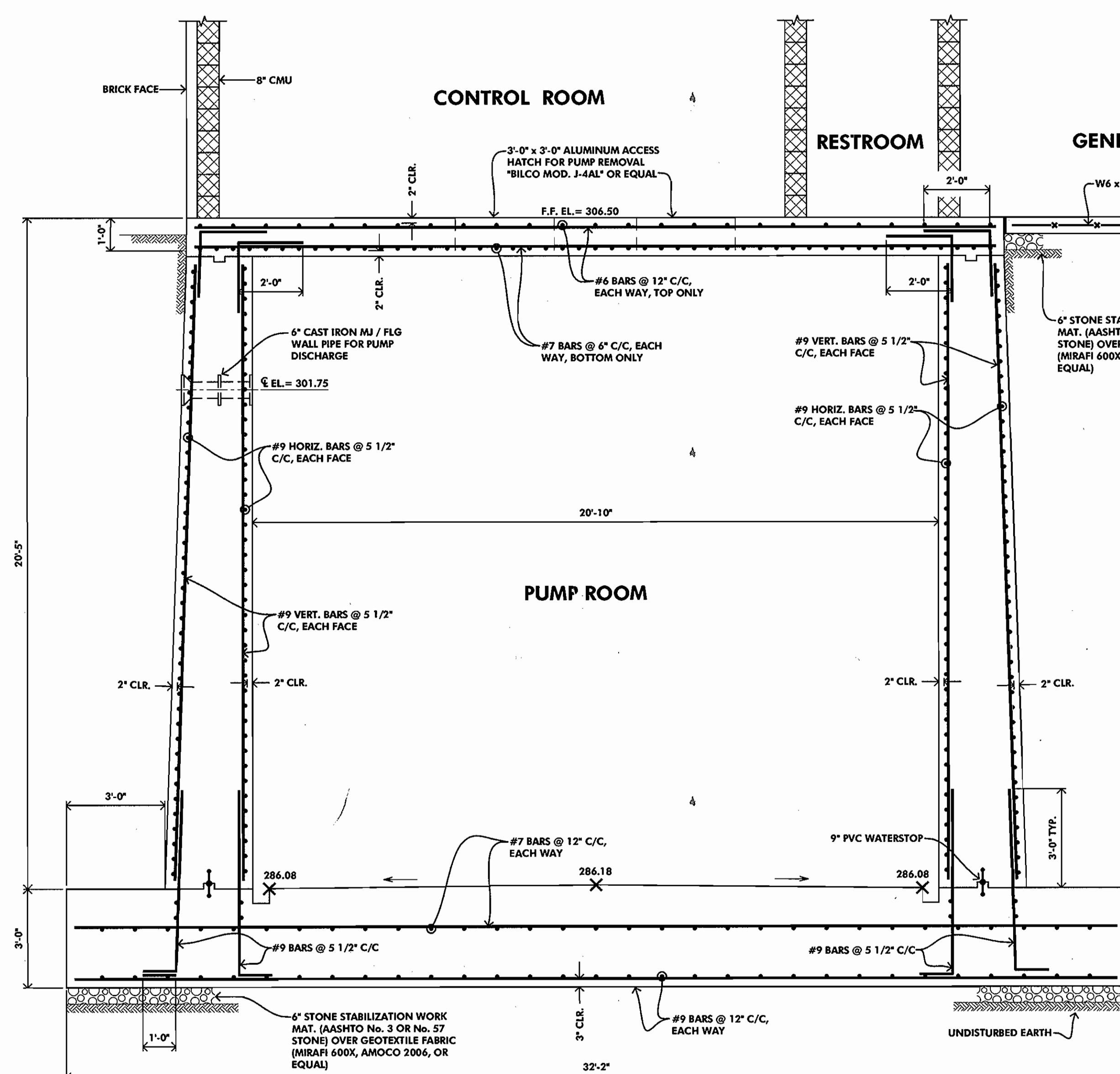
DES: S.A.C.	S.A.C.	STRUCTURAL REVISION	02/01
DRN: -			
CHK: R.SELL			
DATE: FEB, 2000	BY	No.	REVISION
			DATE

**STRUCTURAL PLANS**

**NEW CUT ROAD PUMP WASTEWATER PUMPING STATION**  
CONTRACT # 10-3854-D  
2 nd ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

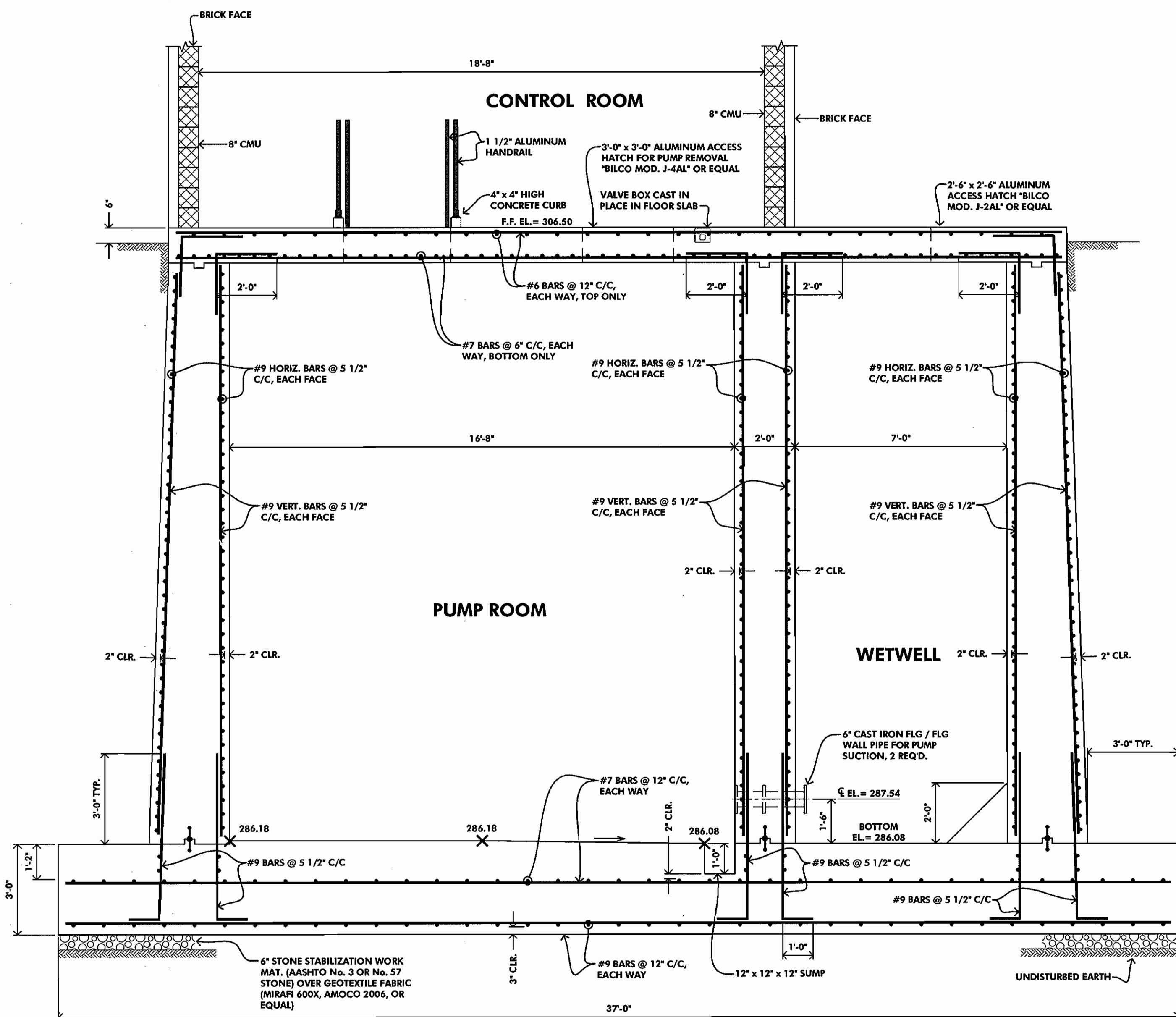
SCALE AS SHOWN  
SHEET 9 OF 30





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

- THE FOLLOWING LOADS WERE USED TO DESIGN THE BUILDING:
- FLOOR LIVE LOAD - 100 PSF
  - ROOF LIVE LOAD - 30 PSF
  - ROOF SNOW LOAD:
    - GROUND SNOW LOAD - 25 PSF
    - FLAT ROOF SNOW LOAD - N/A
    - SNOW EXPOSURE FACTOR - 1.0
    - SNOW LOAD IMPORTANCE FACTOR - 1.1
    - THERMAL FACTOR - 1.0
  - WIND LOAD
    - BASIC WIND SPEED - 90 MPH
    - WIND LOAD IMPORTANCE FACTOR I AND BUILDING CATEGORY - II
    - WIND EXPOSURE FACTOR - B
    - APPLICABLE INTERNAL PRESSURE COEFFICIENT - 1.0
    - COMPONENTS AND CLADDING - N/A
  - EARTHQUAKE DESIGN DATA
    - SEISMIC USE GROUP - II
    - SPECIAL RESPONSE COEFFICIENTS:
      - RESPONSE MODIFICATION COEFFICIENT 1-1/2
      - SYSTEM OVER STRENGTH FACTOR 2-1/2
      - DEFLECTION AMPLIFICATION FACTOR 1-1/4
    - SITE CLASS - D
    - BASIC SEISMIC-FORCE-RESISTING SYSTEM:
      - 11 ABOVE PUMP ROOM ROOF
      - 1D BELOW PUMP ROOM ROOF
    - DESIGN BASE SHEAR:
      - 34 kips AT PUMP ROOM ROOF
      - 309 kips AT PUMP ROOM BASE
    - ANALYSIS PROCEDURE - SECTION 1617.4 "EQUIVALENT LATERAL FORCE PROCEDURE"
  - ASSUMED SOIL BEARING VALUE - 3000 LB/SF



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

THIS SHEET # 10 OF 30 WILL SUPERSEDE SHEET 10 OF 30 APPROVED AND SIGNED BY CHIEF OF LAND DEVELOPMENT DIVISION ON APRIL 4, 2001

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
Robert B. [Signature]  
CHIEF, BUREAU OF UTILITIES  
DATE: 11-15-01

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND  
[Signature]  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 11/15/01

**MICRONE**  
ENGINEERING: ENVIRONMENTAL SCIENCES  
LAND PLANNING & SURVEYING: CONSTRUCTION SERVICES  
20 RIDGELY AVENUE  
ANNAPOLIS, MARYLAND 21401  
(410) 267-8621  
Fax: (410) 267-9922  
ANNAPOLIS CENTREVILLE ELKTON PRINCE FREDERICK SALISBURY



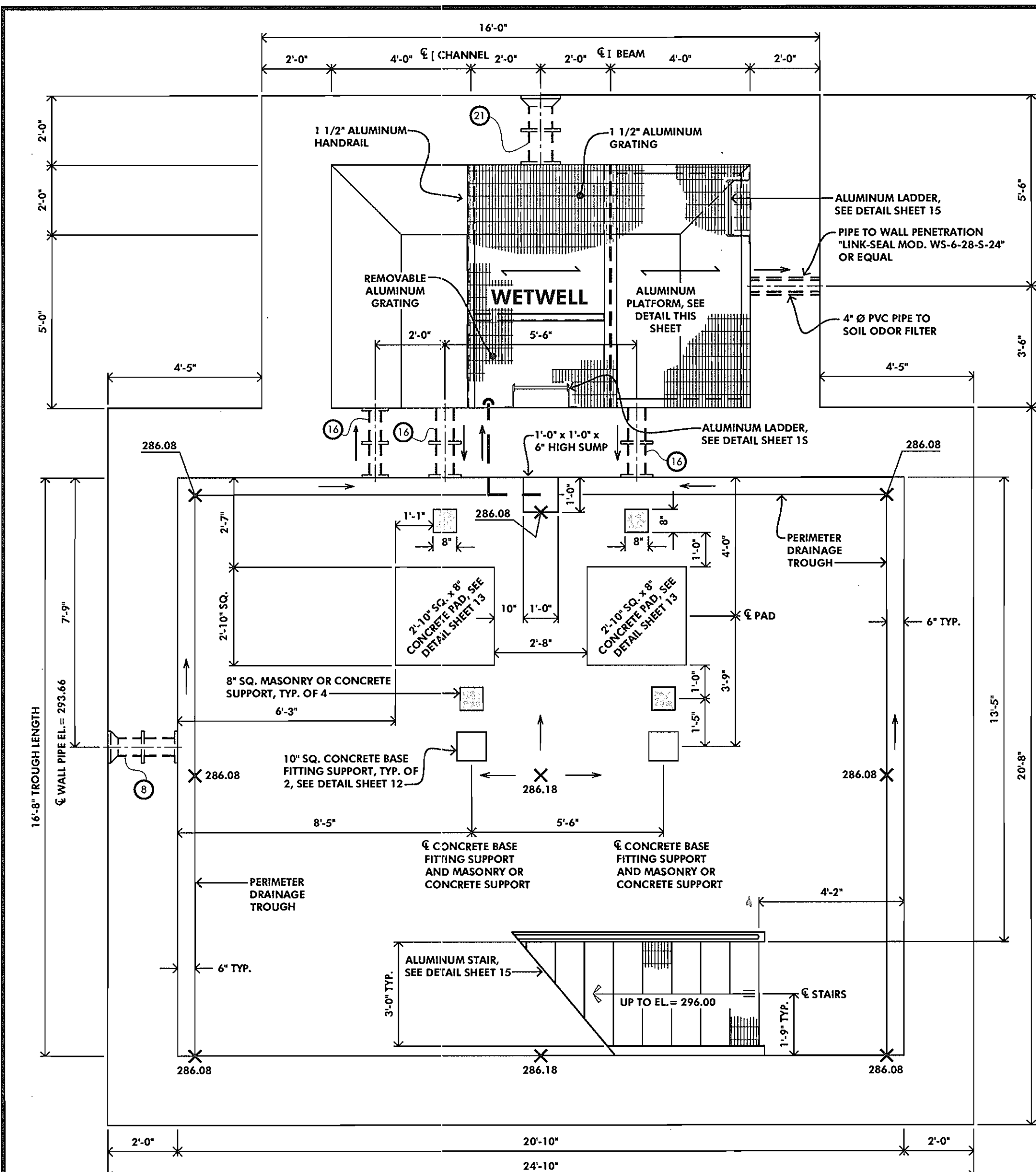
DES: S.A.C.	S.A.C.	STRUCTURAL REVISION	02/01
DRN: -	S.A.C.	BUILDING PERMIT COMMENTS	11/01
CHK: R.SELL			
DATE: FEB, 2000	BY	REVISION	DATE

**STRUCTURAL SECTIONS**

**NEW CUT ROAD PUMP WASTEWATER PUMPING STATION**  
CONTRACT # 10-3854-D  
2nd ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

