

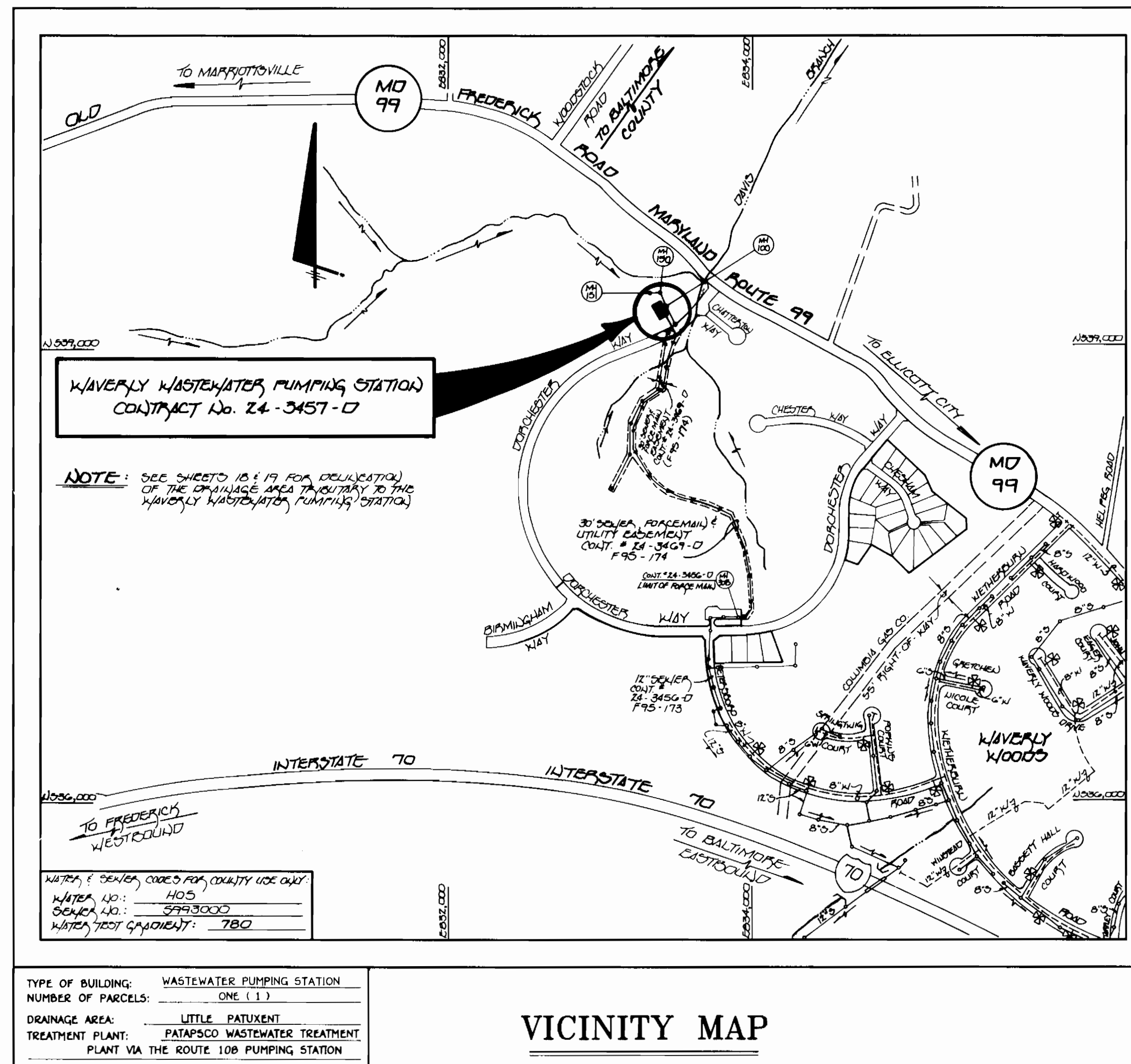
3457 WS/1 WAVERLY WASTE WATER PUMPING STATION

QUANTITIES				
ITEM	ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	SUPPLIER
PUMPING STATION, COMPLETE W. FLGS.	1 EACH	1 EACH	PUMP STATION	CONEWEGO
10" SOLDER D.I.P.	7 L.F.	11 L.F.	CL 52 D.I.P.	
8" SOLDER D.I.P.	247 L.F.	247 L.F.	CL 52 D.I.P.	
MANHOLES	3 EACH	4 EACH	PRECAST	
8" FORCE MAIN	112 L.F.	110 L.F.	CL 54 D.I.P.	
2" VATES	113 L.F.	115 L.F.	TYPE K COPPER	

NAME OF UTILITY CONTRACTOR: CONEWEGO CONTRACTORS
 SURVEY & DRAFTING DIVISION AS-BUILT DATE: 30 SEPTEMBER 1997

INDEX OF DRAWINGS	
No.	DESCRIPTION
1	TITLE SHEET
2	PUMPING STATION, SITE DEVELOPMENT PLAN/LOT LAY OUT
3	PUMPING STATION, SITE DEVELOPMENT PLAN/ACCESS DRIVEWAY
4	PUMPING STATION, SITE DEVELOPMENT PLAN/PROFILES & DETAILS
5	ARCHITECTURAL PLANS: ELEVATIONS & DETAILS
6	ARCHITECTURAL PLANS: SECTIONS & DETAILS
7	STRUCTURAL PLANS
8	STRUCTURAL SECTIONS
9	Mechanical PLANS
10	Mechanical SECTIONS
11	STRUCTURAL & MECHANICAL DETAILS
12	STRUCTURAL & MECHANICAL DETAILS
13	ELECTRICAL PLANS
14	ELECTRICAL LEGEND & SCHEDULE
15	ELECTRICAL ONE-LINE DIAGRAM & DETAILS
16	ELECTRICAL CONTROL DIAGRAMS
17	MISCELLANEOUS DETAILS/Soil BORING PROFILES
18	MISCELLANEOUS DETAILS/Drainage AREA MAP
19	MISCELLANEOUS DETAILS/Drainage AREA MAP

SOP SHEET 1 OF 3
 SOP SHEET 2 OF 3
 SOP SHEET 3 OF 3



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. DATUM.
- ALL PIPE ELEVATIONS ARE INVERT ELEVATIONS, UNLESS OTHERWISE NOTED.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM.
- 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 SITE.
- 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 VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION. ANY DAMAGE TO EXISTING FACILITIES DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S 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 - 850-4620
 - BALTIMORE GAS & ELECTRIC CO. - UNDER GROUND DAMAGE CONTROL - 787-9068
 - MISS UTILITY - 1-800-257-7777
 - COLONIAL PIPELINE CO. - 795-1390
 - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 313-4900
- 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 THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- 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.
- T.B. DENOTES TEST BORING.
- MANHOLES SHOWN WITH 12" AND 18" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL G 5.52.
- WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- MANHOLES LOCATED WITHIN THE PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAMES AND COVERS, STANDARD DETAIL G5.51.
- WATER MAINS AND WATER HOUSE CONNECTION LINES MUST BE PLACED AS TO HAVE ONE (1) FOOT SEPARATION FROM THE SEWER MAIN OR SEWER HOUSE CONNECTION AS THEY PASS ABOUT IT.
- ALL WATER MAINS SHALL BE D.I.P., CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-1/2" COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TREES SHALL BE STRAPPED TO TREES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATION SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS (W.1.11 AND W.2.13). SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATIONS C-153; DUCTILE IRON COMPACT FITTINGS, 3-INCH THROUGH 12-INCH FOR WATER AND OTHER LIQUIDS.
- FORCE MAIN SHALL BE CLASS 54 DUCTILE IRON PIPE (D.I.P.).
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, (410) 313-2450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.11(4) OF THE HOWARD COUNTY CODE.
- 2" W.V. SHALL BE COPPER, TYPE K, MEETING THE REQUIREMENTS OF SECTION 1004 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS & SHALL BE INSTALLED WITH 3'-0" OF COVER.

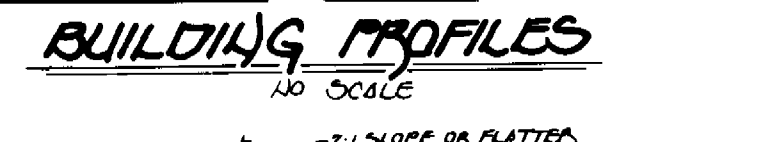
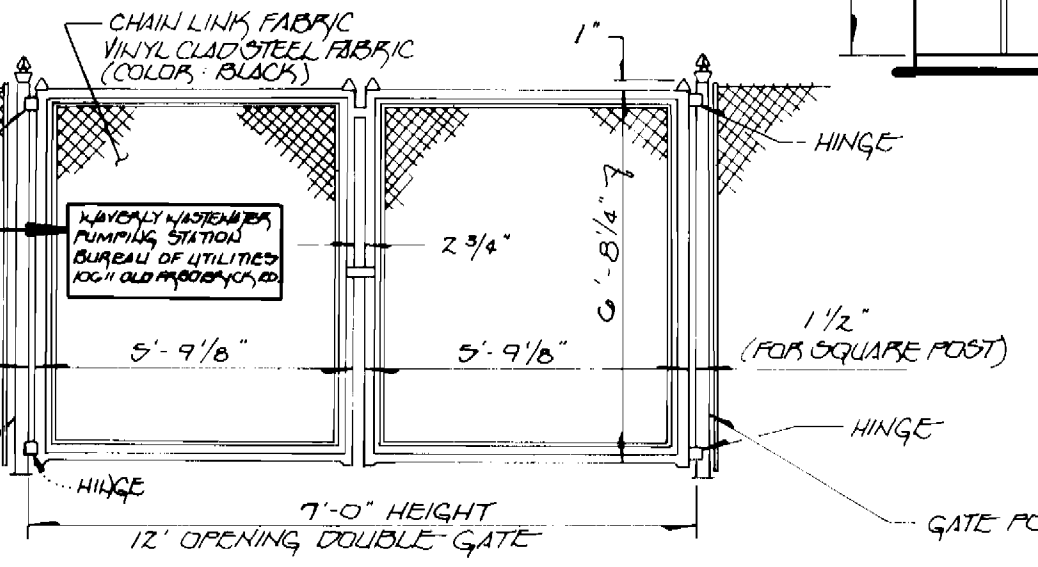
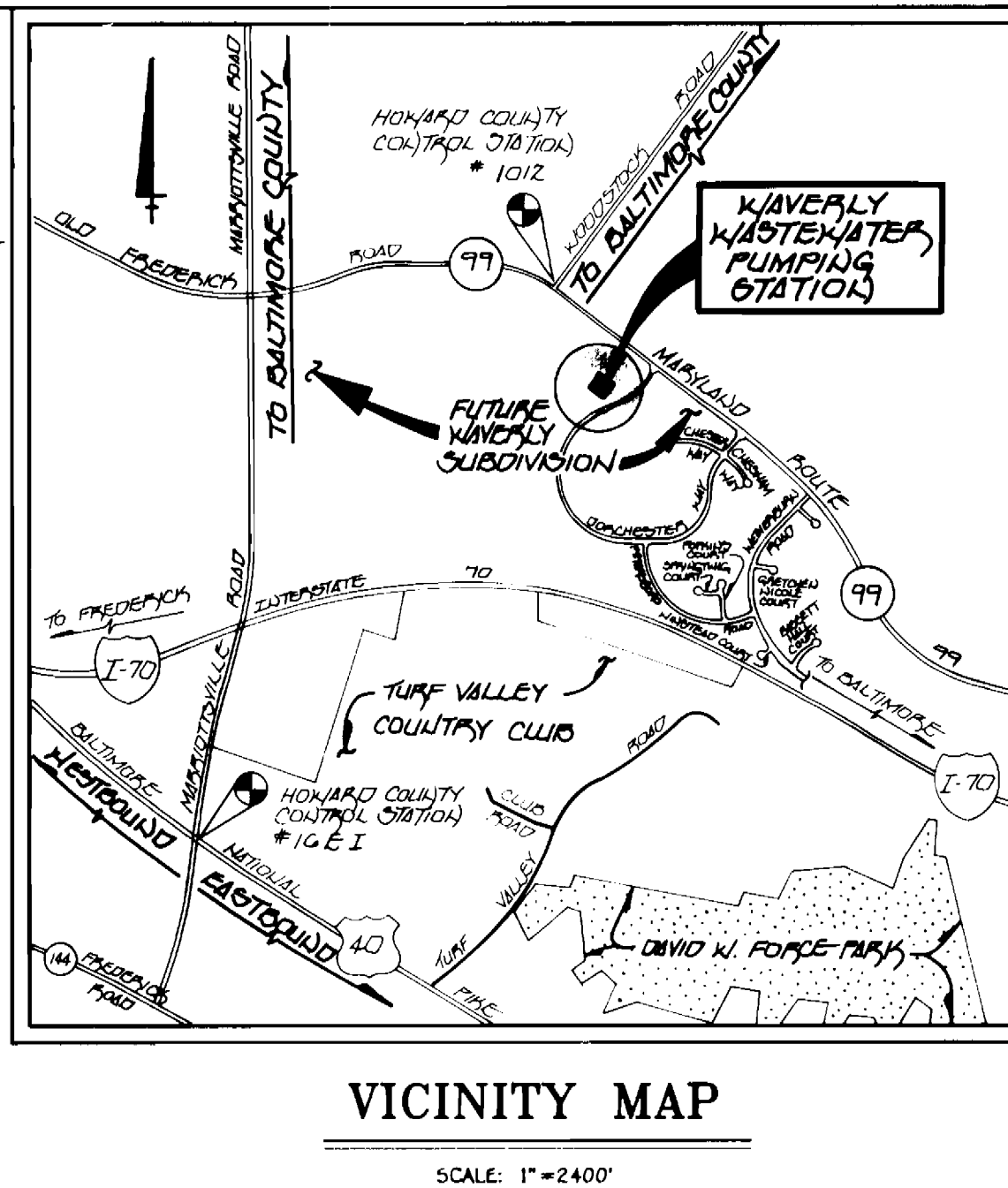
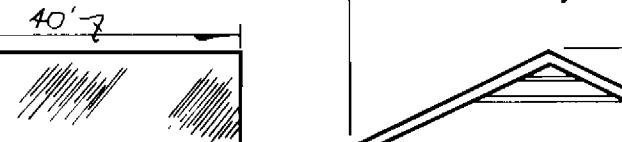
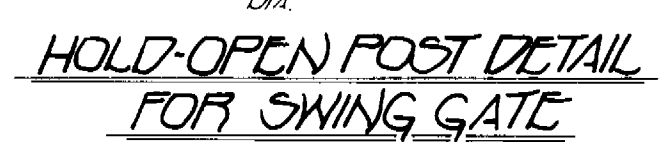
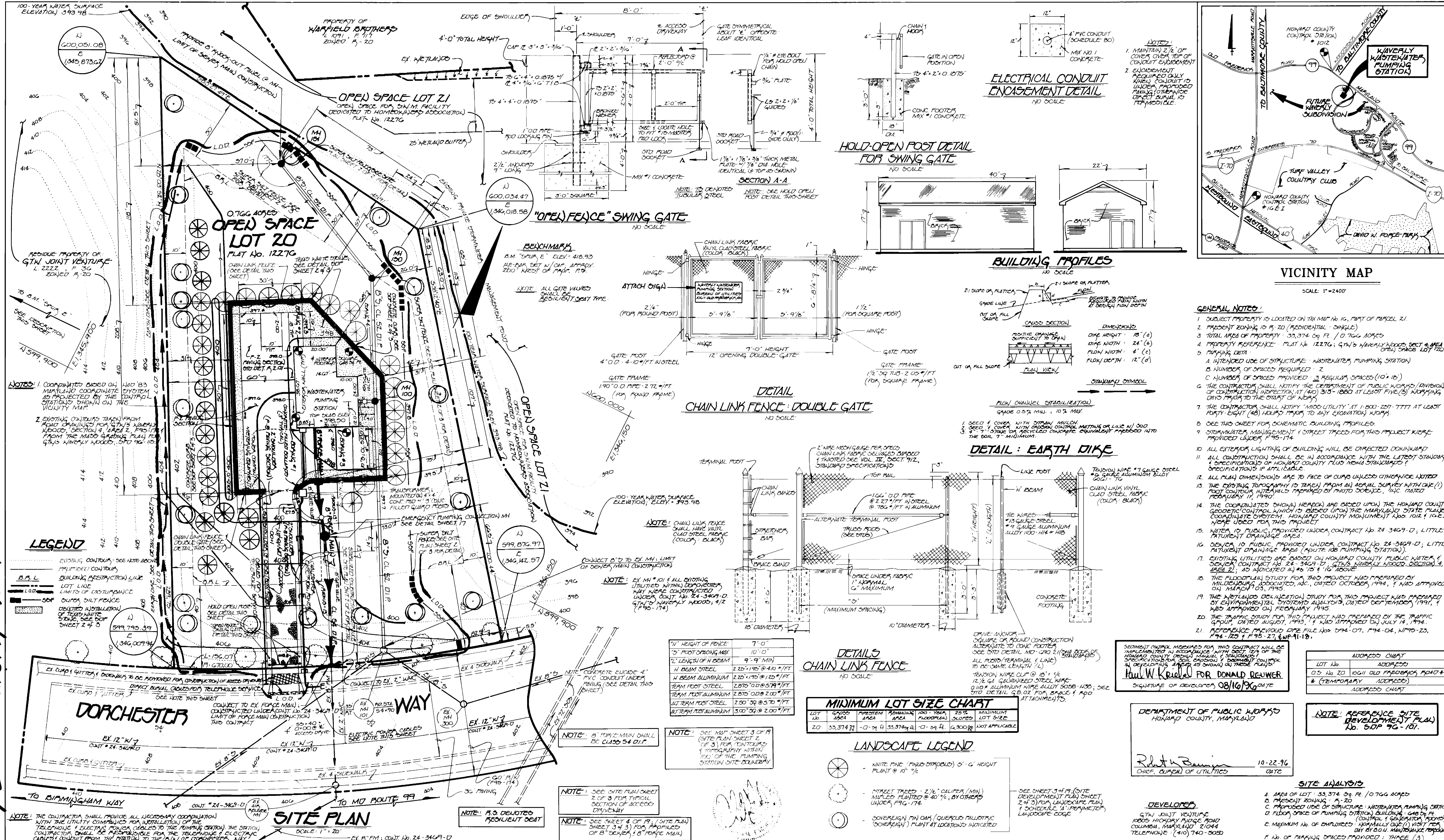
CONTRACT No. 24-3457-D WAVERLY WASTEWATER PUMPING STATION HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
 Approved: *David R. Reutter* 10/30/96 30P 96-101
 HOWARD SOIL CONSERVATION DISTRICT DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL & STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AS SHOWN ON THESE PLANS.
 Approved: *Paul H. Kuehl* for *Donald Reutter Jr.* 10/17/96
 SIGNATURE OF DEVELOPER DATE

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Robert Reutter</i> 10-22-96 CHIEF, BUREAU OF UTILITIES DATE	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND <i>[Signature]</i> 10/19/96 CHIEF, DEVELOPMENT & SURVEYING DIVISION DATE	Fisher, Collins & Carter, Inc. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTENNIAL SQUARE OFFICE BUILDING 10772 BALTIMORE NATIONAL PIKE ELICOTT CITY, MARYLAND 21042 (410) 461-2255 <i>TERRELL A. FISHER</i>	DES: M.J.M., P.W.K. DRWN: J.M.M. CHK: P.W.K. DATE: 8/7/96 BY NO. REVISION DATE	TITLE SHEET 600' SCALE MAP NO. 15 BLOCK NO. 6	WAVERLY WASTEWATER PUMPING STATION CONTRACT NO. 24-3457-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE AS SHOWN SHEET 1 OF 19
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Waverly Woods
3457



- ### GENERAL NOTES:
- SUBJECT PROPERTY IS LOCATED ON TAX MAP NO. 16, PART OF PARCEL 21.
 - PRESIDENT ZONING IS R-20 (RESIDENTIAL SINGLE).
 - TOTAL AREA OF PROPERTY: 33,374 SQ. FT. (0.766 ACRES).
 - PROPERTY REFERENCE: PLAT NO. 12276, G14'S WAVERLY WOODS, SECT. 4, AREA 2 (OPEN) SPACE LOT 20.
 - PARKING DATA:
 - INTENDED USE OF STRUCTURE: WASTE WATER PUMPING STATION.
 - NUMBER OF SPACES REQUIRED: 2.
 - NUMBER OF SPACES PROVIDED: 3 REGULAR SPACES (10' x 16').
 - THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS (DIVISION OF CONSTRUCTION INSPECTION AT (410) 313-1000) AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
 - THE CONTRACTOR SHALL NOTIFY "MCO UTILITY" AT 1-800-297-TTTT AT LEAST FORTY EIGHT (48) HOURS PRIOR TO ANY EXCAVATION WORK.
 - SEE THIS SHEET FOR SCHEMATIC BUILDING PROFILES.
 - STORMWATER MANAGEMENT: 1 STREET TRAP FOR THIS PROJECT WERE PROVIDED UNDER F 95-174.
 - ALL EXTERIOR LIGHTING OF BUILDING WILL BE DIRECTED DOWNWARD.
 - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS & SPECIFICATIONS OF HOWARD COUNTY PLUS LOCAL STANDARDS & SPECIFICATIONS IF APPLICABLE.
 - ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
 - THE EXISTING TOPOGRAPHY IS TAKEN FROM AN AERIAL SURVEY WITH ONE (1) FOOT CONTOUR INTERVALS PREPARED BY PHOTO DSC/PC, INC. DATED FEBRUARY 17, 1990.
 - THE COORDINATED (SHOW) HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NO. 102.1 (G.E.I) HERE USED FOR THIS PROJECT.
 - WATER IS PUBLIC PROVIDED UNDER CONTRACT NO. 24-3469-D, LITTLE PATENT DRAINAGE AREA.
 - SEWER IS PUBLIC PROVIDED UNDER CONTRACT NO. 24-3469-D, LITTLE PATENT DRAINAGE AREA (APRIL 1987). (NOTE: JOB PUMPING STATION).
 - EXISTING UTILITIES ARE BASED ON HOWARD COUNTY PUBLIC WATER & SEWER CONTRACT NO. 24-3469-D, G14'S WAVERLY WOODS, SECTION 4, AREA 2, AS INDICATED IN 10' X 16' ABOVE.
 - THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY MILLER CONSULTANTS, INC., DATED OCTOBER 1994, & WAS APPROVED ON MARCH 03, 1995.
 - THE TRAFFIC DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP, DATED AUGUST, 1993, & WAS APPROVED ON JULY 18, 1994.
 - THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP, DATED AUGUST, 1993, & WAS APPROVED ON JULY 18, 1994.
 - REFERENCE PREVIOUS FILE NO. 544-07, 194-04, 1195-23, 194-125 & 195-27, 6WP-11-10.

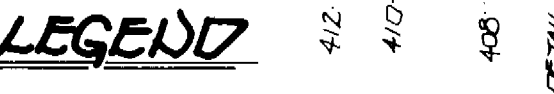
SEMI-ANNUAL MEETINGS FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 212 OF THE SPECIFICATIONS FOR PUBLIC UTILITIES, DATED SEPTEMBER 1991, & DEVELOPING AS PER 49 CHARTS ON THESE PLANS.

Paul W. Keenan FOR DONALD REUWER
SIGNATURE OF DEVELOPER 08/16/96 DATE

ADDRESS CHART	ADDRESS CHART
LOT No.	ADDRESS
05, 10, 20	10211 OLD PROSPERITY ROAD +
* TEMPORARY	ADDRESS CHART

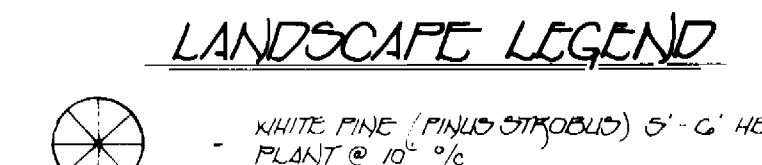
NOTE: REFERENCE SITE DEVELOPMENT PLAN No. 5079 96-101.

R. Keith Barringer 10-22-96
CHIEF, DEPARTMENT OF PUBLIC WORKS DATE



MINIMUM LOT SIZE CHART

LOT NO.	AREA	FLOORS	MINIMUM LOT AREA	MINIMUM LOT WIDTH
20	33,374 sq. ft.	10' - 54' R.	33,374 sq. ft.	10' - 54' R.
20	33,374 sq. ft.	10' - 54' R.	33,374 sq. ft.	10' - 54' R.



ENGINEER'S CERTIFICATE

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
4/22/96
DATE

DEVELOPER'S CERTIFICATE

I/WE 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 THE CONTROL OF SEDIMENT AND EROSION 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.

[Signature]
SIGNATURE OF DEVELOPER
4/22/96
DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

[Signature] 4/30/96
U.S. DEPARTMENT OF AGRICULTURE
NATIONAL RESOURCE CONSERVATION SERVICE DATE

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED: *[Signature]* 4/30/96 DATE
HOWARD SOIL CONSERVATION DISTRICT

DEPARTMENT OF PLANNING & ZONING

DIRECTOR, JOSEPH MATTEA, JR. DATE: _____

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE: _____

INDEX OF SHEETS

SITE DEVELOPMENT PLAN SHEET 1 OF 3 PLANS FOR LOT LAY-OUT
SITE DEVELOPMENT PLAN SHEET 2 OF 3 LANDSCAPE PLAN & LOTS
SITE DEVELOPMENT PLAN SHEET 3 OF 3 PROFILE & DETAIL

PROPERTY (SUBDIVISION)	SECTION/AREA	PARCEL/LOT NO.
G14'S WAVERLY WOODS	4/2	21 / 20
PLAT NO.	BLOCK NO.	ZONE
12276	6	R-20
TAX/ZONE	ELEC. DIST.	CENSUS TRACT
16	2 ND	G0G3
WATER CODE	SEWER CODE	
405	5993000	

SITE DEVELOPMENT PLAN: PUMPING STATION LOT LAY-OUT

WAVERLY WASTE WATER PUMPING STATION CONTRACT NO. 24-3469-D (OPEN) SPACE LOT 20 TAX MAP 16 PARCEL 21 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

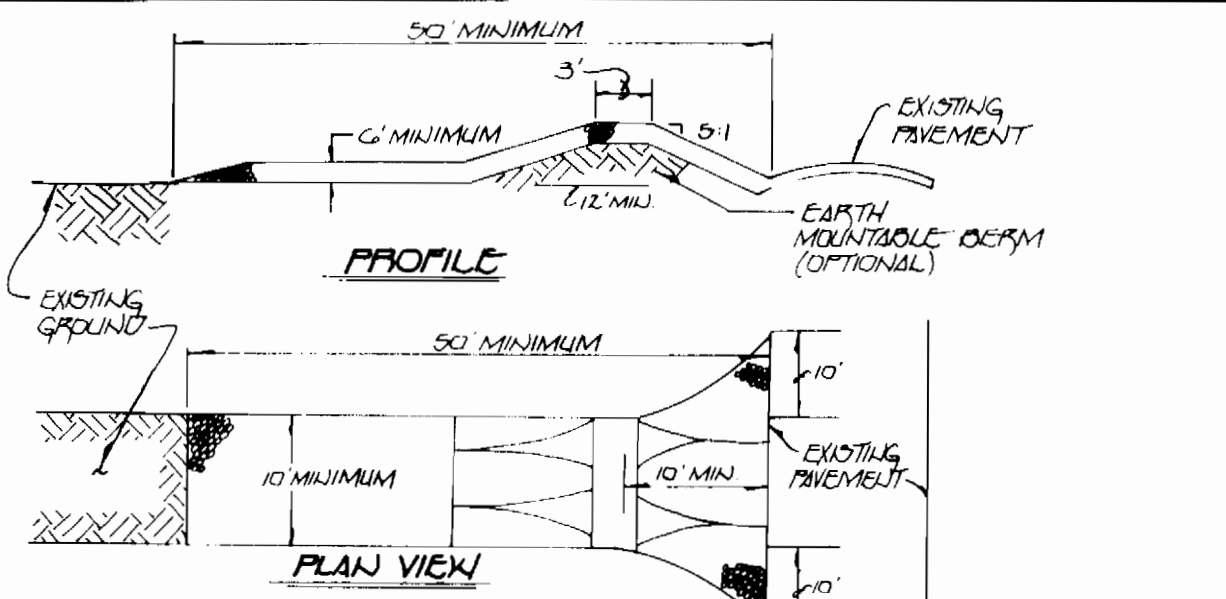
SCALE: AS SHOWN

SHEET 2

Fisher, Collins & Carter, Inc.

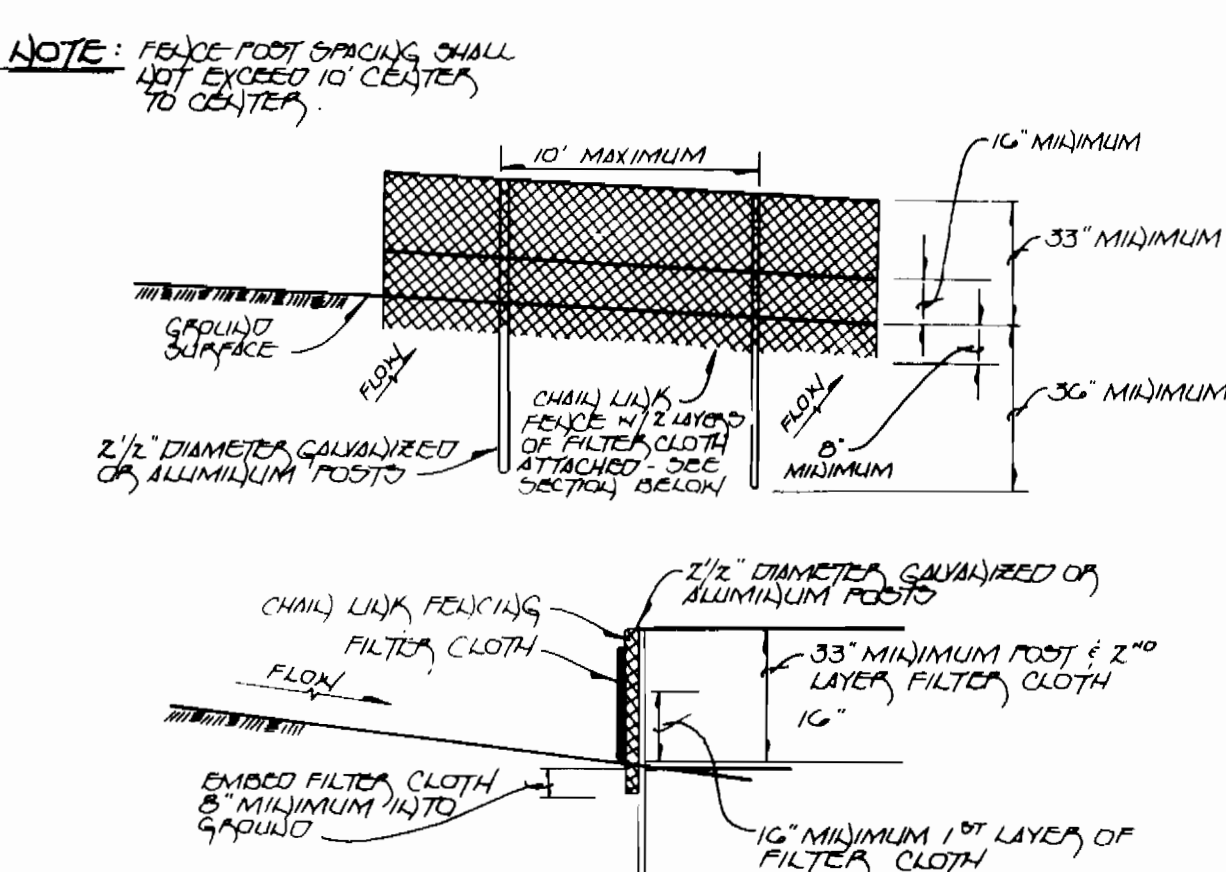
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL OFFICE: 10275 BALTIMORE NATIONAL PIKE, ELLICOTT CITY, MARYLAND 21042 (410) 461-2850

Waverly WUPs
WS/3
3457



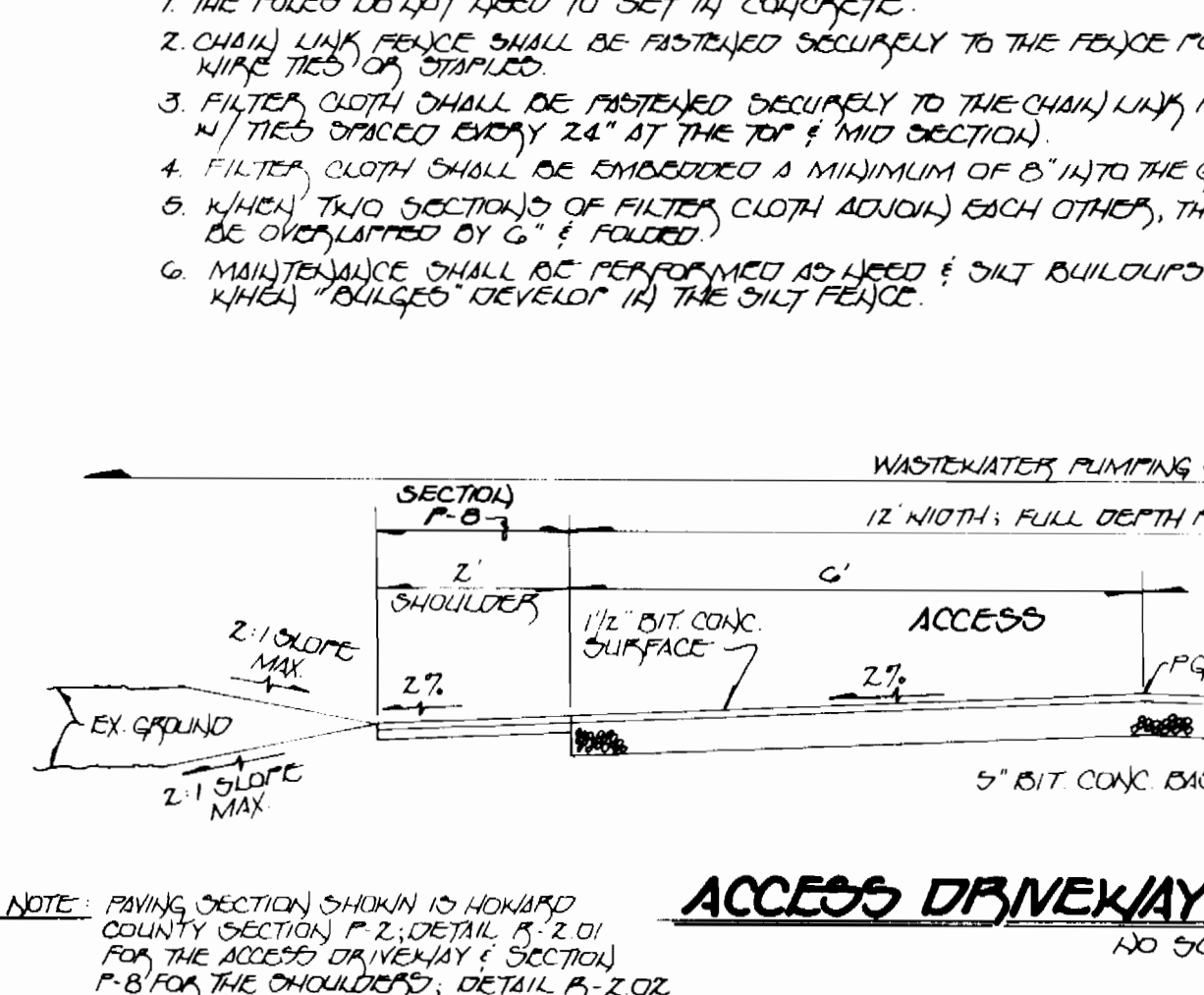
STABILIZED CONSTRUCTION ENTRANCE

- CONSTRUCTION SPECIFICATIONS**
1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
 2. LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET.
 3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
 4. WIDTH - TEN (10) FEET MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
 5. FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACEMENT OF STONE. FILTER WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
 6. SURFACE WATER - ALL SURFACE WATER FLOWING OR OVERHELD TOWARD CONSTRUCTION ENTRANCES SHALL BE FIRED ACROSS THE ENTRANCE. IF FLOWING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES SHALL BE PERMITTED.
 7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRIPPING OR FLOoding OF SEDIMENT INTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE, AS CONDITIONS DEMAND. BERM OR CLEARING OF ANY MEASURED USED TO TRAP SEDIMENT ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED OUT PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
 8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE INTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE CONDUCTED IN AN AREA SEPARATE FROM STONE. CHAINS OR INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
 9. PERIODIC INSPECTION & MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.



SUPER SILT FENCE

- CONSTRUCTION SPECIFICATIONS**
1. THE FENCE DO NOT SET IN CONCRETE.
 2. CHAIN LINK FENCING SHALL BE INSTALLED SECURELY TO THE FENCE POSTS WITH WIRE TIES (2) STAPLED.
 3. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH 1/2" DIA. STAPLED STAPLES AT THE TOP & 1" DIA. SECTION.
 4. FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 6" INTO THE GROUND.
 5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN, EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" & FOLDED.
 6. MAINTENANCE SHALL BE PERFORMED AS NEEDED & SILT BUILDUPS REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.



2.0. STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION:
Vegetative stabilization is the use of plants to stabilize soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to absorb infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas, and restoring visible habitat and aesthetic resources.

CONSTRUCTION SPECIFICATIONS:
This practice shall be used on disturbed areas as specified in the plan sheets. It shall be used on highly erodible or critically eroding areas. The specifications are divided into Temporary Control, Erosion Control, and Permanent Control. The specifications for Temporary Control shall be used on areas where the vegetation is expected to be replaced by permanent stabilization. The specifications for Erosion Control shall be used on areas where the vegetation is expected to be permanent. The specifications for Permanent Control shall be used on areas where the vegetation is expected to be permanent.

Site Preparation:
1. Erosion control and sediment control structures shall be installed prior to any site preparation.
2. Erosion control structures shall be installed prior to any site preparation.
3. Erosion control structures shall be installed prior to any site preparation.

