

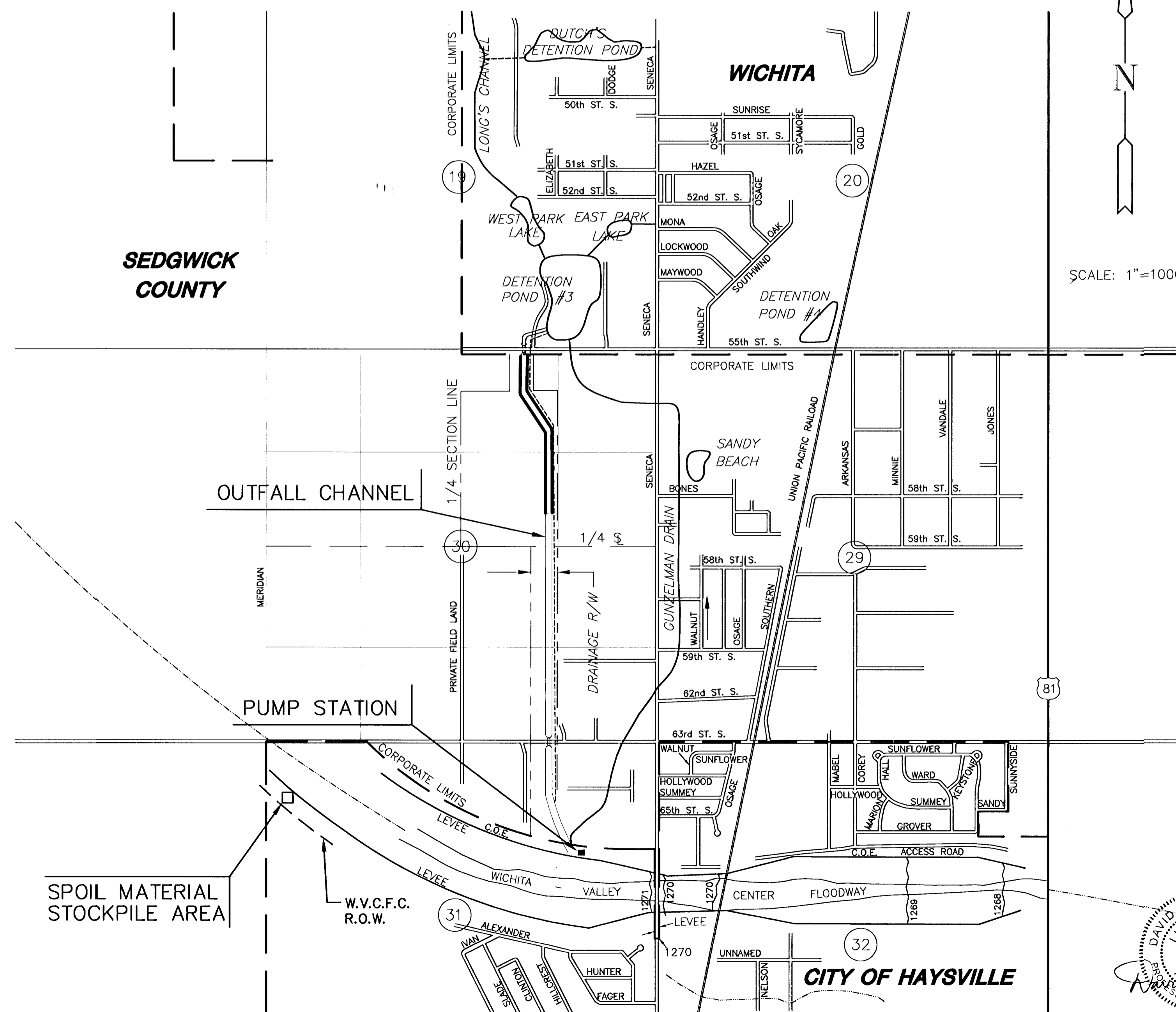
SOUTH SENECA STORMWATER PUMP STATION

PROJECT NO. 468-82586

CITY OF WICHITA, KANSAS
MICHAEL E. LINDEBAK, CITY ENGINEER

MAY, 1996

660761
INDEX NO. 724252



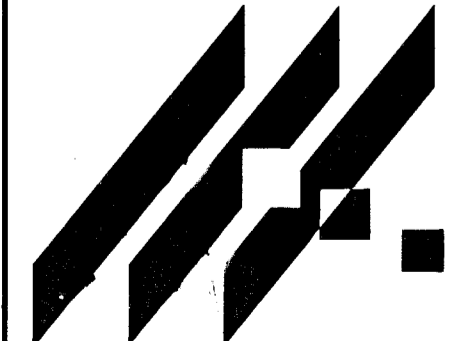
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APPENDIX	
A-1	ITT FLYGT SUBMERSIBLE PROPELLER PUMPS

SCALE: 1"=1000'

NGVD = 1187.4 + WICHITA DATUM

RECORD DRAWINGS 6-12-98



MID-KANSAS ENGINEERING
CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

**SOUTH SENECA DRAINAGE IMPROVEMENTS
DRAINAGE OUTFALL PUMP STATION**

PROJECT NAME

TITLE SHEET

SHEET TITLE

DAC	RRT	RCB
DESIGN BY:	DRAWN BY:	CHECKED BY:
MAY, 1996	93035	1 / 30
DATE	JOB NO.	SHEET / OF

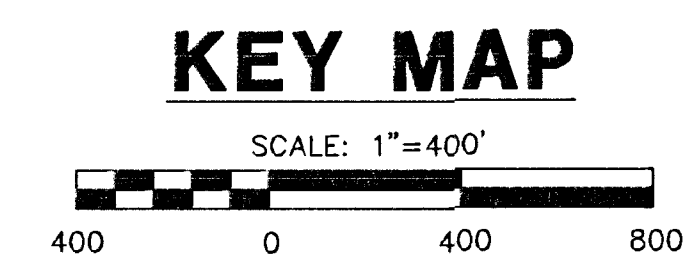
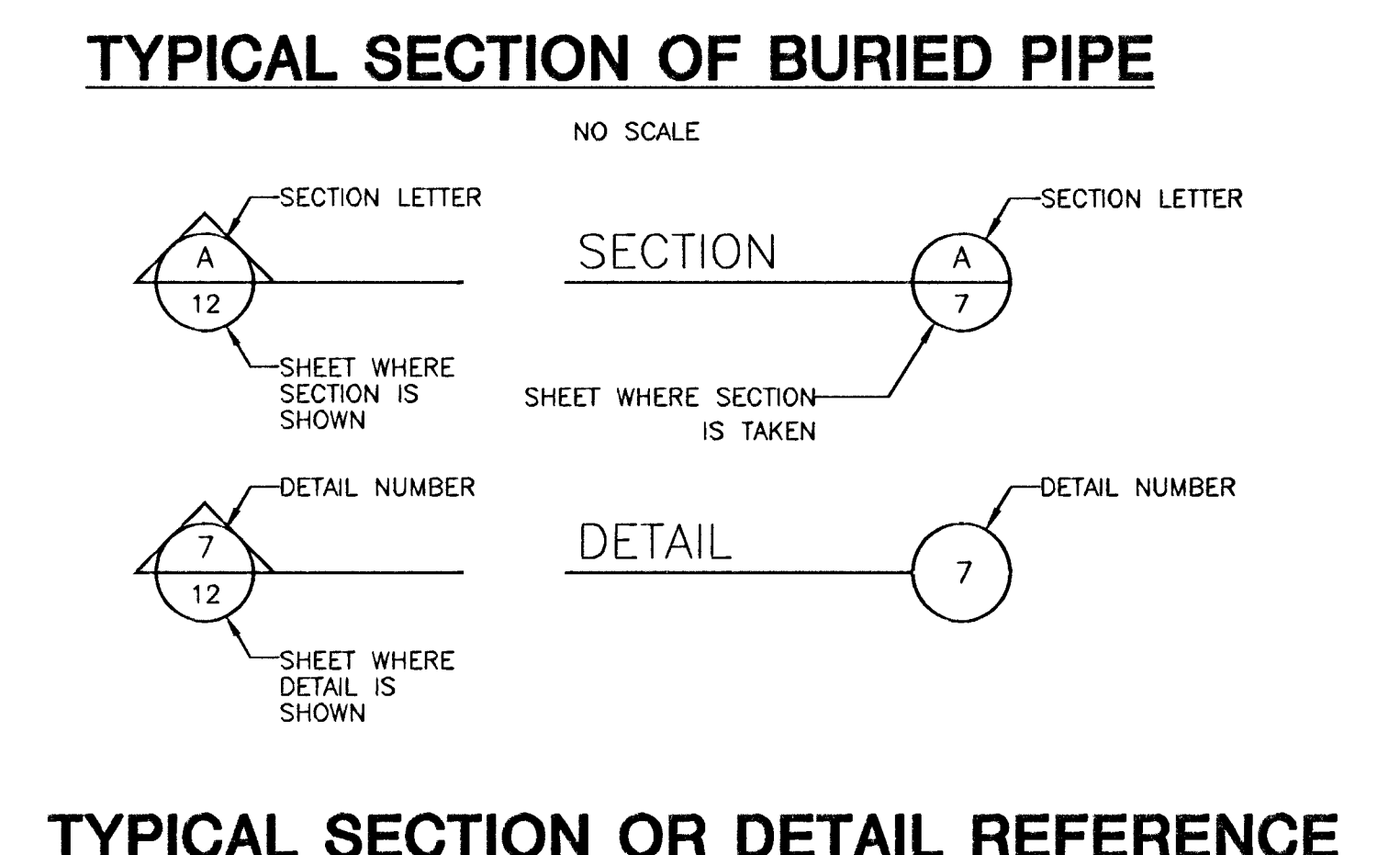
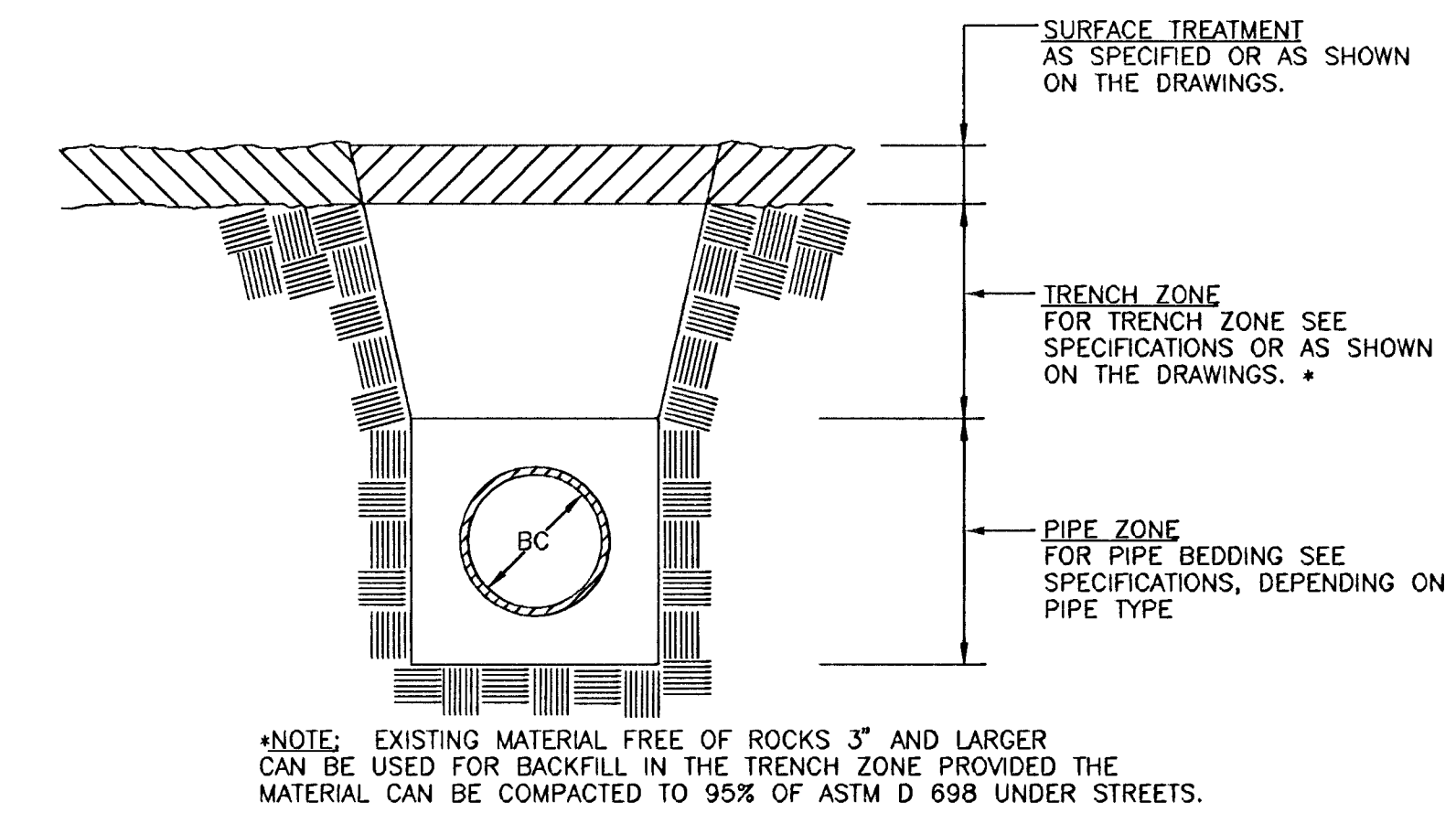
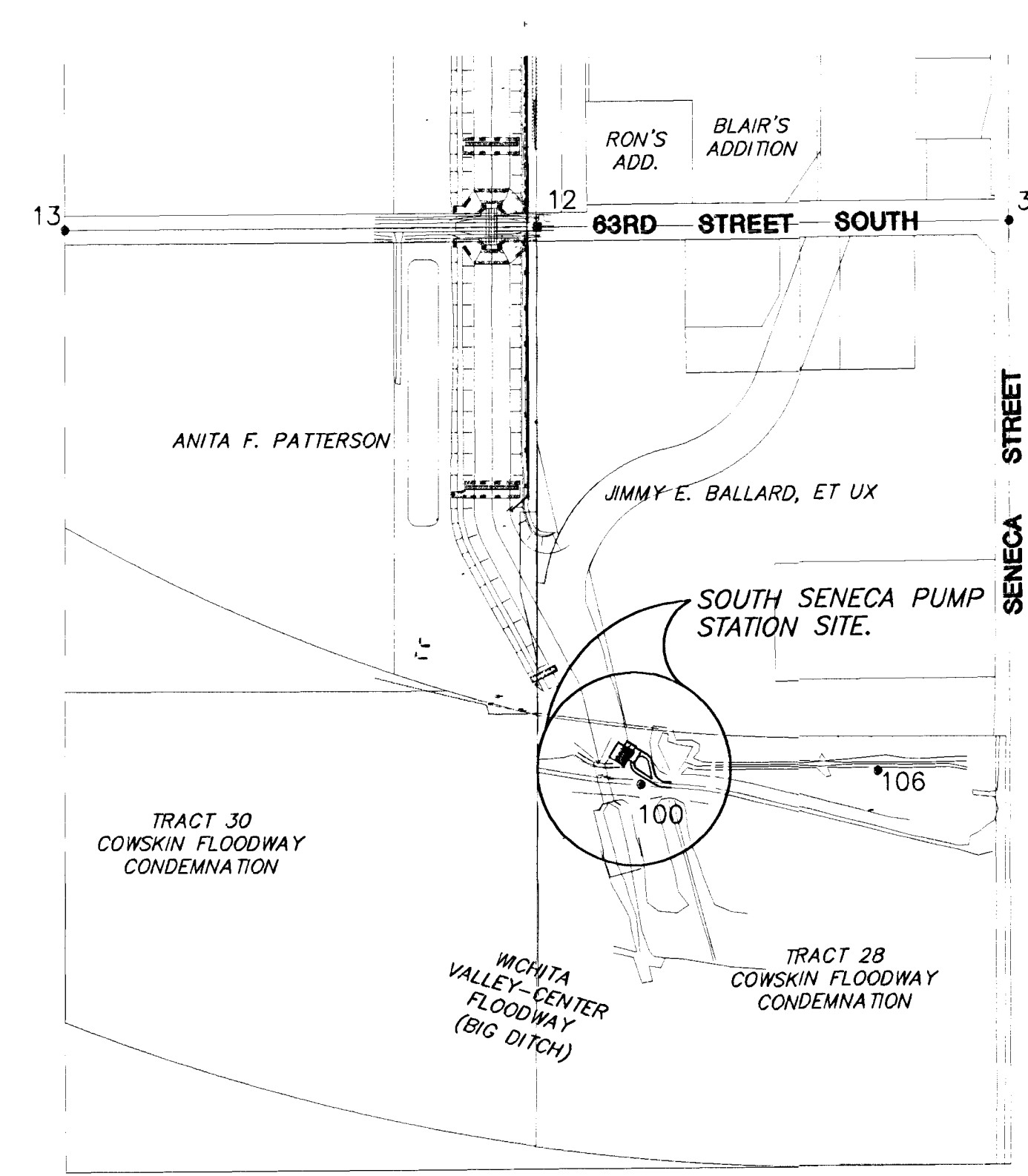
DAVID ALAN CHASE
LICENSED PROFESSIONAL ENGINEER
14372
6-22-98

I:\ENR\93035\VPUMP\TTL.DWG Wed Jun 10 16:49:21 1998

Drawing File: I:\ENR\93035\VPUMP\TTL

GENERAL NOTES

- THE CONTRACTOR SHALL CONTAIN HIS OPERATIONS TO PERMIT TRAFFIC THROUGH AND ALONG ALL COUNTY, CITY AND STATE ROADS. THE CONTRACTOR SHALL ERECT WARNING SIGNS, DETOUR SIGNS, FLASHING LIGHTS, AND BARRICADES TO ENSURE SAFETY AS DIRECTED IN THE GENERAL CONDITIONS OF THE SPECIFICATIONS. THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR SHALL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR OR A LICENSED PROFESSIONAL ENGINEER IN ACCORDANCE WITH STATE LAWS.
 - THE UTILITES (WATER, GAS, TELEPHONE, ELECTRICAL, ETC.) AS LOCATED ON THE PLANS ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING TRENCHING OPERATIONS TO AVOID DAMAGING THESE LINES. THE CONTRACTOR SHALL COORDINATE ANY TRENCHING OPERATIONS THROUGH KANSAS ONE-CALL TO AVOID ANY DAMAGE TO THE LINES. IF ANY LINES ARE DAMAGED THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- NOTE: NOTIFY KANSAS ONE CALL FORTY EIGHT (48) HOURS PRIOR TO EXCAVATION, 1-800-344-7233 (WICHITA) 687-2470
- THE CONTRACTOR SHALL RESTORE ALL DITCHES, CHANNELS, BANK STABILIZATION, SWALES, ROADS, SHOULDERS, PAVEMENT ENTRANCES, AND BANKS TO THEIR ORIGINAL SLOPE AND GRADES. WHERE EXISTING ENTRANCE PIPE, DRAINAGE PIPE, SPRINKLER SYSTEMS, ROADS, SIDEWALKS, DRIVES, SIGNS, MAILBOXES, FENCES, ETC., CONFLICT WITH THE PROPOSED WORK HEREIN THEY SHALL BE REMOVED AND REPLACED OR RESET IN LIKE KIND. ALL OF THE ABOVE INCLUDING TREES, SHRUBS, GRASS, SOD AND OTHER LANDSCAPING, SHALL BE CONSIDERED SUBSIDIARY TO THE PRICE BID FOR PIPE.
 - POSITIVE DRAINAGE SHALL BE PROVIDED FOR ALL AREAS ON OR NEAR SPOIL AREAS. NATURAL DRAINAGE WAYS SHALL BE MAINTAINED.
 - DEMOLITION MATERIALS SHALL BE REMOVED FROM THE SITE TO AN APPROVED DISPOSAL SITE.
 - ALL ELEVATIONS ARE CITY DATUM.
 - ANY EXCESS EXCAVATION SHALL BE REMOVED FROM THE SITE AT CONTRACTOR'S EXPENSE, UNLESS DIRECTED OTHERWISE ON THE SITE PLANS.
 - ALL BACKFILL AT THE SITE AND ALL TRENCHES IN STREETS AND UNDER PAVED PARKING SHALL BE COMPACTED TO MINIMUM OF 95% OF ASTM D-698.
 - ALL OTHER TRENCHES SHALL BE COMPACTED TO MINIMUM OF 90% OF ASTM D-698
 - ALL AREAS DISTURBED BY CONSTRUCTION ABOVE THE NORMAL WATER SURFACE SHALL BE SEDED AND MULCHED PER THE SPECIFICATIONS.
 - ALL BACKFILL IN TRENCHES SHALL BE TYPE 1 UNLESS SPECIFIED OTHERWISE. EXISTING MATERIAL WITH ROCKS 3" IN DIAMETER AND SMALLER CAN BE USED FOR BACKFILL MATERIAL ABOVE PIPE ZONE IN THE PIPE TRENCH ZONE.
 - ALL BOLTS AND NUTS FOR BURIED PIPE SHALL BE CORTEN.
 - THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL PIPE LENGTHS PRIOR TO ORDERING MATERIAL
 - A GETTY GAS GATHERING PIPELINE CROSSES THE PROJECT SITE NEAR THE PUMP STATION. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE GAS COMPANY. (JOE FOWLER, 316-775-6091)
 - SPOIL MATERIAL SHALL BE PLACED ON CITY OF WICHITA PROPERTY AS DIRECTED BY THE CITY (APPROXIMATE LOCATION SHOWN ON SHEET 1) AND AS APPROVED BY THE ENGINEER. FINAL GRADING WILL BE AT A SLOPE OF 6:1 OR LESS. NATURAL DRAINAGE PATH SHALL BE PRESERVED.
 - RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WILL REQUIRE A KANSAS STATE DEPARTMENT OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WILL REQUIRE ADDITIONAL ARCHEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.
 - CONTRACTOR SHALL NOTIFY THE KANSAS CORPORATION COMMISSION, DOUG LOUIS (316-337-6231), BEFORE CONSTRUCTION BEGINS, REGARDING PLUGGED OIL WELLS AND PIPELINES IN THE PROJECT AREA.
 - COASTAL DERBY HAS ABANDONED THEIR WELL FIELD LINES IN THIS AREA. THESE LINES SHALL BE CUT, AS NECESSARY, REMOVED, AND THE REMAINING LINES CAPPED. COASTAL DERBY MAY BE CONTACTED FOR QUESTIONS. (GLEN BERG, 316-291-2416)
 - CONSTRUCTION ACCESS TO THE SITE SHALL BE FROM 63RD STREET SOUTH ALONG THE OUTFALL CHANNEL ONLY. CONSTRUCTION ACCESS FROM SENECA WILL NOT BE ALLOWED.



PAINT SCHEDULE					
ITEM	SURFACE PREPARATION	FACTORY PRIME FIELD TOUCH UP	FIELD PRIME	INTERMEDIATE COATING	FINAL COATING
PUMPS	B	B	-	-	E
PIPING & VALVES	D	B	-	D	E
STRUCTURAL STEEL (EXCEPT LOWER LEVEL)	B	C	-	B	B
STRUCTURAL STEEL (LOWER LEVEL, NON-GALVANIZED)	C	B	-	D	E
GRATING (LOWER LEVEL)	B	B	-	-	E
INLET CHUTE, SUMP BAYS, WET WELL AND OUTFALL CHUTE (INTERIOR WALLS)	E	-	J	-	A
EXTERIOR CONCRETE WALLS (EXPOSED)	A	-	G	-	C
INTERIOR CONCRETE WALLS	A	-	B	-	E
HANDRAILS (LOWER LEVEL)	B	C	-	D	G
CRANE, BRIDGE, HOIST & TROLLEY	B	C	-	B	B

NOTE: ARCHITECTURAL PAINTING IS CALLED OUT IN SPECIFICATION SECTION 09900 AND IS NOT SCHEDULED HERE.

PAINT LEGEND	
SURFACE PREPARATION	INTERMEDIATE COATINGS
A. -GENERAL B. -COMMERCIAL SANDBLAST C. -NEAR-WHITE SANDBLAST D. -WIRE BRUSH E. -BRUSH-OFF SANDBLAST F. -HIGH PRESSURE WASH	A. -EPOXY NSF STD. 61 APPROVED B. -ALKYD ENAMEL C. -ACRYLIC LATEX D. -CATALYZED EPOXY E. -BLEACHING OIL
PRIMERS	FINAL COATINGS
A. -INORGANIC ZINC PRIMER B. -EPOXY PRIMER C. -ALKYD-PHENOLIC UNIVERSAL D. -ACRYLIC MASONRY FILLER PRIMER E. -ACRYLIC LATEX F. -VINYL WASH PRIMER G. -MODIFIED EPOXY H. -MODIFIED EPOXY BLOCK FILLER I. -WATERPROOFING J. -EPOXY PRIMER NSF STD. 61 APPROVED	A. -EPOXY NSF STD. 61 APPROVED B. -ALKYD ENAMEL C. -ACRYLIC LATEX D. -WATERPROOFING E. -CATALYZED EPOXY SERIES 66 F. -SILICONE ALKYD ENAMEL G. -ACRYLIC POLYURETHANE H. -MASONRY SEALER I. -SEALER - PRESERVATIVE J. -STONE SEALER K. -CATALYZED EPOXY SERIES 140

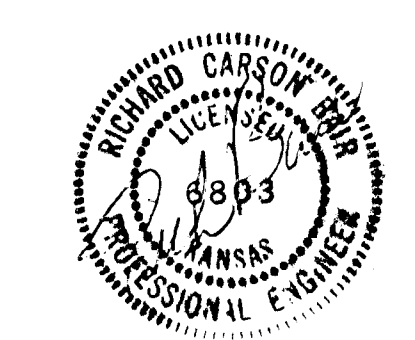
REFER TO SPECIFICATIONS FOR LIST OF APPROVED PAINT TYPES AND MANUFACTURERS.

BENCHMARKS

- BM #1 CHISELED "□" ON EAST END OF NORTH HEADWALL RCB UNDER NORTH DIKE OF FLOODWAY, 1136' WEST OF C/L SENECA AND 1510' SOUTH OF C/L 63RD ST. S. ELEV. = 76.055
- BM #2 STEPPED SPIKE IN NORTH FACE PP, 36' SOUTH OF SE COR, SW 1/4, SE 1/4 SEC 30-T28S-R1E ELEV. = 79.63

HORIZONTAL CONTROLS:

P.T. NO.	NORTH	EAST	DESC.
12	5690.374	9687.616	PK NAIL & WASHER SET OVER STONE @ NW COR. OF THE NE 1/4, NE 1/4, SEC. 31, T28S, R1E. 1. 1/2" REBAR & MKEC CAP 2.51'N & 0.84' E OF CORNER 2. "X" CUT ON STEEL GATE POST 39.55' SSE 3. "X" CUT ON STEEL GATE POST 57.55' SE 4. 3 NAILS IN FENCE POST 41.7' SW
13	5679.890	8364.240	FOUND 1/2" BAR @ NW COR. OF THE NE 1/4, SEC 30, T28S, R1E. 1. NW COR. OF HOUSE 128.3' SE 2. 3 NAILS IN H.L.P. 130.9' ESE 3. 3 NAILS IN COR. POST 30.5' SOUTH
31	5705.922	11012.840	FOUND 5/8" BAR @ NE COR. OF THE NE 1/4, SEC 30, T28S, R1E. 1. PK NAIL IN SOUTH SIDE OF P.P. 80.55' SW 2. PK NAIL IN SOUTH SIDE OF P.P. 80.62' SE 3. 3 NAILS IN P.P. 94.90' NE
100	4123.437	9980.047	I.P.
106	4158.650	10644.297	I.P.



SOUTH SENECA DRAINAGE IMPROVEMENTS DRAINAGE OUTFALL PUMP STATION
PROJECT NAME

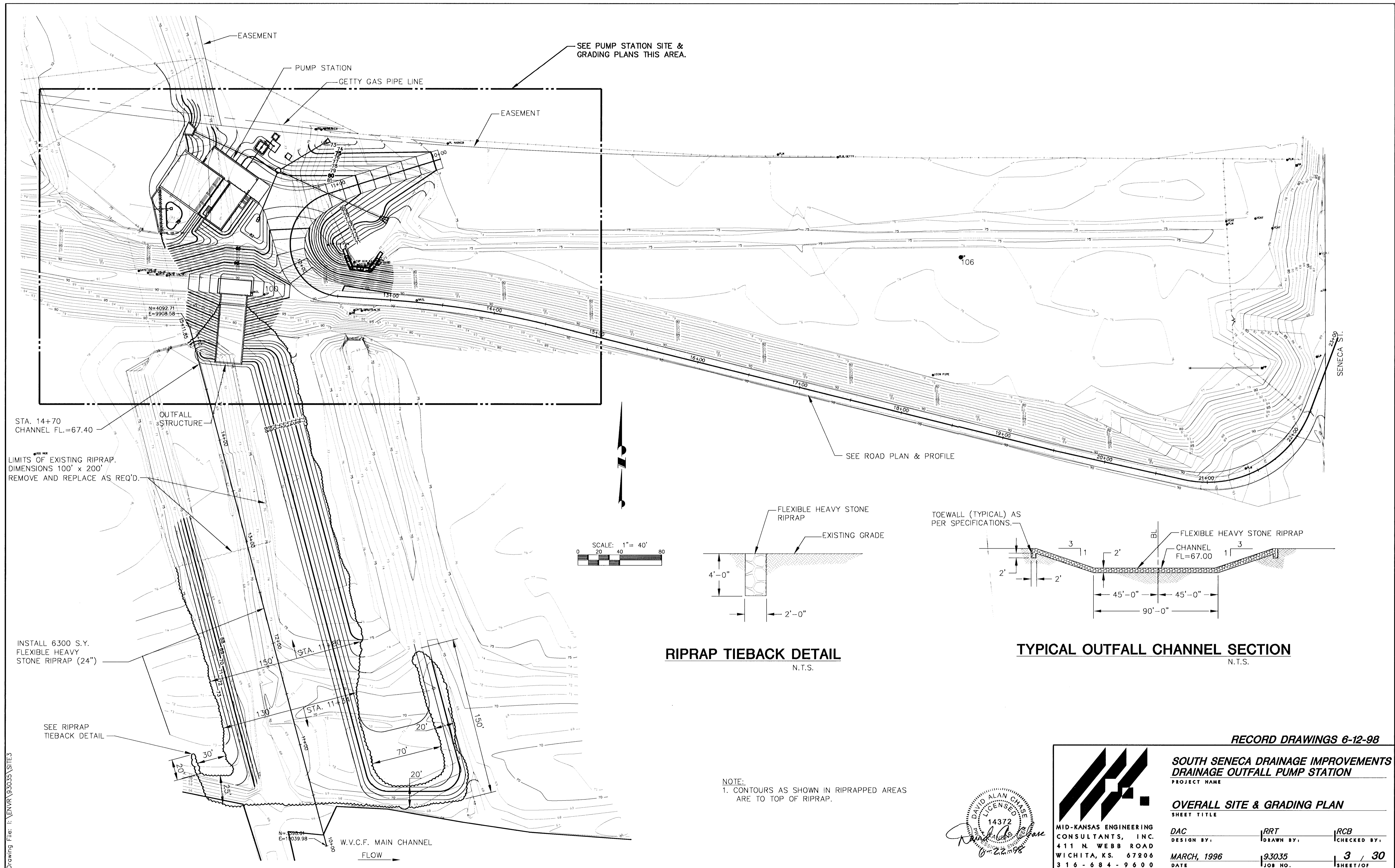
KEY MAP & GENERAL NOTES
SHEET TITLE

MID-KANSAS ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

DATE: MARCH, 1996

DESIGN BY: DAC
DRAWN BY: RRT
CHECKED BY: RCB
JOB NO.: 93035
SHEET/OF: 2 / 30

Drawing Title: F:\WORK\93035\KEYMAP



EASEMENT

PUMP STATION

GETTY GAS PIPE LINE

SEE PUMP STATION SITE & GRADING PLANS THIS AREA.

EASEMENT

106

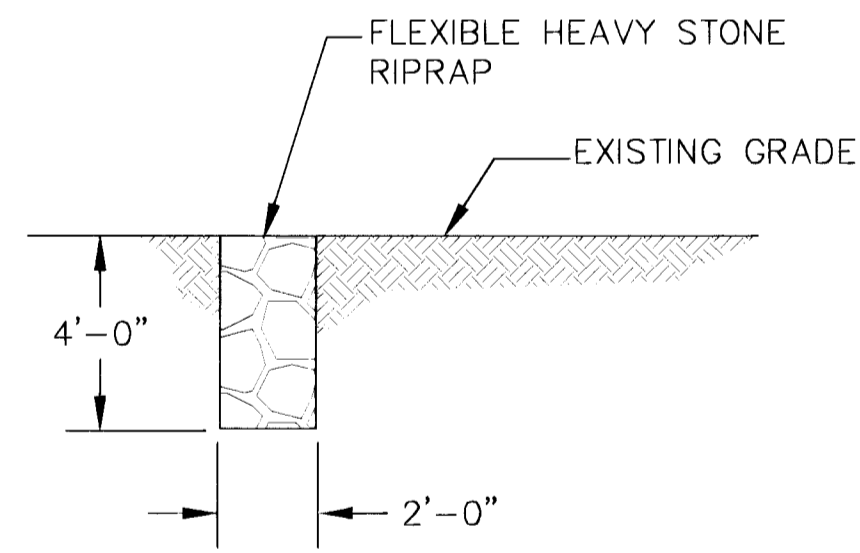
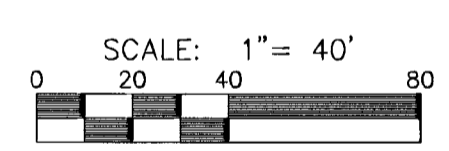
SENECA ST.

STA. 14+70
CHANNEL FL.=67.40

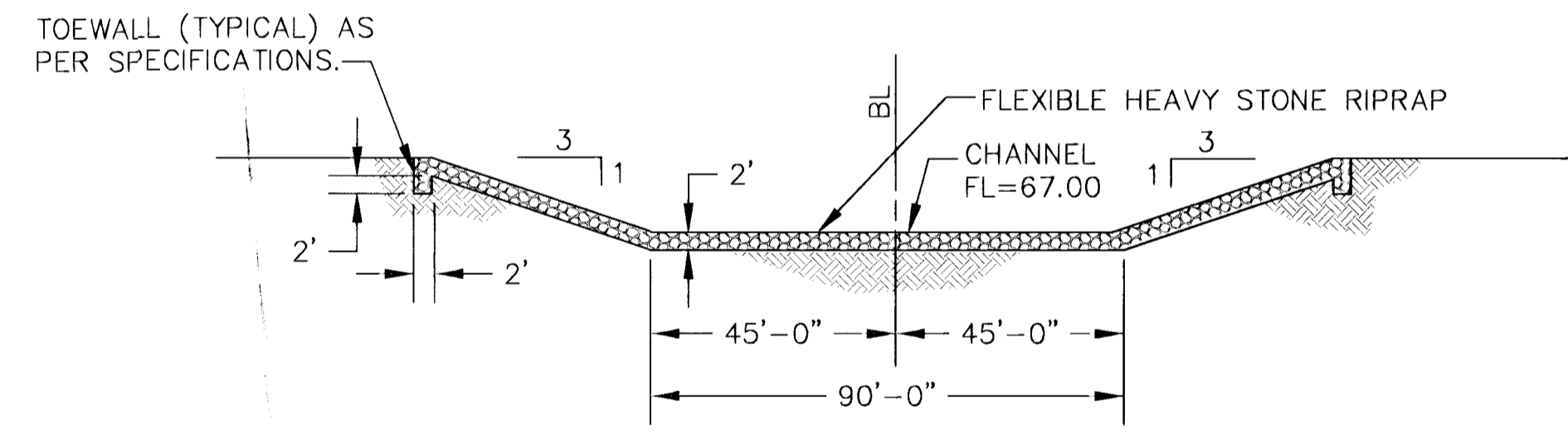
OUTFALL
STRUCTURE

LIMITS OF EXISTING RIPRAP.
DIMENSIONS 100' x 200'
REMOVE AND REPLACE AS REQ'D.

SEE ROAD PLAN & PROFILE



RIPRAP TIEBACK DETAIL
N.T.S.



TYPICAL OUTFALL CHANNEL SECTION
N.T.S.

INSTALL 6300 S.Y.
FLEXIBLE HEAVY
STONE RIPRAP (24")

SEE RIPRAP
TIEBACK DETAIL

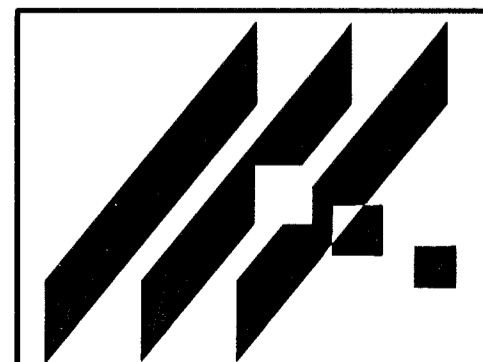
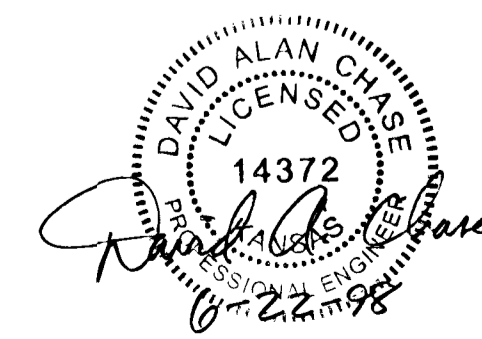
STA. 11+80

STA. 11+85

W.V.C.F. MAIN CHANNEL

FLOW

NOTE:
1. CONTOURS AS SHOWN IN RIPRAPPED AREAS
ARE TO TOP OF RIPRAP.



MID-KANSAS ENGINEERING
CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

RECORD DRAWINGS 6-12-98

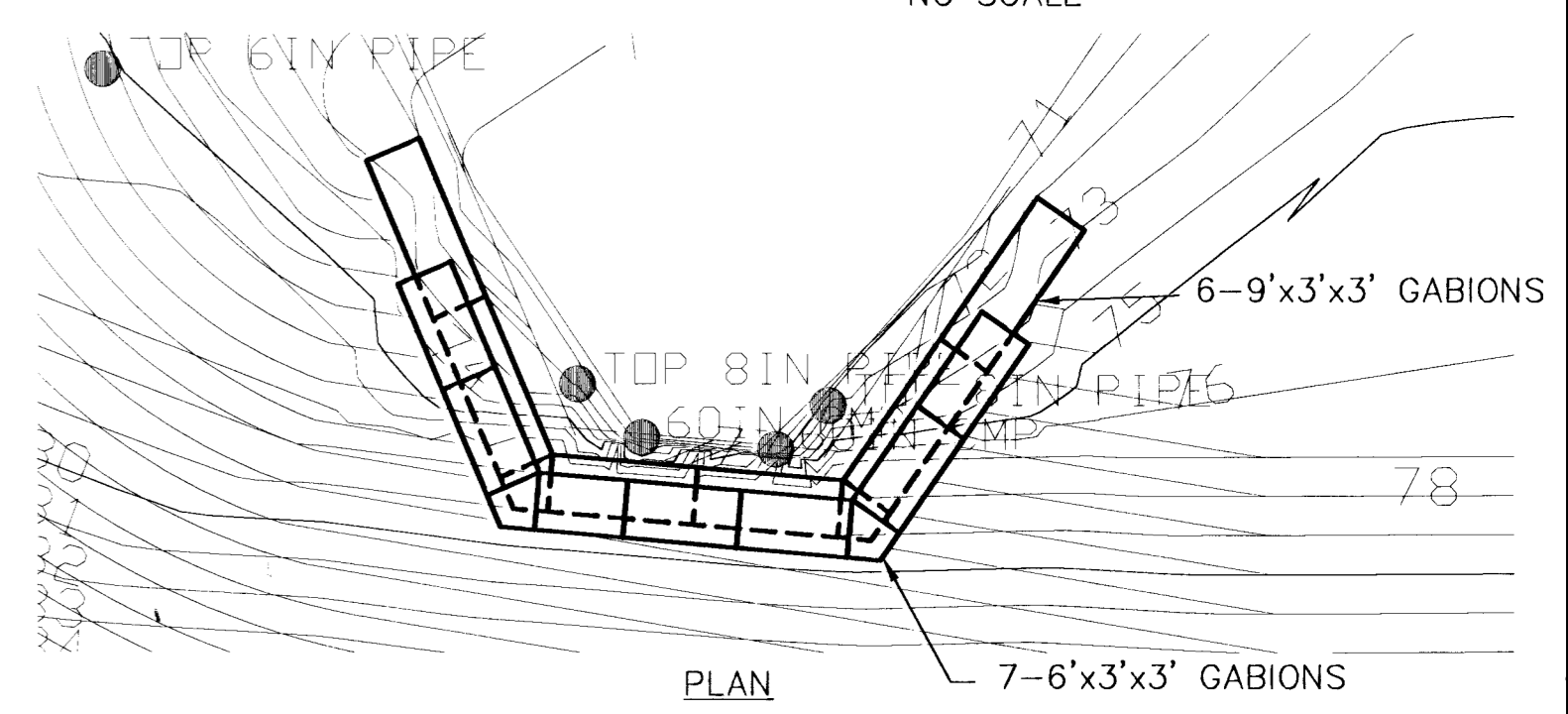
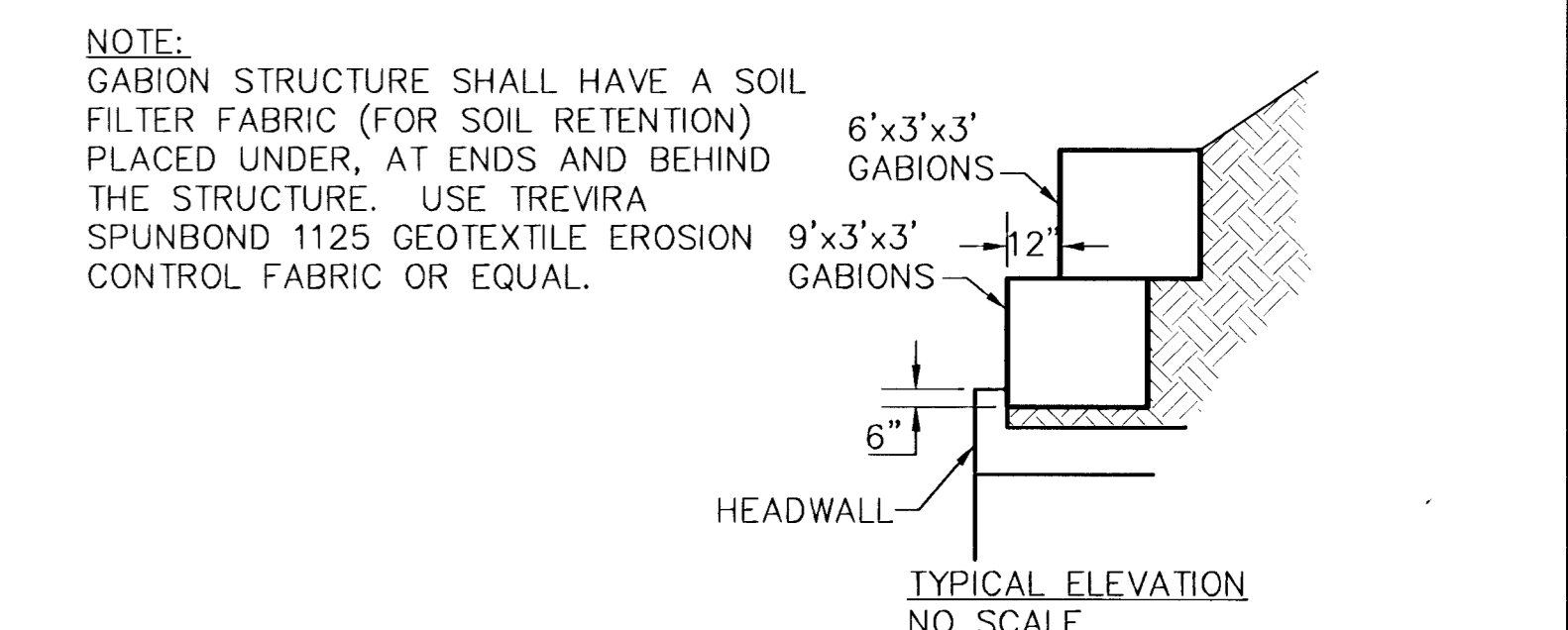
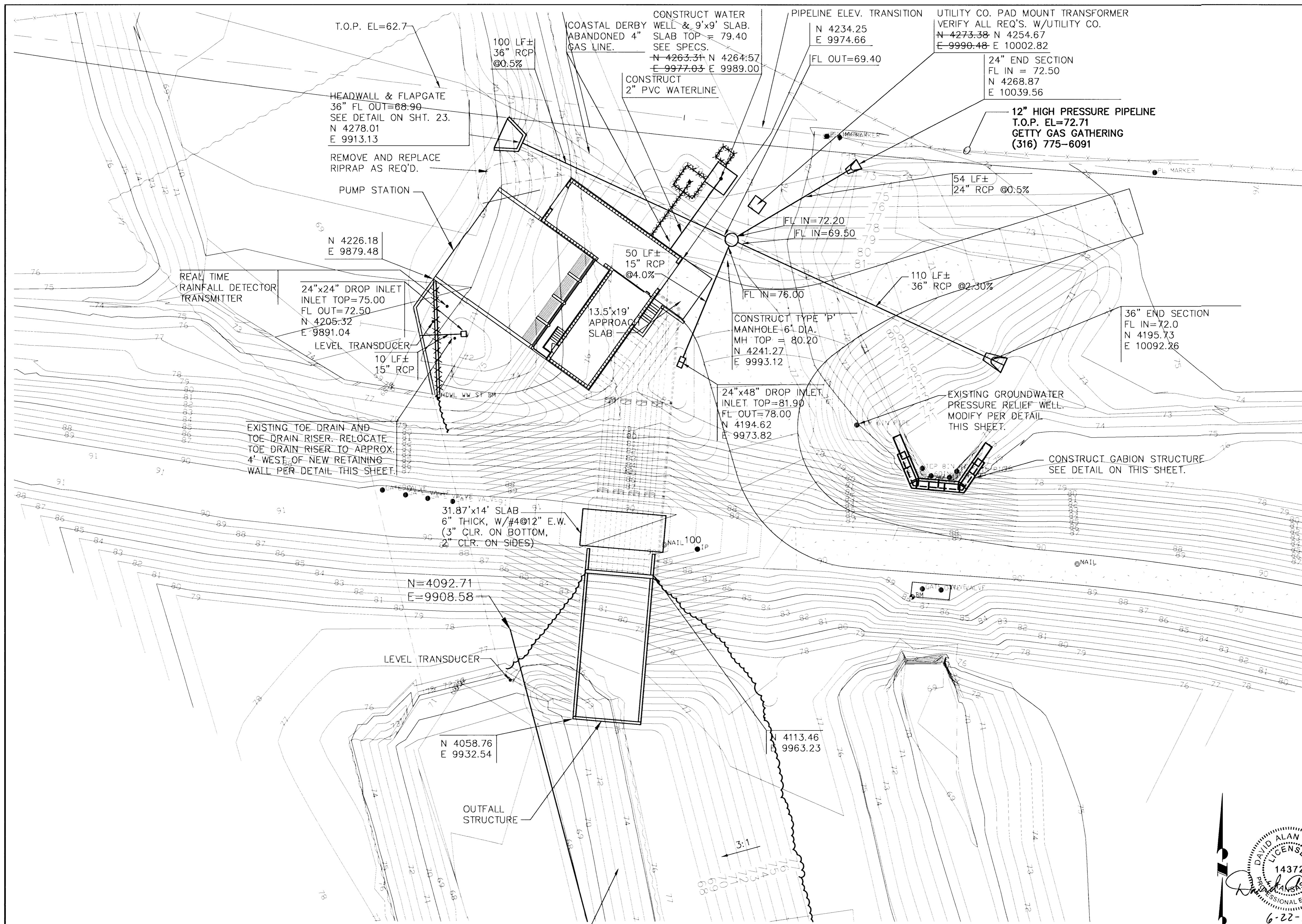
**SOUTH SENECA DRAINAGE IMPROVEMENTS
DRAINAGE OUTFALL PUMP STATION**
PROJECT NAME

OVERALL SITE & GRADING PLAN
SHEET TITLE

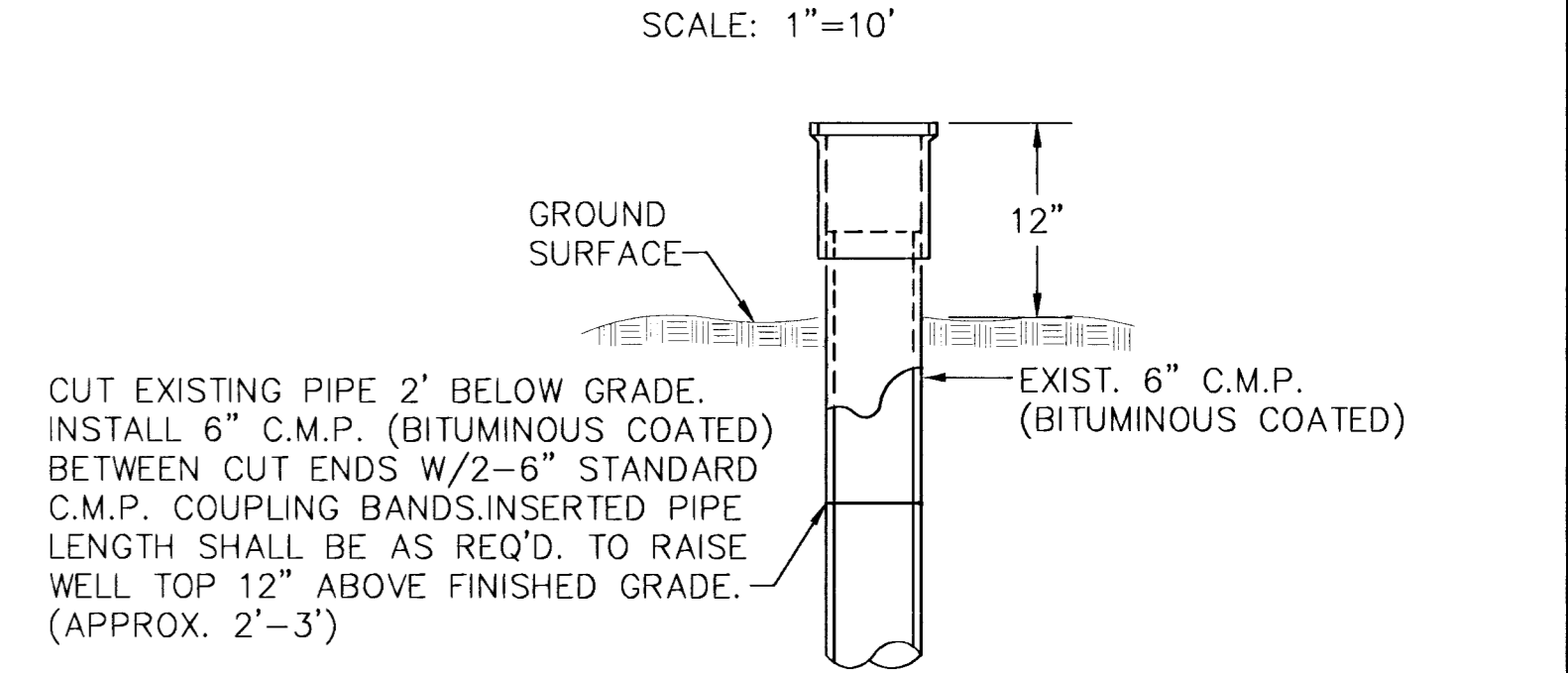
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MARCH, 1996	93035	3 / 30
DATE	JOB NO.	SHEET / OF

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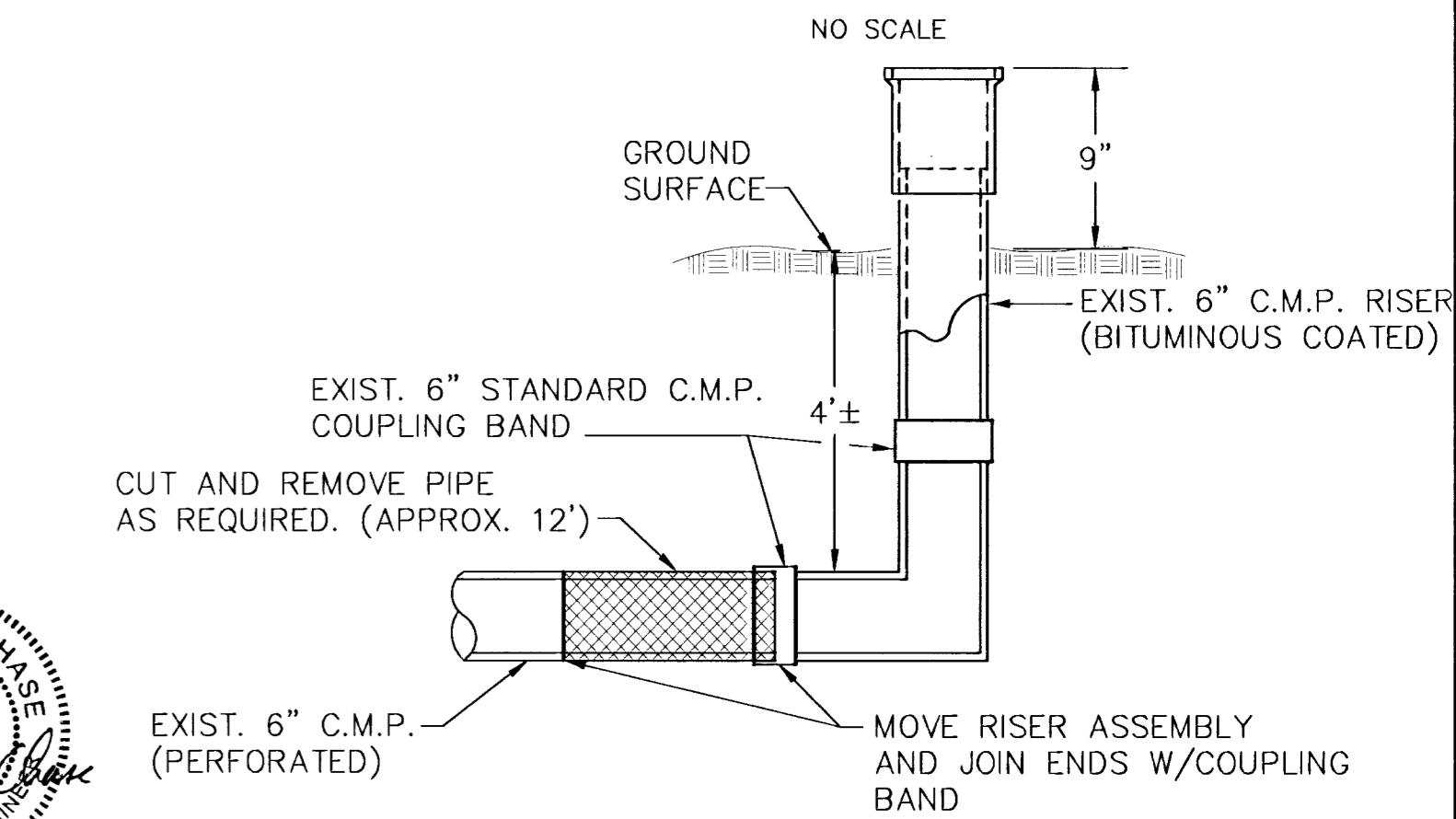
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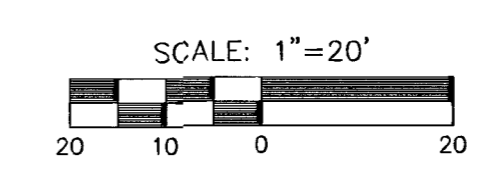
GABION STRUCTURE DETAILS