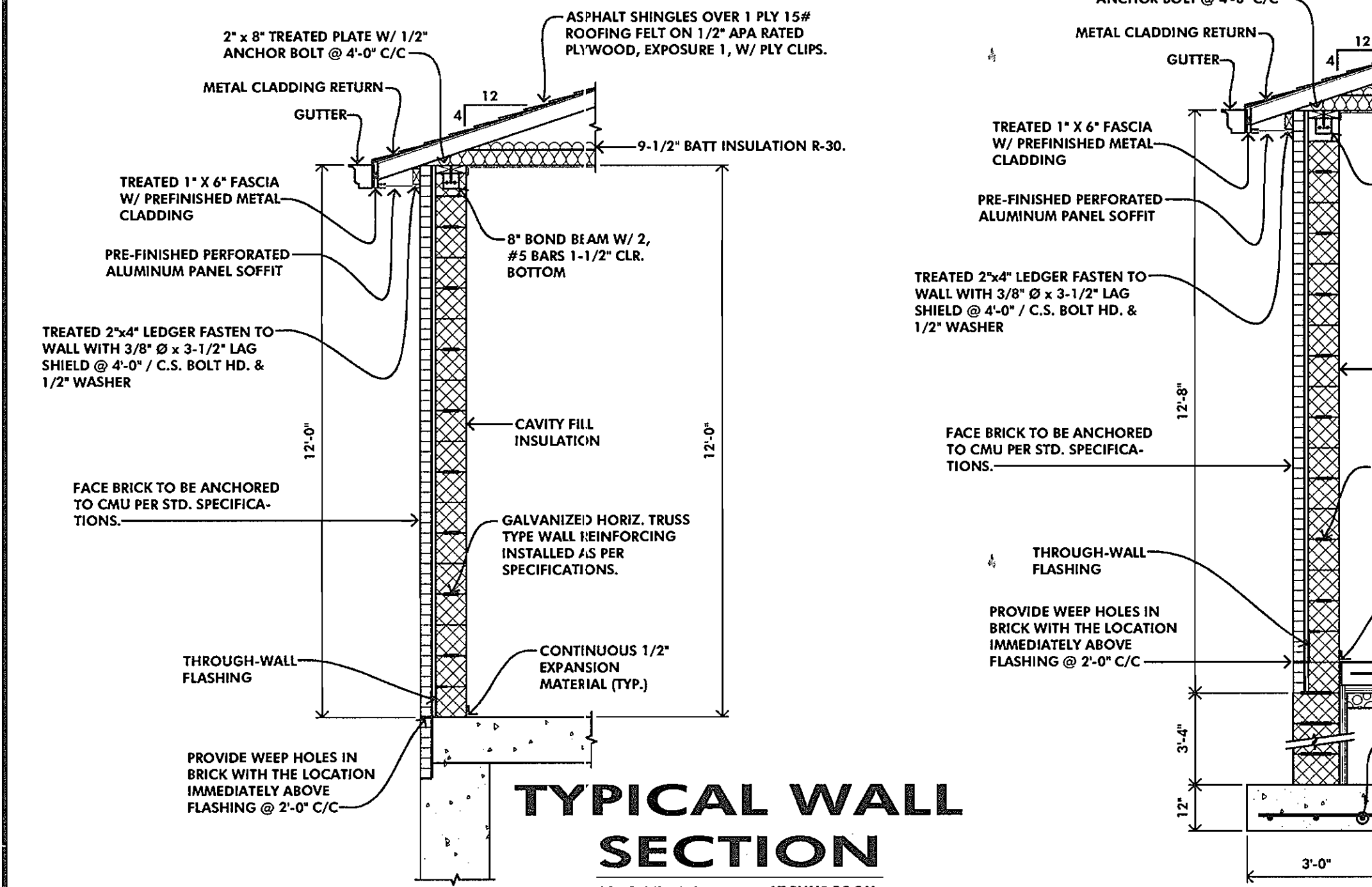
SCALE AS SHOWN  
SHEET 10 OF 30





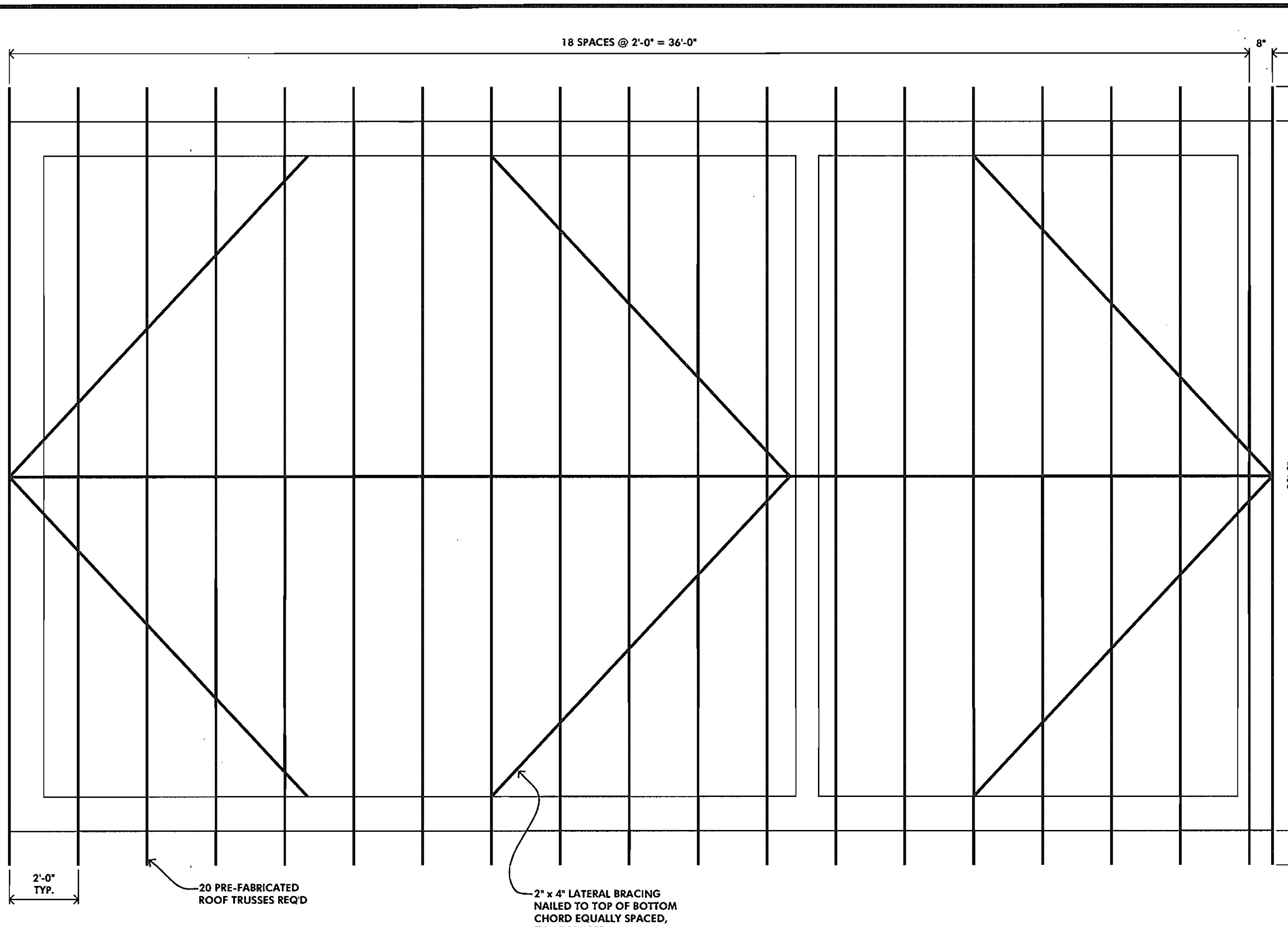
**LAYOUT PLAN**

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



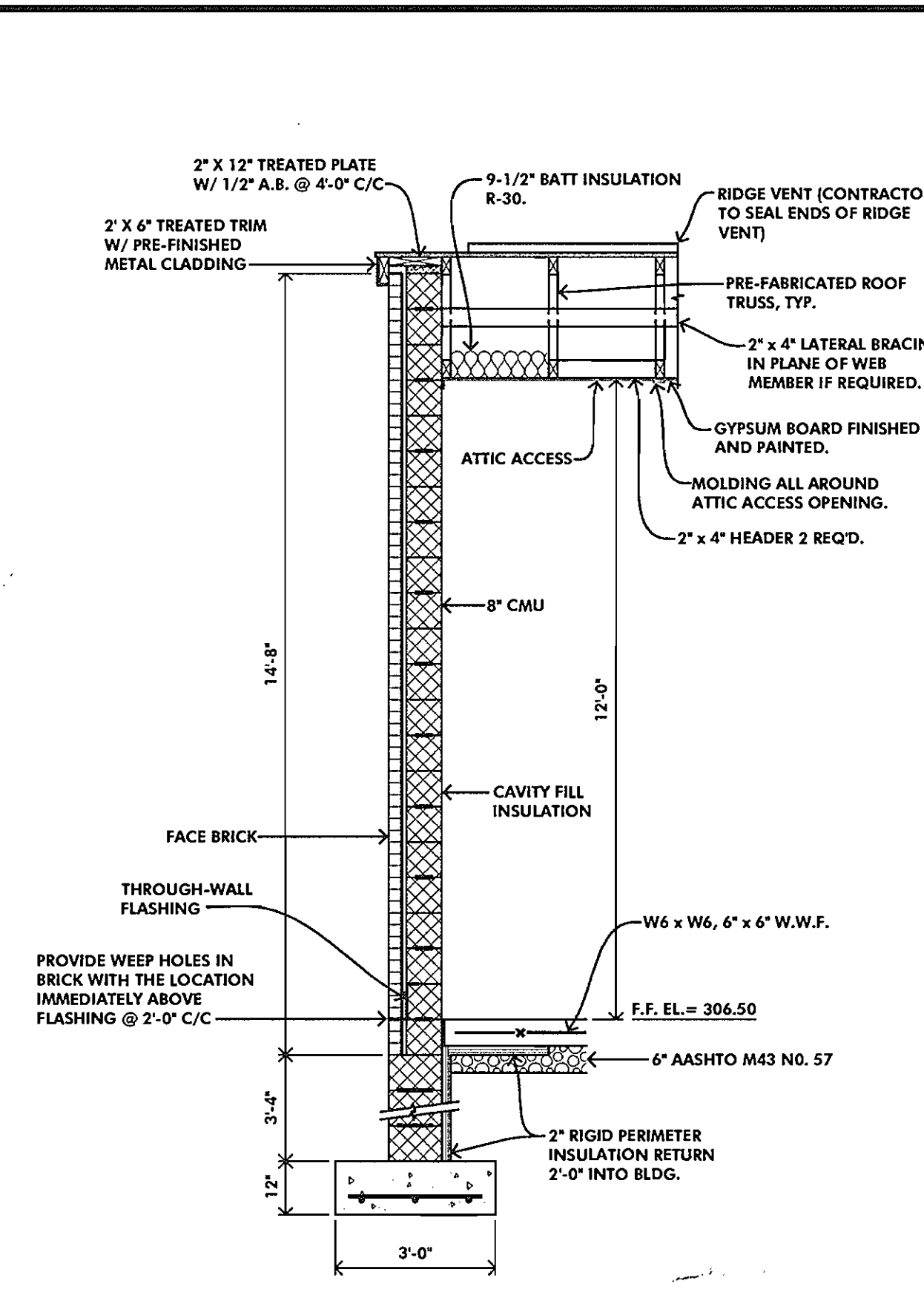
**TYPICAL WALL SECTION**

SCALE: 3/8"=1'-0" AT PUMP ROOM



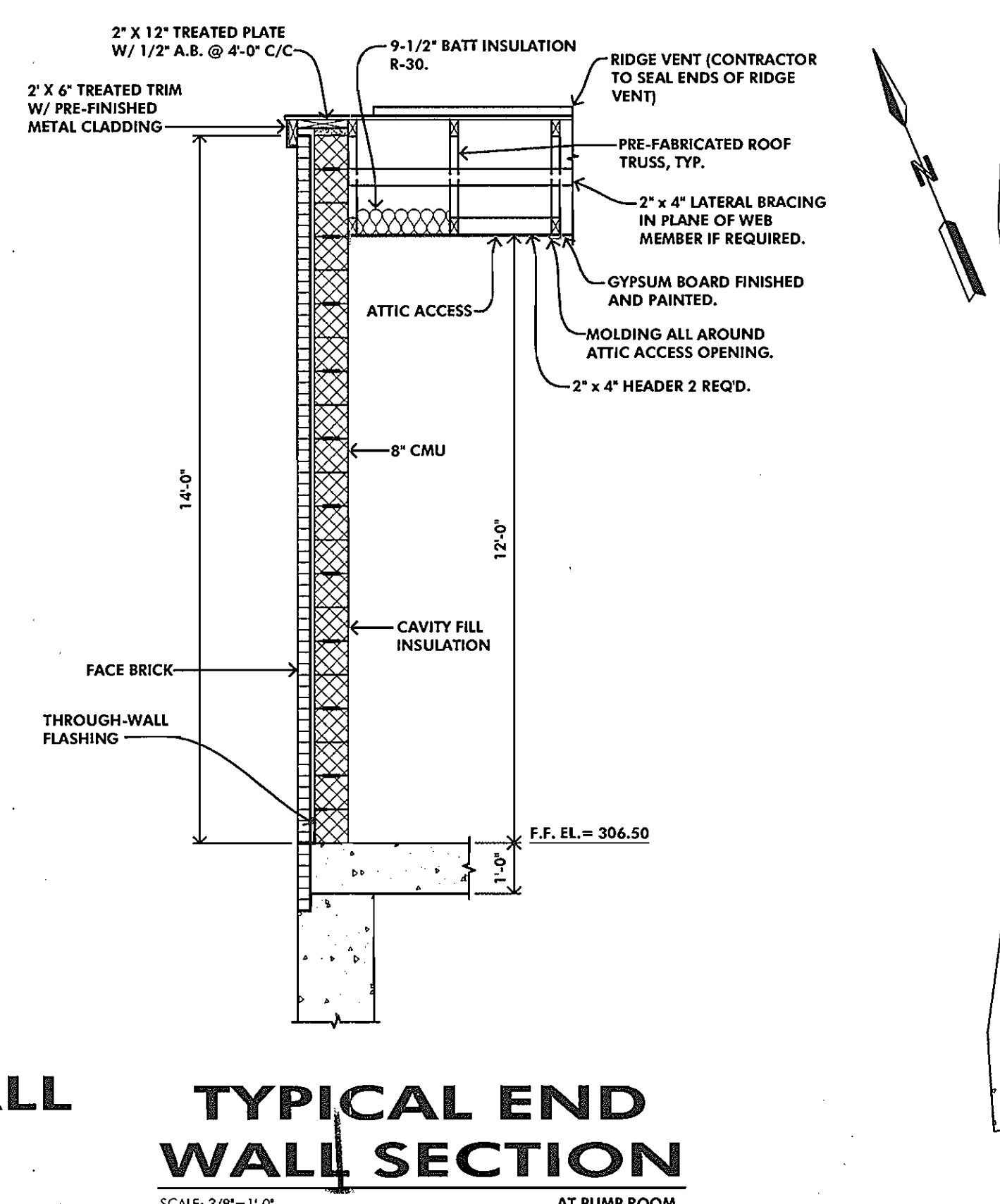
**PLAN - ROOF FRAMING**

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



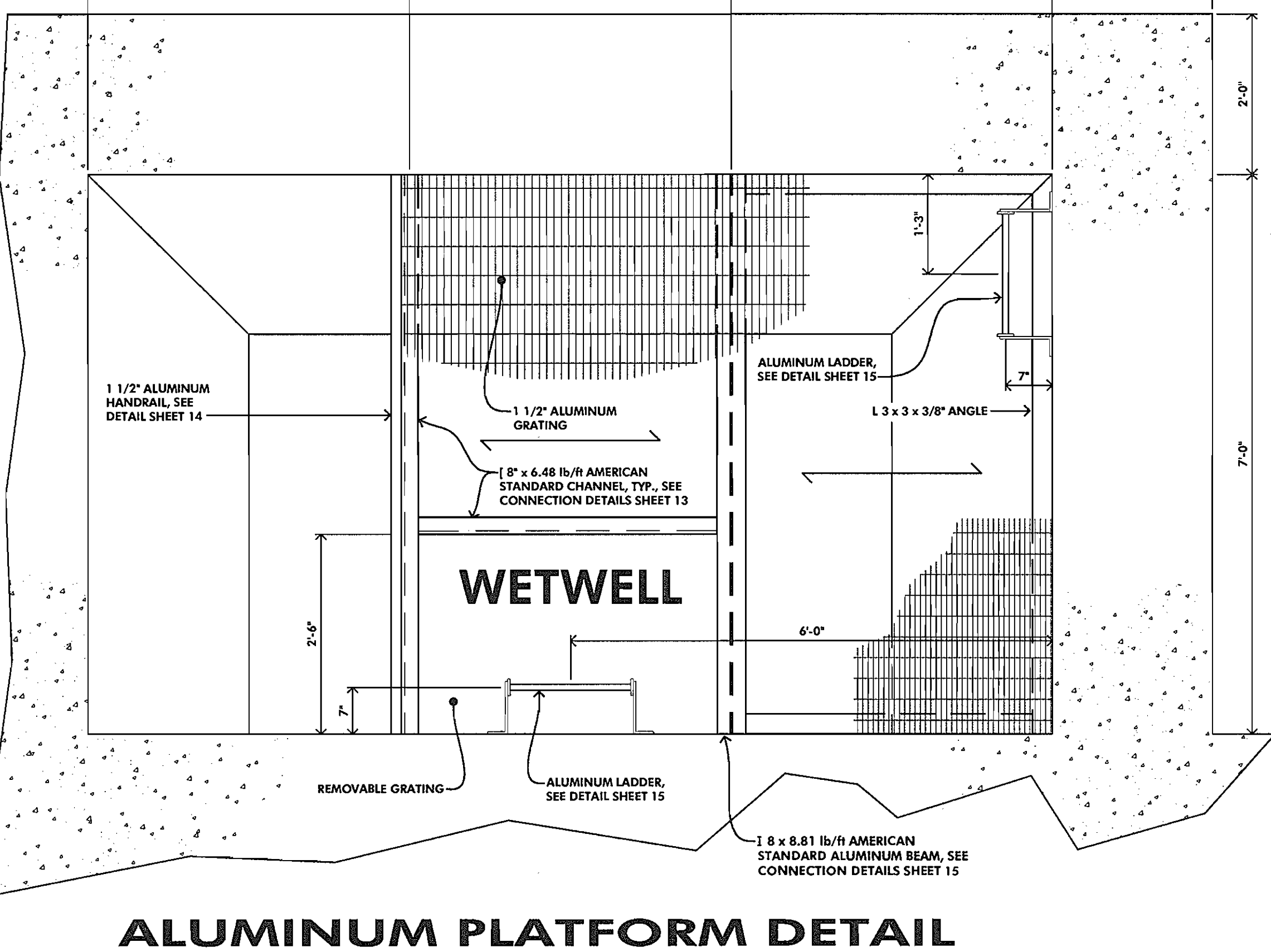
**TYPICAL END WALL SECTION**

SCALE: 3/8"=1'-0" AT GENERATOR ROOM



**TYPICAL WALL SECTION**

SCALE: 3/8"=1'-0" AT GENERATOR ROOM



**ALUMINUM PLATFORM DETAIL**

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

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Robert W. Beninger 1-26-01 CHIEF, BUREAU OF UTILITIES	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND [Signature] 2/26/01 CHIEF, DEVELOPMENT ENGINEERING DIVISION	<b>McCRONE</b> ENGINEERING & ENVIRONMENTAL SCIENCES LAND PLANNING & SURVEYING & CONSTRUCTION SERVICES 20 RIDGELY AVENUE ANNAPOLIS, MARYLAND 21401 (410) 267-9621 Fax (410) 267-9932	DES: S.A.C.					<b>LAYOUT, ROOF FRAMING PLAN, SECTIONS, DETAIL</b>	<b>NEW CUT ROAD PUMP WASTEWATER PUMPING STATION</b> CONTRACT # 10-3854-D	SCALE AS SHOWN SHEET 11 OF 30
			DRN: -	CHK: R.SELL	DATE: FEB, 2000	BY	No.			

File Name: G:\1000034 - New Cut Road PSD\Drawings\MECHANICAL\NC PS.dwg  
 Tab Ref: LAYOUT AND ROOF FRAMING PLAN

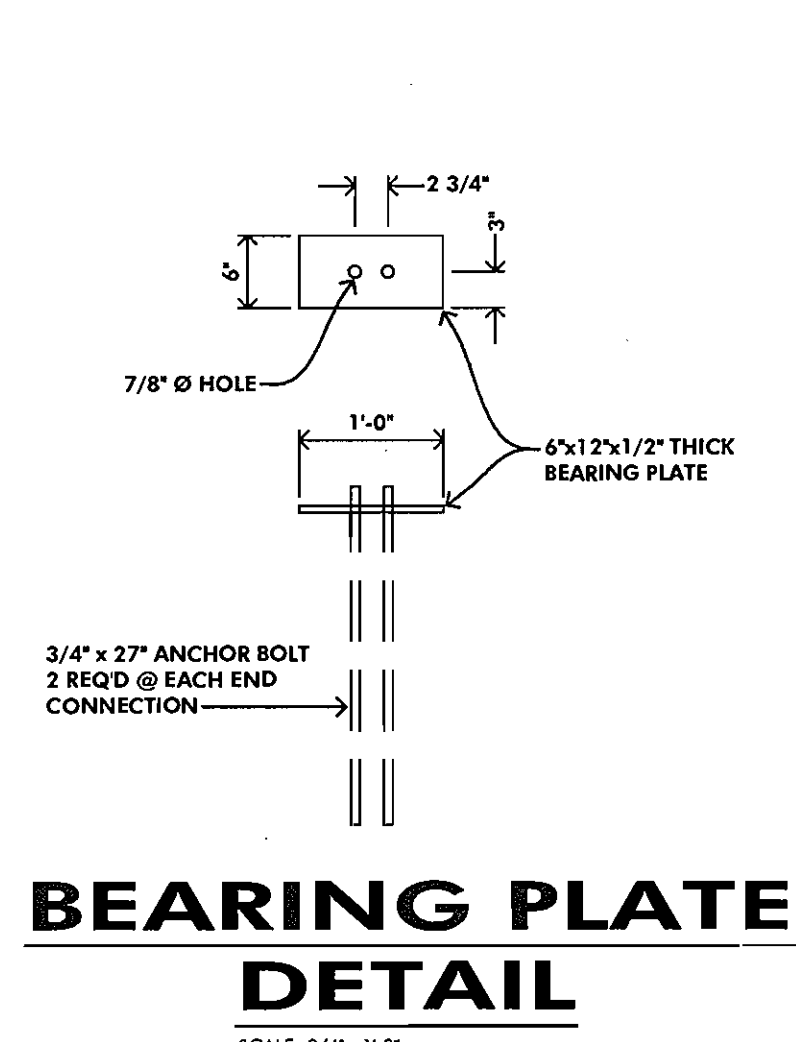




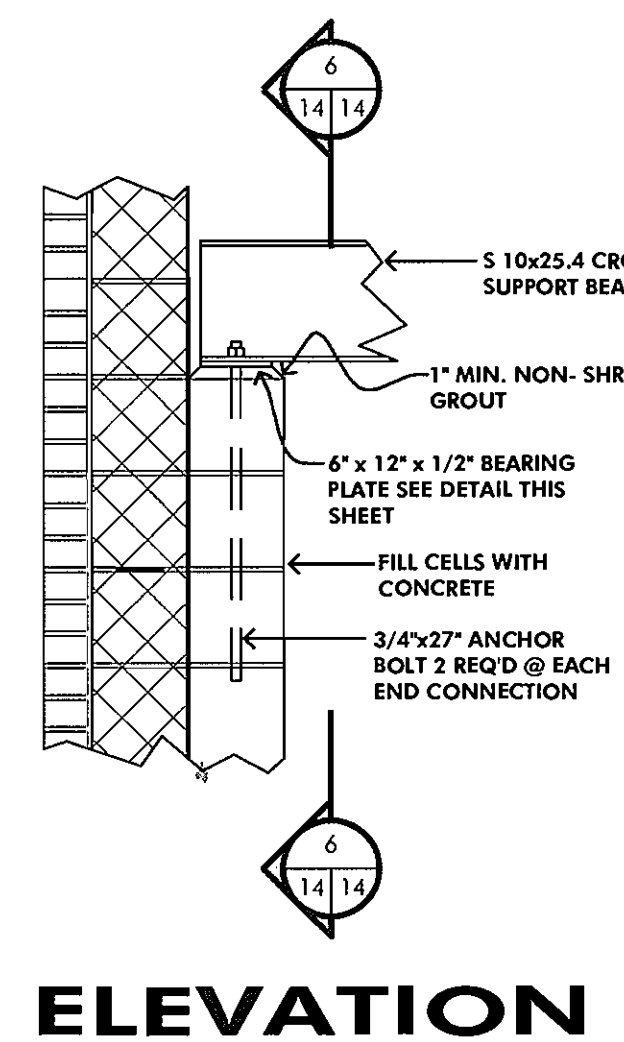




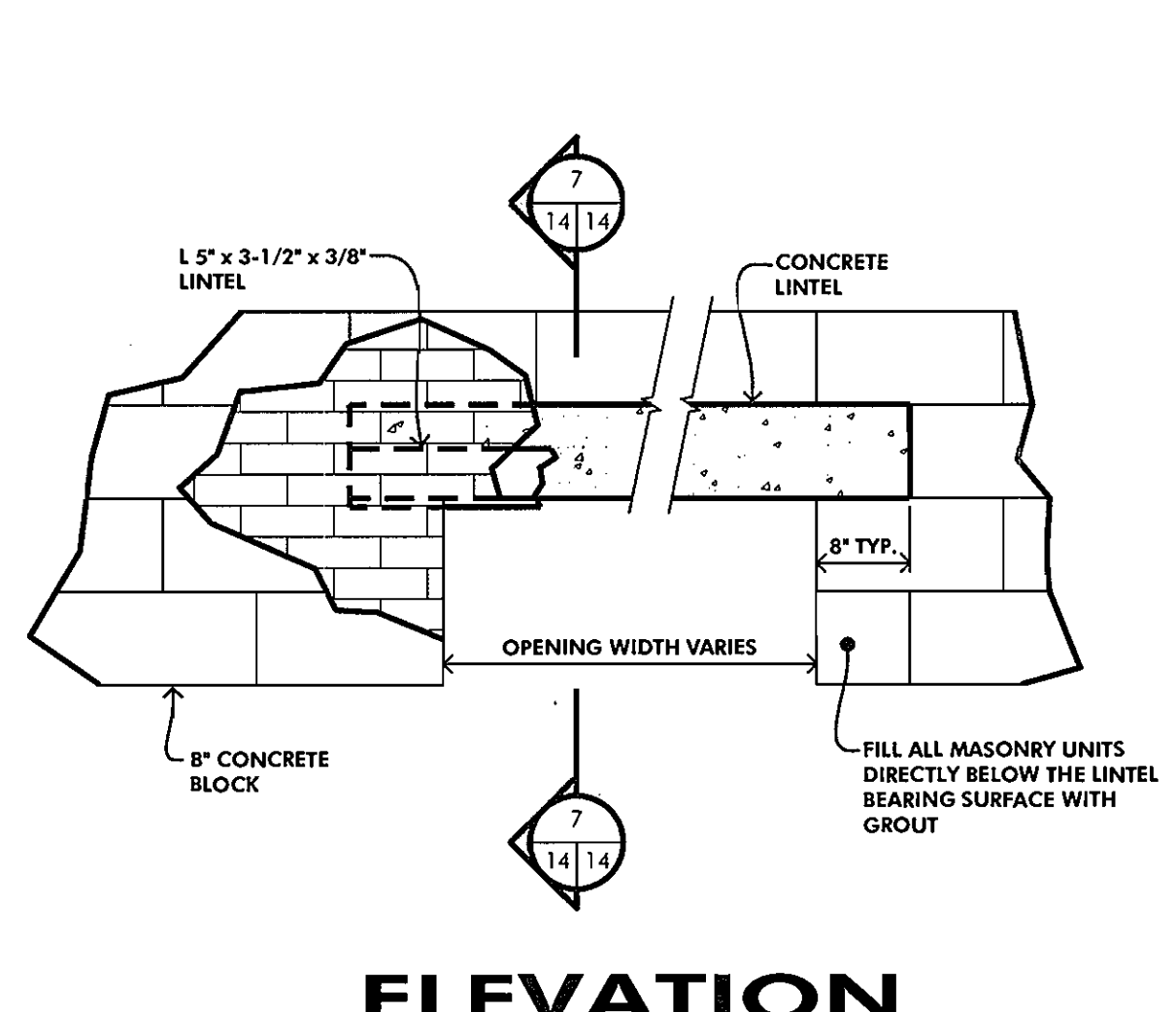




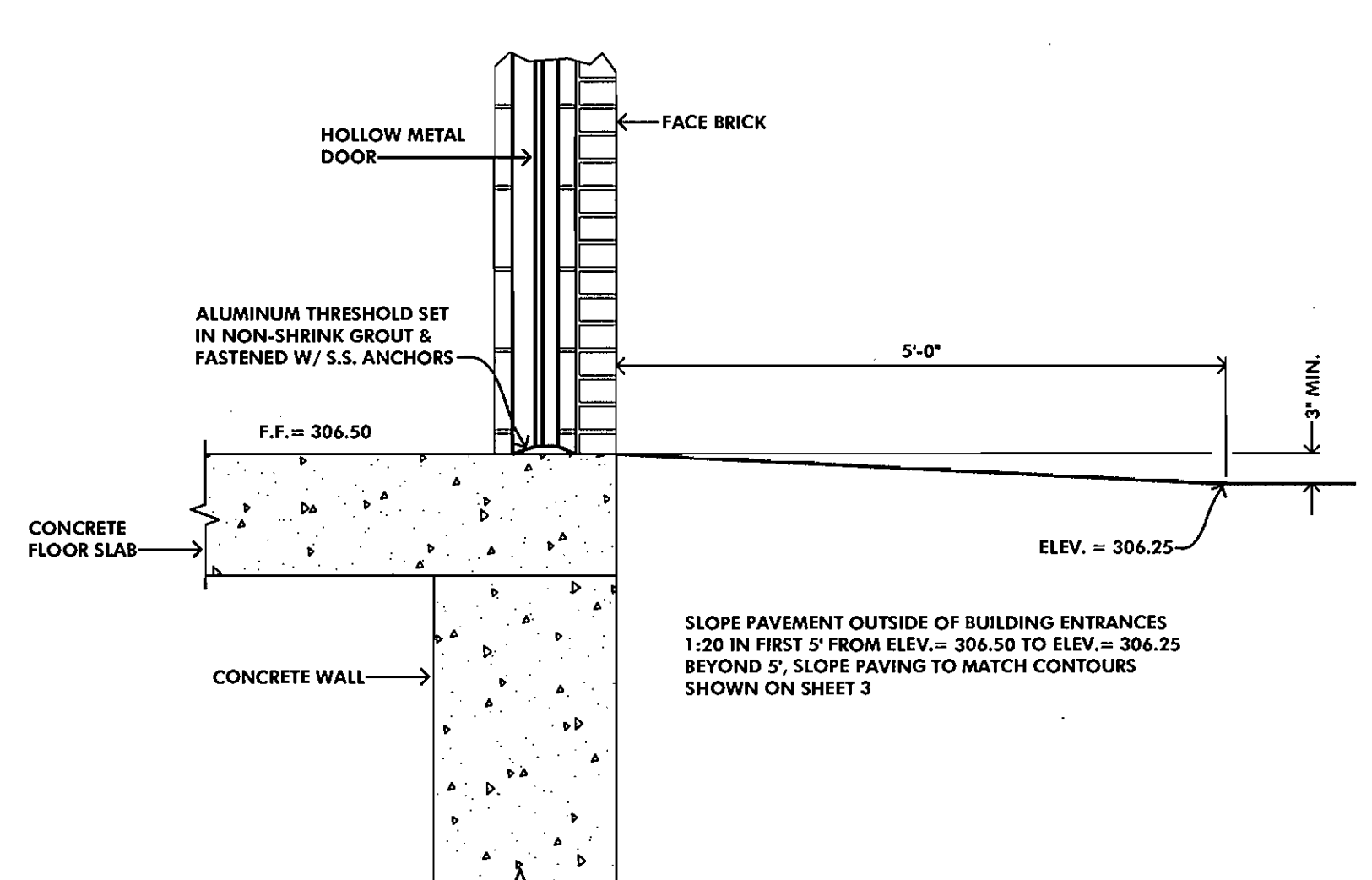
**BEARING PLATE DETAIL**  
SCALE: 3/4"=1'-0"