2.1.0. STANDARDS & SPECIFICATIONS FOR TOPSOIL

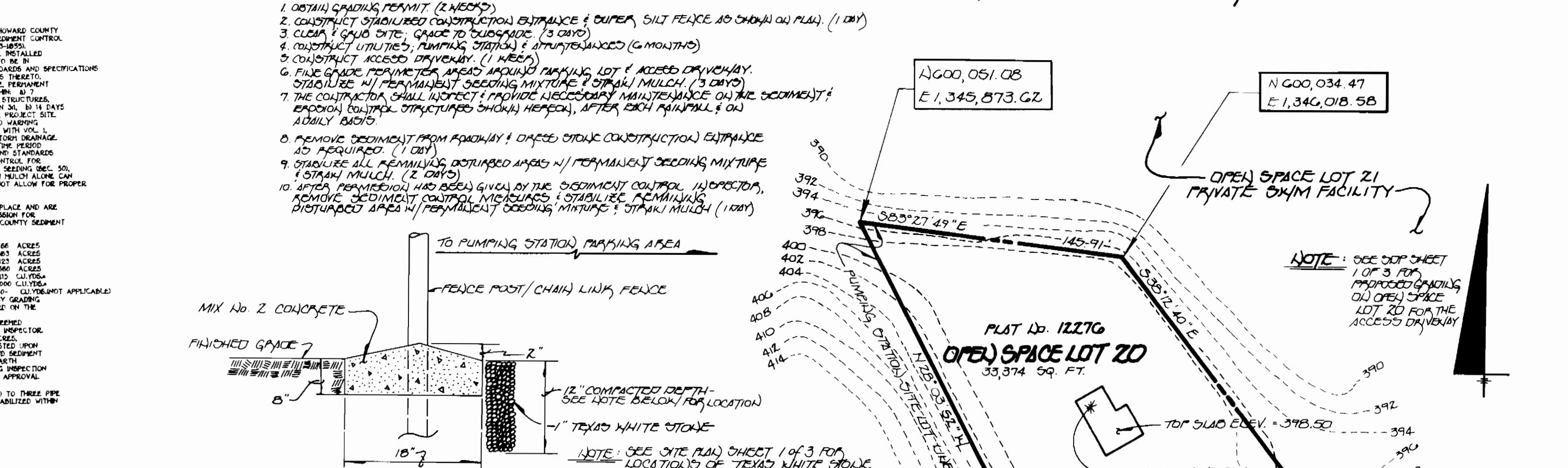
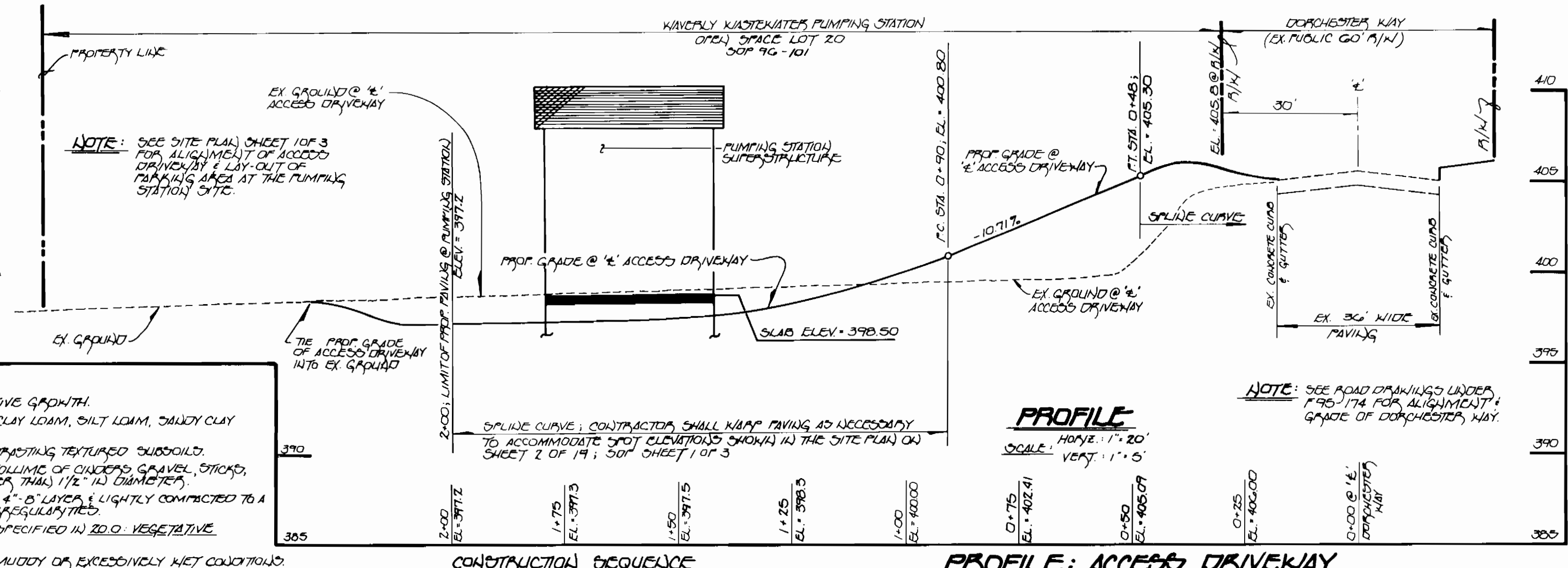
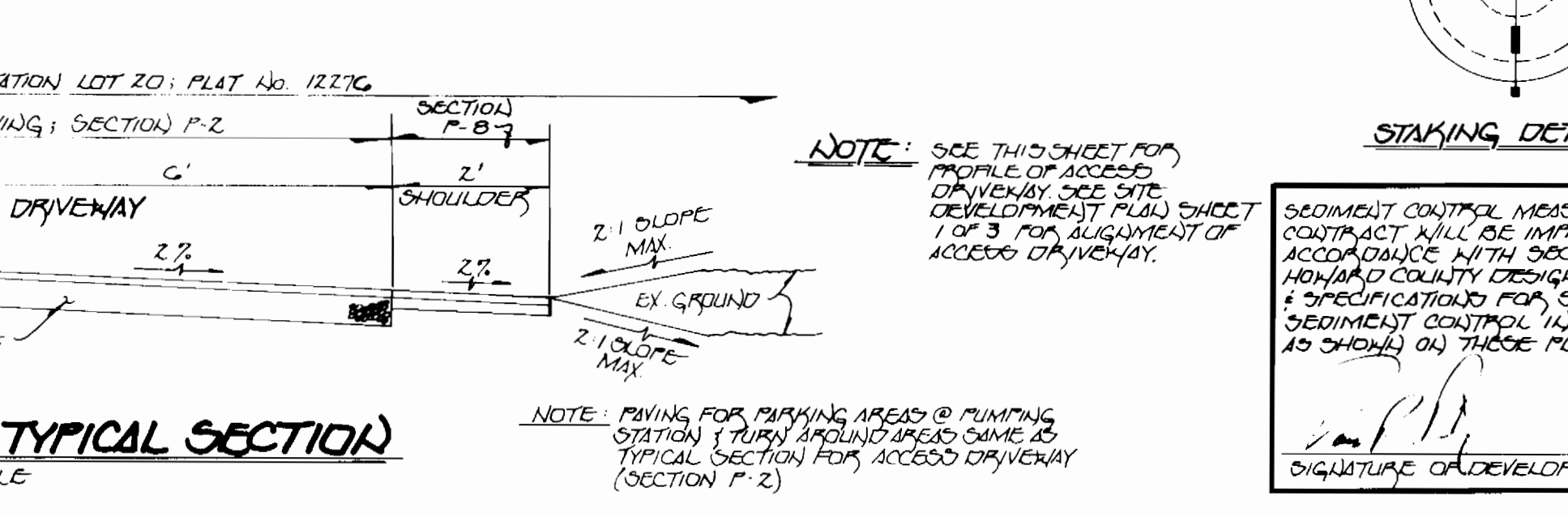
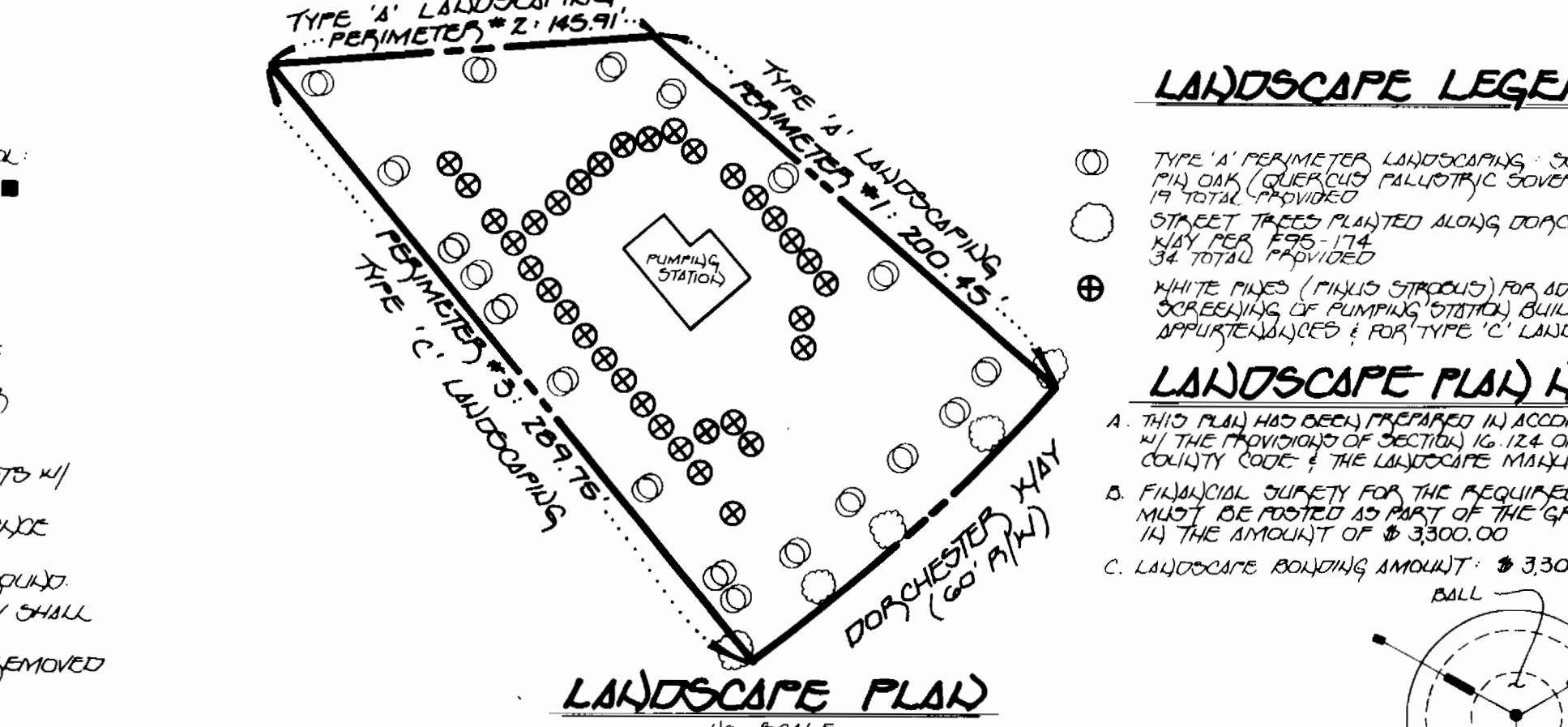
DEFINITION: PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

SPECIFICATIONS:
1. TOPSOIL SHALL BE A LOAM, SILTY LOAM, CLAY LOAM, SILTY CLAY LOAM, OR LOAMY SAND.
2. TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS.
3. TOPSOIL SHALL CONTAIN LESS THAN 5% BY VOLUME OF ROCKS, STONES, ROOTS, TRASH OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
4. APPLICATION:
A. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4"-6" LAYER & LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4".
B. PLACE TOPSOIL IN ATLEAST FOUR LAYERS AS SPECIFIED IN 2.0.0. VEGETATIVE STABILIZATION.
C. TOPSOIL SHALL NOT BE PLACED DURING FRESH, MUDDY OR EXCESSIVELY WET CONDITIONS.

SEDIMENT CONTROL NOTES:

1. A NUMBER OF SEDIMENT CONTROL STRUCTURES SHALL BE INSTALLED AT THE ADVISORY COUNTY DEPARTMENT OF PUBLIC WORKS, ENGINEERING AND DESIGN DIVISION TO BE INSTALLED AT THE ADVISORY COUNTY DEPARTMENT OF PUBLIC WORKS, ENGINEERING AND DESIGN DIVISION.
2. ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, ENGINEERING AND DESIGN DIVISION STANDARDS AND SPECIFICATIONS FOR VEGETATION AND STRUCTURAL PRACTICES.
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7. ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, ENGINEERING AND DESIGN DIVISION STANDARDS AND SPECIFICATIONS FOR VEGETATION AND STRUCTURAL PRACTICES.
8. ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, ENGINEERING AND DESIGN DIVISION STANDARDS AND SPECIFICATIONS FOR VEGETATION AND STRUCTURAL PRACTICES.
9. ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, ENGINEERING AND DESIGN DIVISION STANDARDS AND SPECIFICATIONS FOR VEGETATION AND STRUCTURAL PRACTICES.
10. ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, ENGINEERING AND DESIGN DIVISION STANDARDS AND SPECIFICATIONS FOR VEGETATION AND STRUCTURAL PRACTICES.

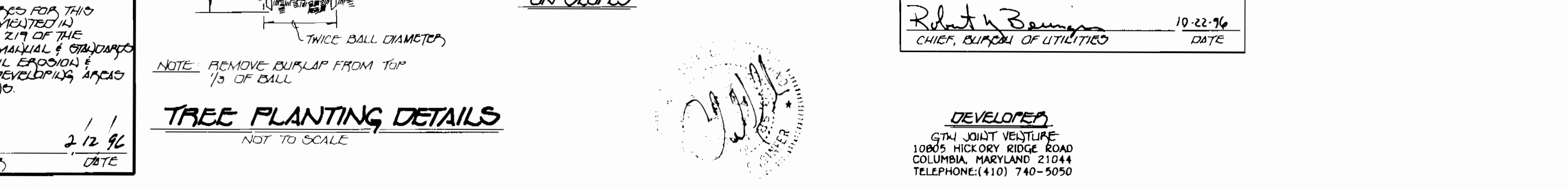
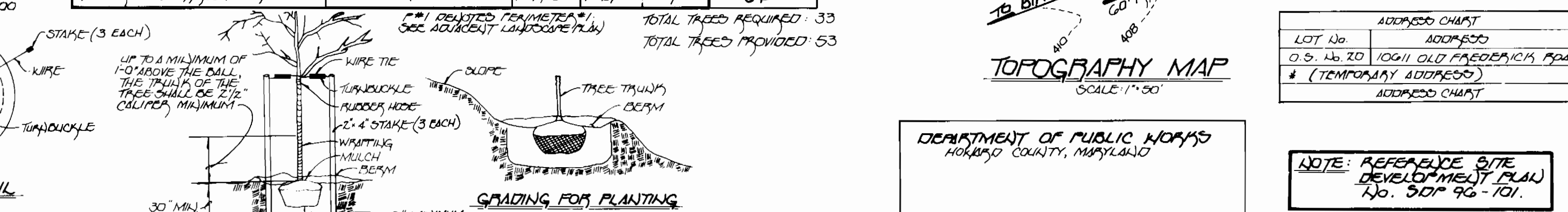


SCHEDULE 'A'

PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO PAVEMENT	ADJACENT TO PERIMETER	TOTALS
LANDSCAPE TYPE	TYPE 'A'	TYPE 'B'	
LENGTH FEET OF PERIMETER	150 LF	100 LF	
CREDIT FOR EXISTING VEGETATION	NOT APPLICABLE	NOT APPLICABLE	
CREDIT FOR HALL FENCE ON BEAM	NOT APPLICABLE	NOT APPLICABLE	
NUMBER OF PLANTS REQUIRED	3	15	15
NUMBER OF PLANTS PROVIDED	4	19	19
NUMBER OF BERRIES REQUIRED	4	10	10
NUMBER OF BERRIES PROVIDED	4	34	34

TOTAL TREES REQUIRED: 33
TOTAL TREES PROVIDED: 53



Fisher, Collins & Carter, Inc.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK
10275 BALTICWAY, NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 461-2855

ENGINEER'S CERTIFICATE
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.

DATE: 1/22/96
SIGNATURE OF ENGINEER: [Signature]

DEVELOPER'S CERTIFICATE
I/WE 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 THE CONTROL OF SEDIMENT AND EROSION BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

DATE: 1/22/96
SIGNATURE OF DEVELOPER: [Signature]

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

[Signature]
DATE: 1/22/96

DEPARTMENT OF PLANNING & ZONING
DIRECTOR, JOSEPH W. HINES, JR.
DATE: 1/22/96

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH
DATE: 1/22/96

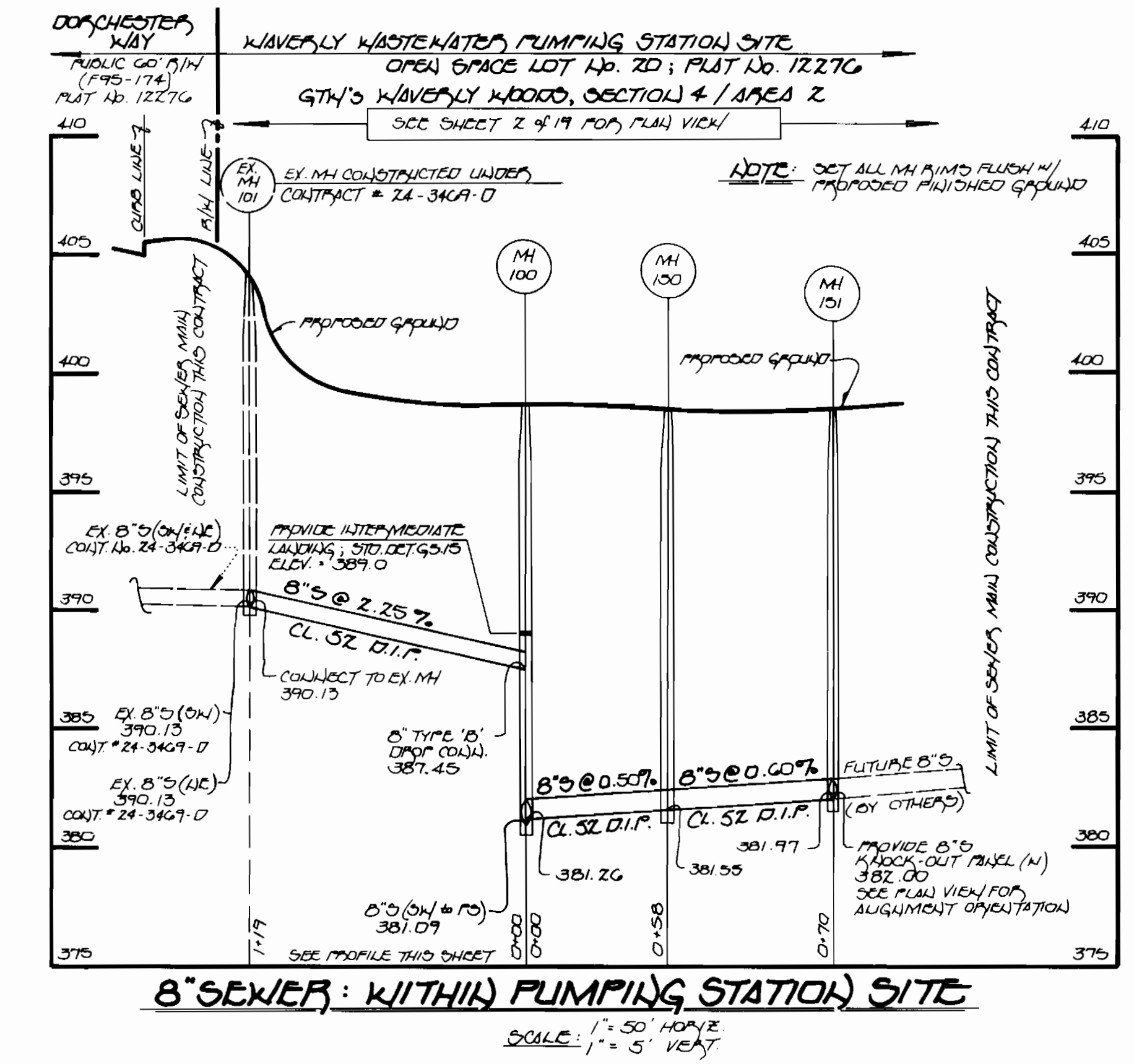
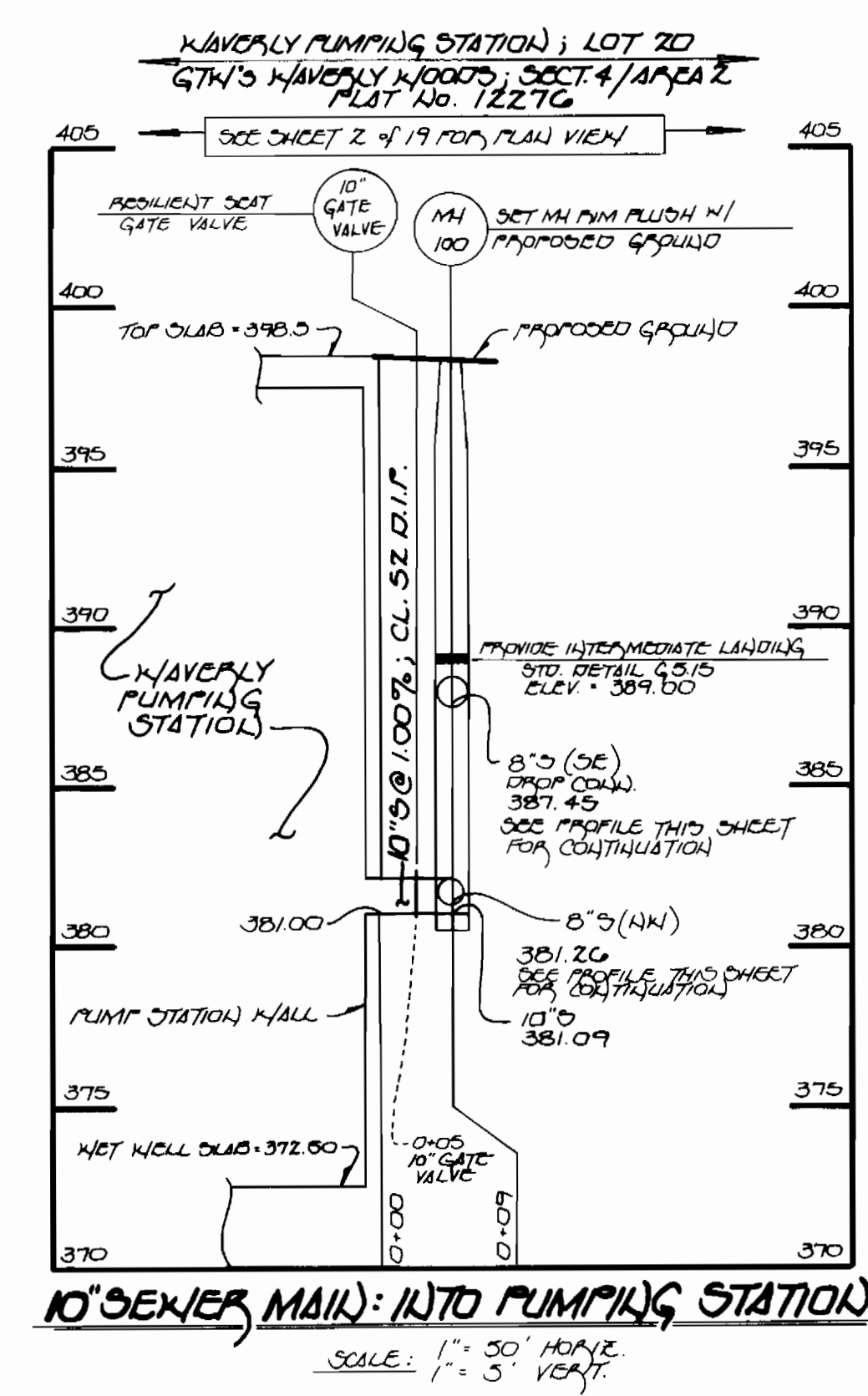
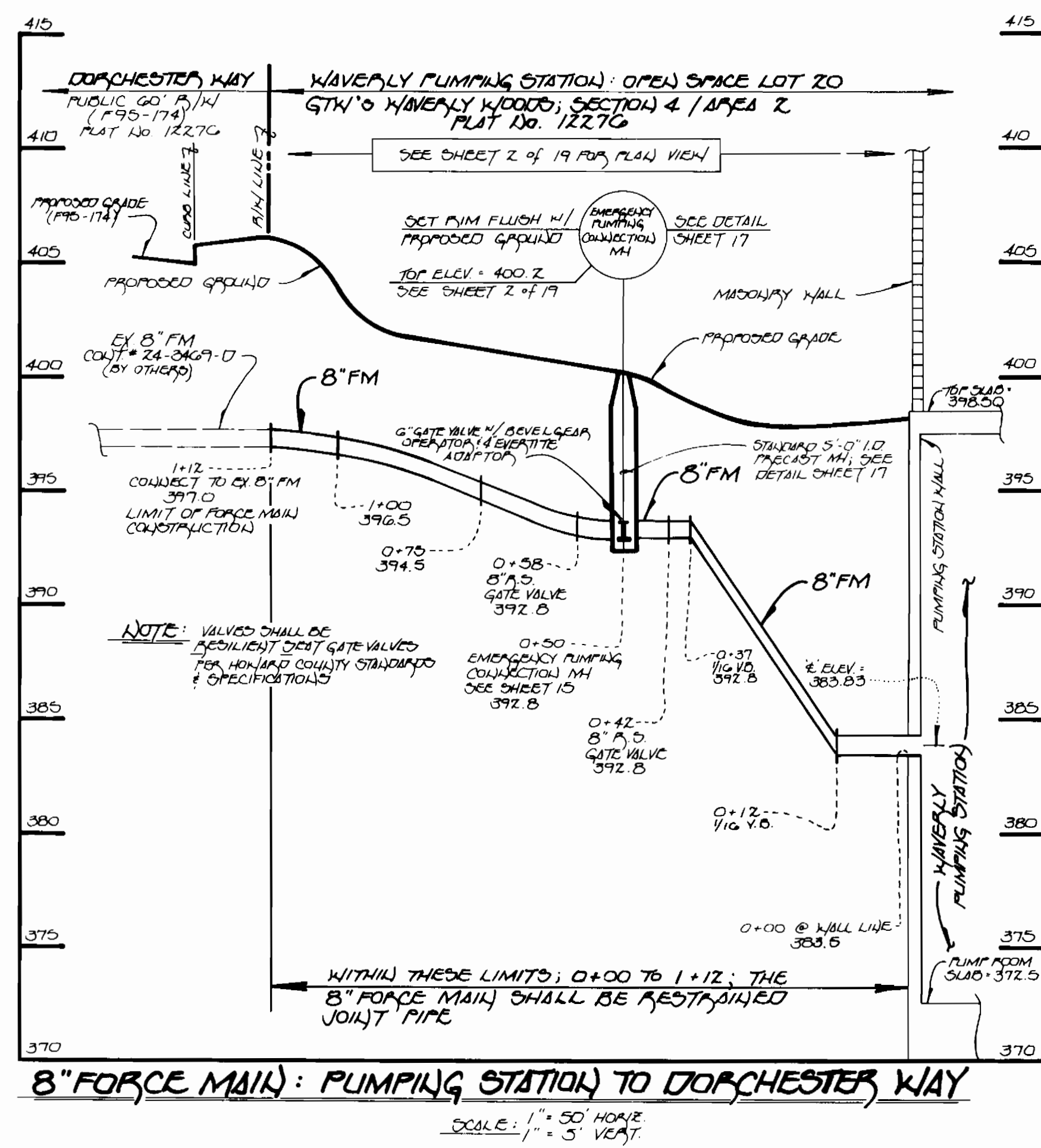
SITE DEVELOPMENT PLAN, LANDSCAPE PLAN & NOTED MISC. NOTES & DETAILS

WAVERLY
WASTEWATER PUMPING STATION
CONTRACT NO. 24-3457-0
OPEN SPACE LOT NO. 20
TAX MAP 16 PARCEL 21
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN
SHEET 3

PROPERTY/SUBDIVISION: GTH'S WAVERLY WOODS
SECTION/AREA: 4/2
PARCEL/LOT NO.: 21 / 20
PLAT NO./F.L. BLOCK NO. ZONE: 1227G 6 R-20
TAX/ZONE: 16
ELEC. DIST.: 2 ND
CENSUS TRACT: C063
WATER CODE: H05
SEWER CODE: 5993000

3457 WS/4 Waverly WWPS



PROFILES: 8" & 10" SEWER MAINS & 8" FORCE MAIN

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert W. Beaman
CHIEF, BUREAU OF UTILITIES
DATE: 10-22-96

NOTE: REFERENCE SITE DEVELOPMENT PLAN No. 50P 96-101.

OWNER AND DEVELOPER
GTW JOINT VENTURE
10805 HICKORY RIDGE ROAD
COLUMBIA, MARYLAND 21044
TELEPHONE: (410) 740-5050



Fisher, Collins & Carter, Inc.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK
10272 Baltimore National Pike
Ellicott City, Maryland 21042
(410) 481-2855

ENGINEER'S CERTIFICATE
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
DATE: 1/23/96

DEVELOPER'S CERTIFICATE
I/WE 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 THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT; I ALSO AUTHORIZE PERIODIC ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

[Signature]
SIGNATURE OF DEVELOPER
DATE: 2/12/96

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

[Signature]
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE
DATE: 1/31/96

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

[Signature]
HOWARD SOIL CONSERVATION DISTRICT
DATE: 1/31/96

DEPARTMENT OF PLANNING AND ZONING

DIRECTOR, JOSEPH RUTTER, JR. DATE: _____

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH
[Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 10/21/96

ADDRESS CHART			
LOT No.	ADDRESS		
0.0 LOT 20	10811 OLD PEBBLECREEK ROAD #		
* TEMPORARY ADDRESS			
ADDRESS CHART			

PROPERTY/SUBDIVISION	SECTION/AREA	PARCEL/LOT No.
G.T.W.'S WAVERLY WOODS	4 / 2	21 / 20
PLAT No.	BLOCK No.	ZONE
1/27C	6	R-20
TAX/ZONE	ELEC. DIST.	CENSUS TRACT
16	2 ND	6063
WATER CODE	SEWER CODE	
H05	5993000	

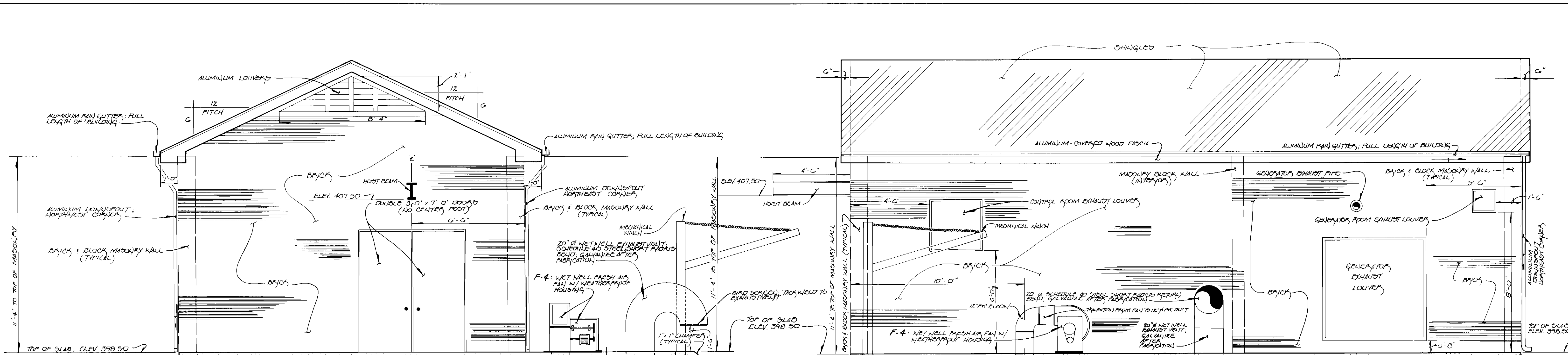
NOTE: REFERENCE SITE DEVELOPMENT PLAN No. 50P 96-101.

WAVERLY WASTEWATER PUMPING STATION
CONTRACT No. 24-3457-01
OPEN SPACE LOT No. 20
TAX MAP 16 PARCEL 21
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN

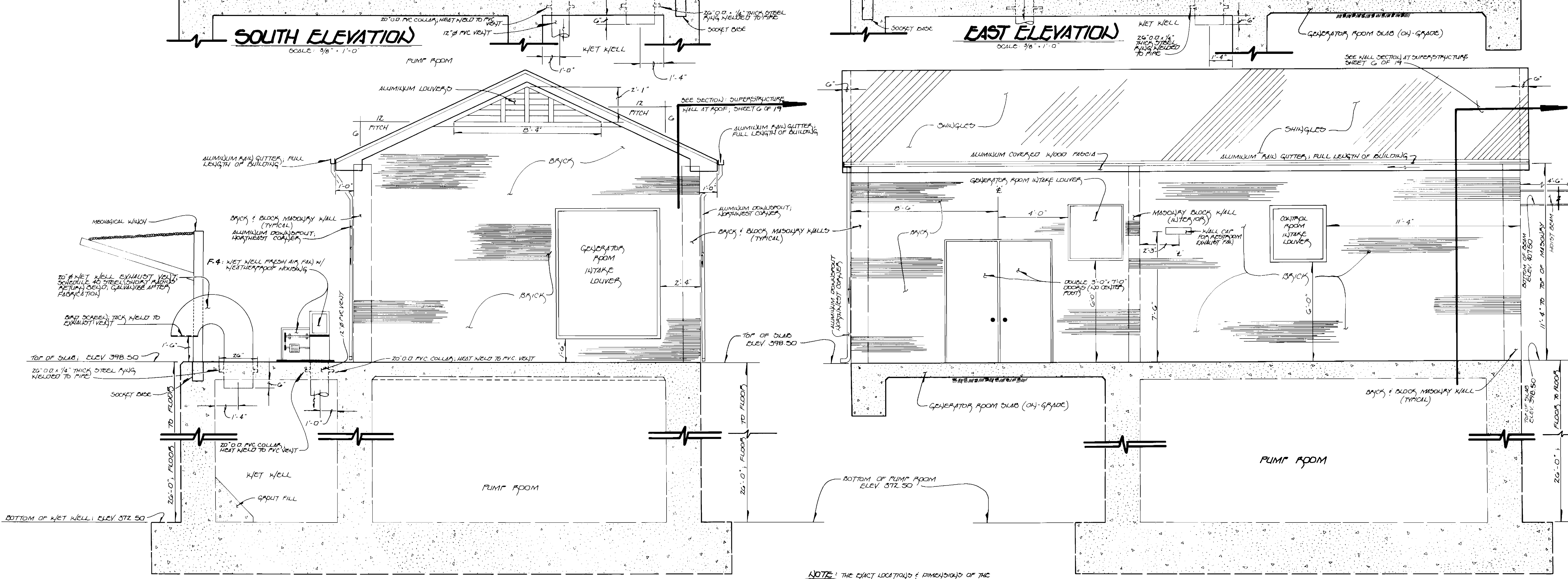
SHEET 4

3457 WWS/5 Waverly WWS



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

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



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

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

NOTE: SEE SHEET G OF 19 FOR LOUVER SCHEDULE

NOTE: FLOOR SLOPES NOT INDICATED. SEE STRUCTURAL SECTIONS (SHEET B) & MECHANICAL PLANS (SHEET 9) FOR FLOOR SLOPES OF PUMP ROOM, CONTROL ROOM & GENERATOR ROOM.

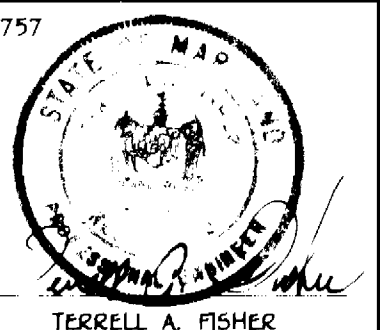
NOTE: THE EXACT LOCATIONS & DIMENSIONS OF THE LOUVERS IS SHOWN. THEY MAY REQUIRE SOME ADJUSTMENT IN THE FIELD TO MAINTAIN NECESSARY COORDINATION WITH THE PARTICULAR MODEL & STYLE OF EQUIPMENT SELECTED FOR INSTALLATION.