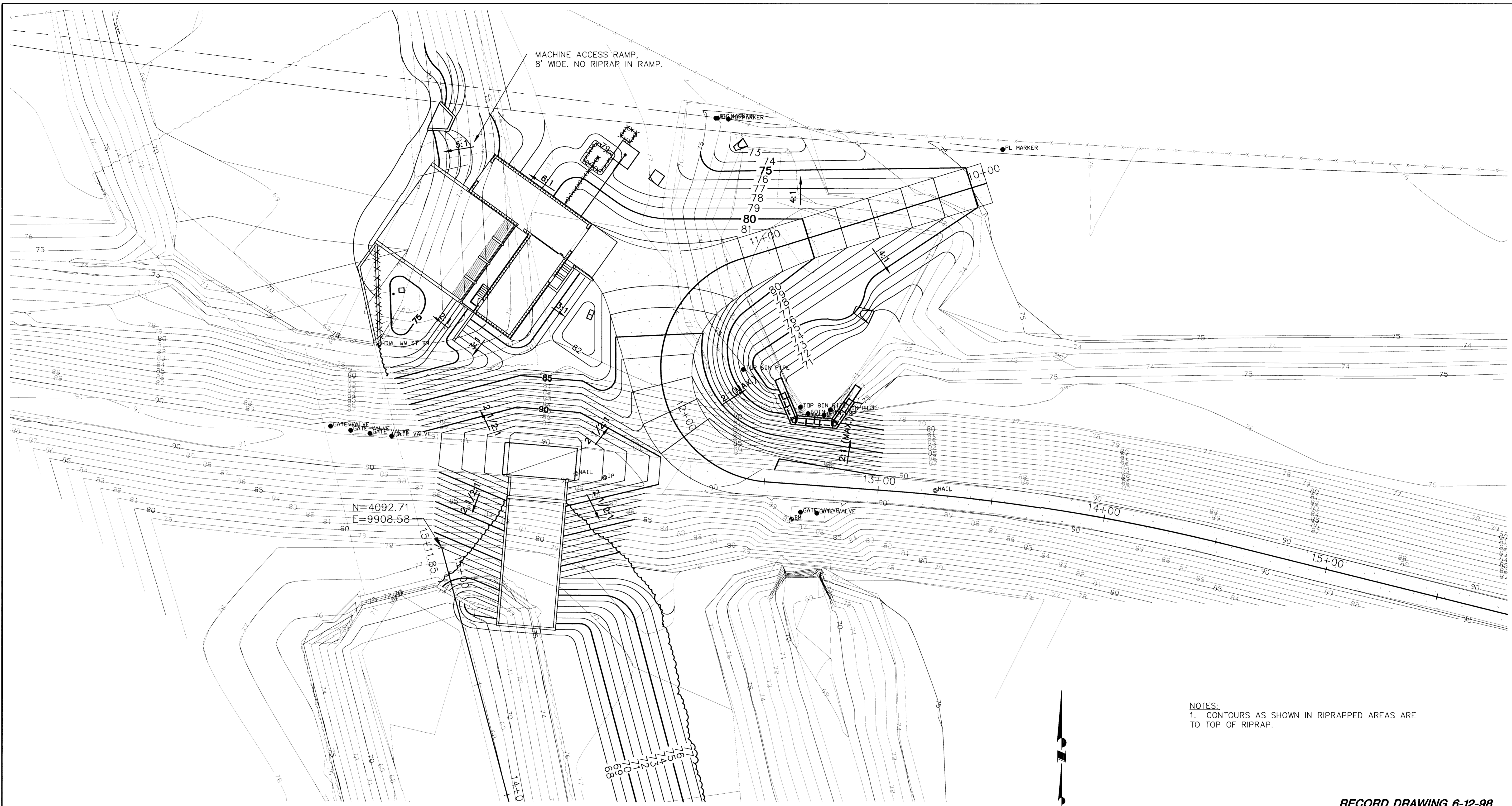
**GROUNDWATER PRESSURE RELIEF WELL
 MODIFICATION DETAIL**



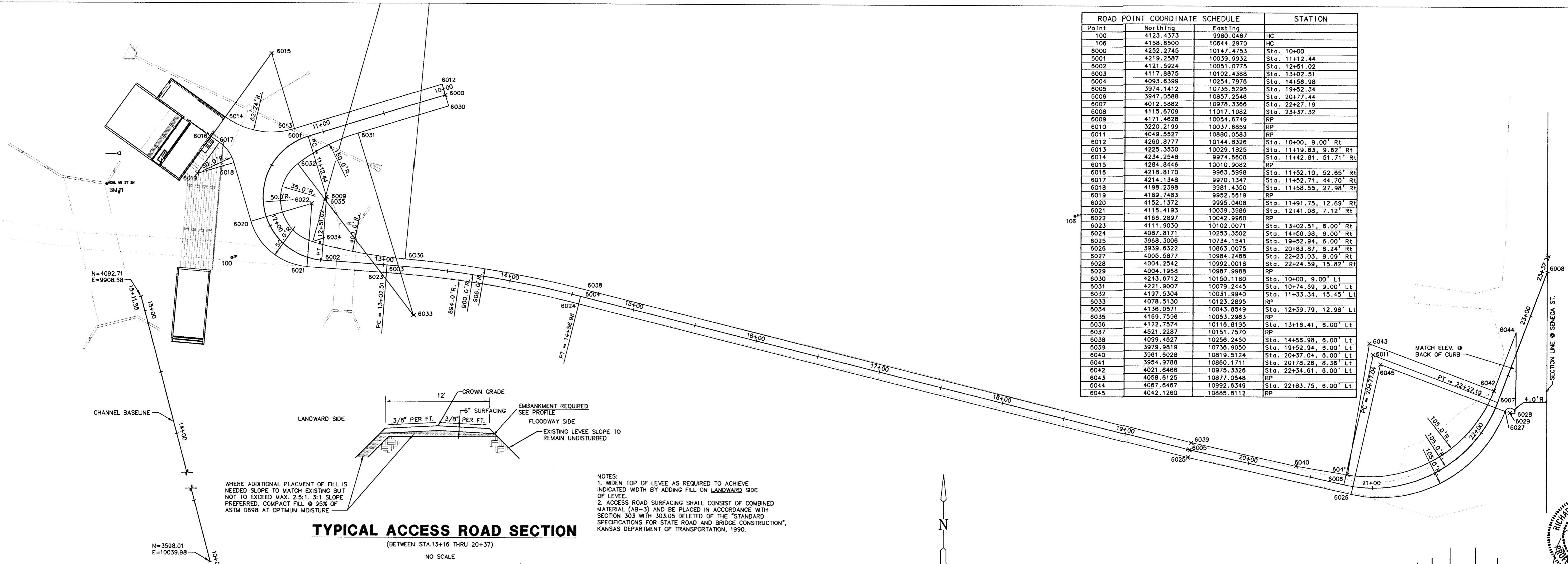
TOE DRAIN RISER RELOCATION DETAIL



**SOUTH SENECA DRAINAGE IMPROVEMENTS
 DRAINAGE OUTFALL PUMP STATION**
 PROJECT NAME
PUMP STATION SITE PLAN
 SHEET TITLE
 MID-KANSAS ENGINEERING
 CONSULTANTS, INC.
 411 N. WEBB ROAD
 WICHITA, KS. 67206
 316-684-9600
 DAC DESIGN BY: RRT DRAWN BY: RCB CHECKED BY:
 MARCH, 1996 DATE: 93035 JOB NO. 4 / 30 SHEET/OF



Point	Northing	Easting	STATION
100	4123.4373	9980.0467	HC
106	4158.6500	10644.2970	HC
6000	4252.2745	10147.4755	Sta. 10+00
6001	4219.2567	10039.9932	Sta. 11+12.44
6002	4121.5924	10051.0775	Sta. 12+51.02
6003	4117.8875	10102.4388	Sta. 13+02.51
6004	4093.6399	10254.7976	Sta. 14+56.98
6005	3974.1412	10735.5295	Sta. 19+52.34
6006	3847.0588	10857.2548	Sta. 20+77.44
6007	4012.5882	10918.3366	Sta. 22+27.19
6008	4115.6709	11017.1082	Sta. 23+37.32
6009	4171.4628	10054.6749	RP
6010	3220.2199	10037.6859	RP
6011	4049.5527	10880.0583	RP
6012	4260.8777	10144.8358	Sta. 10+00, 9.00' Rt
6013	4225.3530	10029.1825	Sta. 11+19.63, 9.62' Rt
6014	4234.2548	9974.6608	Sta. 11+42.81, 51.71' Rt
6015	4284.8446	10010.9082	RP
6016	4218.8170	9963.5998	Sta. 11+52.10, 52.65' Rt
6017	4214.1348	9970.1347	Sta. 11+52.71, 44.70' Rt
6018	4198.2398	9981.4350	Sta. 11+58.55, 27.98' Rt
6019	4189.7483	9952.6819	RP
6020	4152.1372	9995.0408	Sta. 11+91.75, 12.69' Rt
6021	4116.4193	10039.3986	Sta. 12+41.08, 7.12' Rt
6022	4165.2897	10042.9960	RP
6023	4111.9030	10102.0071	Sta. 13+02.51, 6.00' Rt
6024	4087.8177	10253.3502	Sta. 14+56.98, 6.00' Rt
6025	3968.3006	10734.1541	Sta. 19+52.94, 6.00' Rt
6026	3939.6322	10863.0075	Sta. 20+83.87, 6.24' Rt
6027	4005.5877	10984.2488	Sta. 22+23.03, 8.09' Rt
6028	4004.2542	10992.0018	Sta. 22+24.59, 15.82' Rt
6029	4004.1958	10987.9988	RP
6030	4243.6712	10150.1180	Sta. 10+00, 9.00' Lt
6031	4221.9007	10079.2445	Sta. 10+74.59, 9.00' Lt
6032	4197.5304	10031.9940	Sta. 11+33.34, 15.45' Lt
6033	4078.5130	10123.2895	RP
6034	4136.0571	10043.8549	Sta. 12+39.79, 12.98' Lt
6035	4169.7596	10053.2963	RP
6036	4122.7874	10116.1395	Sta. 13+18.41, 6.00' Lt
6037	4521.2287	10151.7570	RP
6038	4099.4627	10256.2450	Sta. 14+56.98, 6.00' Lt
6039	3979.9819	10736.9050	Sta. 19+52.94, 6.00' Lt
6040	3961.6028	10819.5124	Sta. 20+37.04, 6.00' Lt
6041	3954.9788	10860.1711	Sta. 20+78.28, 6.36' Lt
6042	4021.6468	10975.3328	Sta. 22+34.81, 6.00' Lt
6043	4058.6125	10877.0548	RP
6044	4067.6467	10992.6349	Sta. 22+83.75, 6.00' Lt
6045	4042.1260	10885.8112	RP

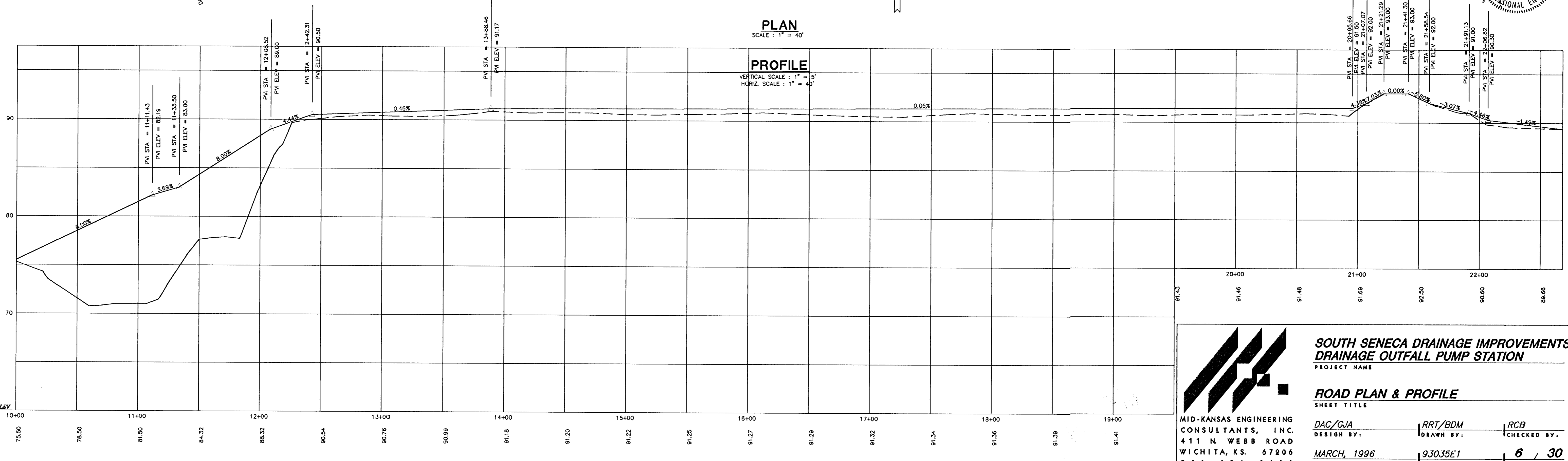
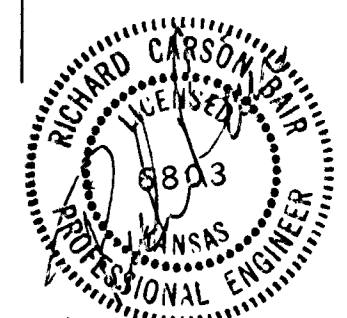


TYPICAL ACCESS ROAD SECTION
(BETWEEN STA. 13+16 THRU 20+37)
NO SCALE

WHERE ADDITIONAL PLACEMENT OF FILL IS NEEDED TO MATCH EXISTING BUT NOT TO EXCEED MAX. 2:1, 3:1 SLOPE PREFERRED, COMPACT FILL @ 95% OF ASTM D698 AT OPTIMUM MOISTURE

12' CROWN GRADE
6\"/>

NOTES:
1. WIDEN TOP OF LEVEE AS REQUIRED TO ACHIEVE INDICATED WIDTH BY ADDING FILL ON LANDWARD SIDE OF LEVEE.
2. ACCESS ROAD SURFACING SHALL CONSIST OF COMBINED MATERIAL (AB-3) AND BE PLACED IN ACCORDANCE WITH SECTION 303 WITH 303.05 DELETED OF THE "STANDARD SPECIFICATIONS FOR STATE ROAD AND BRIDGE CONSTRUCTION", KANSAS DEPARTMENT OF TRANSPORTATION, 1990.



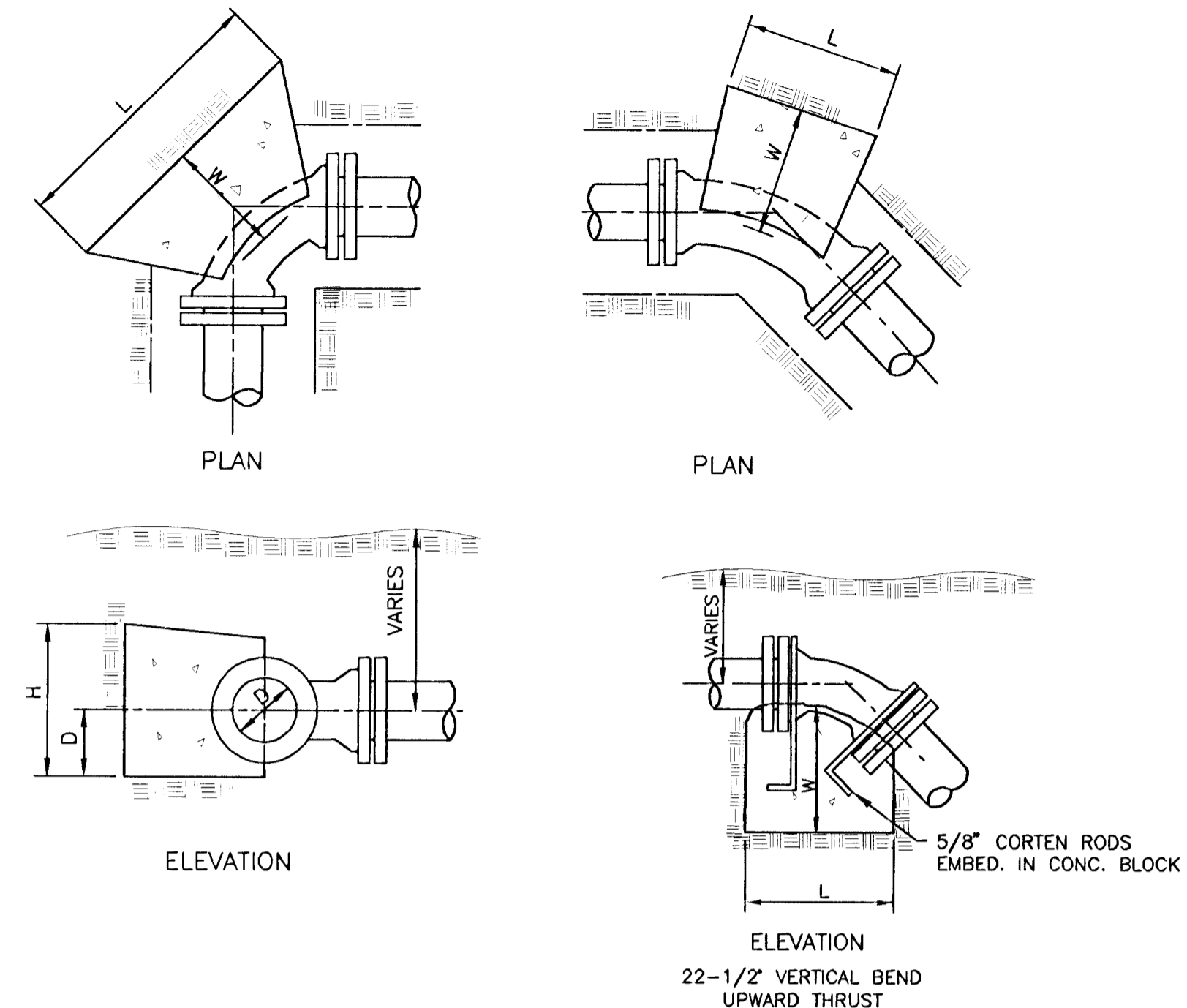
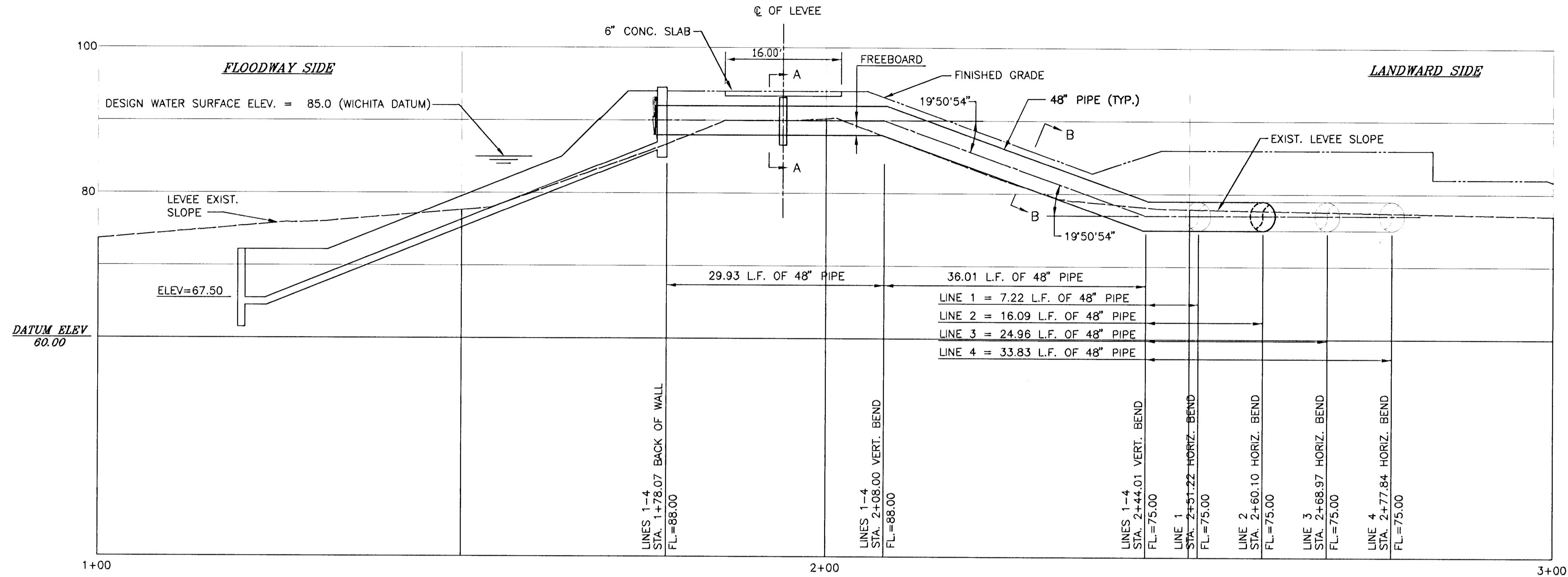
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SOUTH SENECA DRAINAGE IMPROVEMENTS DRAINAGE OUTFALL PUMP STATION
PROJECT NAME

ROAD PLAN & PROFILE
SHEET TITLE

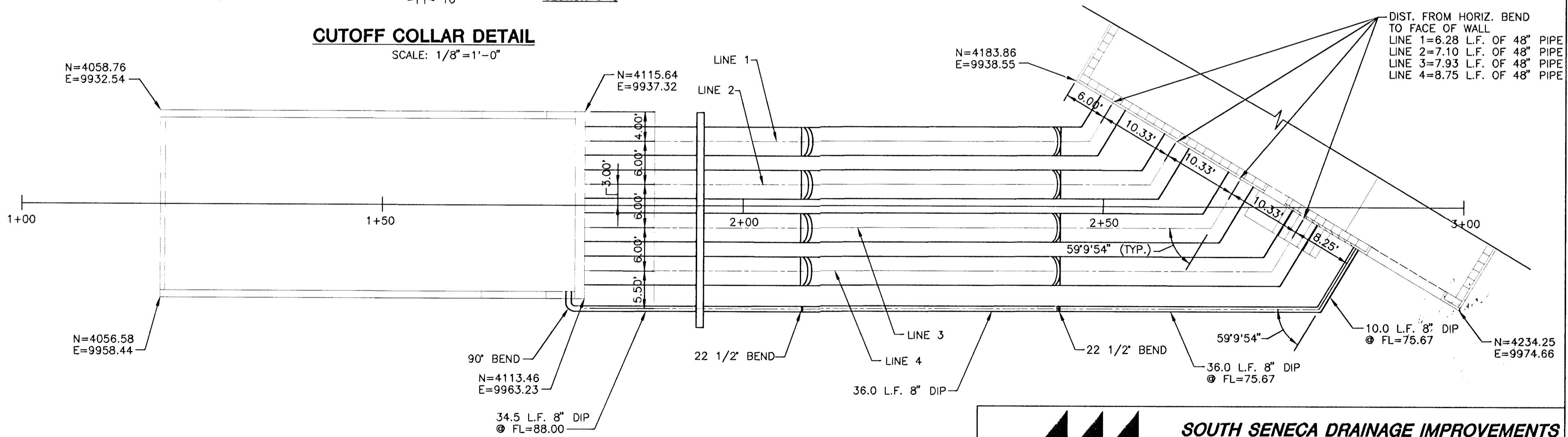
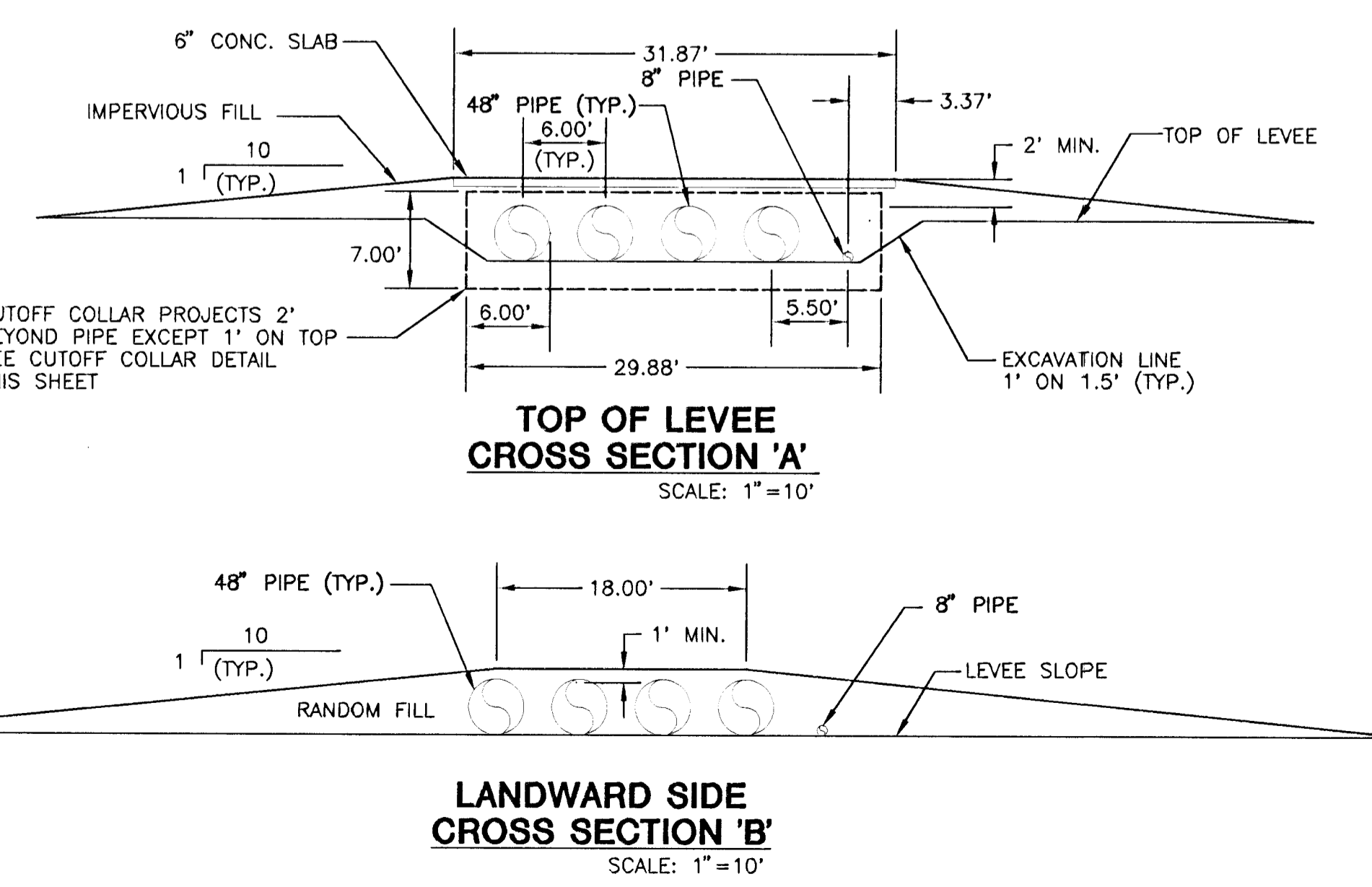
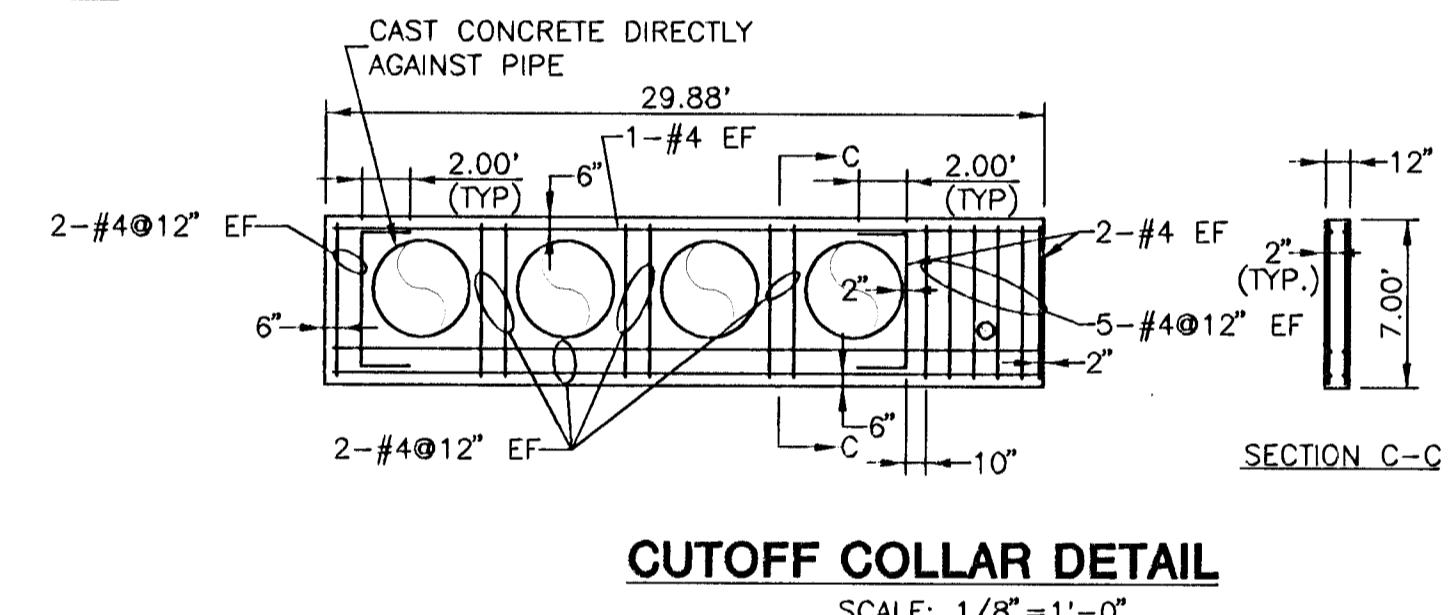
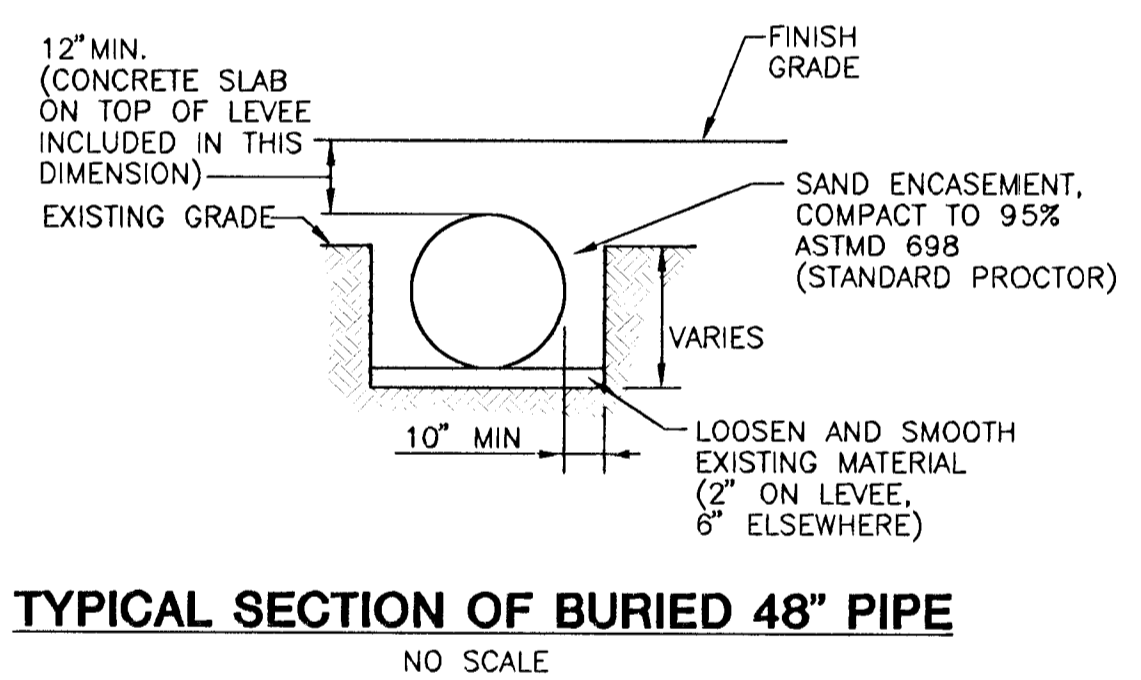
DAC/GJA DESIGN BY.	RRT/BDM DRAWN BY.	RCB CHECKED BY.
MARCH, 1996 DATE	93035E1 JOB NO.	6 / 30 SHEET OF

E:\NORTH\3065\3065E1 The App 16 16:25:07 1996

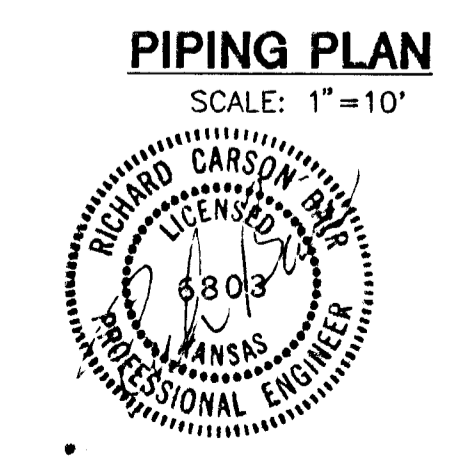


THRUST BLOCK SCHEDULE

LINE	FITTINGS & ANGLE	DIM. "L"	DIM. "W"	DIM. "H"
8"	90° BEND	2'-0"	1'-6"	2'-0"
8"	45° BEND	1'-6"	1'-6"	1'-6"
8"	22.5° BEND	1'-0"	1'-0"	1'-0"
8"	11.25° BEND	1'-0"	1'-0"	1'-0"



- NOTES:**
- 48" PIPE IS SHOWN AS STEEL PIPE WITH LAP WELDED JOINTS. DI PIPE WITH RESTRAINED JOINTS CAN BE BID AS ALTERNATE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DESIGN MODIFICATIONS, SUBJECT TO THE ENGINEER'S APPROVAL, SHOULD DI PIPE BE USED.
 - CONSTRUCT THRUST BLOCKS AT ALL BENDS IN 8" PIPE PER DETAIL THIS SHEET.
 - PVC PIPE (AWWA C-900, CLASS 100) MAY BE USED IN LIEU OF DUCTILE IRON FOR THE 8" PIPE.



**SOUTH SENECA DRAINAGE IMPROVEMENTS
DRAINAGE OUTFALL PUMP STATION**
PROJECT NAME

PIPING PLAN & PROFILE
SHEET TITLE

MID-KANSAS ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, K.S. 67206
316-684-9600

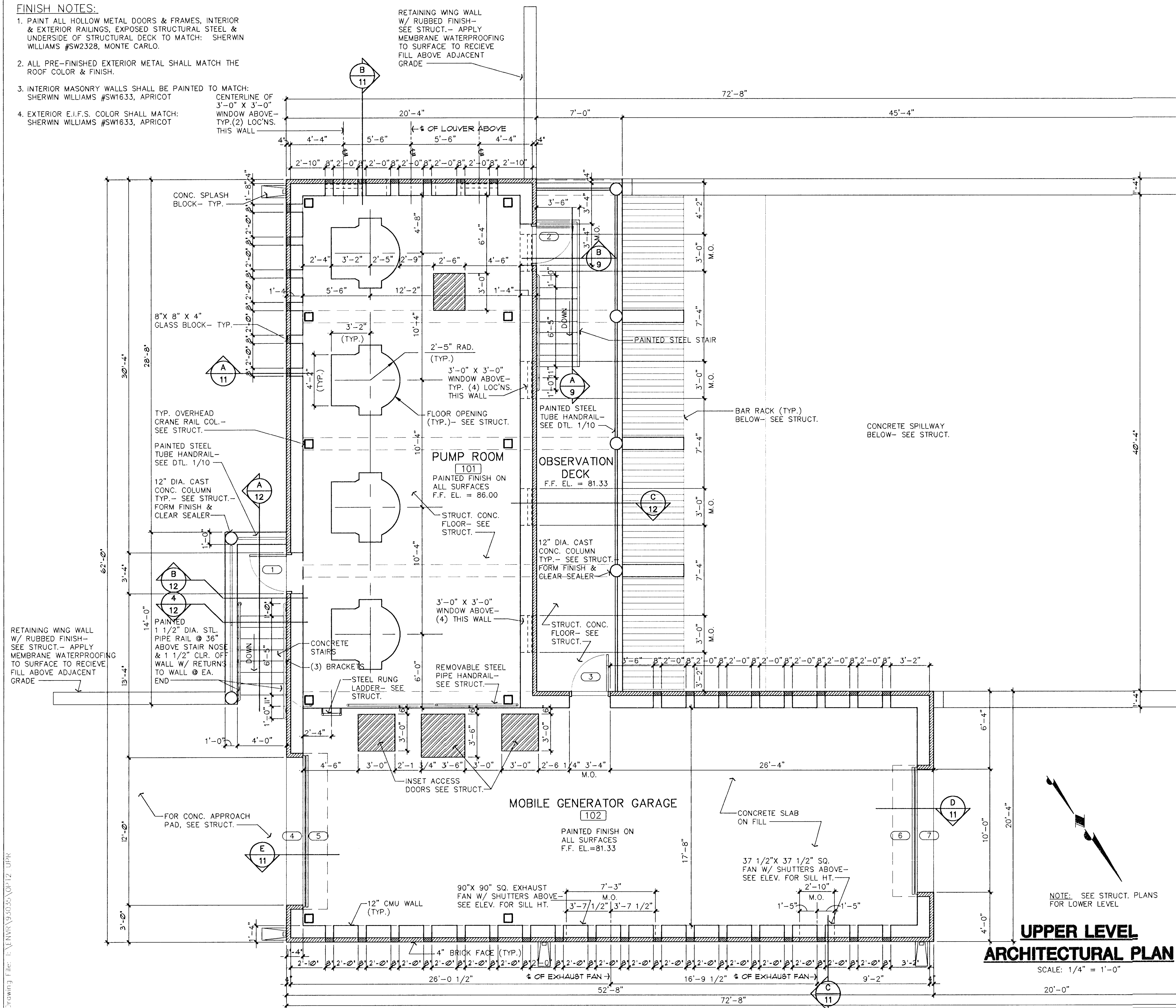
DAC DESIGN BY. RRT DRAWN BY. RCB CHECKED BY.
MARCH, 1996 DATE. 93035 JOB NO. 7/30 SHEET/OF

FINISH NOTES:

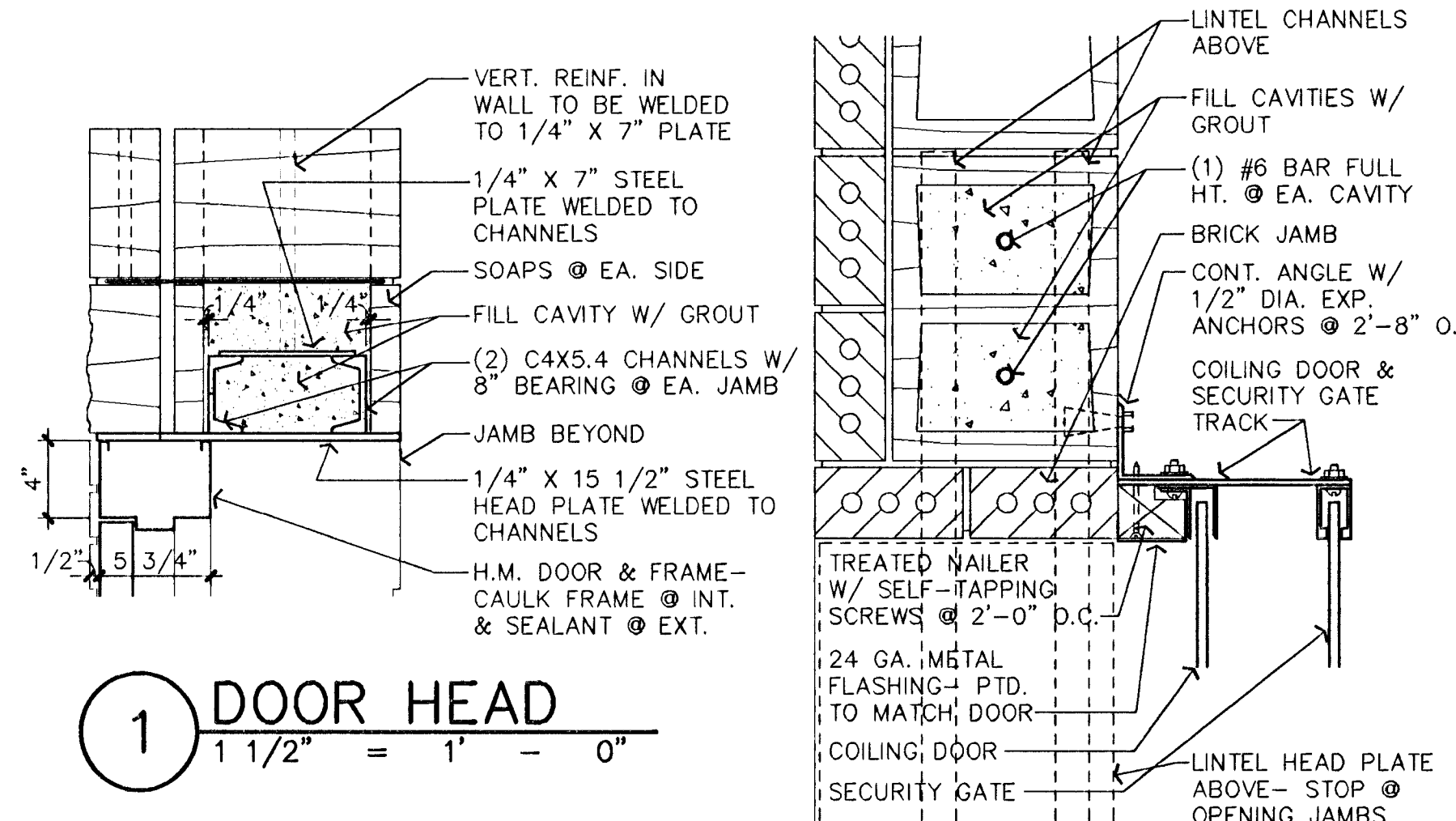
1. PAINT ALL HOLLOW METAL DOORS & FRAMES, INTERIOR & EXTERIOR RAILINGS, EXPOSED STRUCTURAL STEEL & UNDERSIDE OF STRUCTURAL DECK TO MATCH: SHERWIN WILLIAMS #SW2328, MONTE CARLO.
2. ALL PRE-FINISHED EXTERIOR METAL SHALL MATCH THE ROOF COLOR & FINISH.
3. INTERIOR MASONRY WALLS SHALL BE PAINTED TO MATCH: SHERWIN WILLIAMS #SW1633, APRICOT
4. EXTERIOR E.I.F.S. COLOR SHALL MATCH: SHERWIN WILLIAMS #SW1633, APRICOT

RETAINING WING WALL W/ RUBBED FINISH- SEE STRUCT.- APPLY MEMBRANE WATERPROOFING TO SURFACE TO RECEIVE FILL ABOVE ADJACENT GRADE

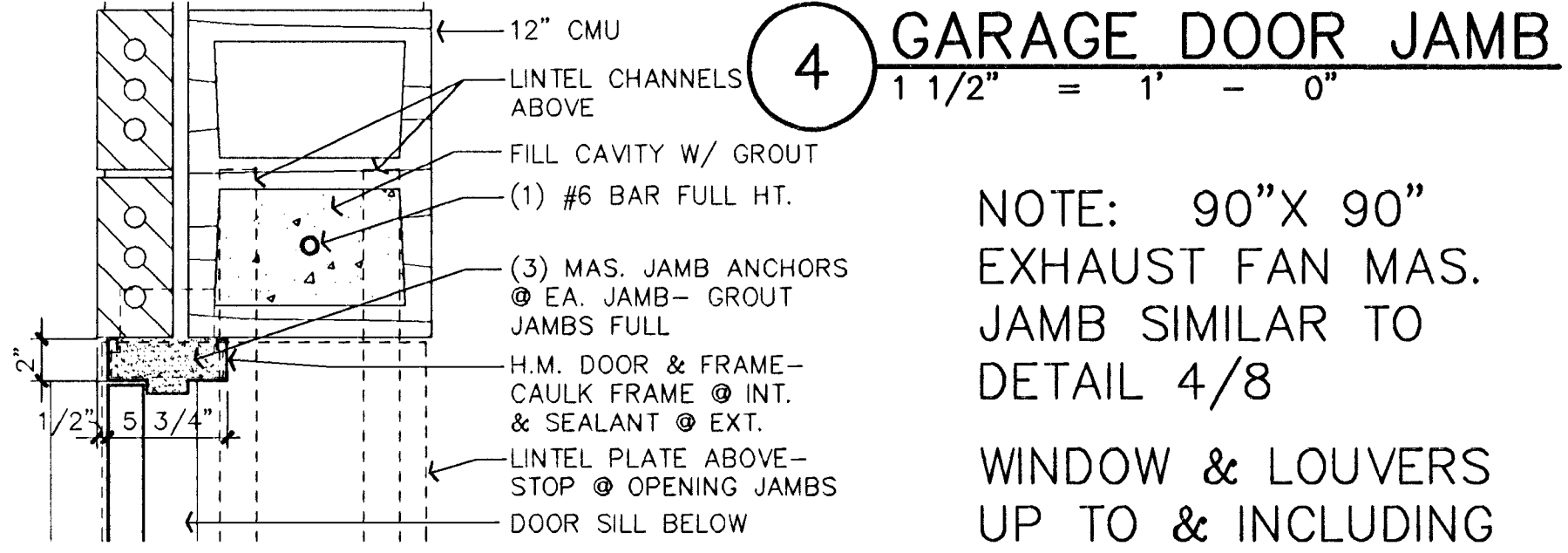
CENTERLINE OF 3'-0" X 3'-0" WINDOW ABOVE-TYP. (2) LOC'NS. THIS WALL



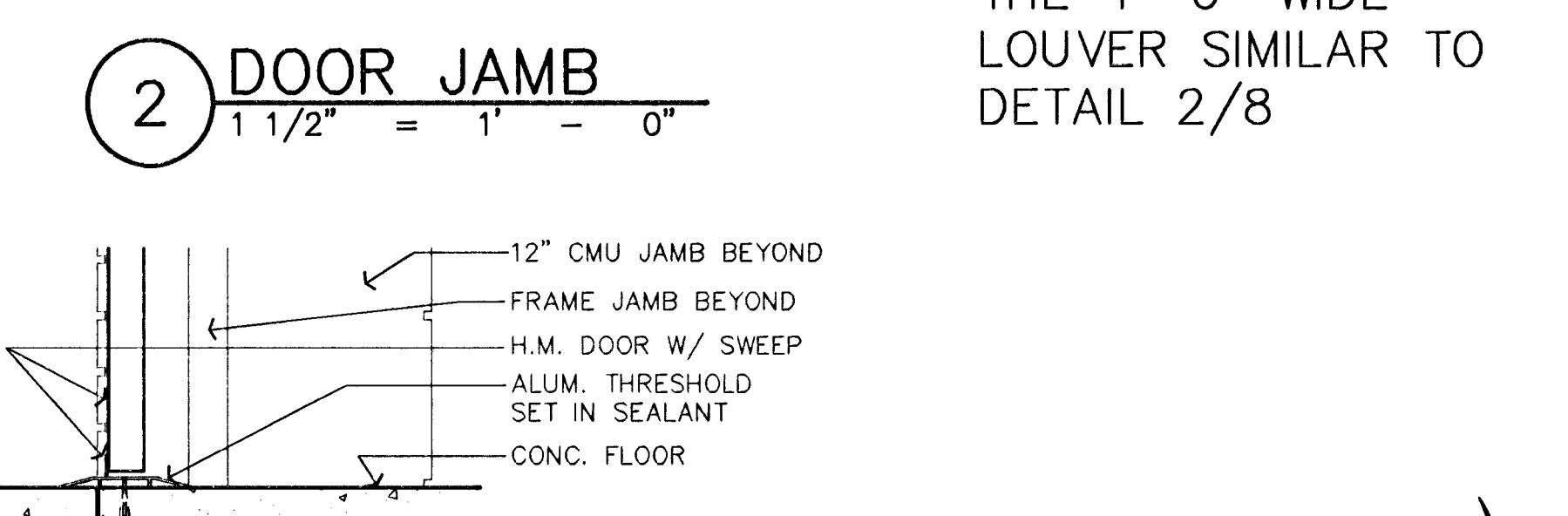
DOOR SCHEDULE										
NO.	DOOR	SIZE	FRAME		DETAILS			REMARKS		
			MAT'L	FINISH	HEAD	JAMB	SILL			
1	3'-0" X 7'-0" X 1 3/4"		H.M.	PAINT	H.M.	PAINT	1/8	2/8	3/8	
2	3'-0" X 7'-0" X 1 3/4"		H.M.	PAINT	H.M.	PAINT	1/8	2/8	3/8	
3	3'-0" X 7'-0" X 1 3/4"		H.M.	PAINT	H.M.	PAINT	1/8	2/8	3/8	
4	12'-0" X 15'-4" COILING DOOR		STEEL	PAINT	STEEL	PAINT	3/11	4/8	-	
5	12'-0" X 15'-4" SEC. GATE		STEEL	PAINT	STEEL	PAINT	3/11	4/8	-	
6	10'-0" X 14'-0" SEC. GATE		STEEL	PAINT	STEEL	PAINT	3/11	4/8	-	
7	10'-0" X 14'-0" COILING DOOR		STEEL	PAINT	STEEL	PAINT	3/11	4/8	-	



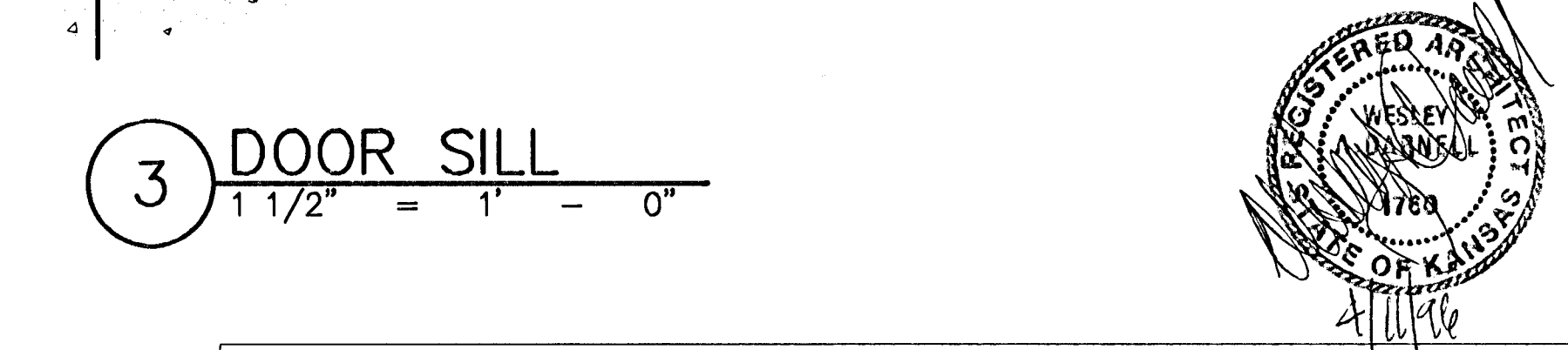
1 DOOR HEAD
1 1/2" = 1' - 0"



4 GARAGE DOOR JAMB
1 1/2" = 1' - 0"

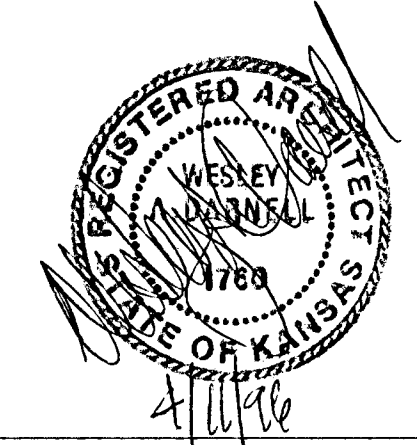


2 DOOR JAMB
1 1/2" = 1' - 0"



3 DOOR SILL
1 1/2" = 1' - 0"

NOTE: 90" X 90" EXHAUST FAN MAS. JAMB SIMILAR TO DETAIL 4/8
WINDOW & LOUVERS UP TO & INCLUDING THE 4'-0" WIDE LOUVER SIMILAR TO DETAIL 2/8