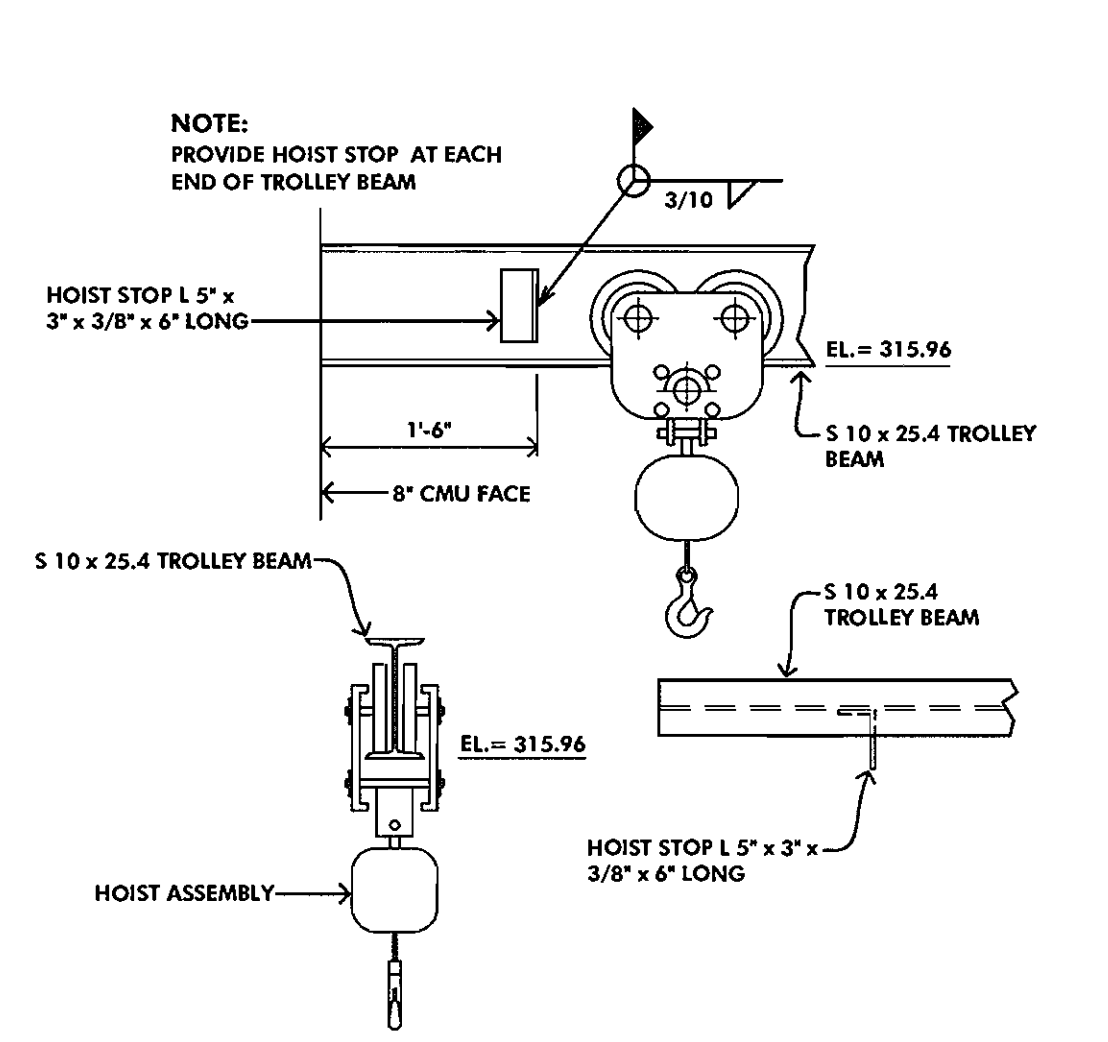
**ELEVATION**



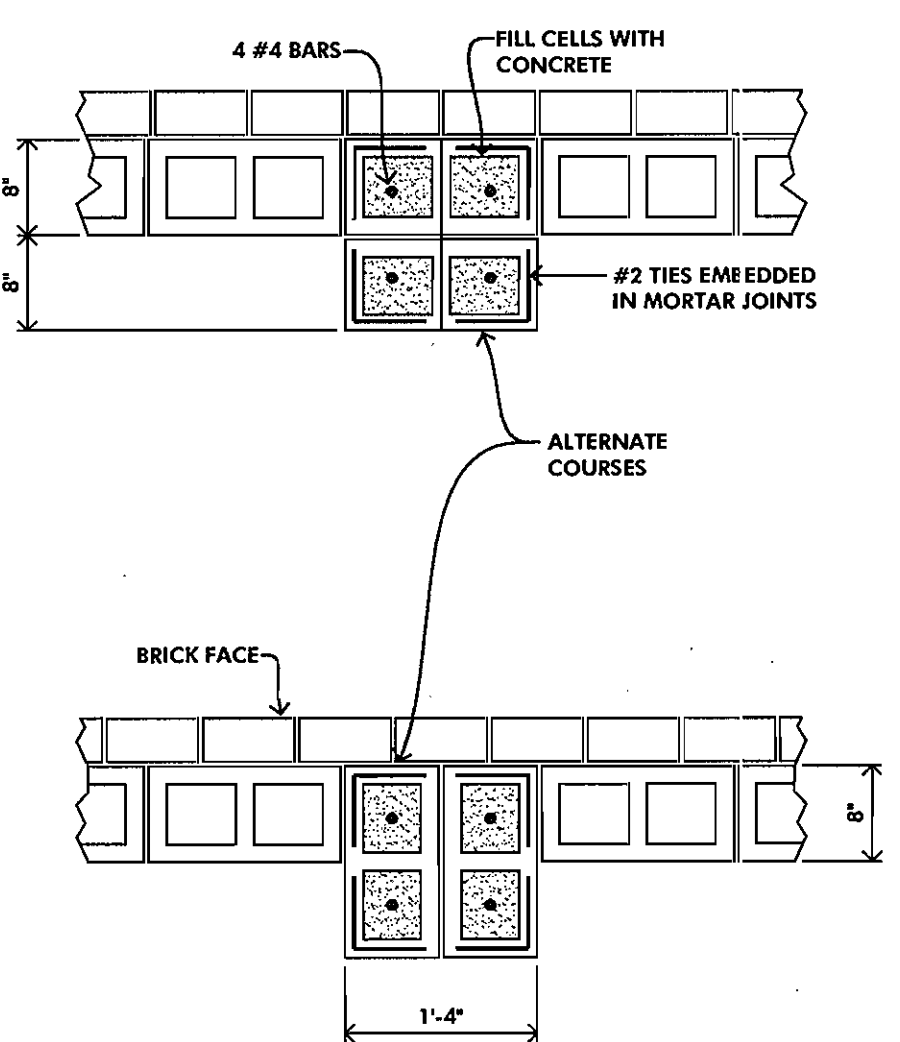
**ELEVATION**



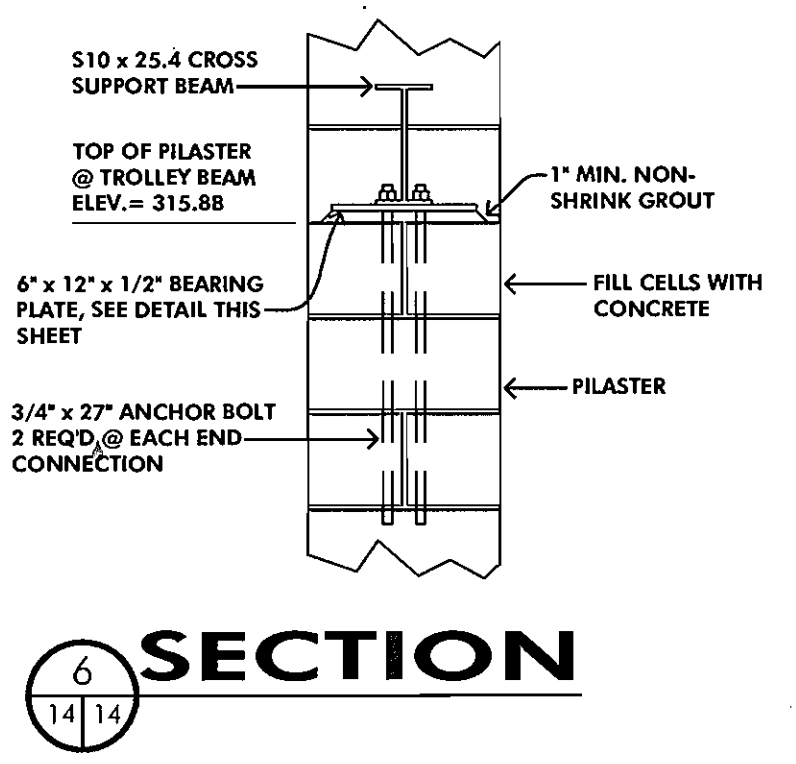
**DOOR SECTION AT CONTROL ROOM**  
SCALE: 3/4"=1'-0"



**BEAMS CONNECTION DETAILS**  
SCALE: 3/4"=1'-0"

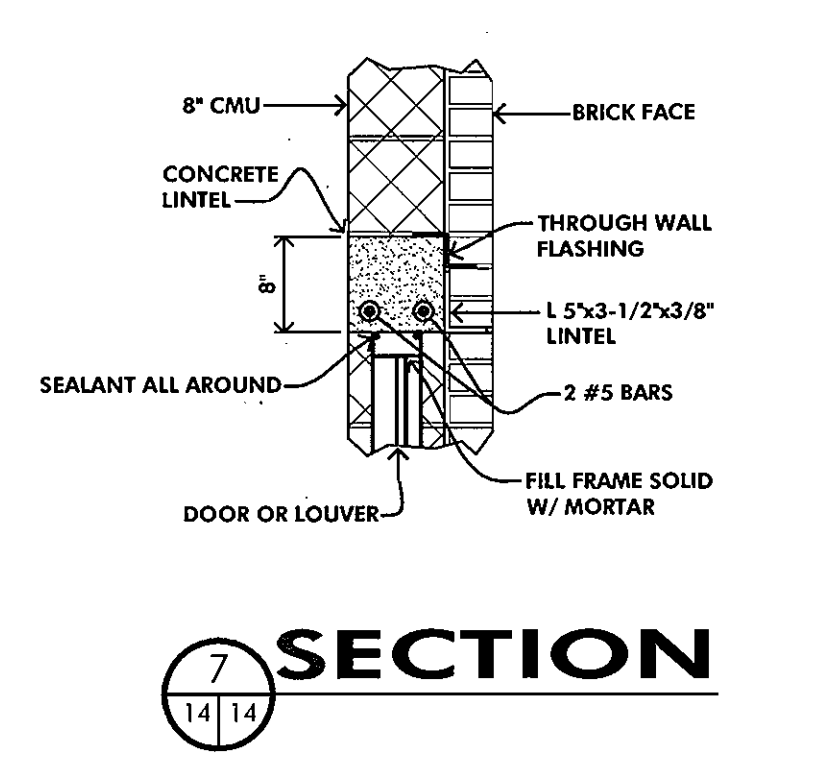


**PILASTER DETAIL**  
SCALE: 3/4"=1'-0"



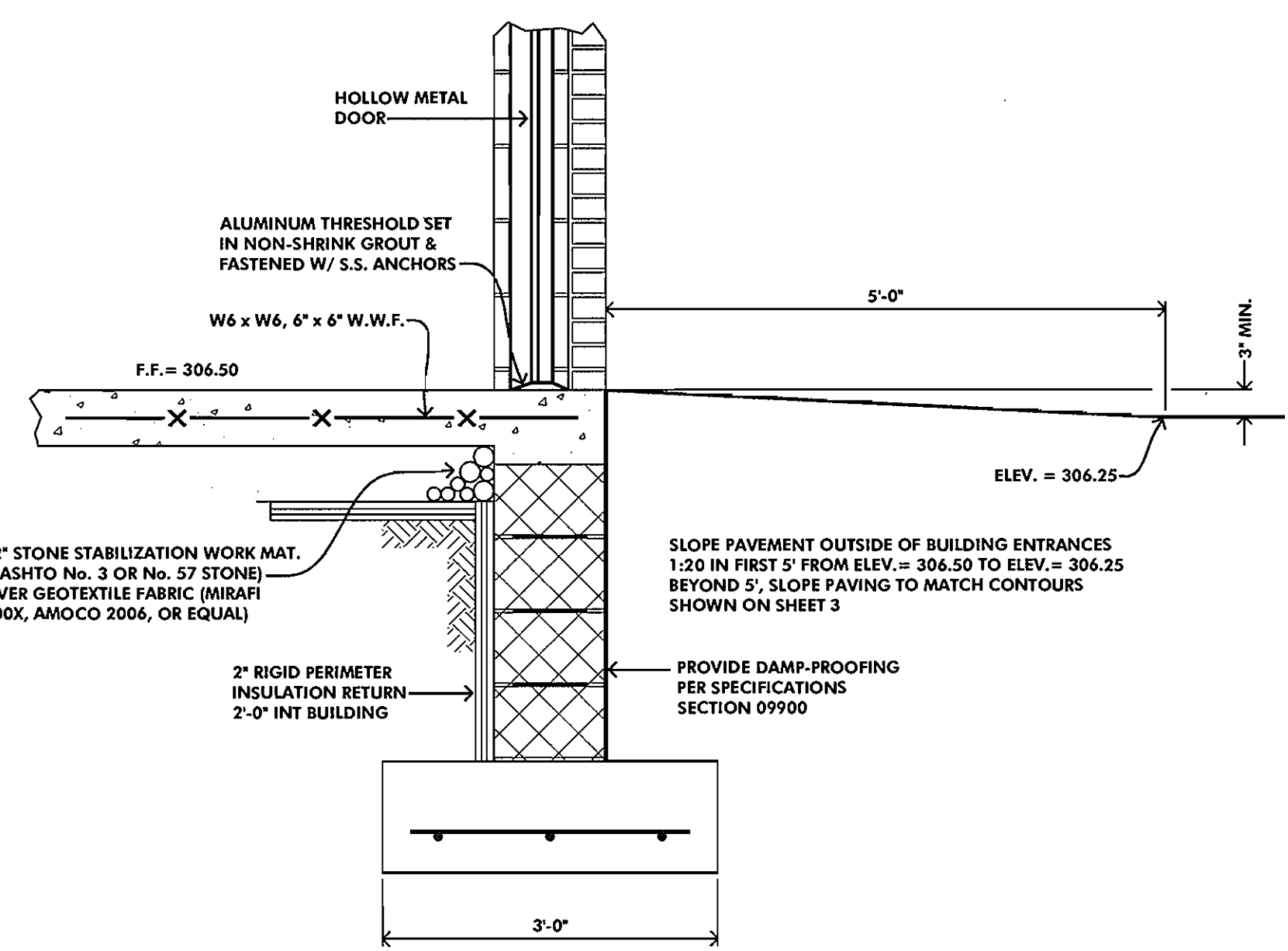
**SECTION**

**TROLLEY, - WALL CONNECTION DETAIL**  
SCALE: 3/4"=1'-0"

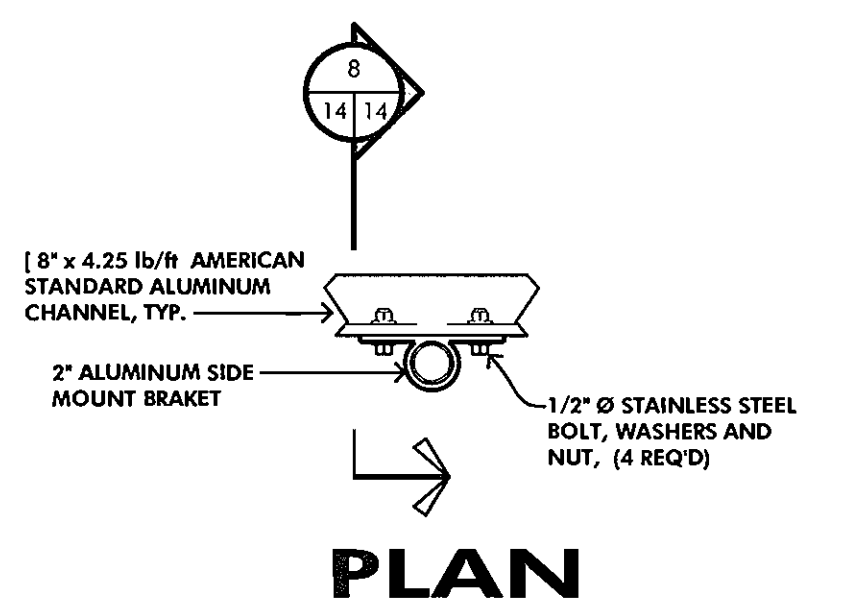


**SECTION**

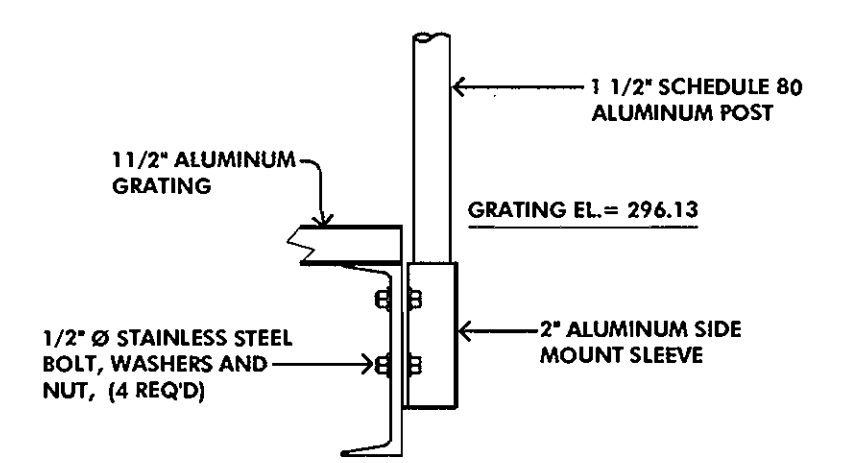
**LINTEL DETAIL**  
SCALE: 3/4"=1'-0"



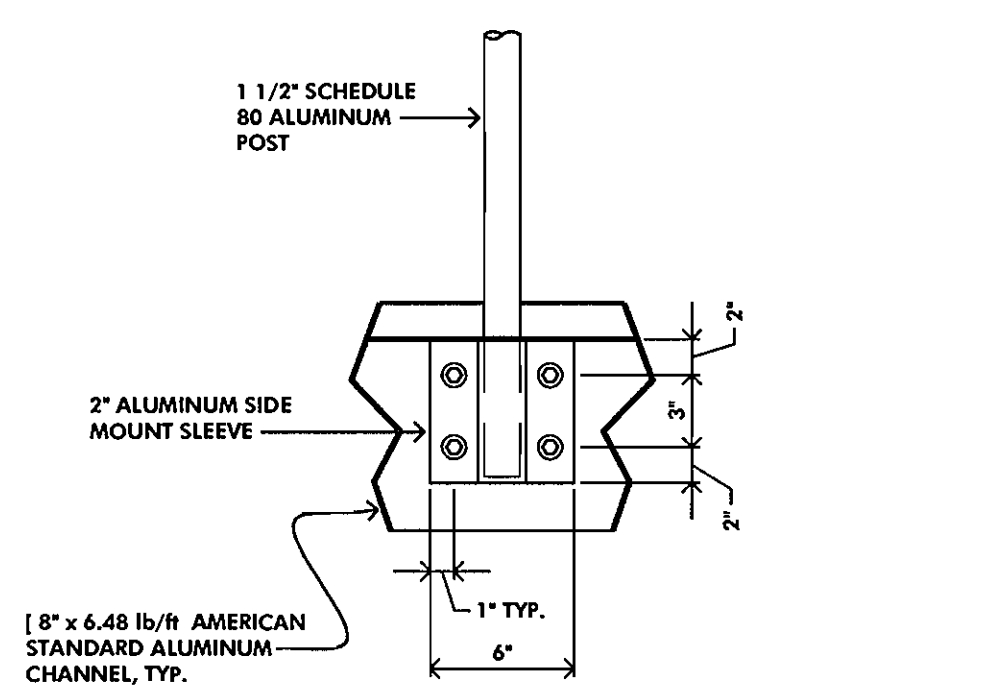
**DOOR SECTION AT GENERATOR ROOM**  
SCALE: 3/4"=1'-0"