CONTRACT NO. 24-3457-D
WAVERLY WASTEWATER PUMPING STATION
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Robert W. Bauman
CHIEF, BUREAU OF UTILITIES
12-22-96
DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
Charles Dammann
CHIEF, DEVELOPMENT ENGINEERING DIVISION
10/1/96
DATE

Fisher, Collins & Carter, Inc.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK
10272 Baltimore National Pike
Ellicott City, Maryland 21042
(410) 461-2855



DES: M.J.M.
P.W.K.
DRWN: J.M.M.
CHK: P.W.K.
DATE: 8/7/96
BY: NO. REVISION DATE

ARCHITECTURAL PLANS
ELEVATIONS & DETAILS

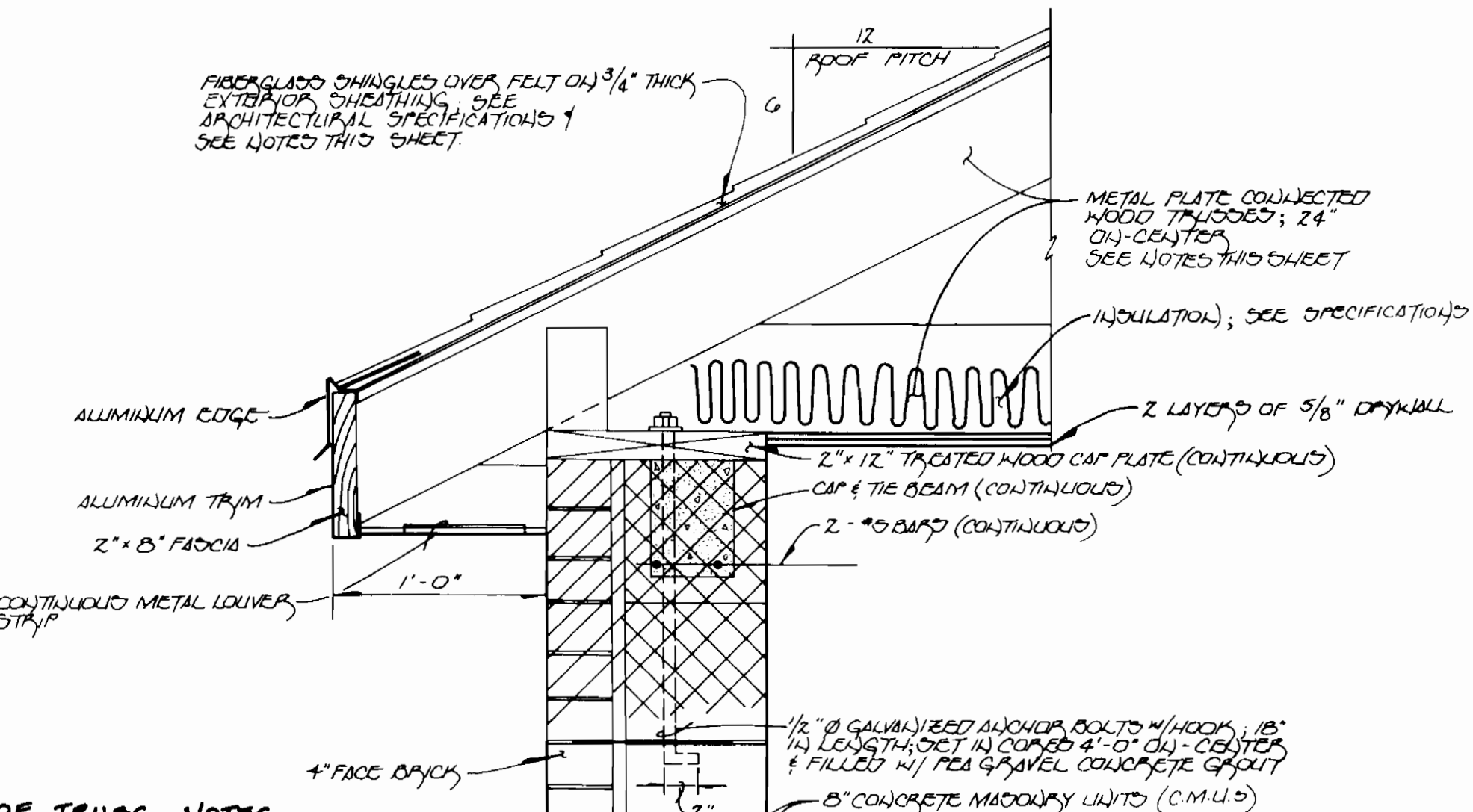
WAVERLY
WASTEWATER PUMPING STATION
CONTRACT NO. 24-3457-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 5 OF 19

3457 W5/6 Waverly WWPS

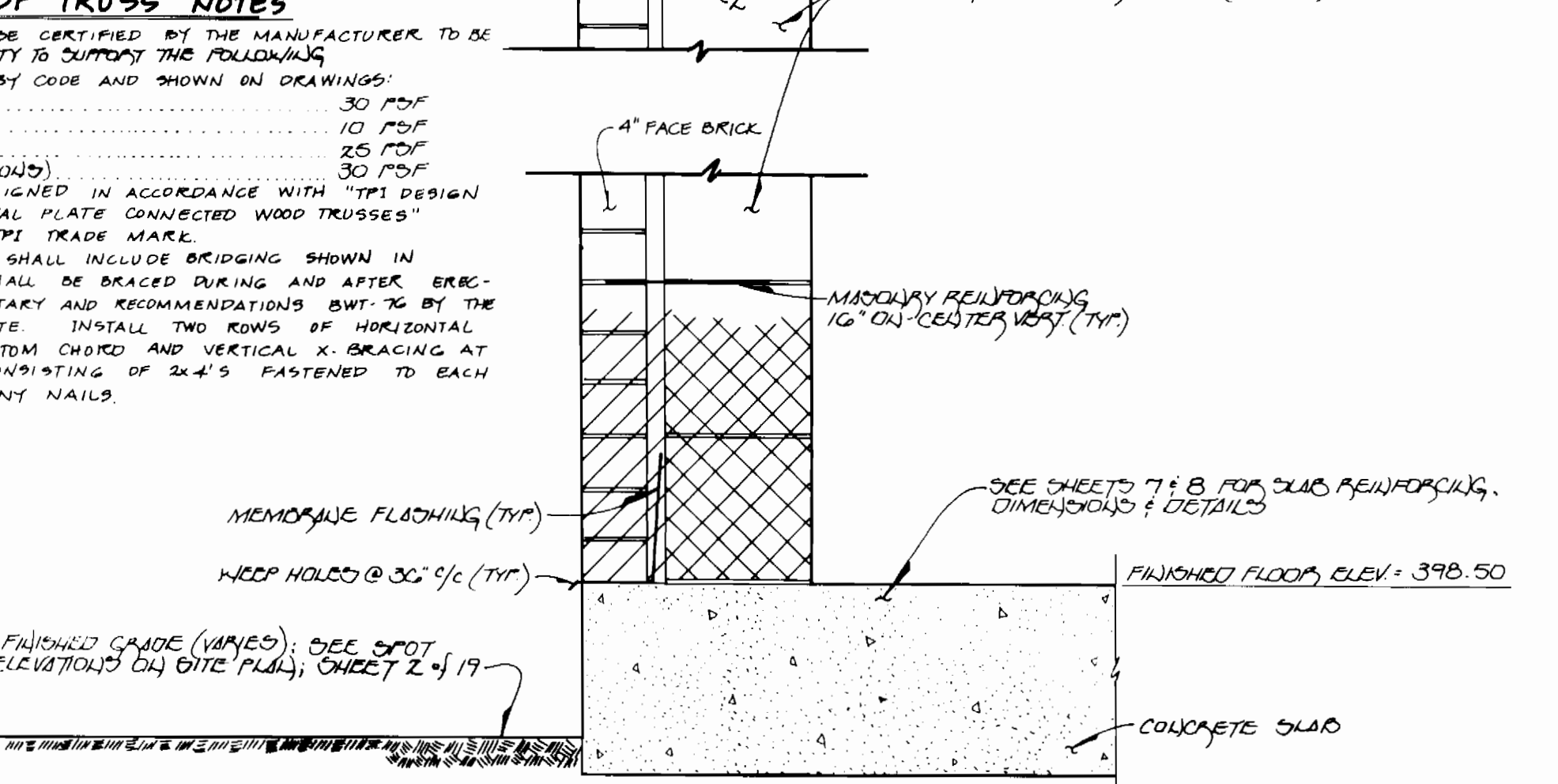
NOTE: SEE ARCHITECTURAL SPECIFICATIONS FOR REQUIREMENTS REGARDING ROOF CHANGING, FELT & SHEATHING; ALSO SEE NOTED THIS SHEET

NOTES: PLYWOOD SHEATHING
 A. PLYWOOD SHALL BE GRADED PER AMERICAN PLYWOOD ASSOCIATION STANDARDS
 B. ROOF SHEATHING SHALL BE COX, 3/4" THICK, PASTENED WITH 6d NAILS SPACED 6 INCHES ON CENTER AT PANEL EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS
 C. SPACE PANEL ENDS 1/16" AND PANEL EDGES 1/8"
 D. SEE SPECIFICATIONS

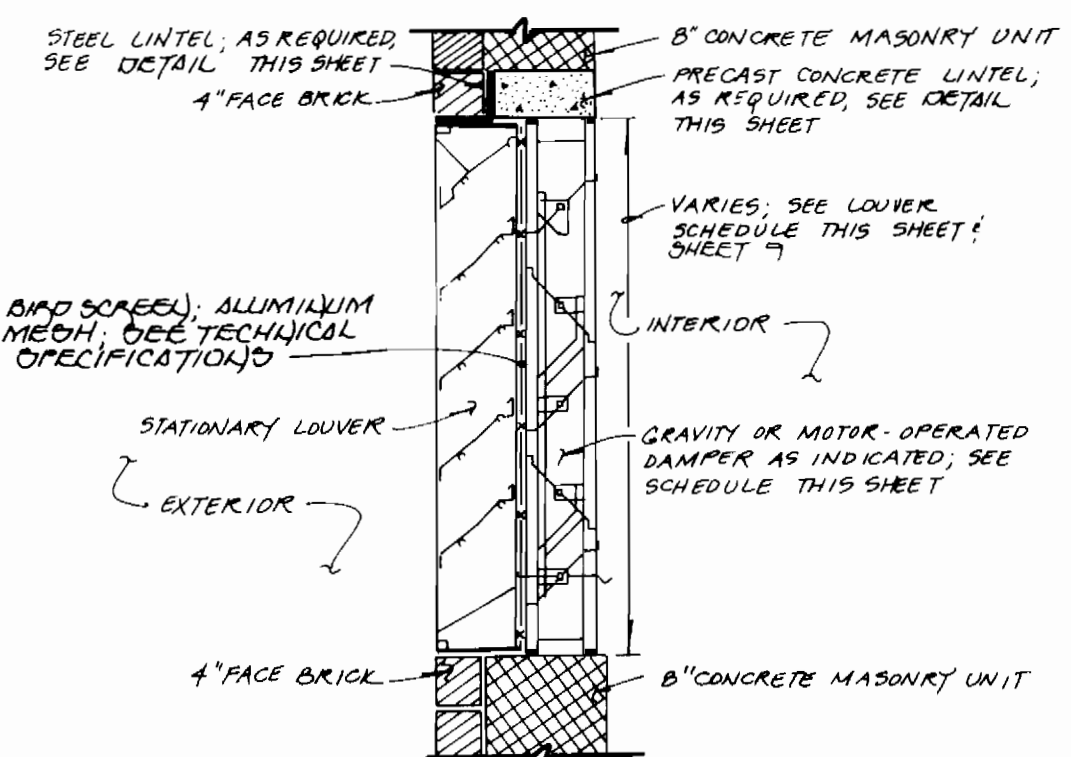


SECTION: SUPERSTRUCTURE WALL AT ROOF
NO SCALE

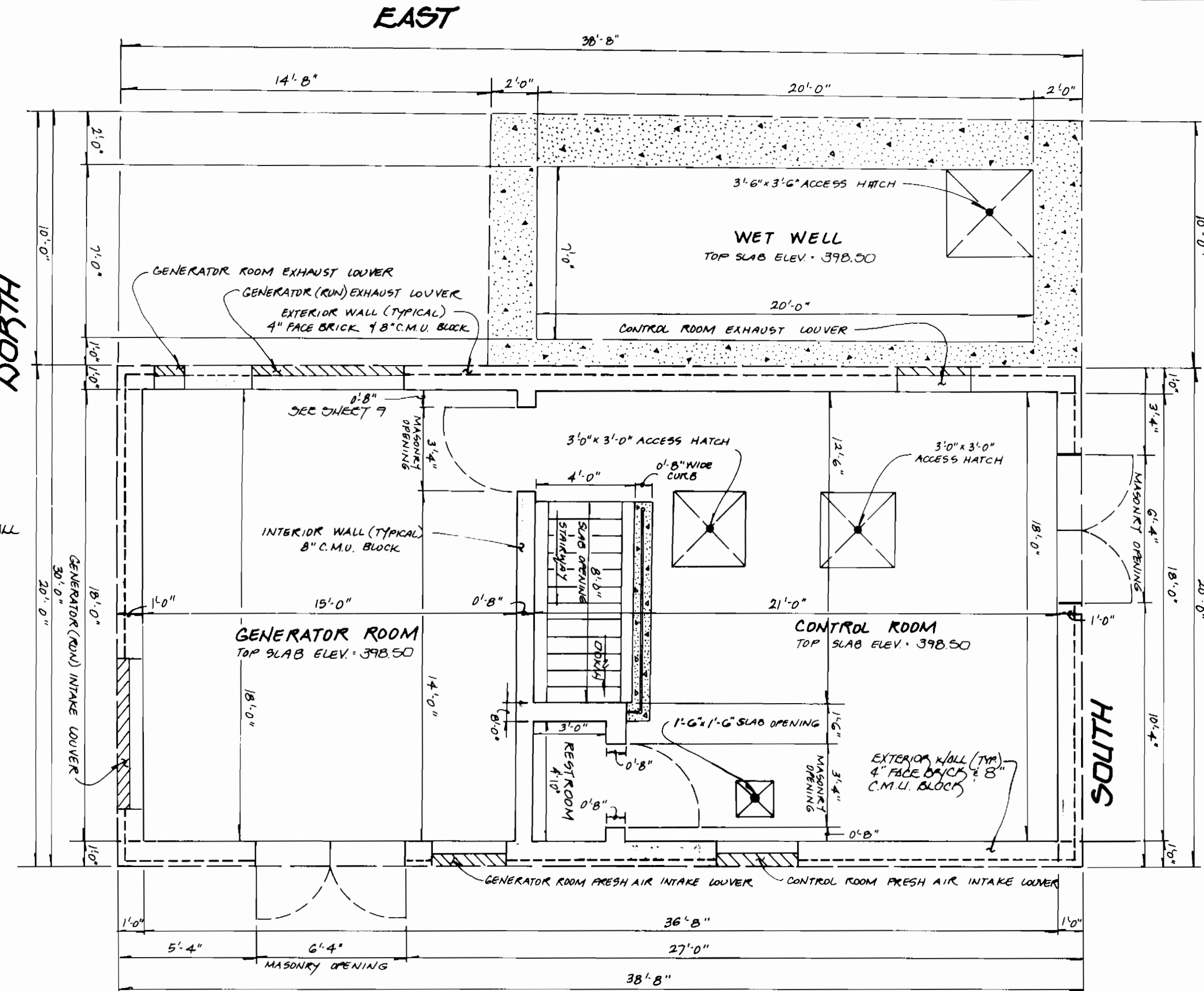
ROOF TRUSS NOTES
 A. ROOF TRUSSES SHALL BE CERTIFIED BY THE MANUFACTURER TO BE DESIGNED FOR THE CAPACITY TO SUPPORT THE FOLLOWING LOADS AS REQUIRED BY CODE AND SHOWN ON DRAWINGS:
 SNOW LOAD 30 PSF
 ROOF DEAD LOAD 10 PSF
 WIND LOAD 25 PSF
 LIVE LOAD (LD DEDUCTIONS) 30 PSF
 B. TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH "TPI DESIGN SPECIFICATIONS FOR METAL PLATE CONNECTED WOOD TRUSSES" AND SHALL BEAR THE TPI TRADE MARK.
 C. TRUSS SHOP DRAWINGS SHALL INCLUDE BRIDGING SHOWN IN SECTIONS. TRUSSES SHALL BE BRACED DURING AND AFTER ERECTION PER THE COMMENTARY AND RECOMMENDATIONS BUT NOT BY THE TRUSS MANUFACTURER. INSTALL TWO ROWS OF HORIZONTAL BRIDGING ON THE BOTTOM CHORD AND VERTICAL X-BRACING AT BOTH GABLE ENDS CONSISTING OF 2x4'S PASTENED TO EACH TRUSS WITH 2-12 PENNY NAILS.



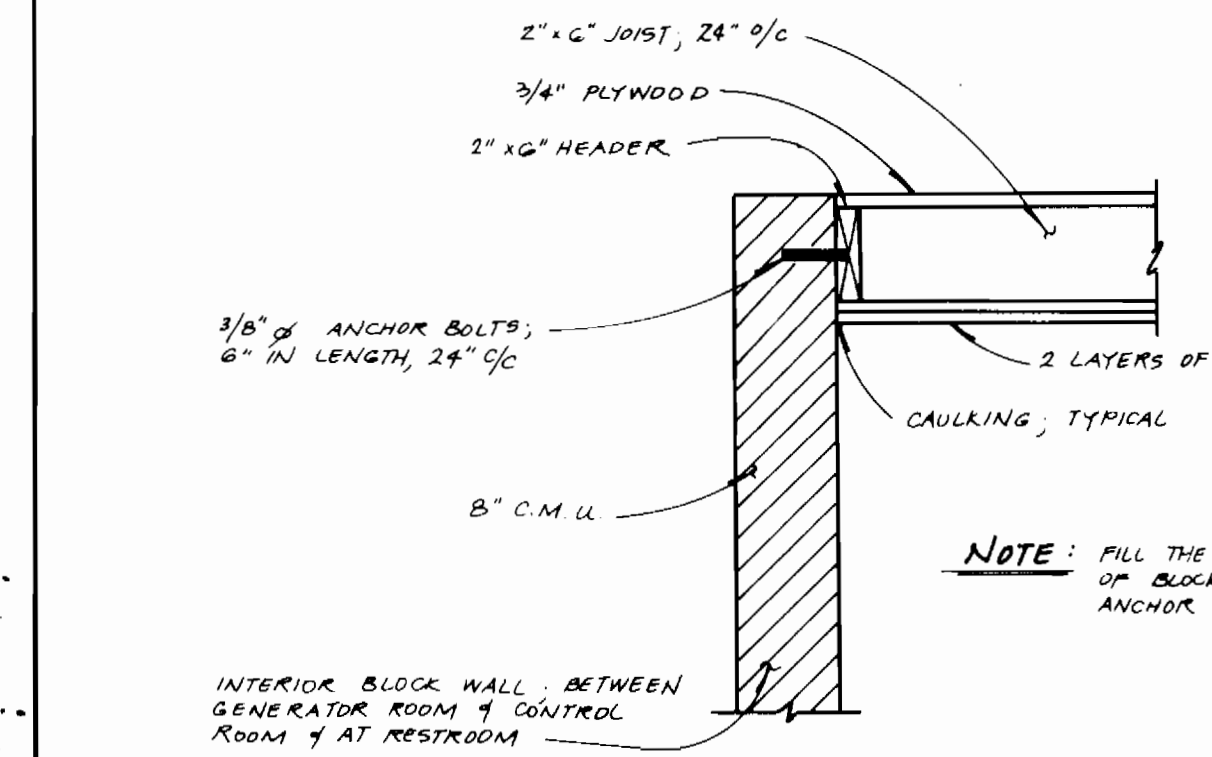
WALL SECTION AT SUPERSTRUCTURE
NO SCALE



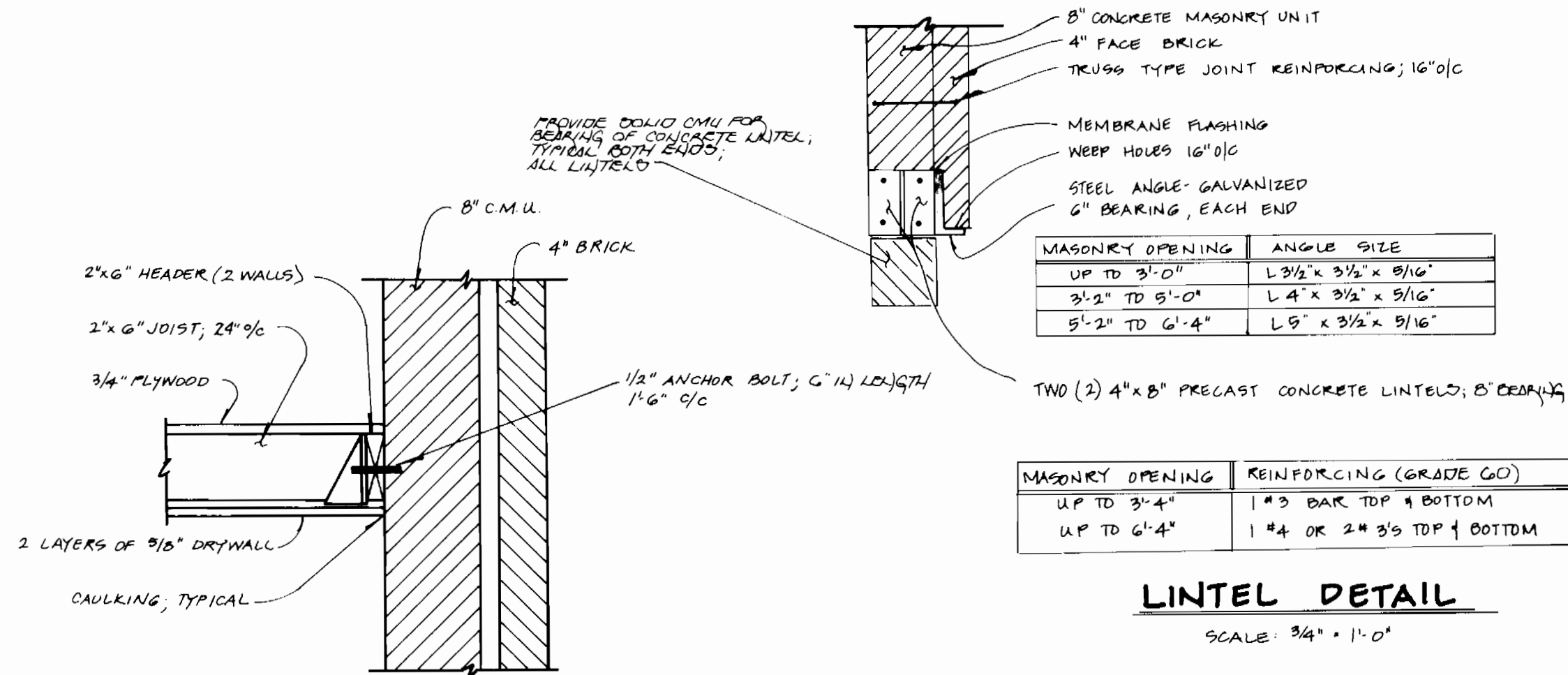
TYPICAL LOUVER/DAMPER DETAIL
NO SCALE



FLOOR PLAN AT ELEV. 398.50
SCALE: 1/4" = 1'-0"



DETAIL AT INTERIOR WALLS
NO SCALE



DETAIL AT EXTERIOR WALLS
NO SCALE

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

LOUVER SCHEDULE					
LOCATION	PURPOSE	DAMPER	SIZE #		REMARKS
			WIDTH	HEIGHT	
WEST WALL - CONTROL ROOM	FRESH AIR INTAKE	MOTOR OPERATED	3'-0"	3'-0"	404.50 W/ BIRD SCREEN, INTERLOCKED W/ FRESH AIR VENTILATOR
WEST WALL - RESTROOM	EXHAUST	ADJ	WALL ON ONLY	10' x 4' DUCT	406.00 W/ BIRD SCREEN, INTERLOCKED W/ RESTROOM LIGHTING SWITCH
WEST WALL - GENERATOR ROOM	FRESH AIR INTAKE	MOTOR OPERATED	3'-0"	3'-0"	404.50 W/ BIRD SCREEN, INTERLOCKED W/ WALL MOUNTED EXHAUSTER
EAST WALL - GENERATOR ROOM	FRESH AIR INTAKE	MOTOR OPERATED	6'-0"	7'-0"	400.00 W/ BIRD SCREEN, INTERLOCKED W/ GENERATOR (RUN)
EAST WALL - AT ROOF GABLE	VENTILATION	NONE	VARIES SEE SHT 5	2'-1"	412.50 W/ BIRD SCREEN
EAST WALL - GENERATOR ROOM	EXHAUST	GRAVITY	1'-3"	1'-3"	406.50 W/ BIRD SCREEN
EAST WALL - GENERATOR ROOM	GENERATOR (RUN) EXHAUST	GRAVITY	6'-0"	6'-0"	399.17 W/ BIRD SCREEN
EAST WALL - CONTROL ROOM	EXHAUST	MOTOR OPERATED	3'-0"	3'-0"	404.50 W/ BIRD SCREEN, INTERLOCKED W/ FRESH AIR VENTILATOR
SOUTH WALL - AT ROOF GABLE	VENTILATION	NONE	VARIES SEE SHT 5	2'-1"	412.50 W/ BIRD SCREEN

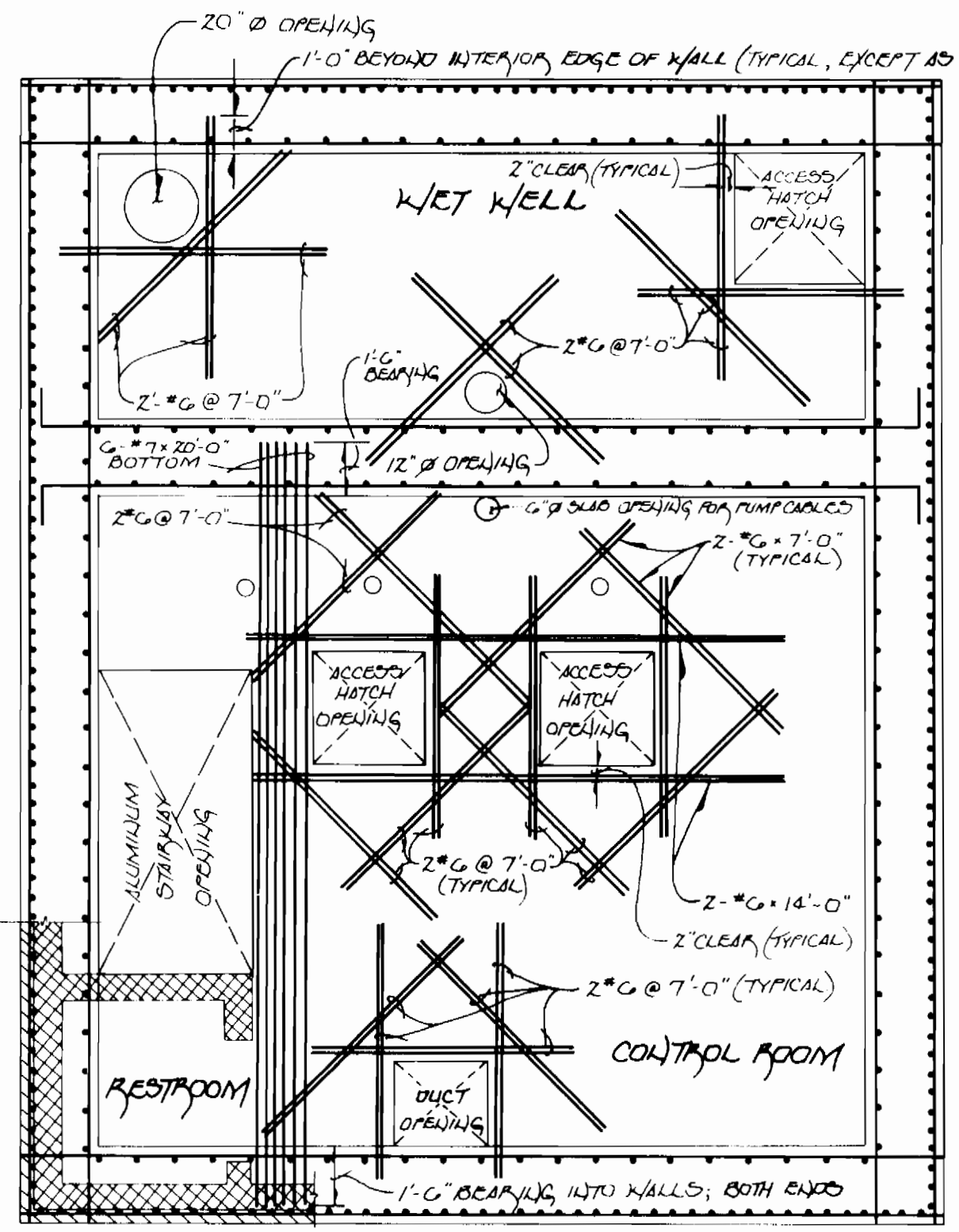
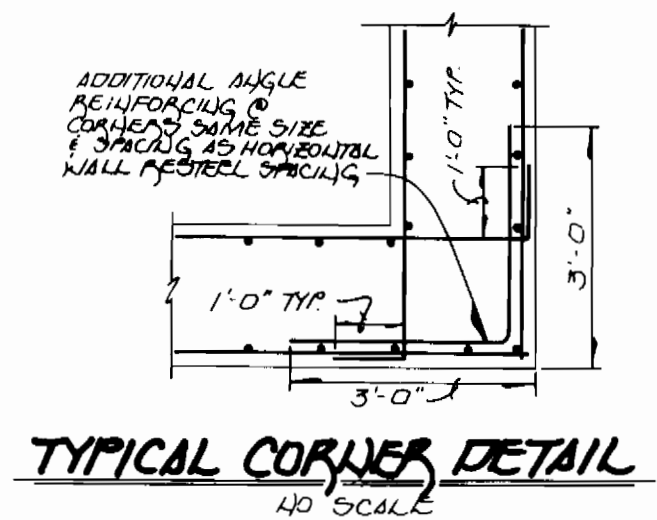
* THE EXACT LOCATION & DIMENSIONS OF THE LOUVERS & THE ASSOCIATED MASONRY OPENINGS MAY REQUIRE SOME ADJUSTMENT IN THE FIELD TO MAINTAIN COORDINATION WITH THE PARTICULAR MODEL & STYLE OF LOUVERS & EQUIPMENT SELECTED FOR INSTALLATION. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

• SEE NORTH & SOUTH ELEVATION WEND, SHEET 5

3457 WS/7 Waverly WWPS

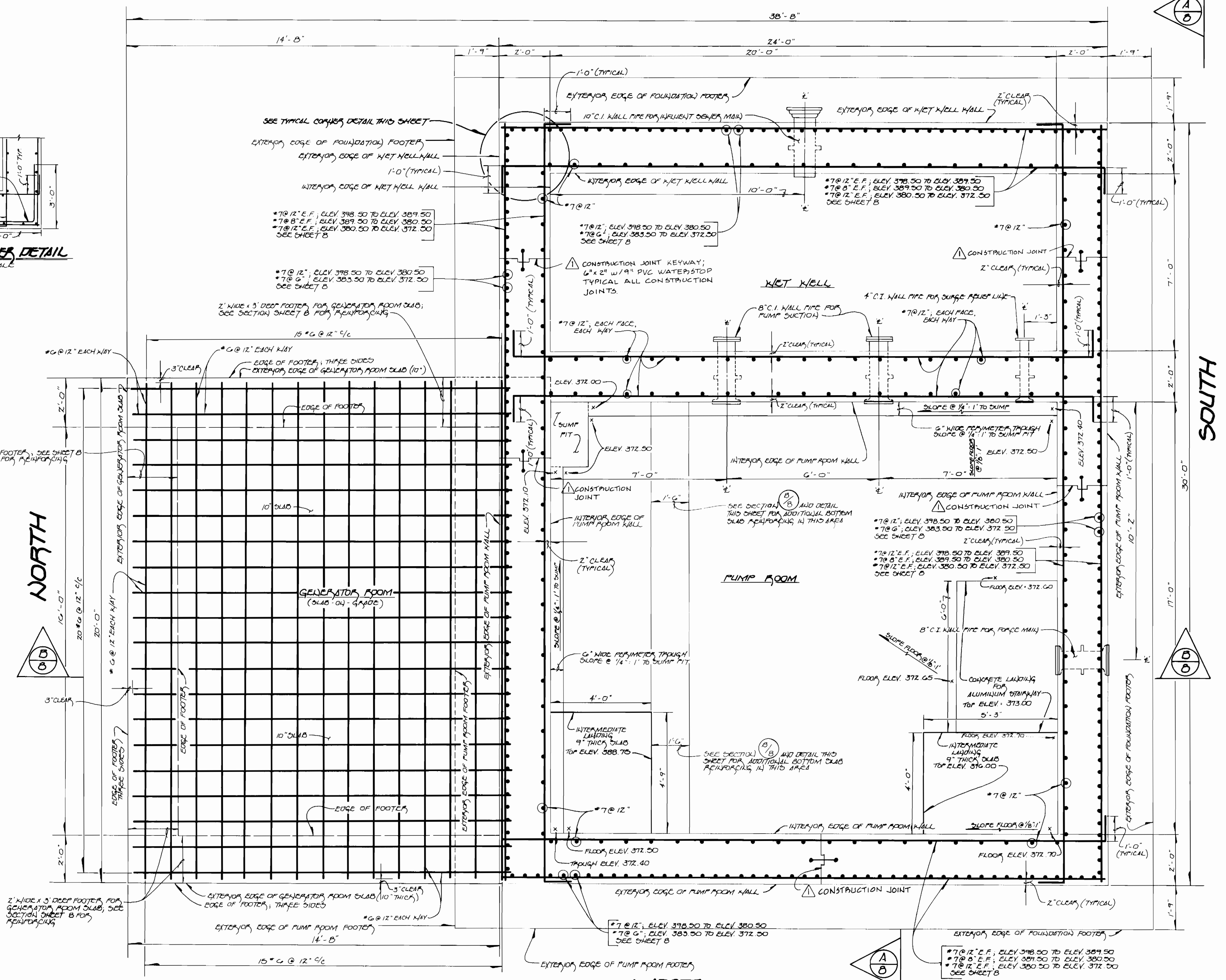
GENERAL STRUCTURAL NOTES

- ALL MATERIALS & METHODS OF ARCHITECTURAL & STRUCTURAL CONSTRUCTION FOR THIS PUMPING STATION SHALL CONFORM TO THE HOWARD COUNTY STANDARD SPECIFICATIONS & DETAILS FOR CONSTRUCTION VOLUME IV, ARTICLE C OF THE CONTRACT SPECIFICATIONS.
- DESIGN LIVE LOADS:**
 FLOOR - 50 P.S.F. FLOORS - 100 P.S.F. FLUID CONCENTRATED EQUIPMENT LOADS, GRAVITY PLUMBING & HATCHES - SEE CONTRACT SPECIFICATIONS;
 HORIZONTAL WIND LOAD - 20 P.S.F.
- FLOTATION:**
 THE ENTIRE SUB-STRUCTURE, COMPLETE IN PLACE & BACKFILLED, IS DESIGNED TO OPERATE WITHOUT DAMAGE TO HYDROSTATIC PRESSURE DURING CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT THE POSSIBILITY OF FLOTATION PRIOR TO THE COMPLETION OF BACKFILLING OPERATIONS.
- CONCRETE:**
 A. ALL CONCRETE WORK, BOTH PLAIN & REINFORCED, SHALL BE IN ACCORDANCE WITH THE LATEST A.C.I. SPECIFICATIONS & THE CONTRACT SPECIFICATIONS.
 B. CONCRETE SHALL DEVELOP A COMPRESSIVE STRENGTH OF 3500 PSI IN 28 DAYS.
 C. ALL EXPOSED SURFACES SHALL BE COMPACTED, 1"-1 1/2" UNLESS OTHERWISE NOTED.
 D. ALL OPENINGS THROUGH WALLS SHALL BE WATER-TIGHT.
 E. THE MECHANICAL & ELECTRICAL PLANS MAY INDICATE THE LOCATION OF OPENINGS NOT SHOWN ON THE STRUCTURAL PLANS.
 F. ALL EXTERIOR CONCRETE WALLS BELOW FINISHED GRADE SHALL BE WATERPROOFED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.
- EARTHWORK:**
 A. ALL EXCAVATION FOR STRUCTURES SHALL BE KEPT FREE OF WATER UNTIL BACKFILL IS PROPERLY TAMPED IN PLACE TO FINISHED GRADE.
 B. NO BACKFILL SHALL BE PLACED UNTIL THE CONCRETE HAS REACHED ITS REQUIRED 28-DAY COMPRESSIVE STRENGTH.
 C. BACKFILL SHALL BE PLACED IN 6" LAYERS & COMPACTED TO 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH A.S.H.T.O. DESIGNATION T-180 METHOD C.
 D. CONTRACTOR SHALL INTERMITTENTLY PROTECT ALL WALLS DURING BACKFILL OPERATIONS.
- REINFORCING STEEL:**
 A. REINFORCING STEEL SHALL CONFORM TO A.S.T.M. DESIGNATION A-60, GRADE 60.
 B. REINFORCING STEEL SHALL BE FREE FROM RUST, OIL & OTHER NON-METALLIC CONTAMINANTS THAT ADVERSELY AFFECT BONDING CAPACITY.
 C. ALL ENDINGS OF BARS, PLACEMENT TOLERANCES & BAR SPACINGS SHALL CONFORM TO A.C.I. 318-77.
- STEEL WORK:**
 A. ALL STRUCTURAL STEEL SHALL BE A.S.T.M. A-36.
 B. ALL BOLTS (EXCEPT NON-HEADED ANCHOR BOLTS) SHALL BE A.S.T.M. A-325 HIGH STRENGTH BOLTS.
 C. ALL NON-HEADED ANCHOR BOLTS SHALL BE A.S.T.M. A-307.
 D. ALL STRUCTURAL ALUMINUM SHALL BE IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.
 E. ALL ALLOY BOLTS IN CONTACT WITH ALUMINUM SHALL BE STAINLESS STEEL.
 F. WELDED CONNECTIONS SHALL CONFORM TO THE LATEST AMERICAN WELDING SOCIETY (AWS) CODE.
- MISCELLANEOUS:**
 ALL ALUMINUM SURFACES & ALL METALS WHICH WOULD BE IN CONTACT WITH DISSIMILAR METALS, BRICK MASONRY OR CONCRETE SHALL BE PAINTED WITH THE PRODUCTS SPECIFIED IN THE CONTRACT SPECIFICATIONS.