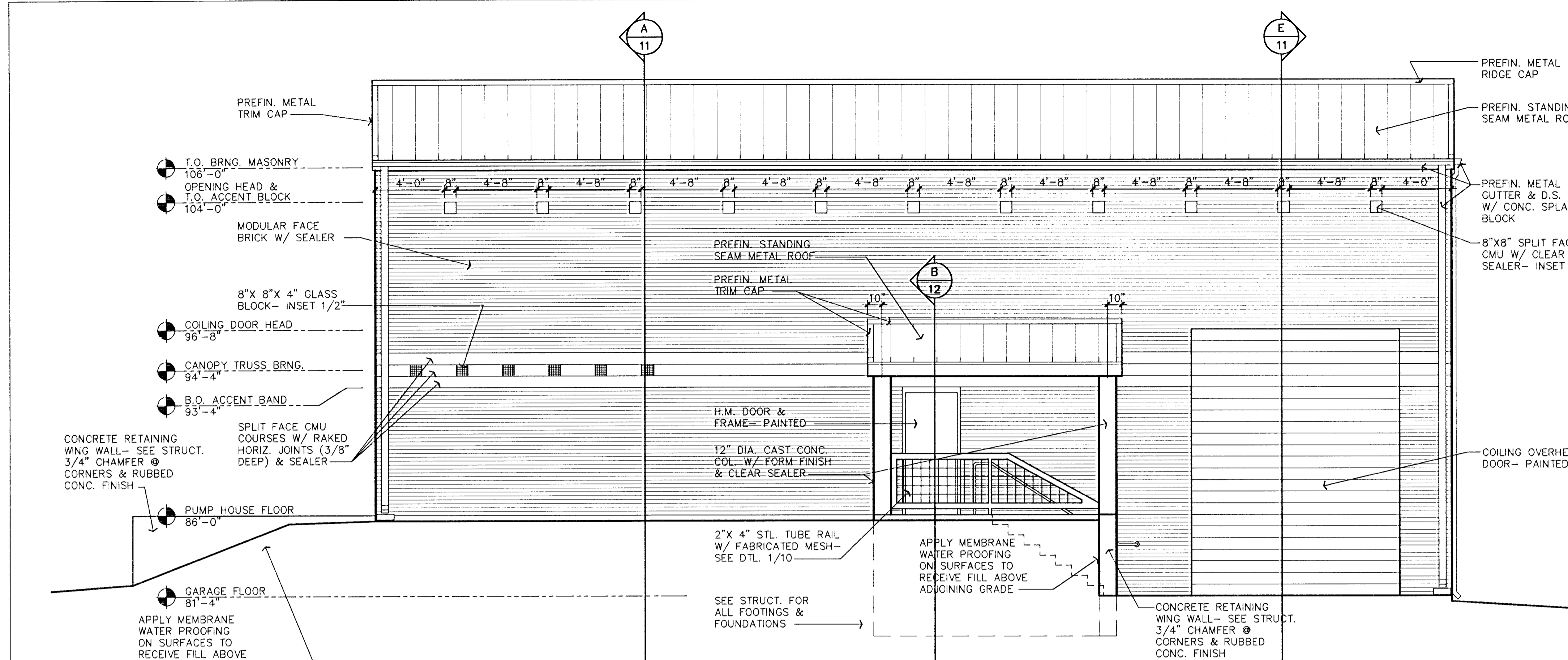
UPPER LEVEL ARCHITECTURAL PLAN

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

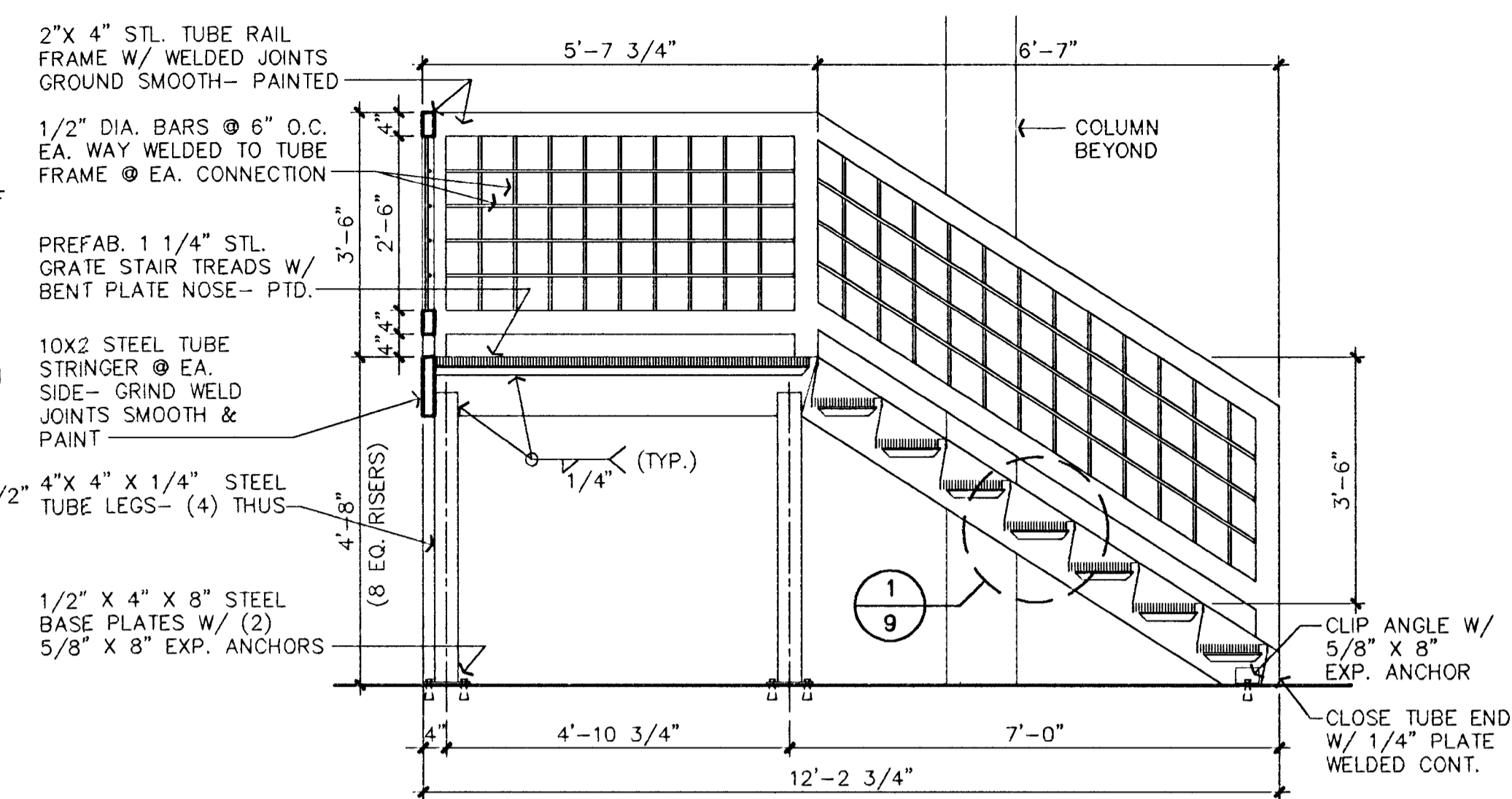
MID-KANSAS ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

SOUTH SENECA DRAINAGE IMPROVEMENTS DRAINAGE OUTFALL PUMP STATION
PROJECT NAME
ARCHITECTURAL FLOOR PLAN
SHEET TITLE
DEW DESIGN BY. RLF DRAWN BY. WAD CHECKED BY.
MARCH, 1996 DATE. 93035 JOB NO. 8 / 30 SHEET OF

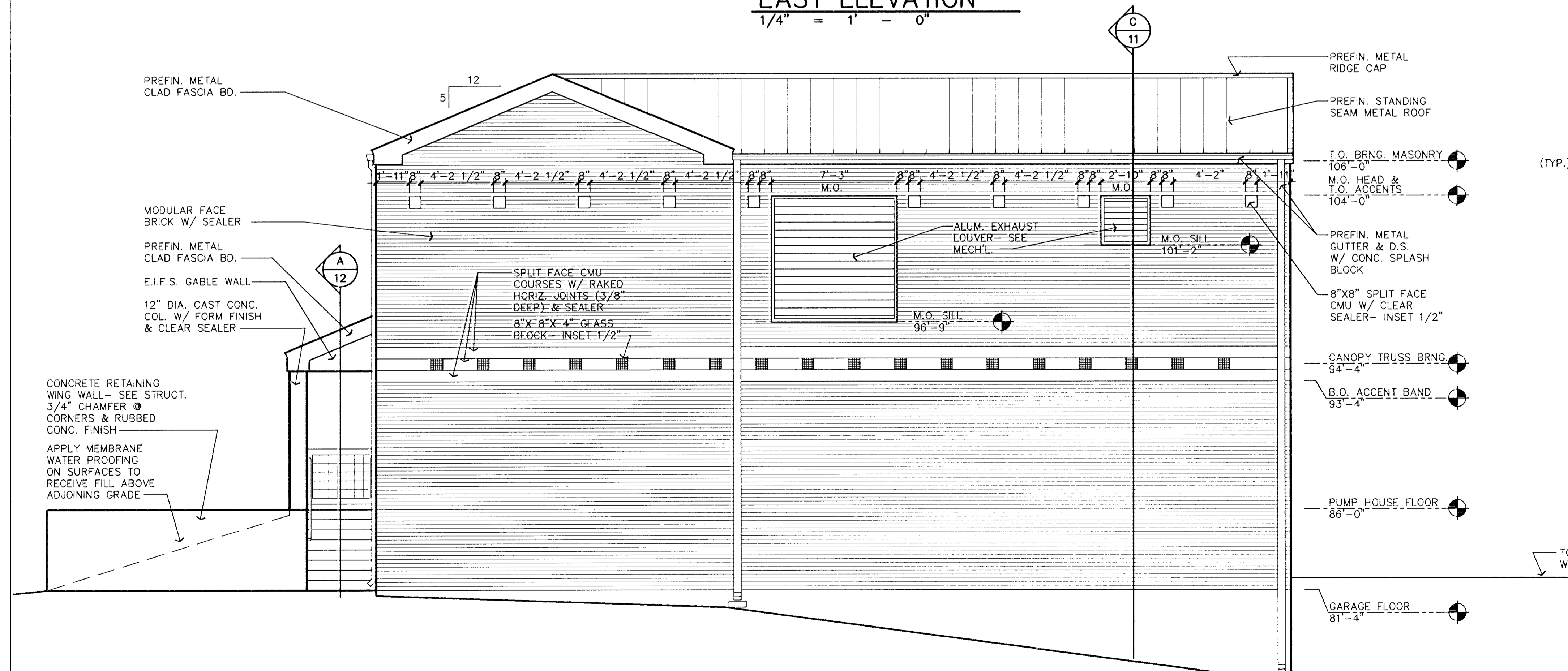
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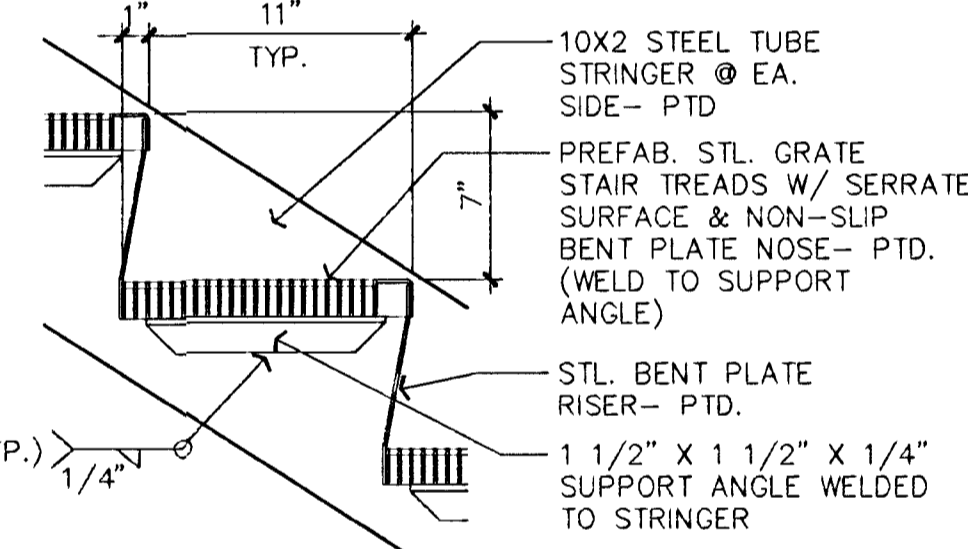
EAST ELEVATION
1/4" = 1' - 0"



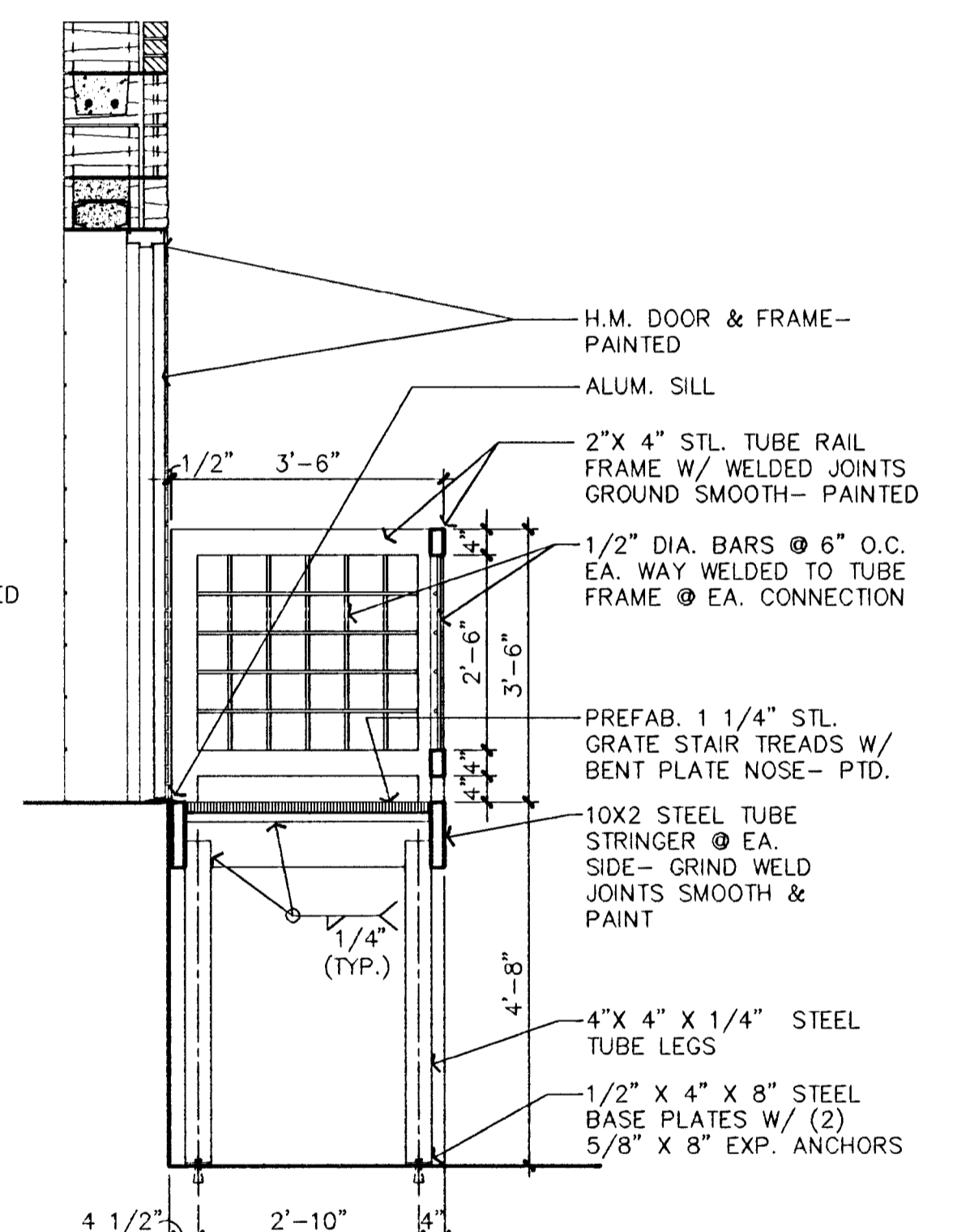
A STAIR SECTION
1 1/2" = 1' - 0"



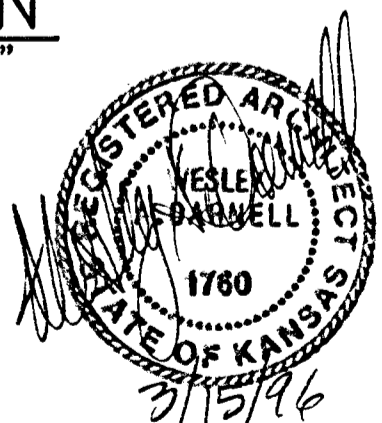
NORTH ELEVATION
1/4" = 1' - 0"



1 TREAD DETAIL
1 1/2" = 1' - 0"



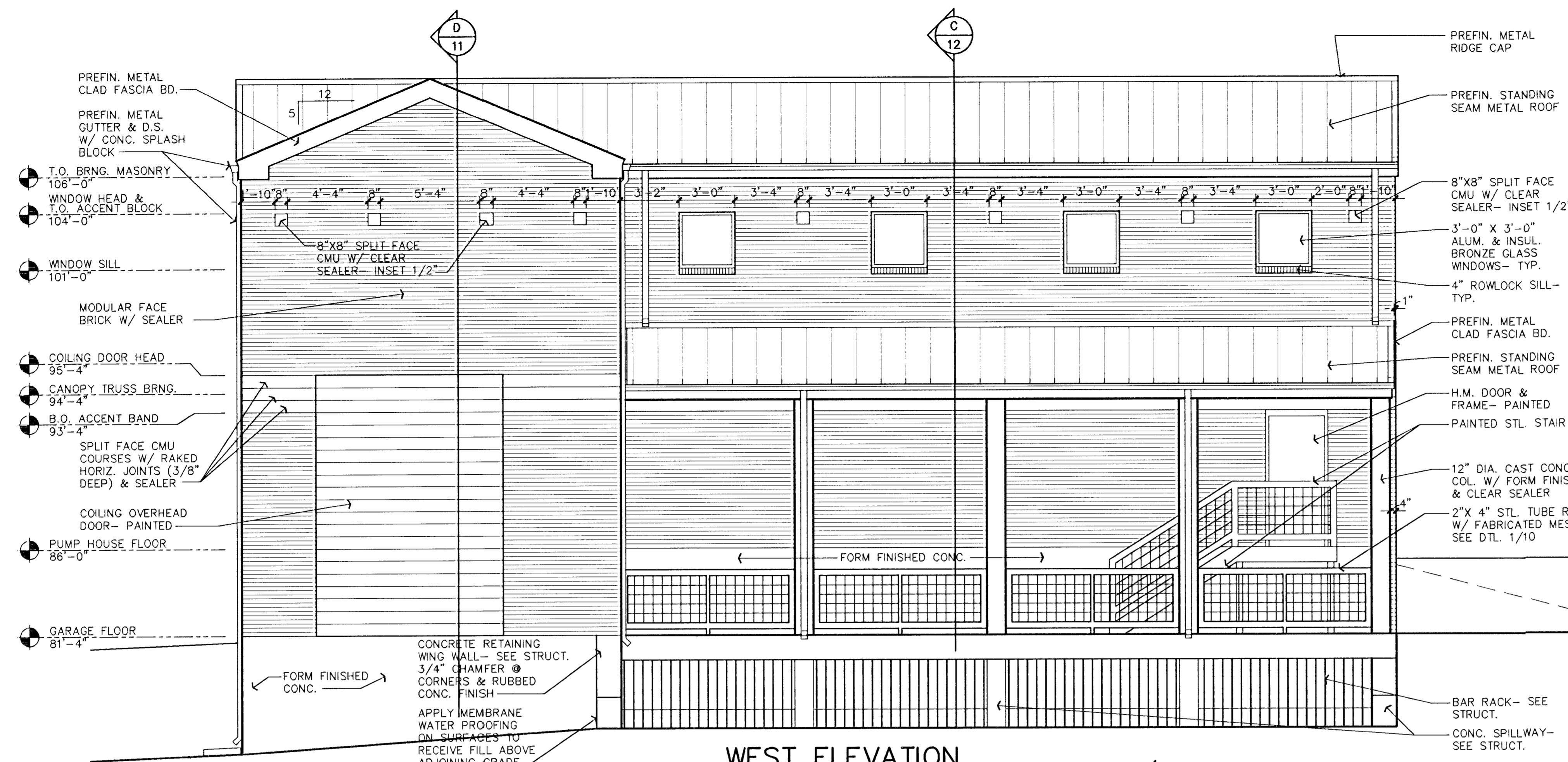
B STAIR SECTION
1 1/2" = 1' - 0"



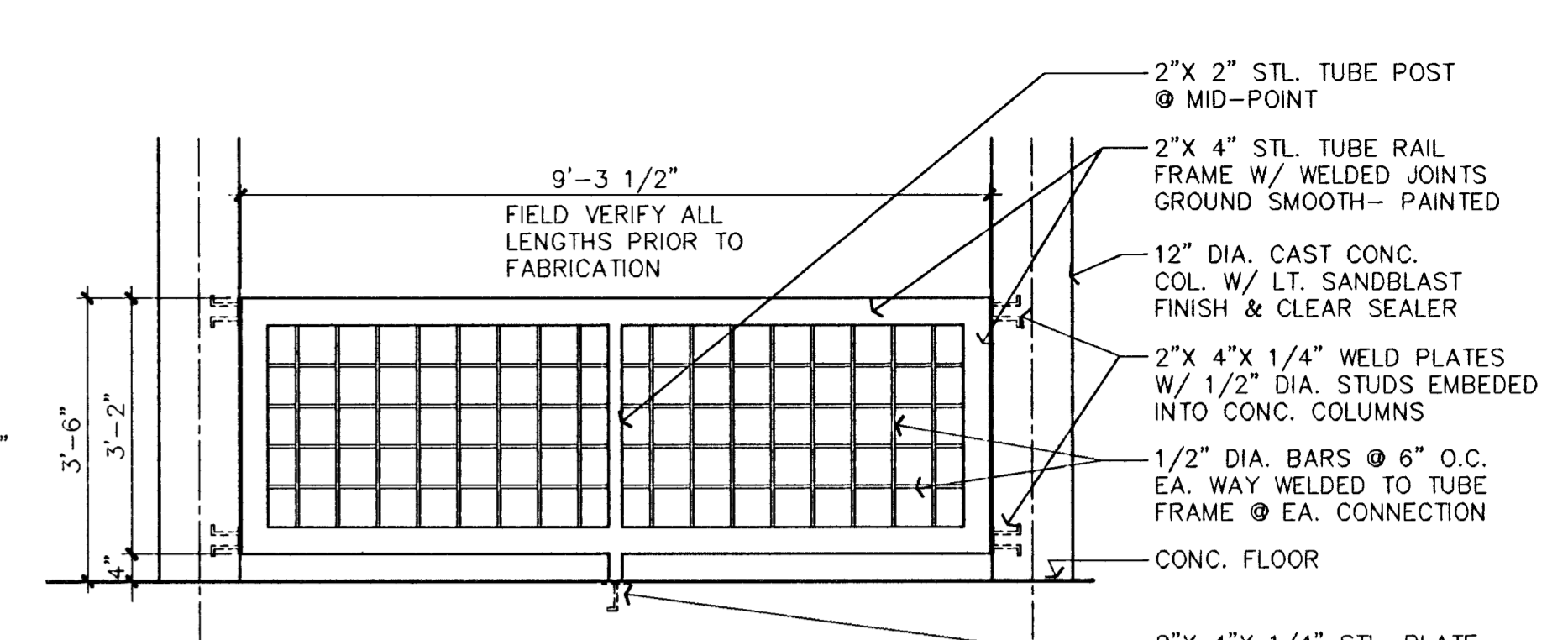
MID-KANSAS ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

**SOUTH SENECA DRAINAGE IMPROVEMENTS
DRAINAGE OUTFALL PUMP STATION**
PROJECT NAME
**ARCHITECTURAL
BUILDING ELEVATIONS**
SHEET TITLE

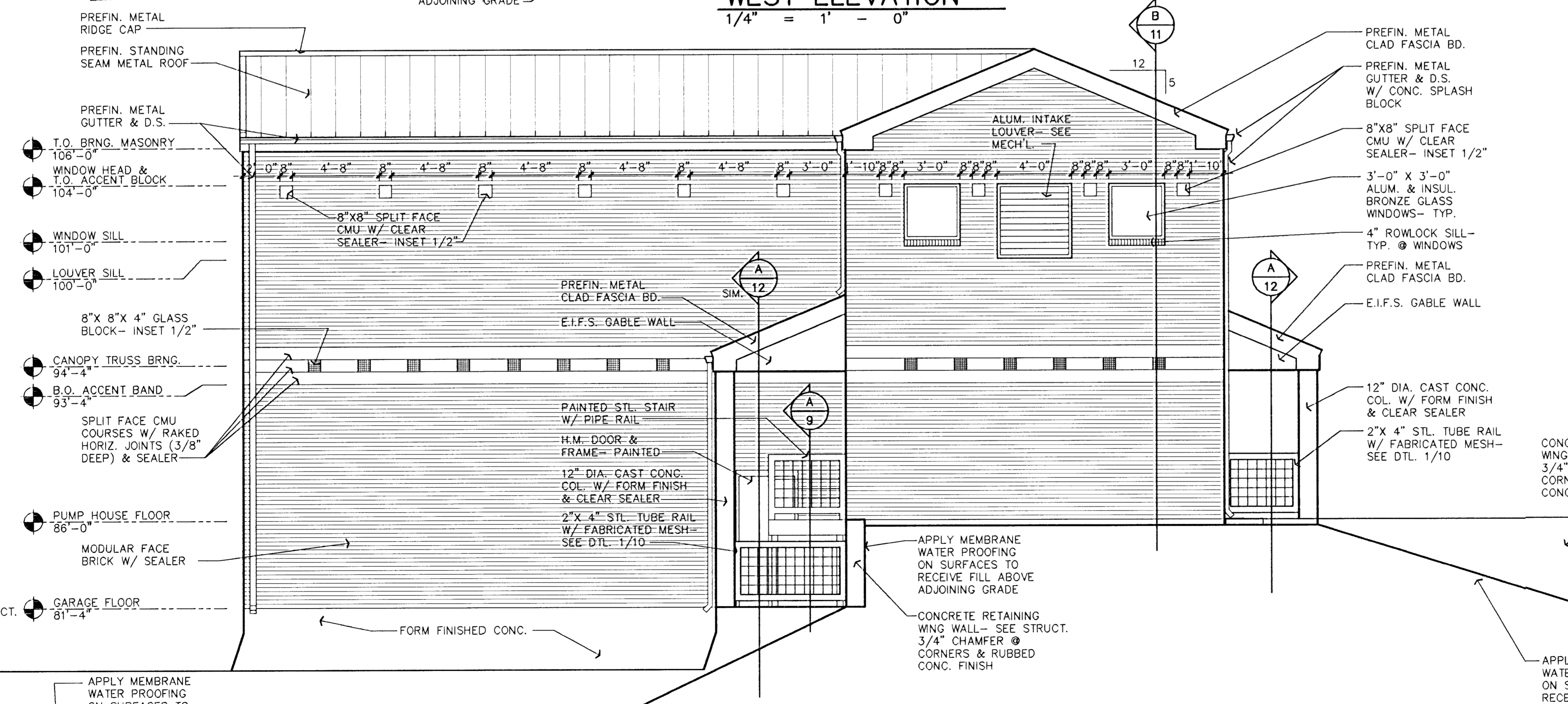
DEW DESIGN BY.	RLF DRAWN BY.	WAD CHECKED BY.
MARCH, 1996 DATE	93035 JOB NO.	9 / 30 SHEET/OF



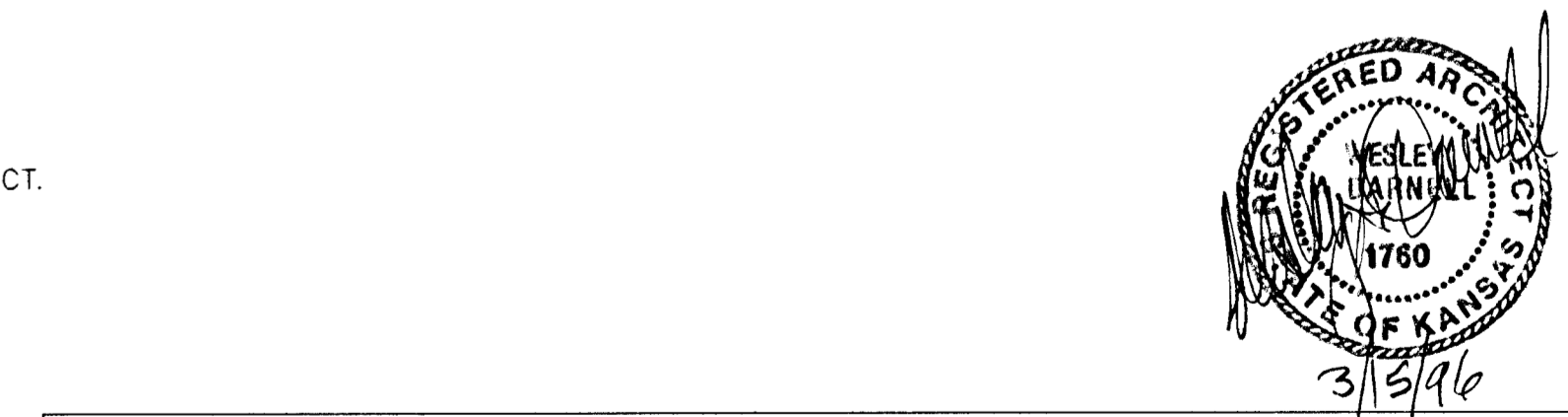
WEST ELEVATION
1/4" = 1' - 0"



1 TUBE RAILING DETAIL
1/2" = 1' - 0"



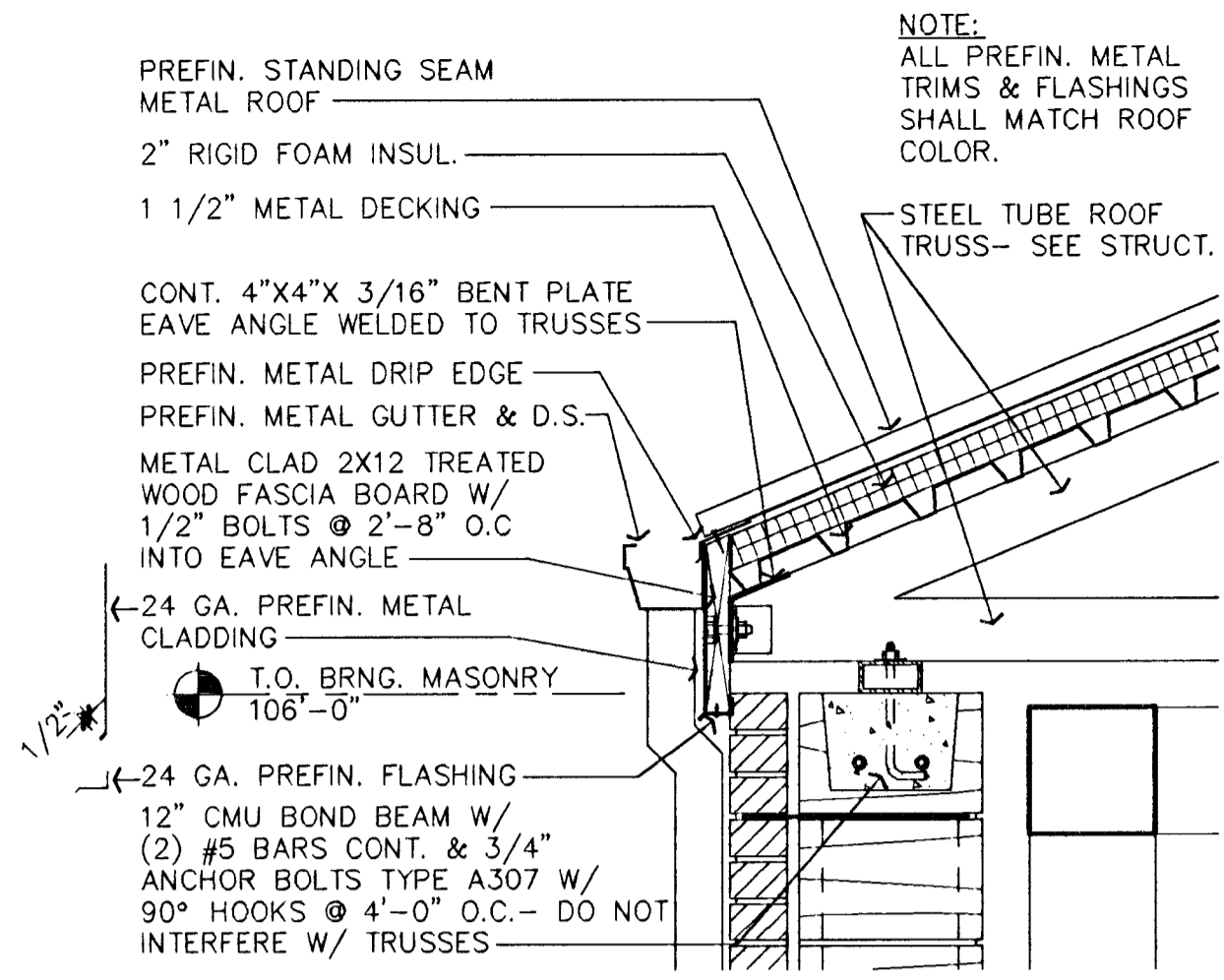
SOUTH ELEVATION
1/4" = 1' - 0"



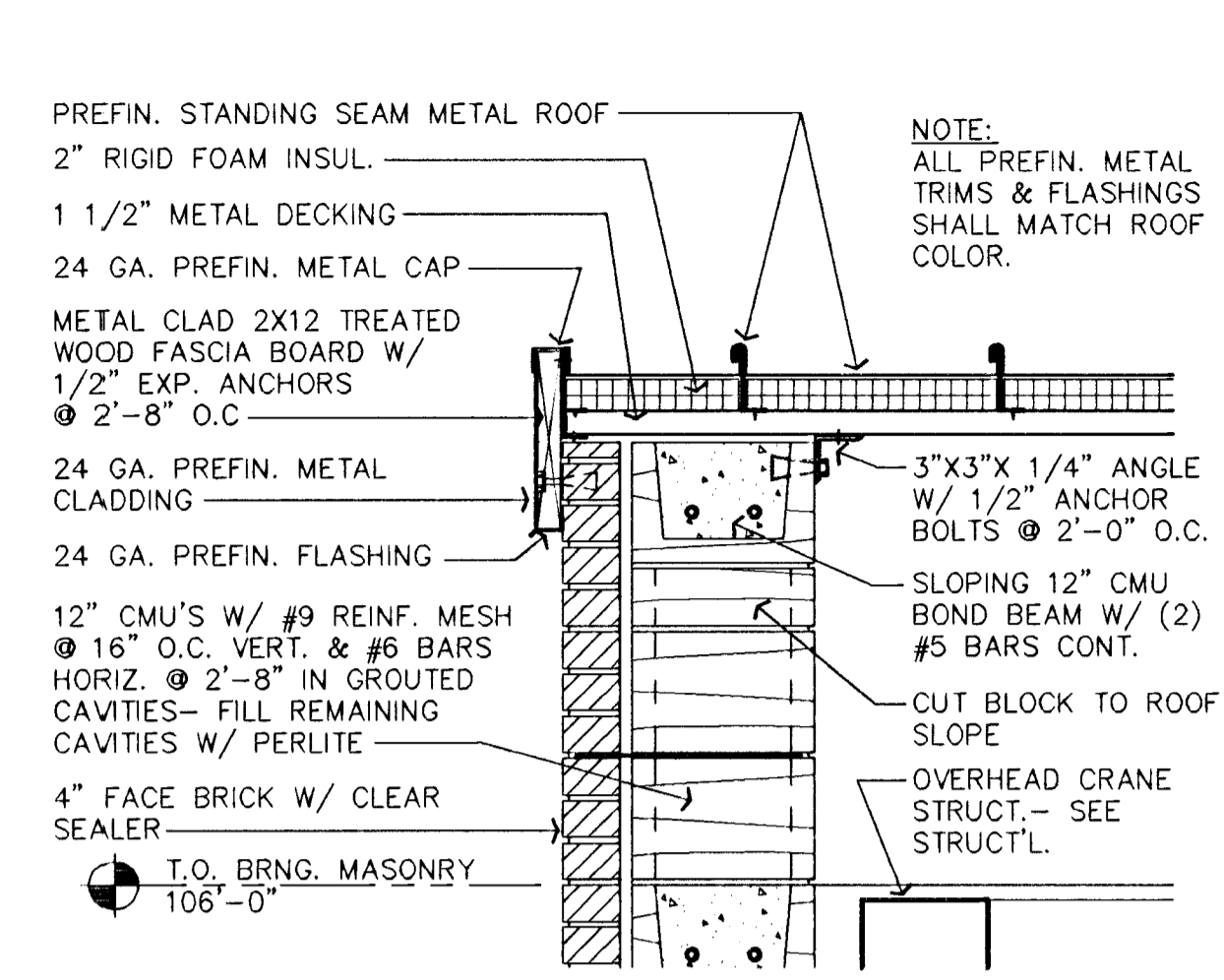
MID-KANSAS ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

SOUTH SENECA DRAINAGE IMPROVEMENTS DRAINAGE OUTFALL PUMP STATION
PROJECT NAME
ARCHITECTURAL BUILDING ELEVATIONS
SHEET TITLE

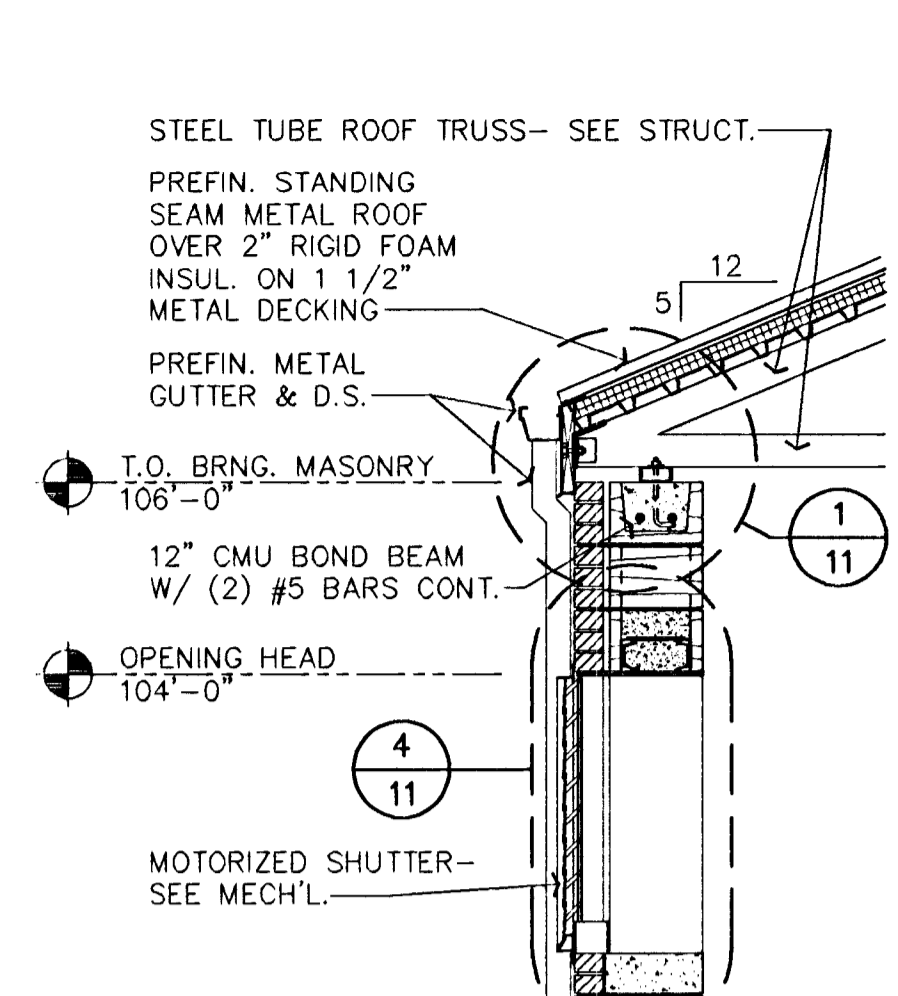
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MARCH, 1996 DATE	93035 JOB NO.	10 / 30 SHEET/OF



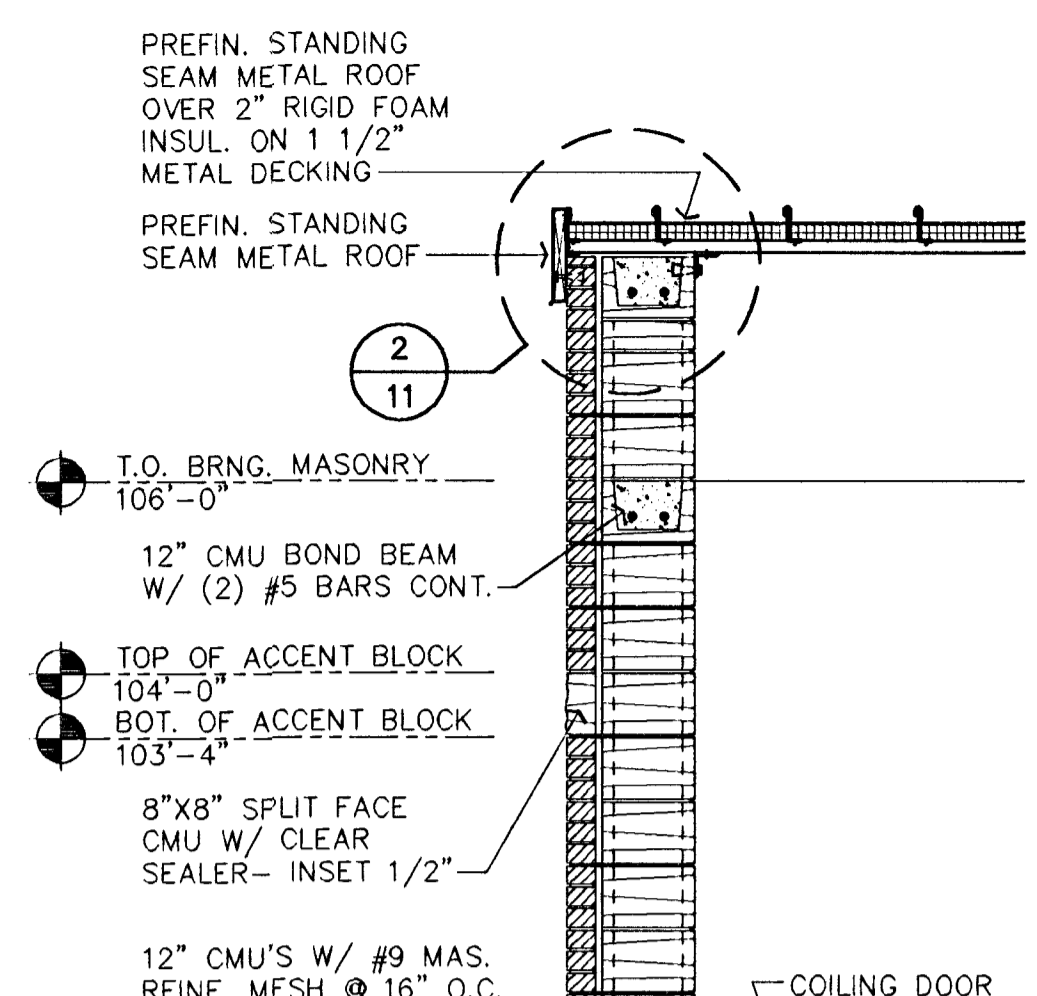
1 TYP. EAVE DETAIL
1" = 1' - 0"



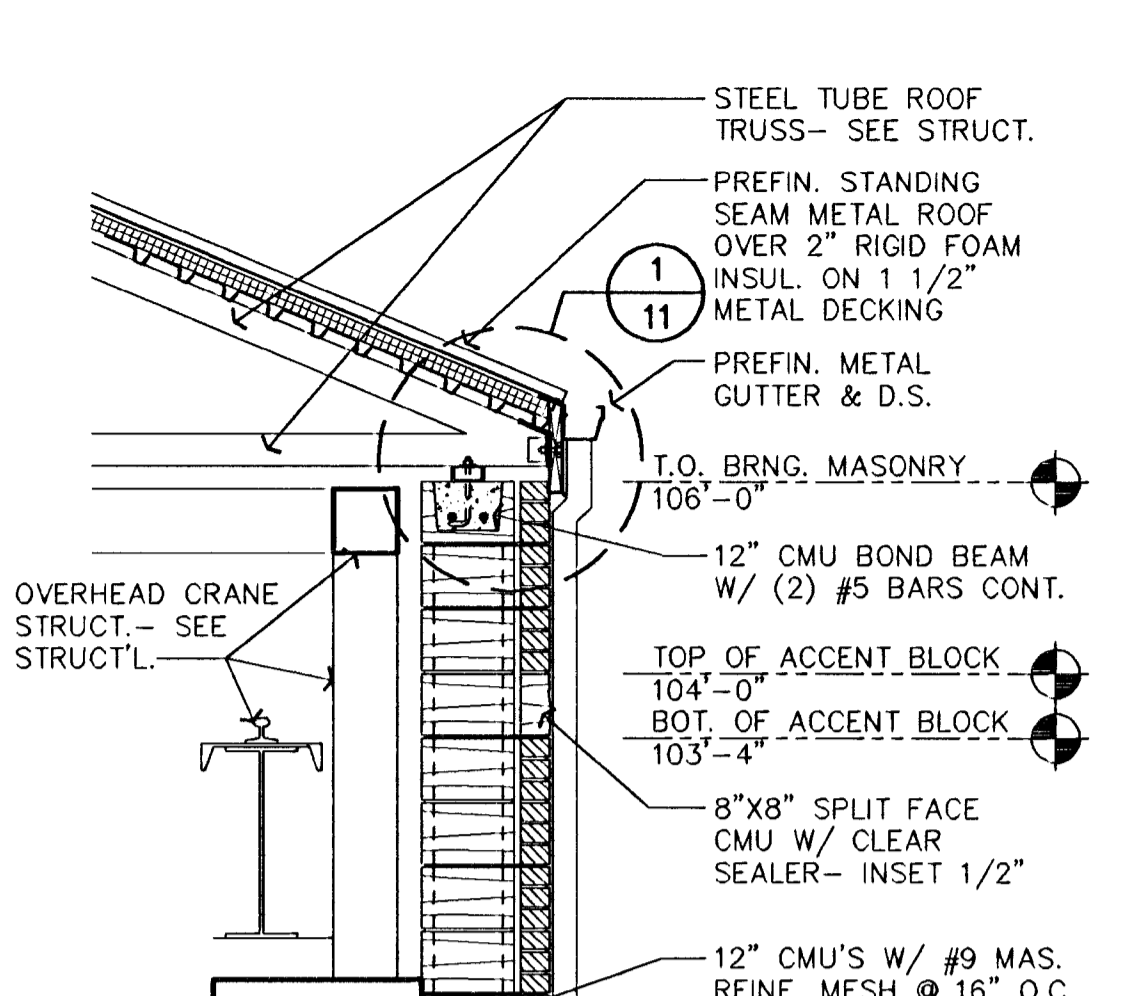
2 TYP. GABLE DETAIL
1" = 1' - 0"



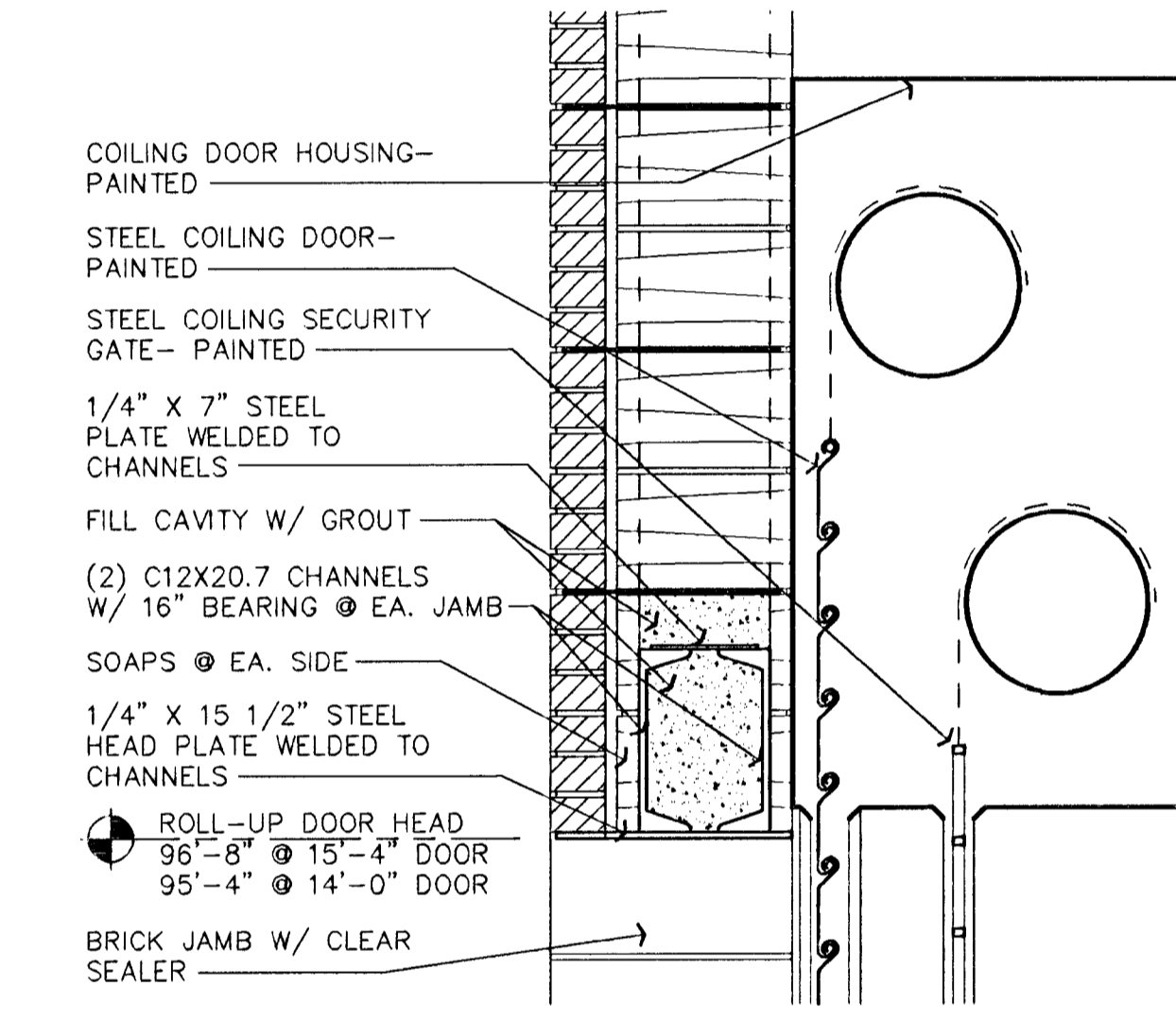
C WALL SECTION
1/2" = 1' - 0"



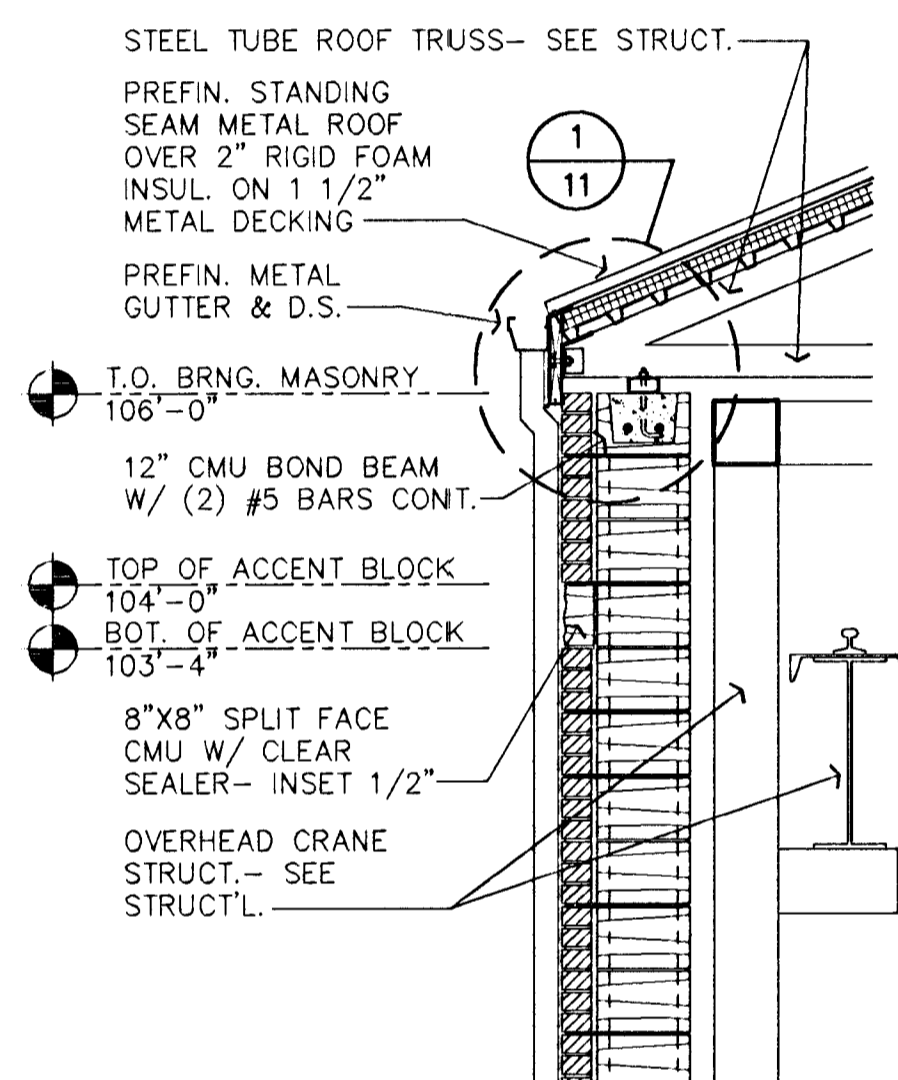
D COILING DOOR SECTION
1/2" = 1' - 0"



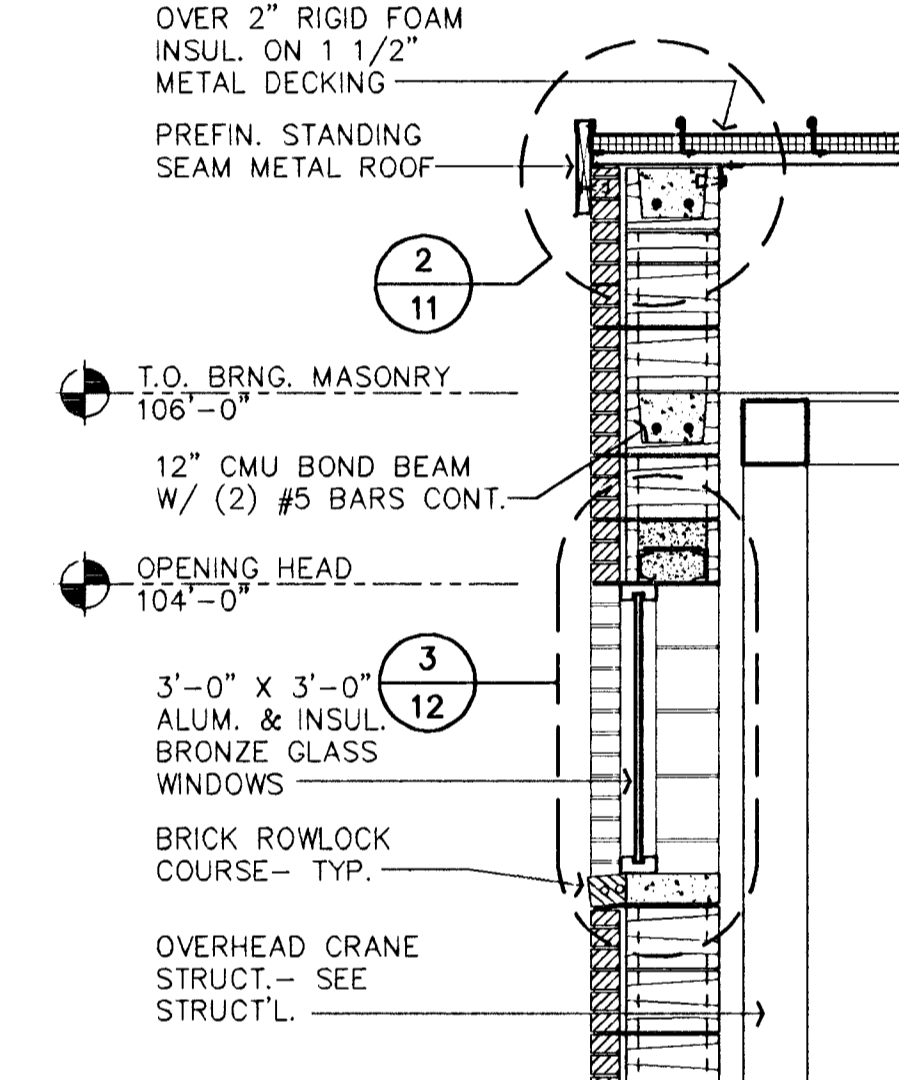
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1/2" = 1' - 0"