**PLAN**

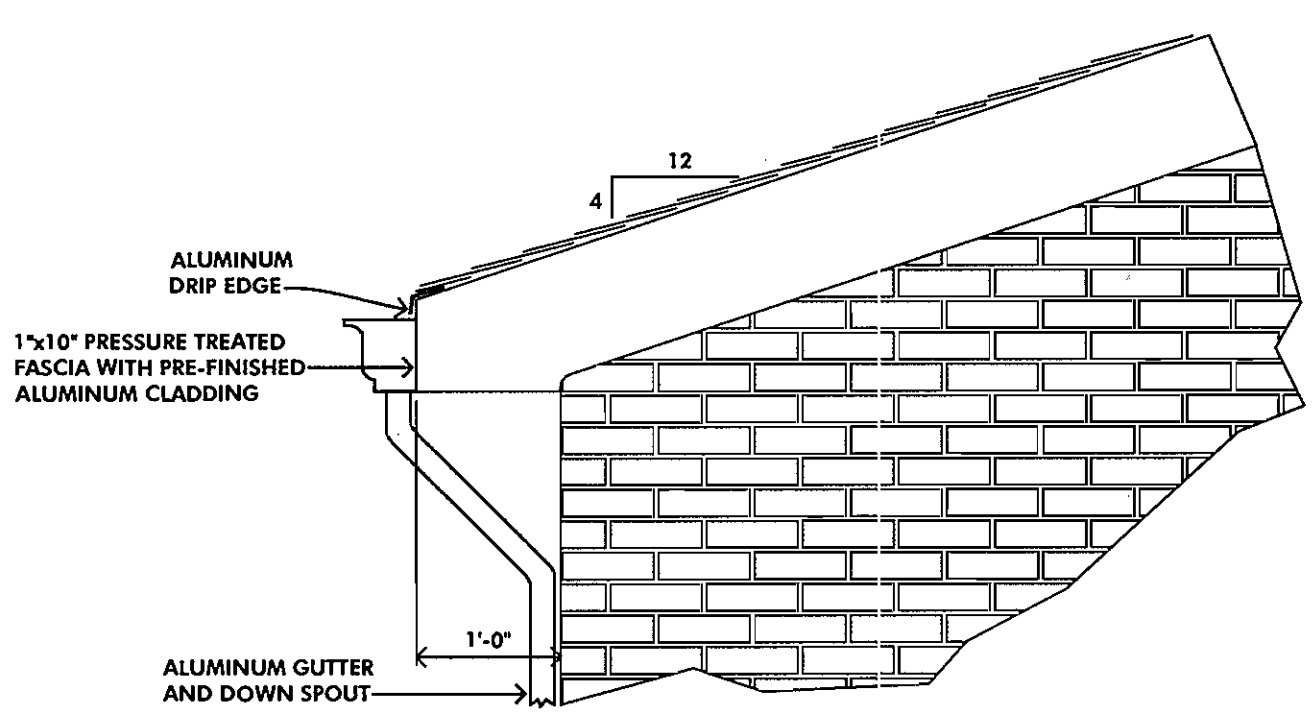


**SECTION**

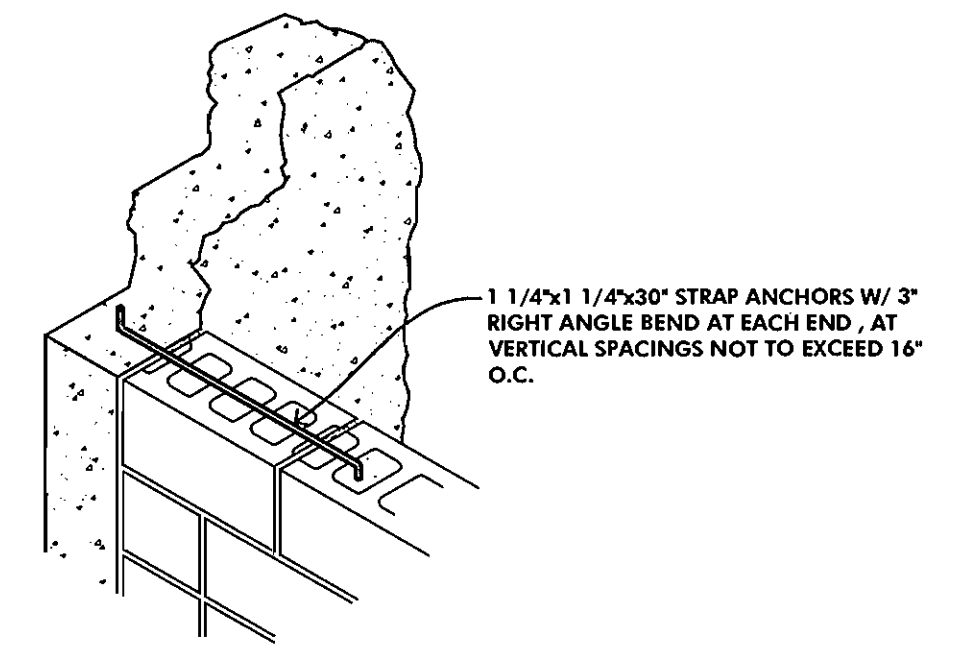


**ELEVATION**

**DETAIL - HANDRAIL CONNECTION**  
SCALE: 1-1/2"=1'-0"



**END WALL DETAIL**  
SCALE: 3/4"=1'-0"

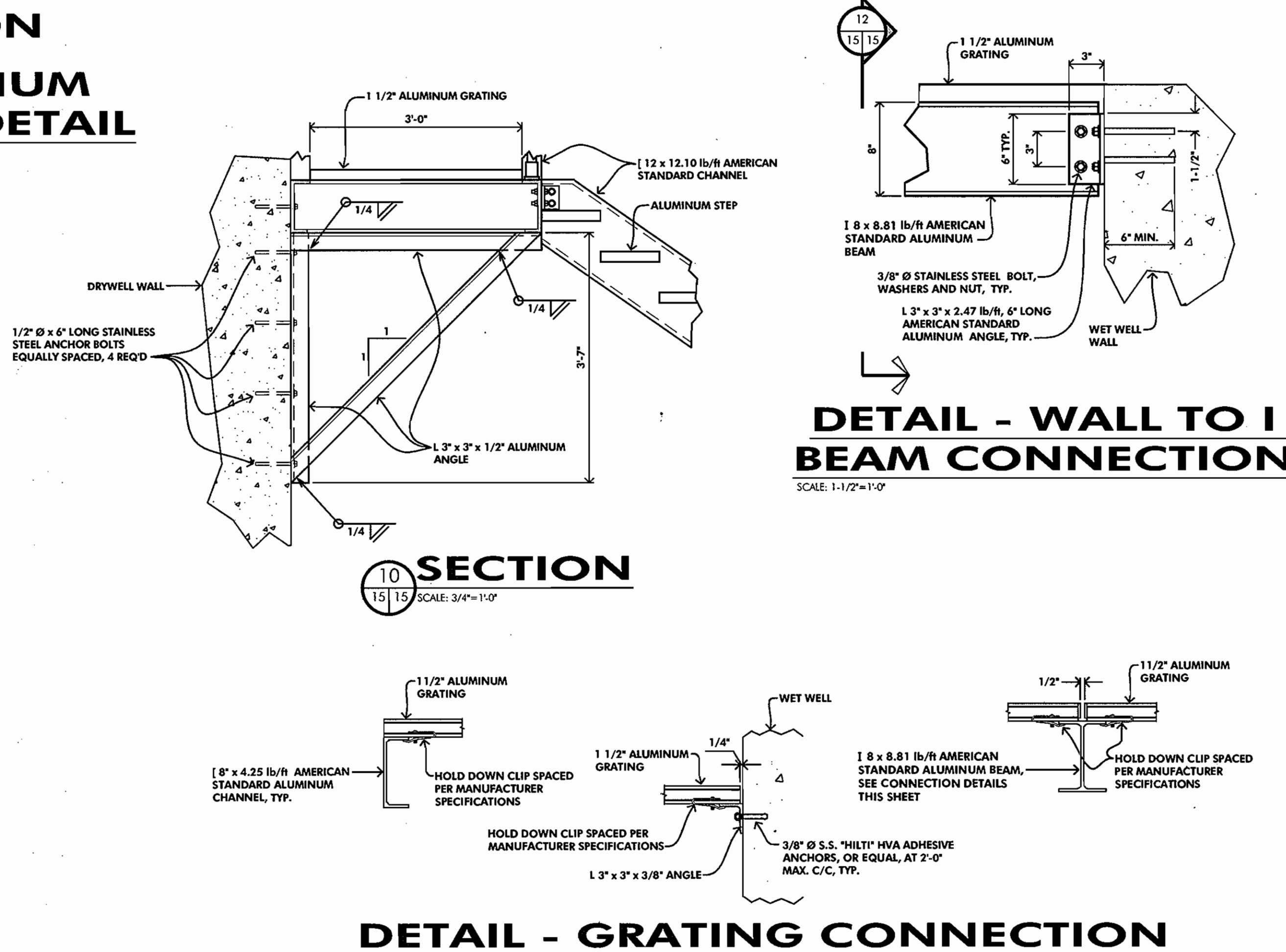
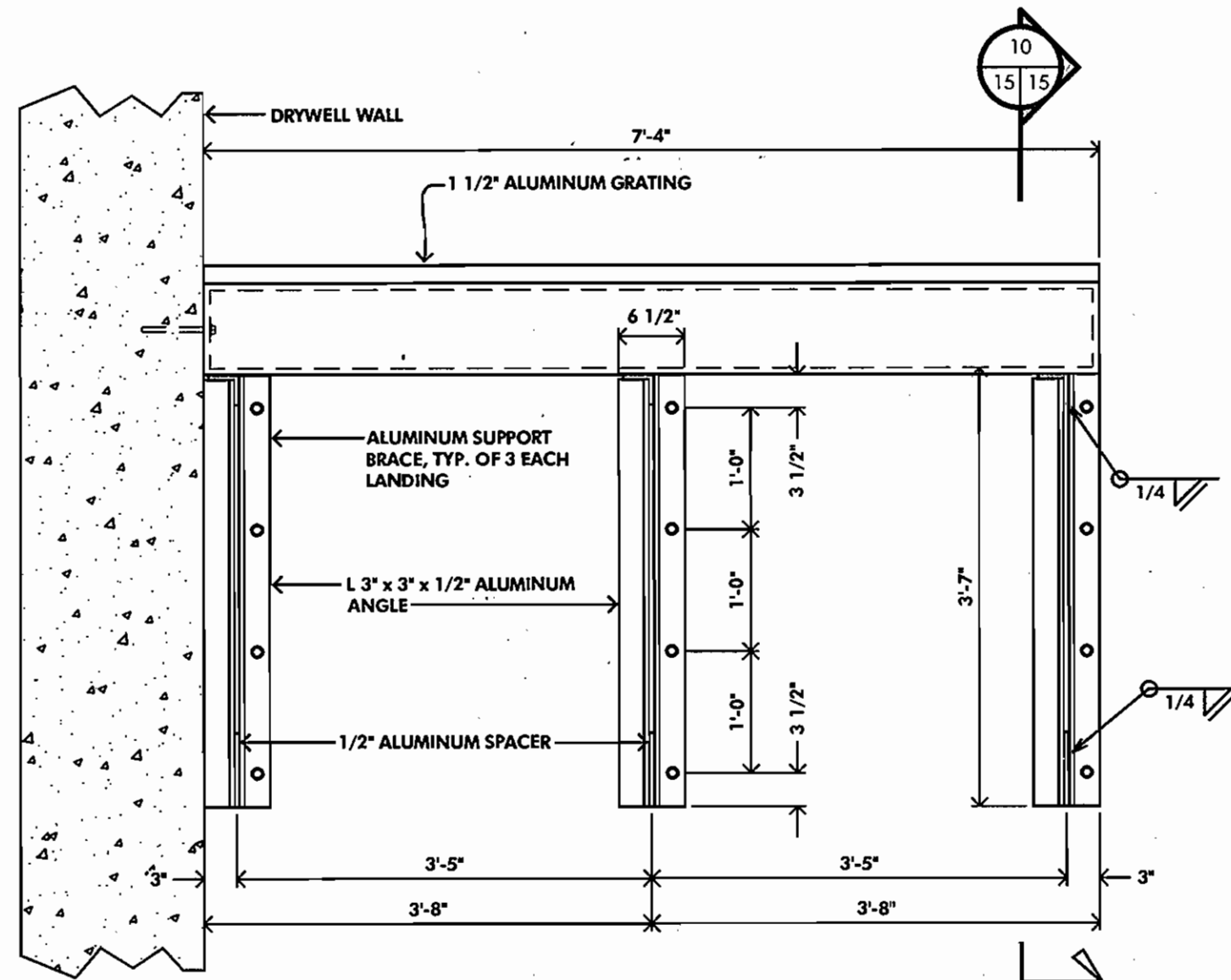
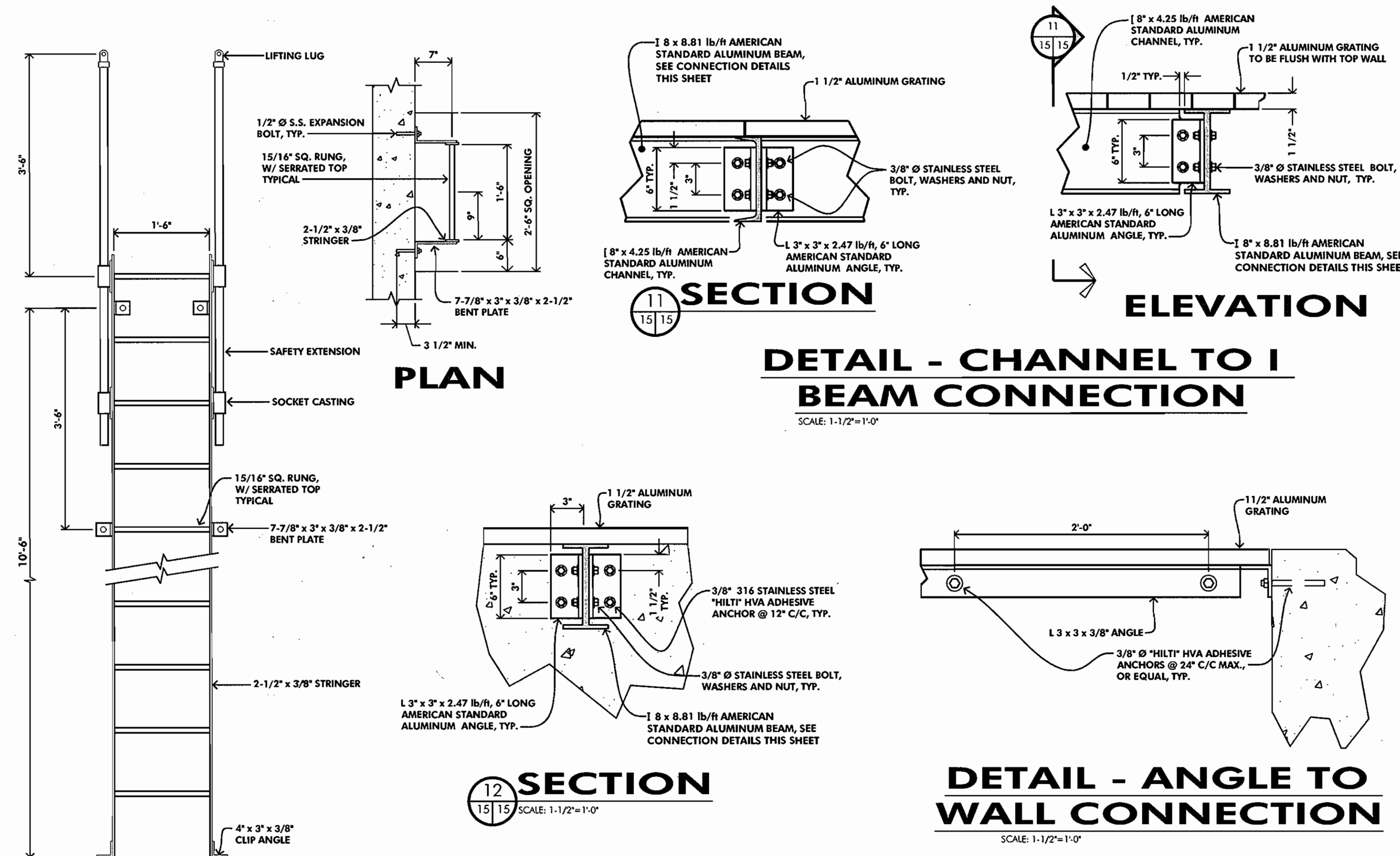
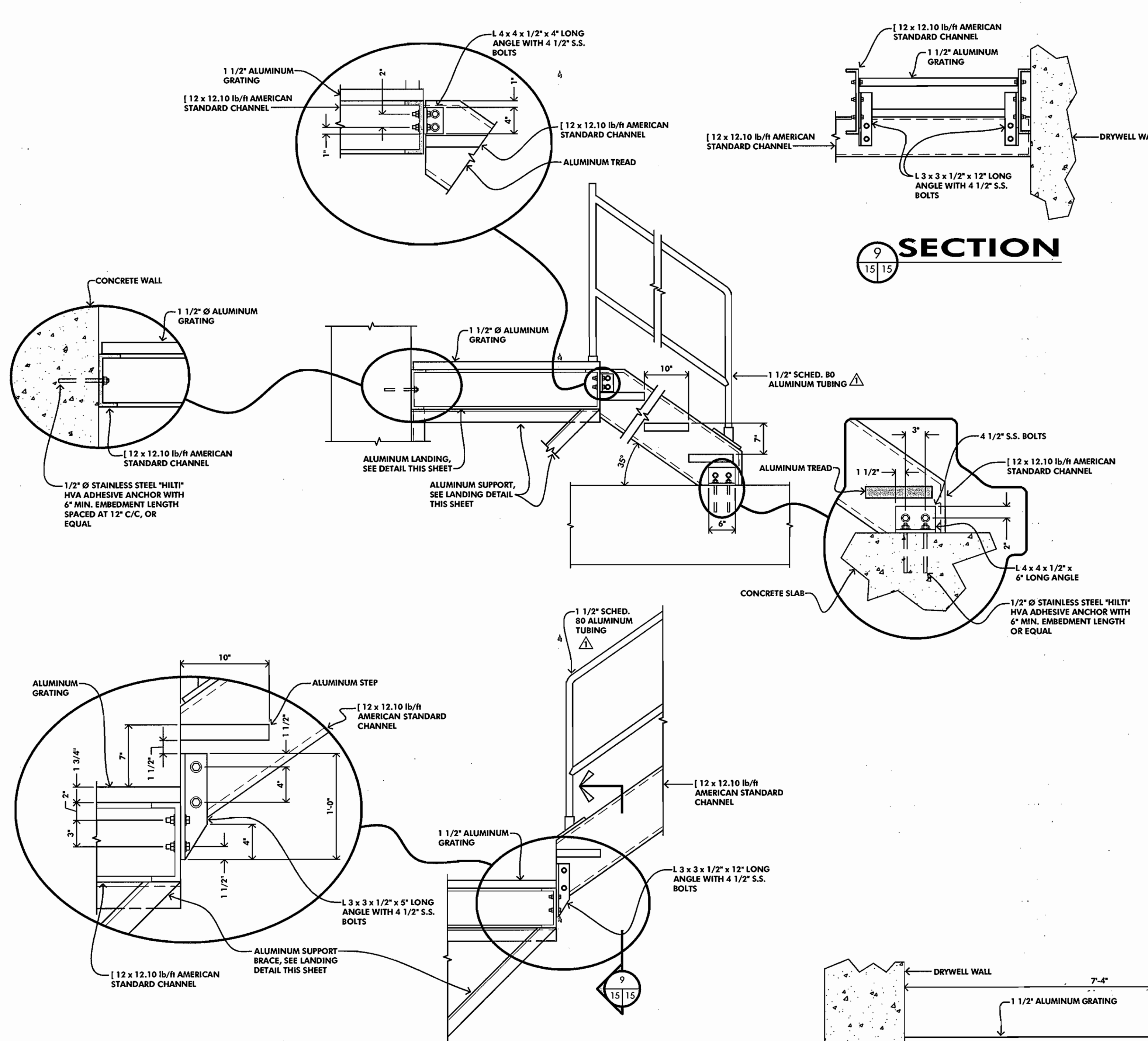


**CMU TO CONCRETE WALL CONNECTION**  
SCALE: 3/4"=1'-0"

Plot Date and Time: Jun 19, 2001, 10:31am

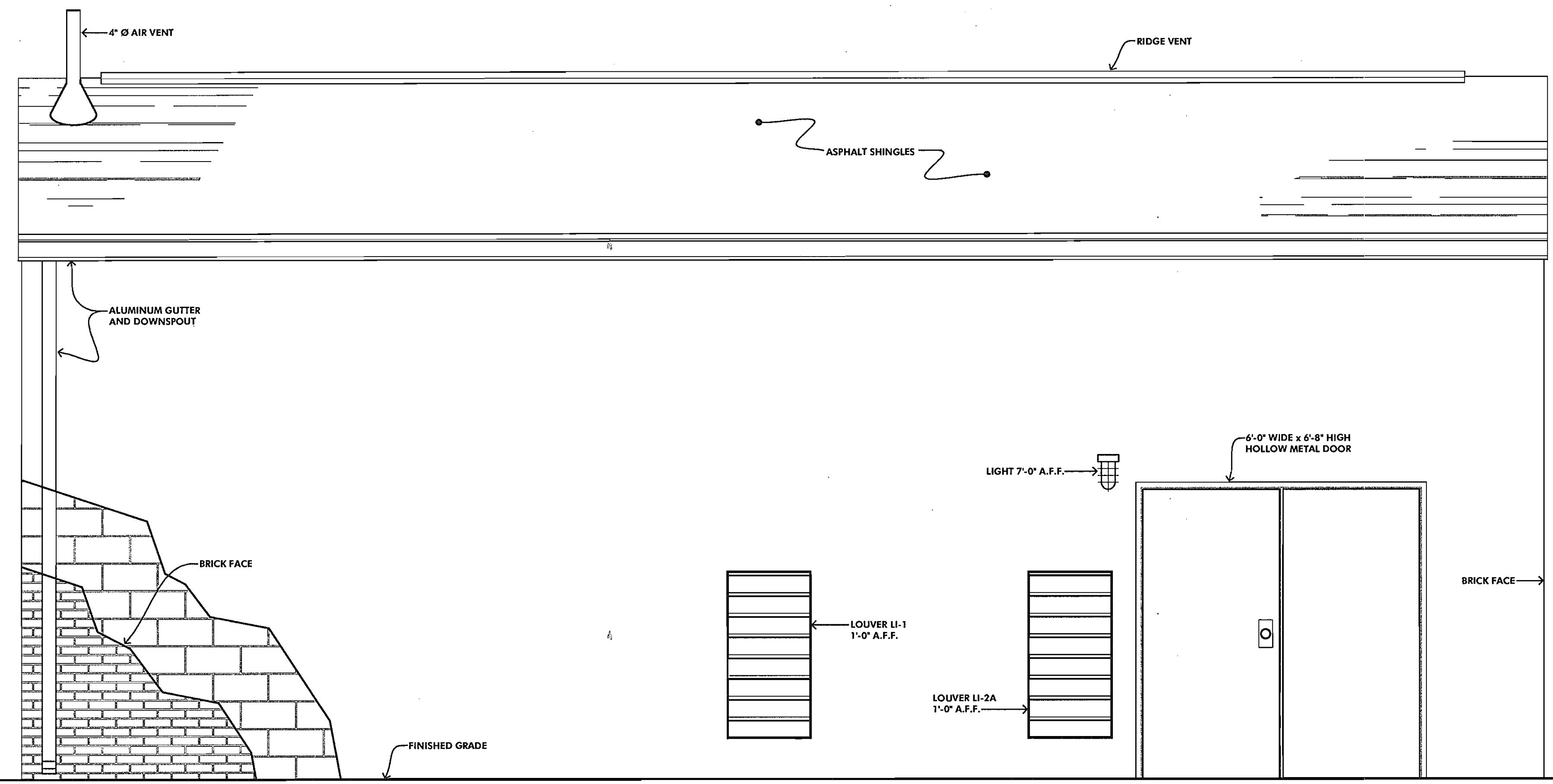
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND  <i>Robert W. Berman</i> 1-26-01 CHIEF, BUREAU OF UTILITIES	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND  <i>Michael J. ...</i> 2/26/01 CHIEF, DEPARTMENT ENGINEERING DIVISION	<b>MCCRONE</b> ENGINEERING ENVIRONMENTAL SCIENCES LAND PLANNING & SURVEYING CONSTRUCTION SERVICES 20 RIDGELY AVENUE ANNAPOLIS, MARYLAND 21401 (410) 293-8621 Fax (410) 267-9932		DES: S.A.C.								<b>DETAILS</b>	<b>NEW CUT ROAD PUMP WASTEWATER PUMPING STATION</b> CONTRACT # 10-3854-D 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN
				DRN: -										
				CHK: R.SELL										
				DATE: FEB, 2000	BY	No.	REVISION	DATE						





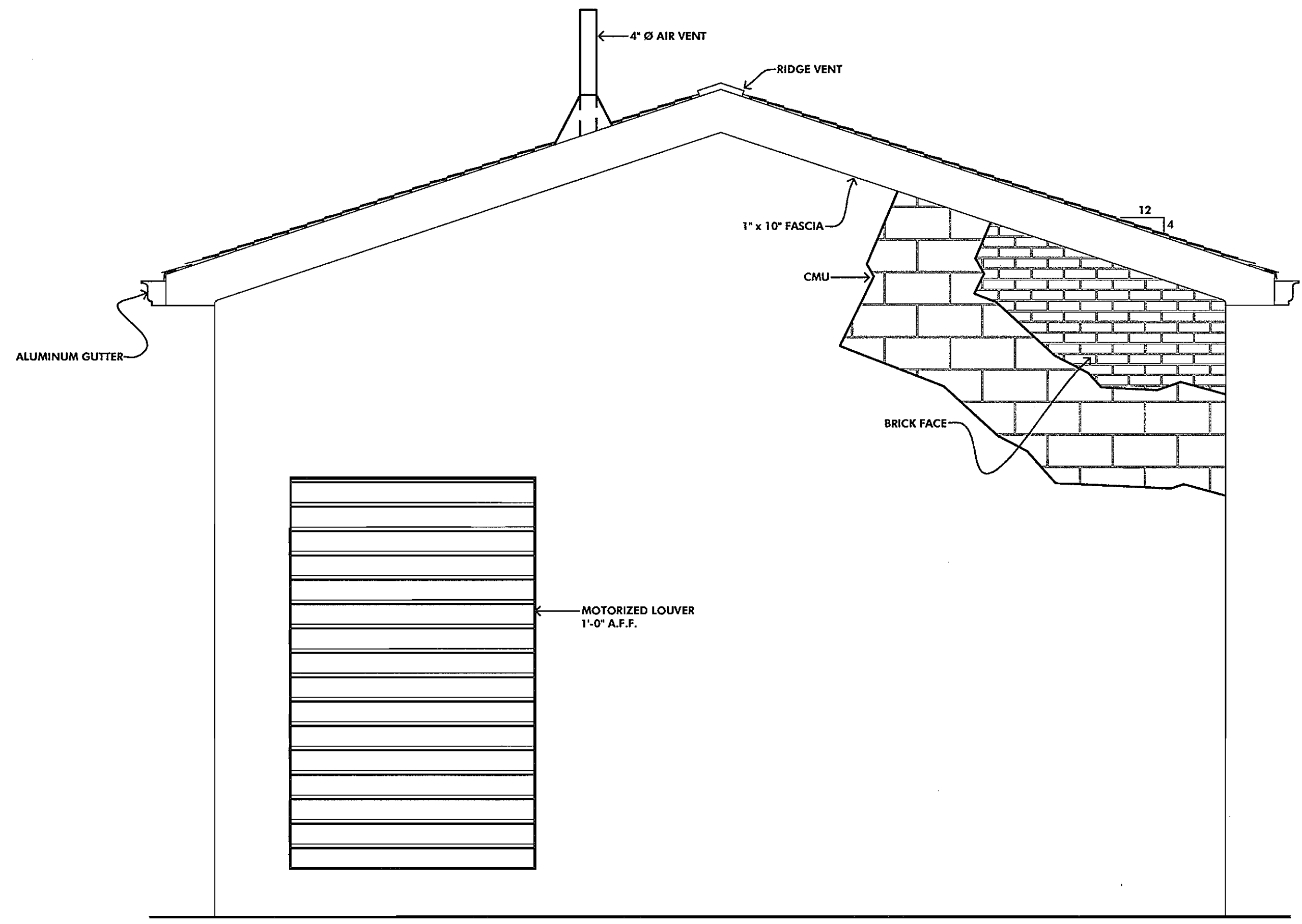
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND  <i>Robert Beatty</i> 11-15-01 CHIEF, BUREAU OF UTILITIES	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND  <i>Chris DeWitt</i> 11/15/01 CHIEF, DEVELOPMENT ENGINEERING DIVISION	 ENGINEERING ENVIRONMENTAL SCIENCES LAND PLANNING & SURVEYING CONSTRUCTION SERVICES 20 RIDGELY AVENUE ANNAPOLIS, MARYLAND 21401 (410) 267-8611 Fax (410) 267-9932	 R. BEATTY PROFESSIONAL ENGINEER No. 11401	DES: S.A.C.	S.A.C. <input type="checkbox"/>	BUILDING PERMIT COMMENTS	11/01	<b>DETAILS</b>	<b>NEW CUT ROAD PUMP WASTEWATER PUMPING STATION</b> CONTRACT # 10-3854-D 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN
				DRN: -						
DATE: FEB, 2000				BY	No.	REVISION	DATE	File Name: G:\1000034 - New Cut Road PS\Drawings\MECHANICAL\NC PS 11-01-01.dwg Tab Ref: DETAILS 1		