NOTE: SEE SHEET 12 FOR ADDITIONAL REINFORCING AROUND WALL OPENINGS

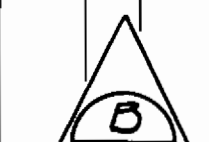
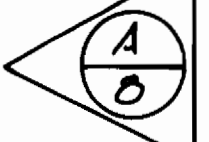
SLAB & WALL REINFORCING
SCALE: 1/2\"/>



WEST

EAST

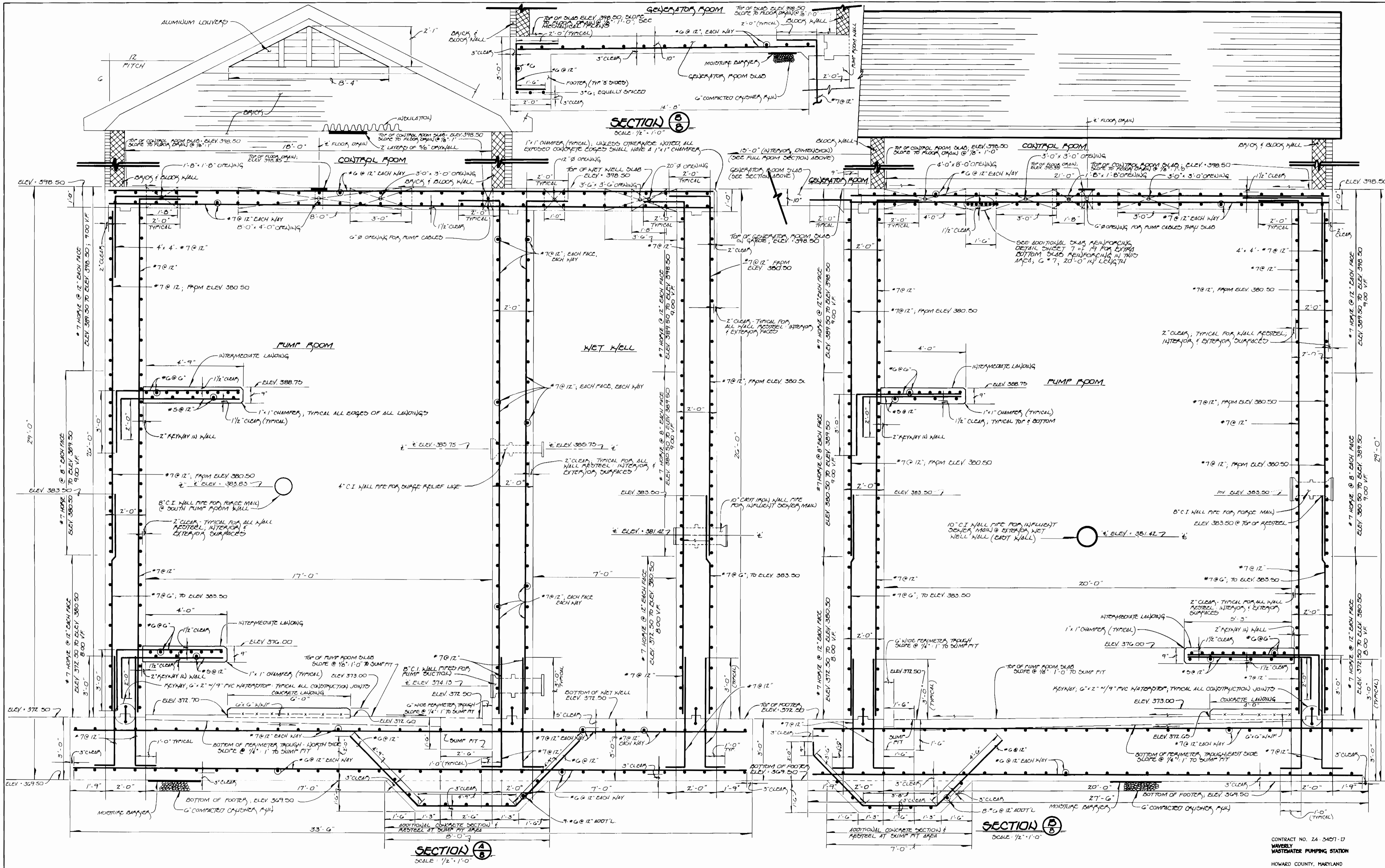
SOUTH



Waverly WWPS

WS/B

3457



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Robert A. Berman
CHIEF, BUREAU OF UTILITIES

10.22.96
DATE

Chief, Development Engineering Division

Fisher, Collins & Carter, Inc.
CIVIL ENGINEERING CONSULTANTS &
LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK
10272 Baltimore National Pike
Ellicott City, Maryland 21042
(410) 481-2855

9757

TERRELL A. FISHER

DES: M.J.M.
PREP: [Symbol] AS-BUILT CONDITIONS
DRAWN: J.H.M.
CHK: P.W.K.
DATE: 8/7/96

BY NO. REVISION DATE

STRUCTURAL SECTIONS

60' SCALE MAP NO. 16 BLOCK NO. 6

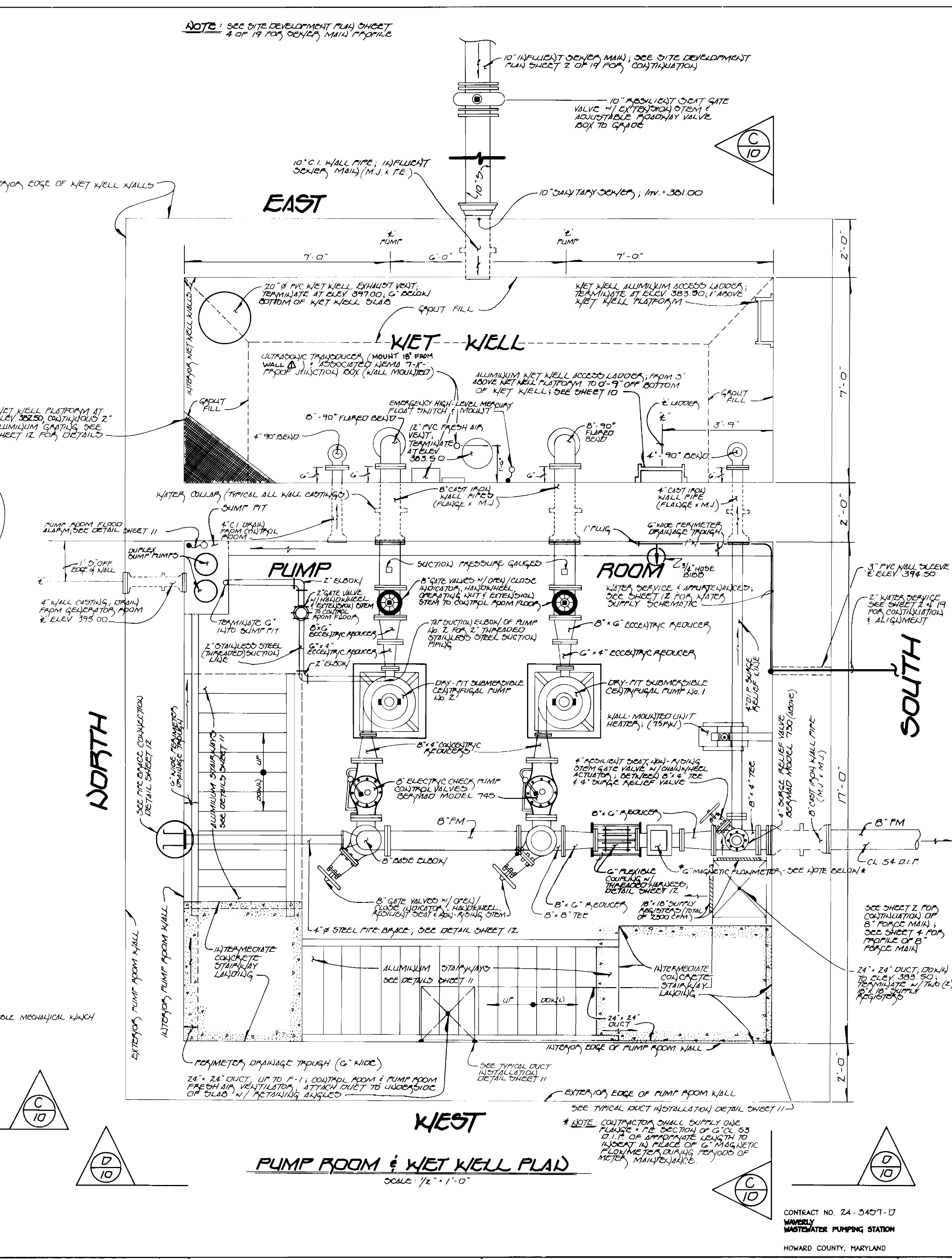
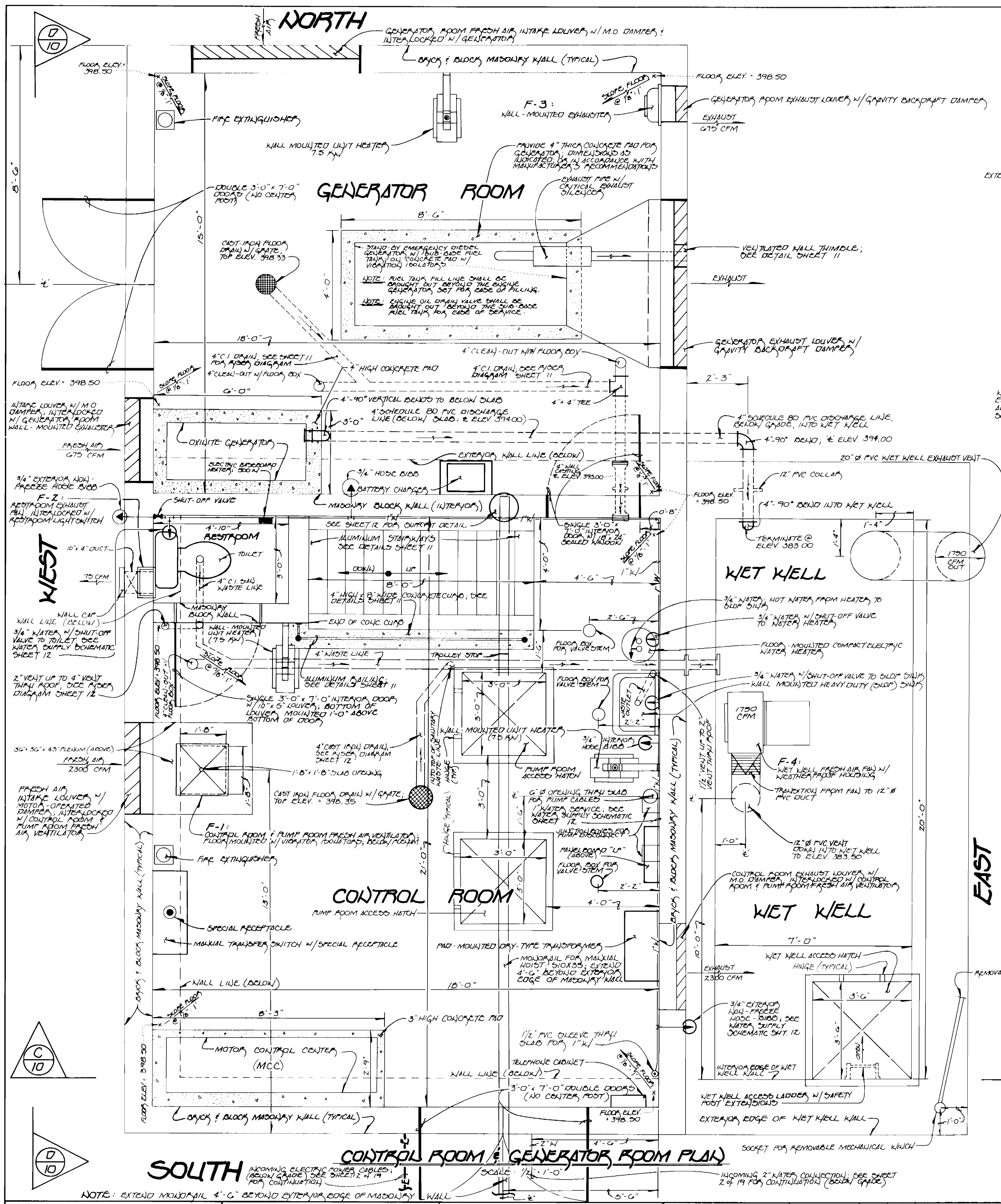
WAVERLY
WASTEWATER PUMPING STATION
CONTRACT NO. 24-3457-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

CONTRACT NO. 24-3457-D
WAVERLY
WASTEWATER PUMPING STATION
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 8 OF 19

3457 WS/9 WABERLY WWPS



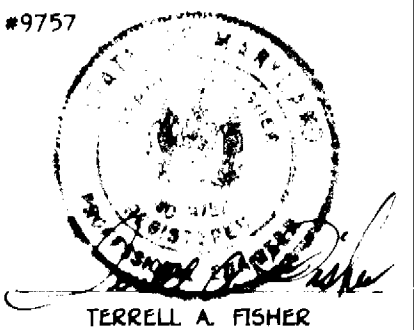
CONTROL ROOM & GENERATOR ROOM PLAN
SCALE: 1/4" = 1'-0"

PUMP ROOM & WET WELL PLAN
SCALE: 1/4" = 1'-0"

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Robert Benjamin
CHIEF, BUREAU OF UTILITIES
10-22-96

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
Chief Development Engineering Division
DATE

Fisher, Collins & Carter, Inc.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK
10272 Baltimore National Pike
Ellicott City, Maryland 21042
(410) 461-2865



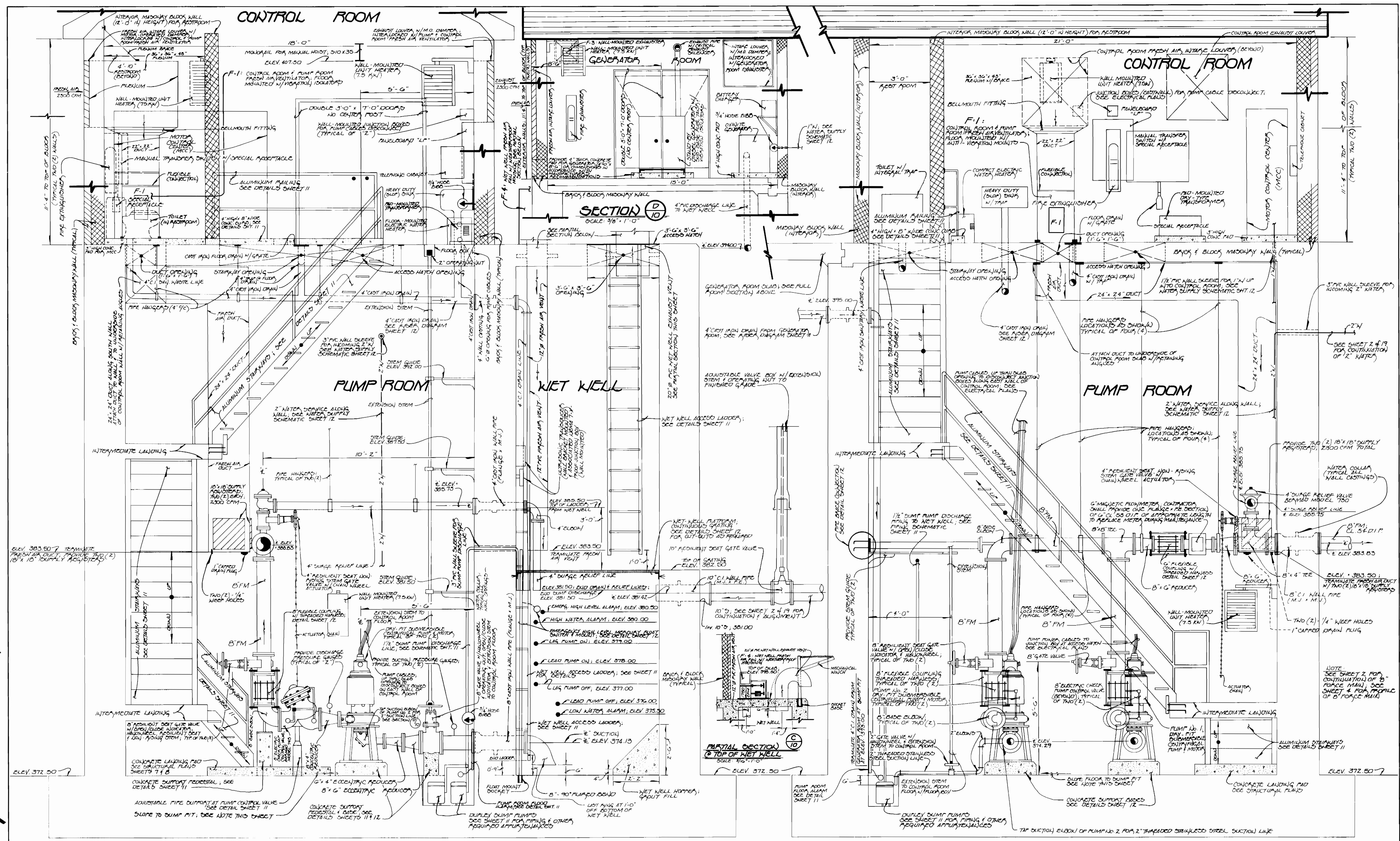
DES: M.J.M. REJ
AS-BUILT CONDITIONS
DRWN: J.M.M.
CHK: P.W.K.
DATE: 8/7/96

MECHANICAL PLANS

WABERLY WASTEWATER PUMPING STATION
CONTRACT NO. 24-3457-17
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 9 OF 19

3457 WS/10 Waverly WWTP



SECTION C-10
SCALE: 1/2" = 1'-0"

SECTION D-10
SCALE: 1/2" = 1'-0"

NOTE: SEE STRUCTURAL PLANS FOR SLOPE OF PUMP ROOM FLOOR, SHEET 7: 8-10.

CONTRACT NO. 24-3457-D
WAVERLY WASTEWATER PUMPING STATION
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert B. ...
CHIEF, BUREAU OF UTILITIES
DATE: 10-22-96

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

John ...
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 10/21/96

Fisher, Collins & Carter, Inc.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK
10272 Baltimore National Pike
Ellicott City, Maryland 21042
(410) 481-2855

#9757

TERRILL A. FISHER
TERRELL A. FISHER

DES: M.J.M.	DATE: 8/7/96	BY: NO.	REVISION:
DRWN: J.M.M.			
CHK: P.W.K.			

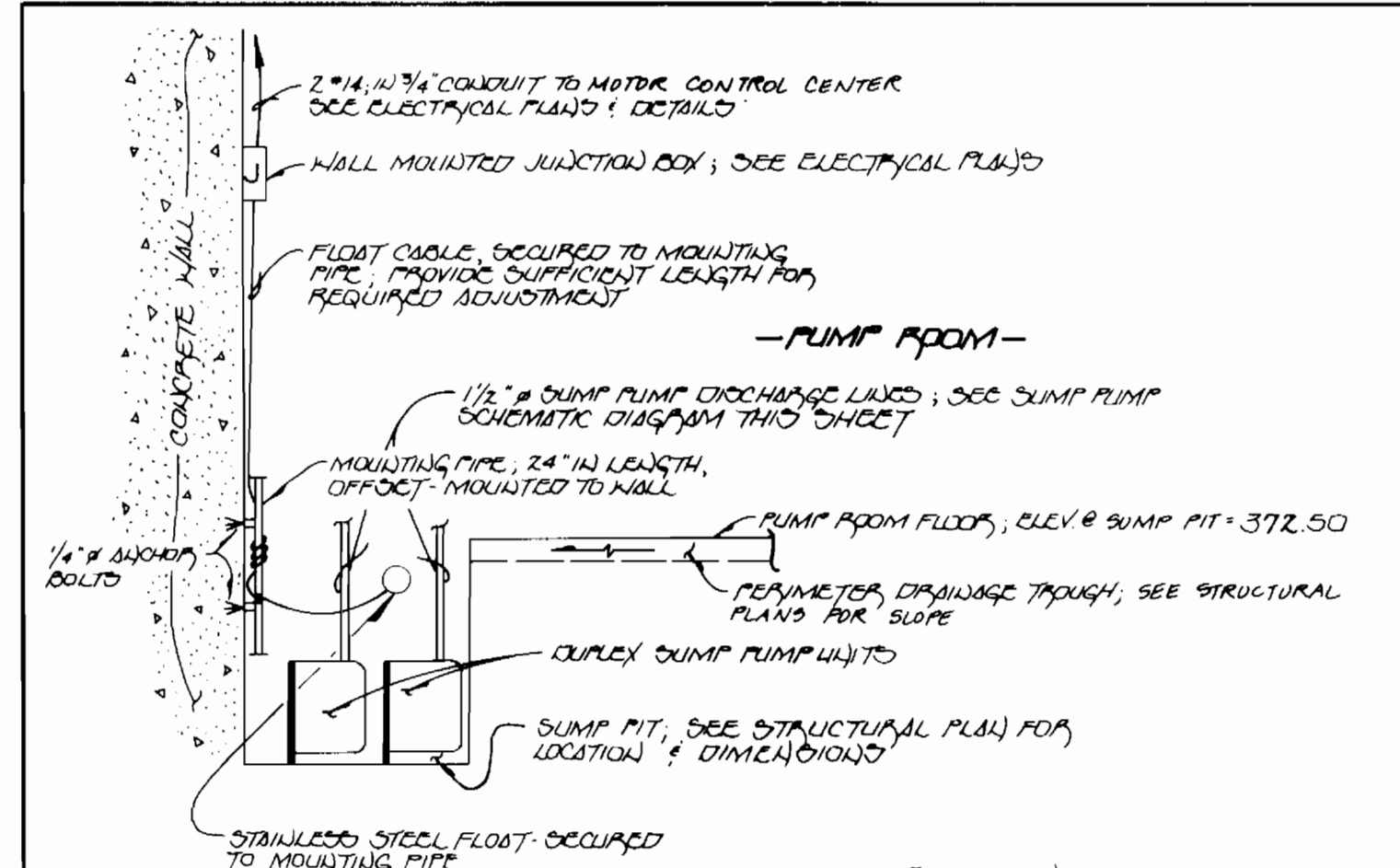
MECHANICAL SECTION 10

DATE: 600' SCALE MAP NO. 16 BLOCK NO. 6

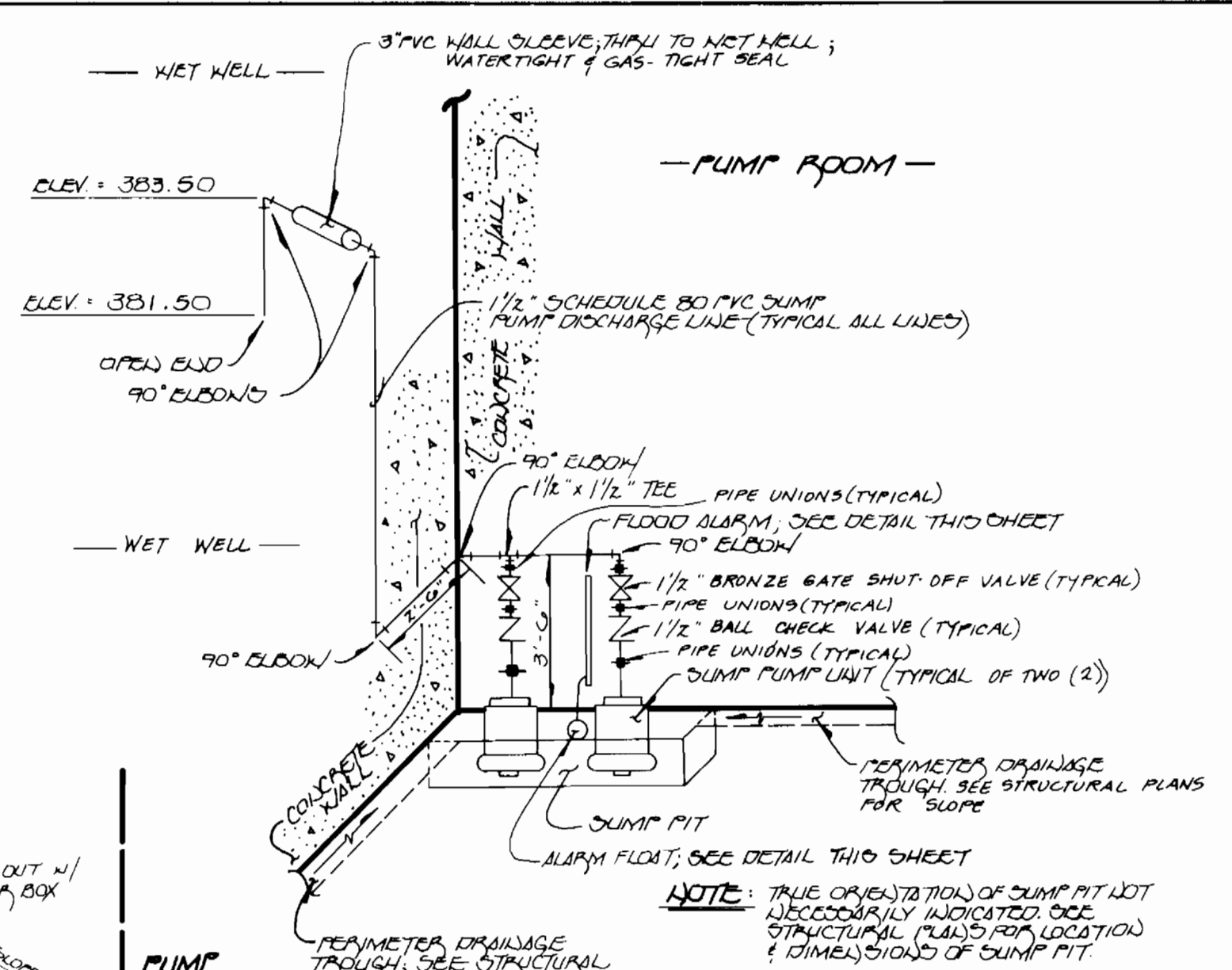
WAVERLY WASTEWATER PUMPING STATION
CONTRACT NO. 24-3457-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 10 OF 19

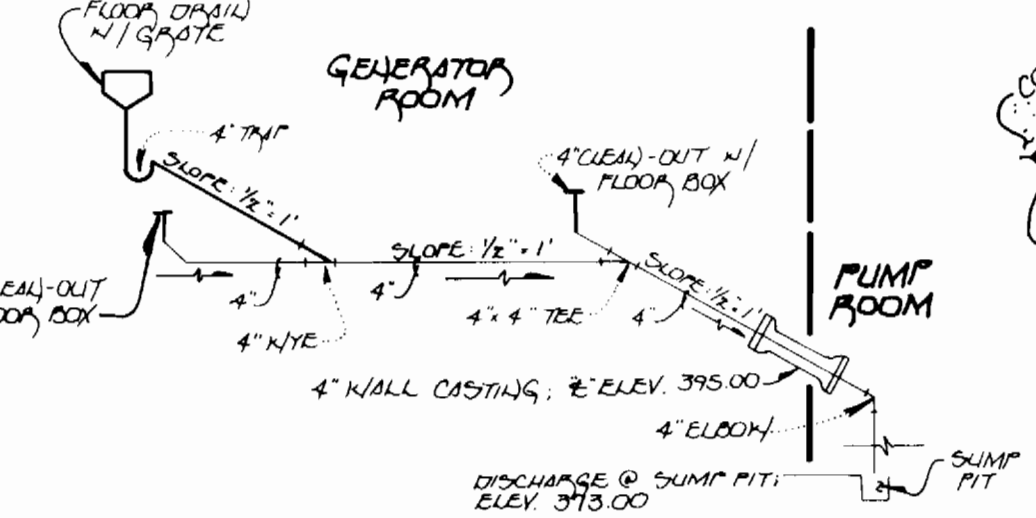
3457 W5/11 Waverly WWPS



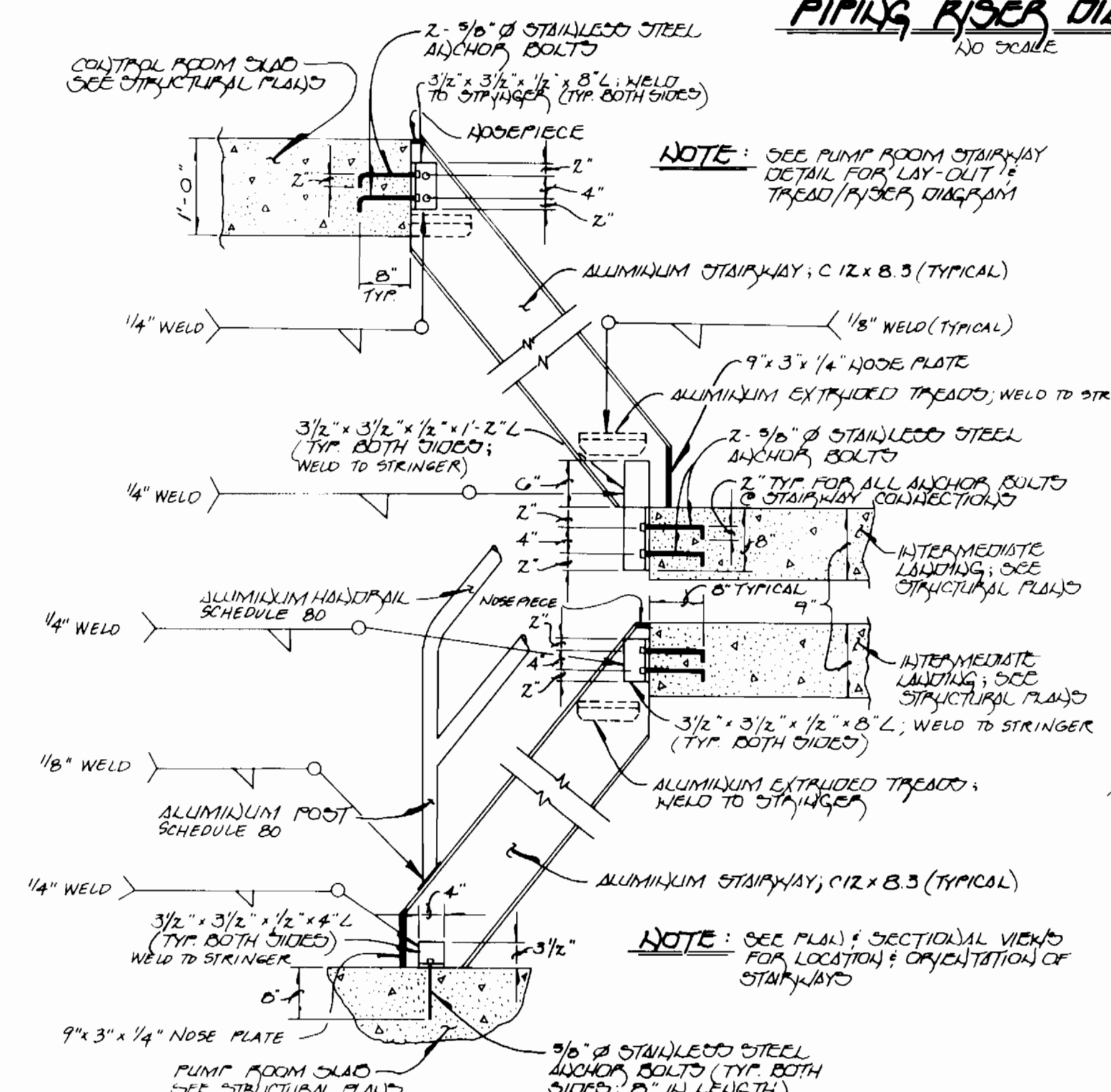
PUMP ROOM FLOOR ALARM MOUNTING DETAIL
NO SCALE



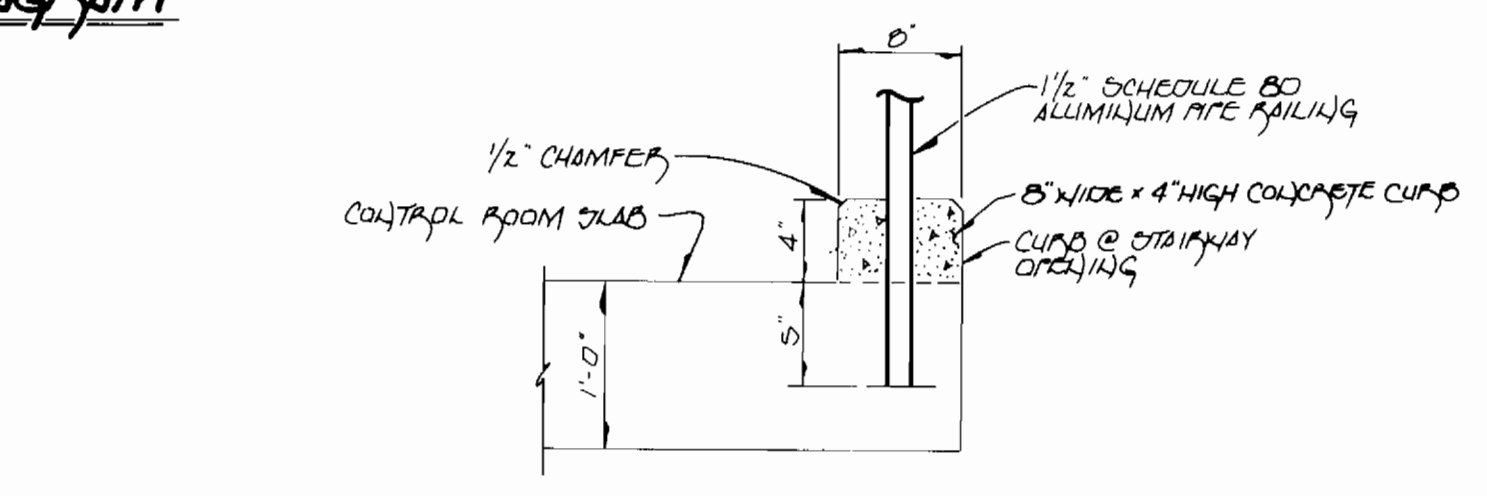
SUMP PUMP SCHEMATIC DIAGRAM
NO SCALE



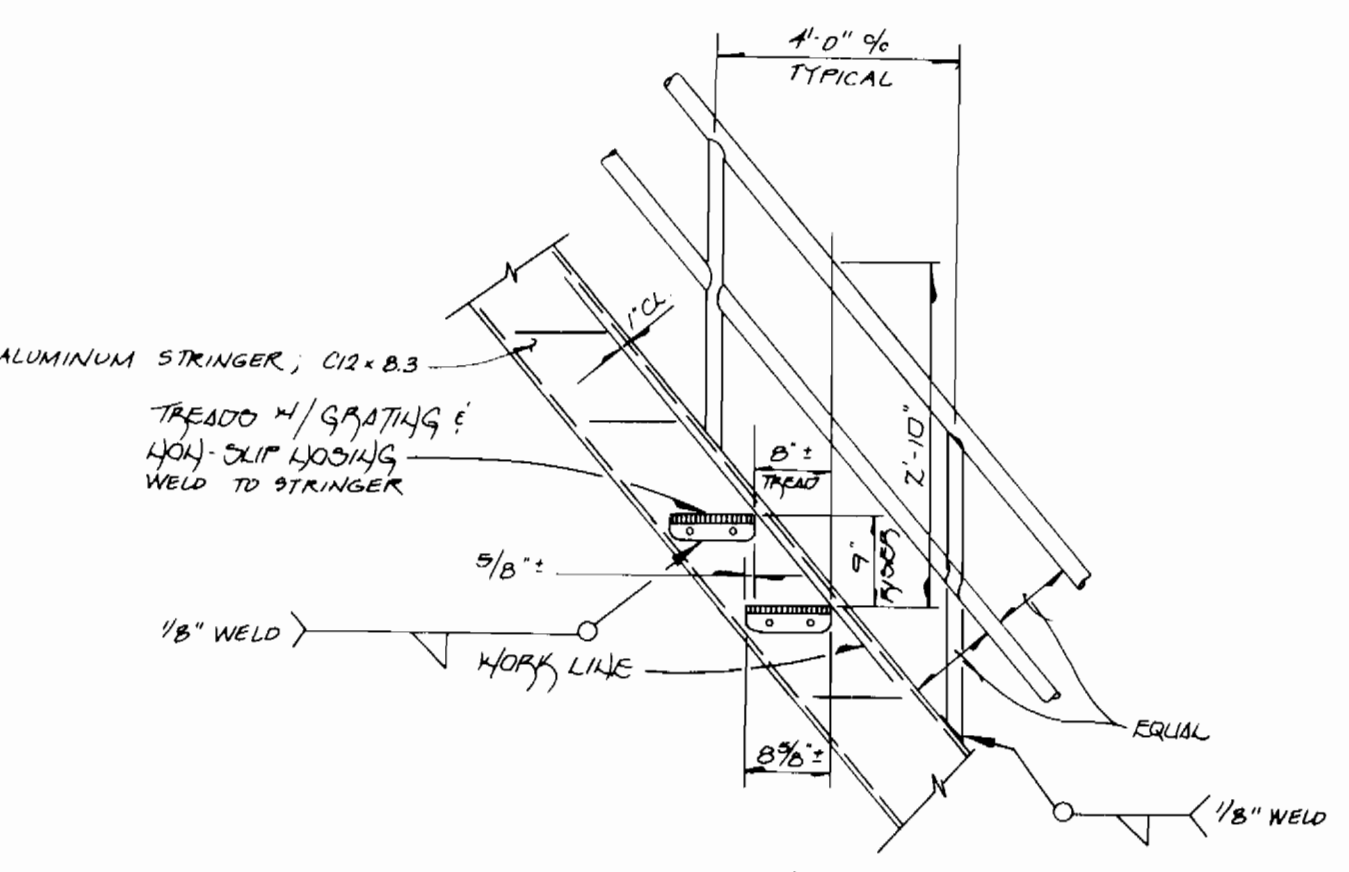
GENERATOR ROOM DRAIN PIPING RISER DIAGRAM
NO SCALE



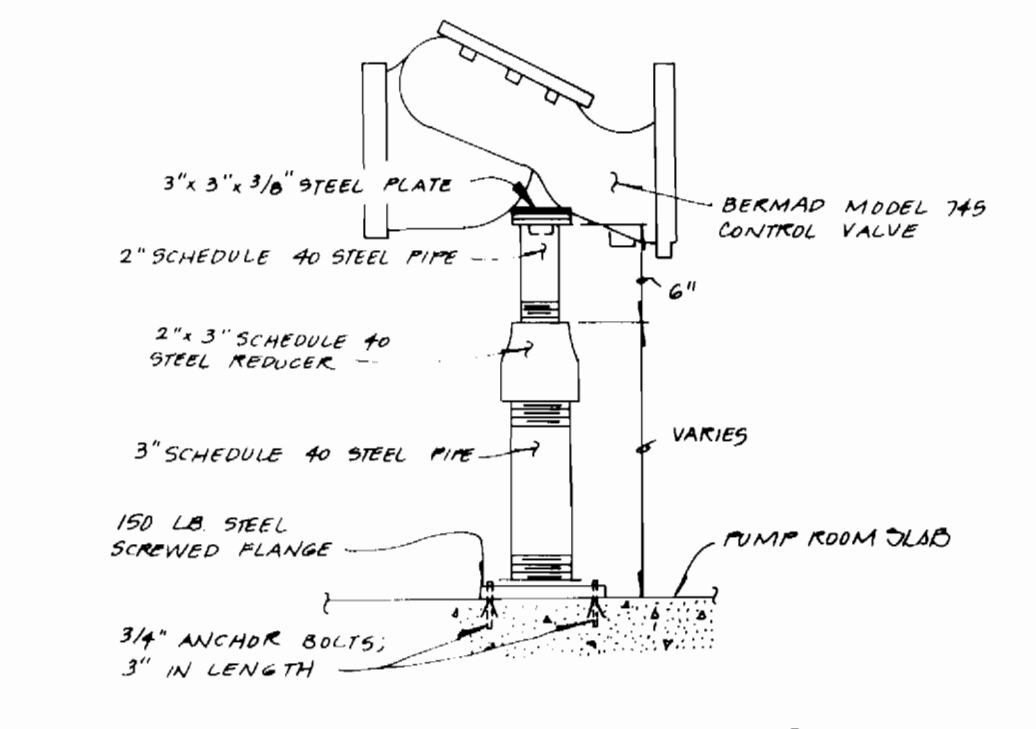
ALUMINUM STAIRWAY CONNECTION DETAILS
NO SCALE