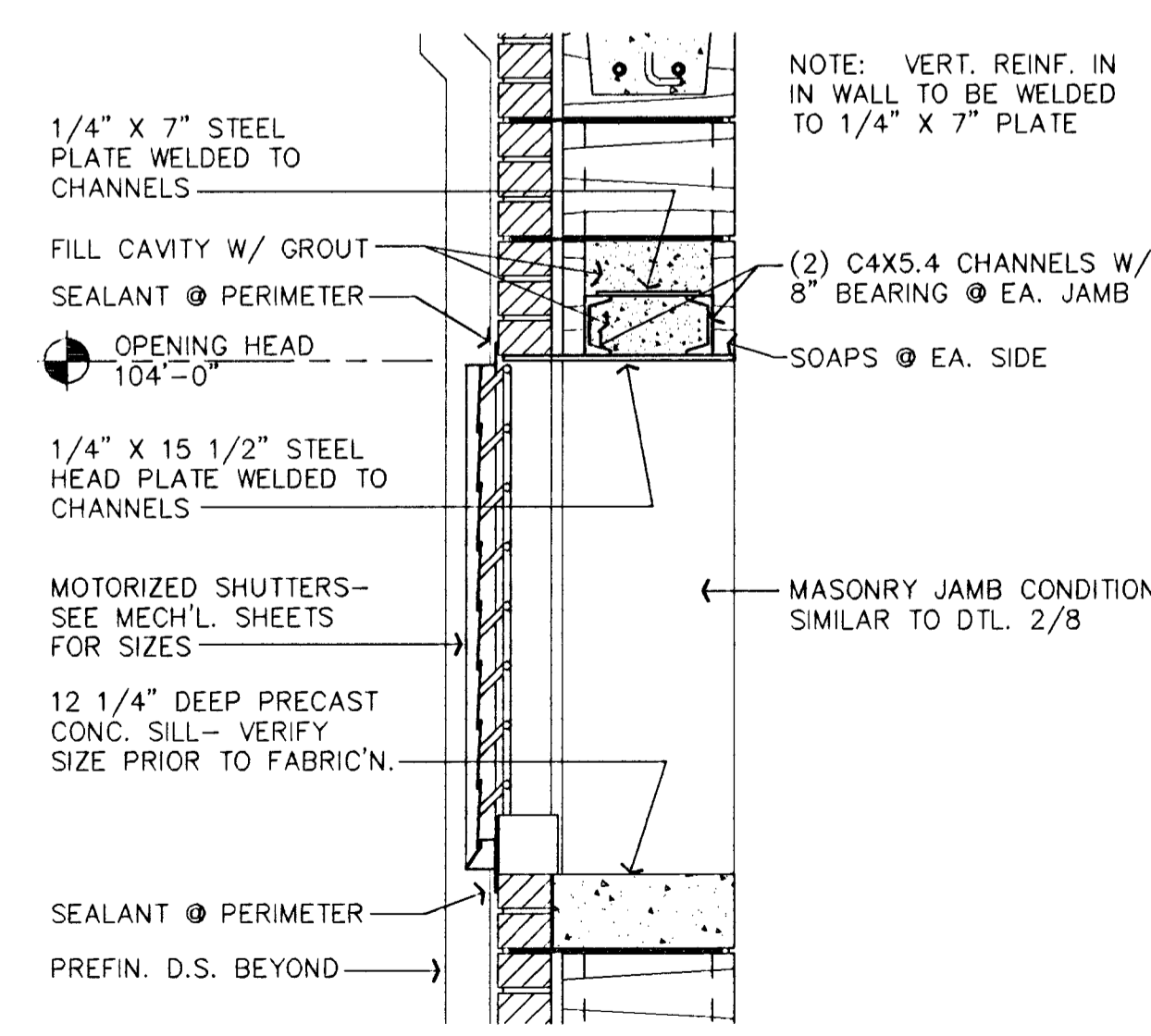
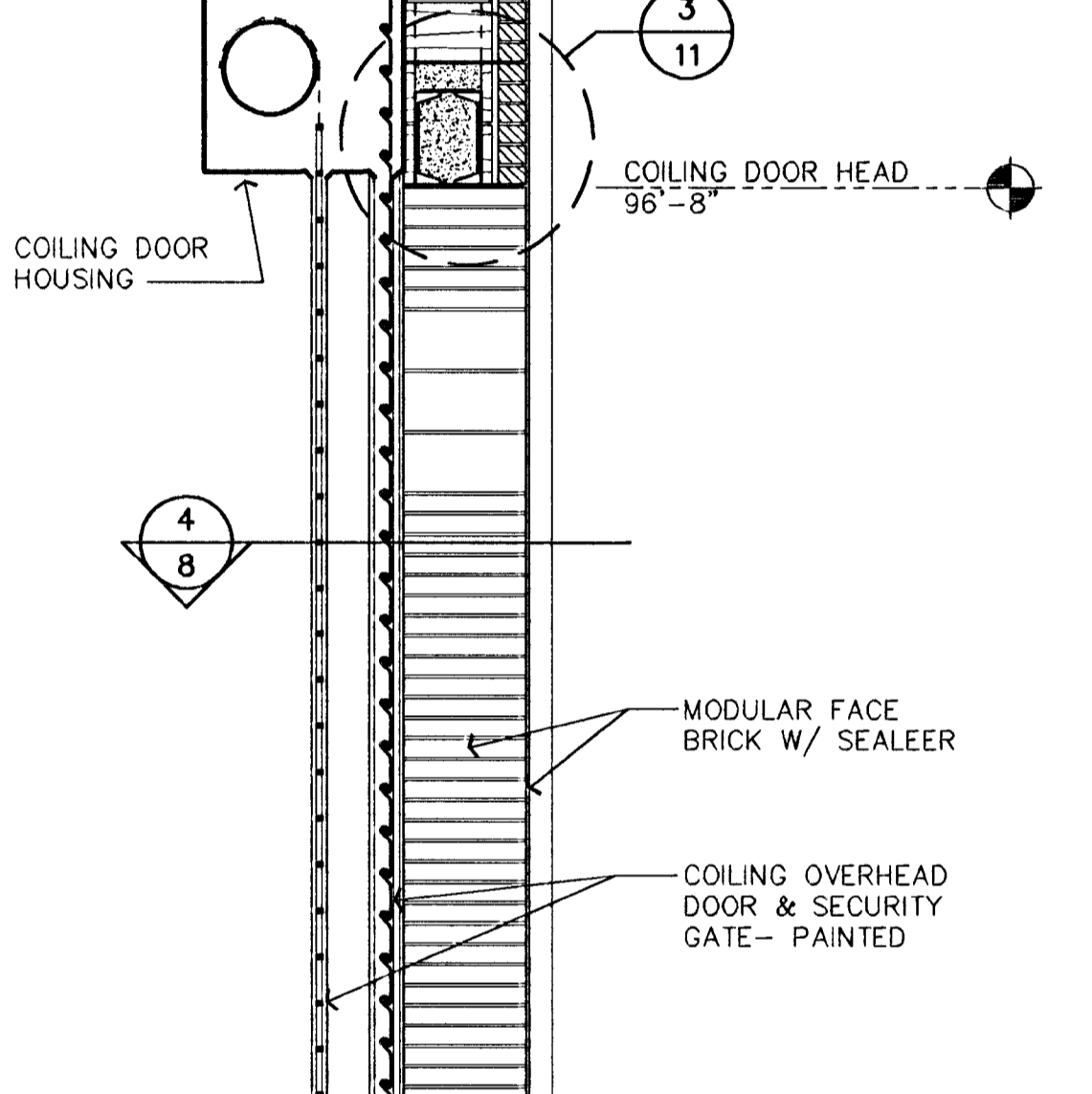
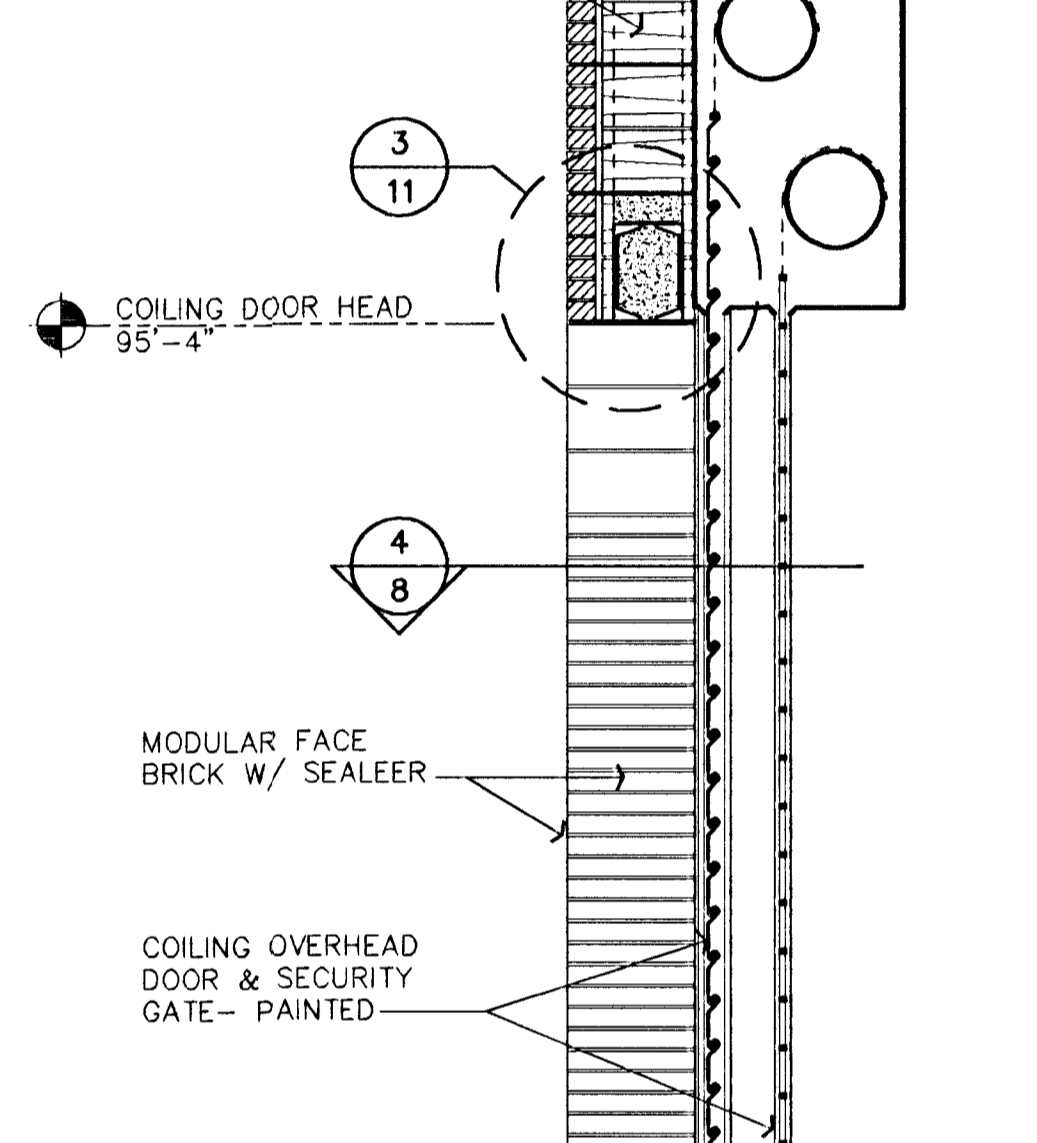
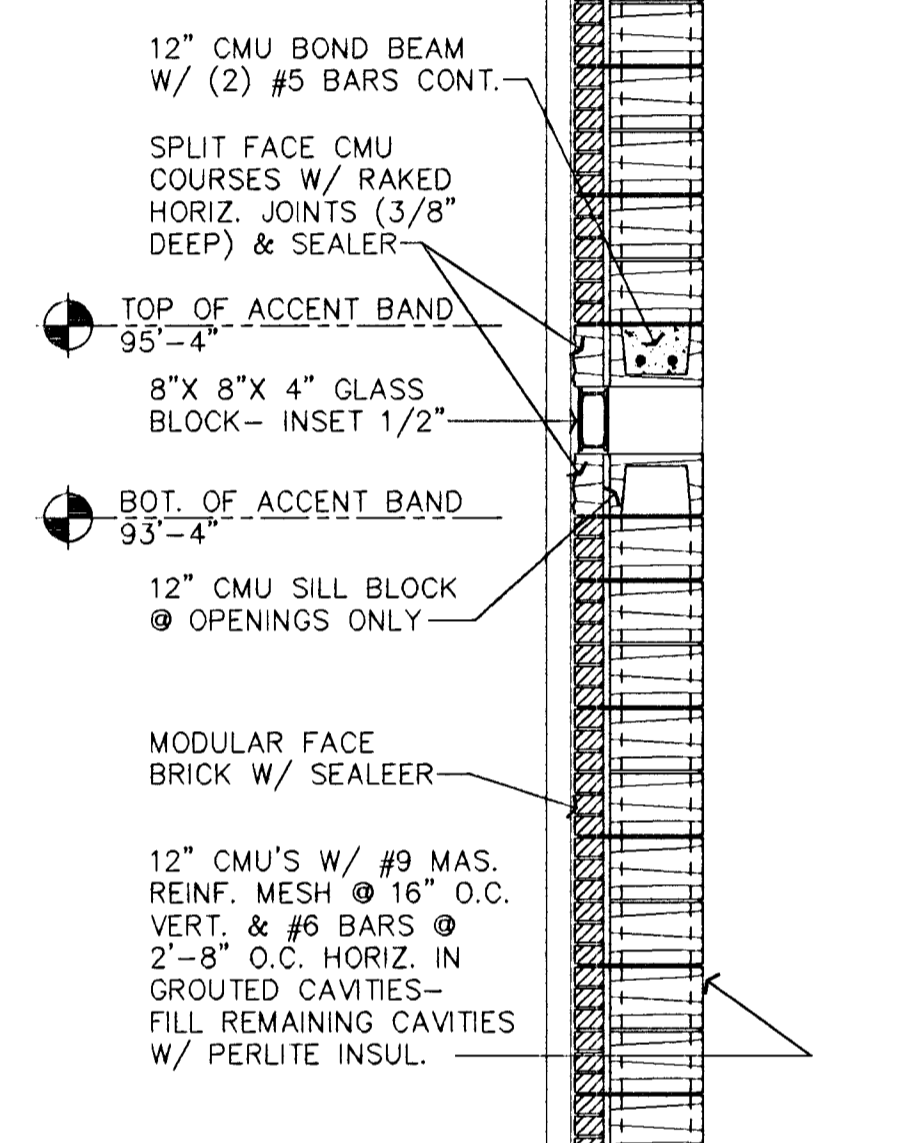
3 COILING DOOR HEAD
1" = 1' - 0"



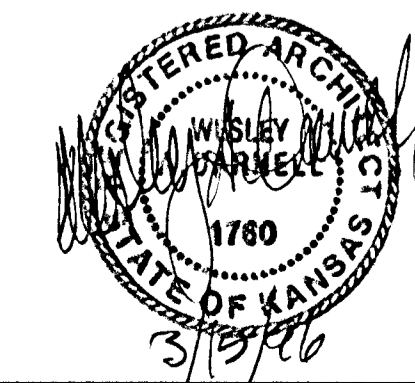
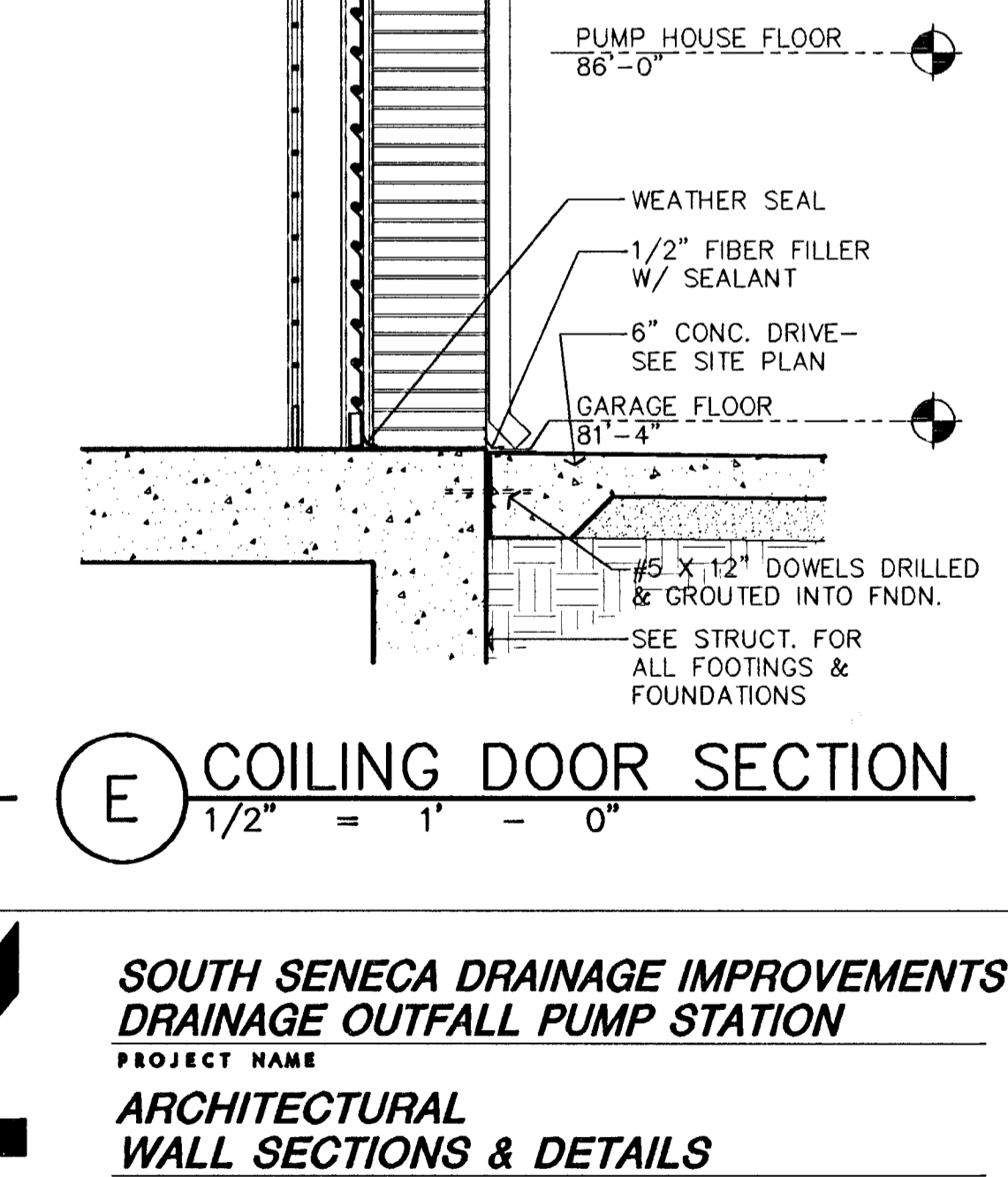
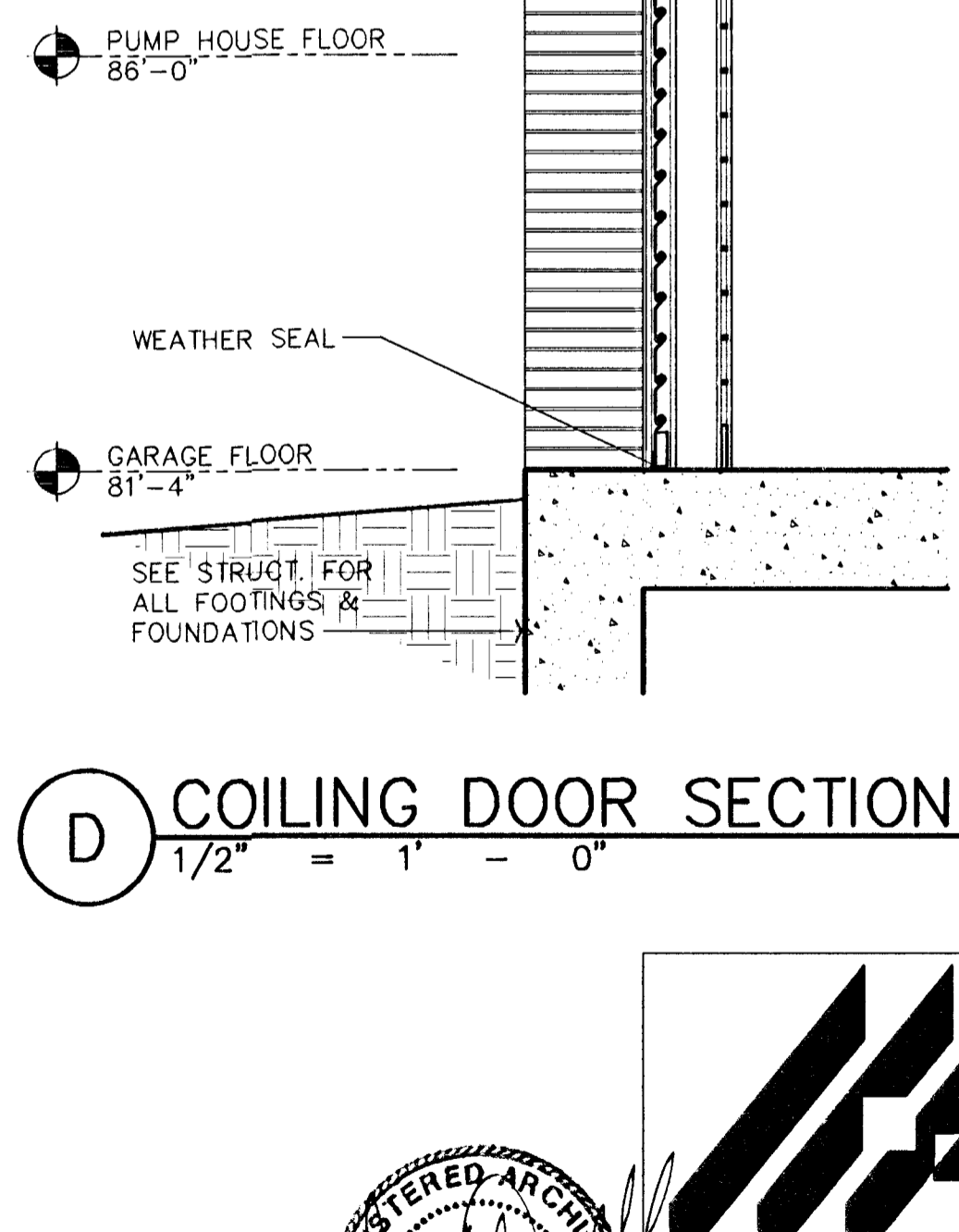
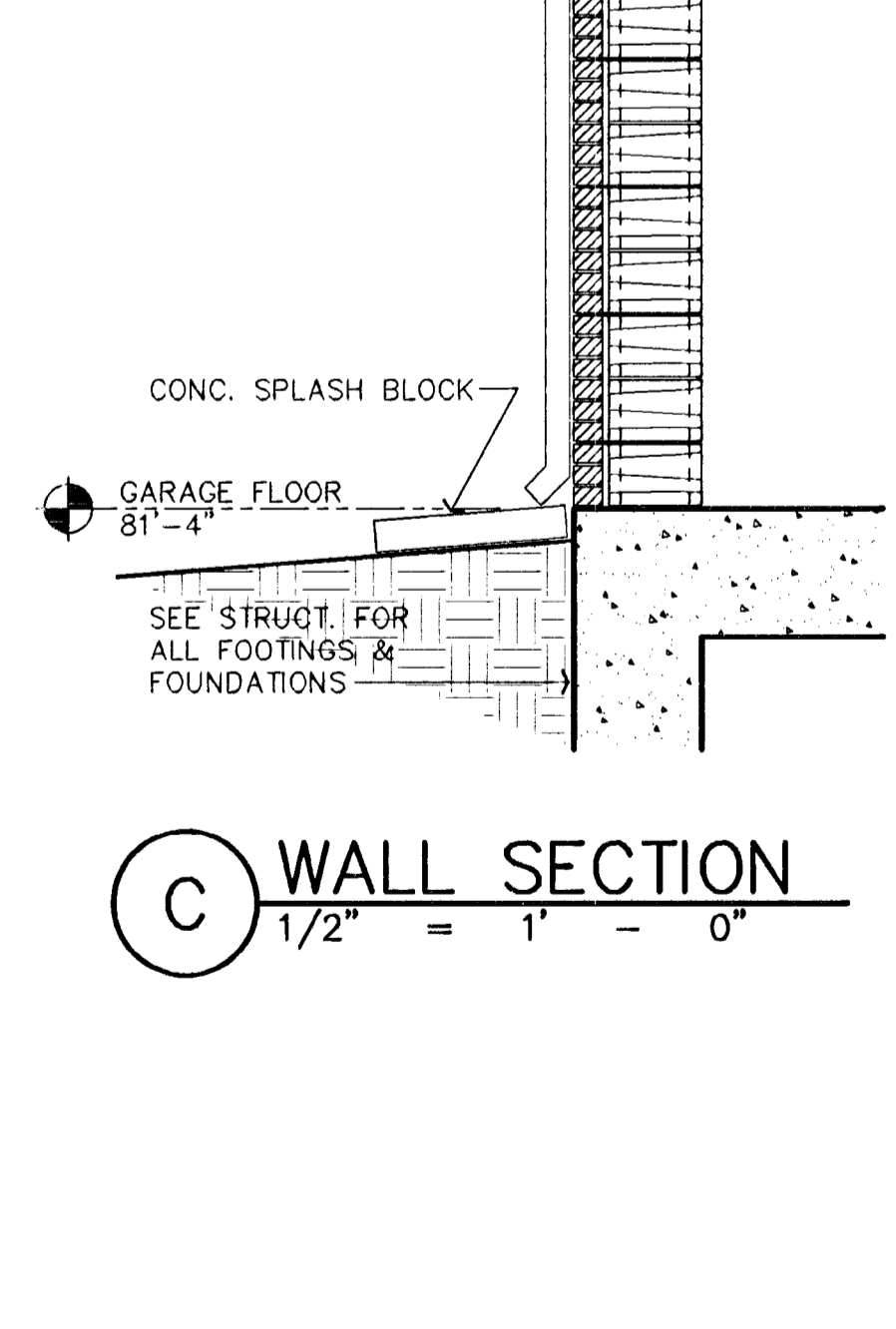
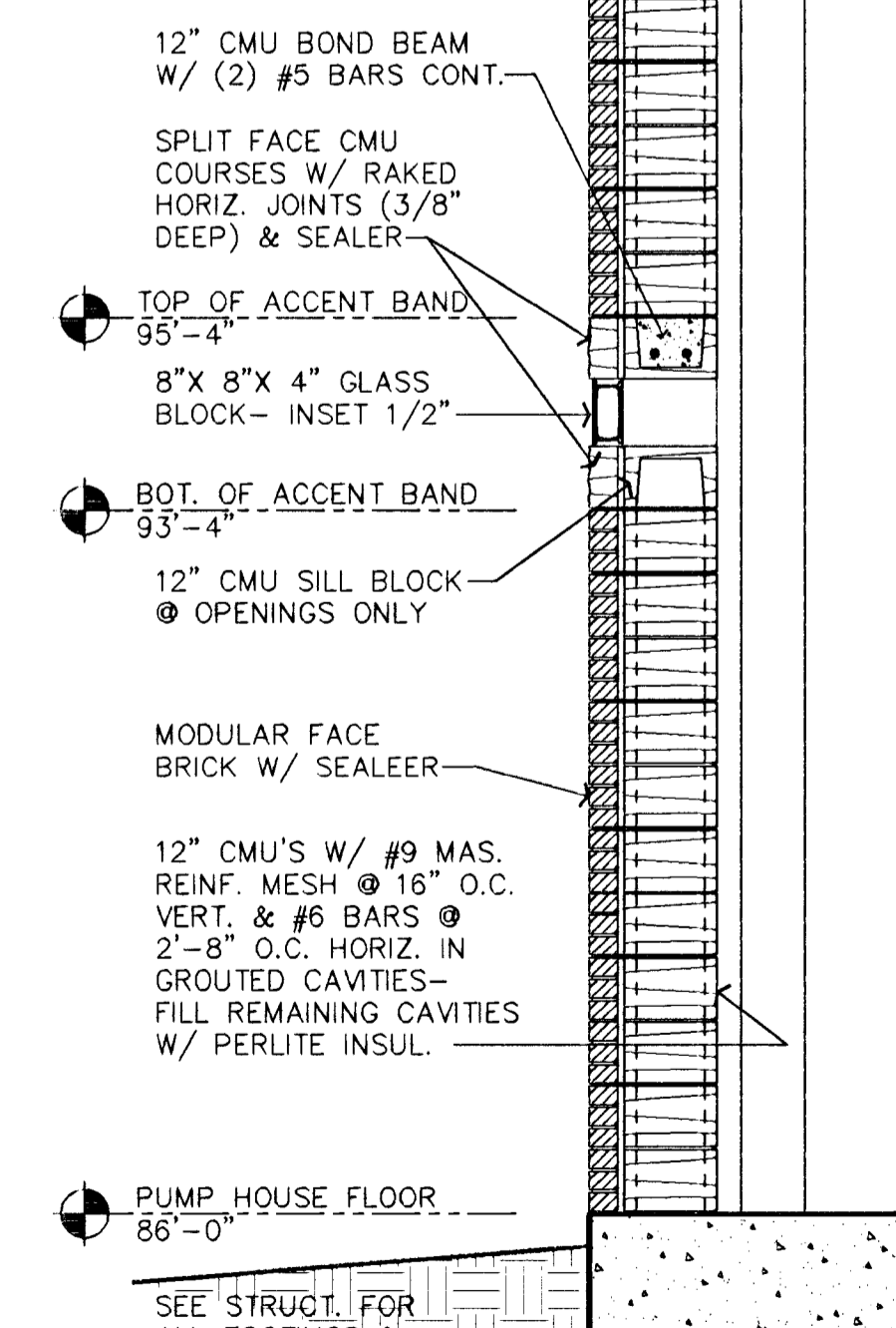
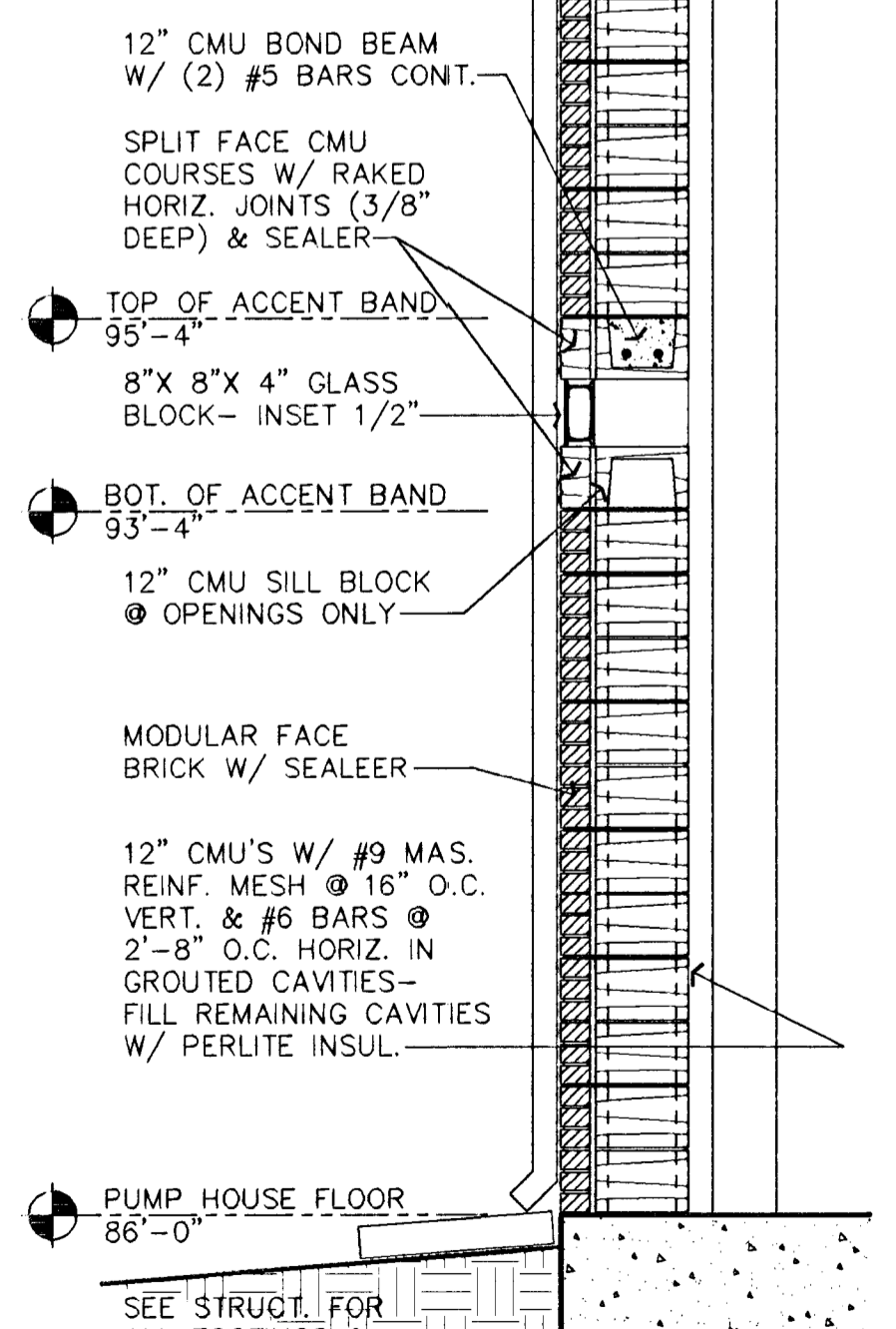
A WALL SECTION
1/2" = 1' - 0"



B WALL SECTION
1/2" = 1' - 0"



4 VENTILATION DETAIL
1" = 1' - 0"

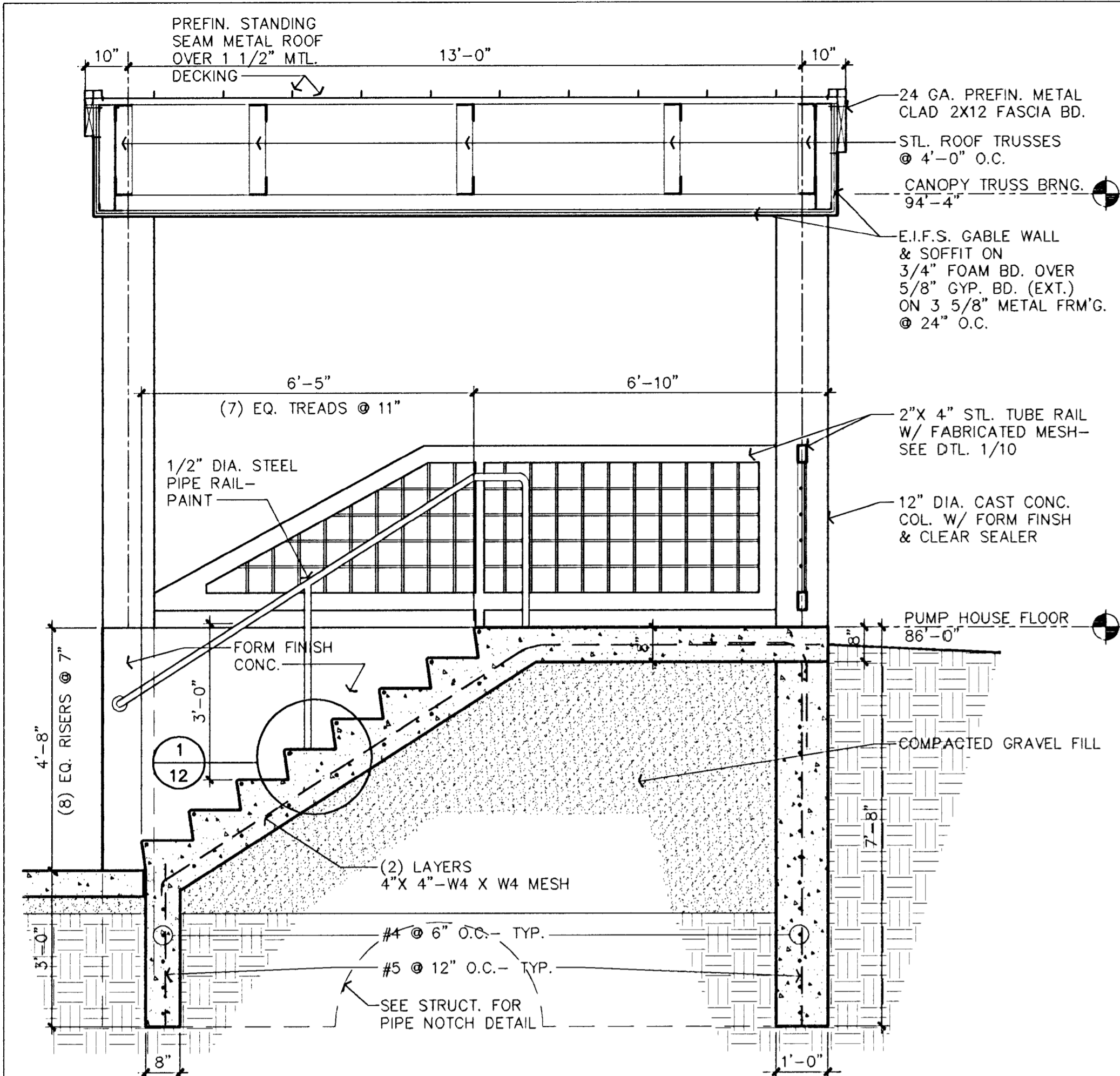


**SOUTH SENECA DRAINAGE IMPROVEMENTS
DRAINAGE OUTFALL PUMP STATION**
PROJECT NAME

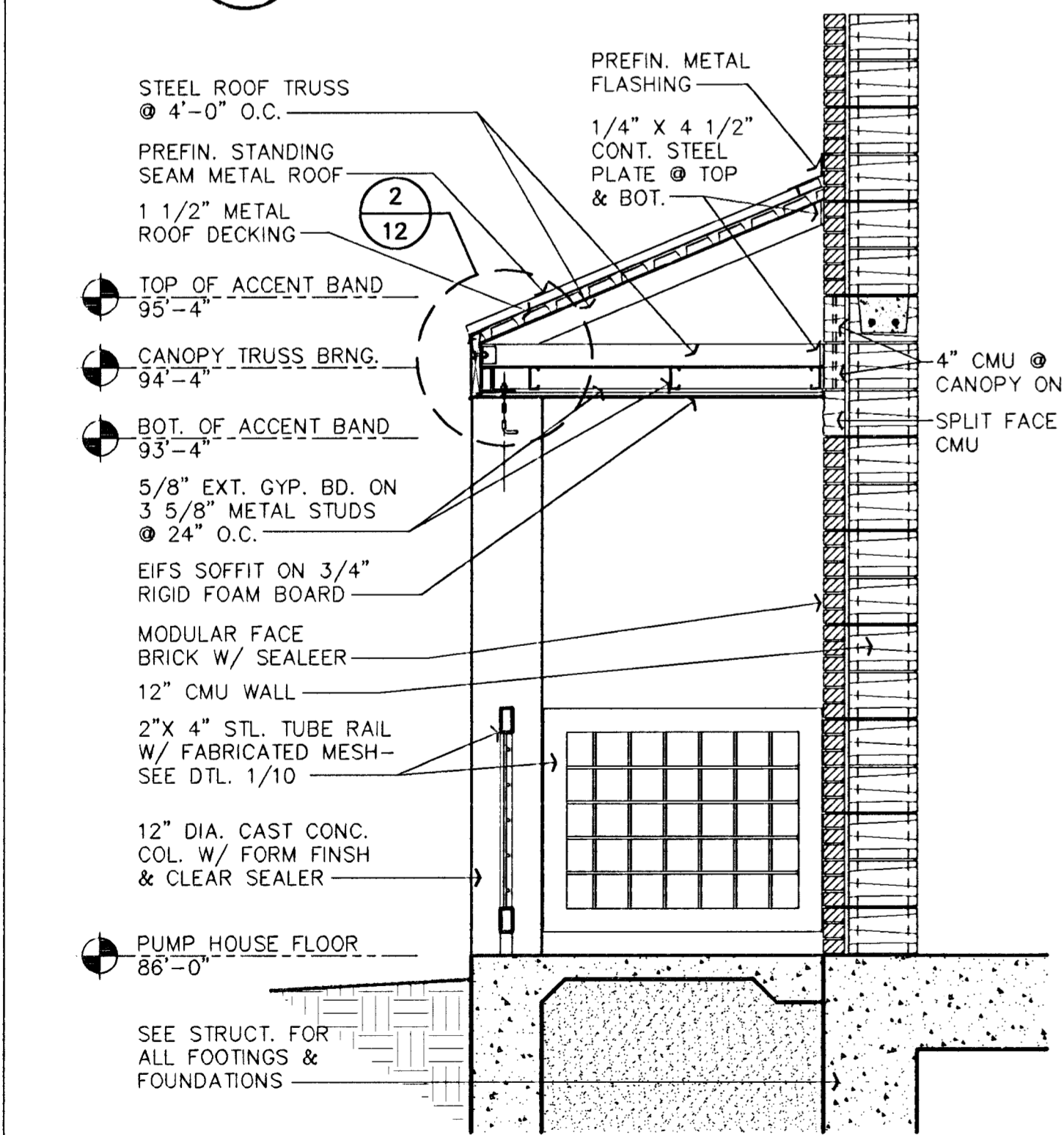
**ARCHITECTURAL
WALL SECTIONS & DETAILS**
SHEET TITLE

MID-KANSAS ENGINEERING
CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

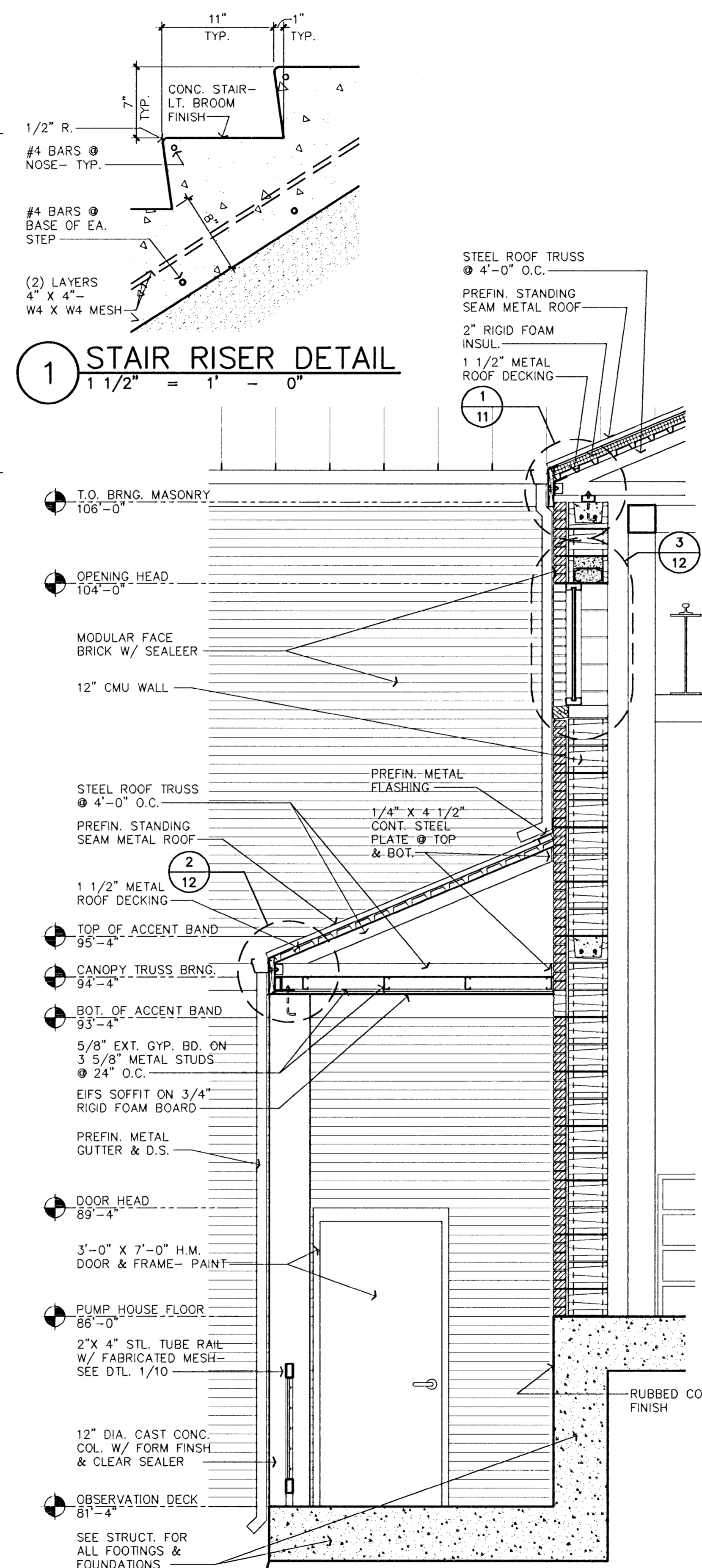
DEW DESIGN BY.	RLF DRAWN BY.	WAD CHECKED BY.
MARCH, 1996 DATE	93035 JOB NO.	11 / 30 SHEET/OF



A ENTRY STAIR SECTION
1/2" = 1' - 0"

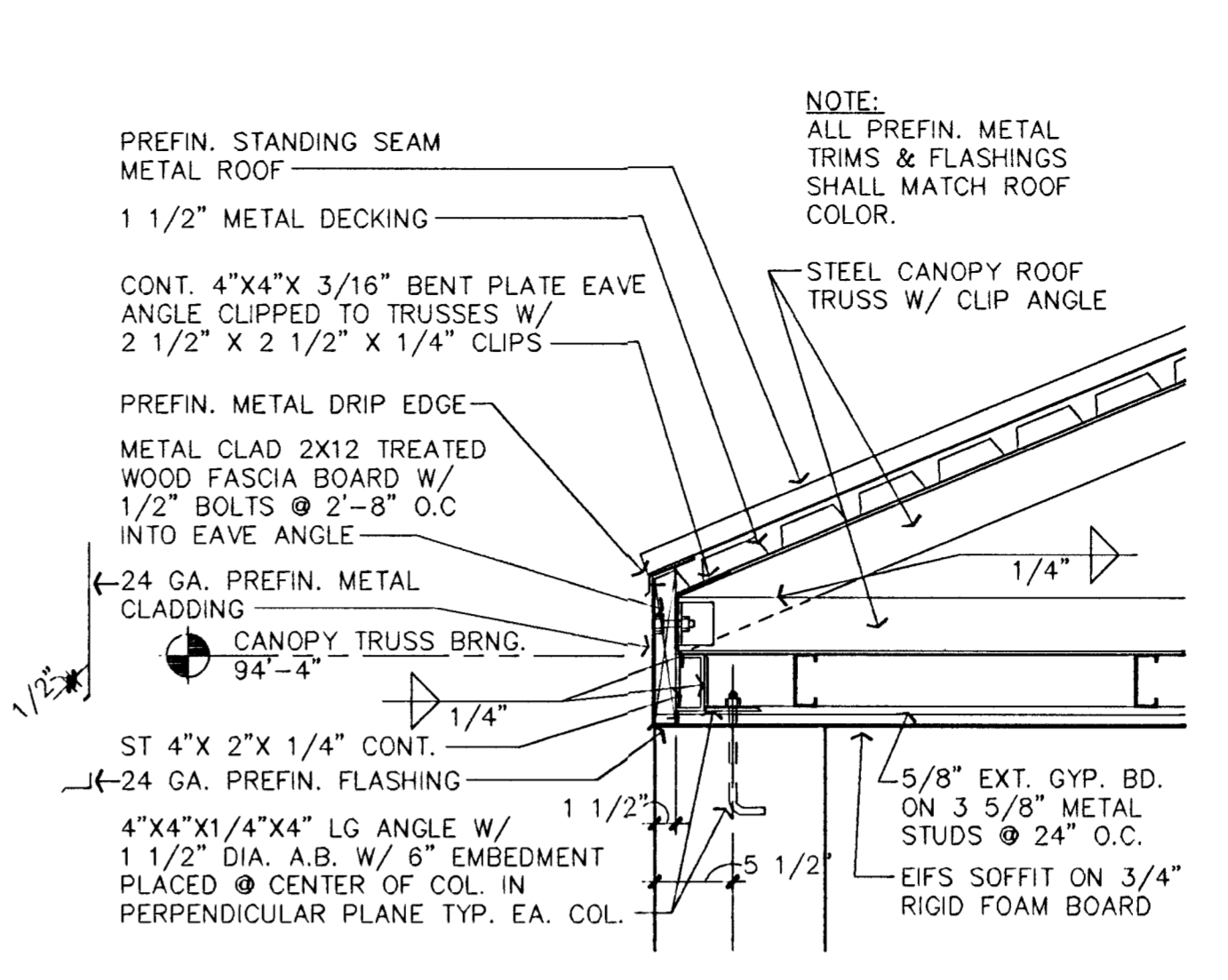


B ENTRY CANOPY SECTION
1/2" = 1' - 0"

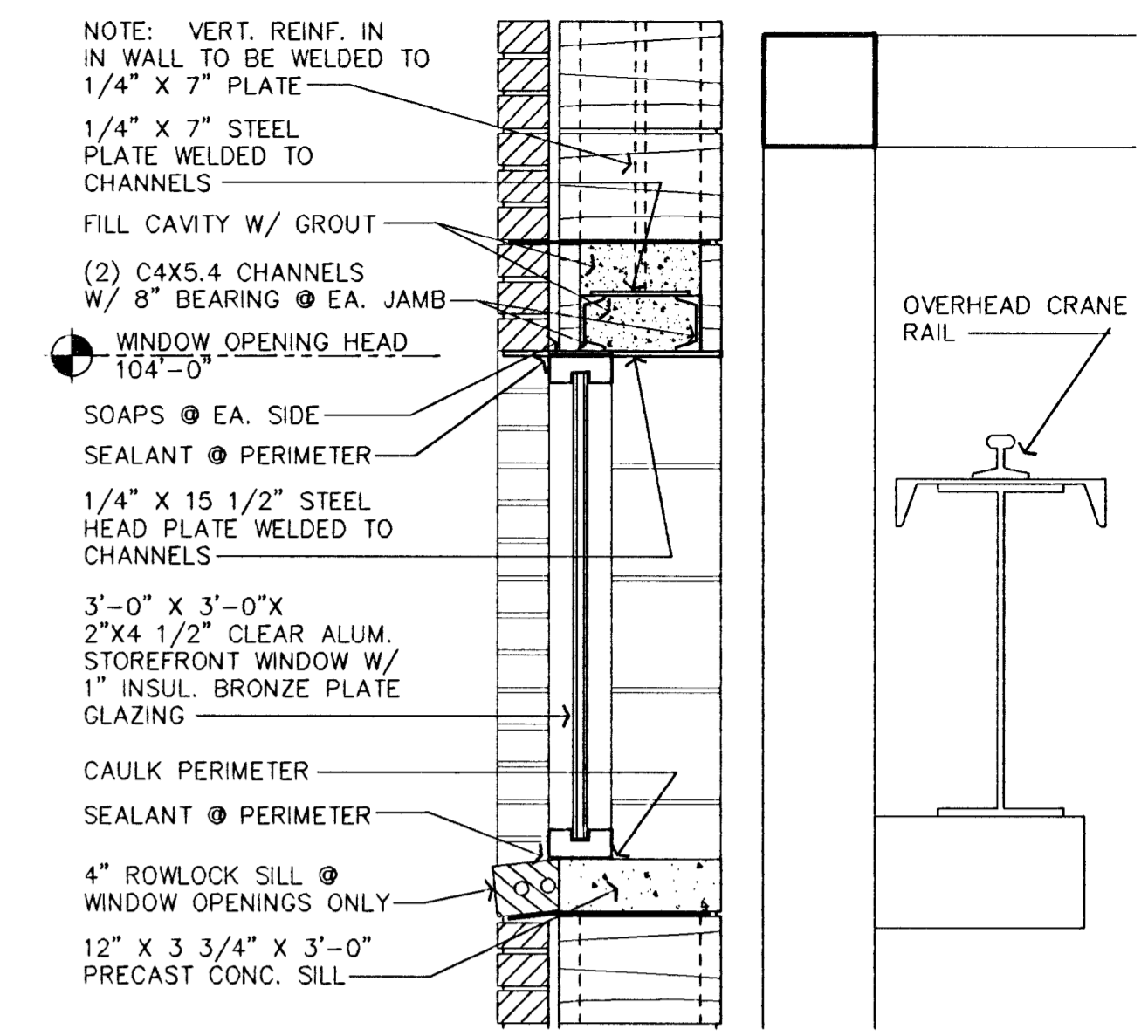


C OBSERVATION CANOPY SECTION
1/2" = 1' - 0"

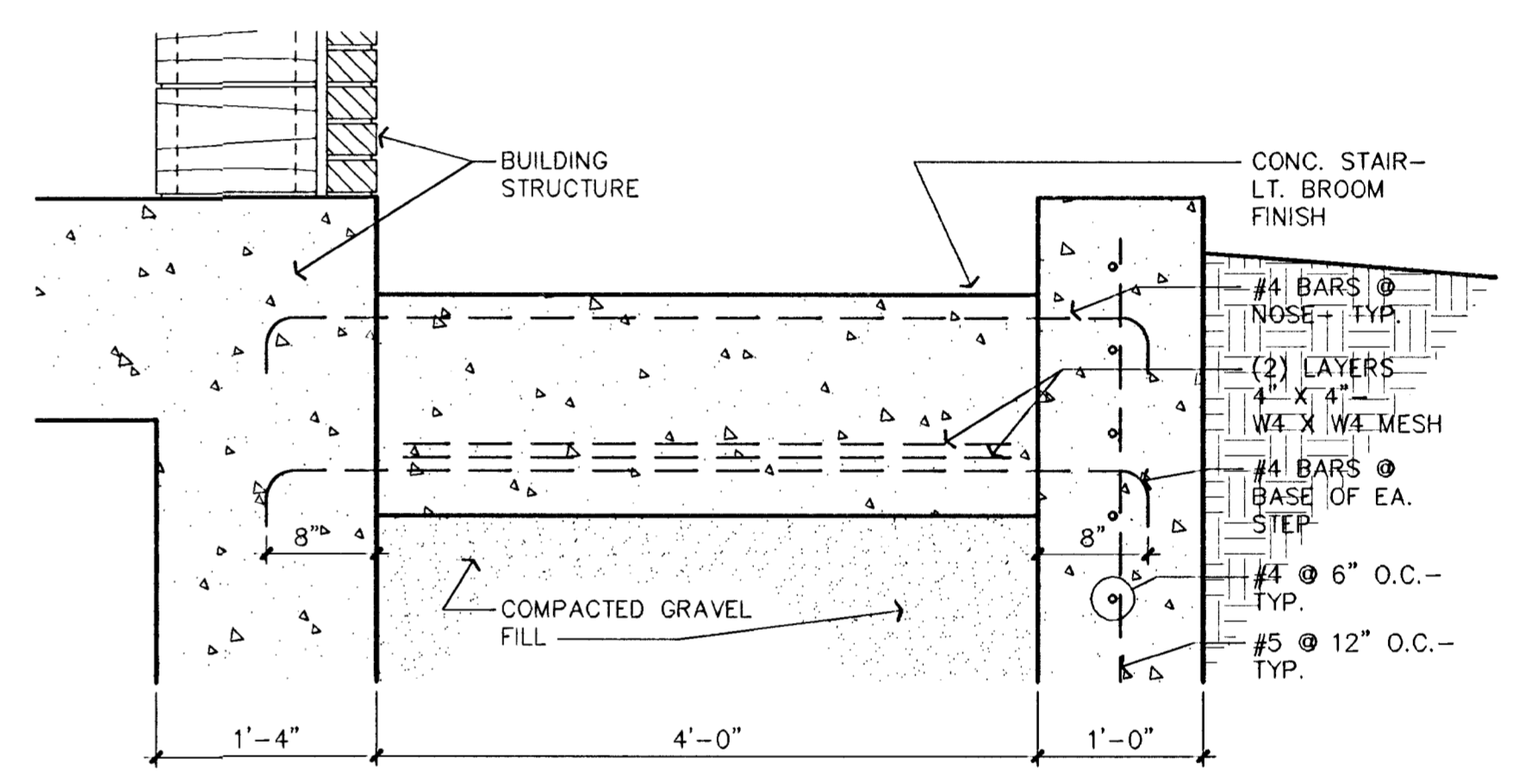
1 STAIR RISER DETAIL
1 1/2" = 1' - 0"



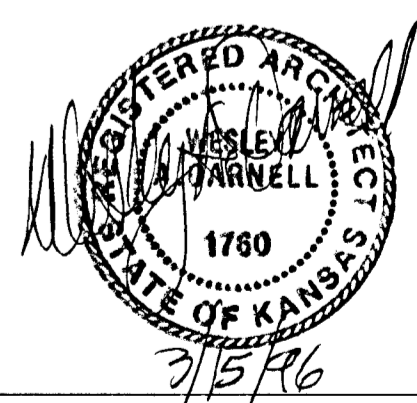
2 CANOPY EAVE DETAIL
1" = 1' - 0"