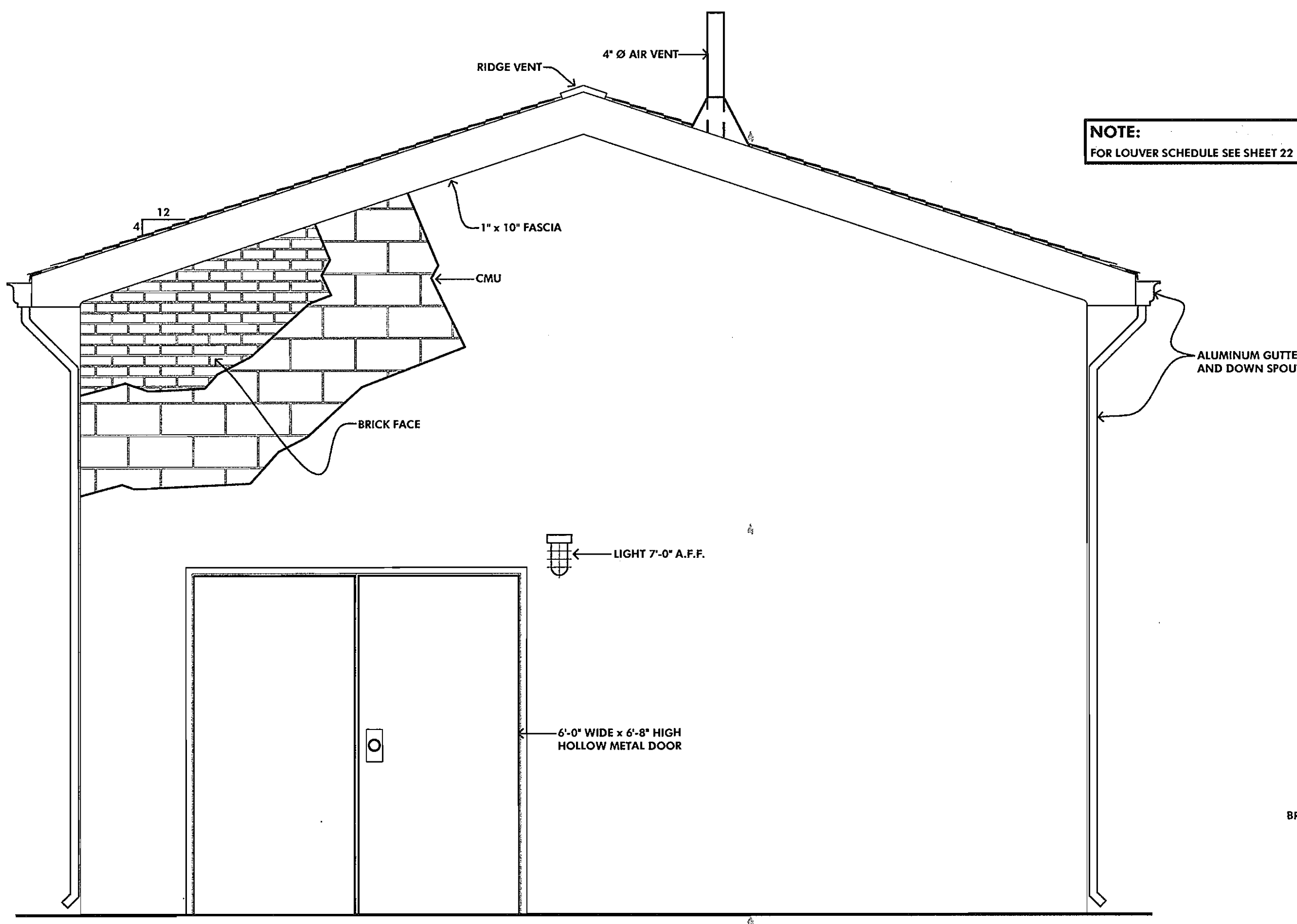
**SOUTH ELEVATION**

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



**EAST ELEVATION**

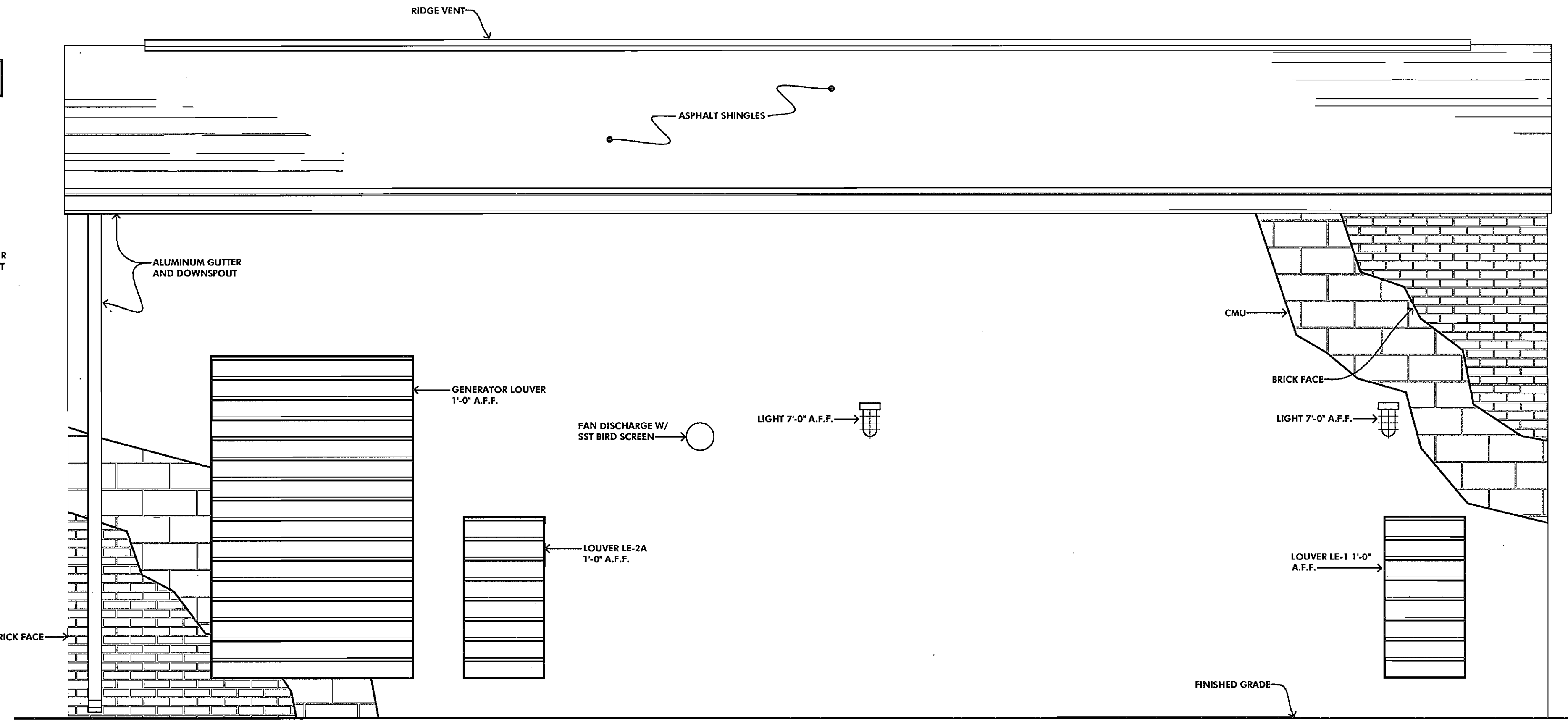
SCALE: 1/2"=1'-0"



**WEST ELEVATION**

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

**NOTE:**  
FOR LOUVER SCHEDULE SEE SHEET 22



**NORTH ELEVATION**

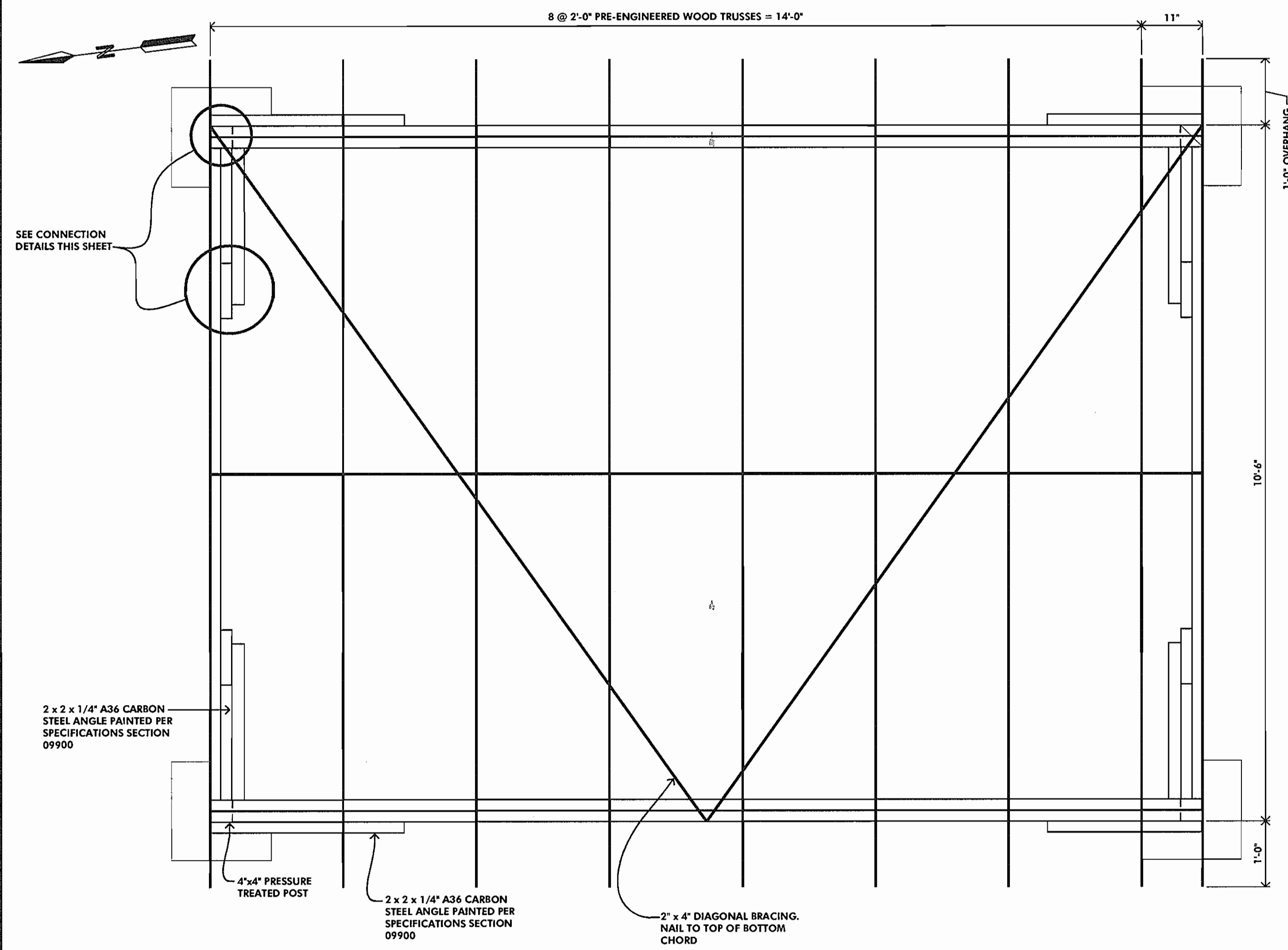
SCALE: 1/2"=1'-0"

<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p><i>Robert H. Deinger</i> 1-26-01 CHIEF, BUREAU OF UTILITIES DATE</p>	<p>DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND</p> <p><i>Michael J. Danaher</i> 2/5/01 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE</p>	<p><b>MICRONE</b> ENGINEERING/ ENVIRONMENTAL SCIENCES LAND PLANNING &amp; SURVEYING/ CONSTRUCTION SERVICES 20 RIDGELY AVENUE ANNAPOLIS, MARYLAND 21401 (410) 267-6621 Fax: (410) 267-9922 ANNAPOLIS CENTREVILLE ELKTON PRINCE FREDERICK SALISBURY</p>		<p>DES: S.A.C.</p> <p>DRN: -</p> <p>CHK: R.SELL</p> <p>DATE: FEB, 2000</p> <table border="1"> <tr> <th>BY</th> <th>No.</th> <th>REVISION</th> <th>DATE</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	BY	No.	REVISION	DATE					<p><b>ELEVATIONS</b></p>	<p><b>NEW CUT ROAD PUMP WASTEWATER PUMPING STATION</b></p> <p>CONTRACT # 10-3854-D</p> <p>2nd ELECTION DISTRICT</p> <p>HOWARD COUNTY, MARYLAND</p>	<p>SCALE AS SHOWN</p> <p>SHEET 16 OF 30</p>
BY	No.	REVISION	DATE												