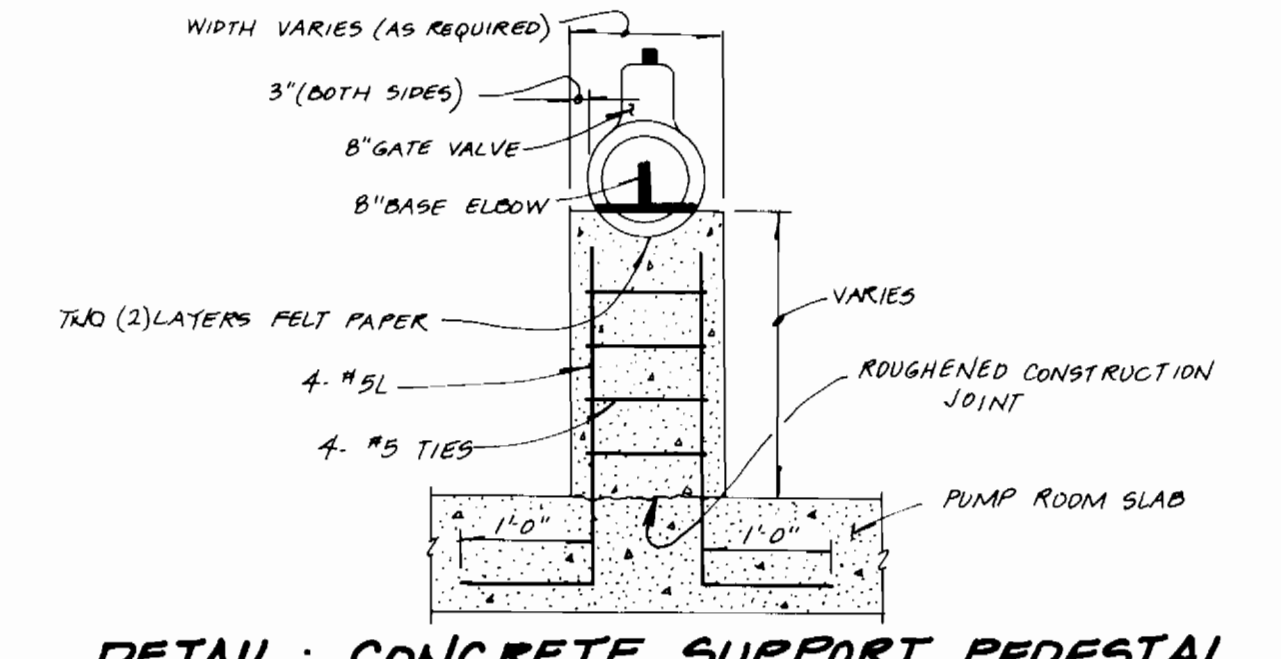
DETAIL: CURB & ALUMINUM POST
NO SCALE



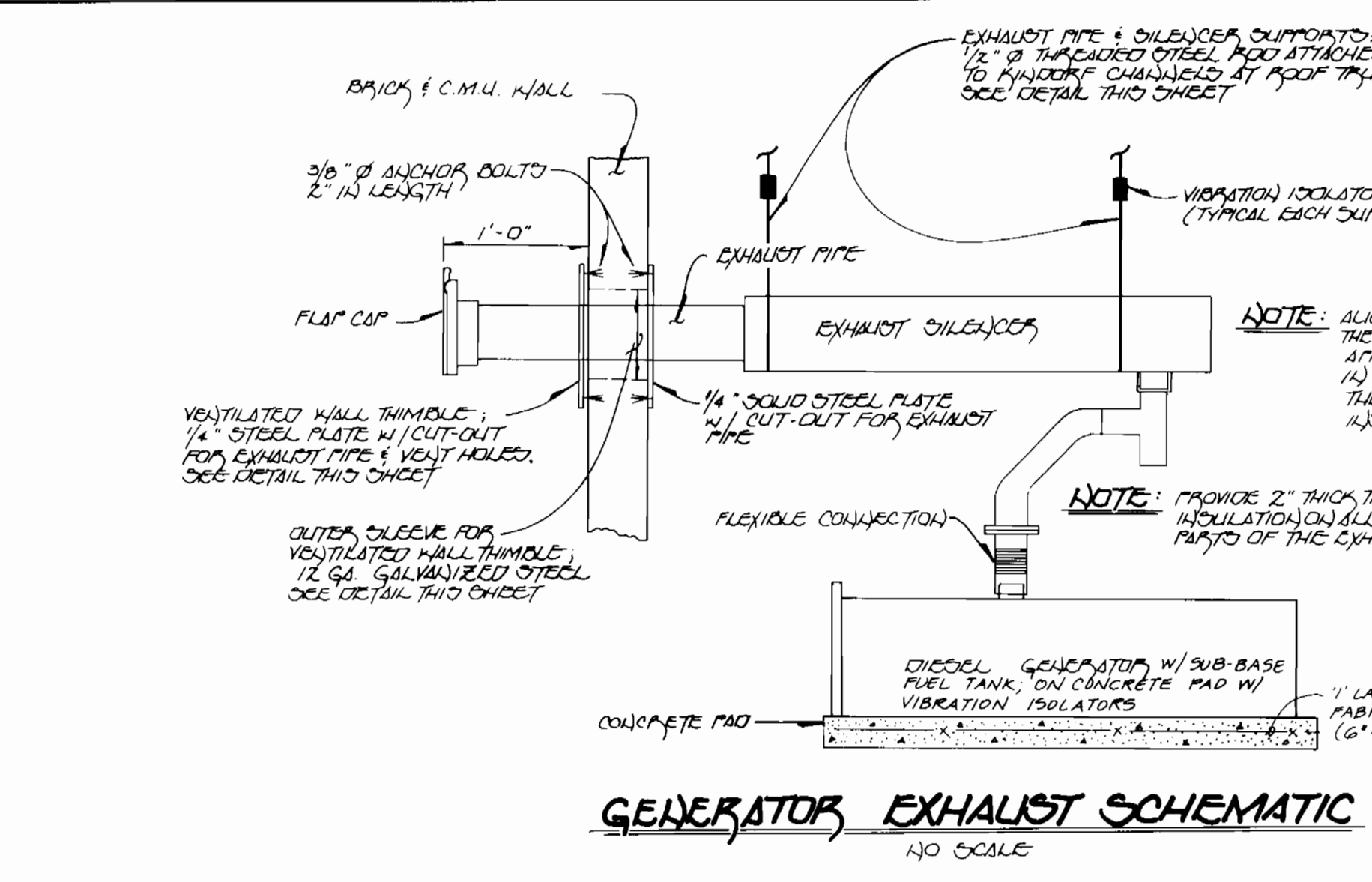
TYPICAL TREAD & RISER DETAIL
NO SCALE



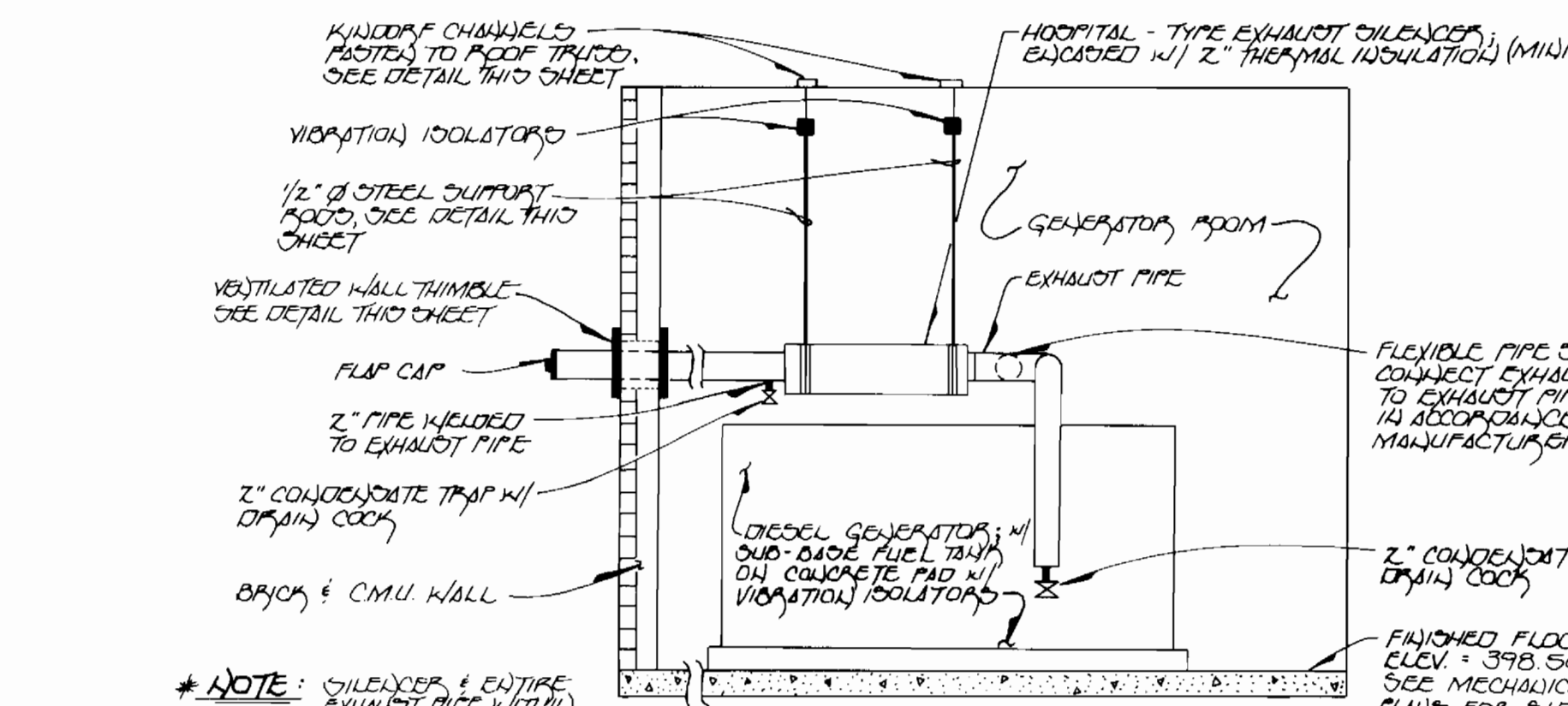
DETAIL: ADJUSTABLE PIPE SUPPORT
NO SCALE



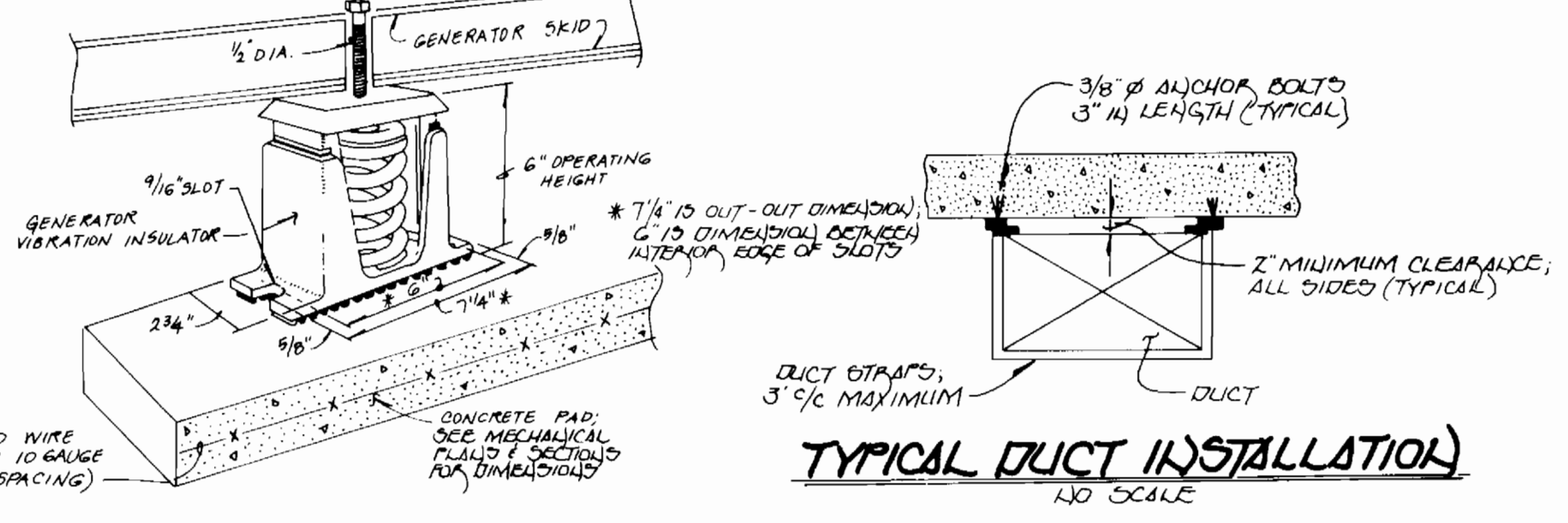
DETAIL: CONCRETE SUPPORT PEDESTAL AT GATE VALVES & BASE ELBOWS
NO SCALE



GENERATOR EXHAUST SCHEMATIC
NO SCALE



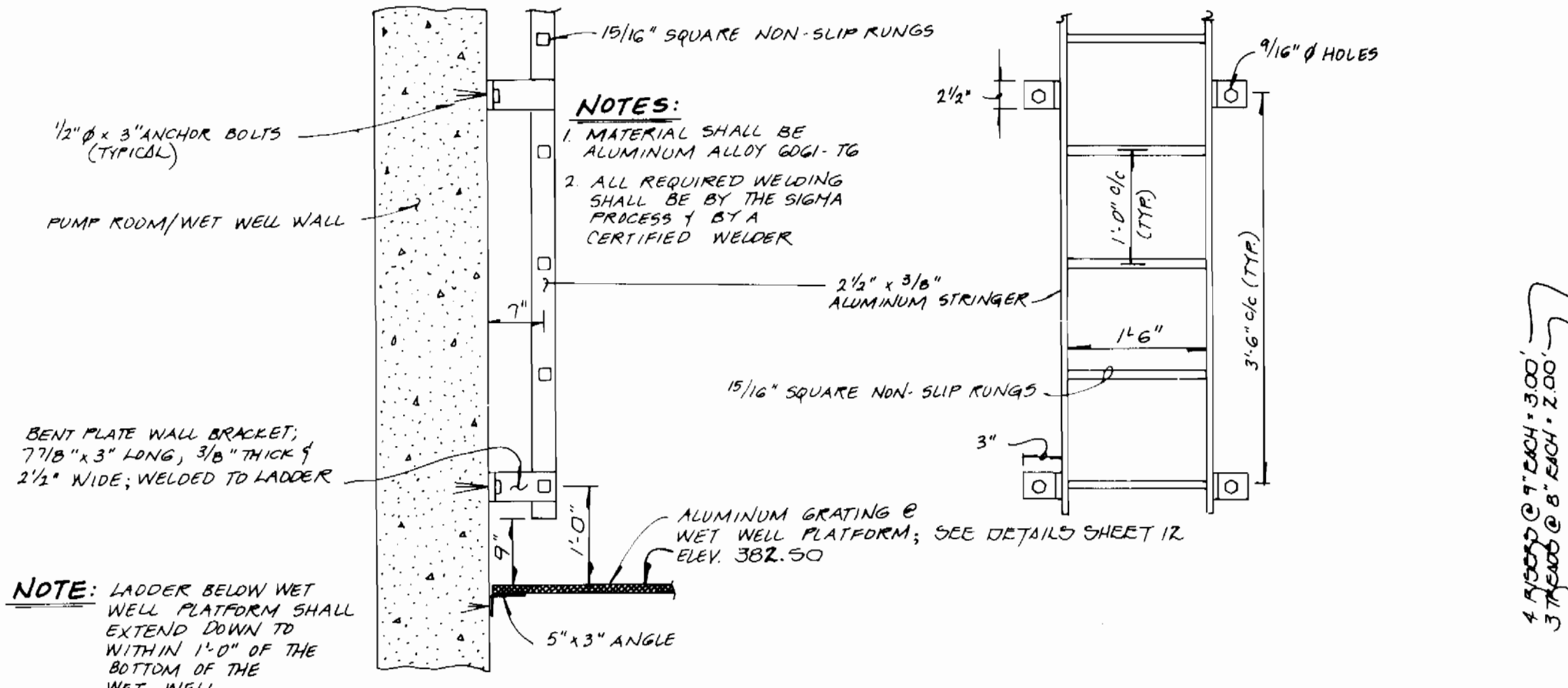
ELEVATION - GENERATOR EXHAUST DETAIL
NO SCALE



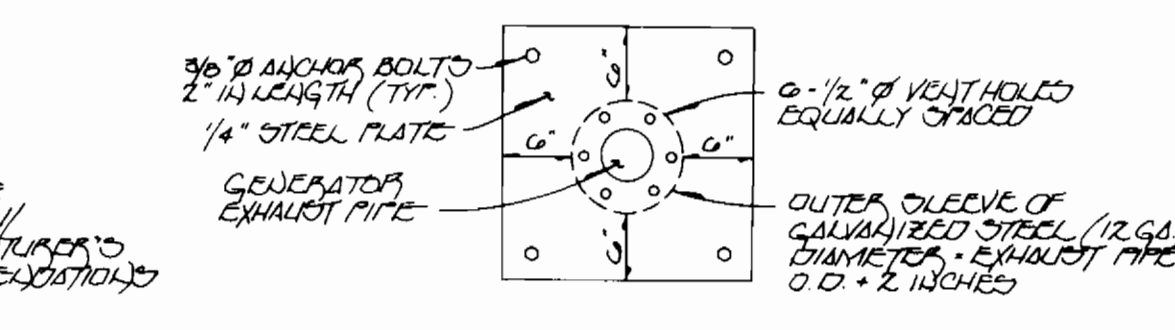
TYPICAL DUCT INSTALLATION
NO SCALE



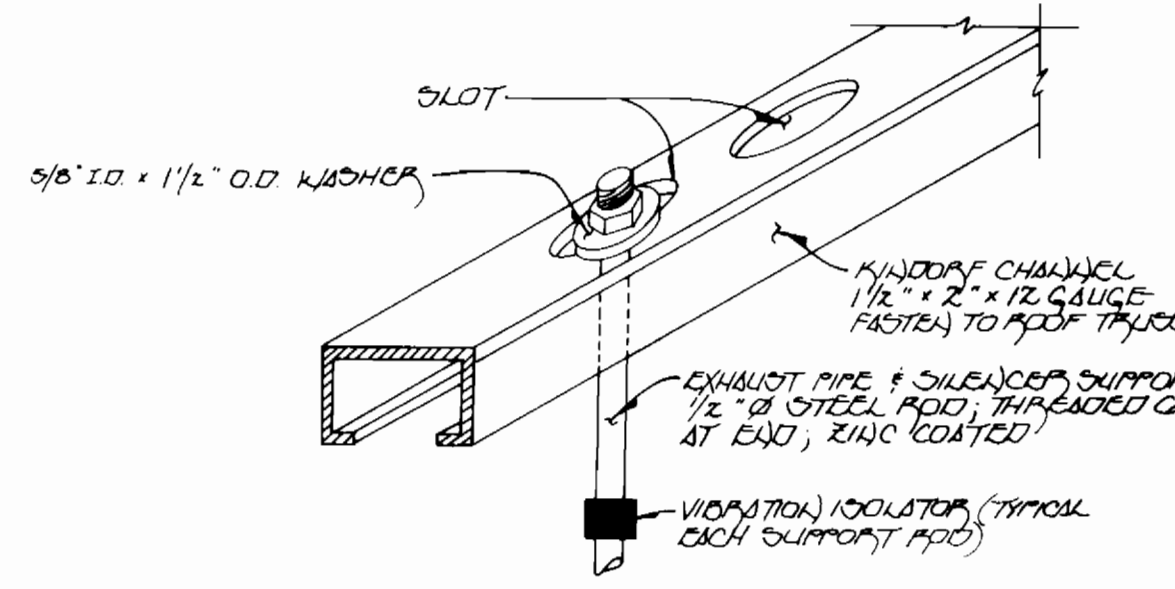
DETAIL: VIBRATION ISOLATOR
NO SCALE



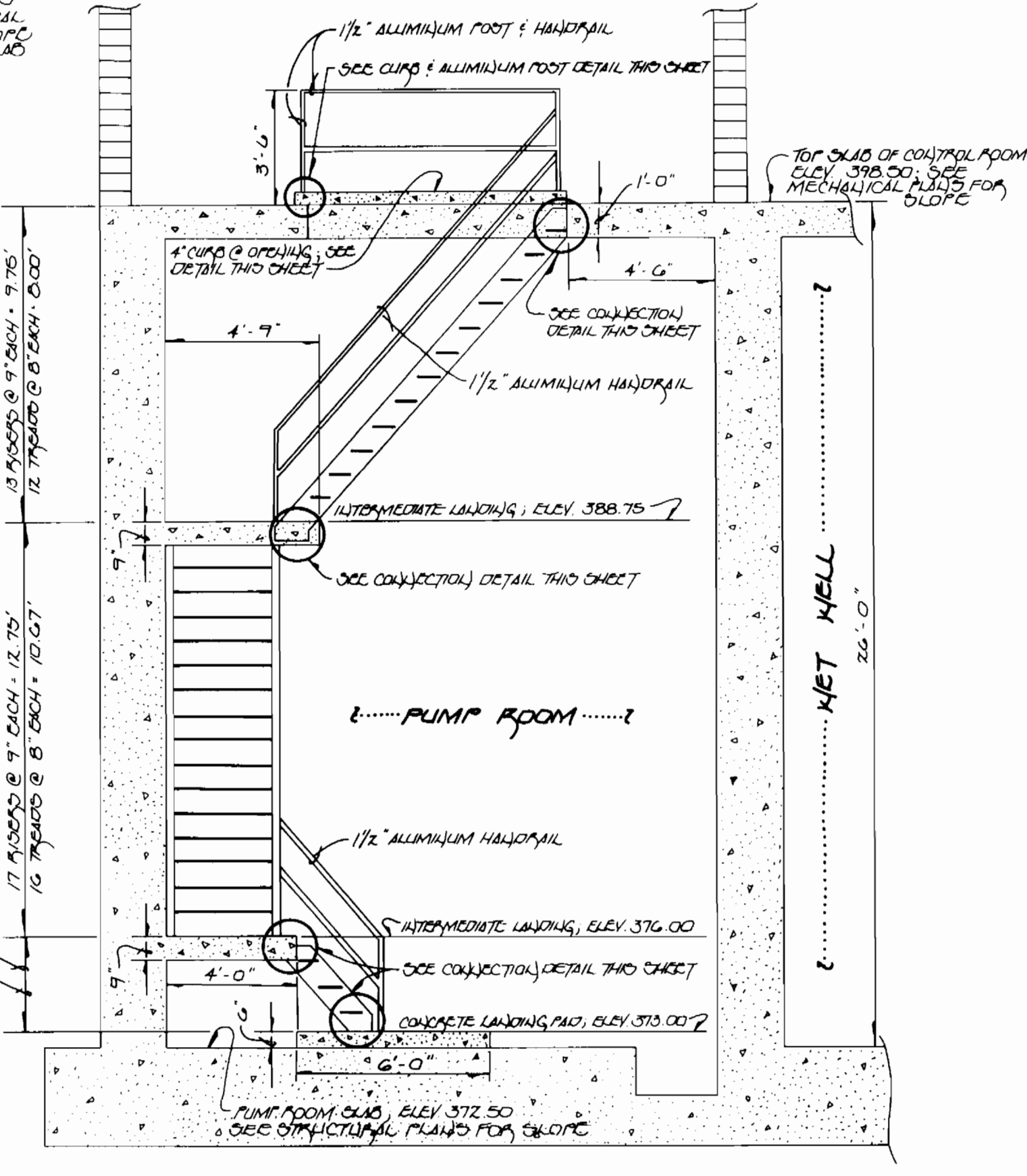
ALUMINUM ACCESS LADDER DETAILS
NO SCALE



VENTILATED WALL THIMBLE
NO SCALE

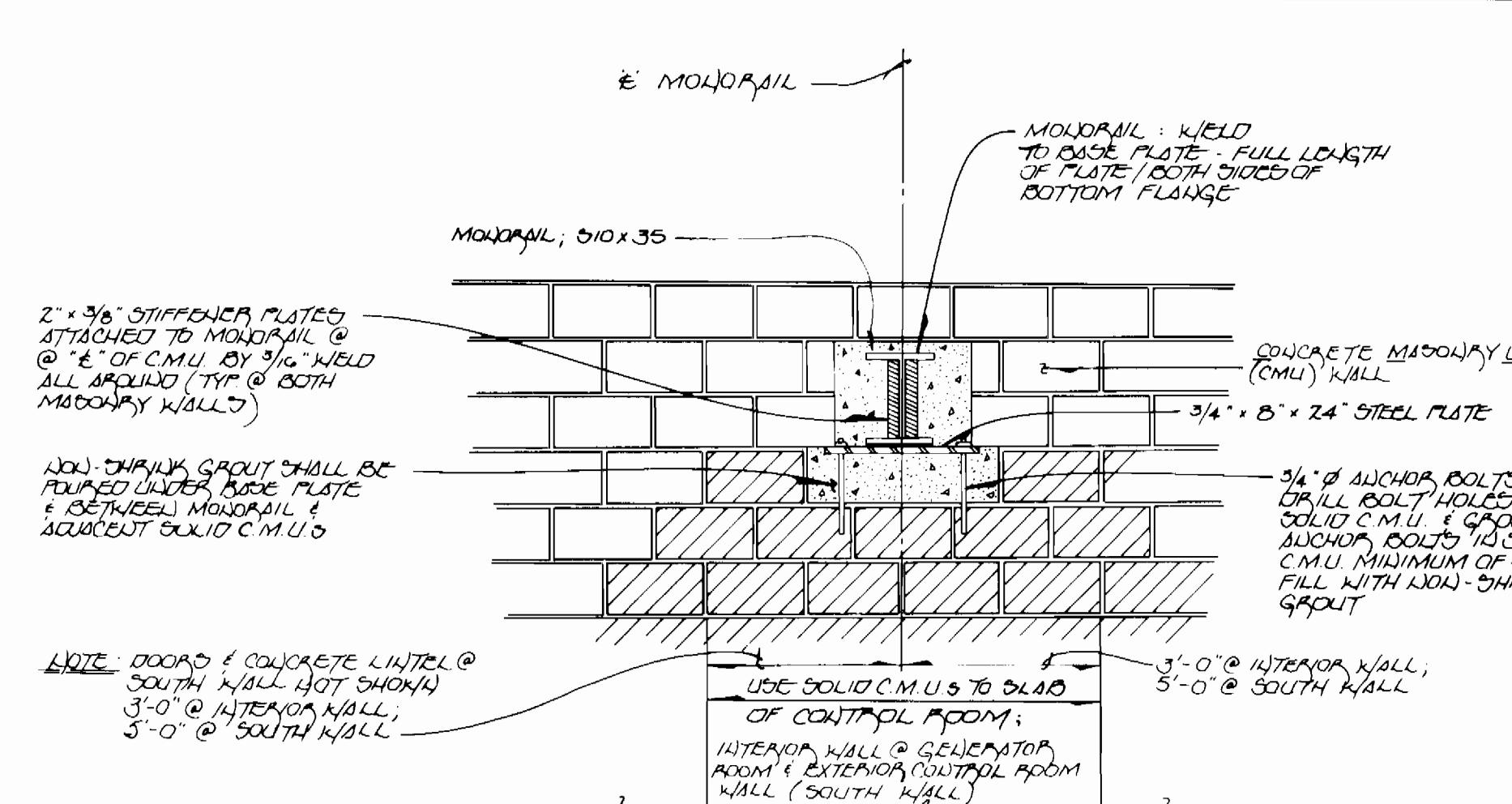


EXHAUST PIPE & SILENCER DETAIL
NO SCALE

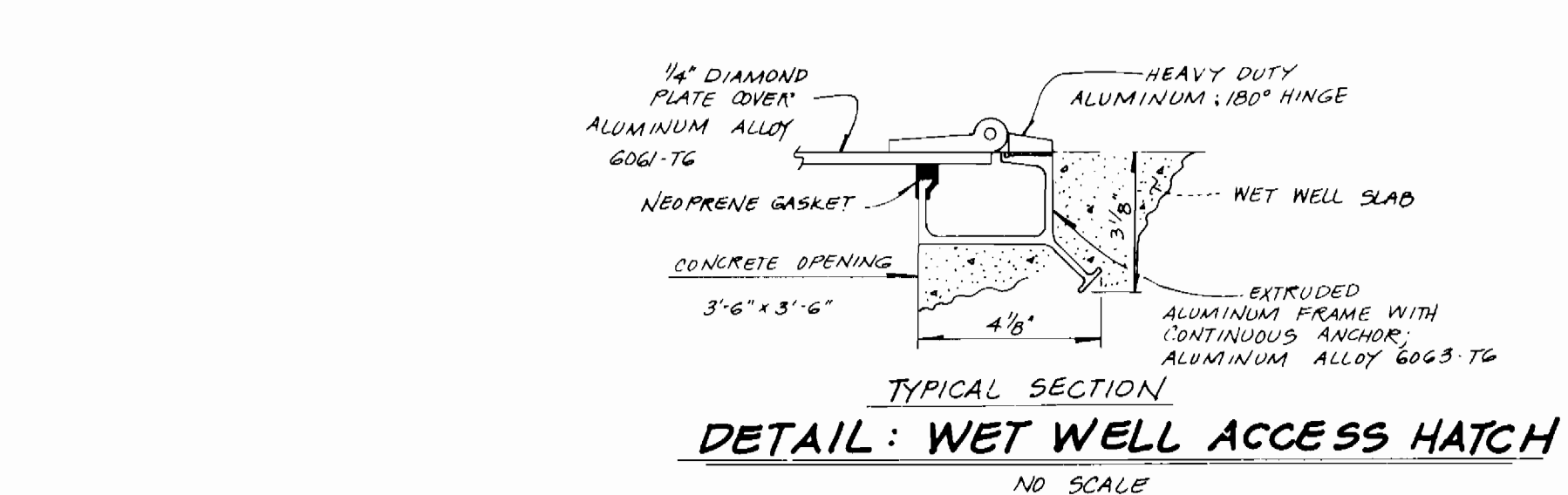
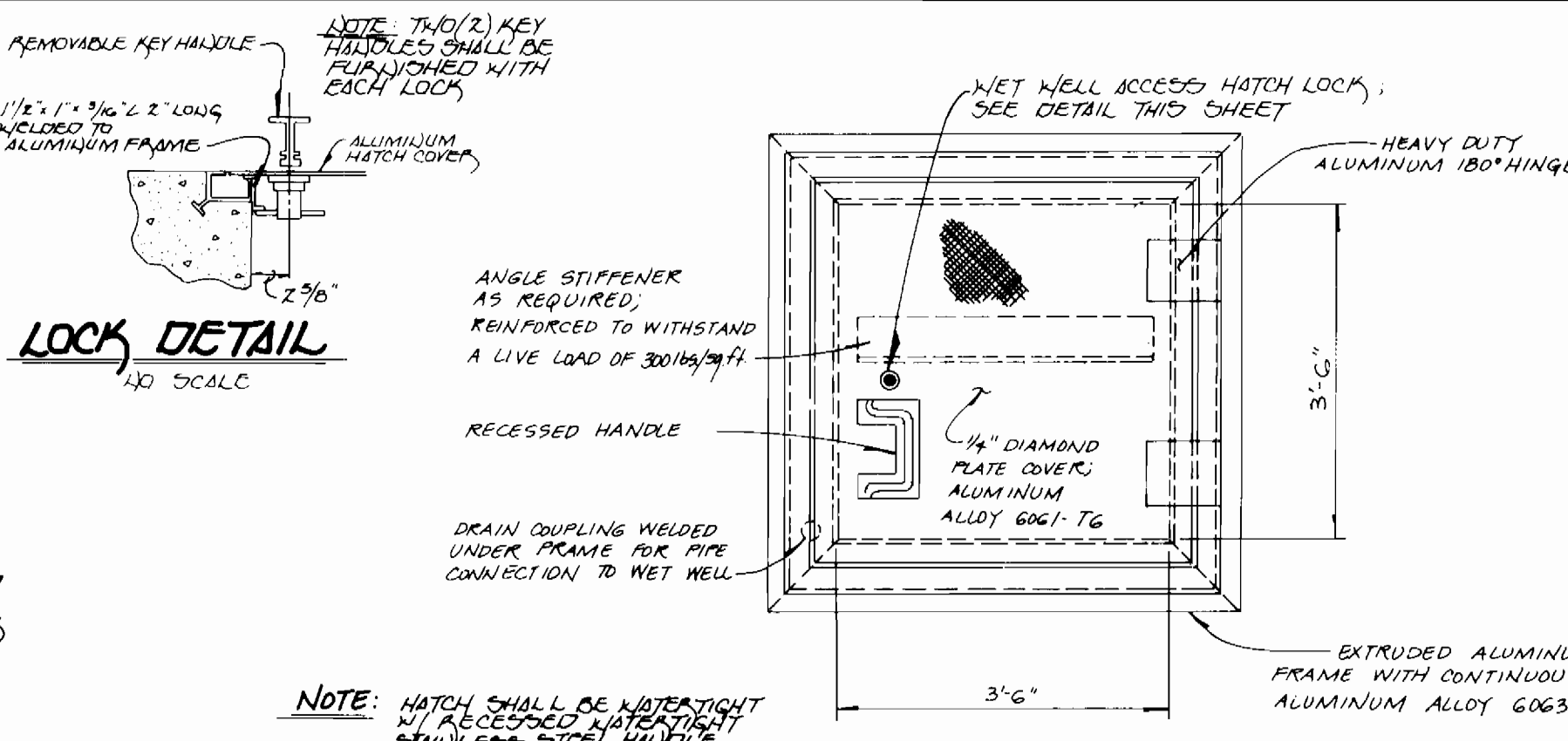


DETAIL: PUMP ROOM STAIRWAY
SCALE: 1/4\"/>

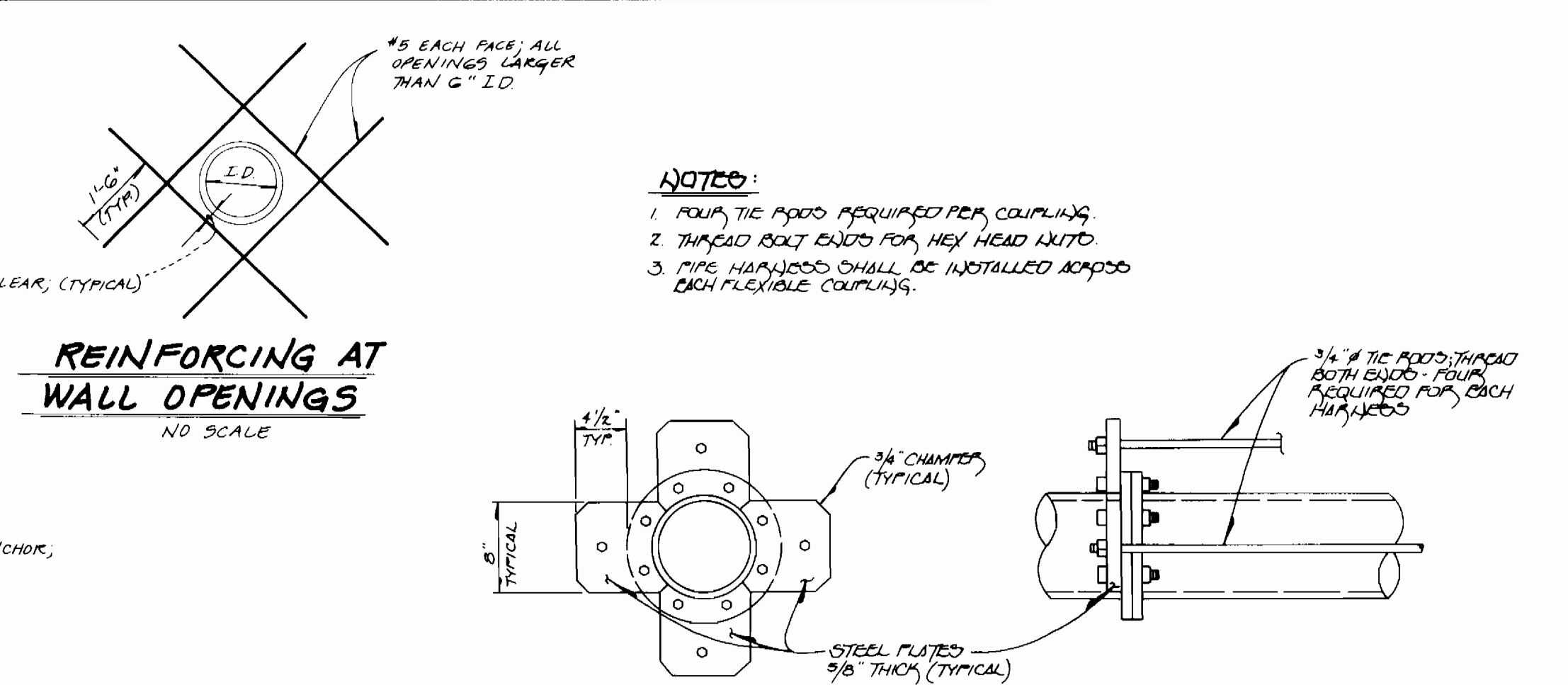
3457 WS/12 Waverly WWP



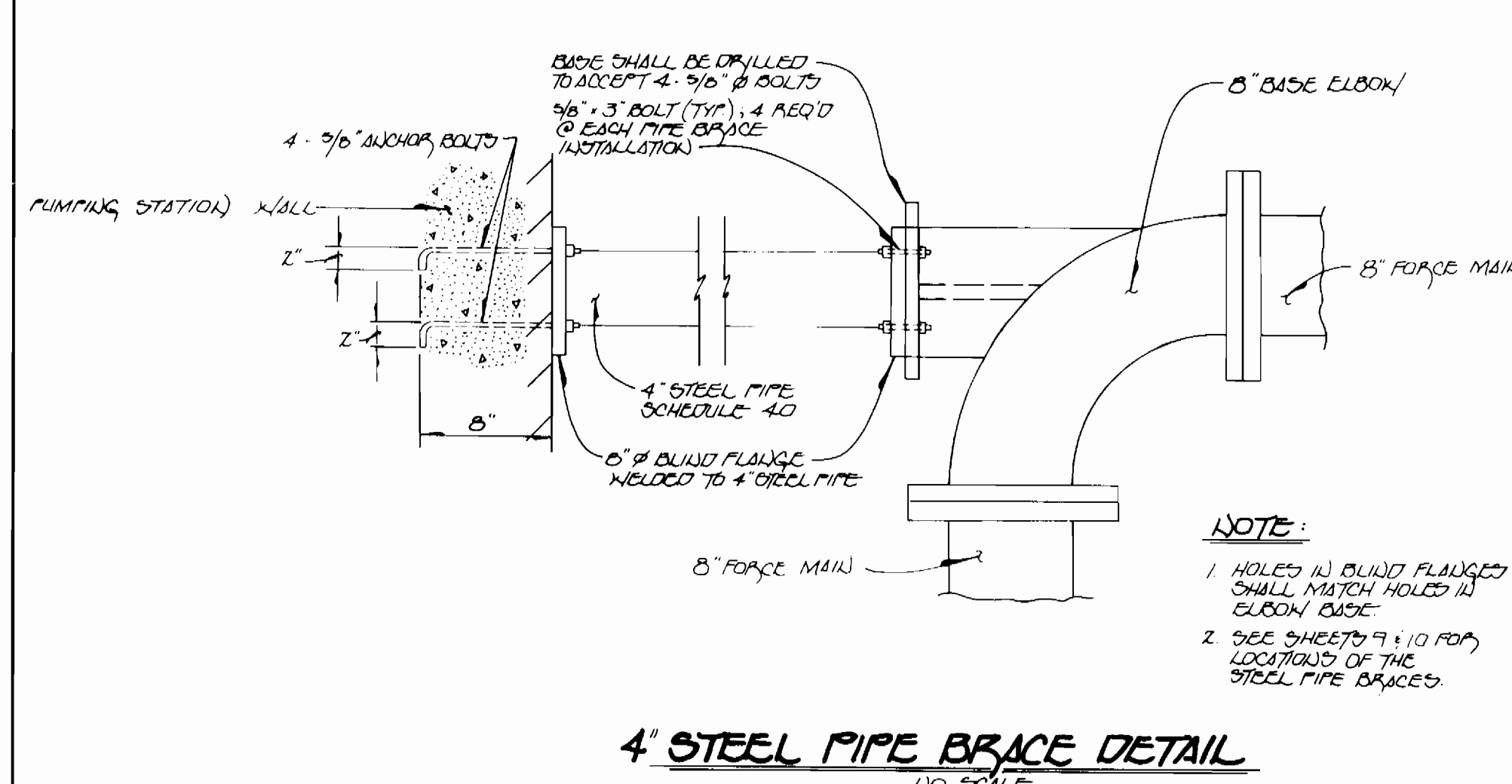
SUPPORT DETAIL: MONORAIL BEAM @ MASONRY WALLS
NO SCALE