3 WINDOW DETAIL
1" = 1' - 0"



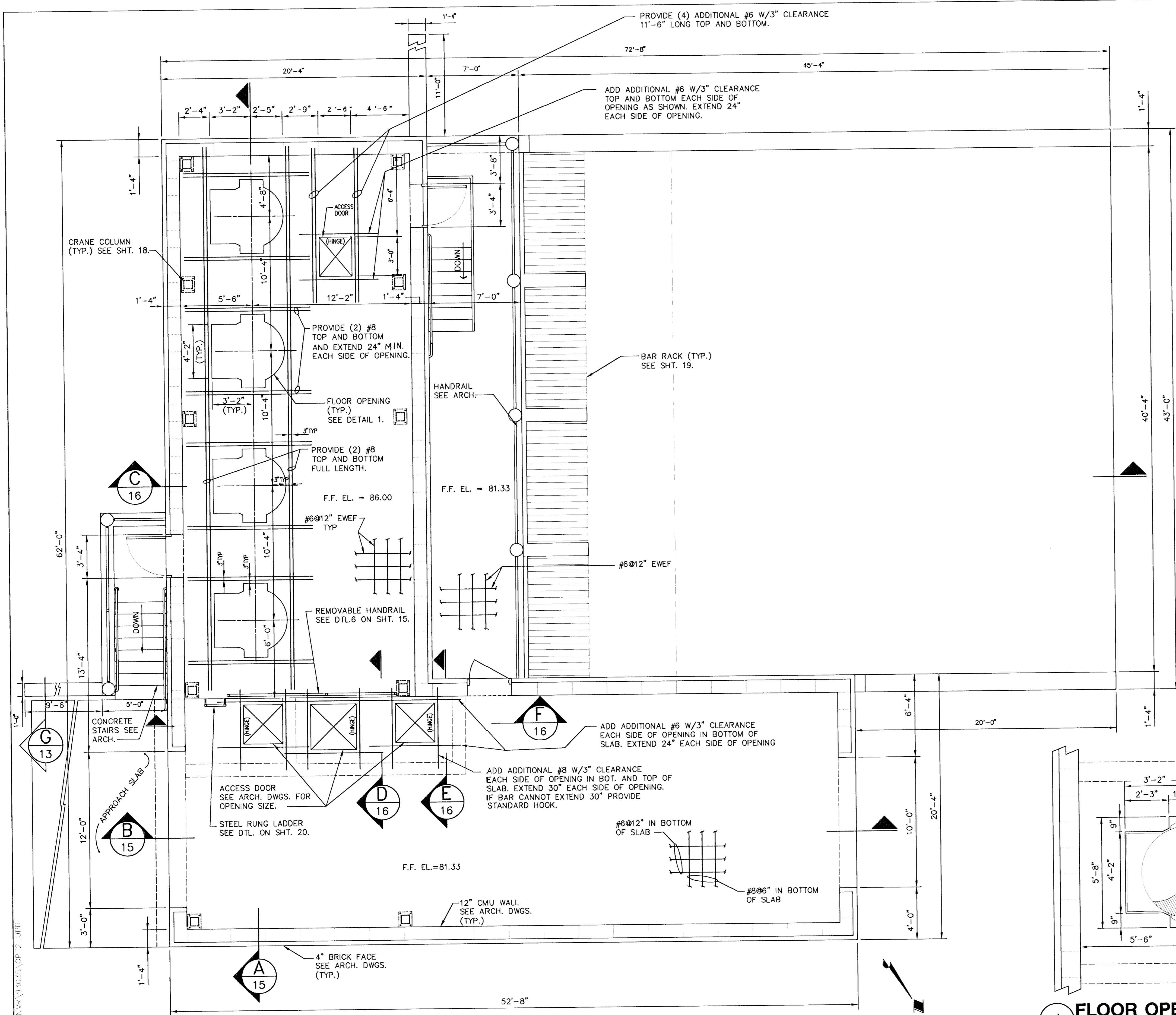
4 STAIR CROSS SECTION
1" = 1' - 0"



MID-KANSAS ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

SOUTH SENECA DRAINAGE IMPROVEMENTS DRAINAGE OUTFALL PUMP STATION
PROJECT NAME
ARCHITECTURAL WALL SECTIONS & DETAILS
SHEET TITLE

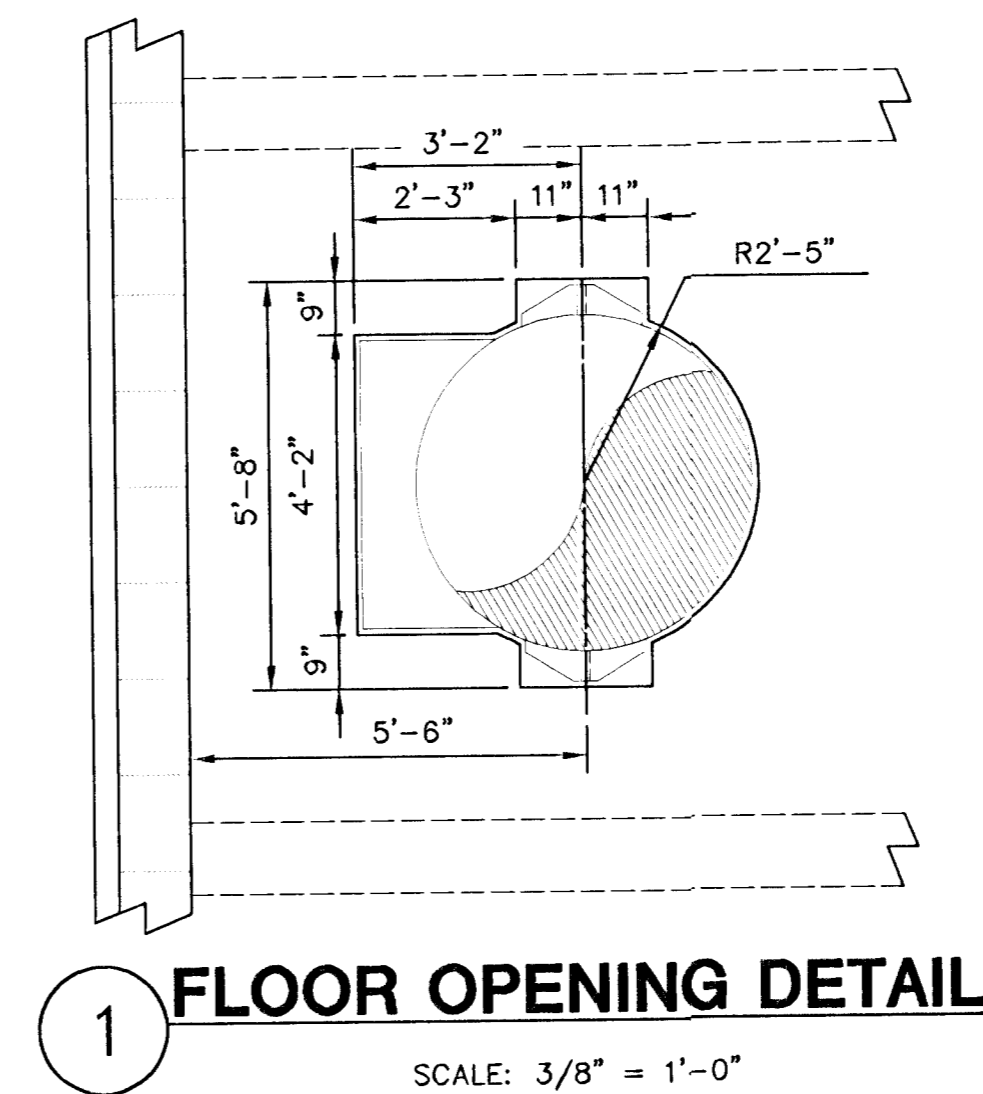
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MARCH, 1996 DATE	93035 JOB NO.	12 / 30 SHEET / OF



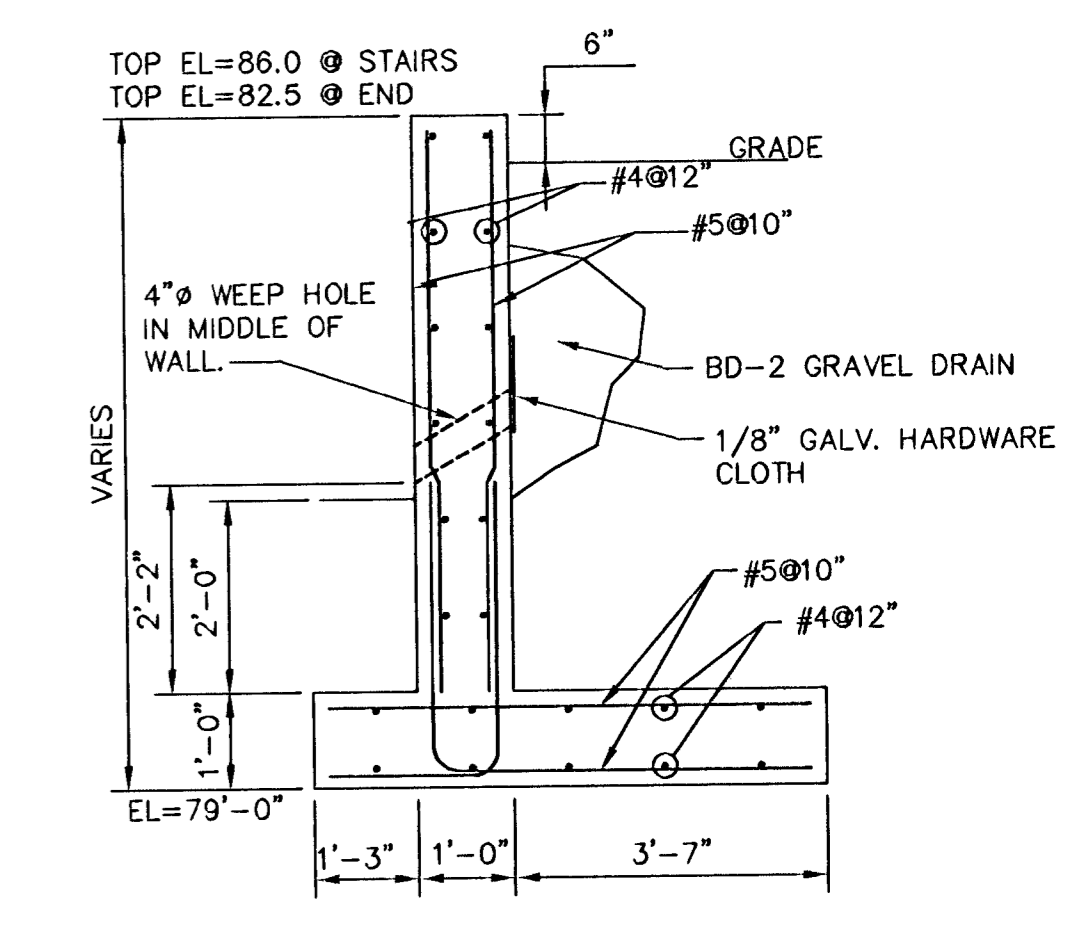
UPPER LEVEL PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES (SOUTH SENECA PUMP HOUSE)

- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND COORDINATING ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE DRAWINGS. IF ERRORS OR DISCREPANCIES OCCUR, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BRING THE DISCREPANCY TO THE ENGINEER BEFORE PROCEEDING WITH WORK.
 - CONTRACTOR TO FURNISH ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO COMPLETE THE WORK SHOWN BY THESE DRAWINGS.
 - CONTRACTOR TO FIELD VERIFY ALL MECHANICAL DEVICES, SUPPORT POINTS, DIMENSIONS AND ELEVATIONS.
 - FOUNDATIONS ARE DESIGNED TO BEAR ON UNDISTURBED SOIL OR COMPACTED FILL CAPABLE OF SUSTAINING 2,000 PSF MINIMUM NET BEARING CAPACITY. IF SUITABLE BEARING CAPACITY IS NOT ENCOUNTERED AT THE ELEVATIONS INDICATED ON THE DRAWINGS, THE ENGINEER MAY ALTER THE DRAWINGS TO PROVIDE ADEQUATE BEARING OF THE FOUNDATIONS.
 - FABRICATOR SHALL HIGHLIGHT CHANGES MADE IN SHOP DRAWINGS WHICH DO NOT COMPLY WITH THE DESIGN DRAWINGS.
 - CONTRACTOR SHALL SUBMIT THREE COPIES OF THE MIX DESIGN FOR REVIEW.
- STRUCTURAL STEEL**
- ALL STRUCTURAL STEEL SHALL BE ASTM A-36 OR EQUIVALENT, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), EXCEPT THE SECOND SENTENCE OF PARAGRAPH 4.2.1 OF THE CODE OF STANDARD PRACTICE SHALL BE DELETED.
 - ALL PIPES TO MEET ASTM A-53, GR B (F_y=35KSI), ALL STRUCTURAL TUBES SHALL BE ASTM A-500 GRADE B WITH F_y=46 KSI.
 - ALL BEAM SIZES NOTED SHALL HAVE STANDARD AISC FRAMING CONNECTIONS U.N.O.
 - ALL FIELD AND SHOP WELDS TO HAVE A MINIMUM OF 1/4" FILLET WELD U.N.O.
 - ALL COLUMNS TO HAVE 1" GROUT AND ANCHOR BOLTS AS CALLED OUT IN THE SCHEDULE WITH DOUBLE NUTS.
 - ELEVATIONS TOP OF STEEL NOTED ON DRAWINGS. BEAMS FRAME FLUSH AT TOP UNLESS NOTED.
 - NO OPENINGS TO BE PLACED IN BEAM WEBS OR FLANGES WITHOUT ENGINEERS PRIOR APPROVAL.
 - NO SUBSTITUTION OF MEMBERS OF EQUAL SECTION MODULUS WITHOUT ENGINEERS APPROVAL.
 - ALL WELDING TO CONFORM TO THE LATEST EDITION OF THE AMERICAN WELDING SOCIETY (AWS) SPECIFICATIONS D1.1. WELD ELECTRODES SHALL BE E70XX.
 - ANCHOR BOLTS SHALL BE ASTM A-36 OR EQUIVALENT.
 - ALL BOLTED CONNECTIONS SHALL USE A-325-N BOLTS (U.N.O.), NO BOLTS ARE TO BE REUSED.
 - DELETED.
 - GALVANIZING TO CONFORM TO ASTM A-123. A MINIMUM OF 2 OZ. PER SQUARE FOOT WILL BE REQUIRED.
- DESIGN LOADS & SOIL PRESSURES:**
GOVERNING CODE: 1994 UNIFORM BUILDING CODE
- LIVE LOADS**
- ROOF 17.5 PSF
 - WIND 80 MPH EXPOSURE B
 - SEISMIC ZONE 2A
- SOIL PRESSURE**
- SOIL 2,000 PSF NET
- METAL DECK**
- METAL DECK SHALL BE SIMILAR TO VULCRAFT, 1.5" DECK, TYPE B, 22 GAGE, GALVANIZED PER MANUFACTURER'S RECOMMENDATIONS.
 - METAL DECK ATTACHMENT:
ANCHOR DECK TO ALL SUPPORTING MEMBERS INCLUDING PERIMETER SUPPORT STEEL. ROOF DECK ATTACHMENT SHALL BE WELDED PATTERN PER MANUFACTURER'S SPECIFICATIONS, CAPABLE OF RESISTING 500 PLF WIND DIAPHRAGM SHEAR. SHOP DRAWINGS SHALL SHOW WELDING REQUIREMENTS.
DECK SHALL HAVE A MINIMUM BEARING OF 1 1/2".
DECK SHALL BE OVERLAPPED (NESTED) ONE RIB PER EACH SIDE LAP
- CONCRETE**
- ALL CONCRETE WORK SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE STANDARD BUILDING CODE REQUIREMENT FOR REINFORCED CONCRETE (ACI 318-92)
 - CONCRETE (NORMAL WEIGHT):
f_c = 4000 PSI
CEMENT SHALL BE PER ASTM C-150 TYPE I OR II
AGGREGATE SHALL BE PER ASTM C33
GROUT FOR MASONRY WALLS AND BOND BEAM SHALL BE 3000 PSI
 - REINFORCING:
COLUMN TIE & BEAM STIRRUPS SHALL BE ASTM A615 GR 40
ALL OTHER REINFORCING SHALL BE ASTM A615 GR 60
ALL WELDED WIRE MESH REINFORCING SHALL BE ASTM 185 COLD DRAWN WIRE. LAP 1 MESH SPACING MINIMUM AT ALL SPLICES.
SHOP DRAWINGS OF ALL REINFORCING STEEL SHALL BE SUBMITTED FOR APPROVAL.
PROVIDE 500 LBS. EXTRA REINFORCING FOR FIELD USE AS DIRECTED BY THE ENGINEER.
 - CAST-IN-PLACE CONCRETE - EXECUTION
ALL CONCRETE IS REINFORCED CONCRETE UNLESS SPECIFICALLY CALLED OUT AS UNREINFORCED. REINFORCE ALL CONCRETE NOT OTHERWISE SHOWN WITH SAME STEEL AS IN SIMILAR SECTIONS OR AREAS.
BARS MARKED CONTINUOUS AND ALL VERTICAL STEEL SHALL BE LAPPED PER NOTE 45 AT SPLICES (UNLESS OTHERWISE NOTED ON THE DRAWINGS).
STANDARD CONCRETE COVER OF BARS UNLESS OTHERWISE NOTED SHALL BE:
1. WHERE FORMED AGAINST EARTH 3 INCHES
2. BOARD FORMED 2 INCHES
COORDINATE CONCRETE WORK WITH PROCESS PIPING AND MECHANICAL DRAWINGS AND SPECIFICATIONS FOR ANY ARCHITECTURAL FINISHED CONCRETE, RECESSED AREAS, EMBEDDED ITEMS, OR SPECIAL CONTROL JOINT PATTERNS.
FOOTINGS TO BE CAST AGAINST UNDISTURBED SOIL.
 - STANDARD HOOKS SHALL BE PER ACI 318.
 - TYPICAL LAP LENGTHS FOR f_c = 4000 PSI SHALL BE:
- | | |
|----------|--|
| BAR LAP | |
| #3 16" | |
| #4 21" | |
| #5 26" | |
| #6 31" | |
| #7 39" | |
| #8 51" | |
| #9 65" | |
| #10 82" | |
| #11 101" | |
- NOTE:**
NOT ALL BAR SIZES LISTED MAY BE REQUIRED.



1 FLOOR OPENING DETAIL
SCALE: 3/8" = 1'-0"



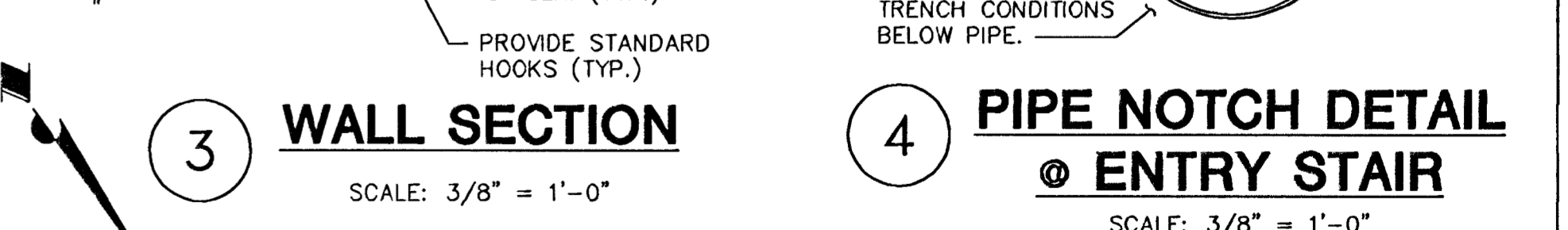
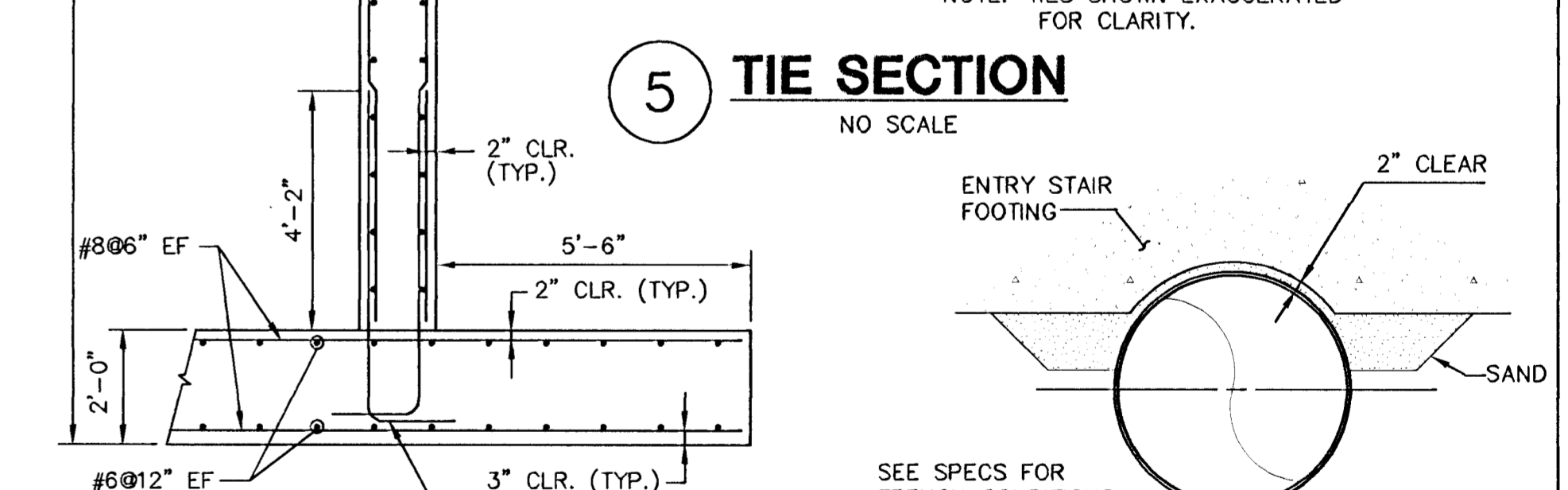
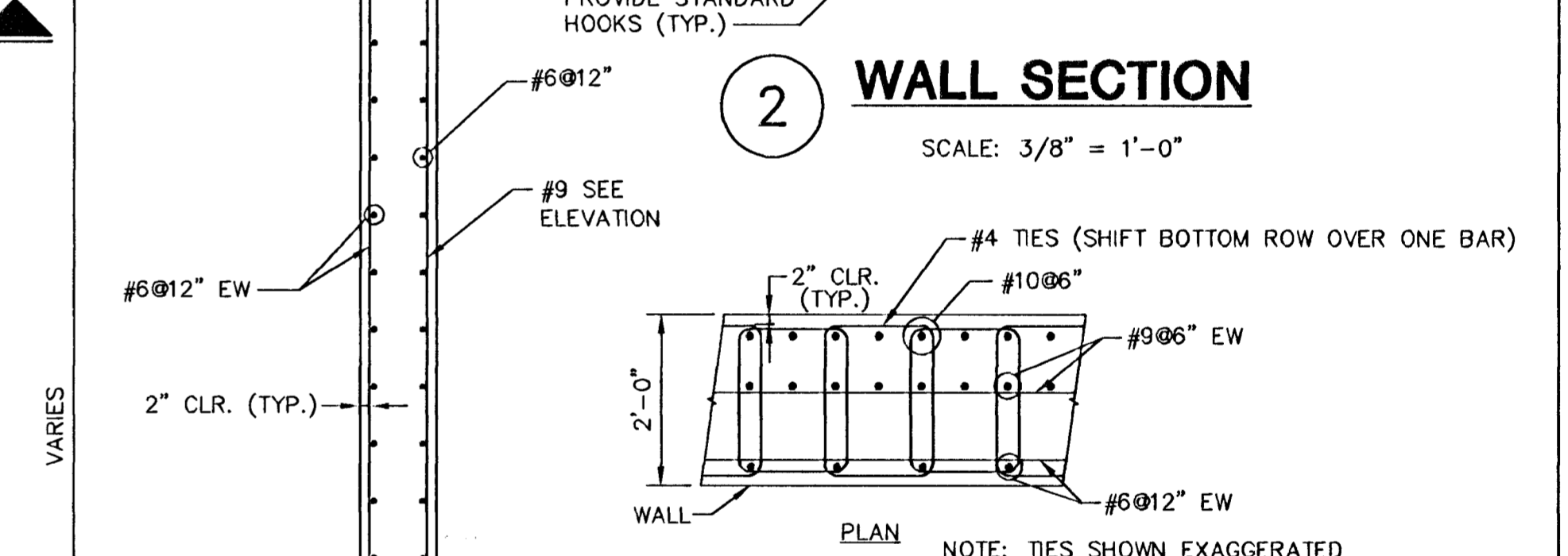
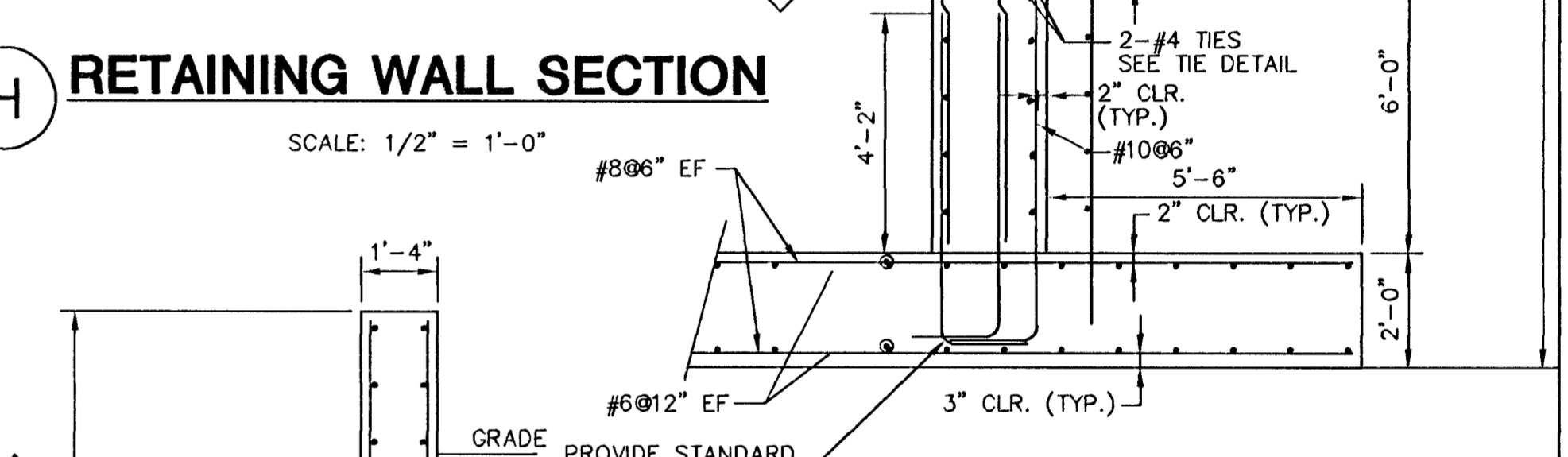
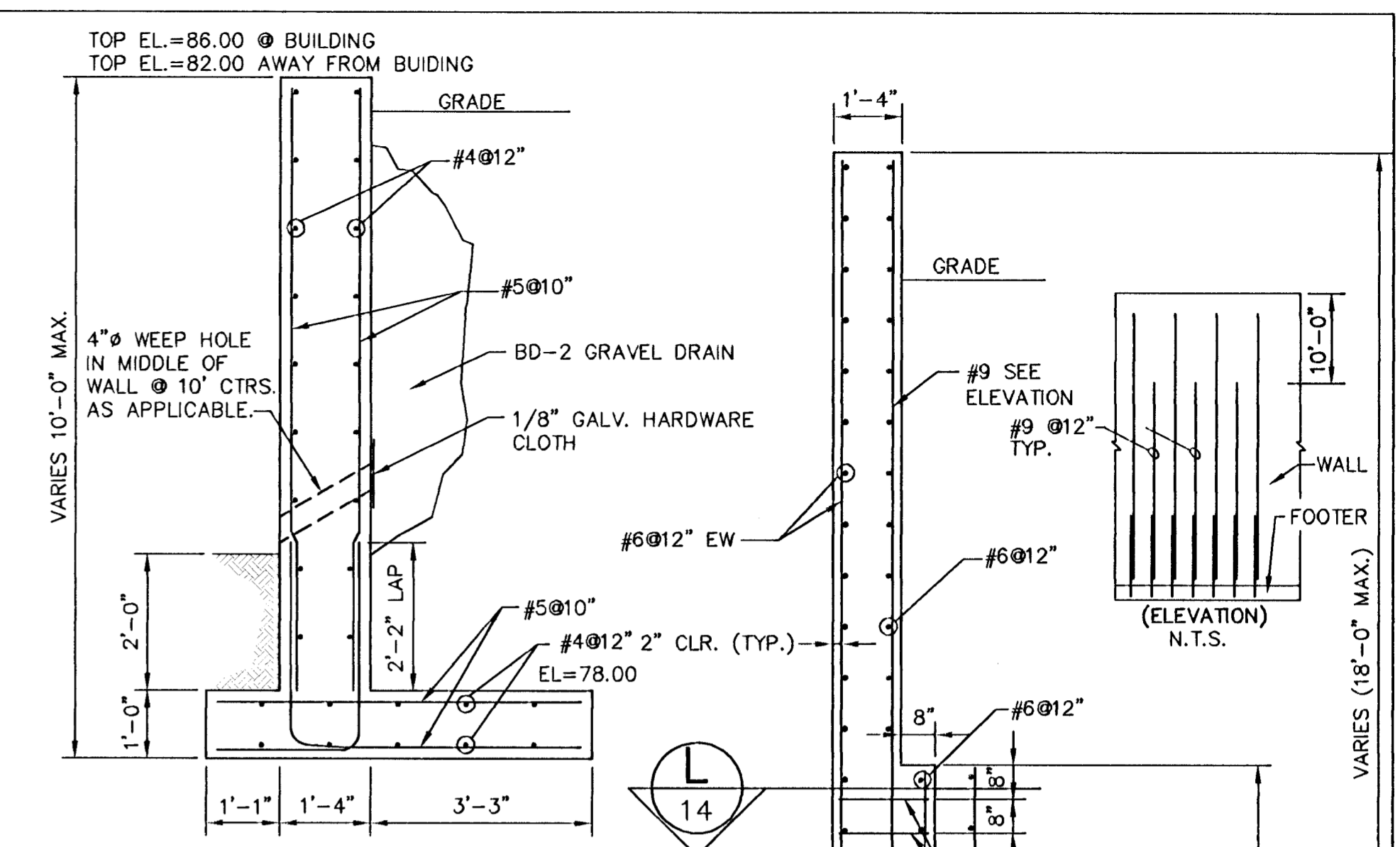
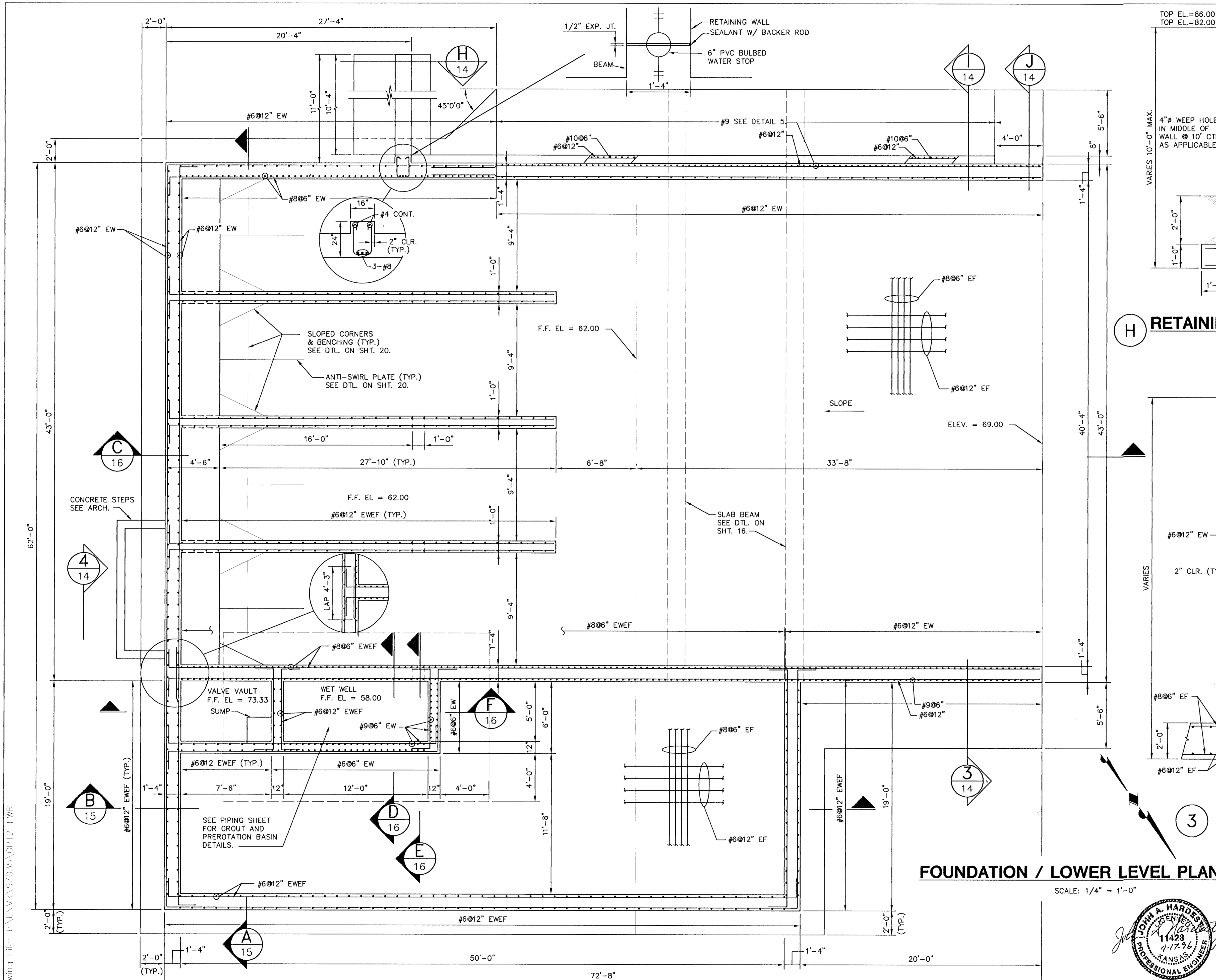
G RETAINING WALL SECTION
SCALE: 1/2" = 1'-0"



MID-KANSAS ENGINEERING CONSULTANTS, INC.
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316-684-9600

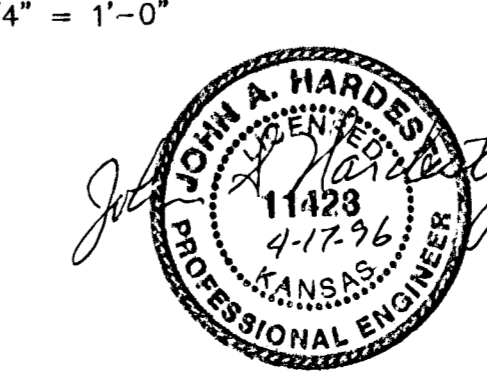
SOUTH SENECA DRAINAGE IMPROVEMENTS DRAINAGE OUTFALL PUMP STATION
PROJECT NAME
STRUCTURAL UPPER LEVEL PLAN
SHEET TITLE

DESIGN BY: DAC/JAH	DRAWN BY: RRT	CHECKED BY: RCB/KJS
DATE: MARCH, 1996	JOB NO.: 93035	SHEET NO.: 13 / 30



FOUNDATION / LOWER LEVEL PLAN

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



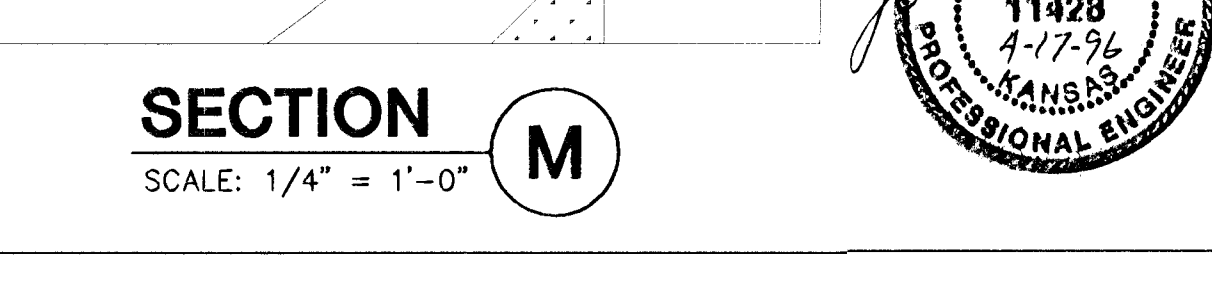
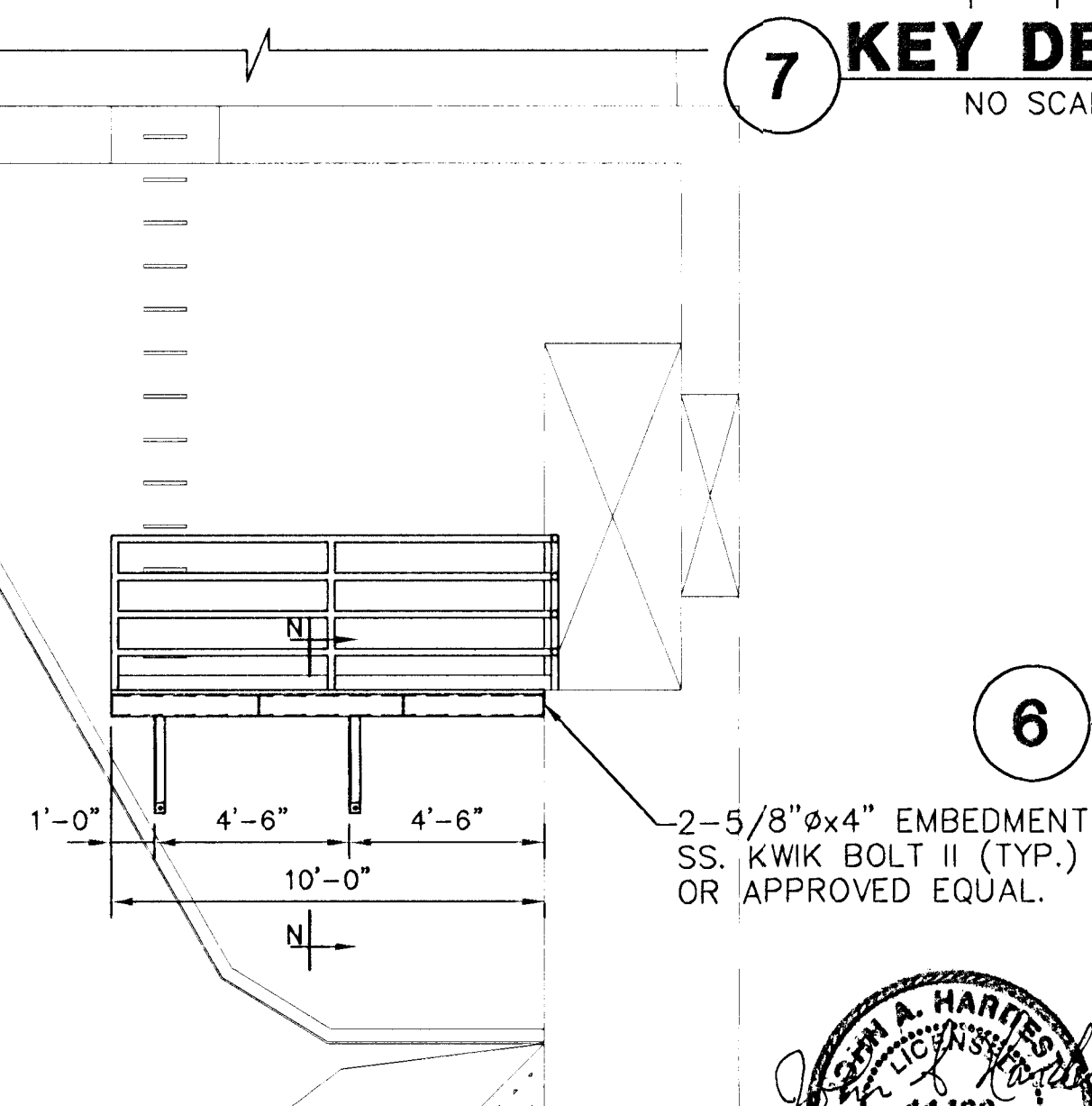
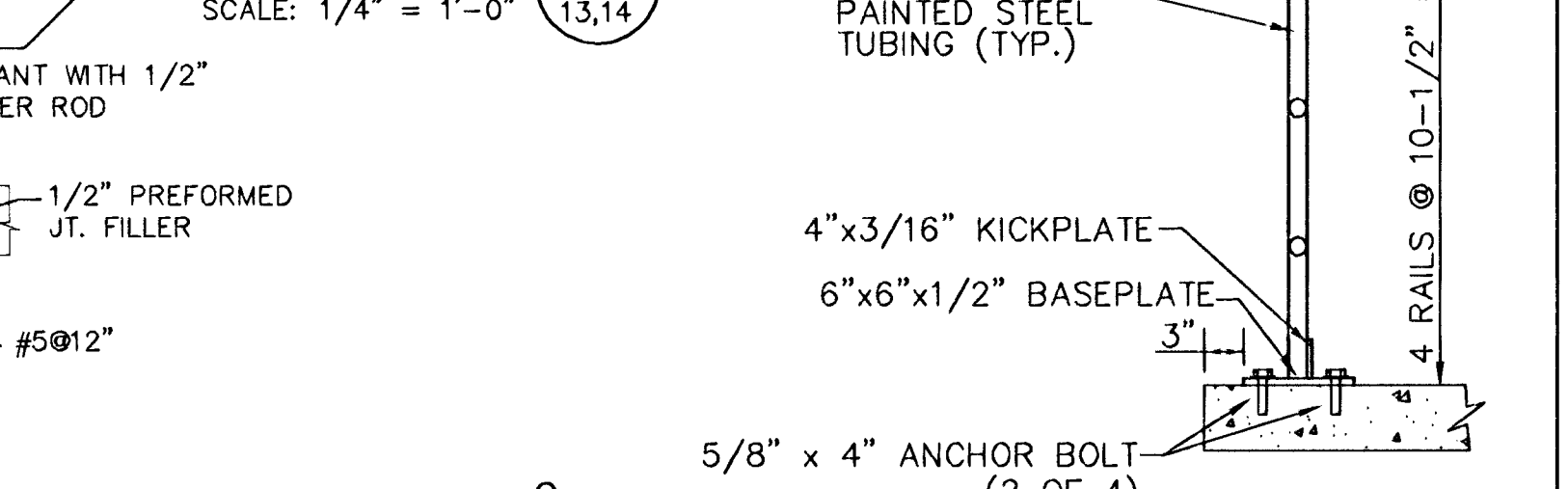
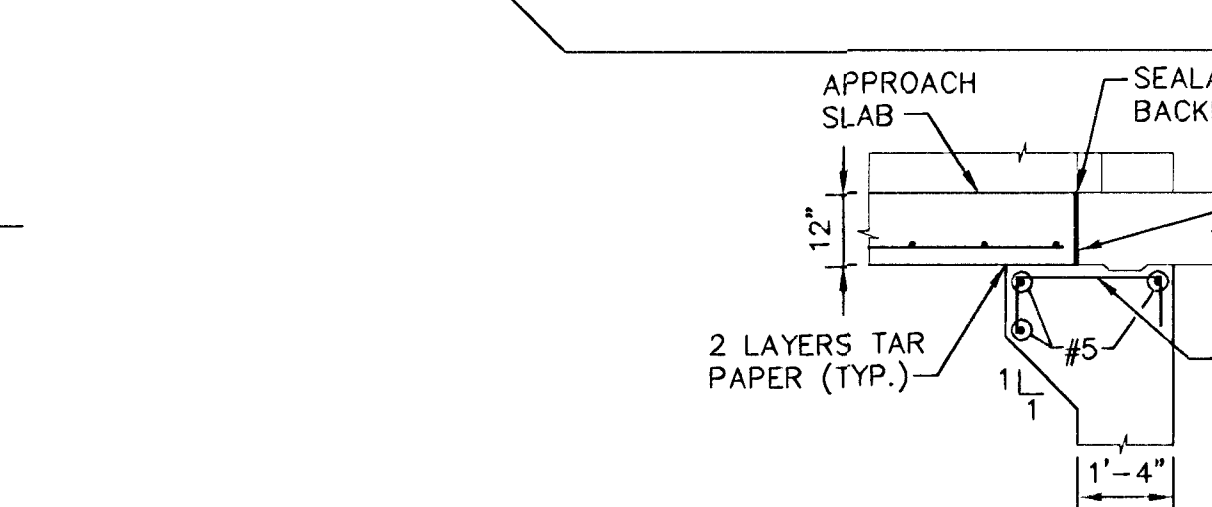
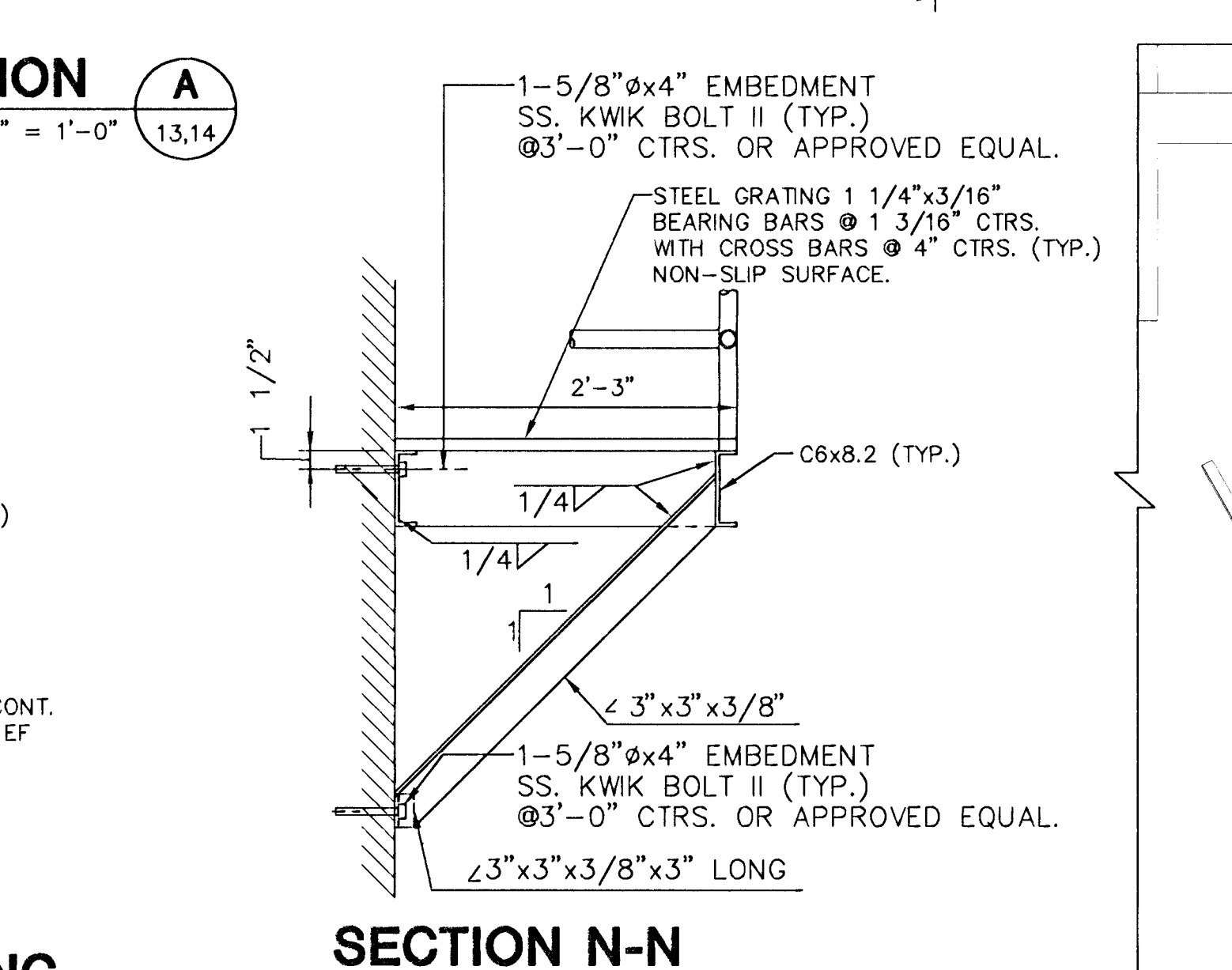
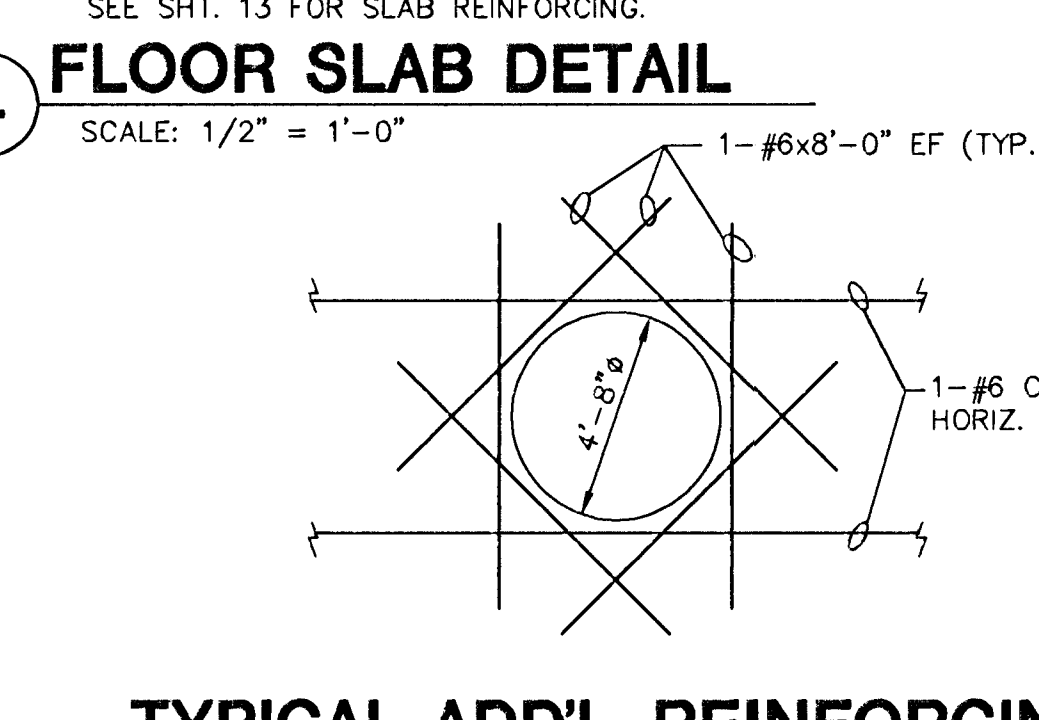
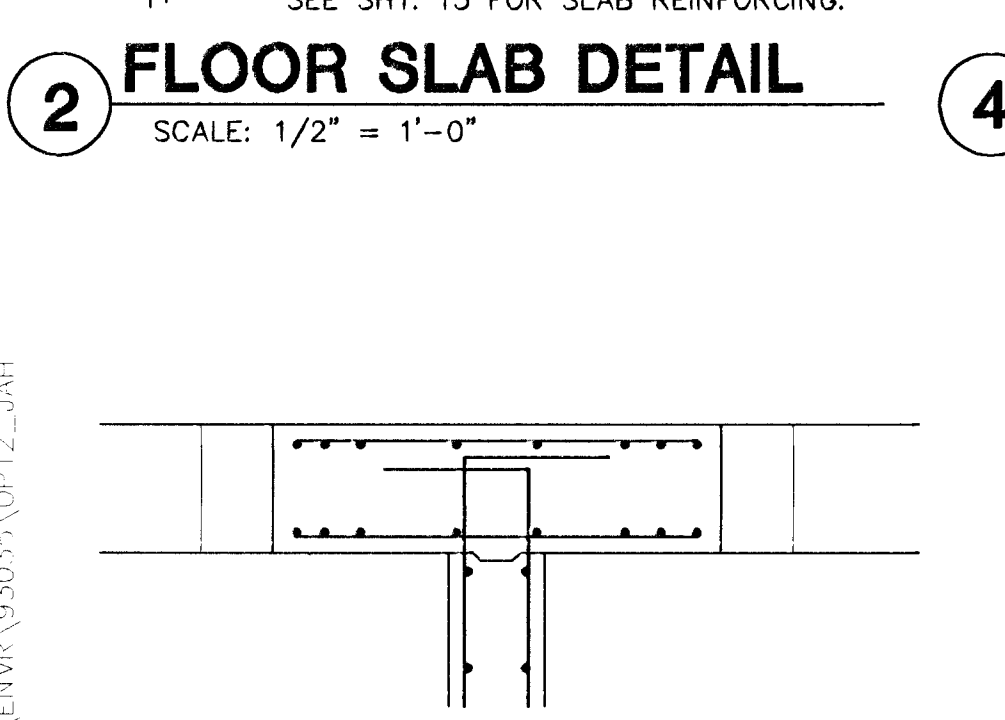
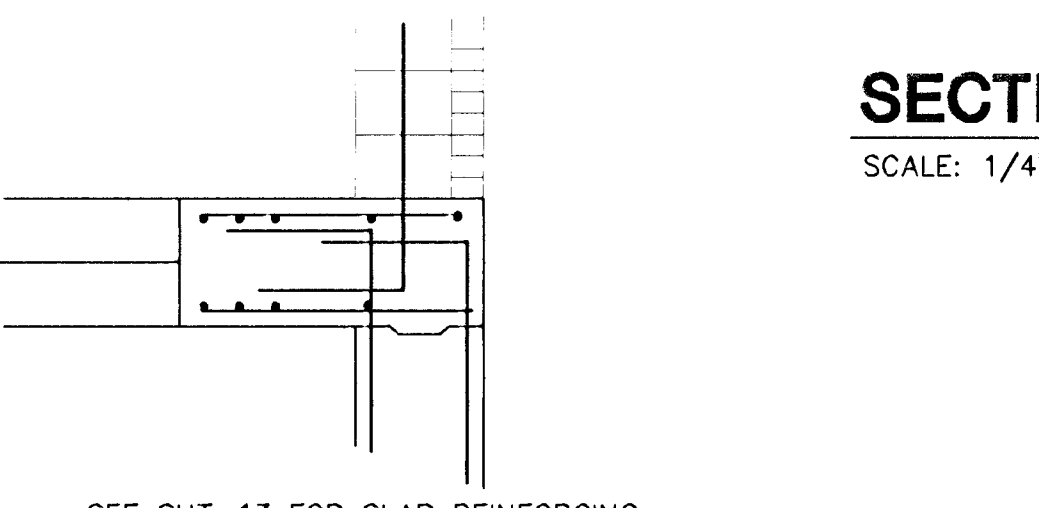
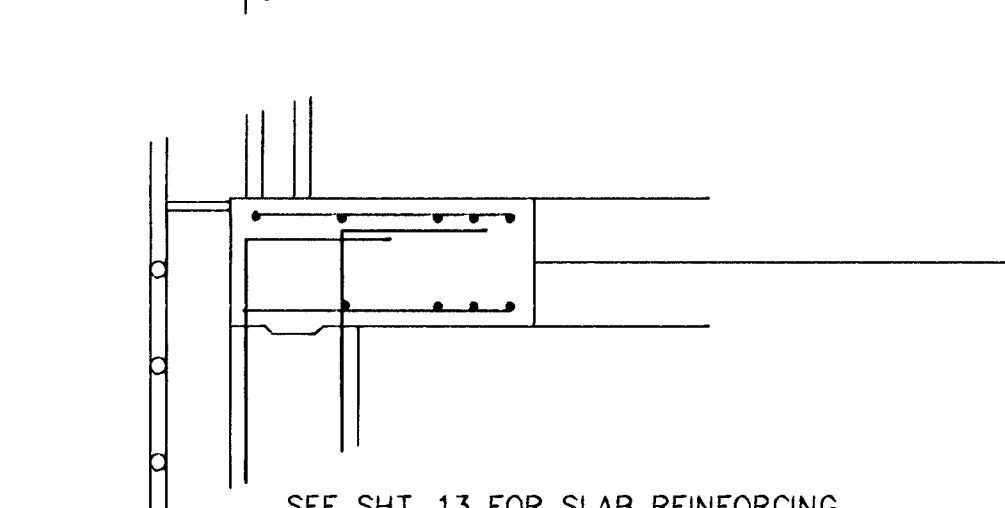
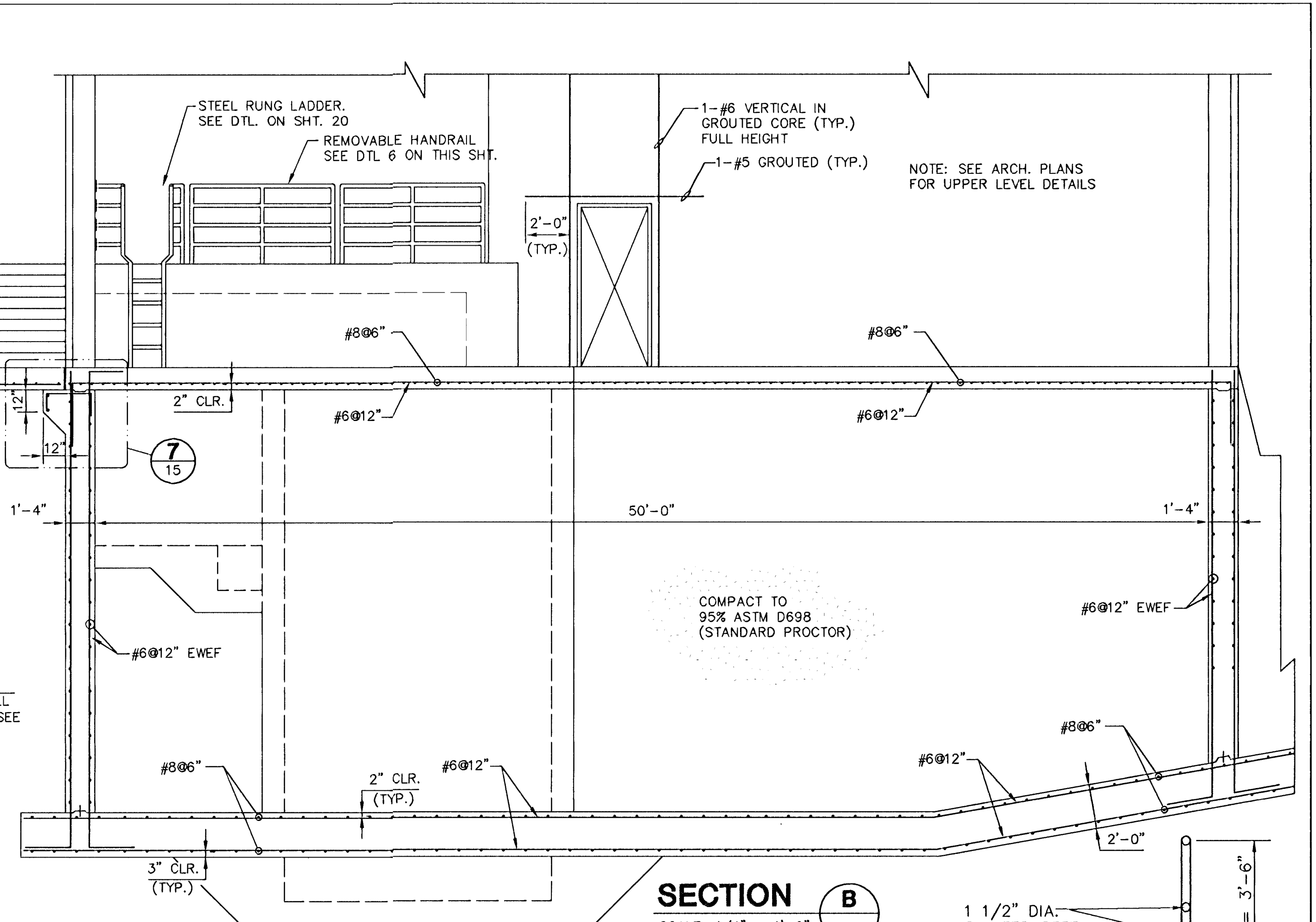
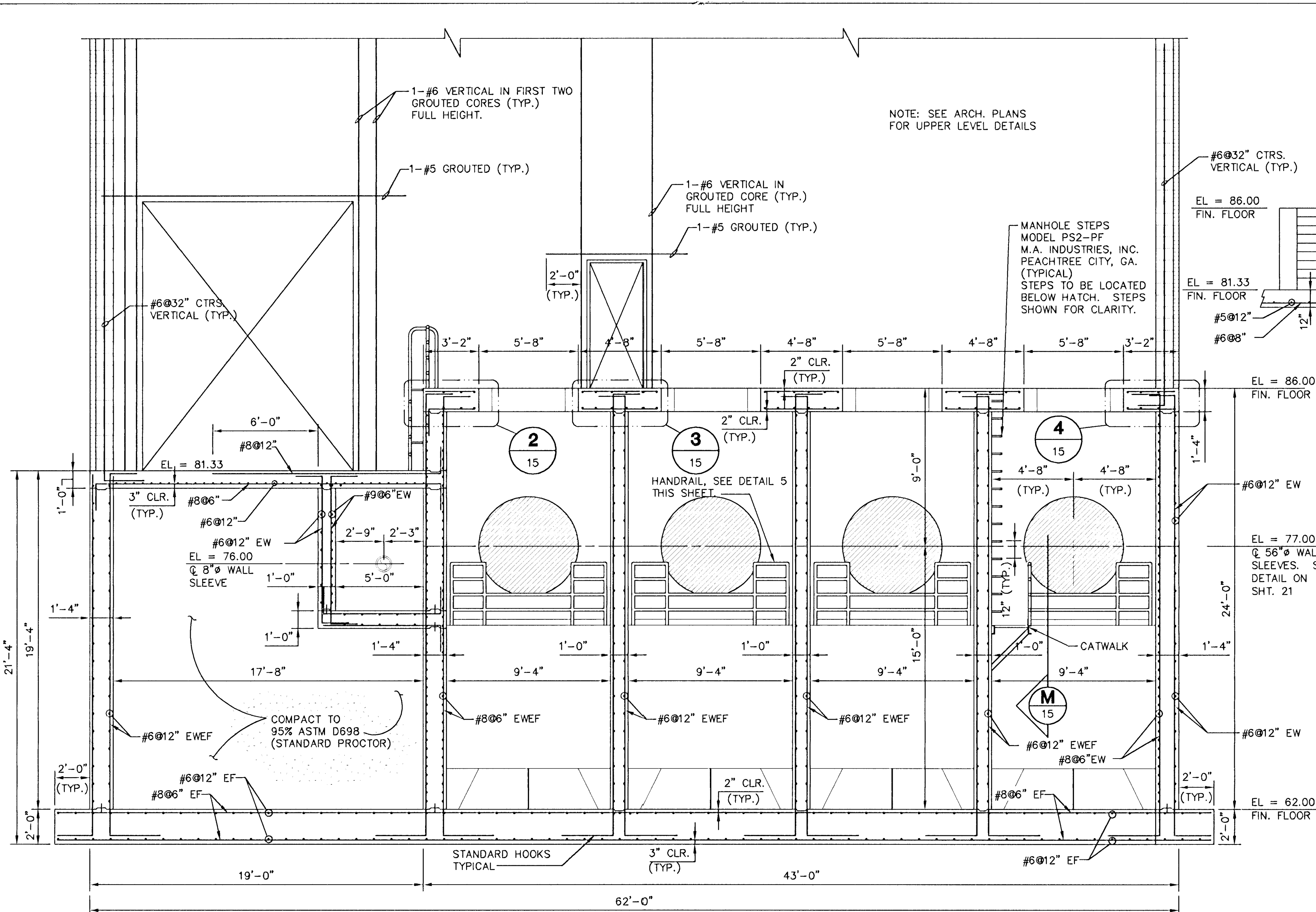
MID-KANSAS ENGINEERING CONSULTANTS, INC.
 411 N. WEBB ROAD
 WICHITA, KS. 67206
 316-684-9600