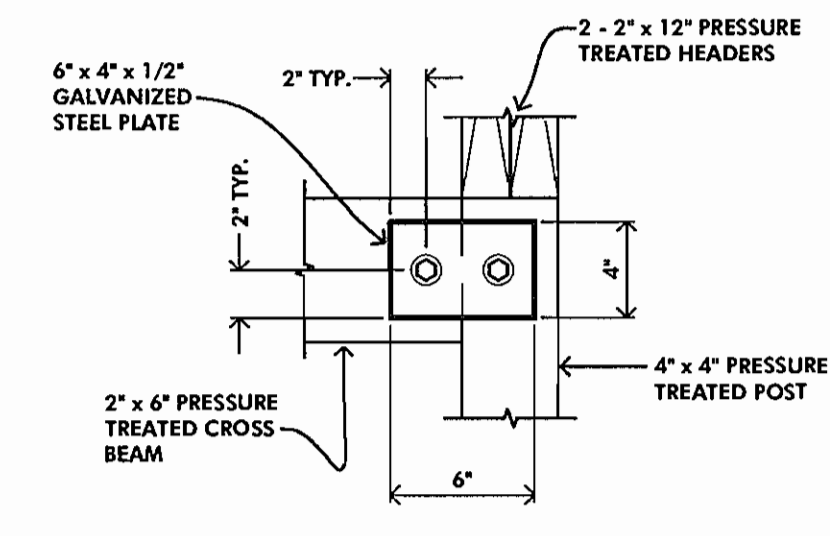






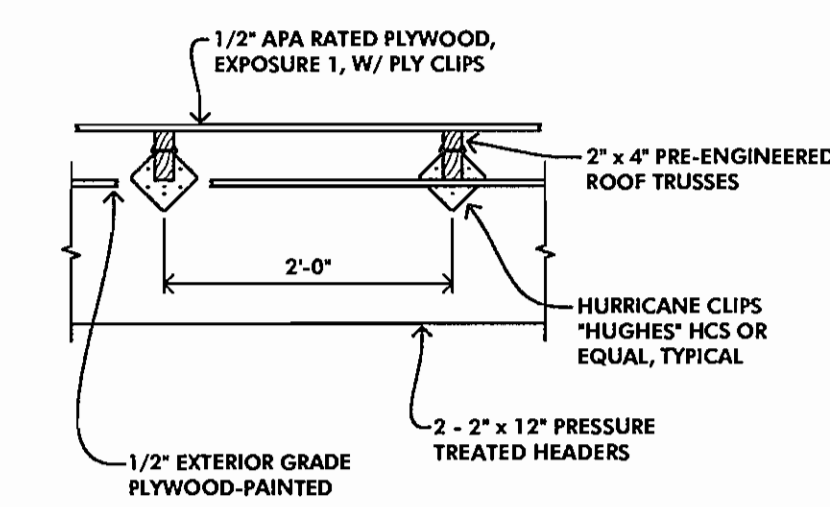
**ROOF FRAMING PLAN**

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



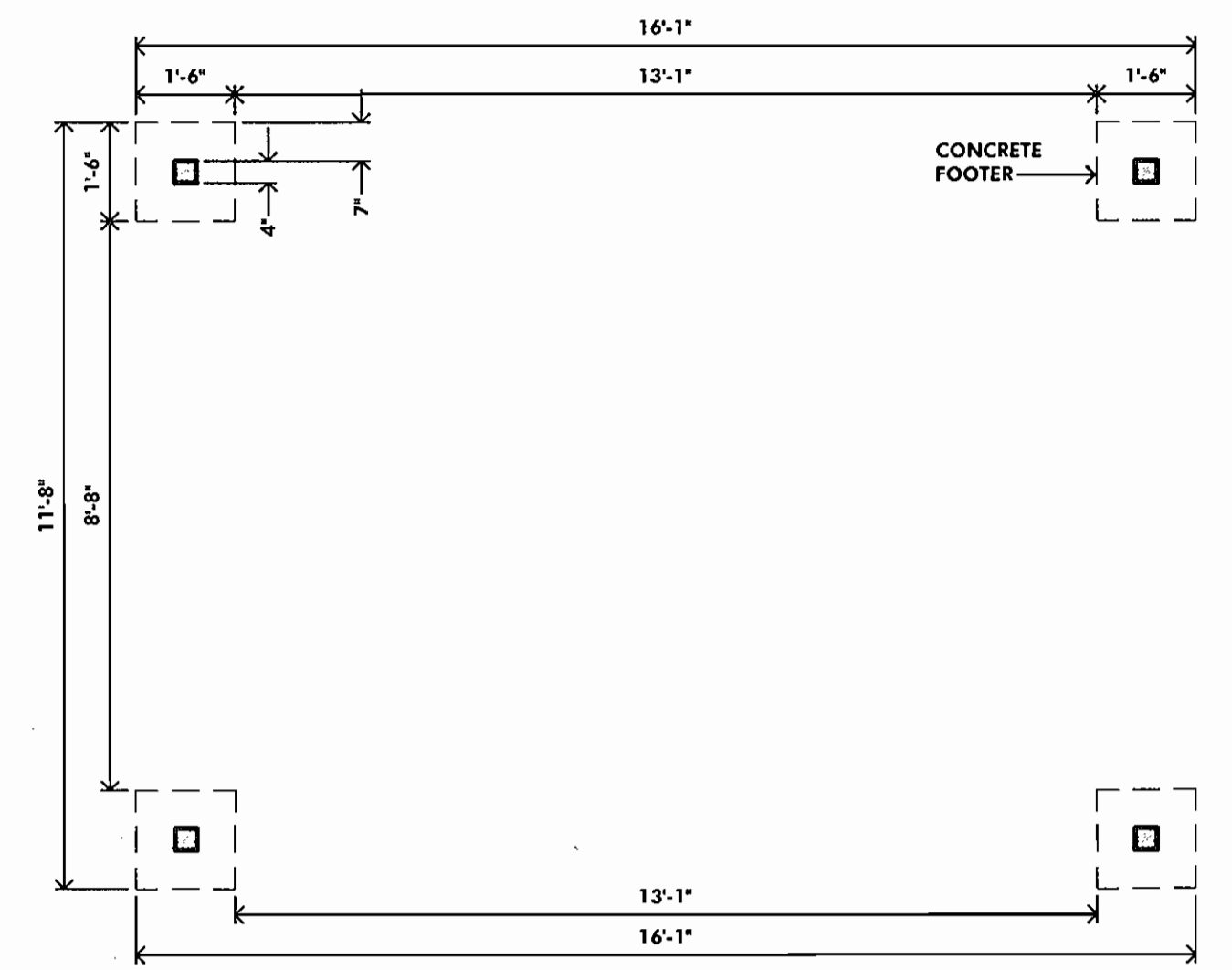
**PLATE DETAIL**

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



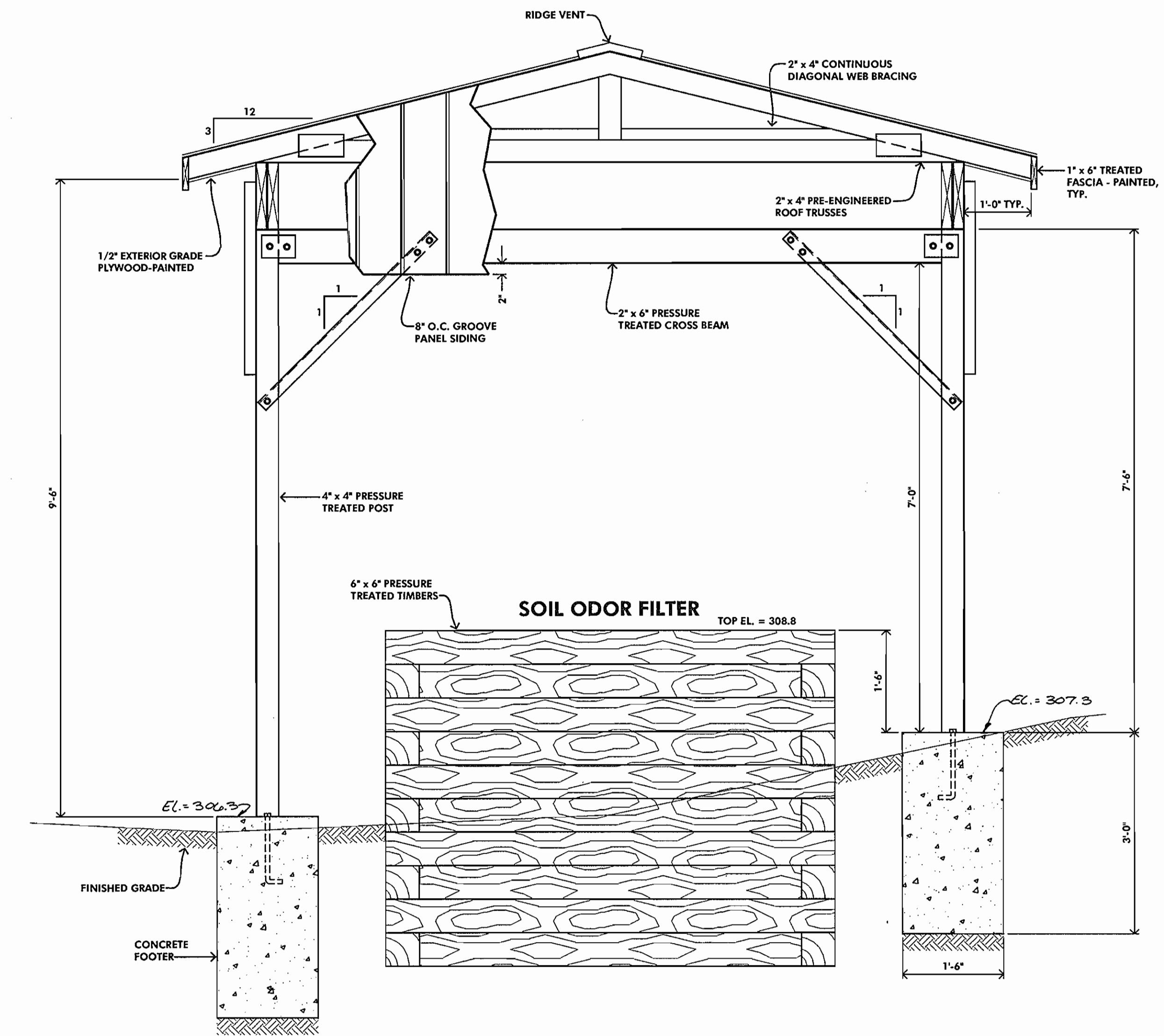
**HEADER TRUSSES CONNECTION**

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



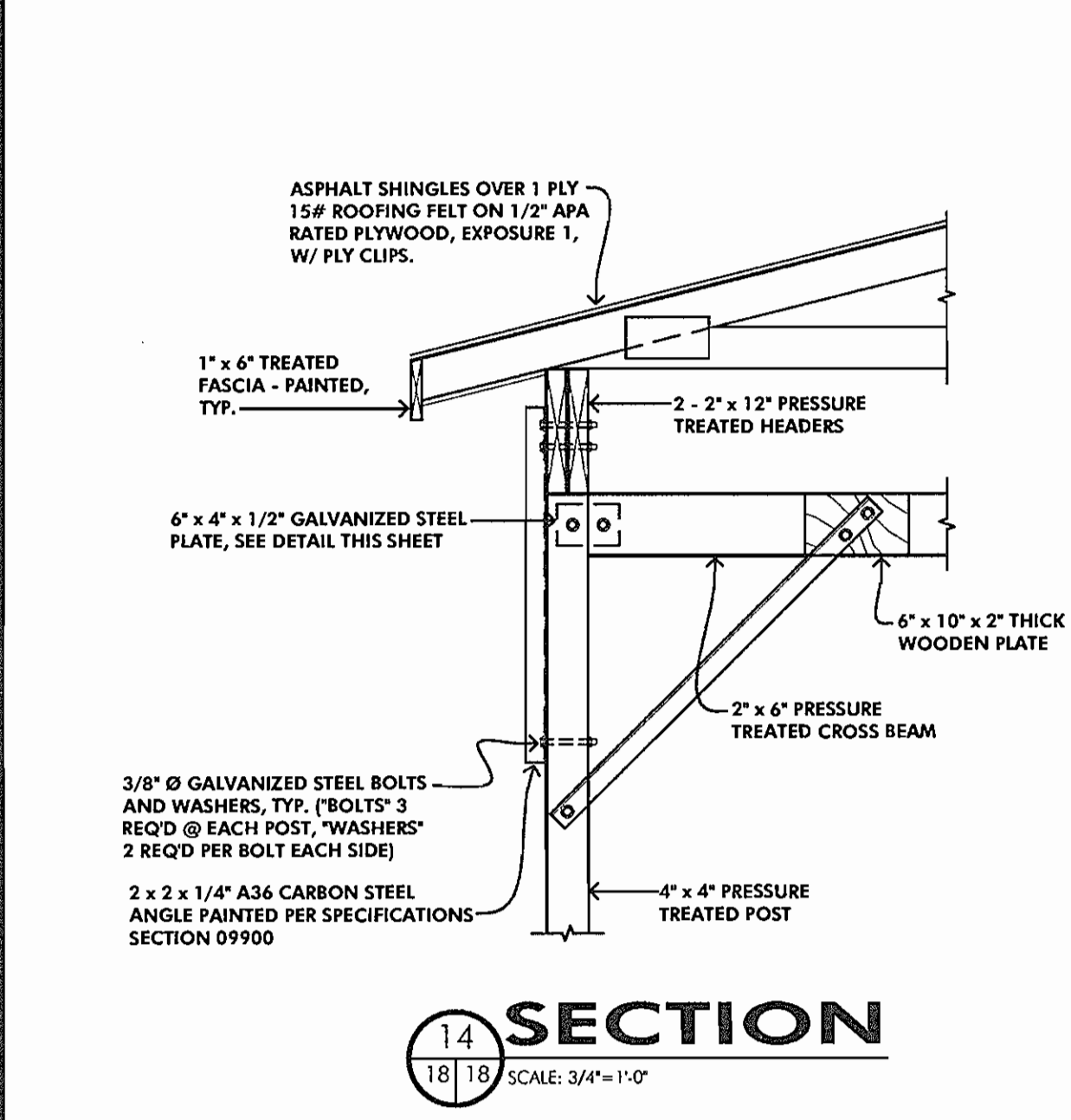
**FOUNDATION PLAN**

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



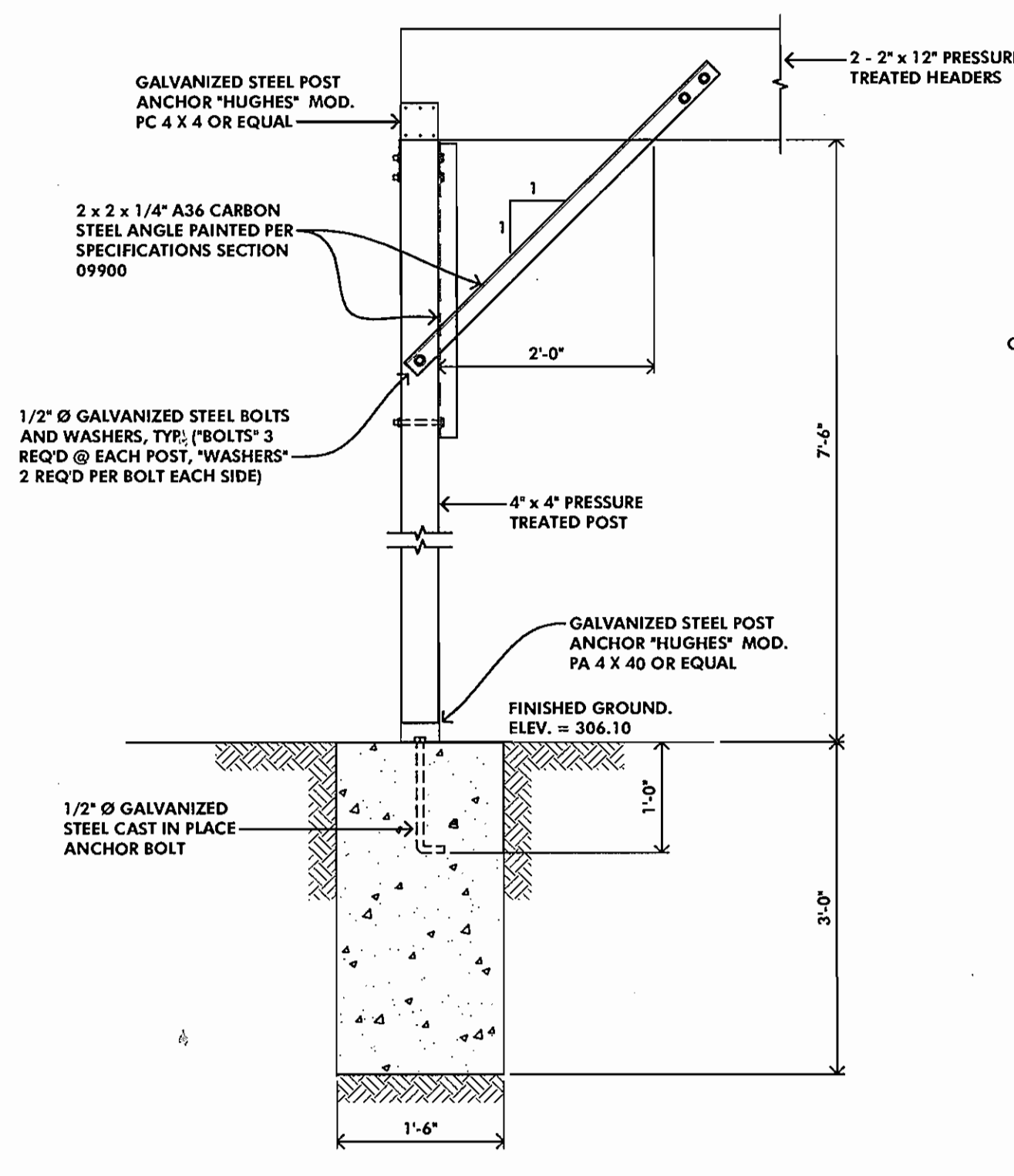
**END VIEW ELEVATION**

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



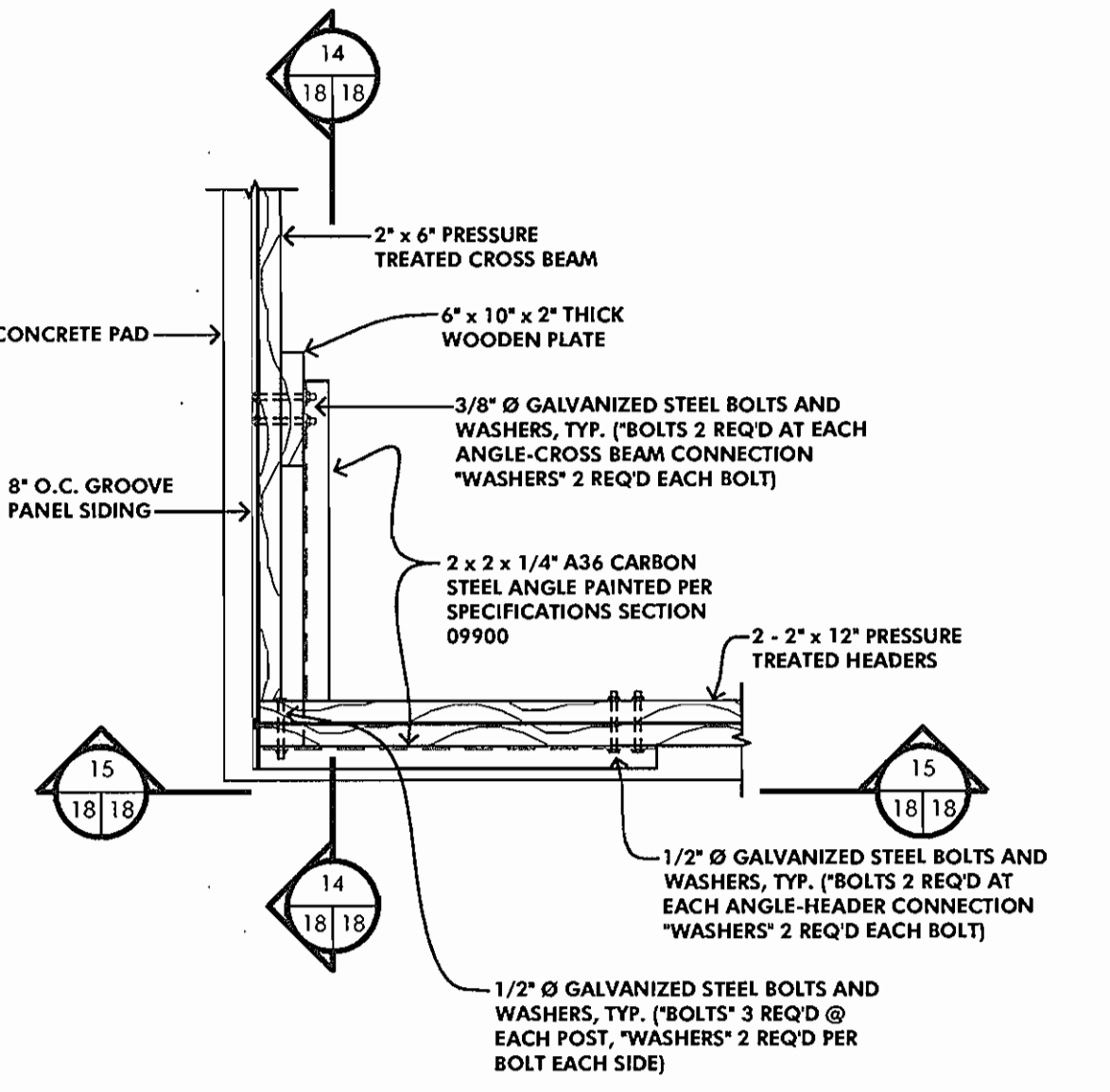
**SECTION 14**

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



**SECTION 15**

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



**PLAN - CONNECTION DETAIL**

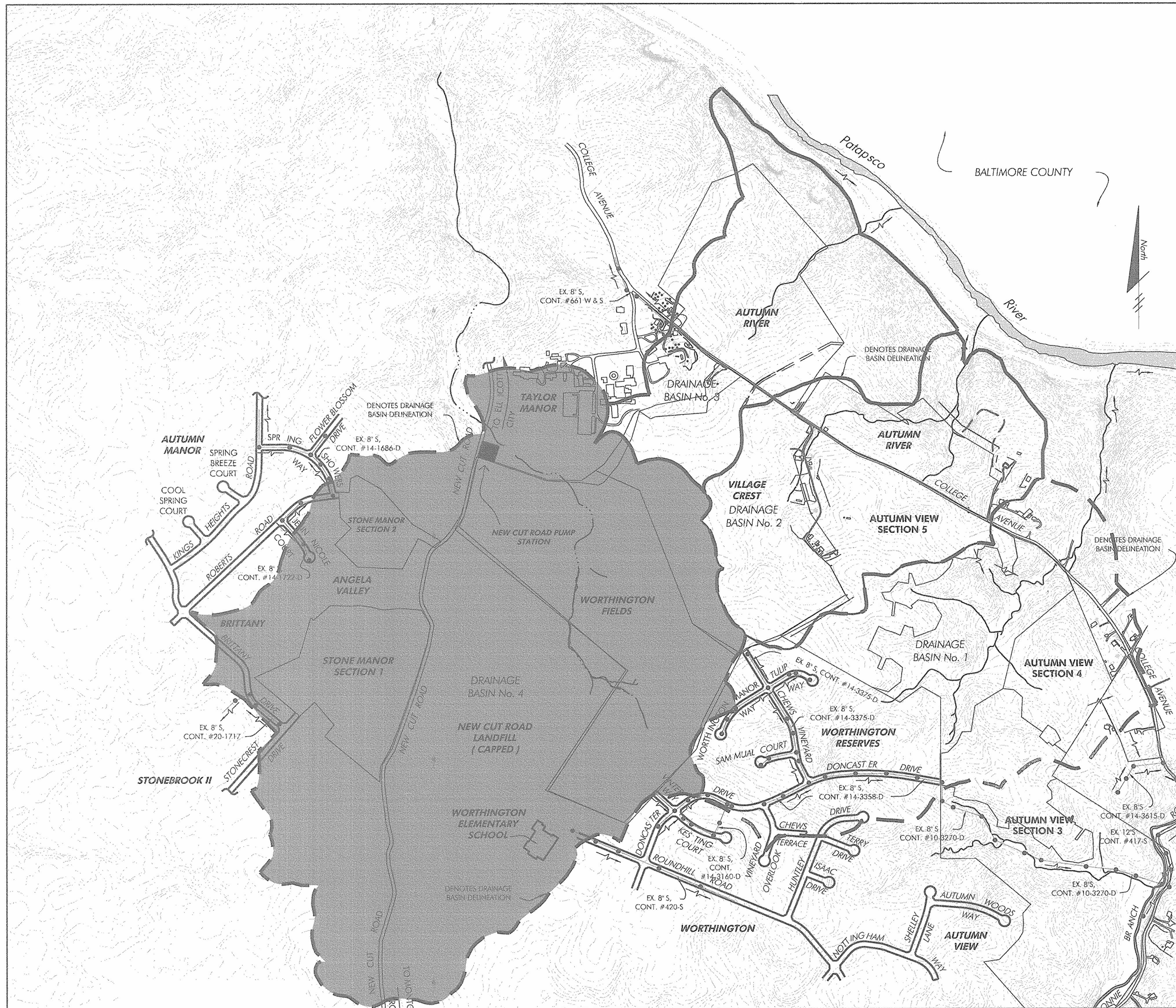
SCALE: 3/4"=1'-0"

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND  <i>Robert W. Bevington</i> CHIEF, BUREAU OF UTILITIES DATE: 1-26-01	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND  <i>Michael J. ...</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 2/5/01	<b>MICRONE</b> ENGINEERING & ENVIRONMENTAL SCIENCES LAND PLANNING & SURVEYING & CONSTRUCTION SERVICES 70 RIDGELY AVENUE ANNAPOLIS, MARYLAND 21401 (410) 267-8621 Fax: (410) 267-9922		DES: S.A.C.					<b>PAVILION DETAILS</b> <b>NEW CUT ROAD PUMP WASTEWATER PUMPING STATION</b> CONTRACT # 10-3854-D 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN
				DRN: -	CHK: R.SELL	DATE: FEB, 2000	BY: No.	REVISION		DATE



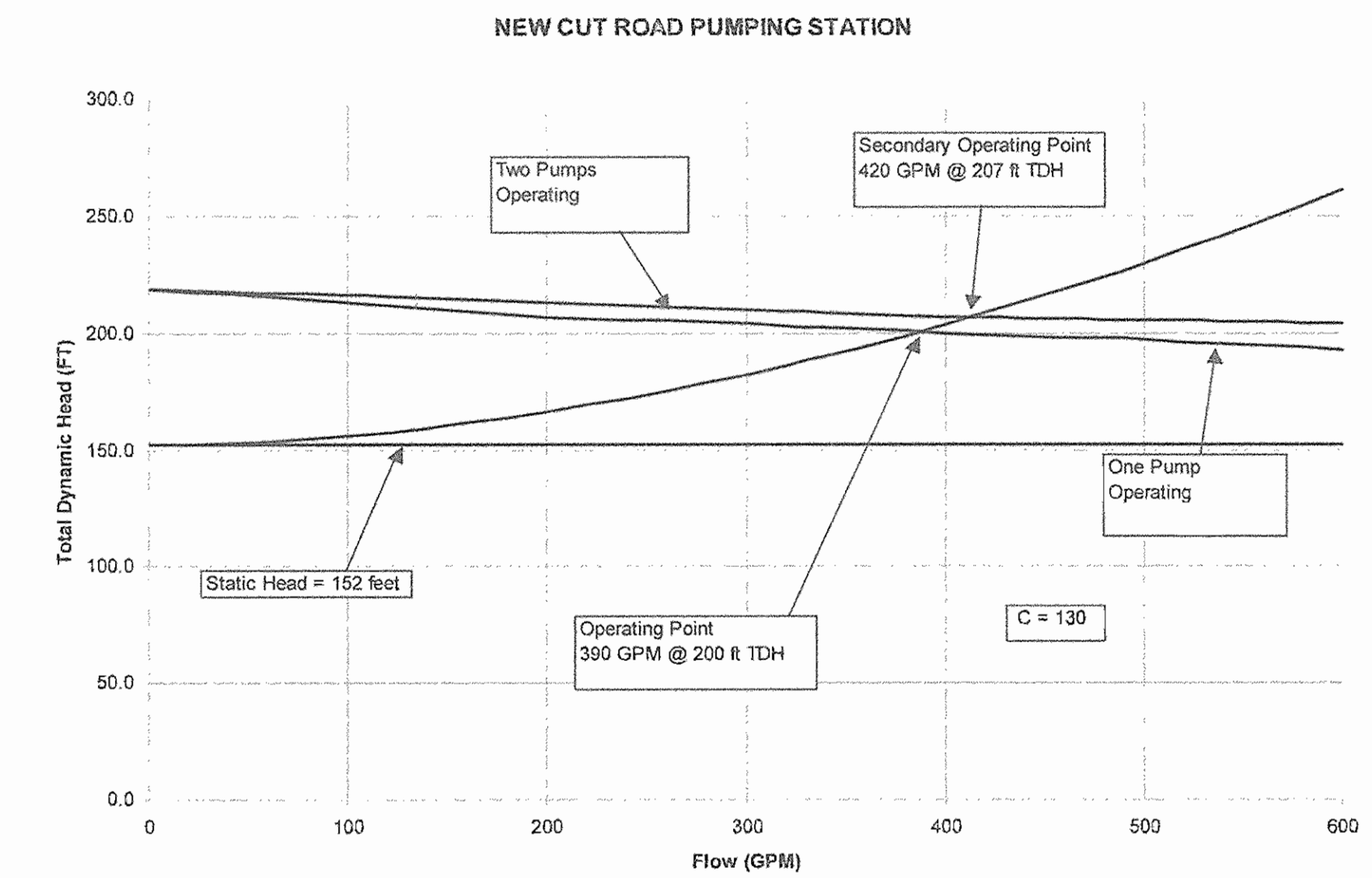






NEW CUT ROAD DRAINAGE AREA MAP, SCALE 1"=500'

**SYSTEM CURVE**



**DESIGN CRITERIA**

NEW CUT ROAD WASTEWATER PUMPING STATION  
DRAINAGE BASIN NO. 4

SUMMARY

STONE MANOR, SECTION 1: 30 SINGLE FAMILY LOTS  
 STONE MANOR, SECTION 2: 12 SINGLE FAMILY LOTS  
 WORTHINGTON FIELDS: 123 SINGLE FAMILY LOTS  
 21 TOWNHOMES  
 36 TOWNHOMES  
 90 CONDOMINIUMS

R-20: 67.8 undeveloped acres @ 1.7 D.U./Acre: 115 SINGLE FAMILY LOTS  
 R-ED: 11.7 undeveloped acres @ 2.0 D.U./Acre: 23 SINGLE FAMILY LOTS  
 POR: 23.1 undeveloped acres

FUTURE ELEMENTARY SCHOOL: 719 STUDENTS AND STAFF

DOMESTIC FLOW

303 SINGLE FAMILY LOTS @ 3.5 PERSONS/D.U. = 1060.5 persons  
 57 TOWNHOMES @ 3.1 PERSONS/D.U. = 176.7 persons  
 90 CONDOMINIUMS @ 2.2 PERSONS/D.U. = 198.0 persons  
 1435.2 = 1435 persons

1435 persons @ 72 gpcpd = 103,320 gallons per day

PEAK: 103,320 GPD X 4 = 413,280 gallons per day

INFILTRATION: 1435 persons @ 40 gpcpd = 57,400 gallons per day

NON-DOMESTIC FLOW

23.1 Acres (POR) @ 1,000 gallons per acre/day = 23,100 gallons per day  
 PEAK: 23,100 gpd x 2 = 46,200 gallons per day

DESIGN FLOW = 413,280 gpd + 57,400 gpd + 46,200 gpd

= 516,880 gpd  
 = 358.9 GPM

DESIGN FLOW: 390 GPM

Plot Date and Time: Jan 04, 2001 - 4:20pm

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Robert W. Beisinger* 1-26-01  
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND

*Chris D. ...* 2/5/01  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

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ANNAPOLIS CENTREVILLE ELTON PRINCE FREDERICK SALISBURY

DES:					
DRN:					
CHK: R.SELL					
DATE: FEB, 2000	BY	No.	REVISION	DATE	

**DRAINAGE AREA MAP**

**NEW CUT ROAD PUMP WASTEWATER PUMPING STATION**

CAPITAL PROJECT S-6238, CONTRACT # 10-3854-D

2nd ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 20 OF 30

File Name: G:\1100024 - New Cut Road Pumping Station\Drawings\Area.dwg  
 Job Ref: NEW CUT ROAD PUMPING STATION















# SYMBOLS

# ABBREVIATIONS

## SINGLE LINE DIAGRAM

- CIRCUIT BREAKER
- AMMETER
- VOLTMETER
- AMMETER
- VOLTMETER
- CURRENT TRANSFORMER, QUANTITY INDICATED
- POTENTIAL TRANSFORMER, QUANTITY INDICATED
- UTILITY METERING
- POWER TRANSFORMER
- MAGNETIC MOTOR STARTER, NEMA SIZE INDICATED  
RV=REDUCED VOLTAGE STARTING, FV=FULL VOLTAGE STARTING  
2S, 2W=2 SPEED, 2 WINDING
- FUSE
- DRAW-OUT TYPE EQUIPMENT
- GROUND-SYSTEM OR EQUIPMENT
- ELAPSED TIME METER
- OVERLOAD RELAY
- MOTOR OPERATED VALVE, MOV

## GROUNDING

- GROUND ROD
- BOND TO REINFORCING STEEL
- GROUNDING CABLE OR GROUND LOOP COUNTERPOISE

## SWITCHES

- SWITCH, SINGLE POLE-"a" INDICATE DEVICE CONTROLLED
- SWITCH, THREE WAY
- SWITCH, WITH RED PILOT LIGHT
- MANUAL MOTOR STARTER
- PUSHBUTTON

## RECEPTACLE & MISCELLANEOUS

- ALL OUTLETS ARE WALL MOUNTED ±18" AFF (UNLESS OTHERWISE NOTED)
- DUPLEX RECEPTACLE
  - DUPLEX RECEPTACLE FLOOR MOUNT FLUSH
  - JUNCTION BOX
  - THERMOSTAT-WALL MOUNTED (MOUNT 4'-6" AFF, UON)

## TELEPHONE

- TELEPHONE OUTLET ±18" AFF, UON
- TELEPHONE OUTLET - FLOOR MOUNTED

## EQUIPMENT

- NON-FUSED DISCONNECT SWITCH, SIZE AS INDICATED
- ENCLOSED MAGNETIC STARTER, UON
- FUSED DISCONNECT SWITCH, SIZE AS INDICATED
- CONTROL STATION-TYPE AS INDICATED
- MOTOR
- MOTOR

## CONDUIT AND WIRE

- CONDUIT NUMBER - SEE CONDUIT AND CONDUCTOR SCHEDULE
- HOWERUN INDICATES NUMBER OF #12 CONDUCTORS AND GROUND (UON)  
LP-X (X-DENOTES CIRCUIT NUMBER IN PANEL LP)
- CONDUIT OR CONDUCTOR - EXPOSED
- CONDUIT OR CONDUCTOR - DIRECT BURIAL, IN SLAB, OR CONCEALED
- CONDUIT OR CONDUCTOR - CONCEALED IN WALL OR CEILING
- CONDUIT OR CONDUCTOR - TURNING UP
- CONDUIT OR CONDUCTOR - TURNING DOWN
- FLEXIBLE CONDUIT
- CONDUIT STUB-OUT WITH CAP

## LIGHTING

- EXIT LIGHT - ARROWS INDICATE DIRECTION AND FACES
- EMERGENCY LIGHTING UNIT - WALL MOUNTED
- HID FIXTURE - WALL MOUNTED
- HID FIXTURE - POLE MOUNTED

## SCHEMATIC DIAGRAM

- |      |      |  |
|------|------|--|
| N.O. | N.C. |  |
|      |      | CONTACT  |
|      |      | TIMED CONTACT<br>CONTACT ACTION RETARDED ON<br>DE-ENERGIZATION |
|      |      | TIMED CONTACT<br>CONTACT ACTION RETARDED ON<br>ENERGIZATION    |
|      |      | PUSHBUTTON SINGLE CIRCUIT<br>MOMENTARY CONTACT                 |
|      |      | PUSHBUTTON SINGLE CIRCUIT<br>LOCK - OUT                        |
|      |      | LIMIT SWITCH   |
|      |      | LIMIT SWITCH HELD CLOSED                                       |
|      |      | LIMIT SWITCH HELD OPEN   |
|      |      | LIQUID - LEVEL ACTUATED SWITCH                                 |
|      |      | PRESSURE OR VACUUM ACTUATED SWITCH                             |
|      |      | FLOW ACTUATED SWITCH   |
|      |      | FLOW ACTUATED SWITCH   |
|      |      | MOTOR OVERLOAD HEATERS   |
|      |      | PILOT LIGHT<br>R=RED, W=WHITE, G=GREEN, B=BLUE                 |
|      |      | PILOT LIGHT - PUSH TO TEST                                     |
|      |      | STARTER COIL   |
|      |      | SOLENOID OPERATED CONTROL VALVE                                |
|      |      | ELAPSED TIME METER   |
|      |      | FUSE   |
|      |      | MOTOR OPERATED TERMINAL  |
|      |      | SELECTOR SWITCH  |
|      |      | PUSHBUTTON   |

## MISCELLANEOUS

- CALL-OUT FOR DETAIL OR SECTION.
- \*3\* INDICATES NUMERICAL ORDER ON DETAIL DWG.
- \*DE-2\* INDICATES DETAIL DWG. REFERENCED.