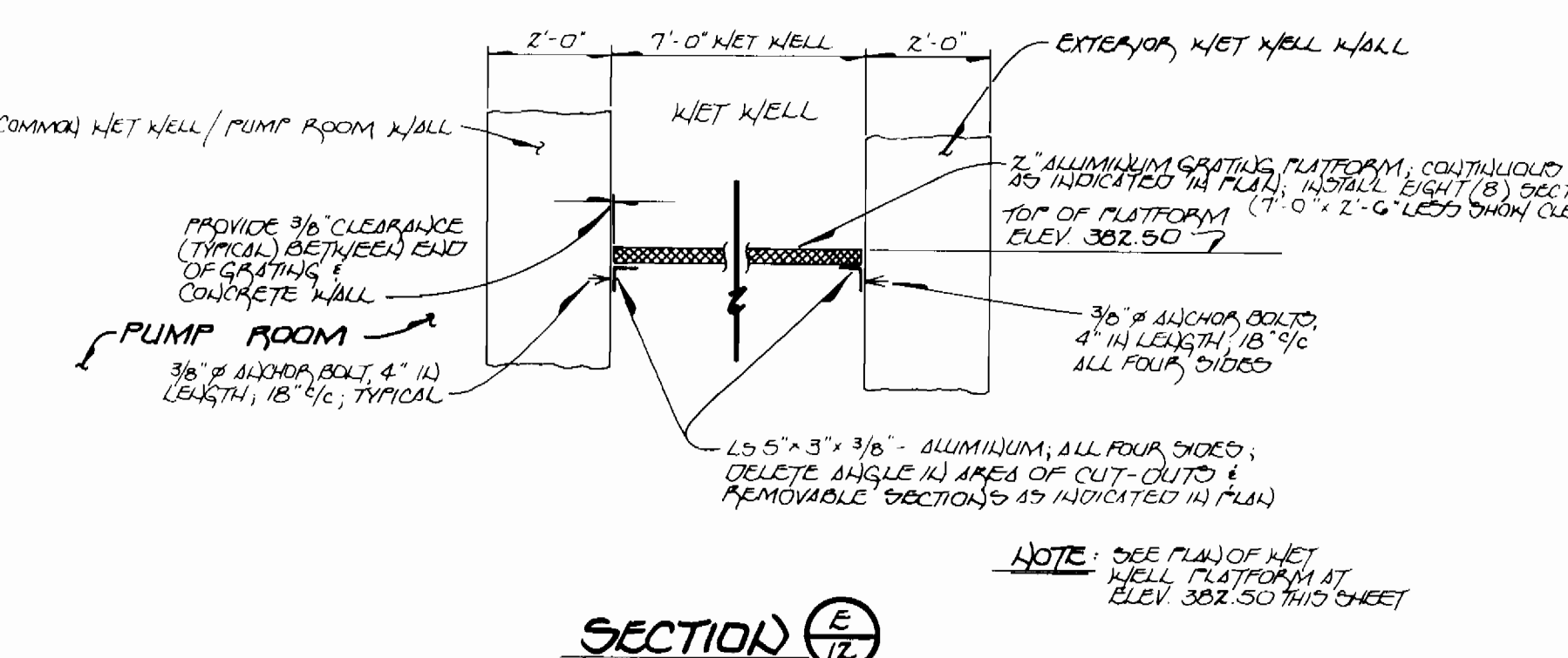
DETAIL: WET WELL ACCESS HATCH
NO SCALE



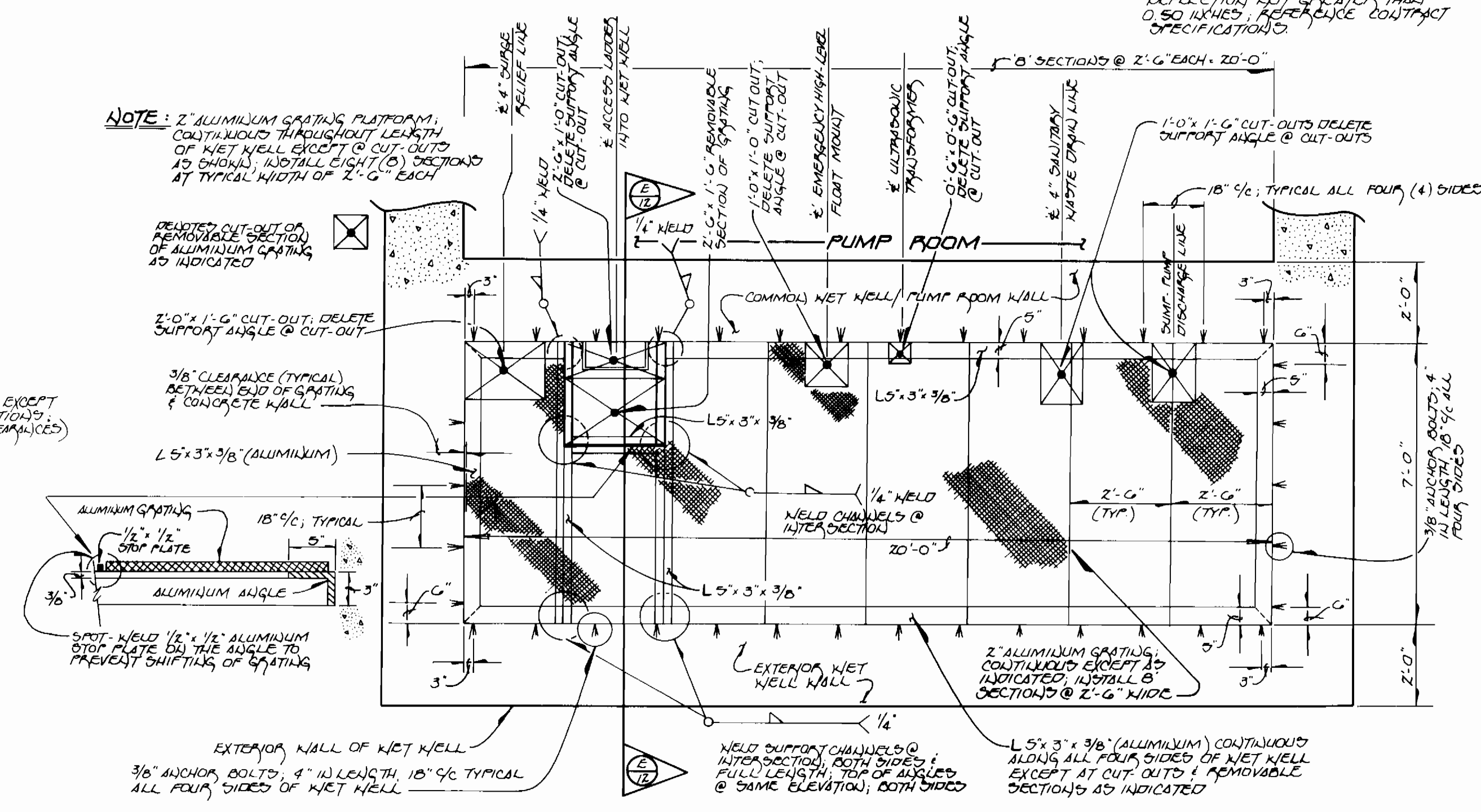
PIPE HARNESS DETAIL
NO SCALE



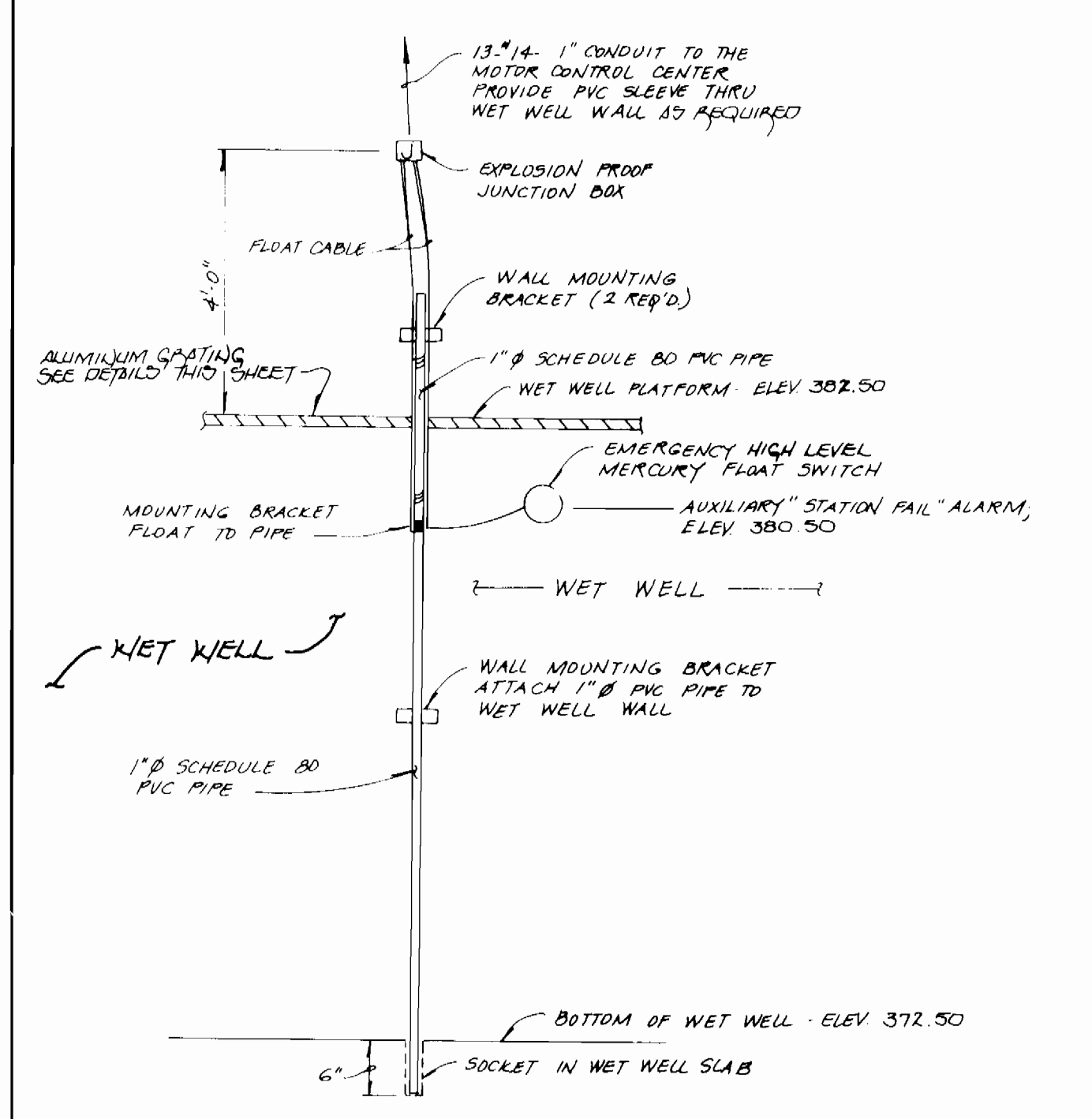
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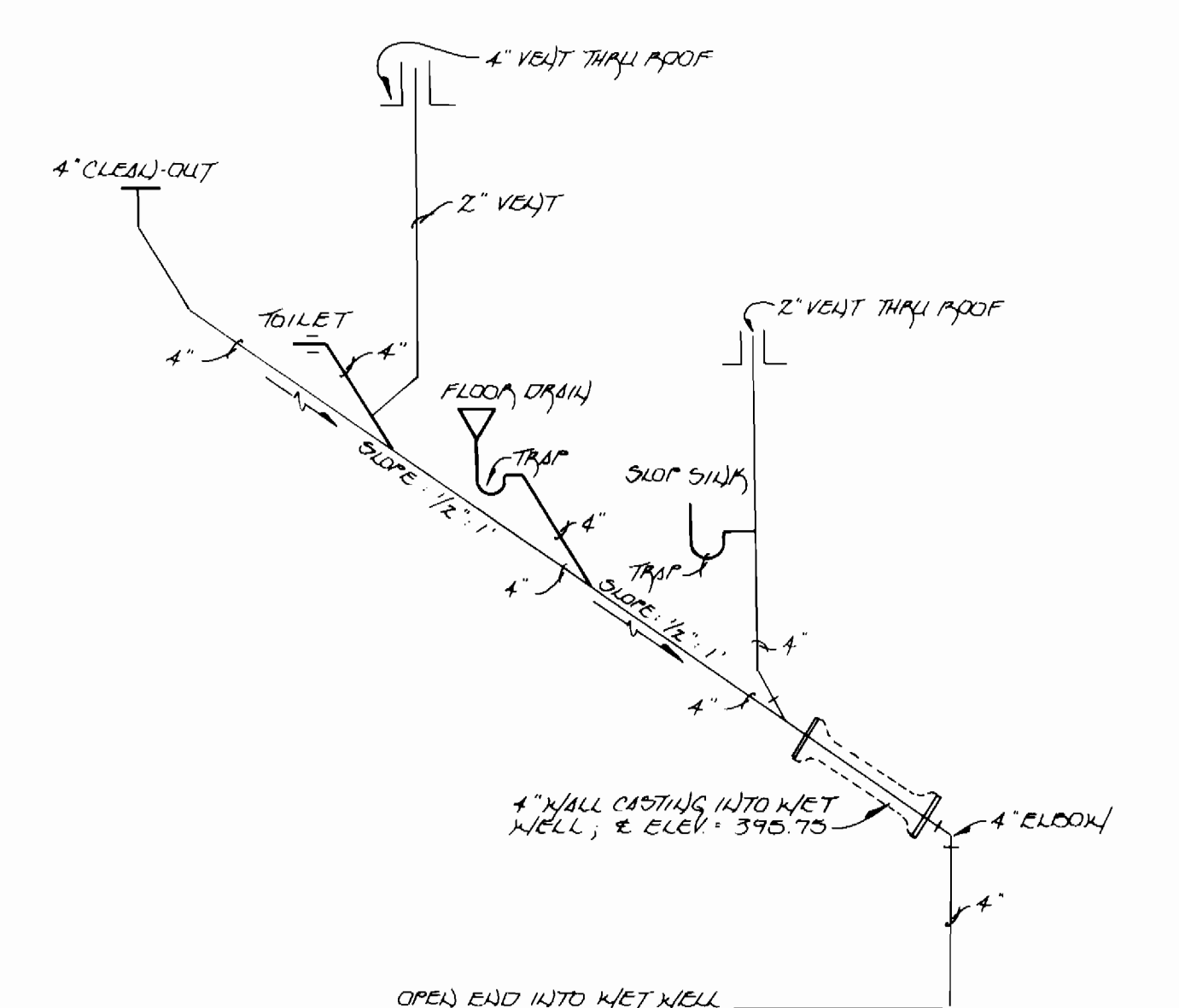
SECTION E
SCALE 3/8\"/>



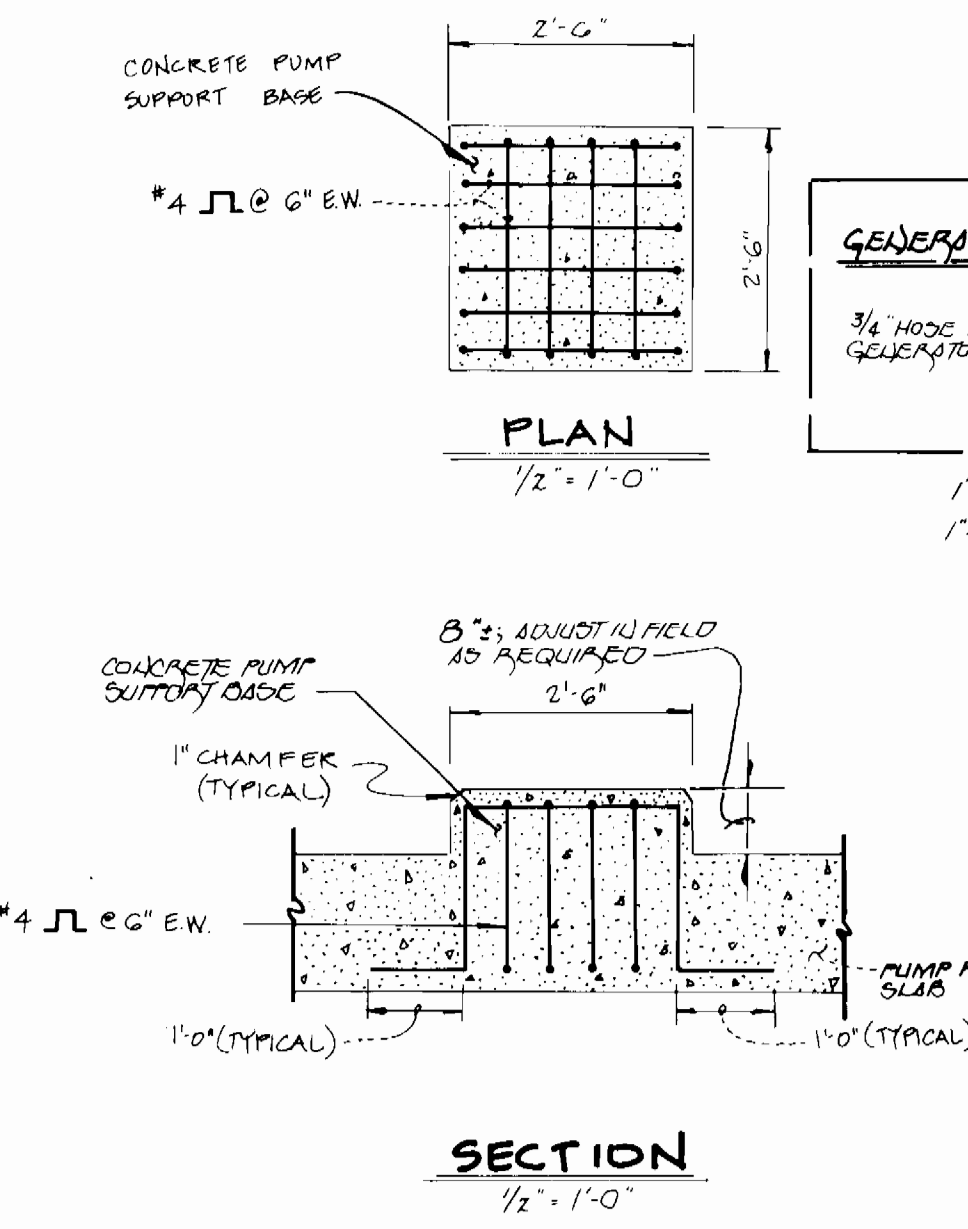
PLAN: WET WELL PLATFORM @ ELEV. 382.50
SCALE 3/8\"/>



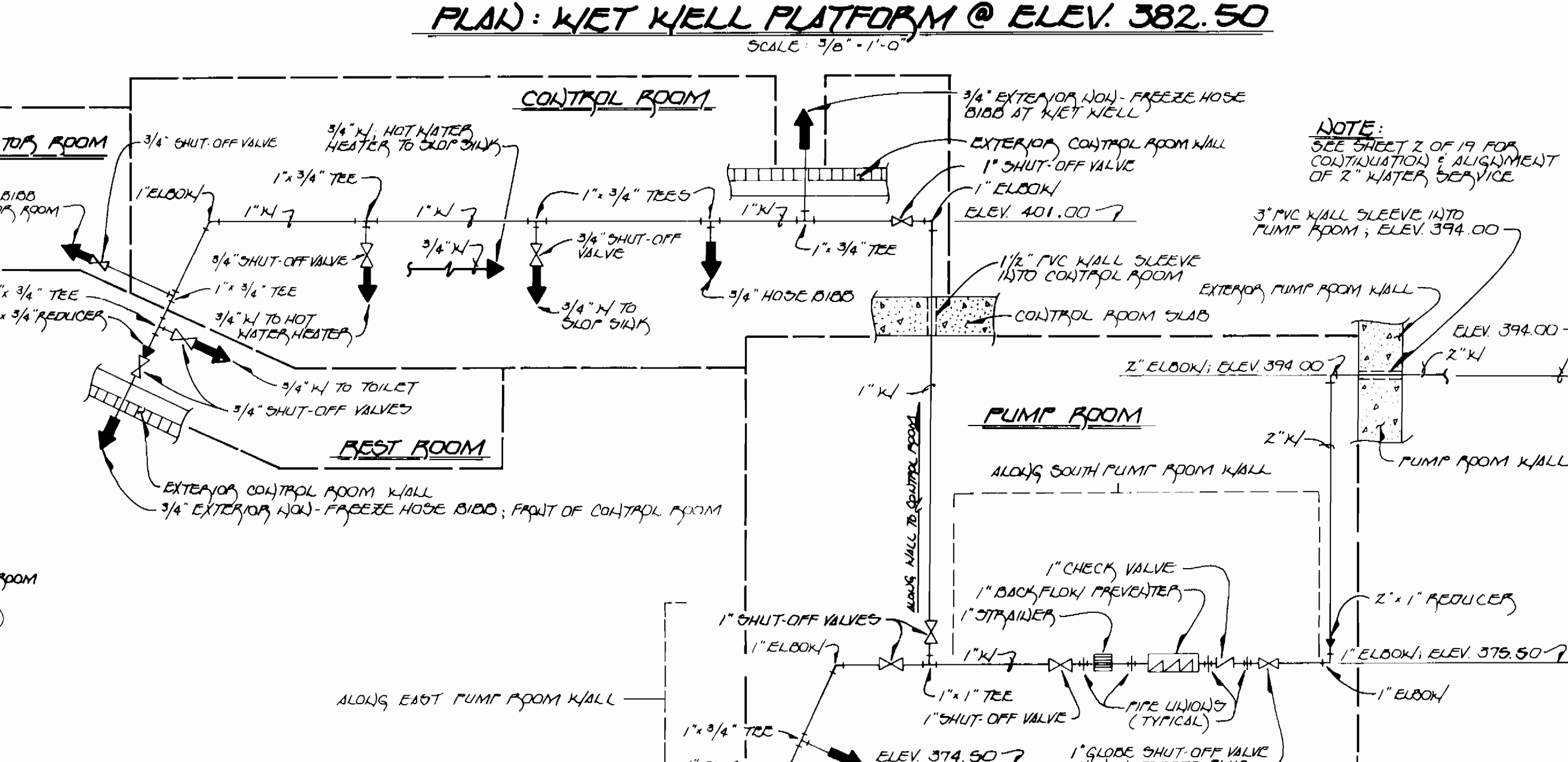
DETAIL: EMERGENCY HIGH LEVEL FLOAT SWITCH
NO SCALE



SANITARY WASTE & DRAIN PIPING RISER DIAGRAM
NO SCALE



DETAIL: PUMP SUPPORT BASE
SCALE: 1/2\"/>



WATER SUPPLY SCHEMATIC
NO SCALE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Robert W. Benjamin
CHIEF, BUREAU OF UTILITIES
12-22-94
DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
John P. Damm
CHIEF, DEVELOPMENT ENGINEERING DIVISION
12/31/96
DATE

Fisher, Collins & Carter, Inc.
#9757
CIVIL ENGINEERING CONSULTANTS &
LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK
10272 Baltimore National Pike
Elliott City, Maryland 21042
(410) 461-2886

STATE OF MARYLAND
TERRELL R. FISHER

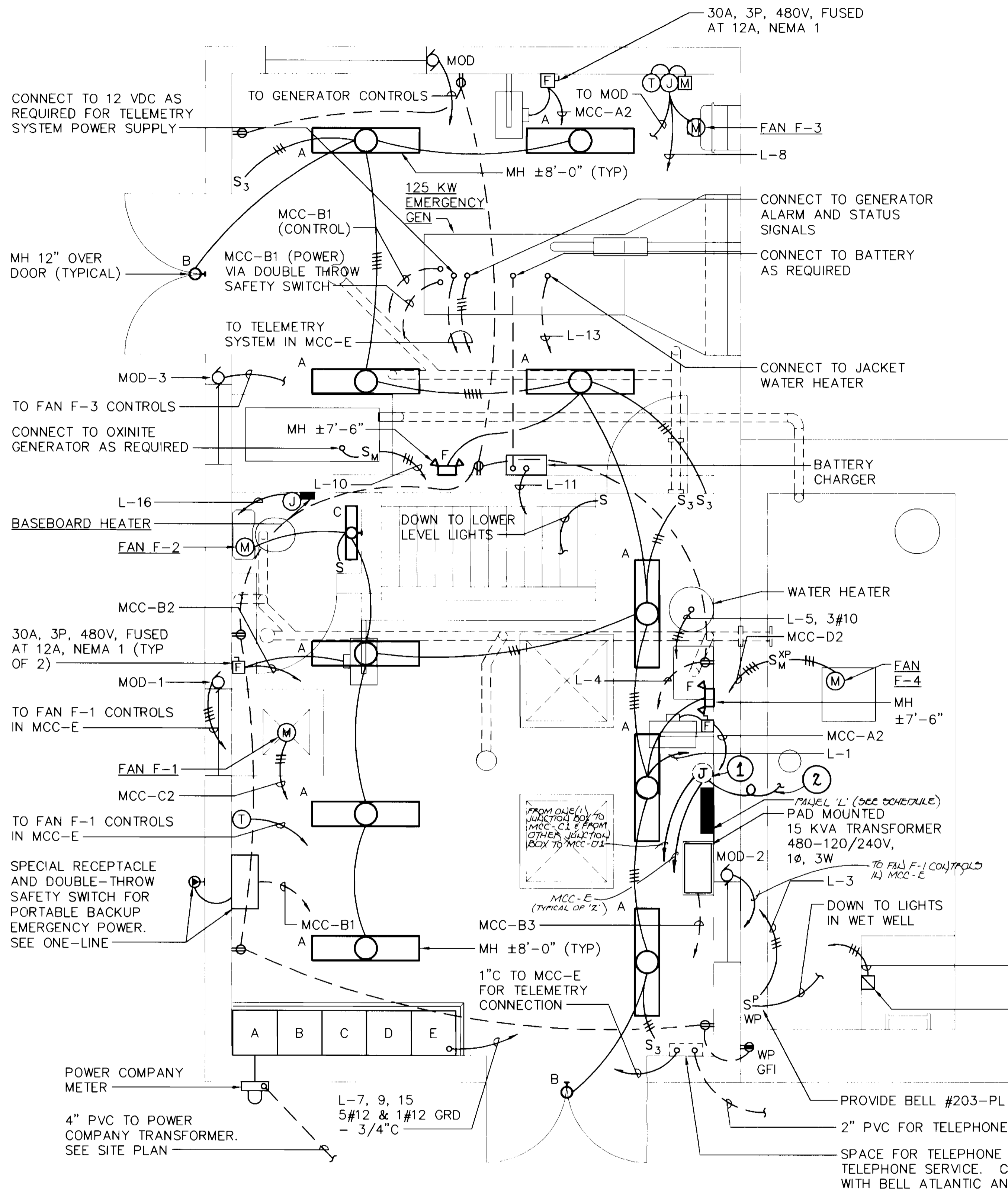
DES: J.M.M.
DRWN: J.M.M.
CHK: P.W.K.
DATE: 8/7/96
BY: NO.
REVISION

**STRUCTURAL & MECHANICAL
DETAILS**

WAVERLY
WASTEWATER PUMPING STATION
CONTRACT NO. 24-3457-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

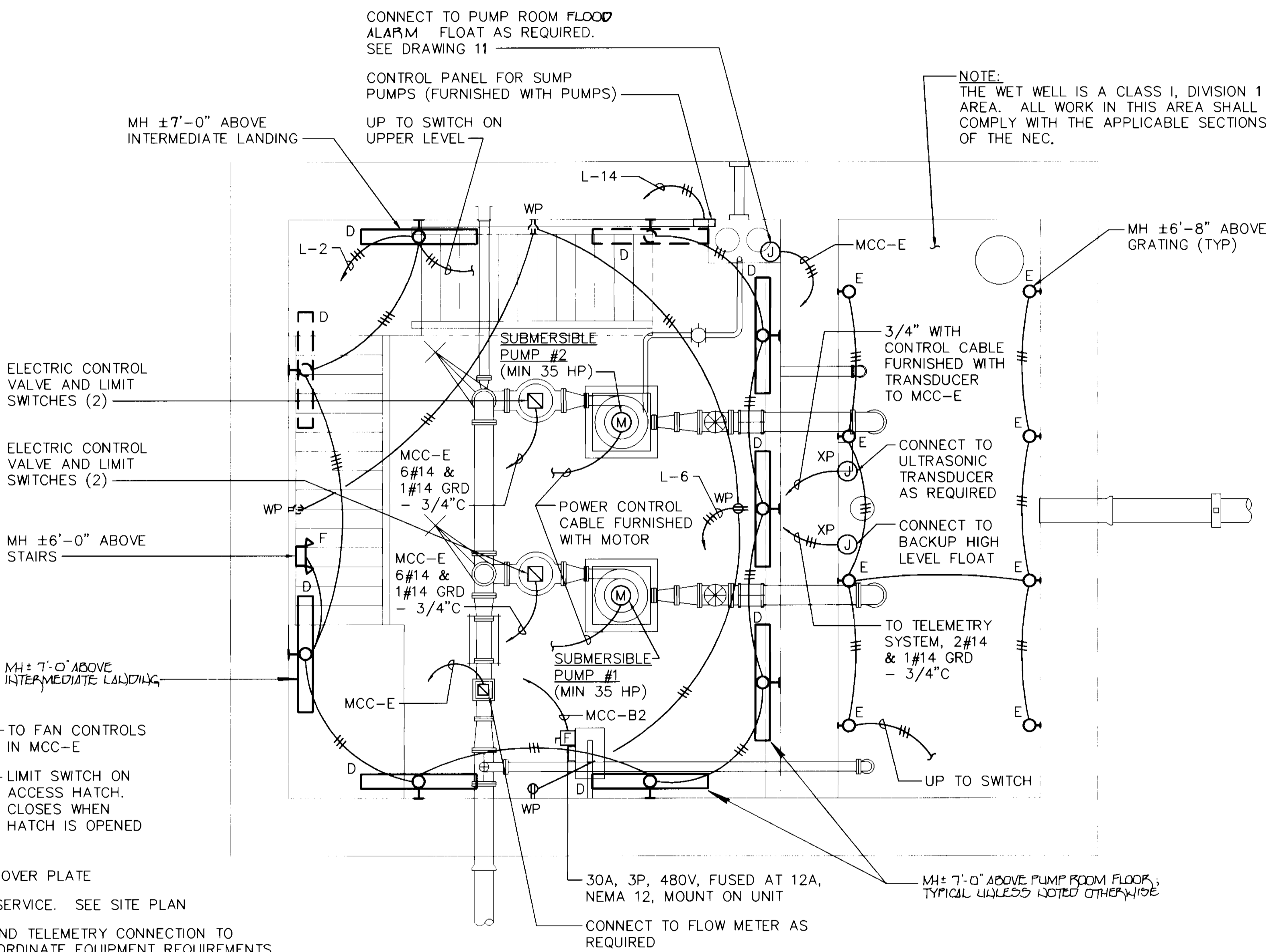
SCALE AS SHOWN
SHEET 12 OF 19

3457 WS/13 Waverly WWPS



CONTROL ROOM & GENERATOR ROOM PLAN

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



PUMP ROOM & WET WELL PLAN

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



DRAWING NOTES:

- 1 WALL MOUNTED JUNCTION BOX FOR DISCONNECT OF PUMP POWER / CONTROL CABLES (TYPICAL OF TWO (2)).
- 2 POWER/CONTROL CABLE FROM SUBMERSIBLE PUMP. PROVIDE SUFFICIENT SLACK IN CABLE WITHIN PUMP ROOM TO ALLOW MOTOR TO BE LIFTED AND PUT ON PUMP ROOM FLOOR. (TYPICAL AT TWO (2) LOCATIONS).

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Robert J. Bannister 10-22-96
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
Mike Dammann 10/31/96
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Fisher, Collins & Carter, Inc.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK
10272 Baltimore National Pike
Ellicott City, Maryland 21042
(410) 461-2855

#9757
STATE OF MARYLAND
TERRELL A. FISHER

DES:	M.L.B.				
DRWN:	J.C.W.				
CHK:	P.O.D.				
DATE:	8/14/96				
BY:	NO.	REVISION	DATE		

ELECTRICAL PLANS
600' SCALE MAP NO. 16 BLOCK NO. 6

WAVERLY
WASTEWATER PUMPING STATION
CONTRACT NO. 24-3457-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE AS SHOWN
SHEET 13 OF 19

3457
 WS/14
 Waverly WWPS

LIGHTING FIXTURE SCHEDULE		
TYPE	DESCRIPTION	MANUFACTURER & CAT.# (OR EQUAL)
A	ENCLOSED AND GASKETED FLUORESCENT WITH PLASTIC HOUSING AND LENS, 2-40 WATT LAMPS, LOW TEMP BALLAST.	HUBBELL EDL042R-SPDR-LI
B	SECURITY LIGHT WITH POLYCARBONATE LENS, BUILT-IN PHOTOCCELL AND 50 WATT HIGH PRESSURE SODIUM LAMP.	HUBBELL NRG-301-PC
C	WALL MOUNTED WRAP AROUND FLUORESCENT SUITABLE FOR WET LOCATIONS, 2-2FT LAMPS AND CLEAR ACRYLIC LENS.	PARAMOUNT 14222-120V
D	SIMILAR TO TYPE C BUT WITH 2-40 WATT, 4FT LAMPS AND LOW TEMP BALLAST.	PARAMOUNT 14432-120V
E	EXPLOSION PROOF INCANDESCENT WITH GUARD AND 200 WATT LAMP.	HUBBELL HLH-BG02200
F	INDUSTRIAL EMERGENCY BATTERY UNIT WITH 2-12V, 8W HALOGEN HEADS.	HUBBELL IMF12-50-2-P8H

PANEL SCHEDULE L					
120/240 VOLTS, 1 PHASE, 3 WIRE - SN - SURFACE					
CIR	FOR	BREAKER FR POLE CAL	CIR	FOR	BREAKER FR POLE CAL
1	LIGHTS - UPPER LEVEL	100 1 20	2	LIGHTS - PUMP ROOM	100 1 20
3	LIGHTS - WET WELL	100 1 20			
5	WATER HEATER	100 2 30	4	RECEPTS - UPPER LEVEL	100 1 20
7	PUMP CONTROLS	100 1 20	8	FAN F-3 (GENERATOR ROOM)	100 1 20
9	FANS F-1 & F-4 CONTROLS	100 1 20	10	OXINITE GENERATOR	100 1 20
11	BATTERY CHARGER	100 1 20	12	SPACE AND BUS	100 2 -
13	JACKET WATER HEATER	100 2 20			
15	FLOW METER & RECORDER	100 1 20	14	SUMP PUMPS	100 1 20
17	SPARE	100 1 20	16	T.R. BASEBOARD HEATER	100 1 20
19	SPARE	100 1 20	18	SPARE	100 1 20
21	SPACE AND BUS	100 1 -	20	SPARE	100 1 20
23	SPACE AND BUS	100 1 -	22	SPACE AND BUS	100 1 -
			24	SPACE AND BUS	100 1 -

MAIN BREAKER 100A, FRAME 2P, CALIB 80A
 * GFI TYPE BREAKER

EXHAUST AND RETURN AIR FAN SCHEDULE								
NO.	SERVICE	CFM	FAN RPM	S.P. (IN W.G.)	TYPE/ DRIVE	ELECTRICAL HP-V/PH/HZ	NOTES	MANUFACTURER & MODEL NO.
F-1	PUMP/ CONTROL RM	2300	1320	0.375	IL/BD	3/4-480/3/60	-	PENN CENTREX SX125BA
F-2	TOILET EXHAUST	75	1280	0.375	CAB/DD	48W-120/1/60	6, 12	PENN ZEPHYRETTE ZT
F-3	GENERATOR ROOM	675	1550	0.250	PR/DD	1/7-120/1/60	6	PENN BREEZEWAY P12R
F-4	WET WELL	1750	1020	0.500	US/BD	1/2-480/3/60	3, 9, 11	PENN DYNAMO D15

TYPES/DRIVES:
 RV - ROOF VENTILATOR PR - PROPELLER DD - DIRECT DRIVE
 IL - IN-LINE CENTRIFUGAL CAB - CABINET BD - BELT DRIVE
 US - UTILITY SET SP - SPECIAL VD - VARIABLE DRIVE

NOTES:
 1 PREFAB. CURB 6 BACKDRAFT DAMPER 11 EXPLOSION PROOF
 2 BUILT-UP CURB 7 MOTORIZED DAMPER 12 WALL CAP
 3 BIRD SCREEN (INLET) 8 DISCONNECT
 4 INSECT SCREEN 9 CORR. PROTECT. COAT.
 5 LOUVER 10 UL 762 (GREASE)

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	LIGHTING FIXTURE - FLUORESCENT - TYPE AS INDICATED
	LIGHTING FIXTURE - WALL MOUNTED - INCANDESCENT OR HID - TYPE AS INDICATED
	BATTERY POWERED EMERGENCY UNIT WITH INTEGRAL CHARGER - NUMBER OF HEADS AS INDICATED
S, S_2, S_3	SWITCH - SINGLE POLE, DOUBLE POLE, THREE WAY - MOUNTING HEIGHT 4'-0"
S^{WP}, S^{XP}	SWITCH - WEATHER PROOF, EXPLOSION PROOF - MOUNTING HEIGHT 4'-0"
	DUPLEX RECEPTACLE - 20A., 125V. - MOUNTING HEIGHT 18" UNLESS NOTED OTHERWISE
	GFI RECEPTACLE - 20A., 125V. - MOUNTING HEIGHT 18" UNLESS NOTED OTHERWISE
	SPECIAL RECEPTACLE WITH CONFIGURATION AS NOTED
	JUNCTION BOX - SIZE PER NEC OR AS INDICATED
	TIME SWITCH
	PANELBOARD - TYPE AS NOTED - MOUNTING HEIGHT 6'-6" TO TOP
	CONDUIT - IN OR ON CEILING OR WALLS
	CONDUIT - IN OR UNDER FLOOR
	HOMERUN TO PANEL - NUMBER OF ARROWS INDICATE NUMBER OF CIRCUITS AND NUMBER OF CROSSLINES INDICATES NUMBER OF #12 CONDUCTORS - WHERE NO CROSSLINES APPEAR 2#12 CONDUCTORS ARE IMPLIED
	DISCONNECT SWITCH - FUSED, NON-FUSED - TYPE AND RATING AS INDICATED
	MAGNETIC STARTER, COMBINATION TYPE STARTER - TYPE AND RATING AS INDICATED
M, S_M	MANUAL MOTOR STARTER, H.P. RATED SWITCH - MOUNTING HEIGHT 4'-0" - TYPE AND RATING AS REQUIRED
	ENCLOSED RELAY
	CONTROL DEVICE - TYPE AS NOTED
	UNIT HEATER - TYPE AS NOTED
M	MOTOR - HORSEPOWER AS NOTED
G	GENERATOR - SIZE AND TYPE AS NOTED
T	TRANSFORMER - DRY TYPE - RATING AS INDICATED
J	BASEBOARD HEATER
T	THERMOSTAT
M	ELECTRIC SERVICE METER
RVSS	REDUCED VOLTAGE SOLID STATE STARTER
FVNR	FULL VOLTAGE NON-REVERSING STARTER
WP	WEATHERPROOF
XP	EXPLOSION PROOF