SOUTH SENECA DRAINAGE IMPROVEMENTS DRAINAGE OUTFALL PUMP STATION
 PROJECT NAME
STRUCTURAL FOUNDATION/LOWER LEVEL PLAN
 SHEET TITLE

DAC/JAH DESIGN BY. RRT DRAWN BY. RCB/JAH CHECKED BY.
 MARCH, 1996 DATE. 93035 JOB NO. 14 / 30 SHEET/OF

Drawing File: E:\NMR\9-3035\XOP12.TWR

E:\NMR\93035\XOP12.TWR Mon Mar 18 16:57:57 1996



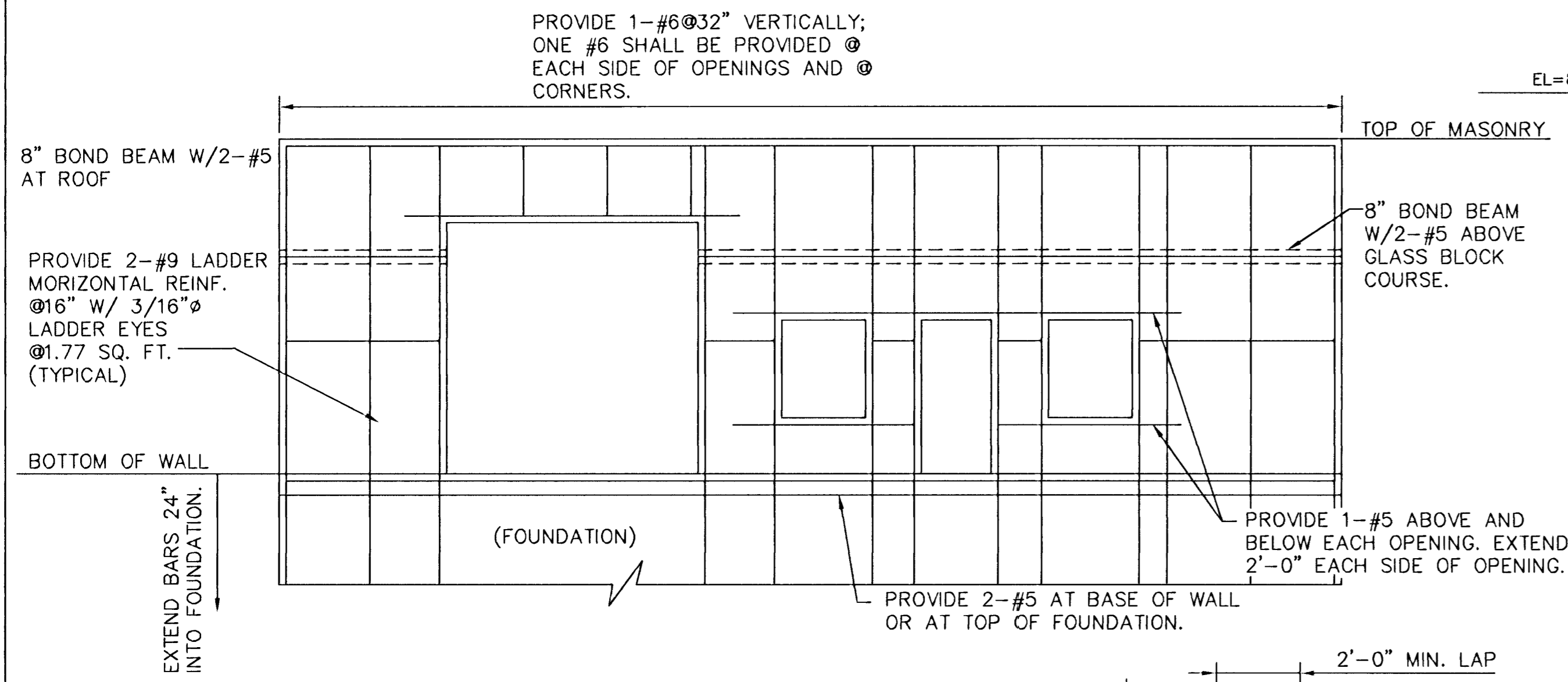
**SOUTH SENECA DRAINAGE IMPROVEMENTS
DRAINAGE OUTFALL PUMP STATION**
PROJECT NAME
**STRUCTURAL
SECTIONS**
SHEET TITLE

**MID-KANSAS ENGINEERING
CONSULTANTS, INC.**
411 N WEBB ROAD
WICHITA, KS. 67206
3 1 6 - 6 8 4 - 9 6 0 0

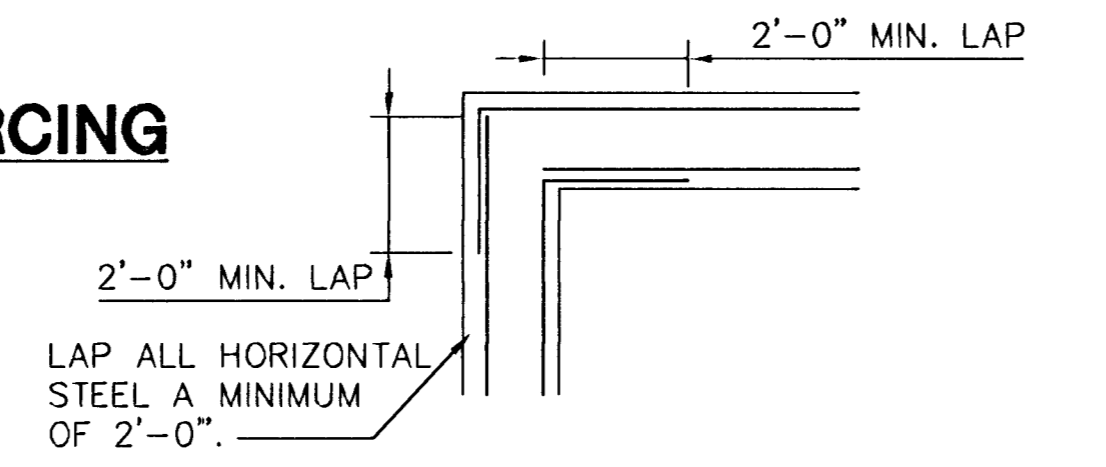
DESIGN BY: **DAG/JAH** DRAWN BY: **RRT** CHECKED BY: **RCB**
DATE: **MARCH, 1996** JOB NO.: **93035** SHEET/OF: **15 / 30**

JOHN L. HARTEG
11428
4-17-96
KANSAS
PROFESSIONAL ENGINEER

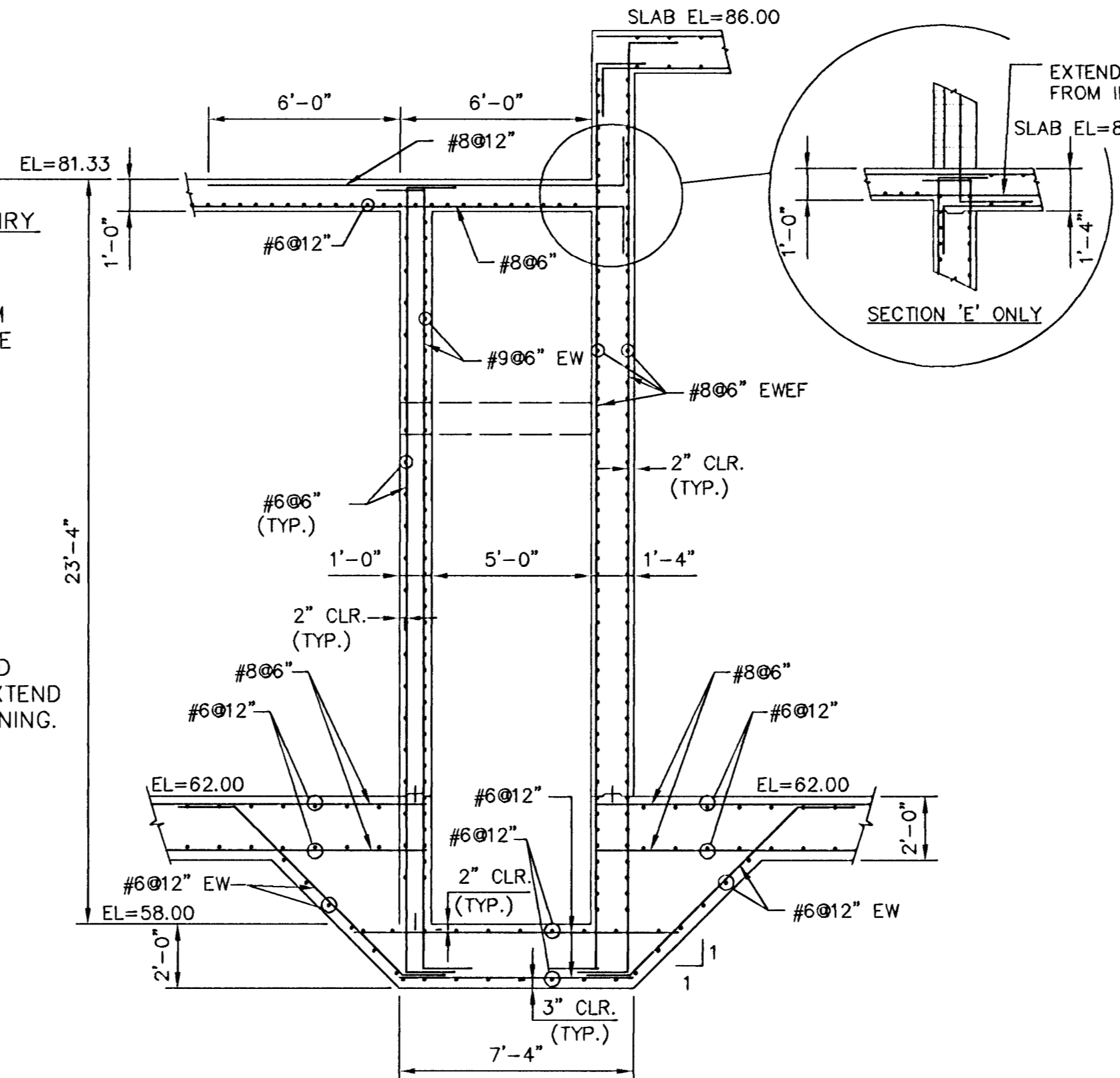
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 Issue: 1/22/1996
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TYPICAL WALL REINFORCING
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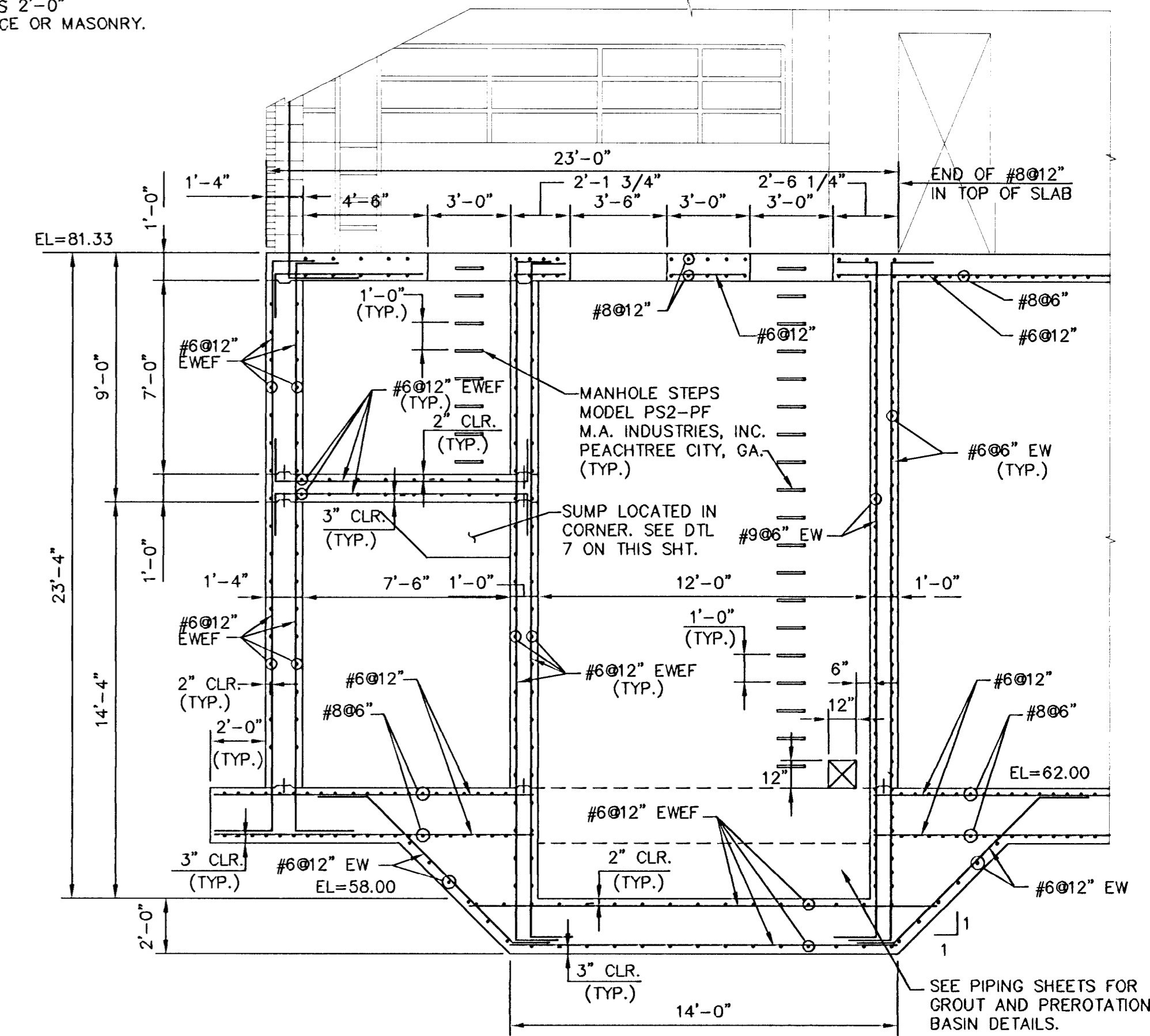


CORNER DETAIL FOR MASONRY
N.T.S.

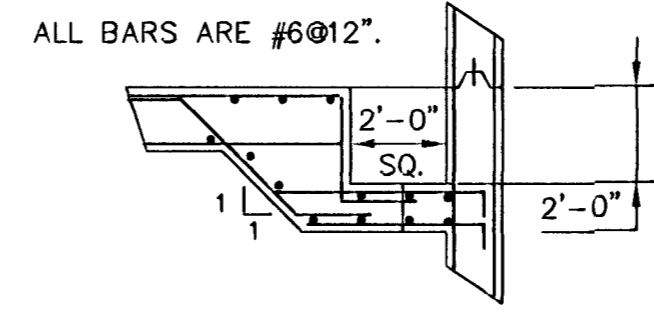


SECTION D
SCALE: 1/4" = 1'-0" 13,14

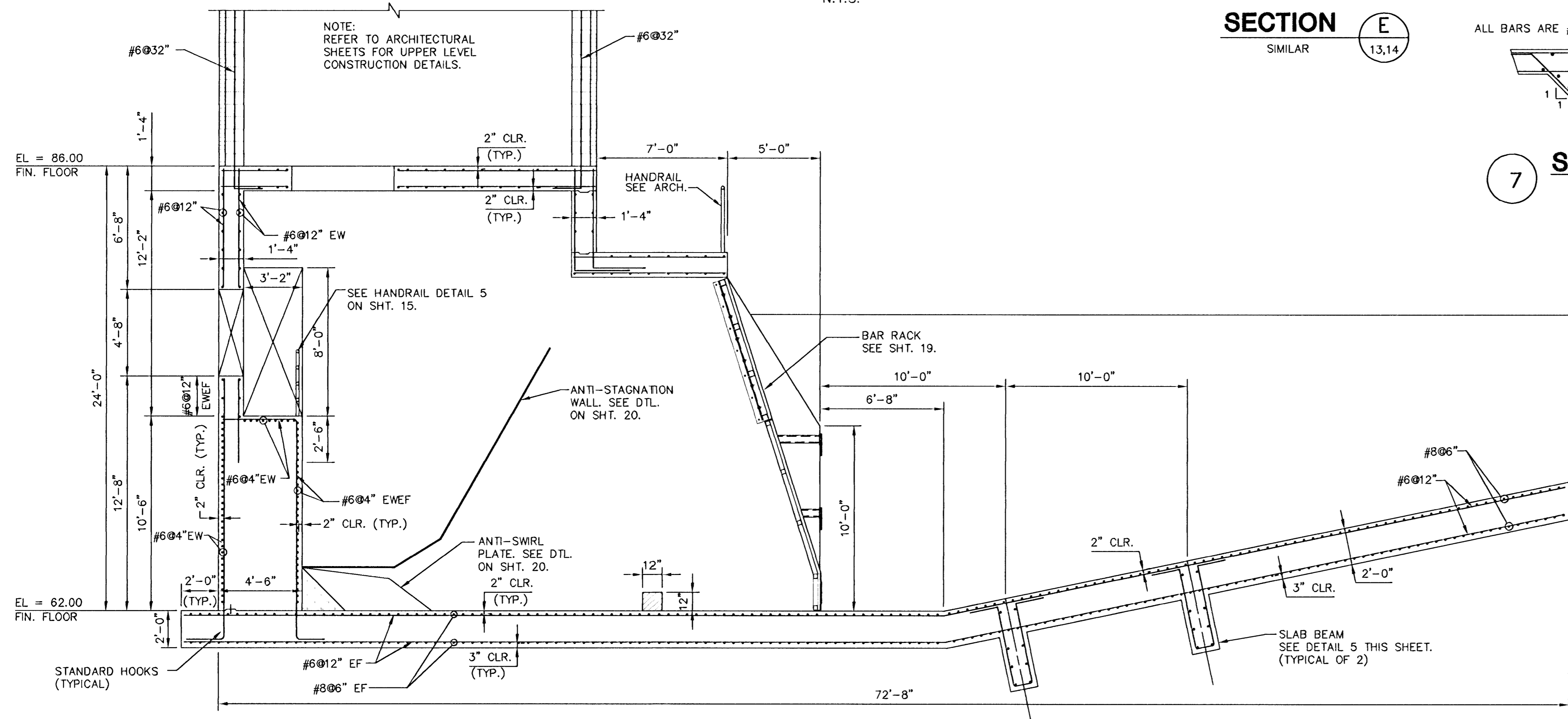
SECTION E
SIMILAR 13,14



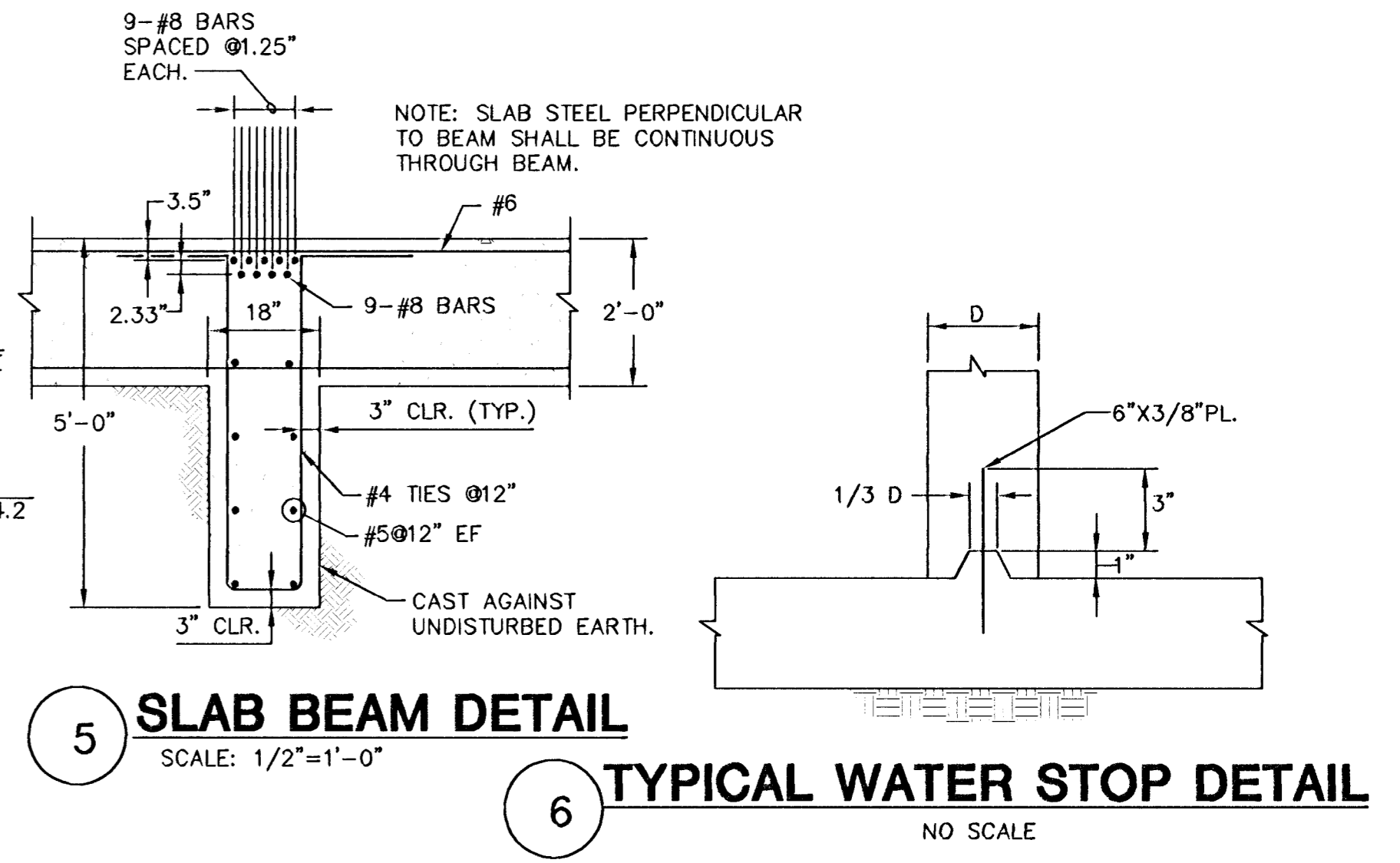
SECTION F
SCALE: 1/4" = 1'-0" 13,14



7 SUMP DETAIL
SCALE: 1/2" = 1'-0"

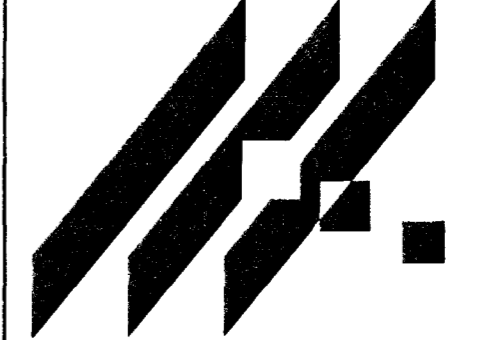


SECTION C
SCALE: 1/4" = 1'-0" 13,14



5 SLAB BEAM DETAIL
SCALE: 1/2" = 1'-0"

6 TYPICAL WATER STOP DETAIL
NO SCALE

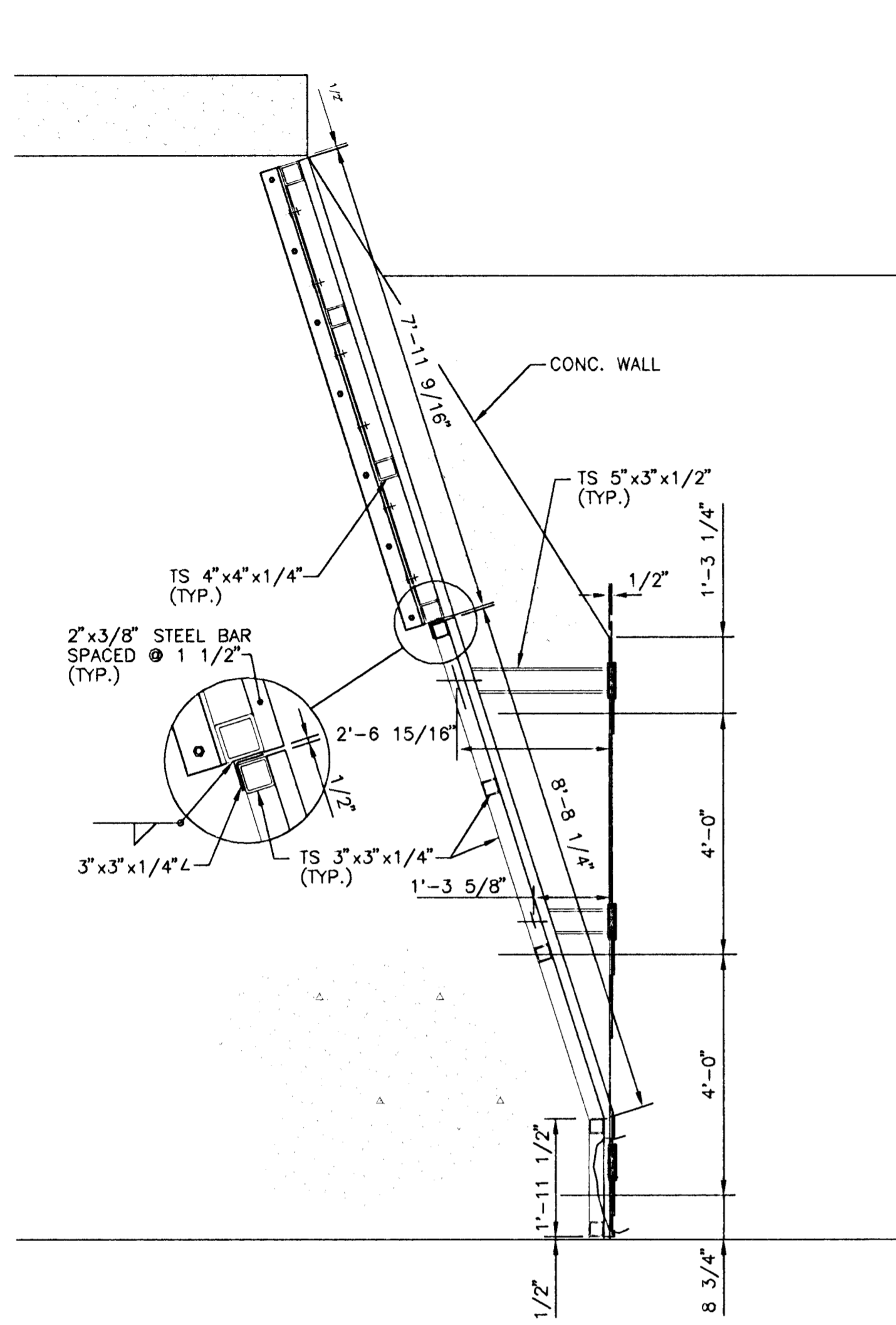


**SOUTH SENECA DRAINAGE IMPROVEMENTS
DRAINAGE OUTFALL PUMP STATION**
PROJECT NAME
**STRUCTURAL
SECTIONS**
SHEET TITLE

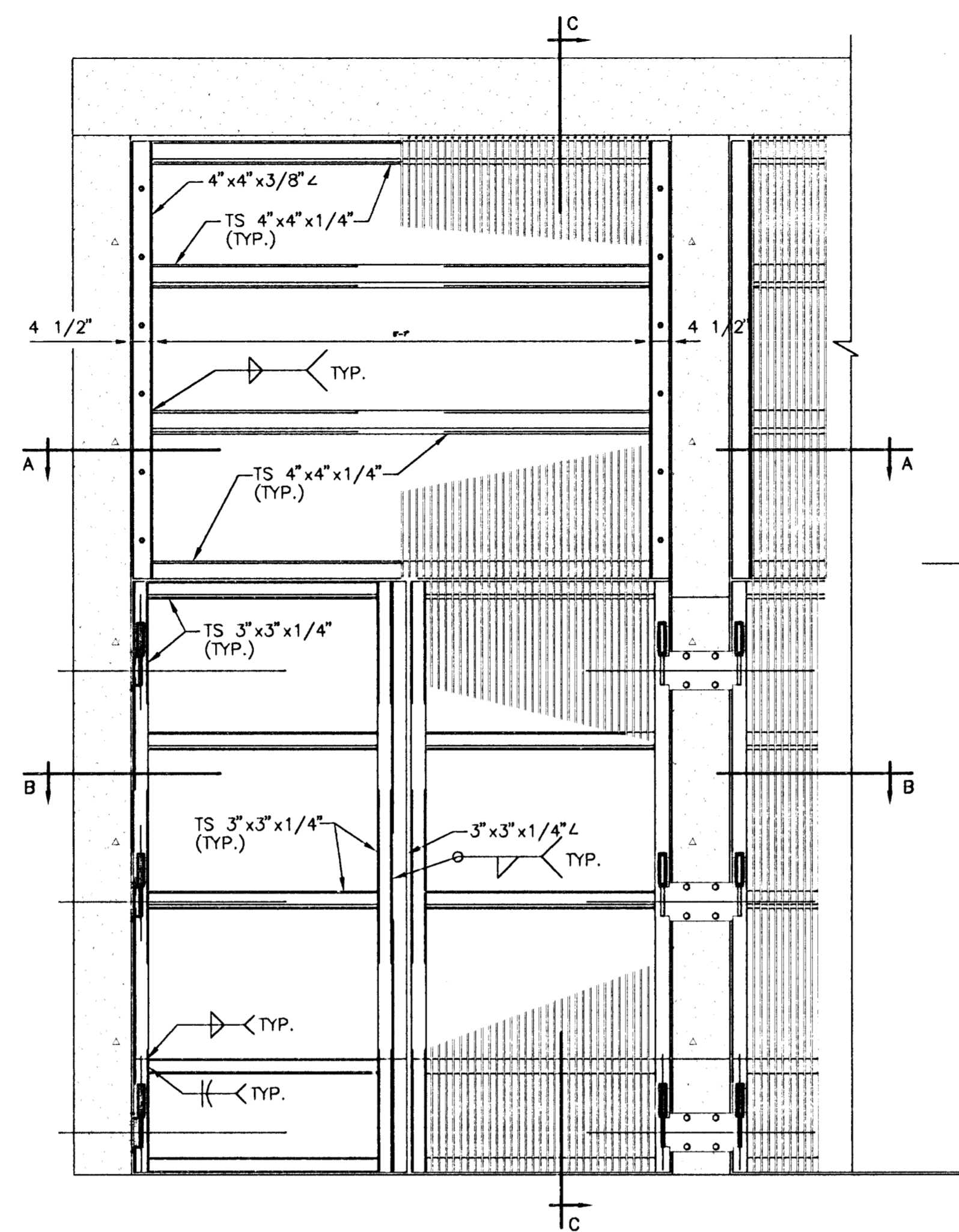
MID-KANSAS ENGINEERING
CONSULTANTS, INC.
411 N. WEBB ROAD
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DESIGN BY: DAC/JAH	DRAWN BY: RRT	CHECKED BY: RCB/KJS
DATE: MARCH, 1996	JOB NO.: 93035	SHEET/OF: 16 / 30

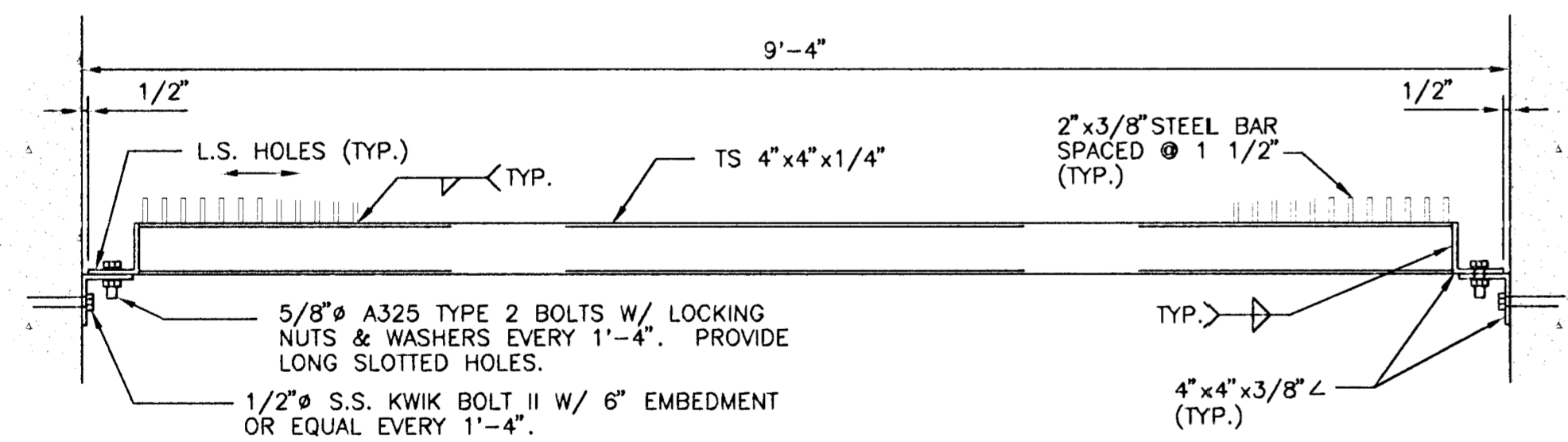
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 Date: 1/18/1996
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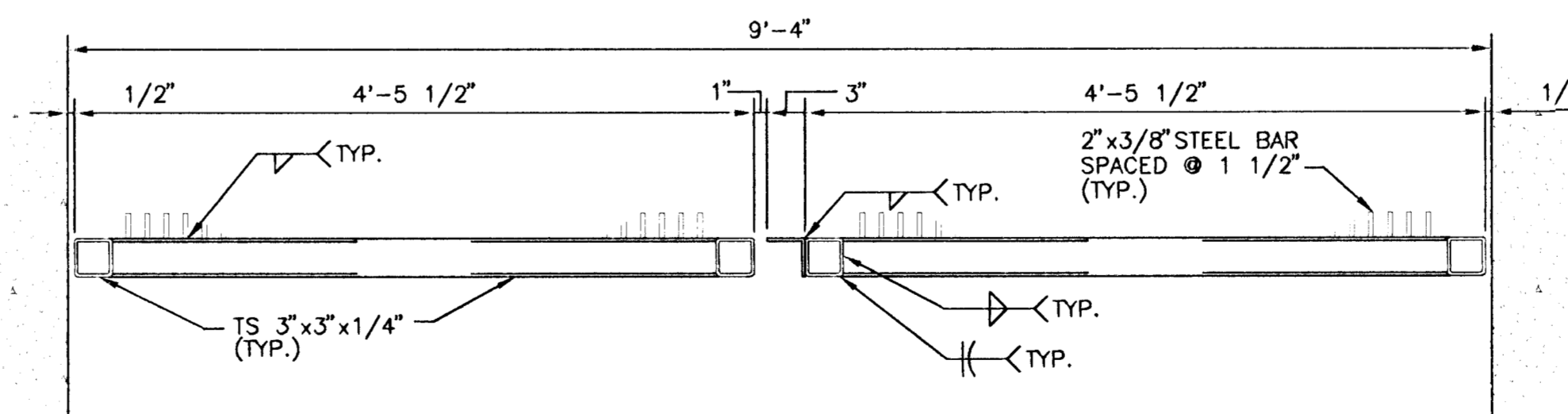
SECTION C-C
SCALE: 1/2"=1'-0"



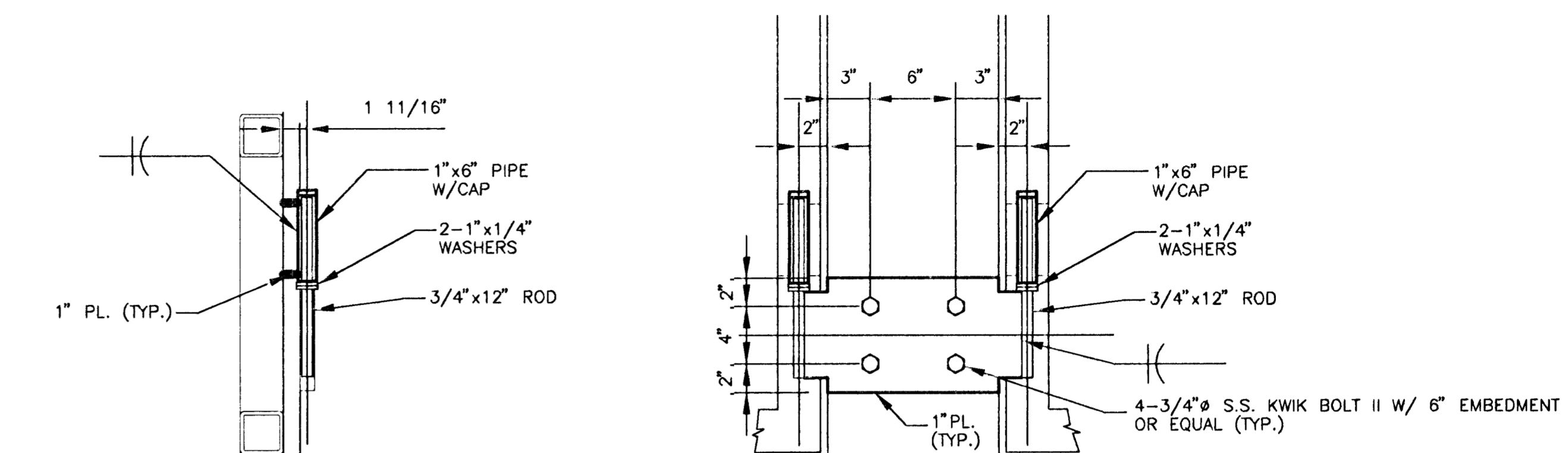
ELEVATION
SCALE: 1/2"=1'-0"



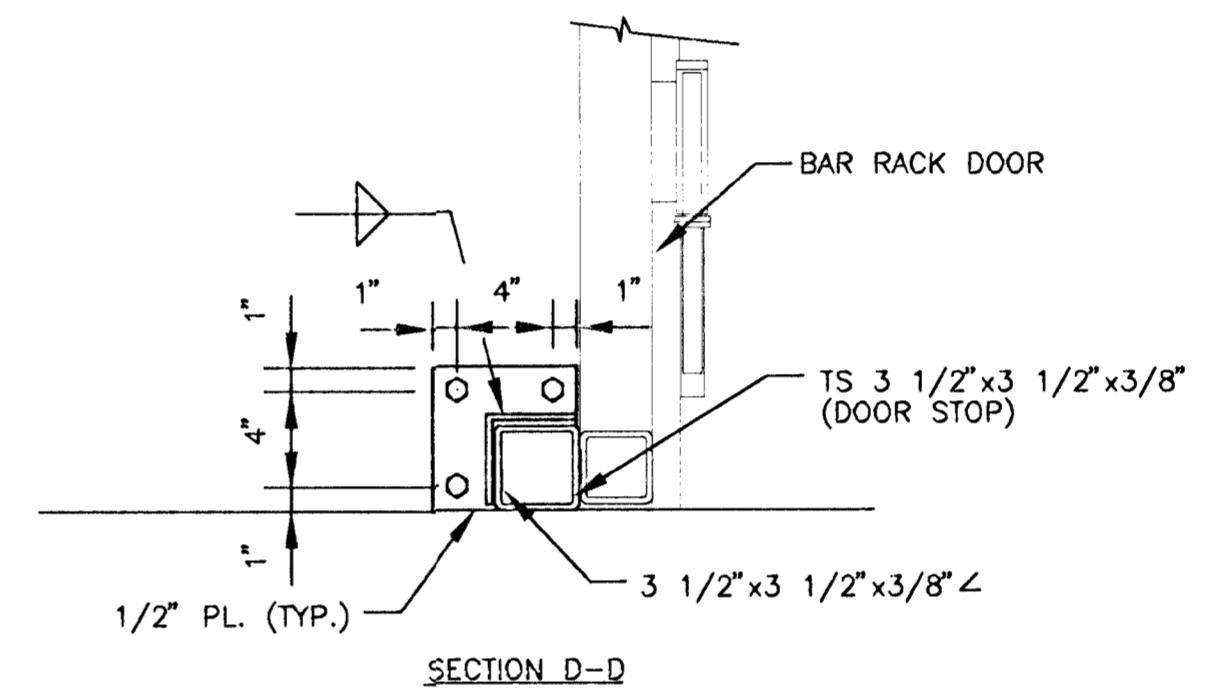
SECTION A-A
SCALE: 1"=1'-0"



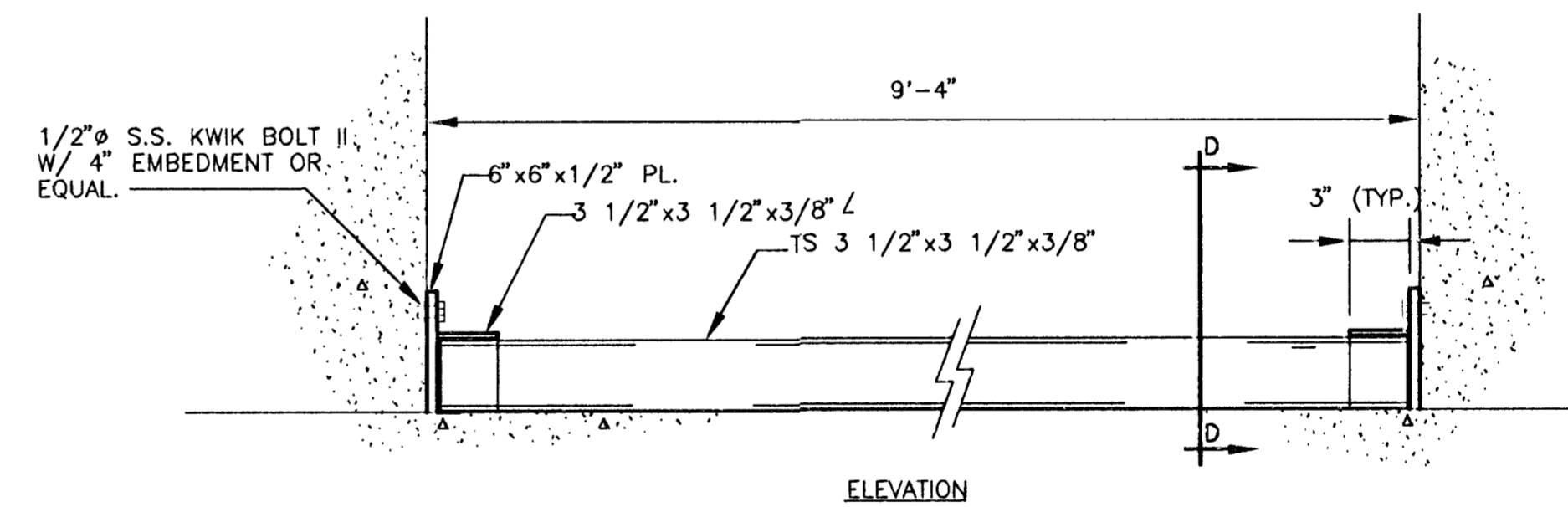
SECTION B-B
SCALE: 1"=1'-0"



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



BARRACK DOOR STOP
SCALE: 1 1/2"=1'-0"



ELEVATION

- NOTES:**
1. ALL WELDS TO BE CONTINUOUS.
 2. ALL PARTS OF THE BAR RACK ARE TO BE GALVANIZED EXCEPT THE STAINLESS STEEL ANCHOR BOLTS. NUTS TO BE COATED IN ACCORDANCE W/ ASTM A563.