3  
DE-2

A	A	AMPERE	M	MAX	MAXIMUM
A/C	A/C	AIR CONDITIONER	MECH	MECH	MECHANICAL
AC	AC	ALTERNATING CURRENT	MH	MH	MANHOLE
AF	AF	ABOVE FINISHED GRADE	MIN	MIN	MINIMUM
AFG	AFG	ABOVE FINISHED FLOOR	MISC	MISC	MISCELLANEOUS
AHU	AHU	AIR HANDLING UNIT	N	N	NEUTRAL
AL	AL	ALUMINUM	NEC	NEC	NATIONAL ELECTRICAL CODE
ATS	ATS	AUTOMATIC TRANSFER SWITCH	NTS	NTS	NOT TO SCALE
AWG	AWG	AMERICAN WIRE GAUGE	O	OH	OVERHEAD
B	BKR	BREAKER	OL	OL	OVERLOAD
BLDG	BLDG	BUILDING	O.C.	O.C.	ON-CENTER
C	/C	CONDUCTOR	P	P	POLE
C	C	CONDUIT	P/E	P/E	PHOTO ELECTRIC CELL
CB	CB	CIRCUIT BREAKER	PL	PL	PLATE
CJ	CJ	CONTROL JOINT	PNL	PNL	PANEL
CKT	CKT	CIRCUIT	PVC	PVC	POLYVINYL CHLORIDE
CLG	CLG	CEILING	PWR	PWR	POWER
CMU	CMU	CONCRETE MASONRY UNIT	Q	QTY	QUANTITY
COL	COL	COLUMN	R	R	RADIUS
CONC	CONC	CONCRETE	RD	RD	ROOF DRAIN
CONT	CONT	CONTINUATION/CONTINUED	RECF	RECF	RECEPTACLE
CPT	CPT	CONTROL POWER TRANSFORMER	REINF	REINF	REINFORCING
D	DC	DIRECT CURRENT	RELO	RELO	RELOCATE
DWG	DWG	DRAWING	RGS	RGS	RIGID GALVANIZED STEEL
E	E.F.	EACH FACE	RVAT	RVAT	REDUCED VOLTAGE AUTO TRANSFORMER
EF	EF	EXHAUST FAN	RVSS	RVSS	REDUCED VOLTAGE SOLID STATE
EMT	EMT	ELECTRICAL METALLIC TUBING	S	SF	SUPPLY FAN
ETM	ETM	ELAPSED TIME METER	SHT	SHT	SHEET
EVH	EVH	ELECTRIC WATER HEATER	SFST	SFST	SINGLE POLE SINGLE THROW
EXP	EXP	EXPANSION	SSH	SSH	SOLID STATE METERING
EXIST or EX	EXIST or EX	EXISTING	SST	SST	STAINLESS STEEL
F	F/D	FLOOR DRAIN	STP	STP	SHIELDED TWISTED PAIR
FIN	FIN	FINISHED	STL	STL	STEEL
FVNR	FVNR	FULL VOLTAGE NON-REVERSING	TYP	TYP	TYPICAL
G	G	GROUND	U	UG	UNDERGROUND
GFI	GFI	GROUND FAULT INTERRUPTER	UL	UL	UNDERWRITERS LABORATORIES
GND	GND	GROUND	UON	UON	UNLESS OTHERWISE NOTED
H	HH	HAND HOLE	V	V	VOLT
HORIZ.	HORIZ.	HORIZONTAL	VERT	VERT	VERTICAL
HP	HP	HIGH POINT	VFD	VFD	VARIABLE FREQUENCY DRIVE
J	J-BOX	JUNCTION BOX	V.P.	V.P.	VENT PIPE
JT	JT	JOINT	W	W/	WITH
L	LG	LONG	WP	WP	WEATHERPROOF
LP	LP	LOW POINT	WWF	WWF	WELDED WIRE FABRIC
LTS	LTS	LIGHTS	X	XFER	TRANSFER
			XFMR	XFMR	TRANSFORMER

## NOTES:

1. NOT ALL SYMBOLS / ABBREVIATIONS USED ON DRAWINGS.

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND

*[Signature]* 7/5/01  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*[Signature]* 1-26-01  
CHIEF, BUREAU OF UTILITIES DATE

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DES: TLH					
DRN: FS					
CHK: TLH					
DATE: JAN, 2001	BY	No.	REVISION	DATE	

## E-1 ABBREVIATIONS AND SYMBOLS

## NEW CUT ROAD PUMP WASTEWATER PUMPING STATION

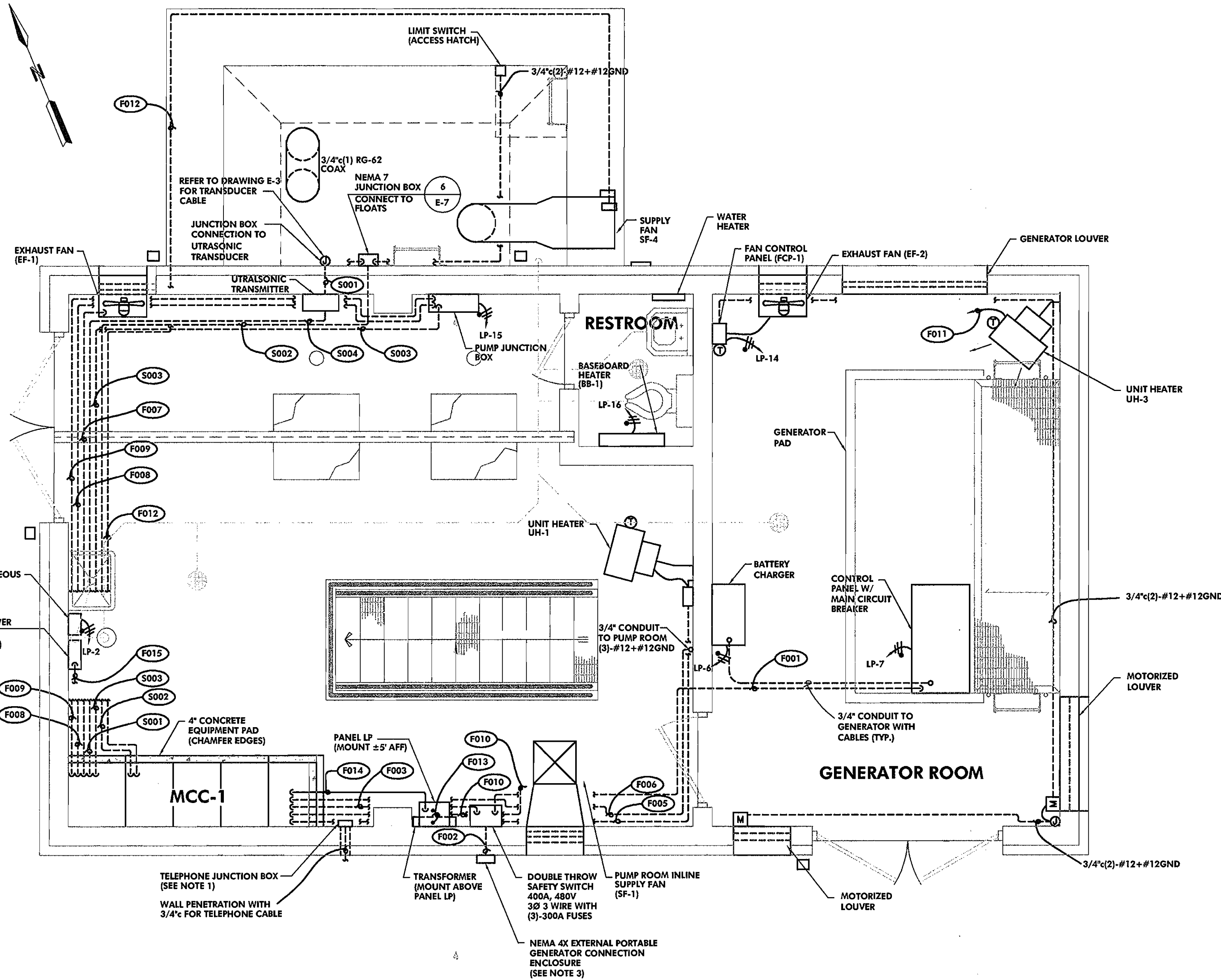
CONTRACT # 10-3854-D

2<sup>nd</sup> ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE  
AS  
SHOWN

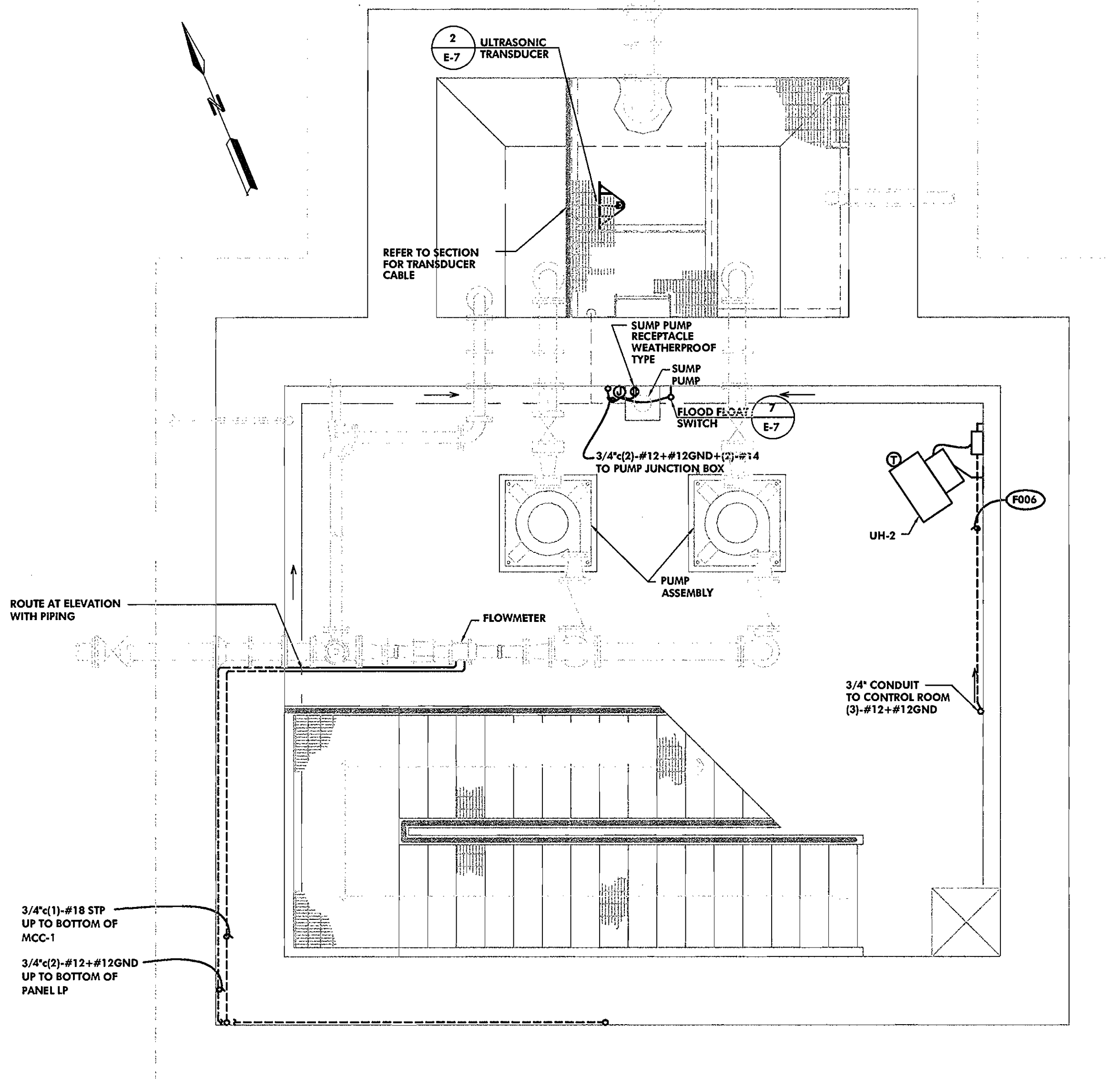
SHEET  
24 OF 30





**PLAN - CONTROL AND GENERATOR ROOM**

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



**PLAN - PUMP ROOM**

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

**NOTES:**

- CONTRACTOR TO SUPPLY 5 PAIR CABLE PER VERIZON REQUIREMENTS. CABLE SHALL BE BURIED UNDERGROUND FROM BUILDING TO NEAREST PEDESTAL. CONTRACTOR TO COORDINATE WITH VERIZON FOR TESTING AND ACTIVATION OF DEDICATED CIRCUITS. CONTRACTOR TO NOTIFY BUREAU OF UTILITIES 4 WEEKS IN ADVANCE OF COMPLETION FOR ORDERING OF LINE. CONTRACTOR SHALL EXTEND PHONE CIRCUIT TO TELEMETRY SYSTEM IN MCC-1 IN 3/4".
- CONTRACTOR SHALL PROVIDE AND INSTALL 1" (3)-#12+ #12GND TO ODOR BLOWER AND 3/4" (2)-#14+ #12GND TO SOLENOID VALVE. REFER TO SITE AND PROCESS MECHANICAL DRAWINGS FOR LOCATIONS.
- CONTRACTOR SHALL PROVIDE NEMA 4X ENCLOSURE AND MOUNT FOUR SINGLE POLE RECEPTACLES (HUBBLE-HBL400ITBC, HBL400ITR, HBL400ITBL, HBL400ITGN) FOR CONNECTION OF PORTABLE GENERATOR.

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HOWARD COUNTY, MARYLAND

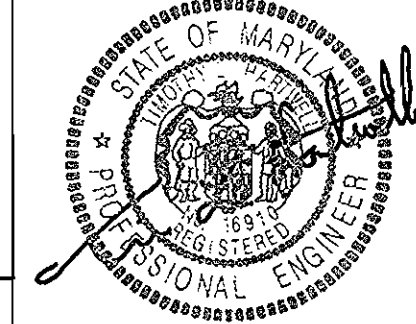
*[Signature]*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*[Signature]* 11-15-01  
DATE

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DRN: FS					
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DATE: NOV, 2001	BY	No.	REVISION	DATE	

**E-2  
ELECTRICAL PLAN**

**NEW CUT ROAD PUMP  
WASTEWATER PUMPING STATION**

CONTRACT # 10-3854-D  
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 25 OF 30

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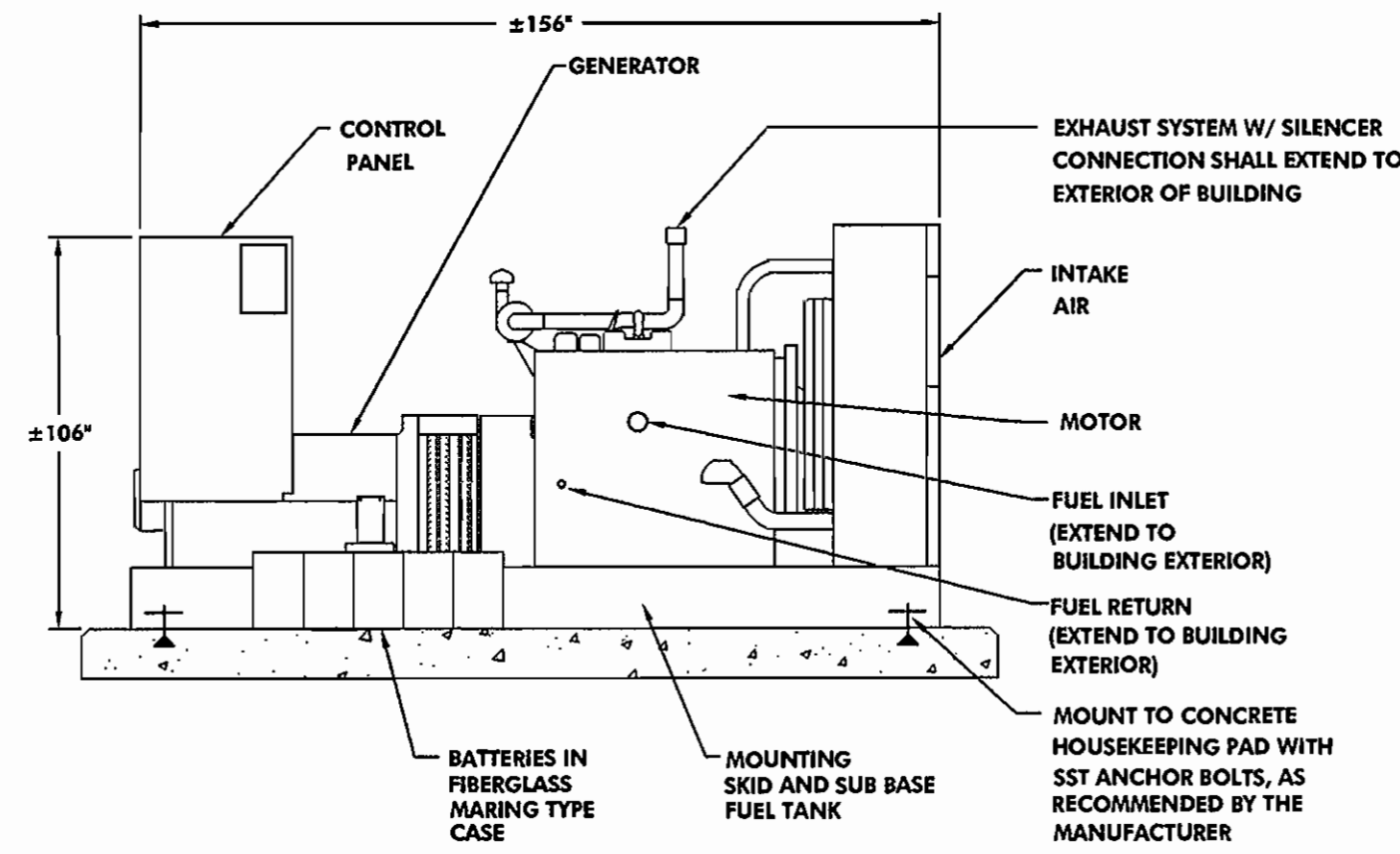