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Robert W. Benjamin CHIEF, BUREAU OF UTILITIES 10-22-96 DATE	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND [Signature] CHIEF, DEVELOPMENT ENGINEERING DIVISION 10/21/96 DATE	Fisher, Collins & Carter, Inc. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTENNIAL SQUARE OFFICE PARK 10272 Baltimore National Pike Ellicott City, Maryland 21042 (410) 461-2855	#9757 TERRELL A. FISHER	DES: M.L.B. DRWN: J.C.W. CHK: P.O.D. DATE: 8/14/96	BY NO. REVISION DATE	ELECTRICAL LEGEND AND SCHEDULES	CONTRACT NO. 24-3457-D WAVERLY WASTEWATER PUMPING STATION HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 14 OF 19
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CONTRACT NO. 24-3457-D
 WAVERLY
 WASTEWATER PUMPING STATION
 HOWARD COUNTY, MARYLAND

MOTOR CONTROL CENTER "MCC" SCHEDULE

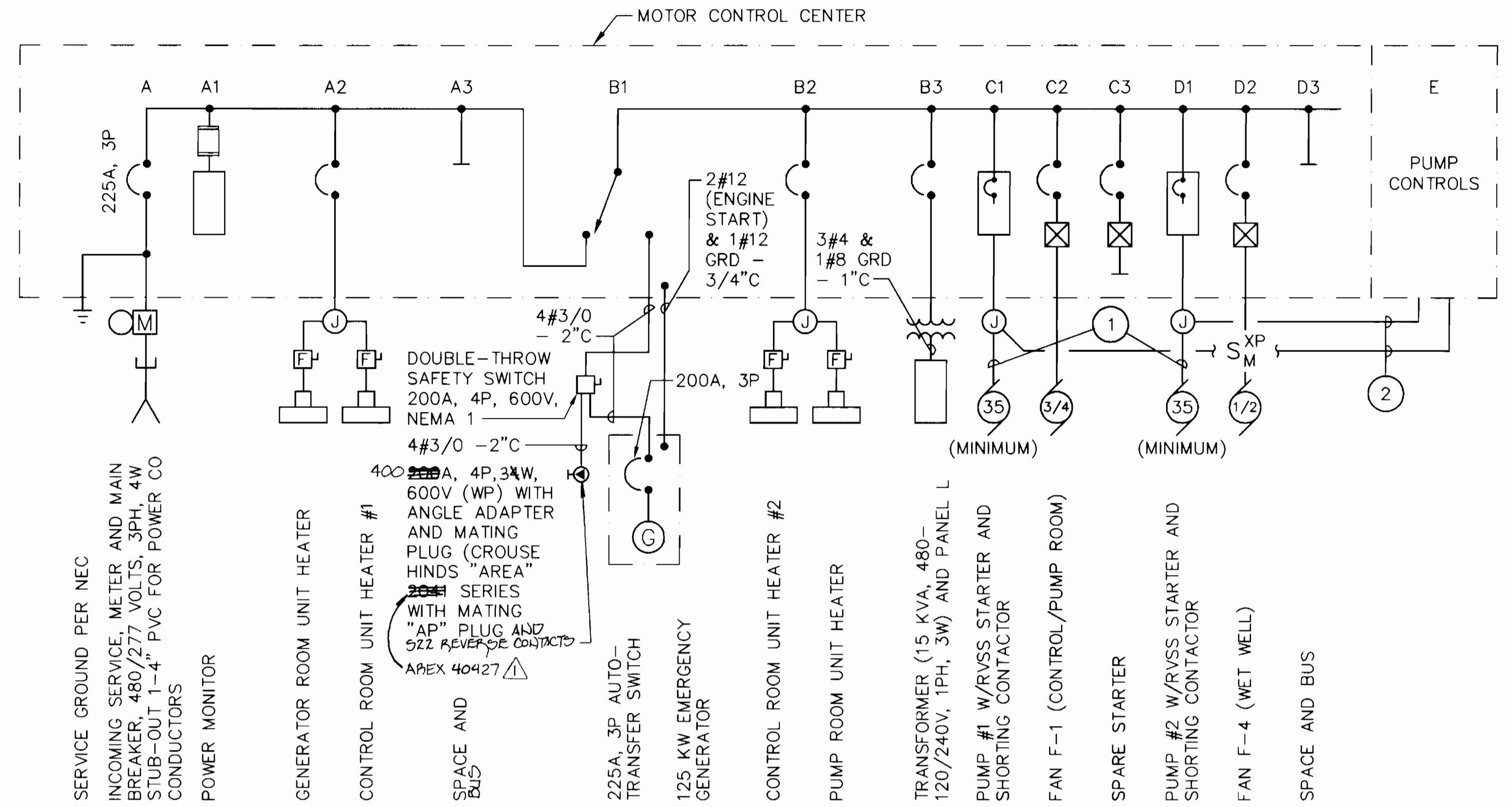
480 VOLTS - 3 PHASE - 3 WIRE - 600A. BUS - BONDED AND GROUNDED NEUTRAL TERMINATION													
CIR. NO.	EQUIPMENT DESCRIPTION	HP	BASIC DEVICE	AUX. DES.	CIRCUIT BREAKER			WIRE		GRD. WIRE SIZE	CONDUIT SIZE	LOAD (FLA)	CONTROL DIAGRAM
					FRAME	POLES	CAL.	NO.	SIZE				
A	INCOMING SERVICE 480Y/277V, 3PH, 4W	-	-	-	-	-	-	4	4/0	-	2-1/2"	-	-
A1	MAIN CIRCUIT BREAKER & POWER CIRCUIT MONITOR	-	CIRCUIT BREAKER	-	225	3	225	-	-	-	-	-	-
A2	UNIT HEATERS (GEN RM & CONTROL RM)	-	CIRCUIT BREAKER	-	100	3	30	3	10	10	3/4"	18	-
A3	SPACE AND BUS	-	-	-	-	-	-	-	-	-	-	-	-
B1	AUTOMATIC TRANSFER SWITCH, 225A, 3P	-	-	-	-	-	-	-	-	-	-	-	-
B2	UNIT HEATERS (PUMP RM & CONTROL RM)	-	CIRCUIT BREAKER	-	100	3	30	3	10	10	3/4"	18	-
B3	TRANSFORMER (PANEL L) 15 KVA	-	CIRCUIT BREAKER	-	100	2	40	2	8	10	3/4"	31	-
C1	PUMP #1	MIN 35	RVSS STARTER	3,4	100	3	90	3	6	8	1"	52	SEE SHT 16
C2	F-1 (CONTROL/PUMP ROOM)	3/4	SIZE 0 FVNR STARTER	1,2,3	100	3	15	3	12	12	3/4"	1	SEE SHT 16
C3	SPARE STARTER	-	SIZE 0 FVNR STARTER	1,2,3	100	3	15	-	-	-	-	5	-
D1	PUMP #2	MIN 35	RVSS STARTER	3,4	100	3	90	3	6	8	1"	52	SEE SHT 16
D2	F-4 (WET WELL)	1/2	SIZE 0 FVNR STARTER	1,2,3	100	3	15	3	12	12	3/4"	1	SEE SHT 16
D3	SPACE AND BUS	-	-	-	-	-	-	-	-	-	-	-	-

AUXILIARIES FOR MOTOR CONTROL CENTER

- HAND-OFF-AUTOMATIC SWITCH
- INDICATING LIGHTS
- 120 VOLTS CONTROL POWER TRANSFORMER
- ALARM/STATUS/CONTROLS

NOTES

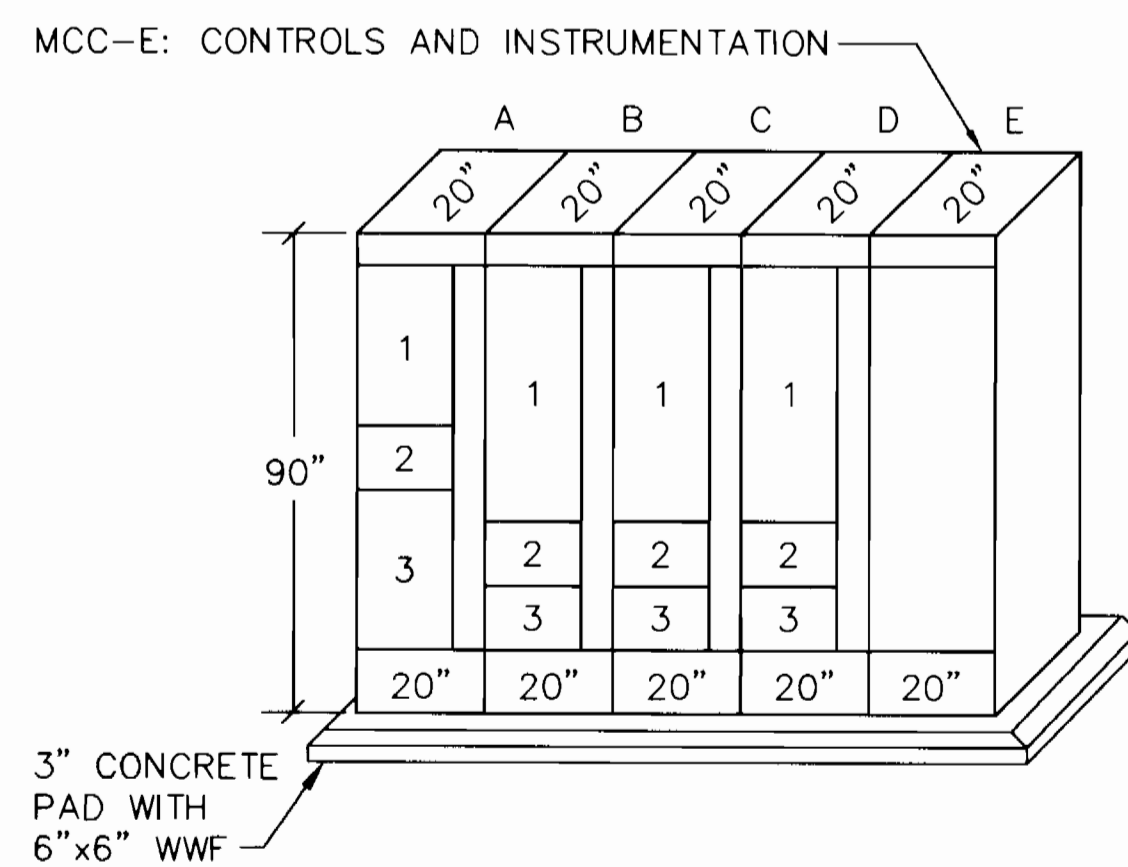
TOTAL CONNECTED LOAD: 178 AMPERES
ANTICIPATED MAXIMUM DEMAND: 145 AMPERES



ONE-LINE DIAGRAM

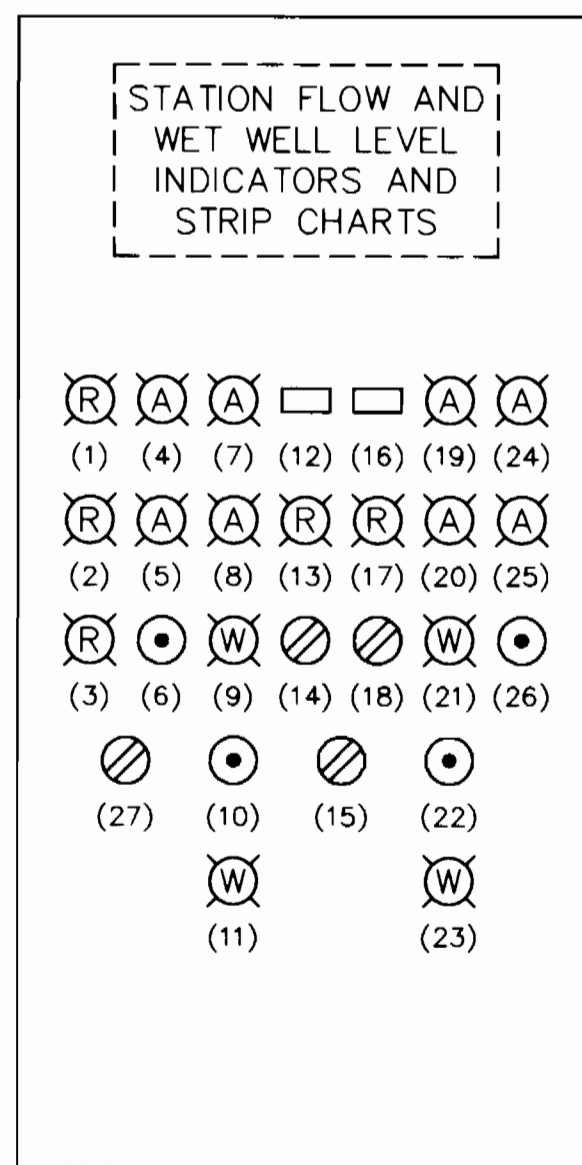
NO SCALE

- POWER/ALARM CABLE FURNISHED WITH PUMP MOTOR.
- MOTOR ALARM WIRING: 3#12 & 1#12 GRD - 3/4"C.



MOTOR CONTROL CENTER ELEVATION

NO SCALE

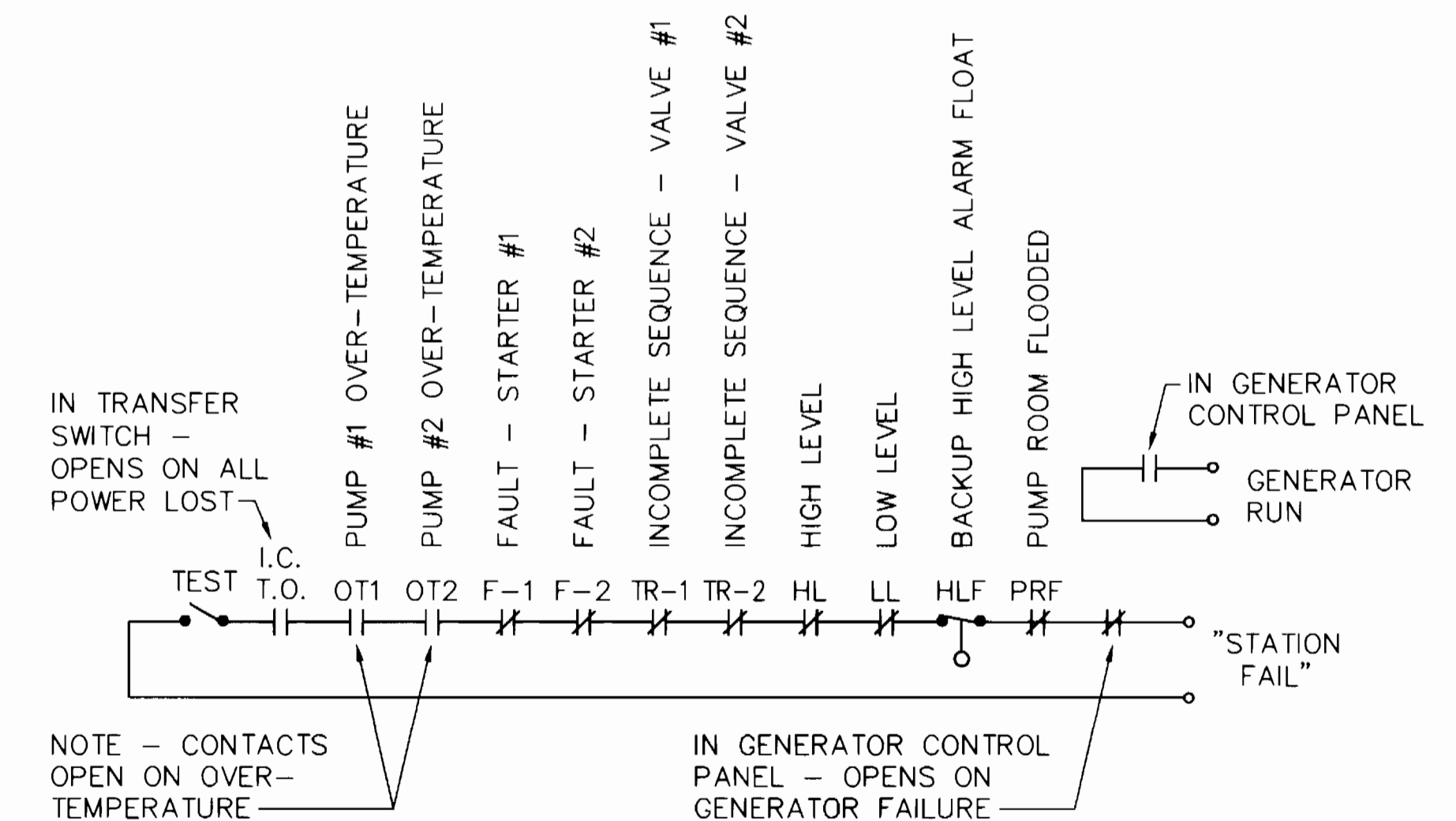


MCC-E ELEVATION

NO SCALE

- HIGH WET WELL LEVEL
- LOW WET WELL LEVEL
- PUMP ROOM FLOODED
- PUMP #1 OVER-TEMPERATURE
- PUMP #1 SEAL LEAK
- PUMP #1 OVER-TEMPERATURE/SEAL LEAK RESET
- PUMP #1 VALVE FULLY OPEN
- PUMP #1 VALVE FULLY CLOSED
- VALVE #1 - INCOMPLETE SEQUENCE
- VALVE #1 INCOMPLETE SEQUENCE RESET
- VALVE/MOTOR #1 FAILURE/LOCKOUT
- PUMP #1 ELAPSED TIME
- PUMP #1 RUNNING
- PUMP #1 H-O-A SELECTOR SWITCH
- SELECTOR SWITCH: PUMP #1 LEAD; AUTOMATIC; PUMP #2 LEAD
- PUMP #2 ELAPSED TIME
- PUMP #2 RUNNING
- PUMP #2 H-O-A SELECTOR SWITCH
- PUMP #2 VALVE FULLY OPEN
- PUMP #2 VALVE FULLY CLOSED
- VALVE #2 - INCOMPLETE SEQUENCE
- VALVE #2 INCOMPLETE SEQUENCE RESET
- VALVE/MOTOR #2 FAILURE/LOCKOUT
- PUMP #2 OVER-TEMPERATURE
- PUMP #2 SEAL LEAK
- PUMP #2 OVER-TEMPERATURE/SEAL LEAK RESET
- TELEMETRY SYSTEM TEST SWITCH

NOTE: (A) ; A = AMBER; R = RED; W = WHITE



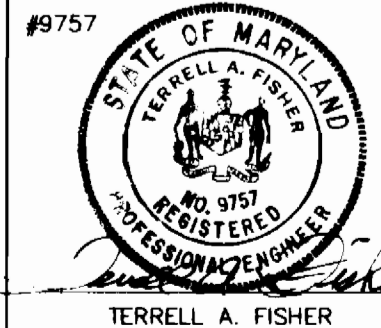
TELEMETRY ALARMS

NO SCALE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Fisher, Collins & Carter, Inc.
CIVIL ENGINEERING CONSULTANTS &
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DES:	M.L.B.	PREJ	AS-BUILT CONDITIONS
DRWN:	J.C.W.		
CHK:	P.O.D.		
DATE:	8/14/96		
BY:	NO.	REVISION	DATE

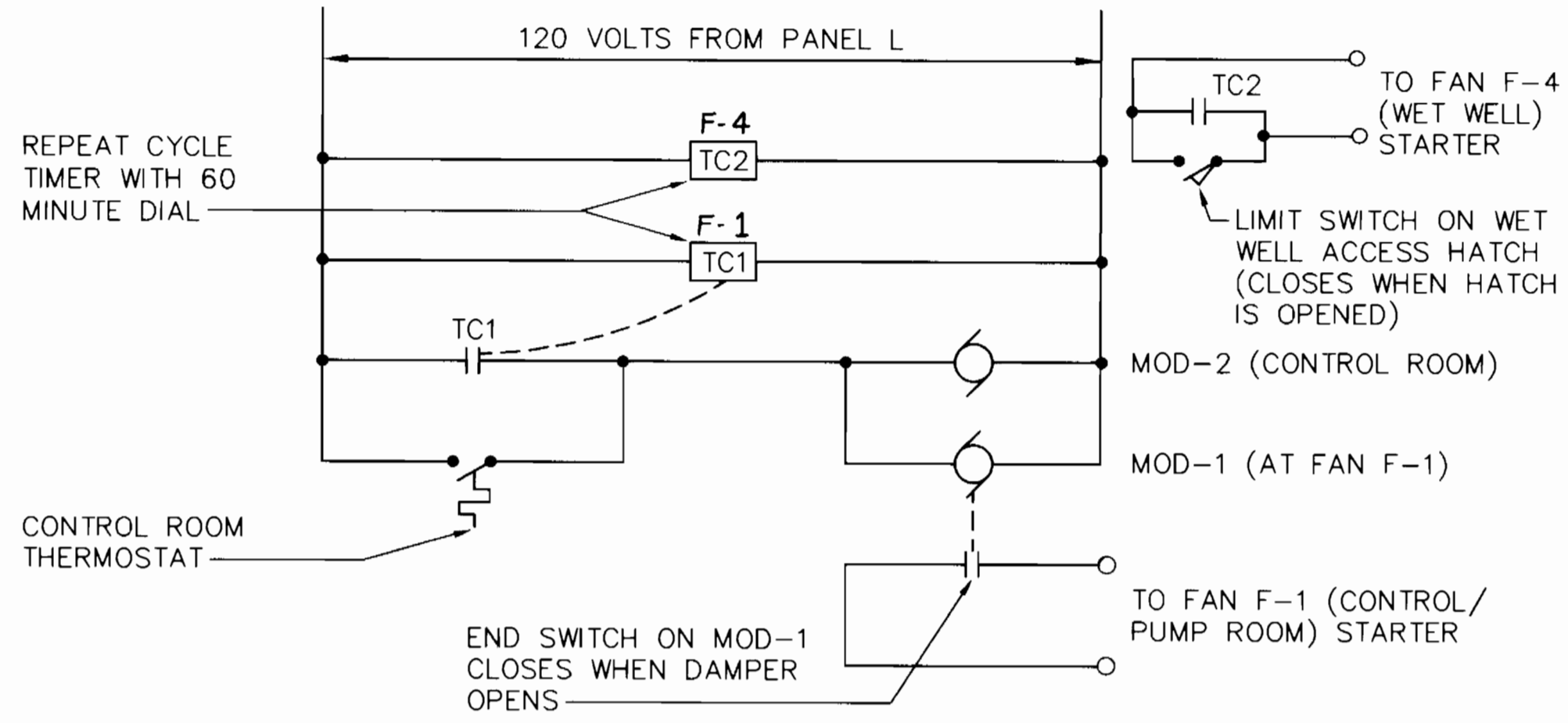
ELECTRICAL ONE-LINE DIAGRAM
AND MCC DETAILS

WAVERLY
WASTEWATER PUMPING STATION
CONTRACT NO. 24-3457-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE
AS SHOWN
SHEET
15 OF 19

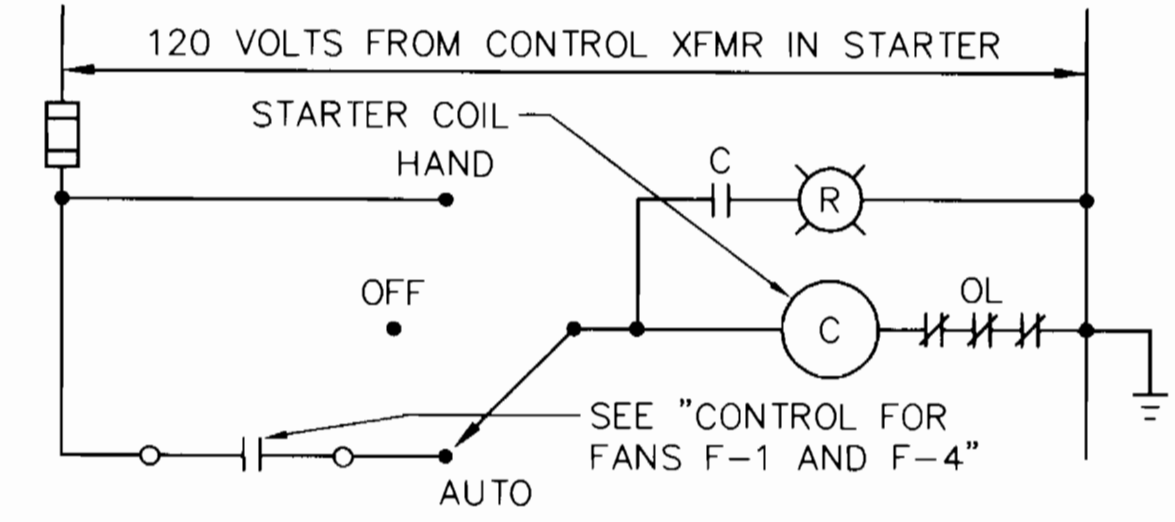
3457 Ws/15 Waverly WPPS

CONTRACT NO. 24-3457-D
WAVERLY WASTEWATER PUMPING STATION
HOWARD COUNTY, MARYLAND



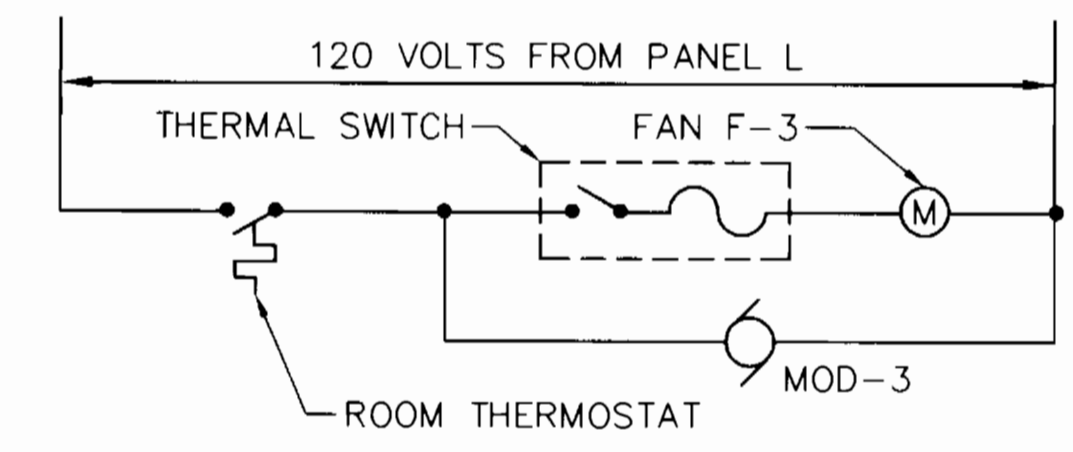
CONTROLS FOR FANS F-1 AND F-4

NO SCALE
(CONTROL/PUMP ROOM AND WET WELL)



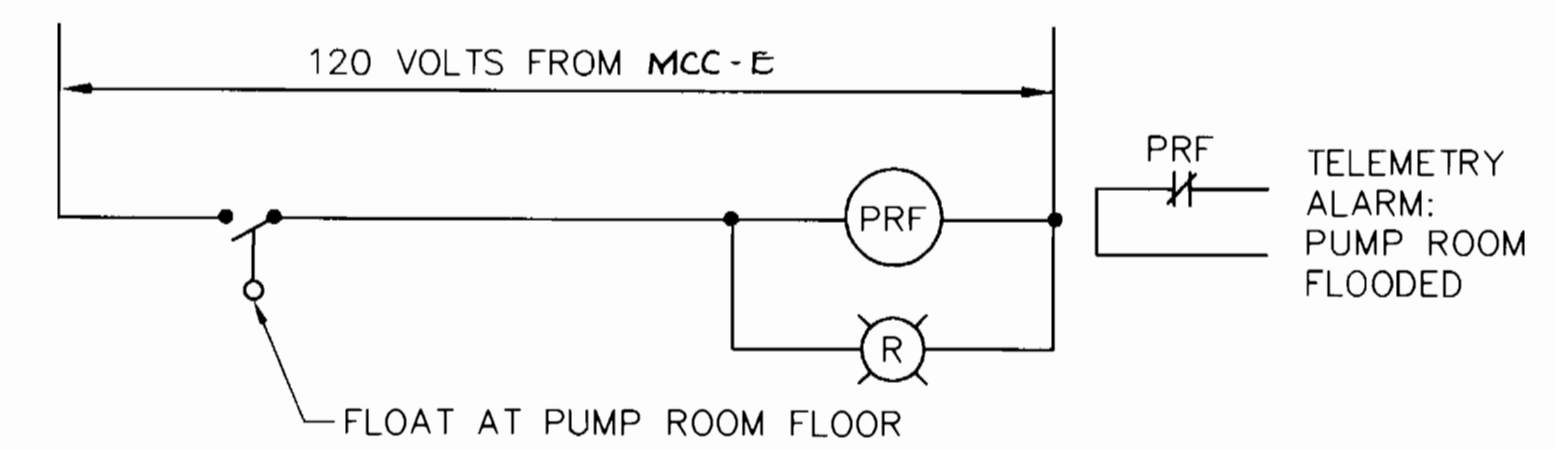
FANS F-1 AND F-4

NO SCALE
(TYPICAL)



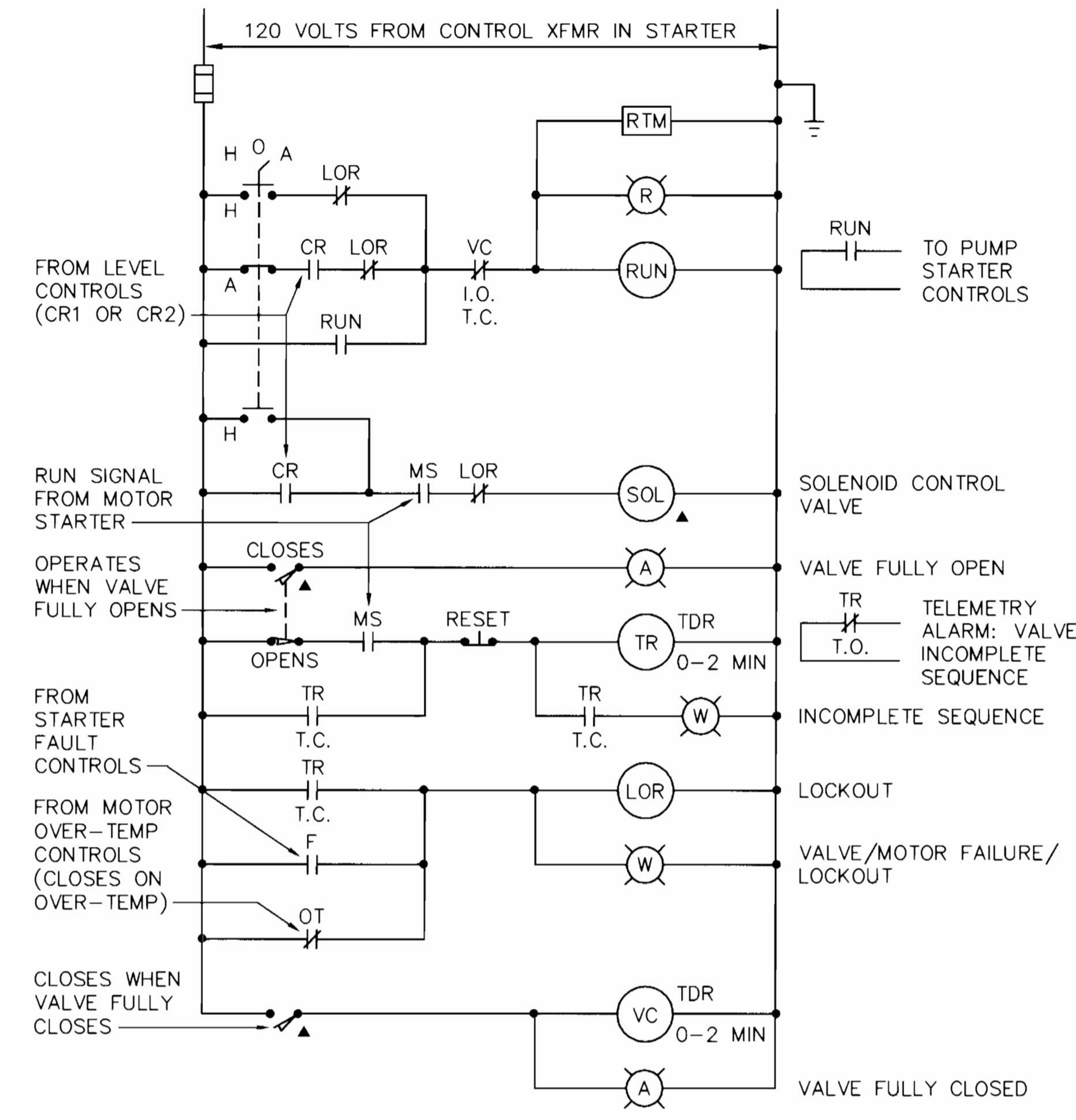
FANS F-3

NO SCALE
(GENERATOR ROOM)



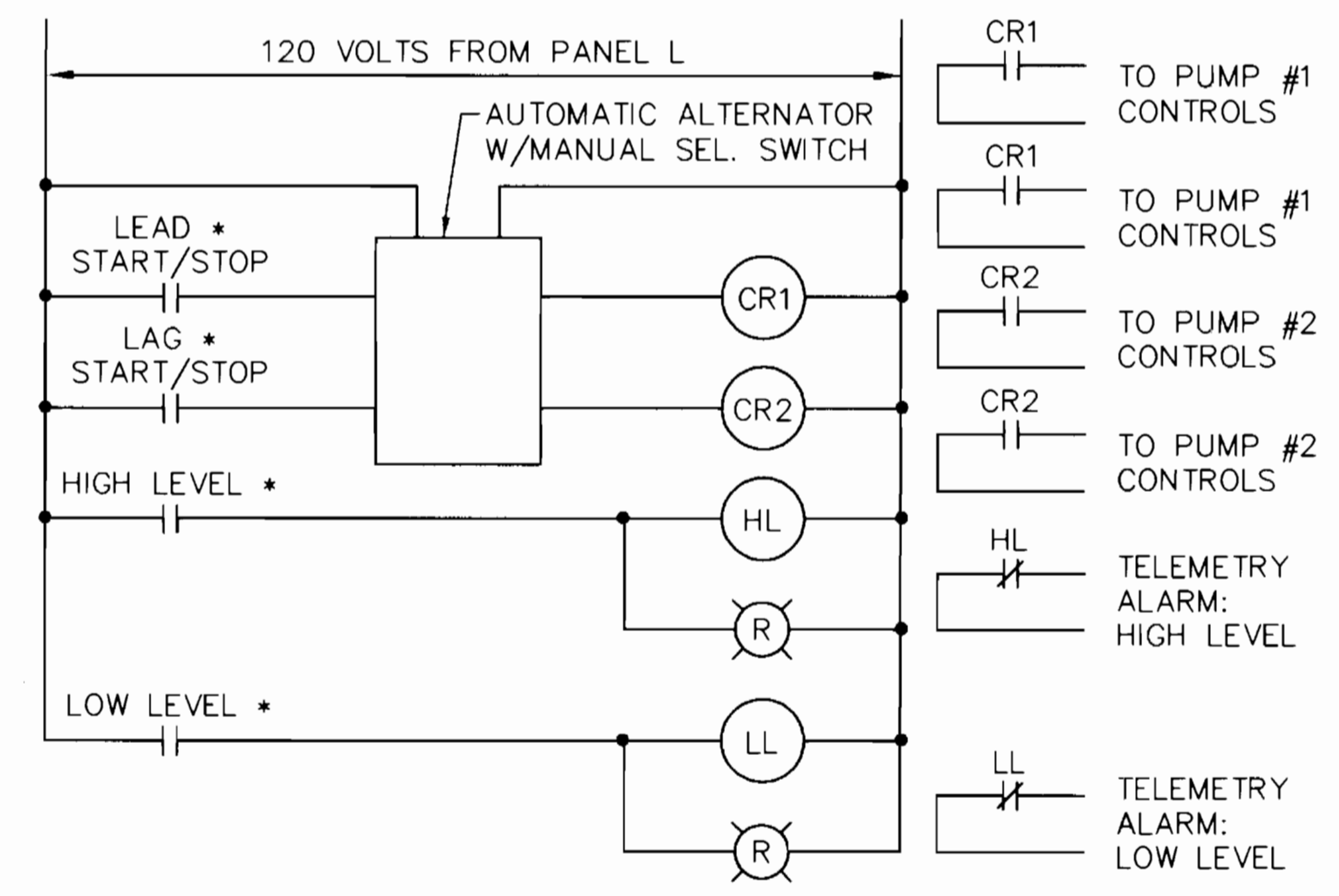
PUMP ROOM FLOODED

NO SCALE



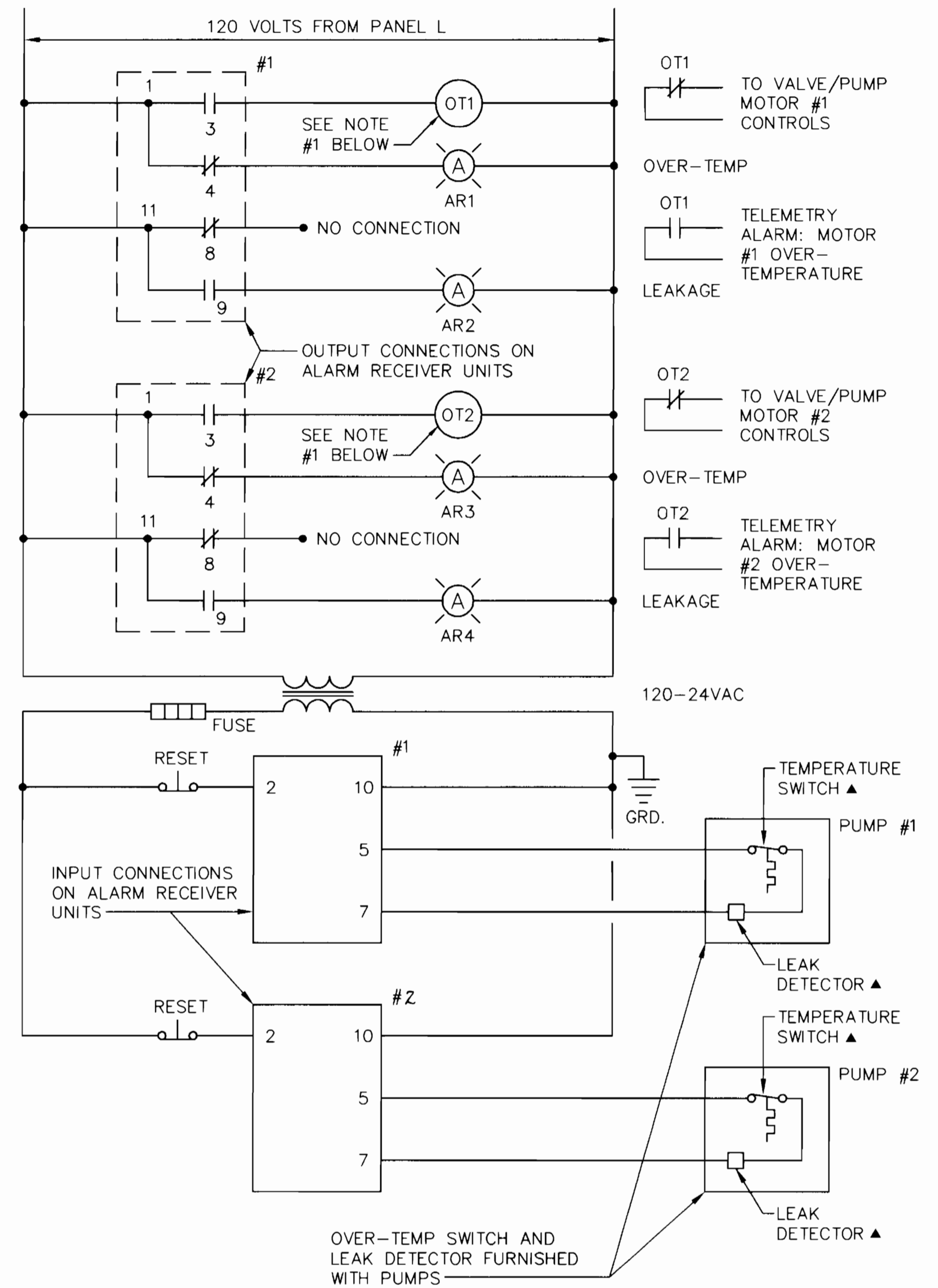
VALVE/PUMP CONTROLS

NO SCALE
(TYPICAL FOR EACH PUMP)
NOTE: ALL DEVICES ARE IN MCC-E UNLESS NOTED BY ▲ (REMOTE DEVICE)