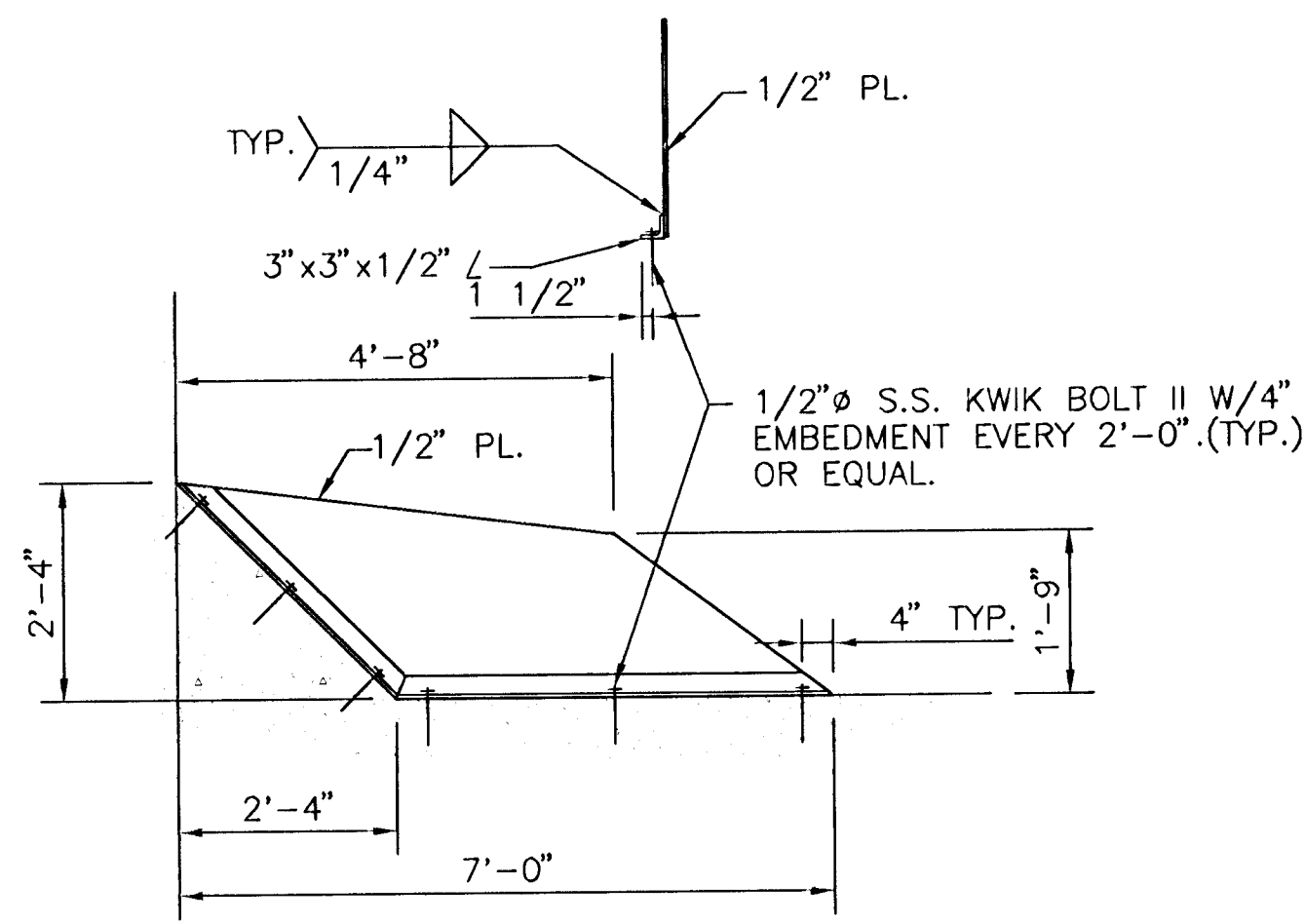
**SOUTH SENECA DRAINAGE IMPROVEMENTS
DRAINAGE OUTFALL PUMP STATION**
PROJECT NAME

BAR RACK DETAILS
SHEET TITLE

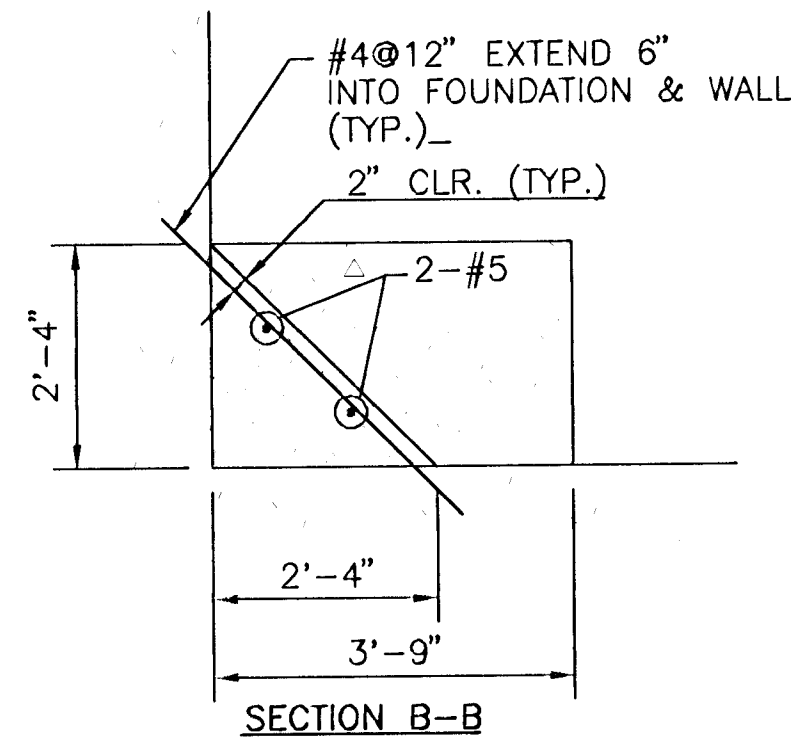
MID-KANSAS ENGINEERING
CONSULTANTS, INC.
411 N WEBB ROAD
WICHITA, KS. 67206
316-684-9600

RCB/JAH DESIGN BY:	RRT DRAWN BY:	RCB/KJS CHECKED BY:
MARCH, 1996 DATE	93035 JOB NO.	19 / 30 SHEET / OF

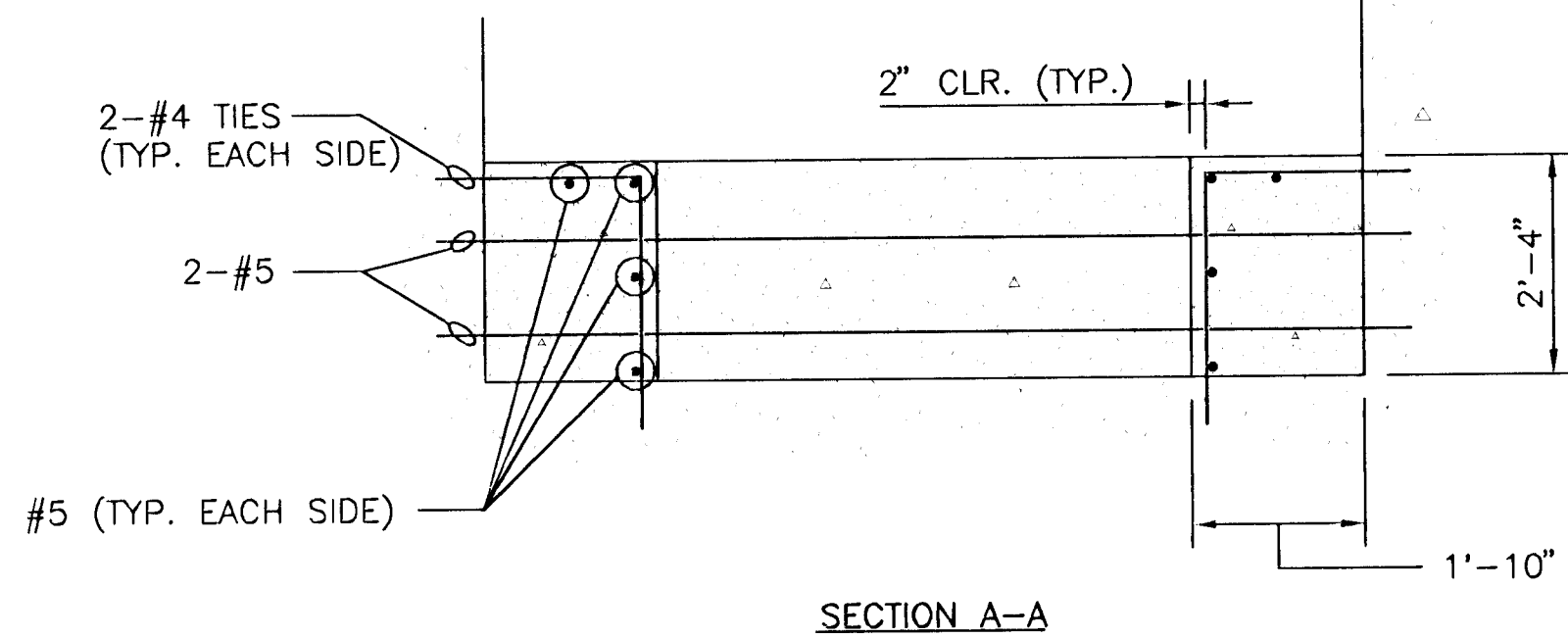
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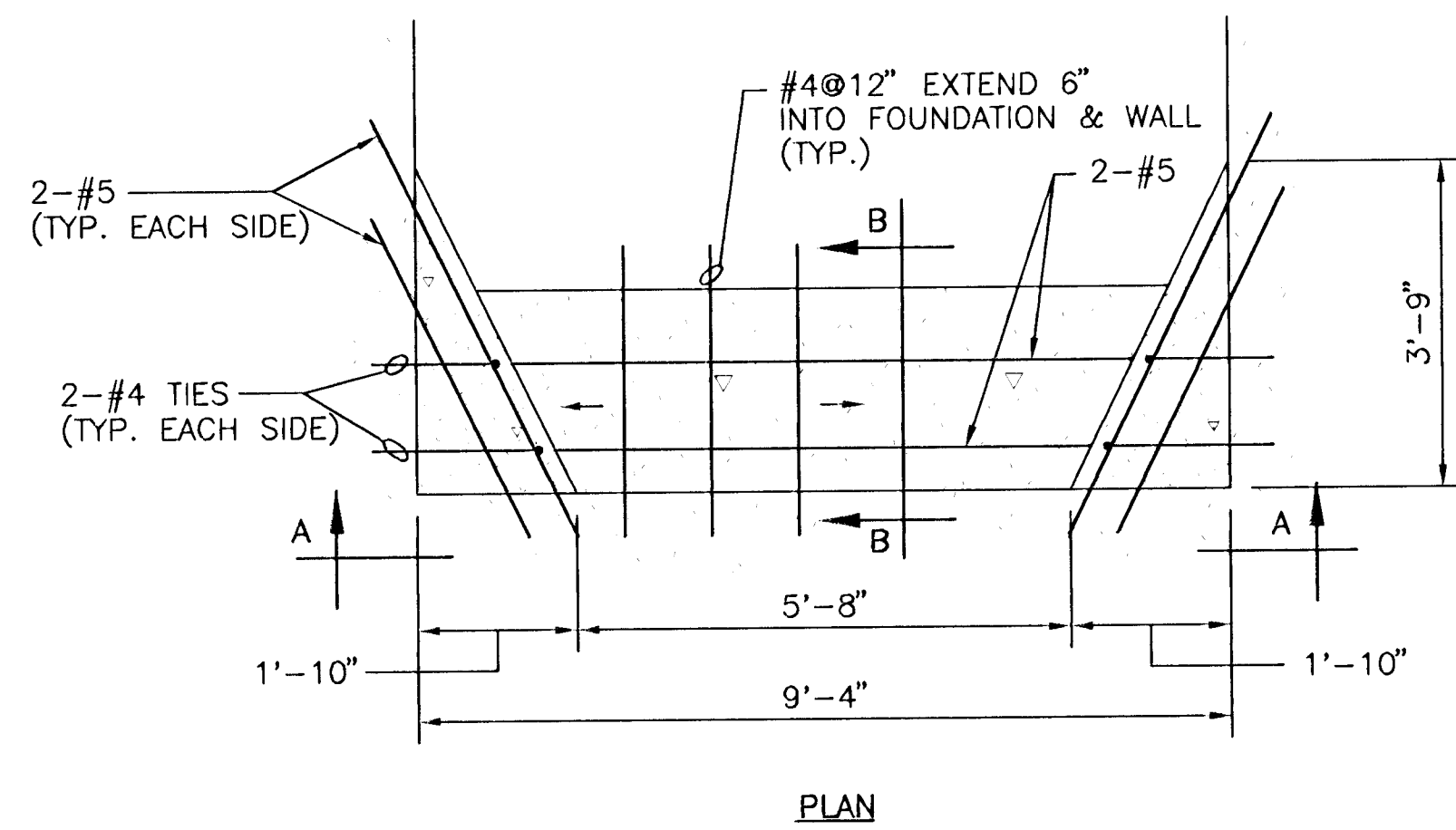
ANTI-SWIRL PLATE DETAIL
SCALE: 1/2" = 1'-0"



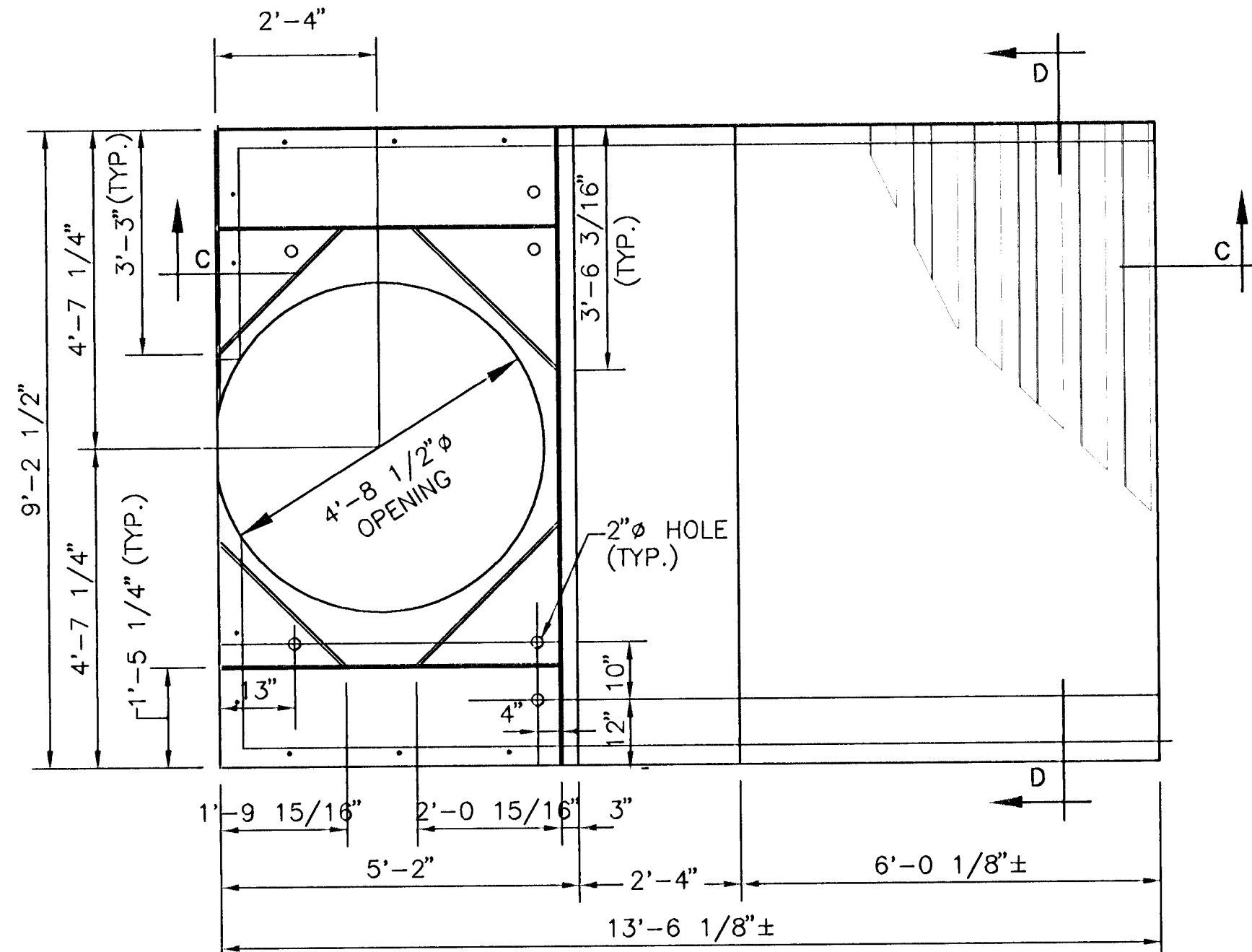
SECTION B-B



SECTION A-A

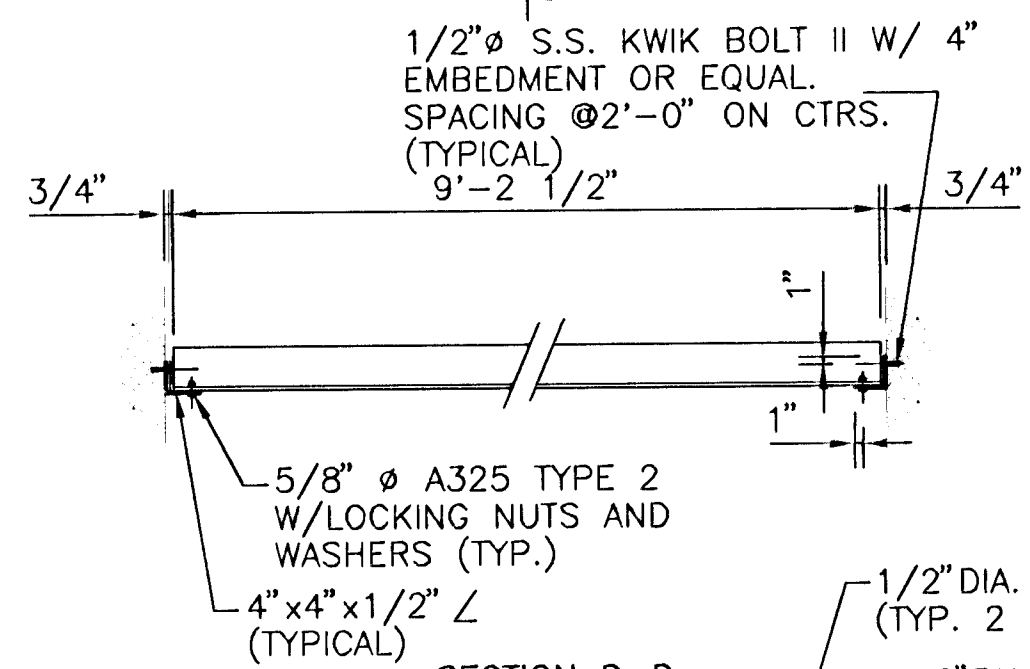


SLOPED CORNERS & BENCHING DETAIL
SCALE: 1/2" = 1'-0"

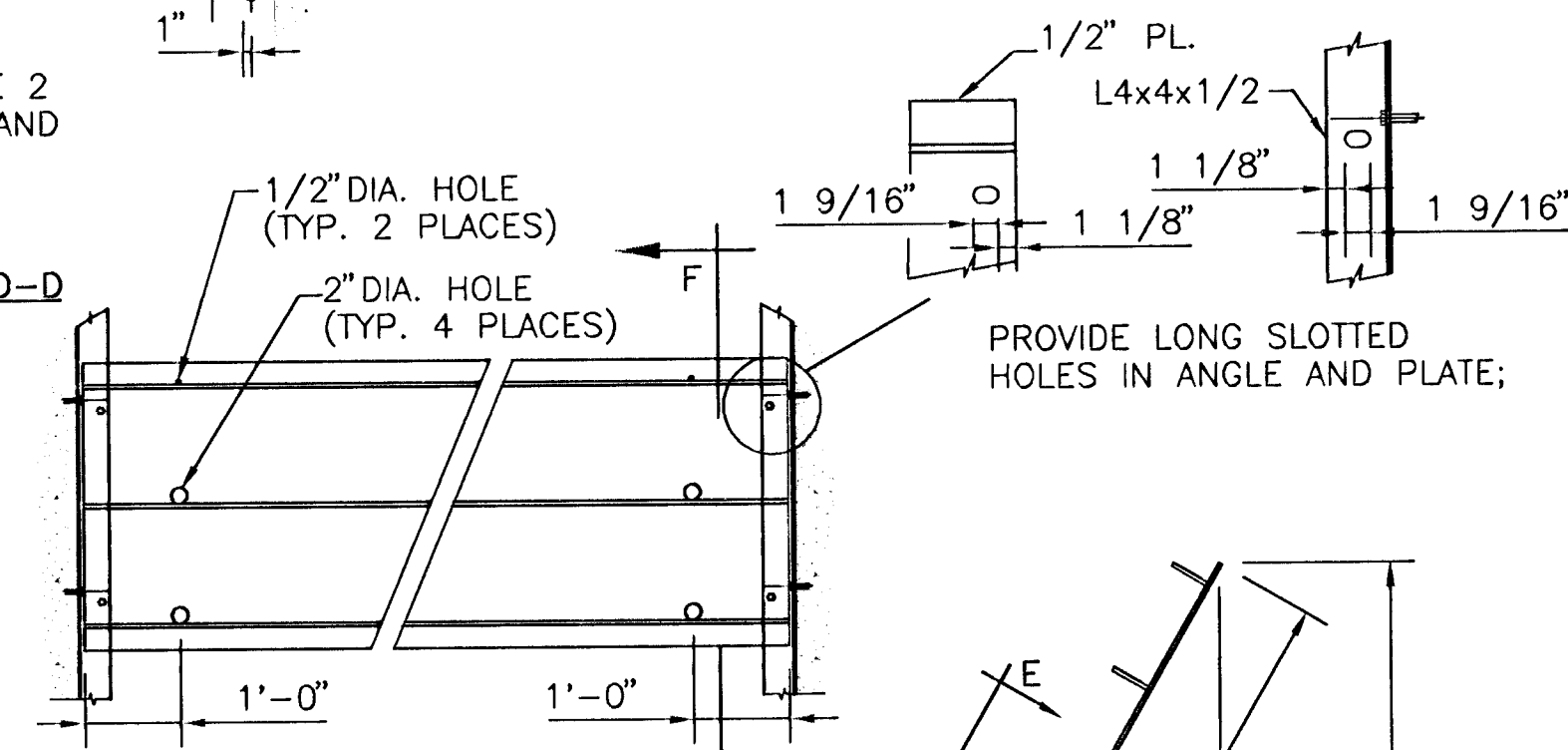


PLAN

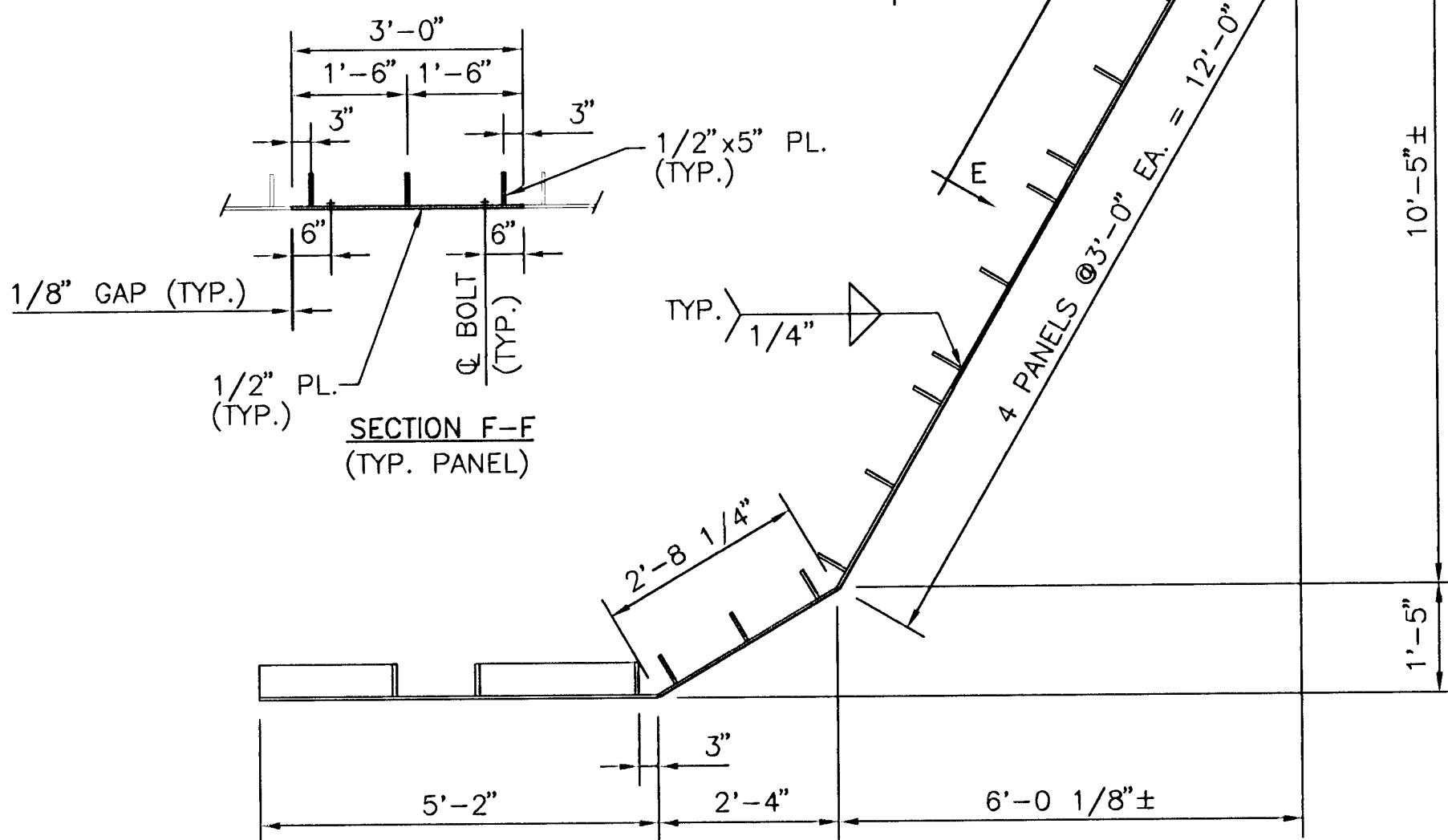
NOTE: ALL PARTS THAT ARE NOT STAINLESS STEEL SHALL BE GALVANIZED. NUTS TO BE COATED IN ACCORDANCE W/ ASTM A 536.



SECTION D-D

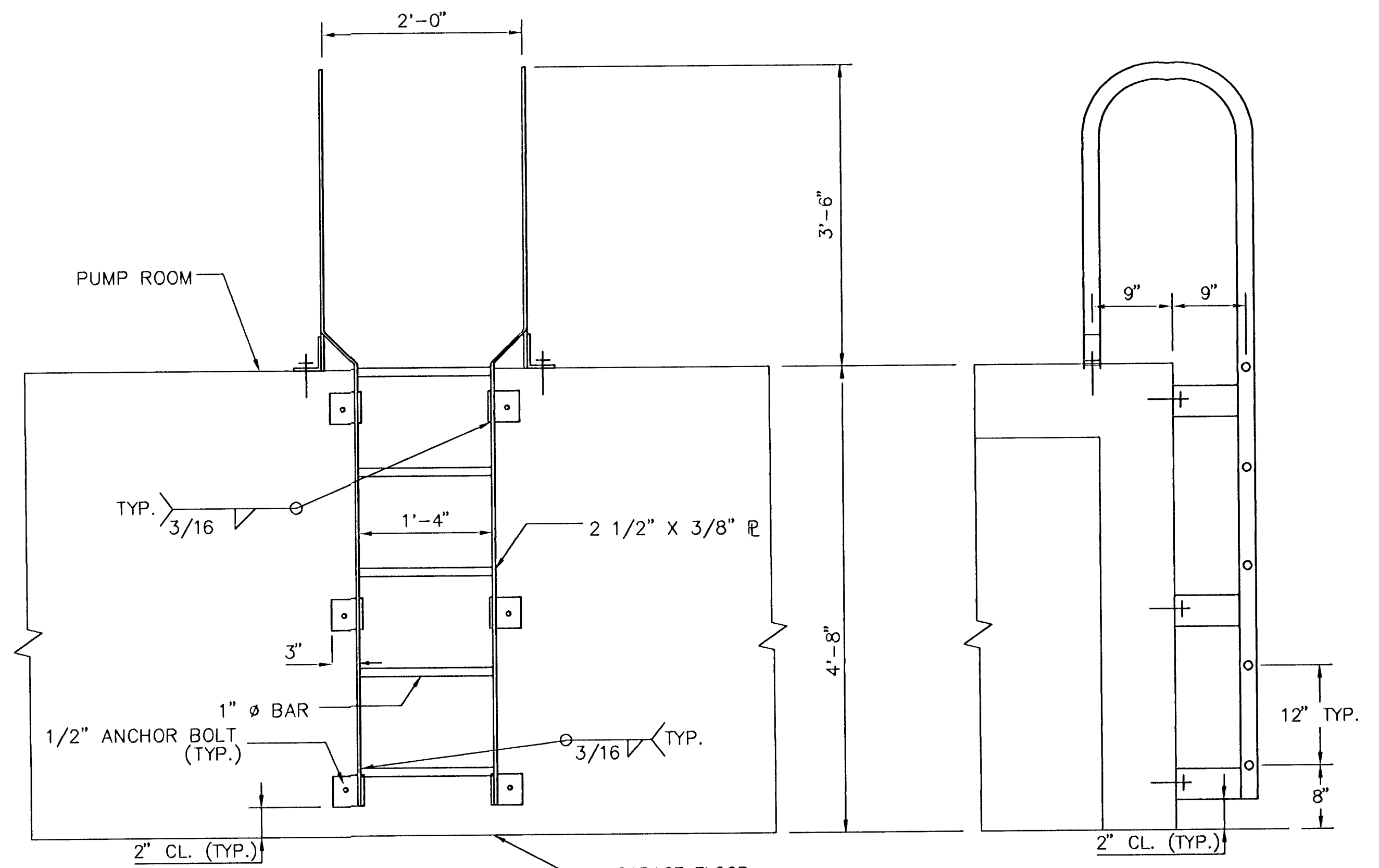


SECTION E-E



SECTION C-C

ANTI-STAGNATION WALL DETAIL
SCALE: 1/2" = 1'-0"



FRONT VIEW

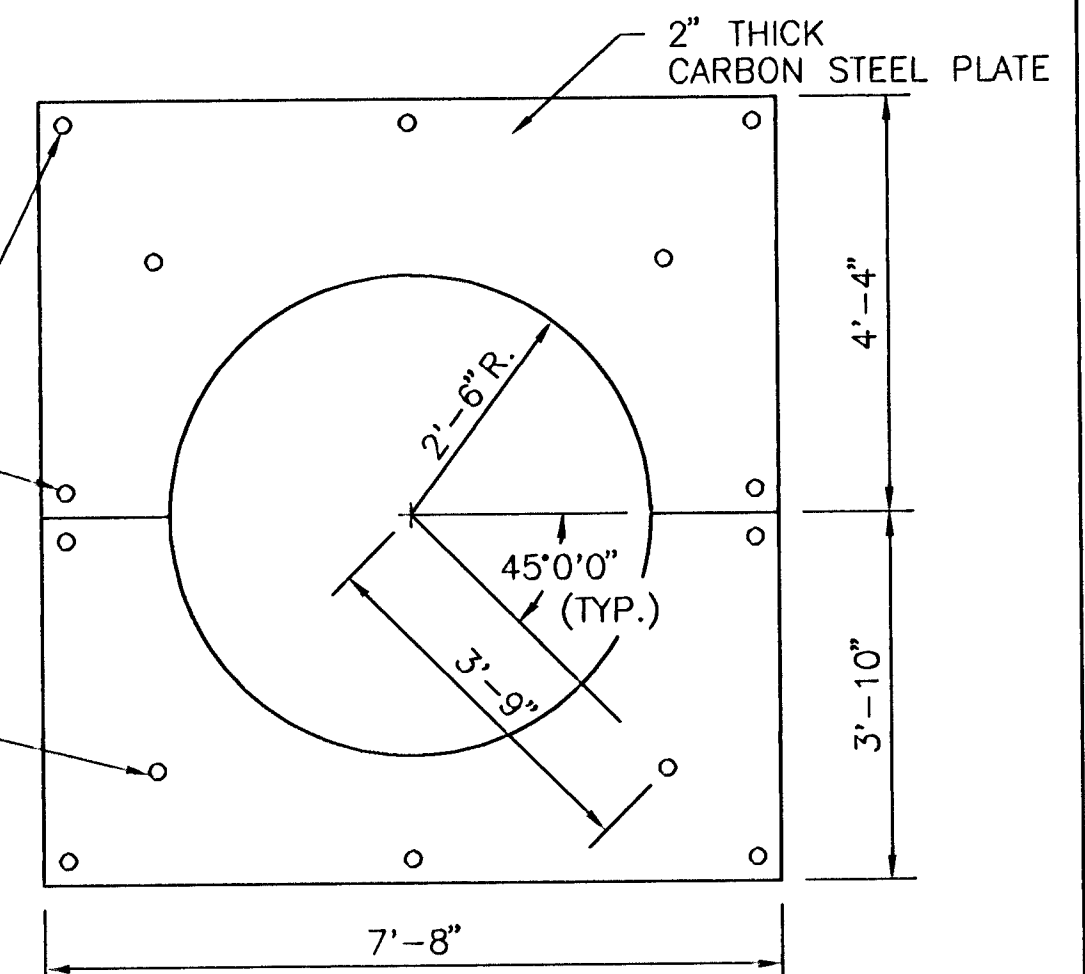
STEEL RUNG LADDER DETAIL
NO SCALE

SIDE VIEW

PROVIDE (10)-1" EPOXY ADHESIVE ANCHOR BOLTS WITH MINIMUM EMBEDMENT OF 12". MATERIAL SHALL BE A36 OR BETTER. HOLES IN CONCRETE FOR ADHESIVE ANCHOR BOLTS SHALL BE DRILLED. ALSO PROVIDE 4" x 1" CUT WASHERS W/ 1 1/16" HOLES. ANCHOR BOLTS SHALL HAVE A MINIMUM EDGE DISTANCE IN CONCRETE OF 6", AND 2" MIN. EDGE DISTANCE IN THE PLATE.

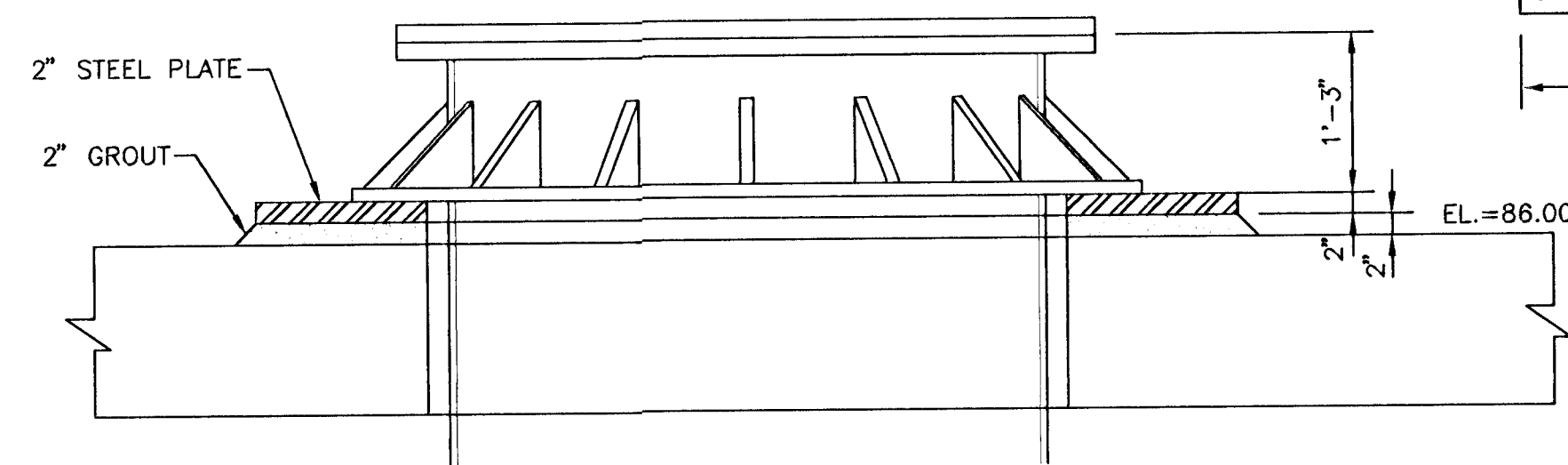
1 1/2" ANCHOR BOLT HOLE (TYP. OF 10)

PROVIDE (4)-1" ANCHOR BOLTS TO THREAD 2" INTO TAPPED AND THREADED ANCHOR BOLT HOLES IN SOLE PLATE (FOR BOLTING PUMP TUBE SUPPORT PLATE TO SOLE PLATE). MATERIAL SHALL BE A36 OR BETTER. ALSO PROVIDE 4" x 1" CUT WASHERS W/ 1 1/16" HOLES.

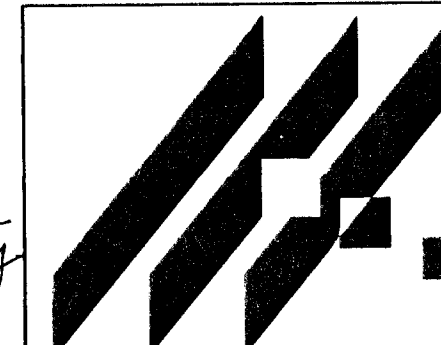


NOTE: SOLE PLATE SHALL BE SPLIT IN TWO PIECES AS SHOWN. PLATE SHALL BE ORIENTED AS SHOWN IN UPPER LEVEL PLAN ON SHEET 24.

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



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



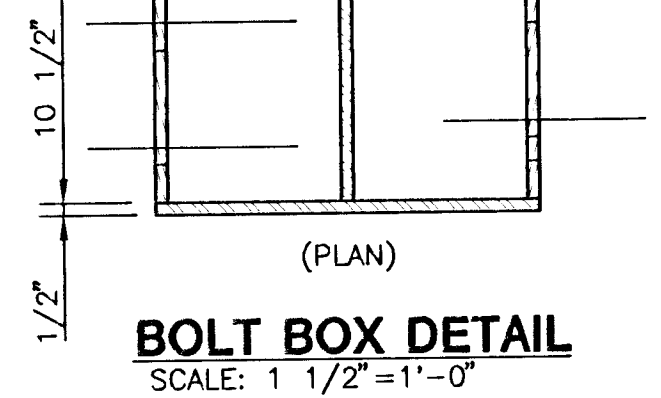
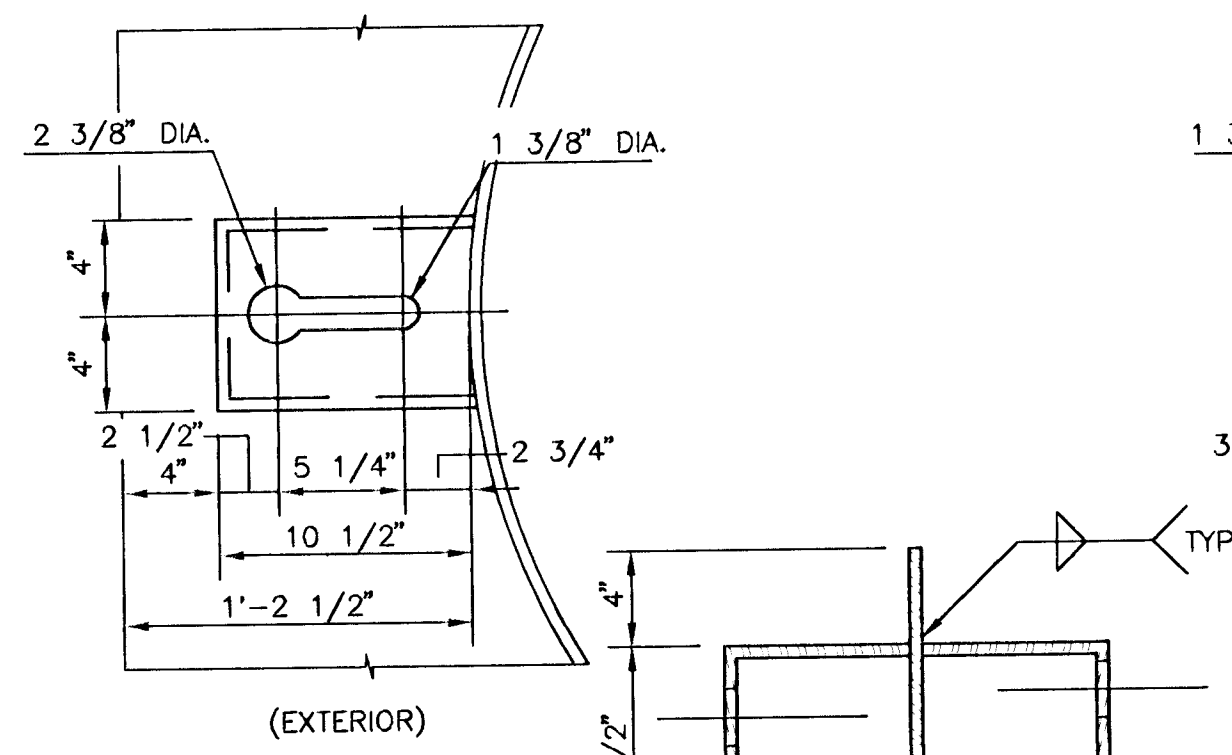
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SOUTH SENECA DRAINAGE IMPROVEMENTS DRAINAGE OUTFALL PUMP STATION

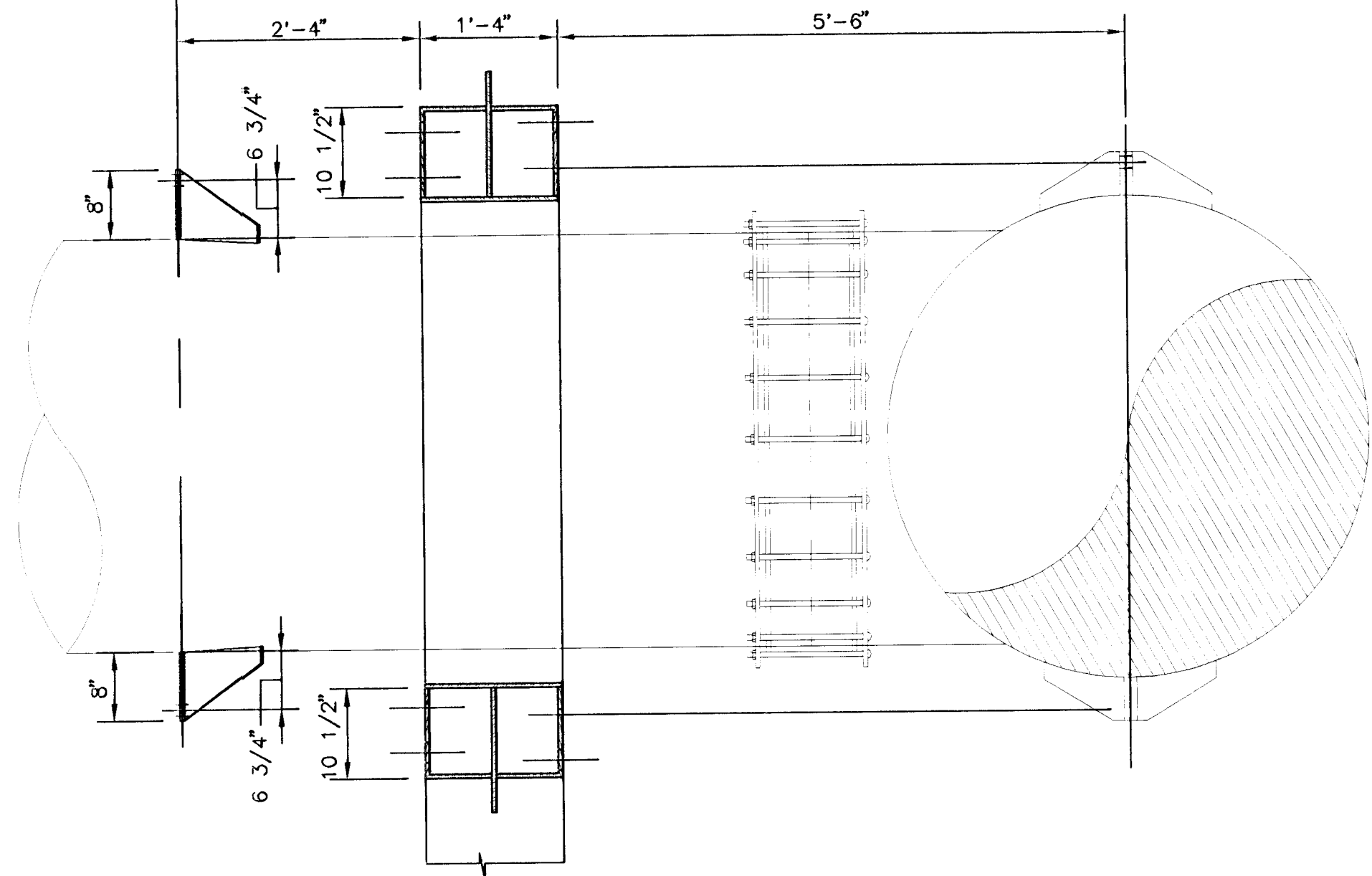
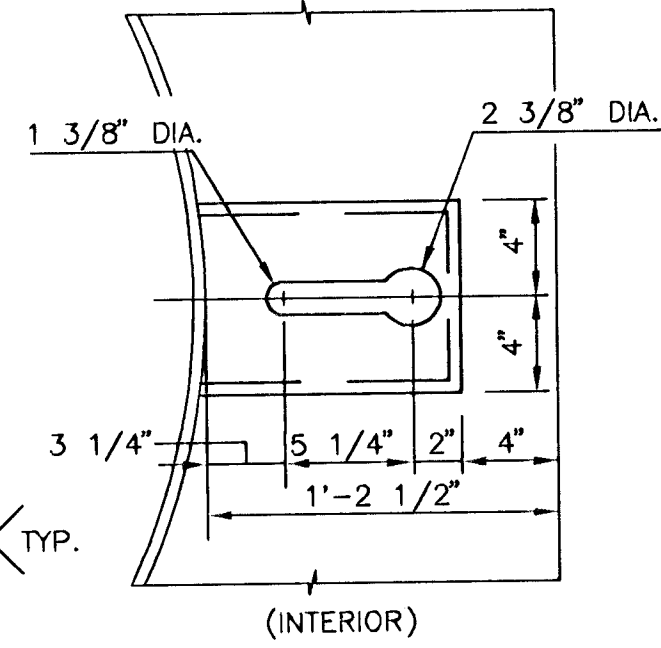
PROJECT NAME
STRUCTURAL DETAILS
SHEET TITLE

DESIGN BY: DAC/JAH	DRAWN BY: RRT	CHECKED BY: RCB/JAH
DATE: MARCH, 1996	JOB NO.: 93035	SHEET/OF: 20 / 30

Time: 12:57:39
Date: 1/11/1996
Drawing File: I:\ENVR\93035\DETAILS



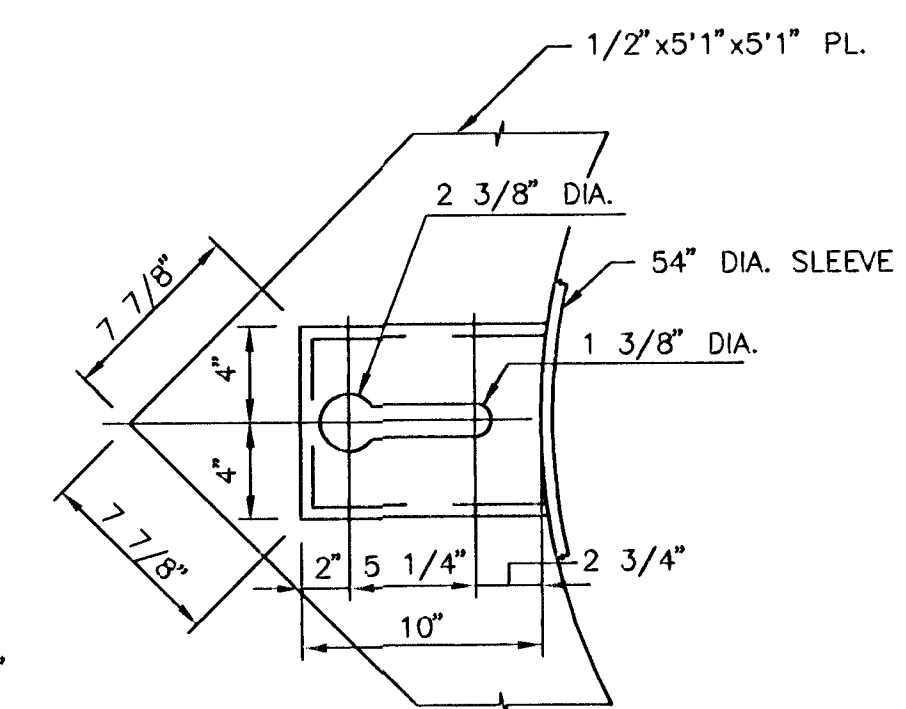
BOLT BOX DETAIL
SCALE: 1 1/2"=1'-0"



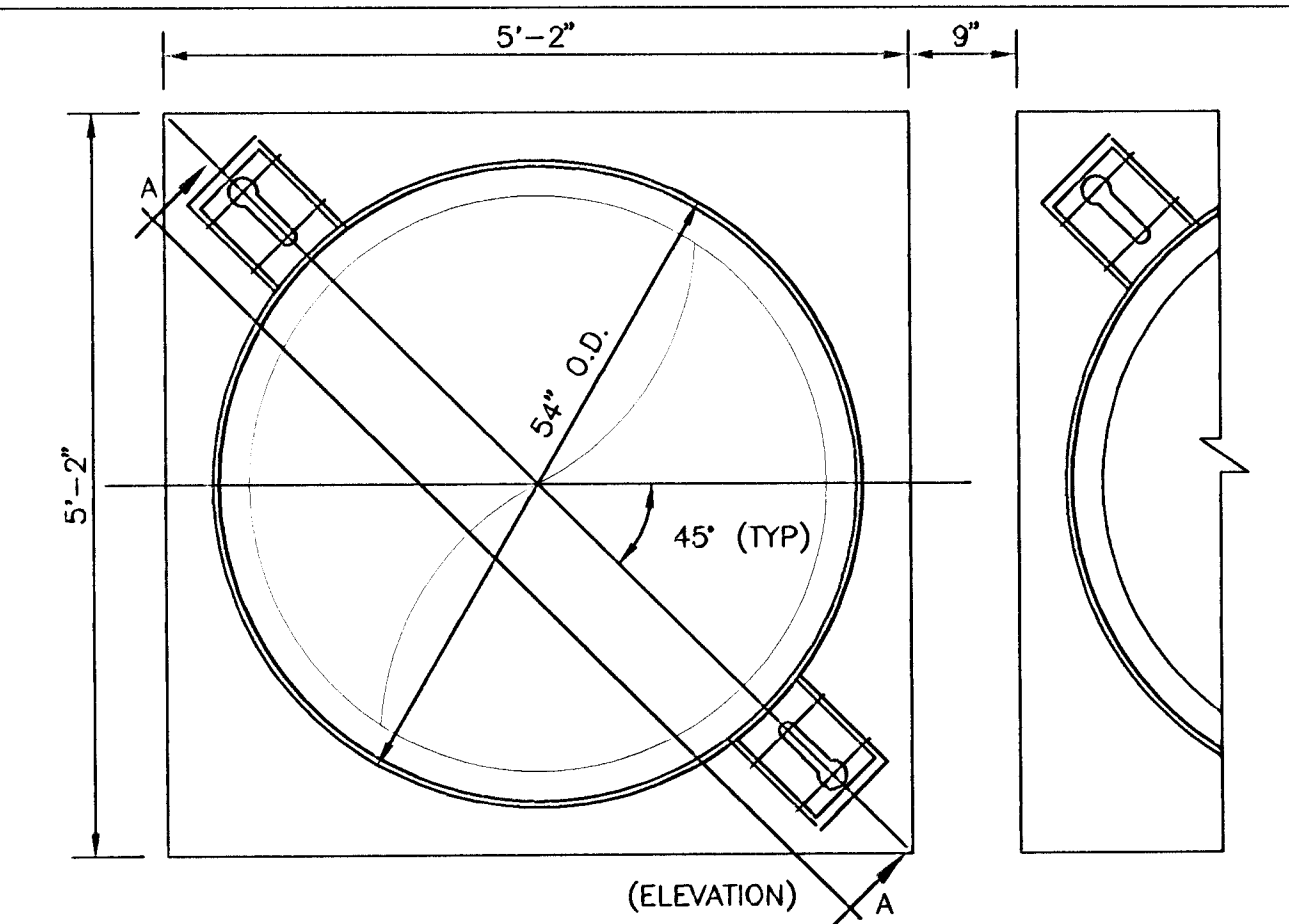
PUMP STATION WALL SLEEVE DETAIL
SCALE: 3/4"=1'-0"

56" O.D. SLEEVE DETAILS
PUMP DISCHARGE

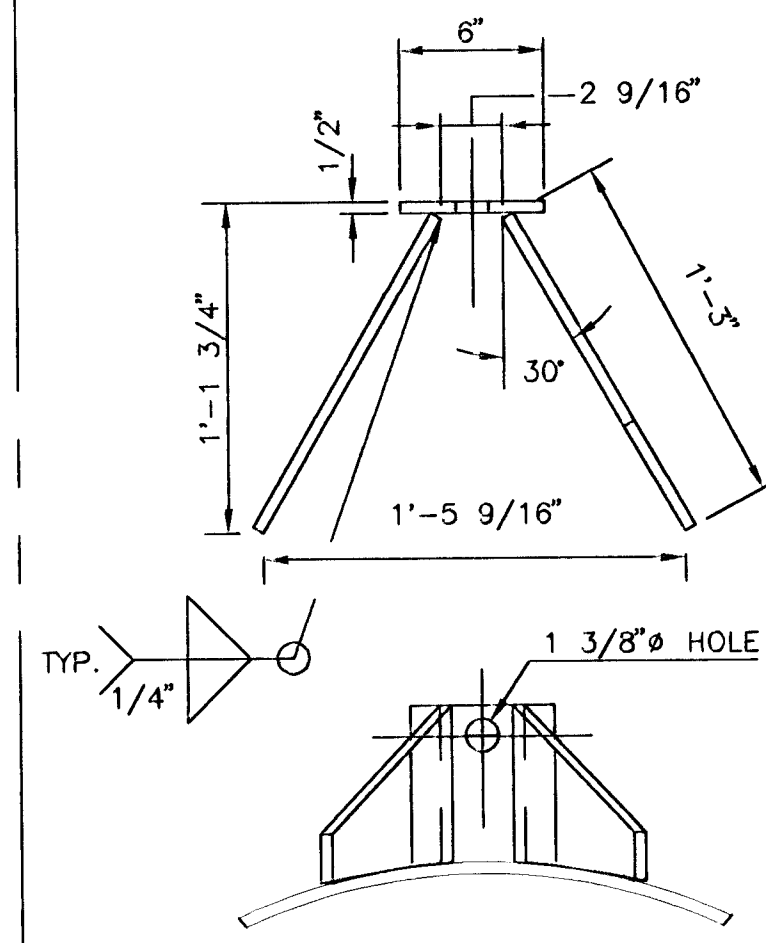
54" O.D. SLEEVE DETAILS
OUTFALL PIPING



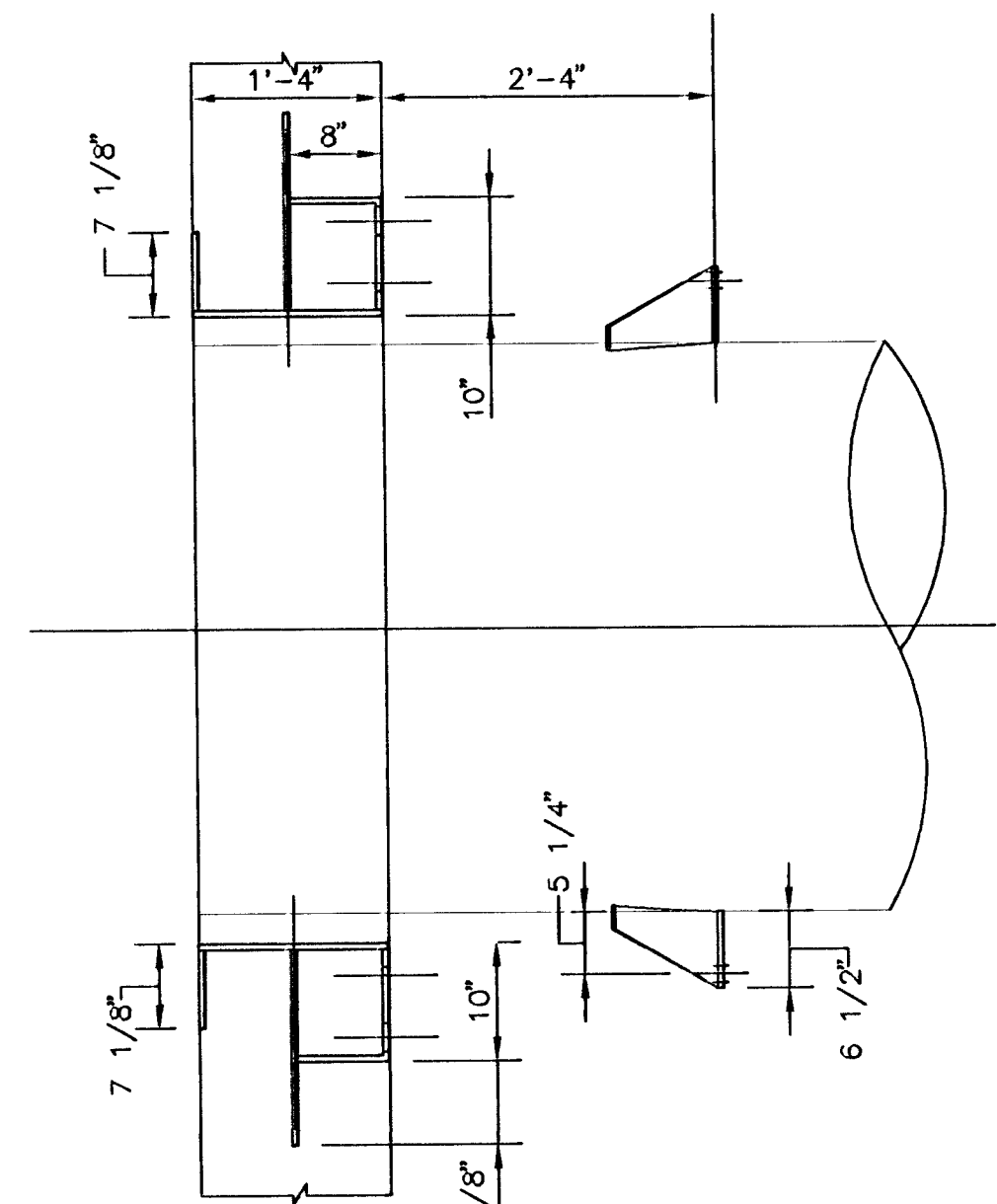
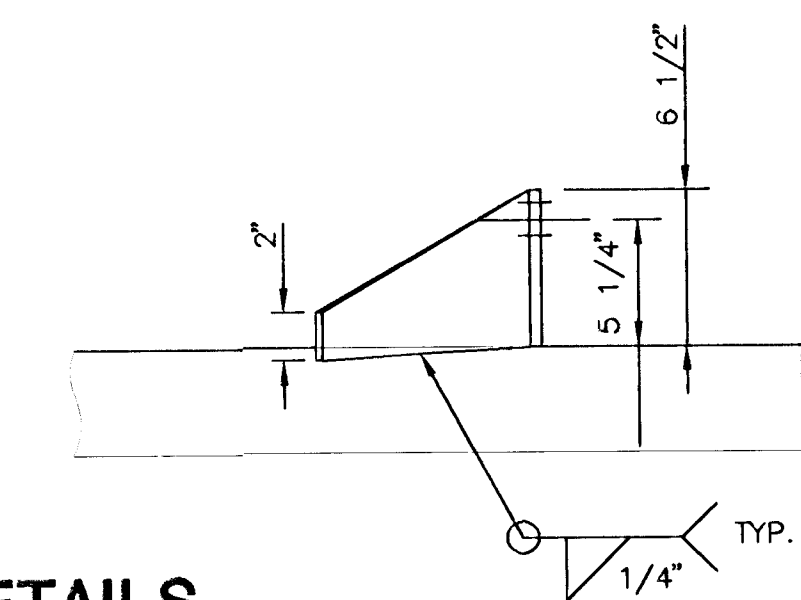
BOLT BOX DETAIL
SCALE: 1 1/2"=1'-0"



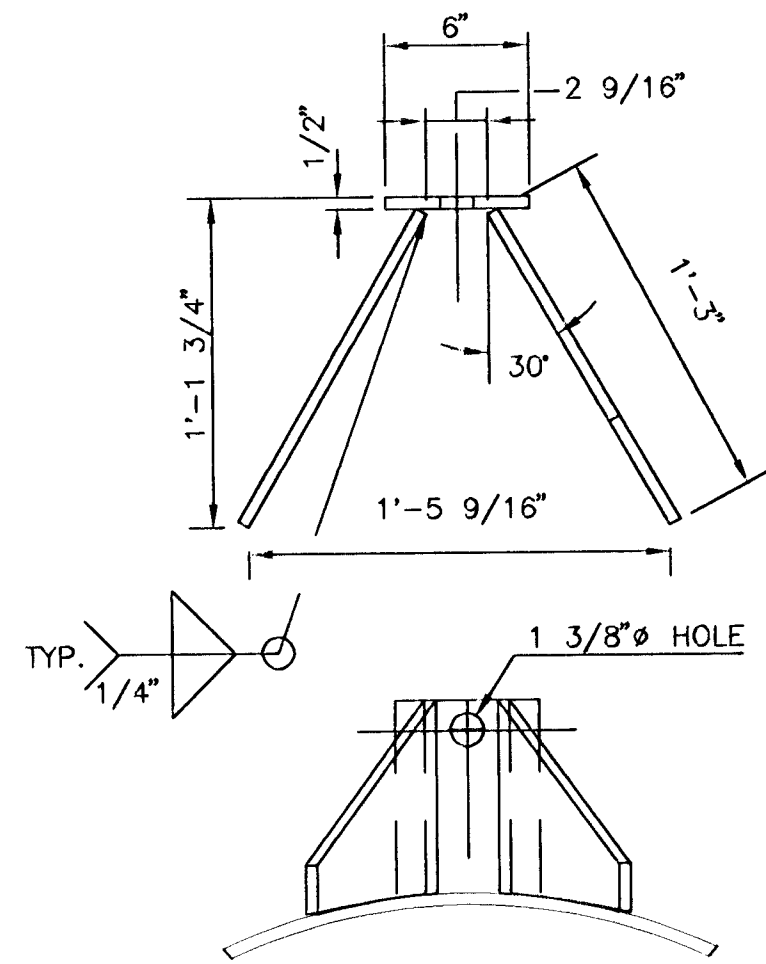
(ELEVATION)



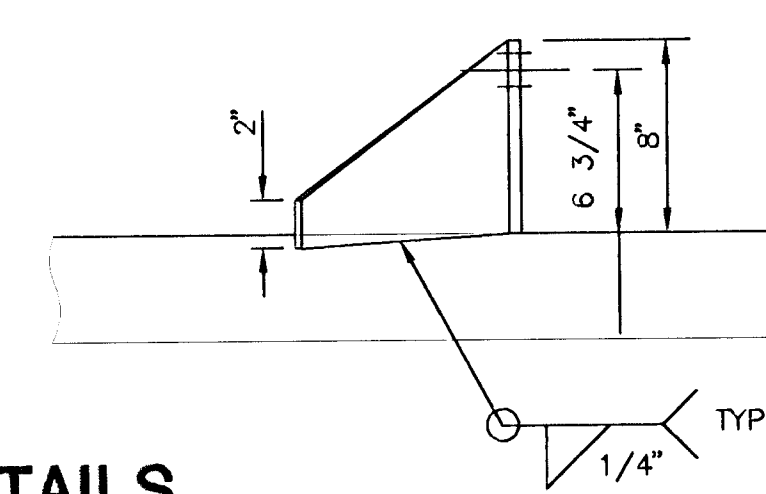
HARNES 'B' DETAILS
SCALE: 1 1/2"=1'-0"



OUTFALL STRUCTURE WALL SLEEVE DETAILS
SCALE: 3/4"=1'-0"



HARNES 'A' DETAILS
SCALE: 1 1/2"=1'-0"



SEAL PLATE 1/2"x48"x60"
RECTANGLE OR OVAL
WELDED TO SLEEVE

54" O.D. -1/2" STEEL
WALL SLEEVE

KEY SLOTS FOR
BOLT ASSEMBLY

FILL W/EMBECCO GROUT
& COAT W/HEAVY EPOXY
AT BOTH ENDS AS SHOWN.