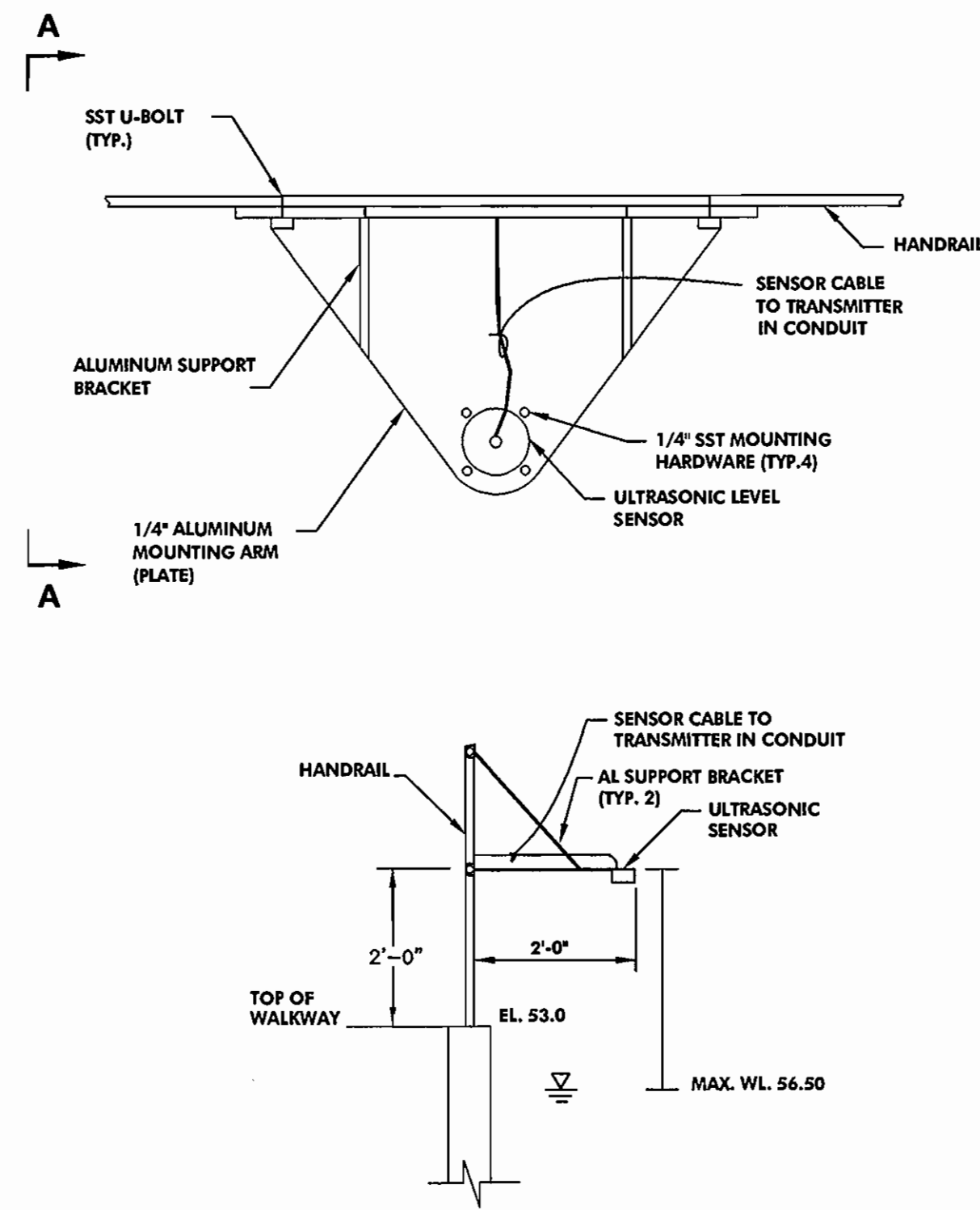




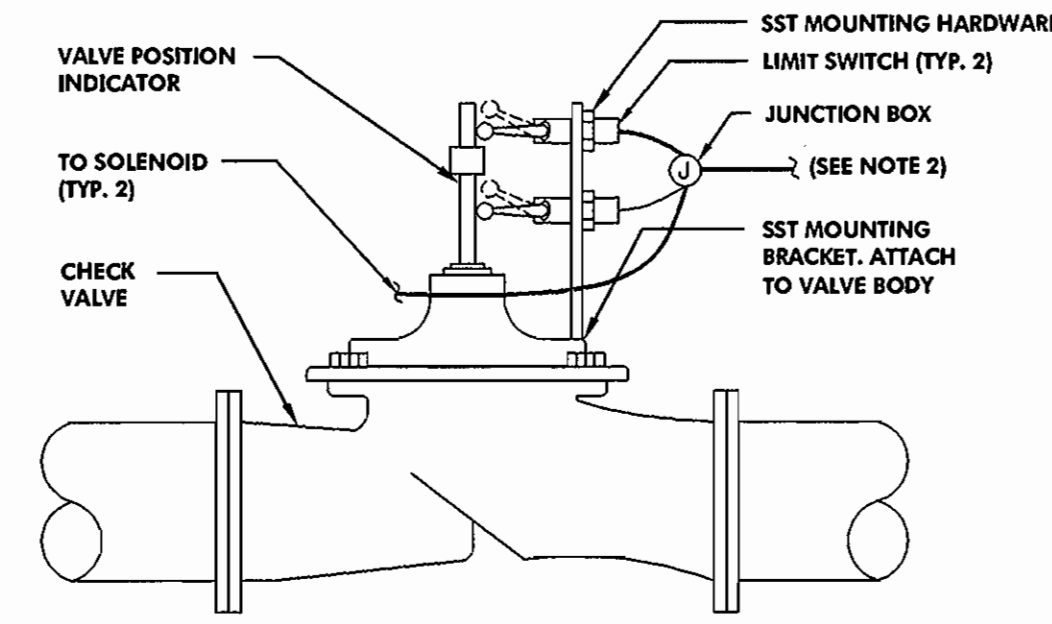




**1 GENERATOR**  
SCALE: NOT TO SCALE

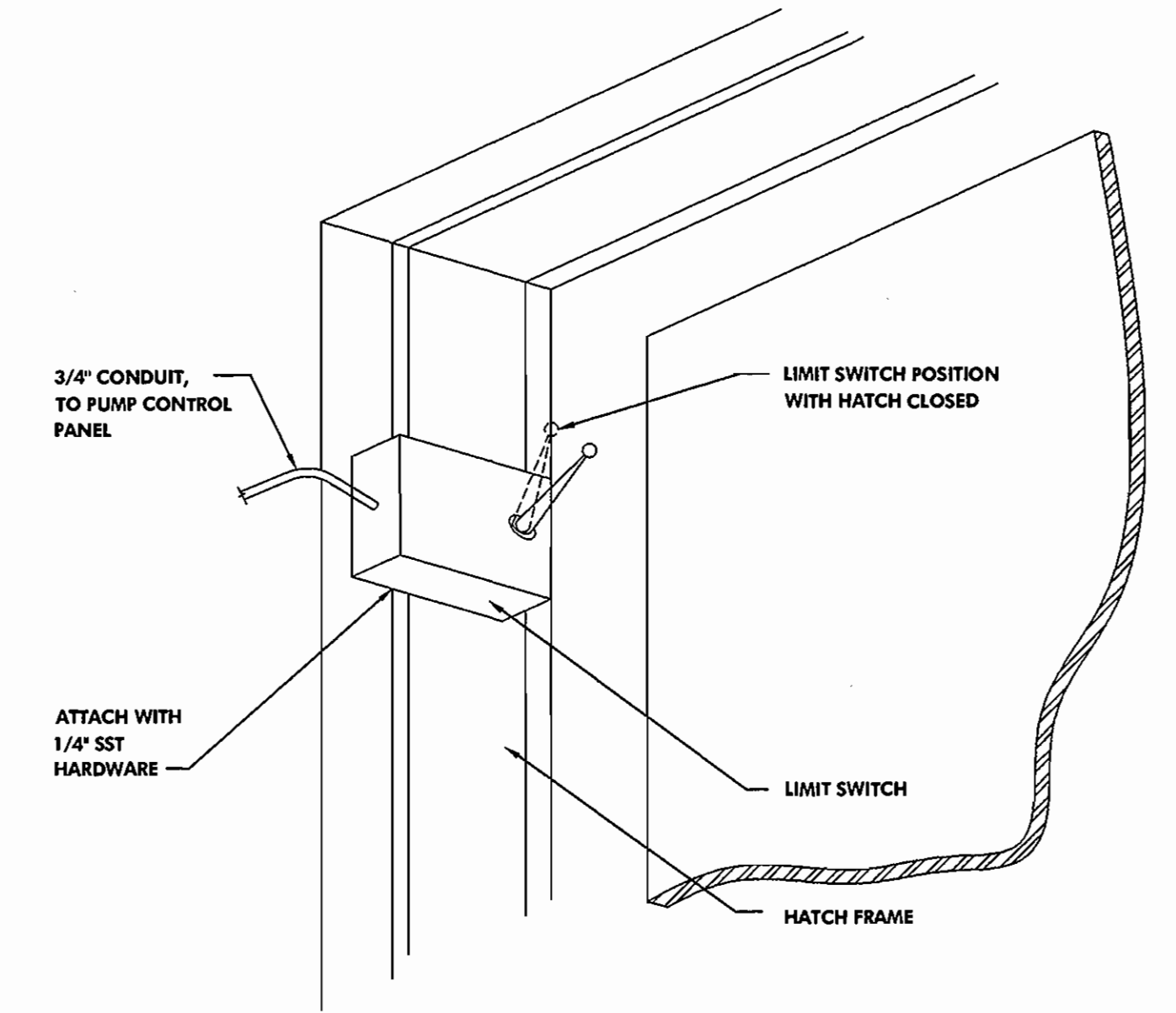


**2 WAS HOLDING TANK ULTRASONIC MOUNTING DETAIL**  
SCALE: NOT TO SCALE



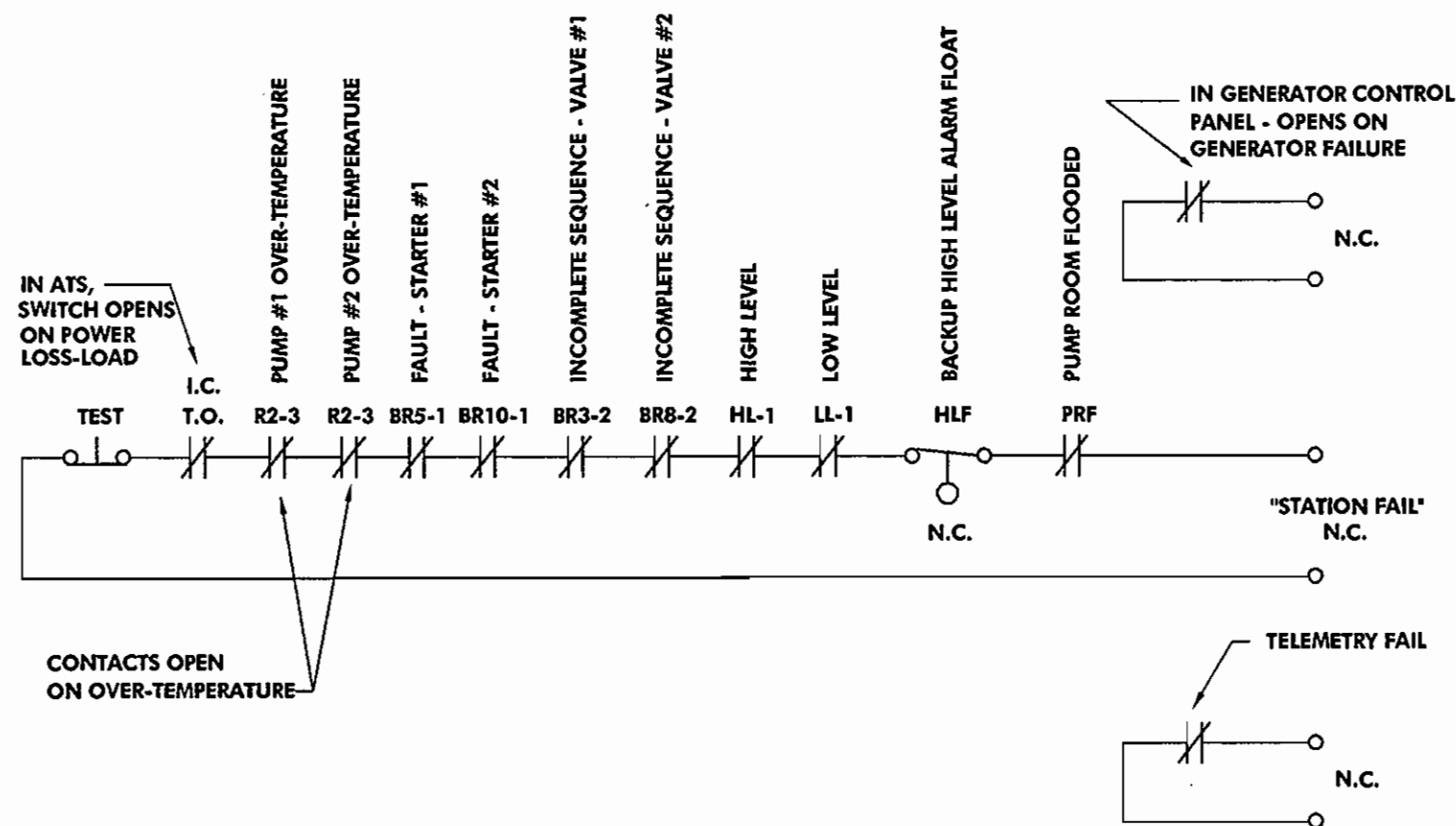
**NOTES:**  
 1. MOUNT LIMIT SWITCHES TO ENERGIZE WHEN VALVE STEM IS PROTRUDED (VALVE FULLY OPEN), (RETRACTED), AND (VALVE FULLY CLOSED).  
 2. PROVIDE AND INSTALL 3/4"(10) - #14 + #12GND TO MCC-1 FROM LIMIT SWITCHES AND SOLENOIDS.  
 3. REFER TO SCHEMATICS FOR CONTACT REQUIREMENTS AND WIRING.

**3 LIMIT SWITCH DETAIL**  
SCALE: NOT TO SCALE (TYP. 2)



**NOTES:**  
 1. MOUNT SWITCH IN SIMILAR POSITION FOR HATCH ON WETWELL.  
 2. FOR HAZARDOUS LOCATIONS, PROVIDE INTRINSICALLY SAFE RELAY IN CONTROL PANEL FOR SWITCH, OR SWITCH SUITABLE FOR CLASS 1, DIVISION 1 LOCATIONS.

**4 MAN IN STATION LIMIT SWITCH DETAIL**  
SCALE: NOT TO SCALE (TYP. 2)

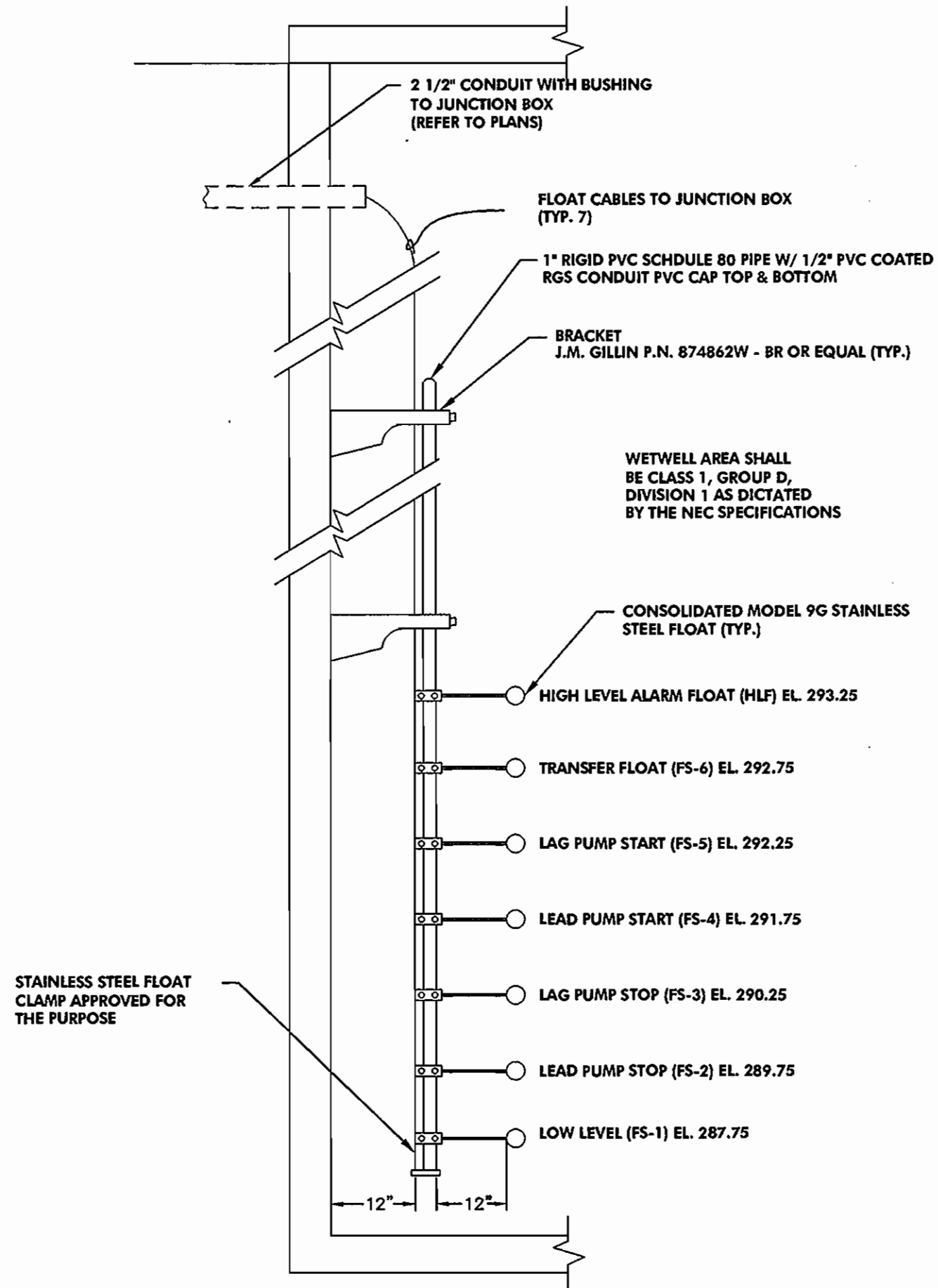


**NOTES:**  
 1. PROVIDE ALL #14 WIRING BETWEEN TELEMETRY AND PUMP CONTROL SYSTEM, ATS, AND GENERATOR CONTROL PANEL.

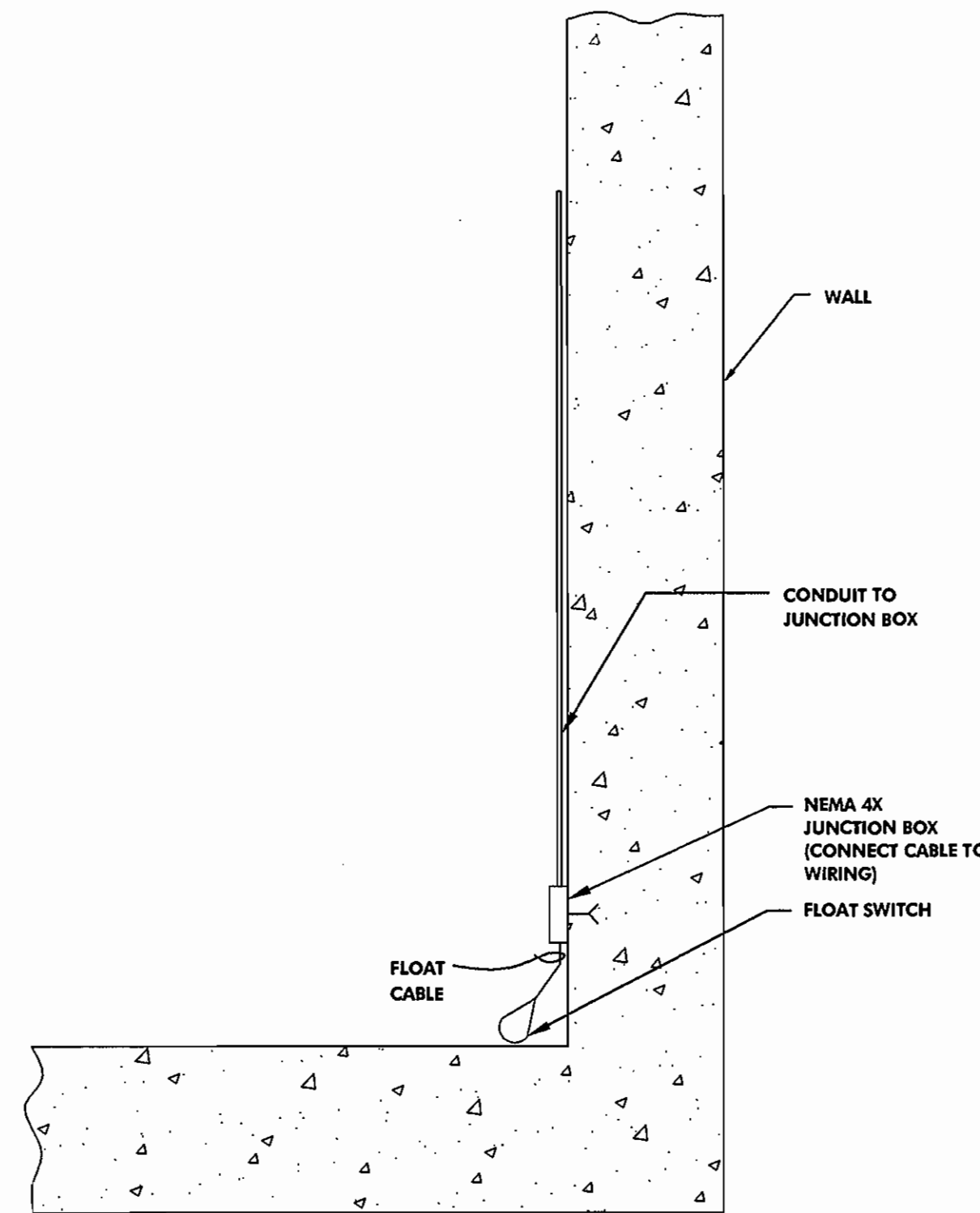
DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY MARYLAND

*Michael Damann* 2/5/01  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

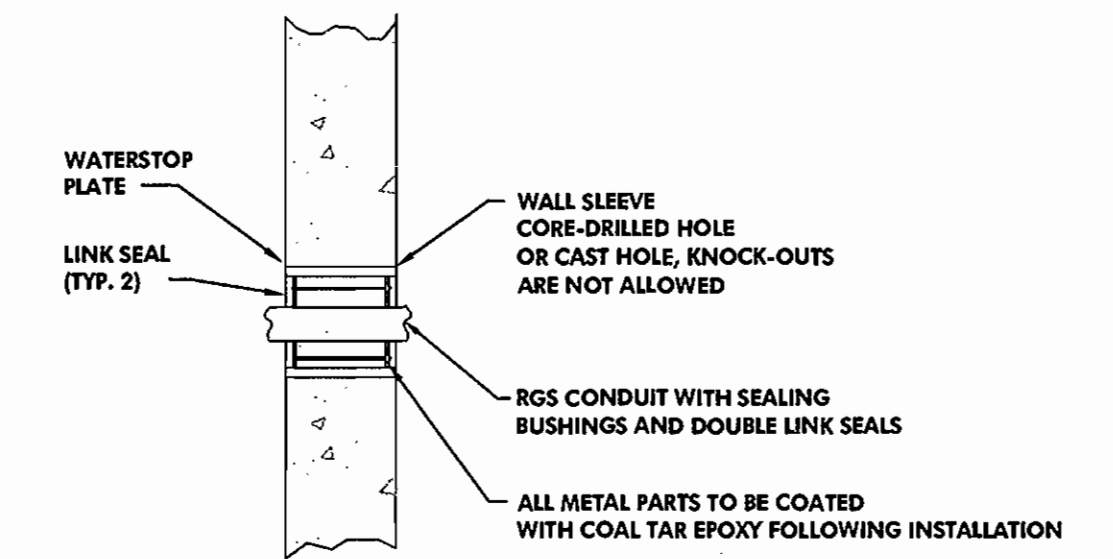
**5 TELEMETRY ALARM SCHEMATIC**  
SCALE: NOT TO SCALE (TYP. 2)



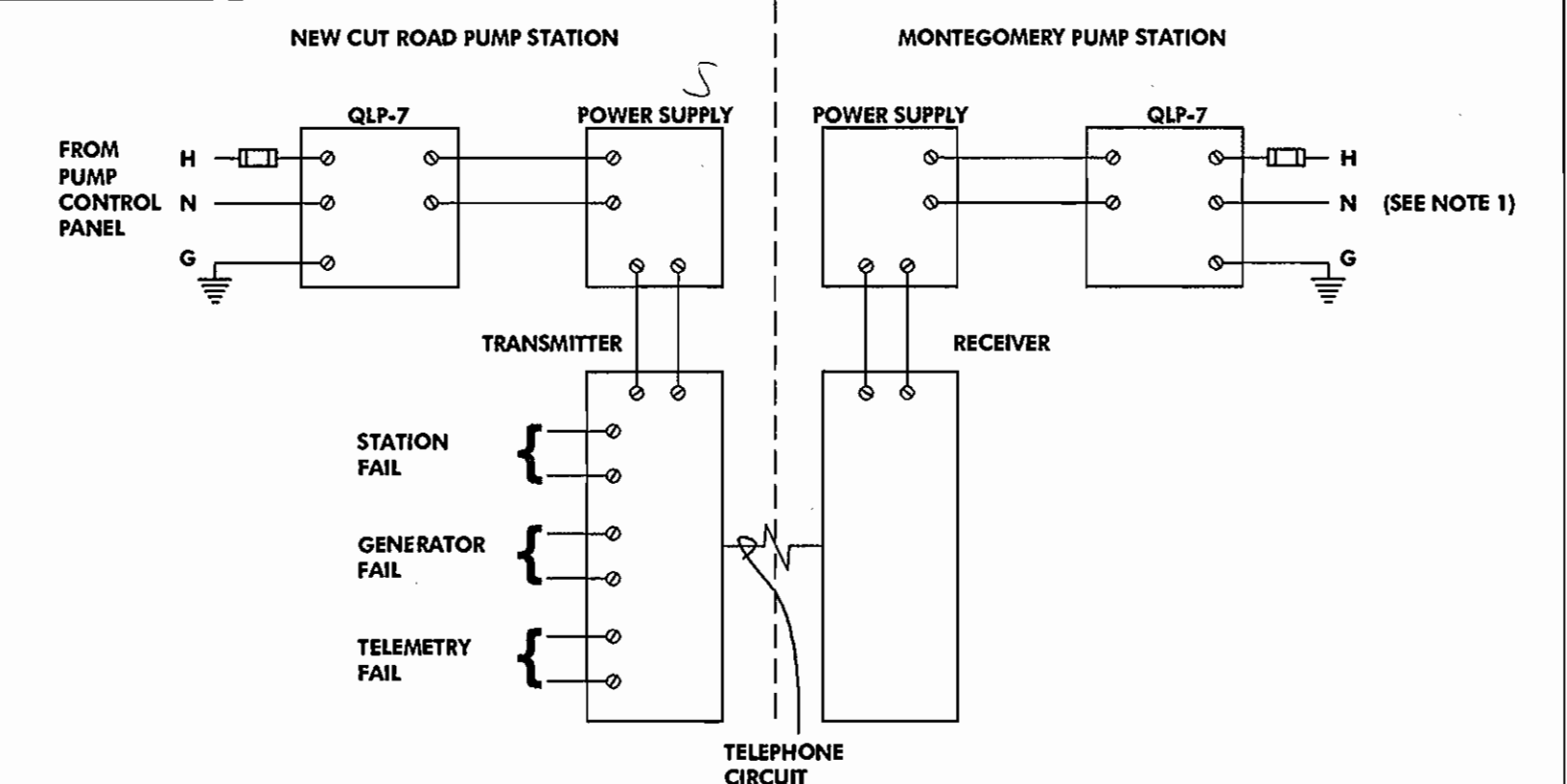
**6 FLOAT MAST DETAIL**  
SCALE: NOT TO SCALE



**7 DRYWELL FLOAT DETAIL**  
SCALE: NOT TO SCALE



**8 CONDUIT PENETRATION DETAIL**  
SCALE: NOT TO SCALE



**NOTES:**  
 1. PROVIDE AND INSTALL TELEMETRY EQUIPMENT AT MONTGOMERY PUMP STATION IN NEMA 12 ENCLOSURE. INCLUDE 3/4"(2) - #12 + #12GND TO EXISTING PANELBOARD FOR POWER. INCLUDE 3/4"(6) - #14 TO EXISTING RTU SYSTEM FOR CONNECTION OF OUTPUTS.

**9 TELEMETRY SCHEMATIC**  
SCALE: NOT TO SCALE

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DES: TLH					
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DATE: JAN, 2001	BY	No.	REVISION	DATE	

**E-7 ELECTRICAL DETAILS**

**NEW CUT ROAD PUMP WASTEWATER PUMPING STATION**

CONTRACT # 10-3854-D

2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 30 OF 30