LEVEL CONTROLS

NO SCALE
* FROM OUTPUT RELAYS IN MILLTRONICS MULTIRANGER PLUS CONTROL UNIT



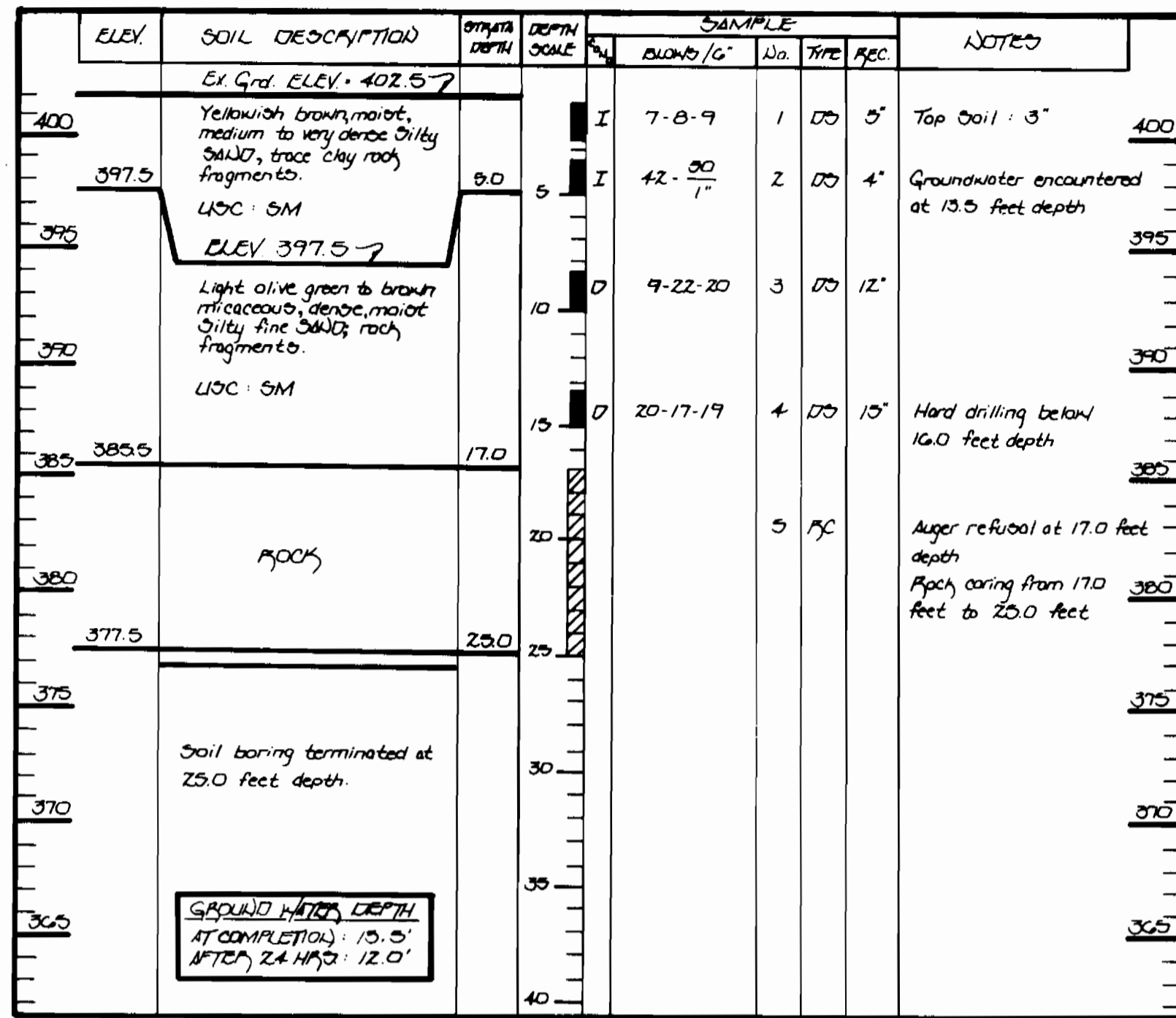
PUMP LEAK DETECTION AND OVER-TEMPERATURE CONTROLS

NO SCALE

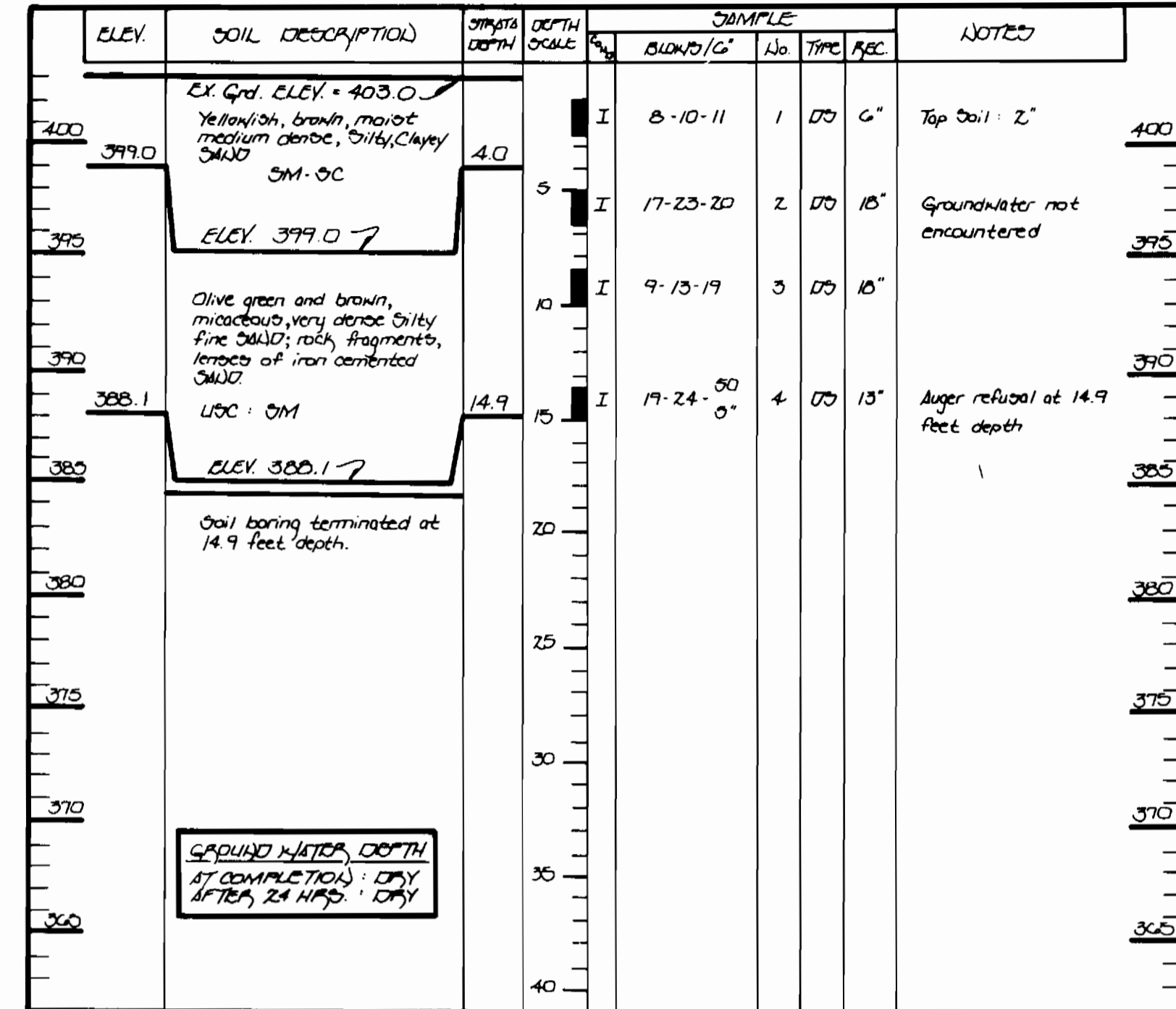
- NOTES:
- OVER-TEMPERATURE RELAYS OT1 AND OT2 ARE NORMALLY ENERGIZED. THEY DROP-OUT ON AN OVER-TEMPERATURE CONDITION.
 - ALL DEVICES ARE IN MCC-E UNLESS NOTED BY ▲ (REMOTE DEVICE)

CONTRACT NO. 24-3457-D
WAVERLY WASTEWATER PUMPING STATION
HOWARD COUNTY, MARYLAND

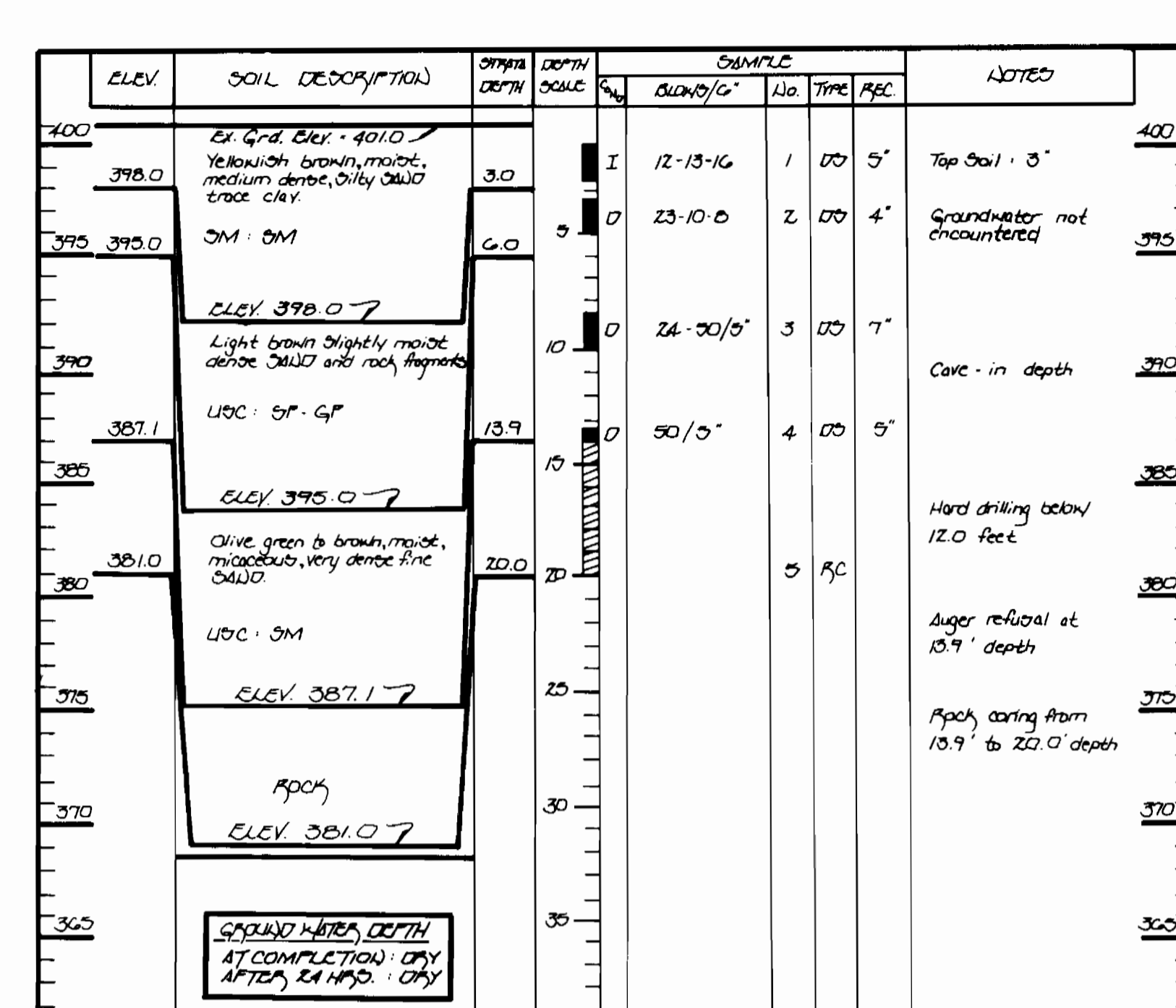
3457 W9/10 WAVERLY WWPS



BORING B-1



BORING B-2

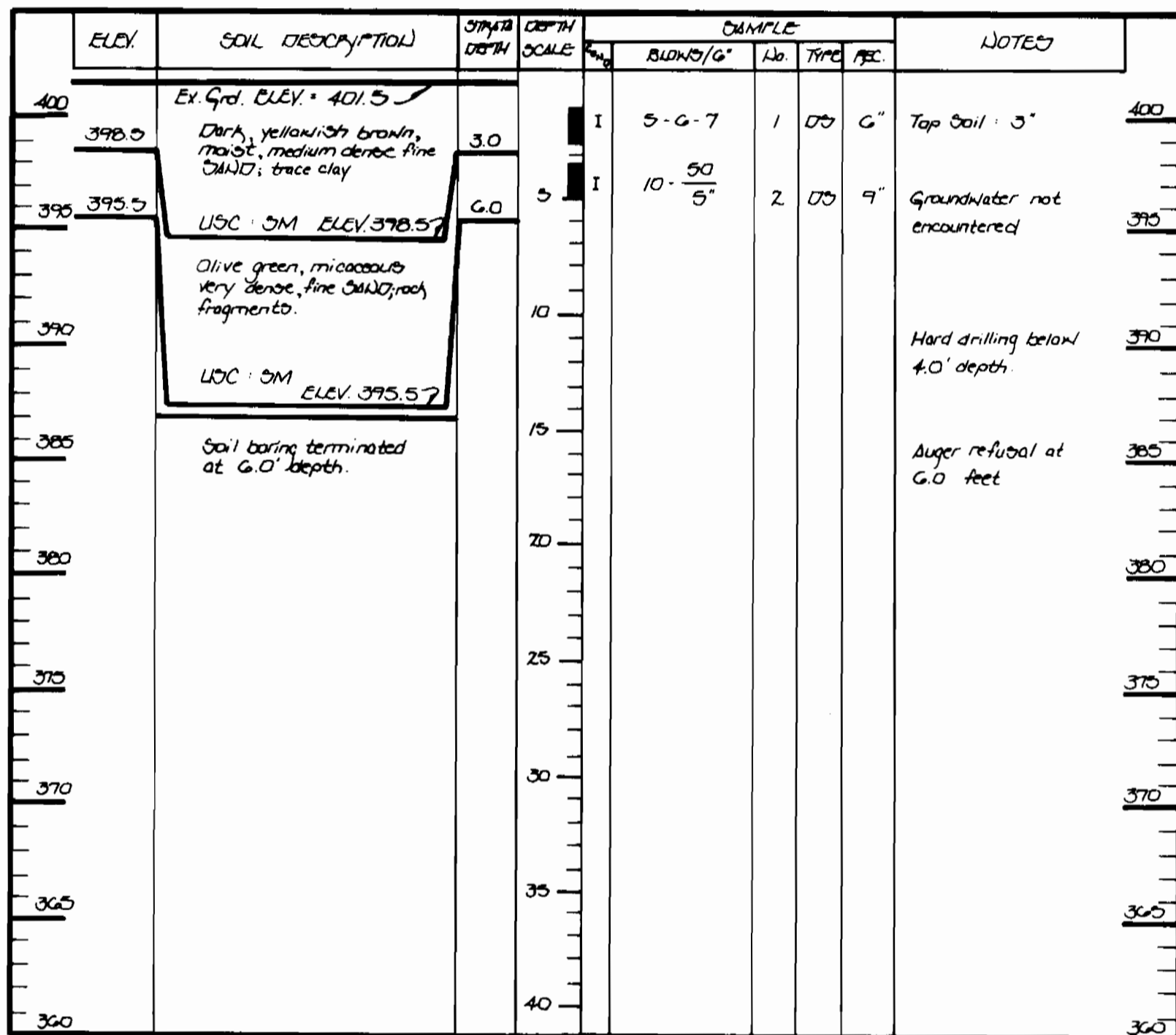


BORING B-3

DESIGN FLOW TABULATION CHART

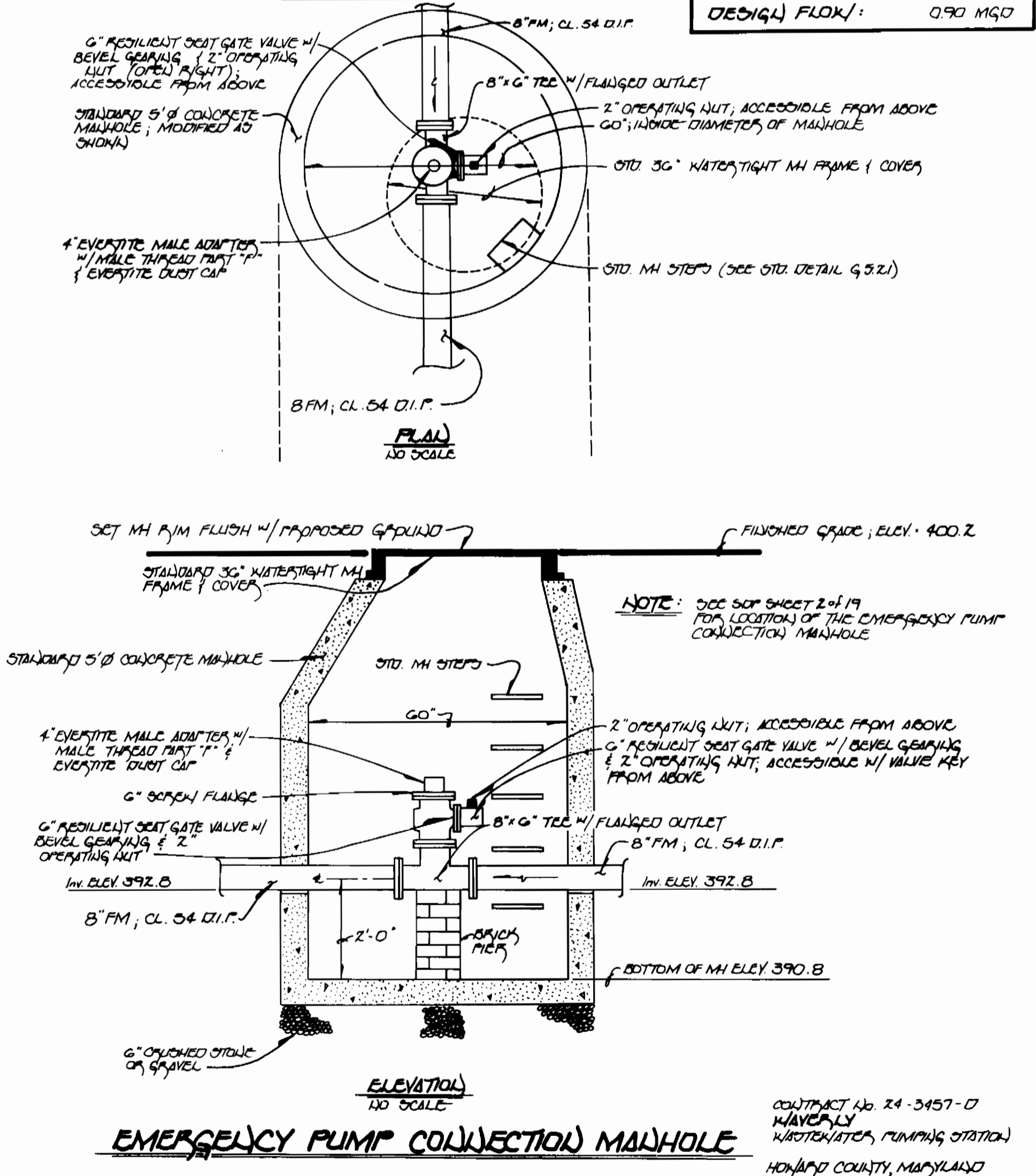
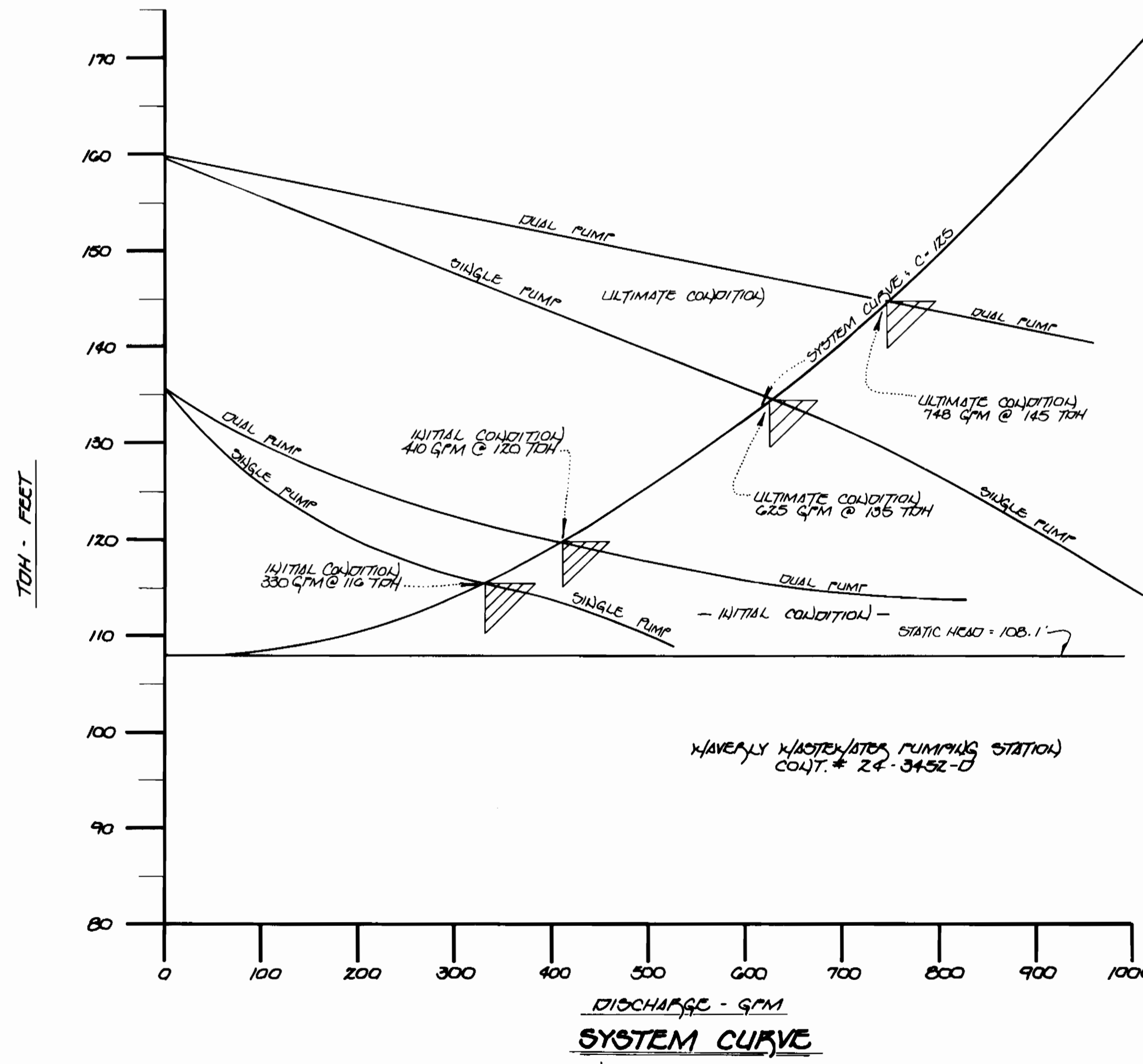
NO.	AREA	ULTIMATE POPULATION (PERSONS)	AVERAGE DOMESTIC FLOW GPD	PEAK DOMESTIC FLOW GPD	NON-DOMESTIC FLOW GPD	INFILTRATION GPD	TOTAL DESIGN FLOW GPD
1	A-20	210.0	13,170	60,710	---	0,432	69,142
2	A-20	80.0	9,792	23,184	---	0,220	26,404
3	A-20	186.0	13,392	53,368	---	7,440	61,008
4	A-20	101.0	7,302	29,232	---	4,060	33,292
5	A-20	17.0	1,260	5,040	---	700	5,740
6	A-20	70.0	5,040	20,160	---	2,800	22,960
7	A-20	68.2	4,910	19,642	---	2,728	22,370
8	A-20	136.4	9,821	39,283	---	5,456	44,759
9	A-20	18.6	1,339	5,357	---	744	6,101
10	A-20	161.2	11,600	46,420	---	6,448	52,074
11	A-20	49.0	3,528	14,112	---	1,960	19,072
12	A-20	56.0	4,032	16,128	---	2,240	18,368
13	A-20	56.0	4,032	16,128	---	2,240	18,368
14	A-20	186.0	13,392	53,368	---	7,440	61,008
15	A-20	59.0	4,284	17,136	---	2,380	19,516
16	A-20	53.0	3,859	15,437	---	2,144	17,581
17	A-20	35.0	2,520	10,080	---	1,400	11,480
18	A-20	111.0	8,035	32,141	---	4,464	36,605
19	A-20	74.4	5,357	21,427	---	2,976	24,403
20	B-1	---	---	---	15,400	---	15,400
21	B-1	---	---	---	14,400	---	14,400
22	REC	---	---	---	19,000	---	19,000
23	REC	---	---	---	17,000	---	17,000
24	A-20	86.0	6,250	24,998	---	3,472	28,470
25	A-20	37.2	2,678	10,714	---	1,488	12,202
26	A-20	43.4	3,125	12,499	---	1,756	14,255
27	A-20	74.4	5,357	21,427	---	2,976	24,403
28	A-20	35.0	2,520	10,080	---	1,400	11,480
29	A-20	24.0	1,764	7,056	---	980	8,036
30	A-20	142.0	10,267	41,069	---	5,740	46,775
31	REC	---	---	---	35,000	---	35,000
32	A-20	267.0	19,262	77,126	---	10,712	87,838
TOTALS			2,443.0	175,932	703,728	98,800	917,440

DESIGN FLOW: 0.90 MG/D



BORING B-4

SOIL BORING PROFILES



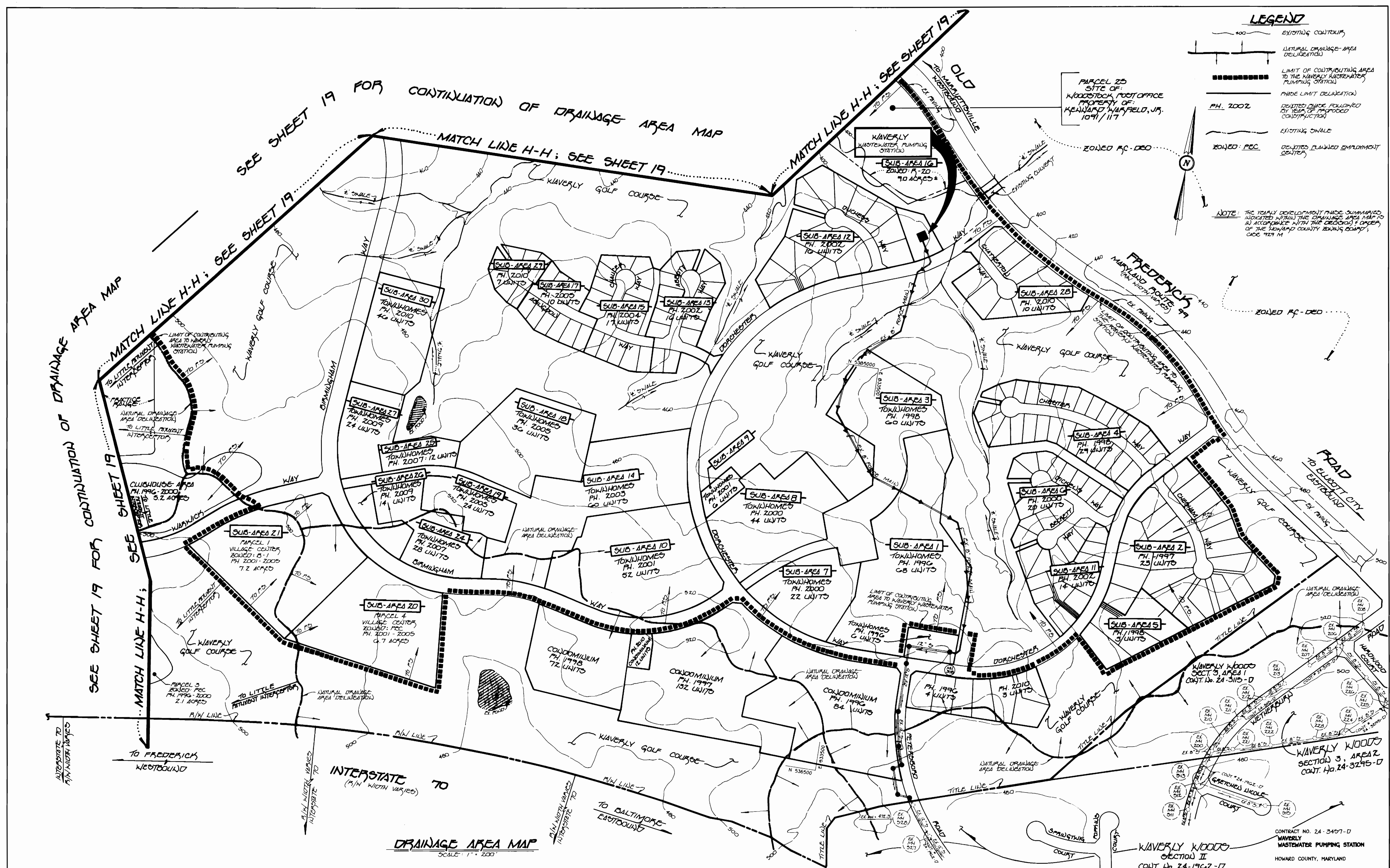
EMERGENCY PUMP COLLECTION MANHOLE

- NOTES:**
- SEE SHEET 1 OF 3 (SHEET 2 OF 19) FOR LOCATIONS OF THE SOIL BORINGS AT THE PUMPING STATION SITE.
 - LEGEND FOR CONVICTION: 'I' DENOTES 'INTEGRITY'; 'D' DENOTES 'DISINTEGRATED'.
 - STANDARD PENETRATION TEST (SPT) TAKEN WITH 2" O.D. SAMPLER; 120 POUND HAMMER FALLING 30 INCHES; COUNT AT 2" INTERVALS.
 - LEGEND FOR SAMPLE TYPE: 'DR' DENOTES 'DRY'; 'S' DENOTES 'SATURATED'; 'FC' DENOTES 'FINE SAND'.
 - BORING METHOD IS HOLLOW STEM AUGER.

SOIL BORING PROFILES

WAVERLY WWPS
WS/17
3457

3457 WS/18 WAWERLY WWPS



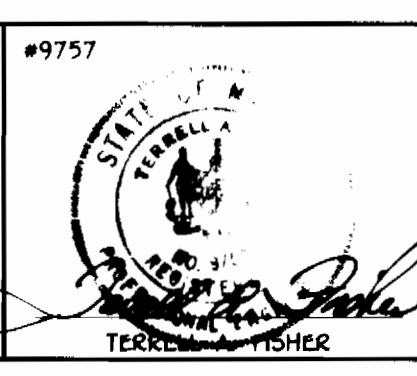
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert Beaman
CHIEF, BUREAU OF UTILITIES
12-22-96
DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

Michael J. ...
DATE

Fisher, Collins & Carter, Inc.
CIVIL ENGINEERING CONSULTANTS & SURVEYORS
CENTENNIAL SQUARE OFFICE BUILDING
10272 BALTIMORE NATIONAL PIKE
CLLICOFF, CITY, MARYLAND 21024
(410) 461-2855



DES: J.M.M. P.W.K.	DATE: 8/7/96	BY: NO.	REVISION
DRWN: J.M.M.			
CHK: P.W.K.			

MISCELLANEOUS DETAILS
DRAINAGE AREA MAP

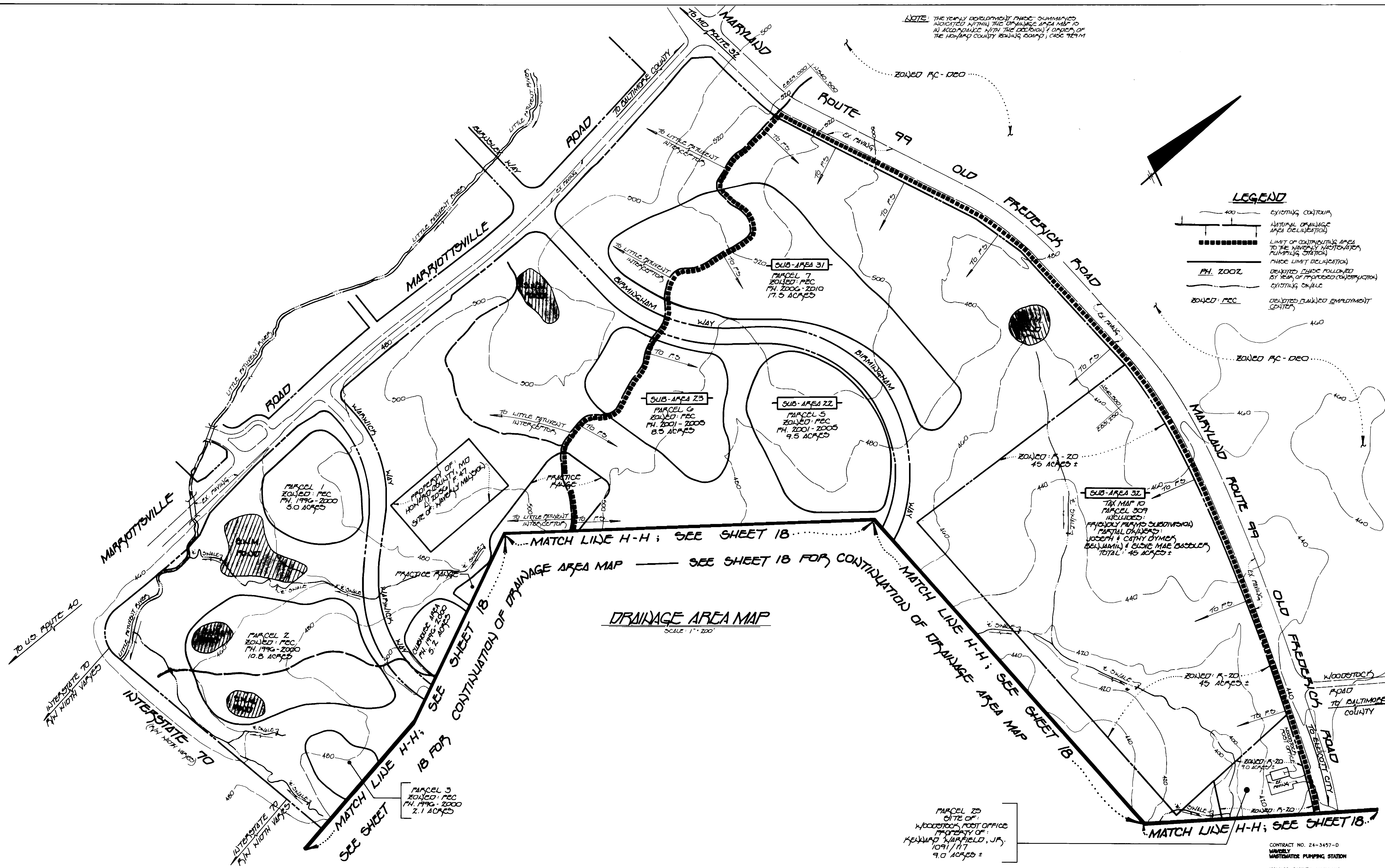
600' SCALE MAP NO. 16 BLOCK NO. 6

WAWERLY
WASTEWATER PUMPING STATION
CONTRACT NO. 24-3457-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 18 OF 19

3457
WS/19
WAVERLY W.W.P.S.

NOTE: THE YEARLY DEVELOPMENT PHASE SUMMARIES INDICATED WITHIN THE DRAINAGE AREA MAP IS IN ACCORDANCE WITH THE DECISIONS & OPINION OF THE HOWARD COUNTY ZONING BOARD, CASE #241M



LEGEND

- EXISTING CONTOUR
- NATURAL DRAINAGE AREA DELINEATION
- LIMIT OF CONTRIBUTING AREA TO THE WAVERLY WASTEWATER PUMPING STATION
- PHASE LIMIT DELINEATION
- PH. 2002Z DELETED PHASE FOLLOWED BY YEAR OF PROPOSED CONSTRUCTION EXISTING OR AILE
- ZONED: PEC DELETED PLANNED EMPLOYMENT CENTER

DRAINAGE AREA MAP
SCALE: 1" = 200'

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>R. J. Berman</i> CHIEF, BUREAU OF UTILITIES	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND <i>John P. ...</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	Fisher, Collins & Carter, Inc. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTENNIAL SQUARE OFFICE PARK 10272 Baltimore National Pike Beltsville City, Maryland 21042 (410) 481-2855		DES: H.J.M./P.W.K.		MISCELLANEOUS DETAILS DRAINAGE AREA MAP	WAVERLY WASTEWATER PUMPING STATION CONTRACT NO. 24-3457-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN
				DRWN: J.M.M.				DATE: 8/7/90