48" PIPE
(49.5" O.D.)

STEEL HARNES "B"
SEE DETAIL ON THIS SHEET

OUTFALL STRUCTURE PIPING INSTALLATION
NO SCALE

DRILL HOLES IN PLATE TO MATCH
BOLT HOLE PATTERN OF 54" FLAP GATE.
(ANSI B16.1 CLASS 125 PARTIAL
PATTERN - VERIFY WITH FLAP GATE MFR.)
(TYPICAL)

EXTERIOR BOLT BOXES-1/2" STEEL
WELD TO SLEEVE AND SEAL PLATE.
SEE DETAIL ON THIS SHEET.

2-1 1/4" CORTEN BOLTS

SEAL PLATE 1/2"x66"x85"
RECTANGLE OR OVAL
WELDED TO SLEEVE

56" O.D. -1/2" STEEL
WALL SLEEVE

KEY SLOTS FOR
BOLT ASSEMBLY

FILL W/EMBECCO GROUT
& COAT W/HEAVY EPOXY
AT EXTERIOR AS SHOWN.

48" PIPE
(49.5" O.D.)

SEE HARNES 'A' DETAIL

PUMP DISCHARGE PIPING INSTALLATION
NO SCALE

DRESSER COUPLING

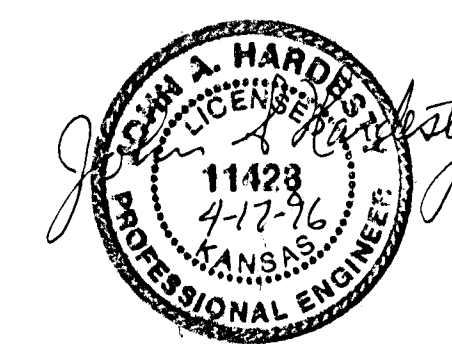
LINK-SEAL
MODULAR LINKS

INTERIOR BOLT BOXES-1/2" STEEL
WELD TO SLEEVE AND SEAL PLATE.
SEE DETAIL ON THIS SHEET.

EXTERIOR BOLT BOXES-1/2" STEEL
WELD TO SLEEVE AND SEAL PLATE.
SEE DETAIL ON THIS SHEET.

4-1 1/4" BOLTS
2 EACH SIDE OF WALL
(BURIED BOLTS SHALL BE CORTEN)

- NOTES: (FOR PUMP DISCHARGE AND OUTFALL STRUCTURE INSTALLATIONS)**
1. INSERTS AND PIPE TO BE HOT DIP GALVANIZED AFTER CONSTRUCTING OF A-36 STEEL.
 2. BURIED PIPE TO BE WRAPPED W/TAPE AS PER SPECIFICATIONS TO WITHIN 12" OF HARNES. FROM THIS POINT TO WALL, COAT PIPE, BOLTS, HARNES, AND FACE OF BOLT BOX AND SLEEVE WITH COAL TAR EPOXY:
SURFACE PREP. SSPC-SP10.
FIRST COAT - TMEC SERIES 66 (3.0-5.0 MILS DFT)
SECOND COAT - TMEC 46H-413 (14.0-20.0 MILS DFT)

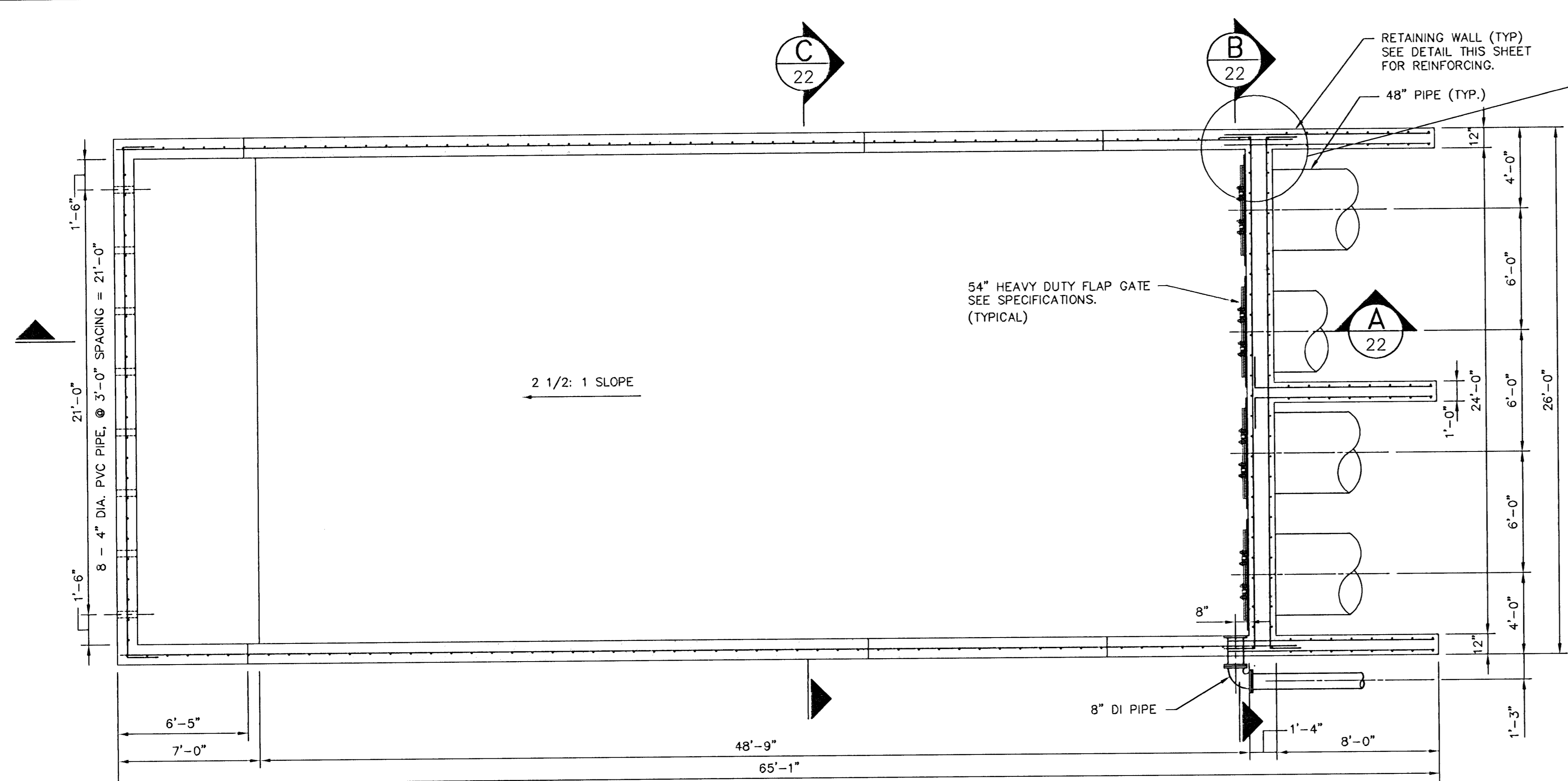


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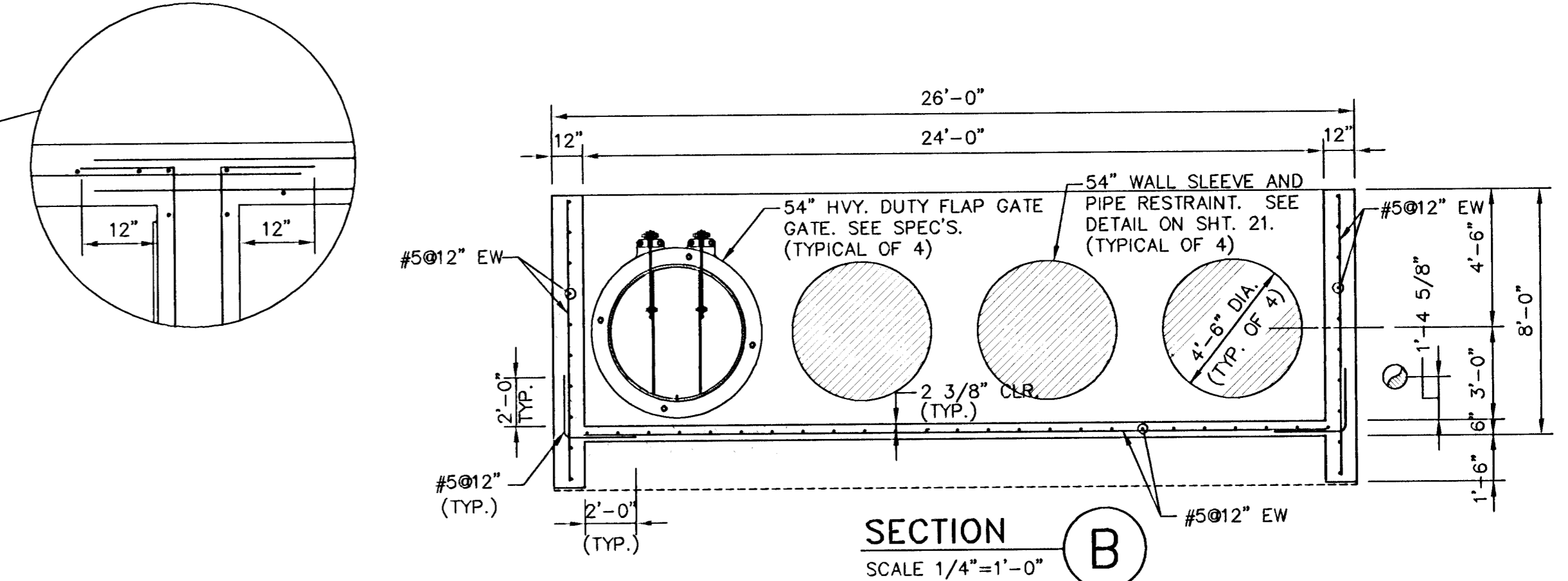
SOUTH SENECA DRAINAGE IMPROVEMENTS DRAINAGE OUTFALL PUMP STATION
PROJECT NAME

STRUCTURAL PIPE RESTRAINT DETAILS
SHEET TITLE

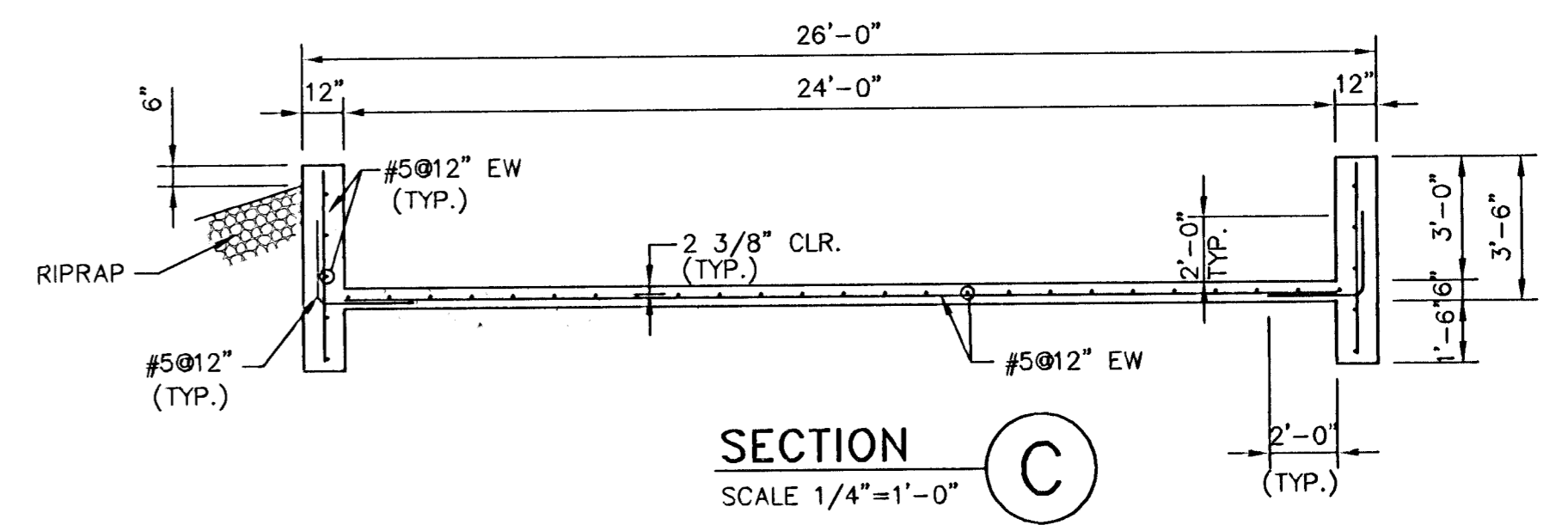
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DATE: MARCH, 1996	JOB NO.: 93035	SHEET/OF: 21 / 30



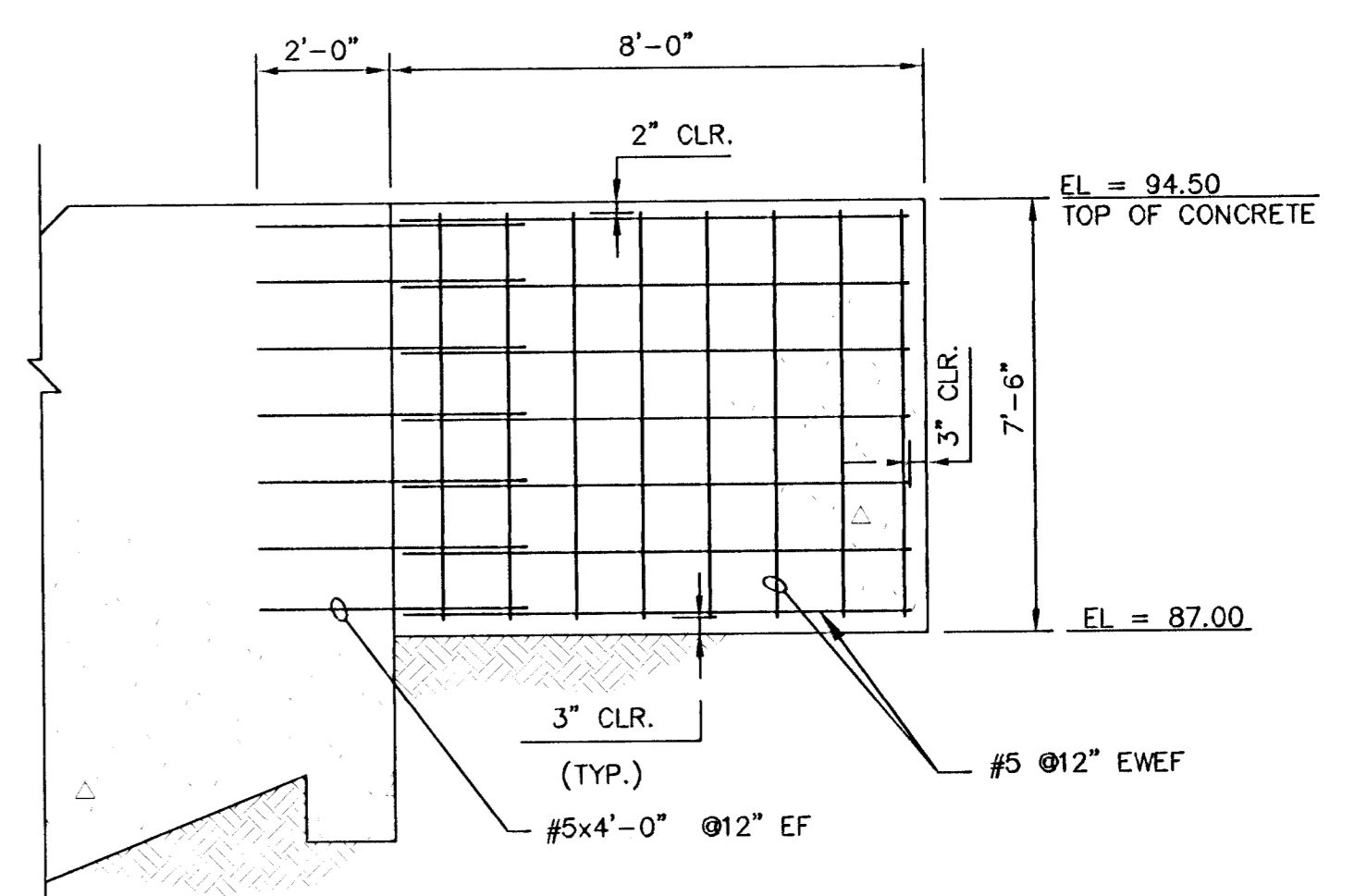
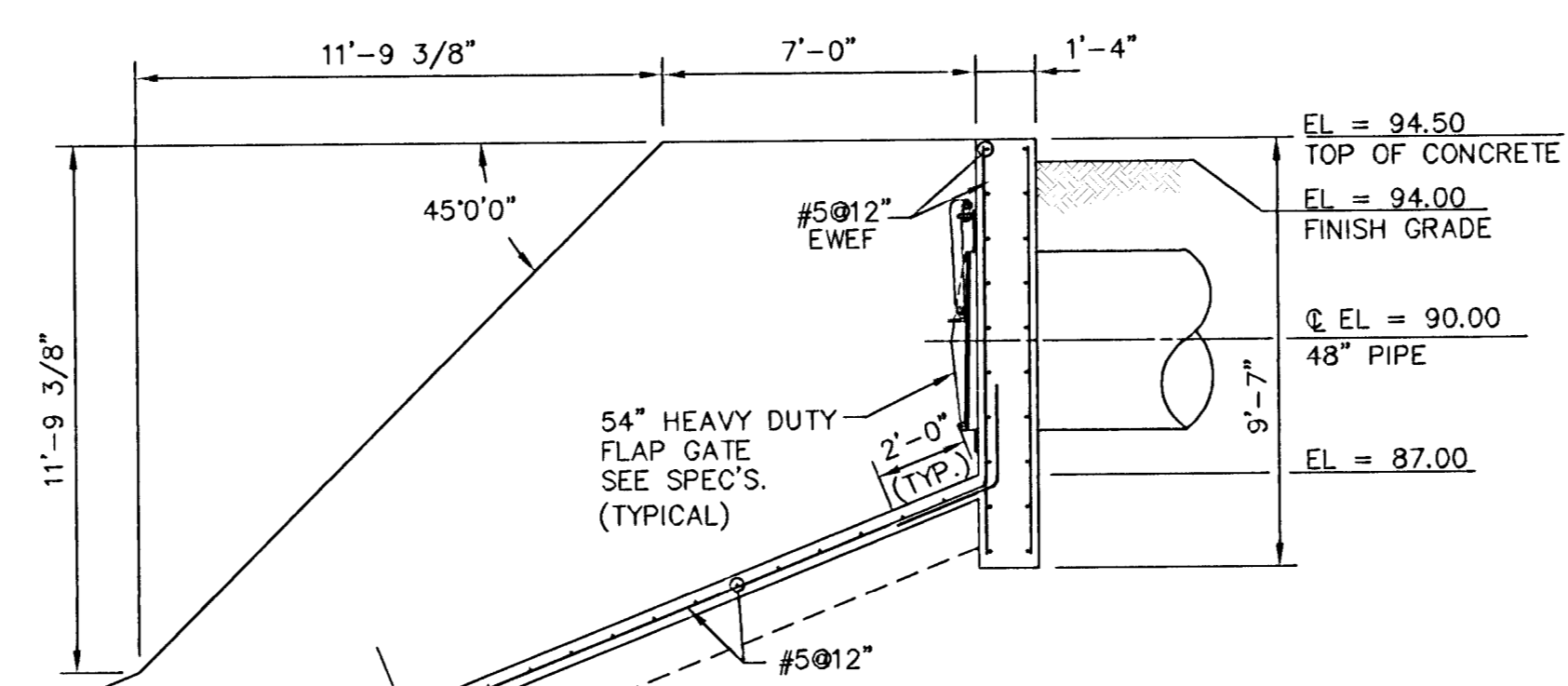
PLAN
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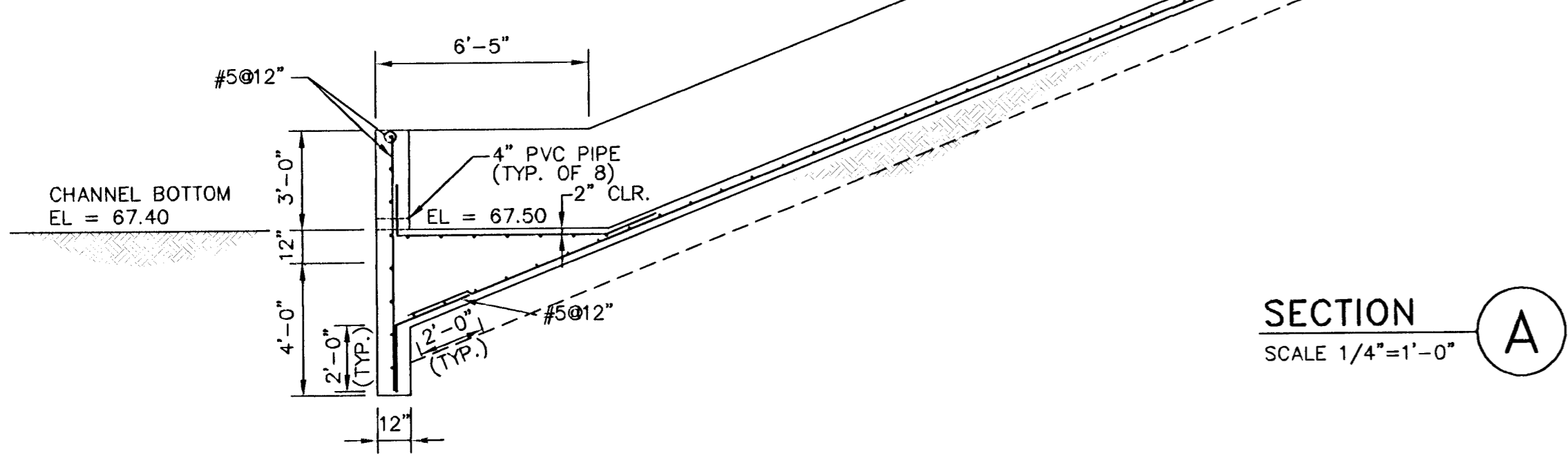
SECTION B
SCALE 1/4"=1'-0"



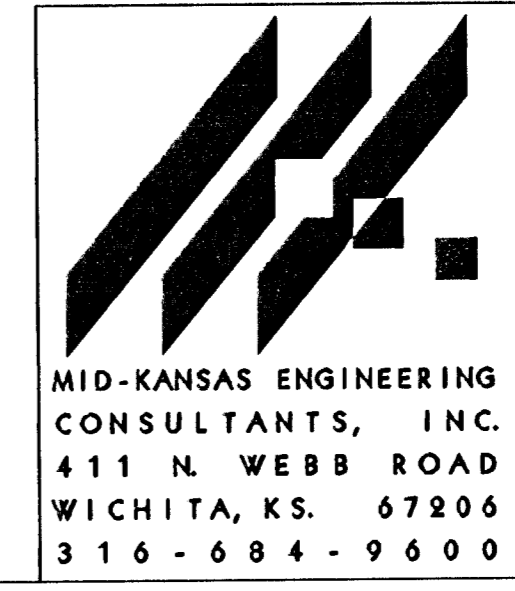
SECTION C
SCALE 1/4"=1'-0"



RETAINING WALL DETAIL
SCALE: 1/4" = 1'-0"



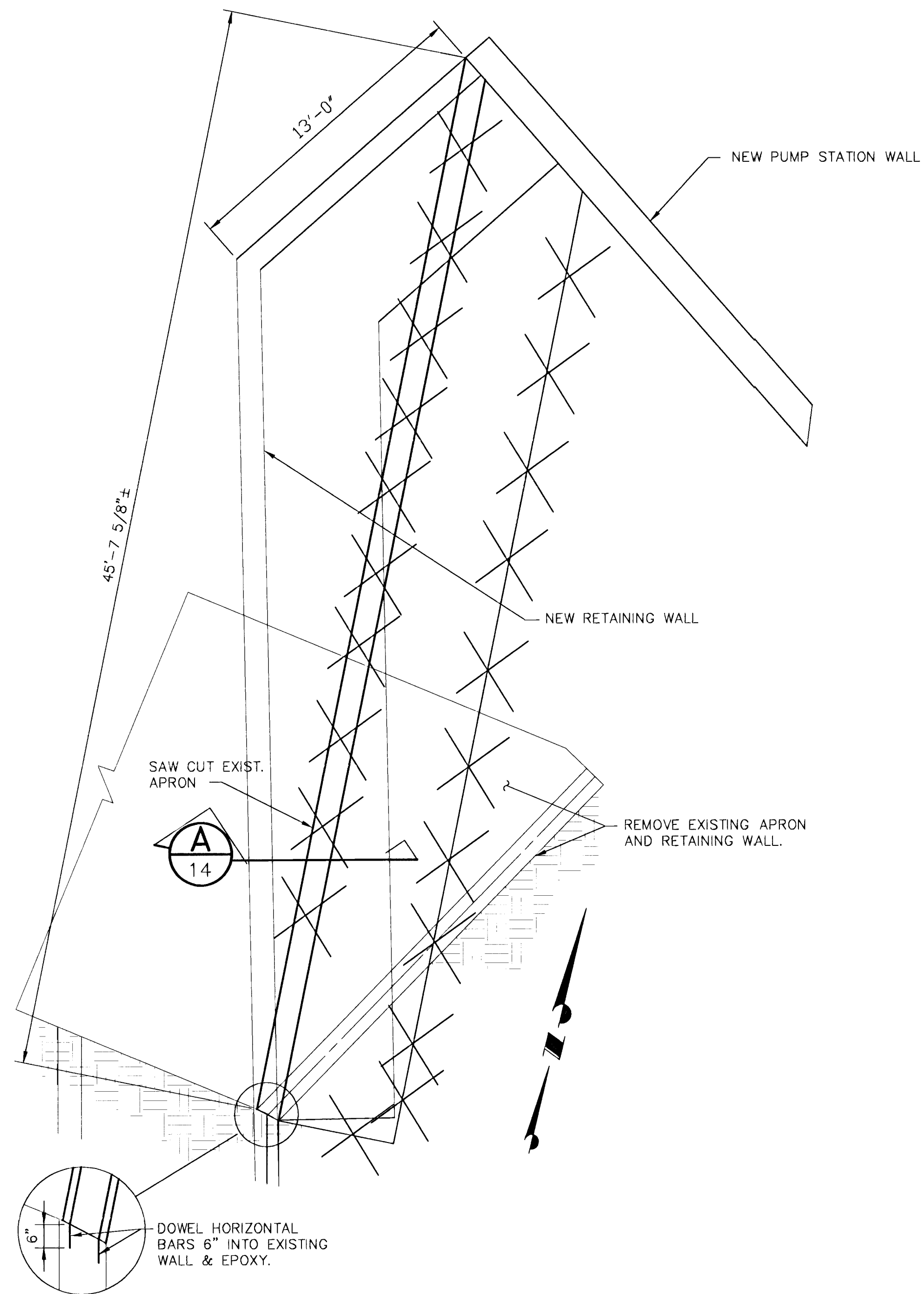
SECTION A
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**SOUTH SENECA DRAINAGE IMPROVEMENTS
DRAINAGE OUTFALL PUMP STATION**
PROJECT NAME
**STRUCTURAL
OUTFALL STRUCTURE**
SHEET TITLE

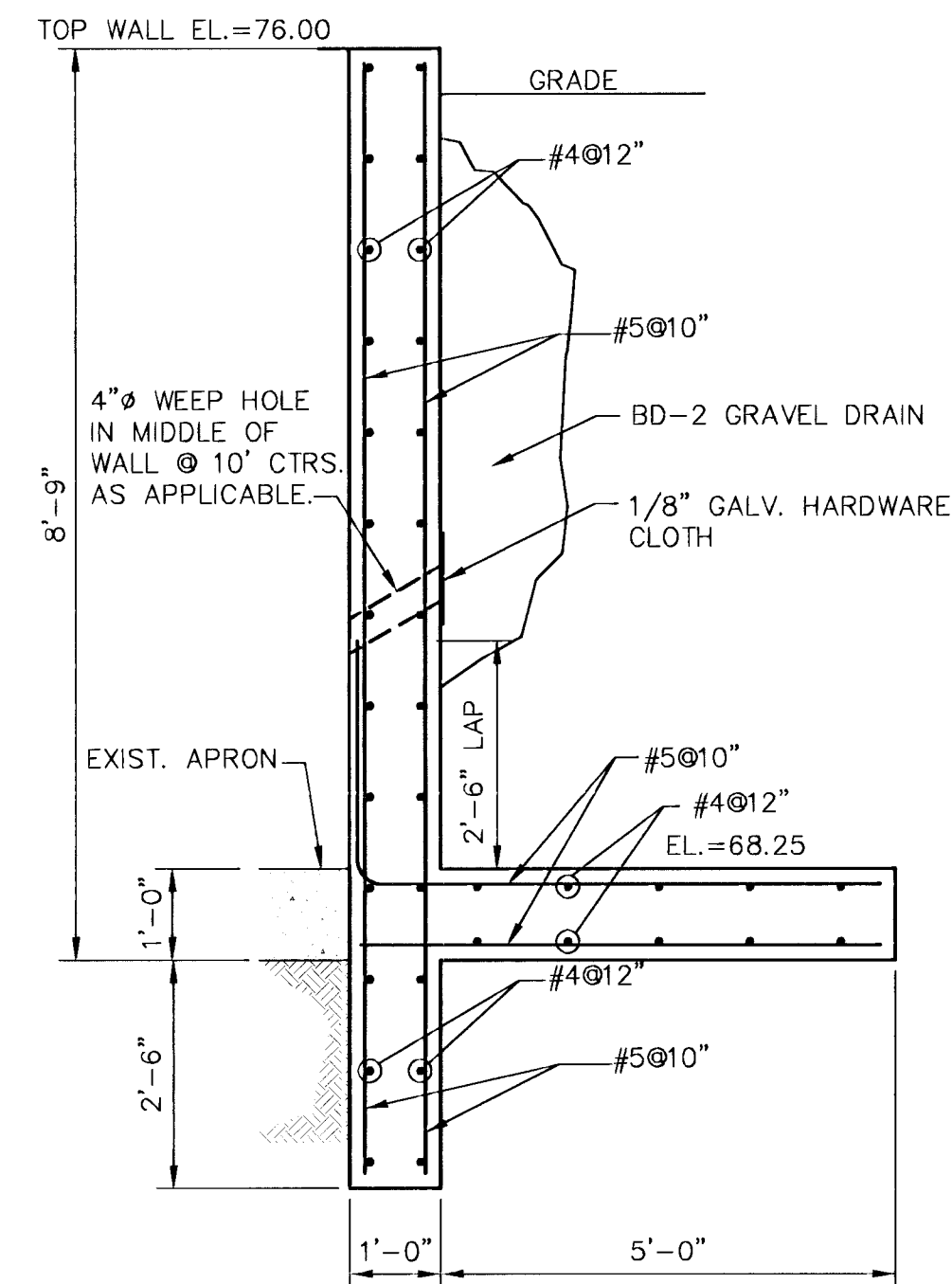
DAC/JAH DESIGN BY:	RRT DRAWN BY:	RCB/KJS CHECKED BY:
MARCH, 1996 DATE	93035 JOB NO.	22 / 30 SHEET/OF

Drawing File: I:\ENR\93035\OUTFALL



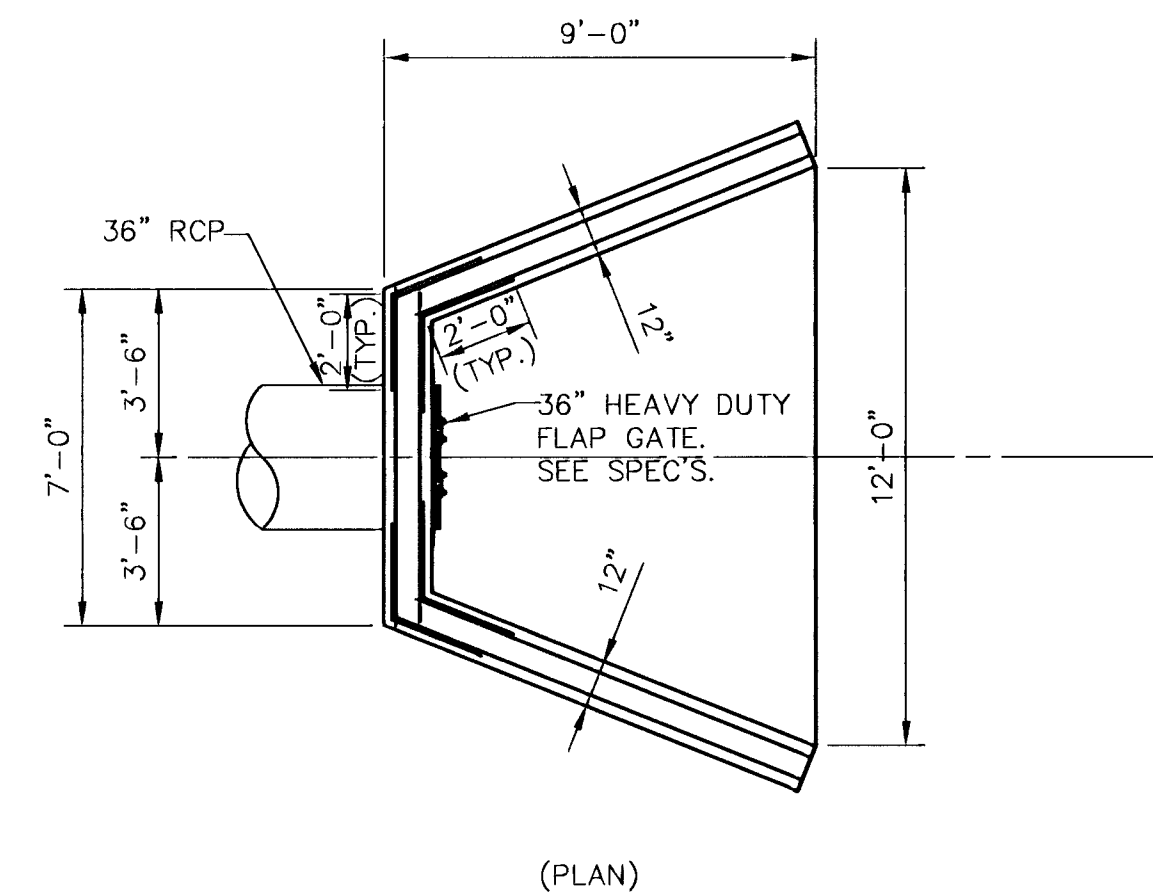
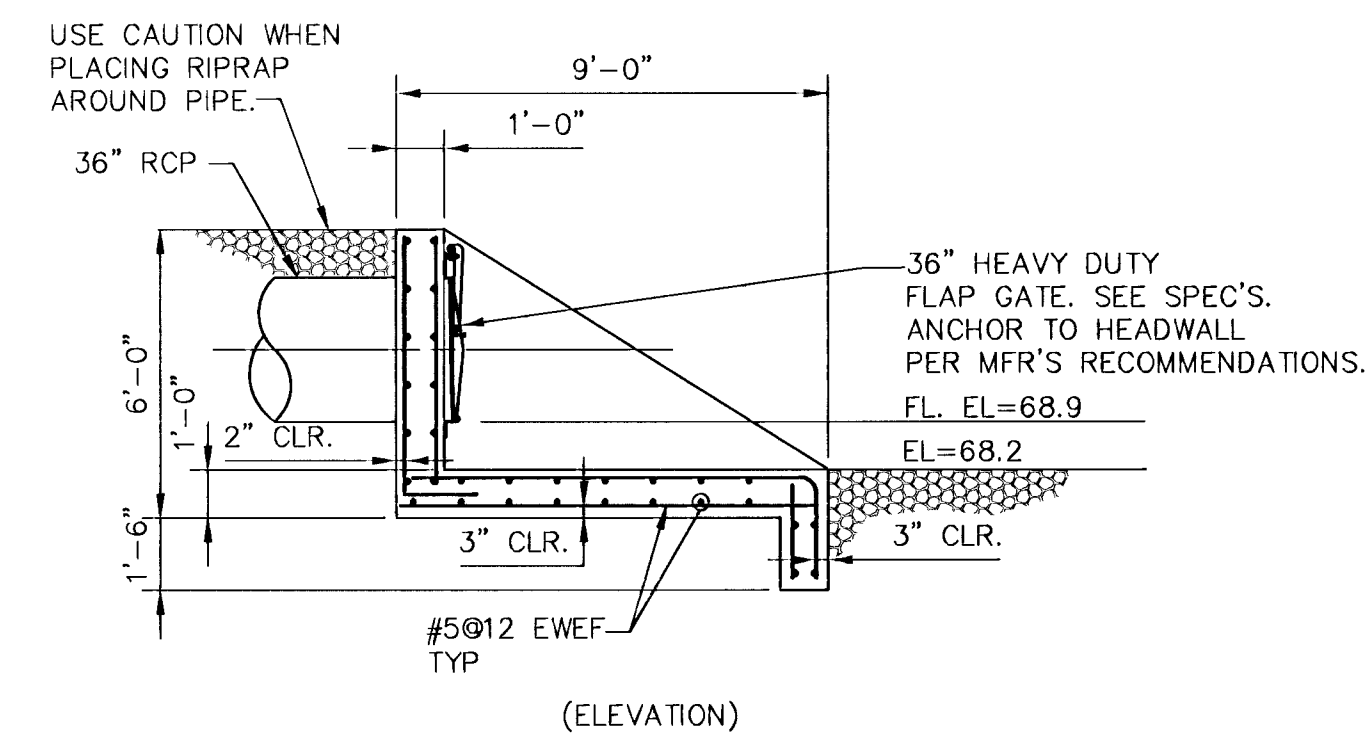
RETAINING WALL

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A RETAINING WALL SECTION

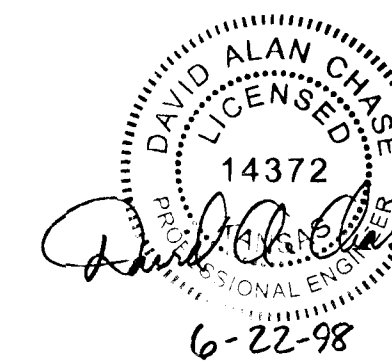
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HEADWALL & FLAP GATE DETAIL

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

Drawing File: I:\ENVR\93035\JL TAILS2

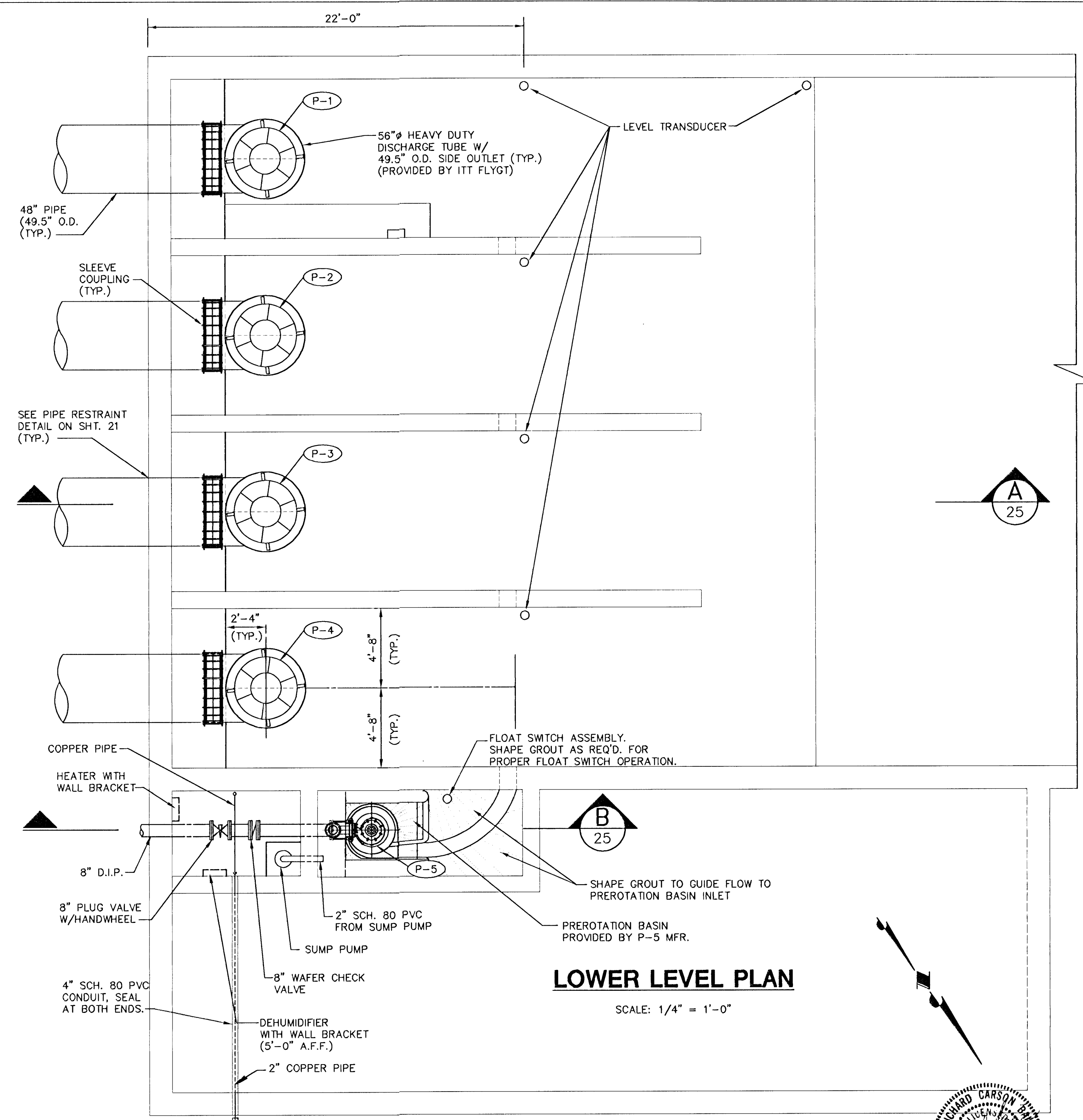
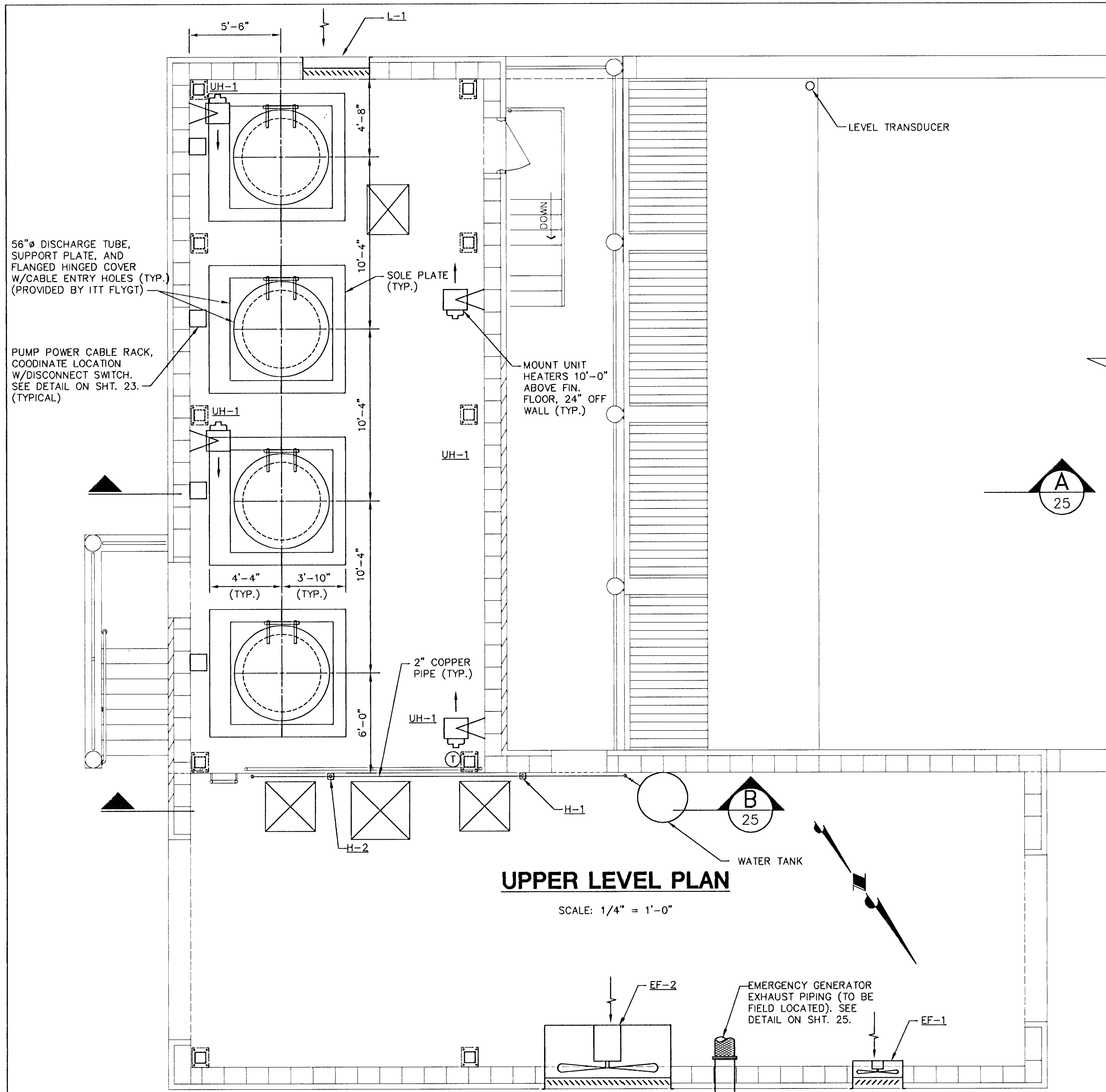


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RECORD DRAWING 6-12-98

SOUTH SENECA DRAINAGE IMPROVEMENTS DRAINAGE OUTFALL PUMP STATION
 PROJECT NAME
STRUCTURAL MISCELLANEOUS DETAILS
 SHEET TITLE

DAC/JAH DESIGN BY:	RRT DRAWN BY:	RCB/KJS CHECKED BY:
MARCH, 1998 DATE	93035 JOB NO.	23 / 30 SHEET / OF



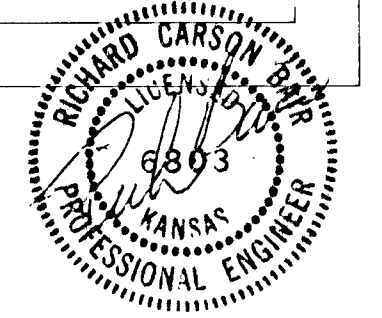
MECHANICAL LIST

- L-1 LOUVERS AND DAMPERS MODEL IL-6-304, EXTRUDED ALUMINUM, 48"x48" WITH MOTORIZED LOW-LEAKAGE CONTROL DAMPER. LOCATION AND FINISH AS PER ARCHITECTURAL SPECIFICATIONS.
- EF-1 ACME PROPELLER WALLFAN MODEL K-30G, 1/2 HP MOTOR, 7000 CFM @ 2" SP. W/MOTORIZED WEATHER PROOF SHUTTER & INTERIOR SCREENED SAFETY GUARD.
- EF-2 ACME PROPELLER WALLFAN MODEL K-72R, 10 HP MOTOR, 65,000 CFM @ 2" SP. W/MOTORIZED WEATHER PROOF SHUTTER & INTERIOR SCREENED SAFETY GUARD.
- UH-1 MODINE ELECTRIC UNIT HEATER MODEL HE 125, 12.5 KW, 480/60/3, MOTOR 1/15 HP, 208-230/60/1, 1050 RPM W/WALL MOUNTING BRACKET. MOUNT 10' A.F.F. PROVIDE THERMOSTAT W/0-3 HR. ADJUSTABLE TIMER SWITCH.
- SUMP PUMP - WELL 2" SERIES 2400 SUBMERSIBLE 30 GPM @ 25 FT., 1/2 H.P., 120/60/1 MICRO PRESSURE SWITCH CONTROL.
- DEHUMIDIFIER - WHITE WESTINGHOUSE ED358D DEHUMIDIFIER 35 PINTS PER DAY CAPACITY - 260 CFM - 7.5 AMPS 120/60/1 PROVIDE 3/4" HOSE TO DRAIN TO SUMP PUMP
- HEATER - TITAN PORTABLE HEATER #T760 BI WITH THERMOSTAT, 110 VOLT, WITH TIP OVER SWITCH.
- WATER TANK - TEEL VERTICAL PRECHARGED WATER TANK (GRANGER STOCK #4PB86), 370 GALLON CAPACITY, 28 PSI PRECHARGE PRESSURE.
- WELL PUMP - (NOT SHOWN ON THIS SHEET) - TEEL SUBMERSIBLE PUMP (GRANGER STOCK #2PC09), 2" DISCHARGE, 35 GPM, FRANKLIN 4" MODEL 23432594 SUBMERSIBLE MOTOR, 2HP, 3 WIRE, 460/60/3 WITH MAGNETIC CONTACTOR, OVERLOAD RELAY, AND MOTOR CONTROL BOX.
- H-1 - 1 1/2" HYDRANT, AKRON 2125 VALVE, 417 NOZZLE, NPSM CONNECTIONS. FURNISHED WITH 150' OF 1 1/2" PVC WATER DISCHARGE HOSE. PROVIDE FLOOR DRAIN BELOW PER DETAIL ON SHT. 25.
- H-2 - 3/4" HYDRANT, AKRON 2125 VALVE, 417 NOZZLE, NPT CONNECTIONS. FURNISHED W/ 50' OF 3/4" HOSE. PROVIDE FLOOR DRAIN BELOW PER DETAIL ON SHT. 25.
- AIR RELEASE VALVE - 1/2" INLET, APCO NO. 50. SUPPORT AS REQUIRED.

PUMP SCHEDULE

MARK	NAME	TYPE	MINIMUM CAPACITY		MIN. CONN. SIZES		MOTOR				STARTER (SIZE/POLE)	ELECTRICAL REFERENCE
			GPM	TDH (FT)	SUCTION	DISCHARGE	HP	RPM	SPEED	ELECT.		
*P-1	PUMP #1	SUBMERSIBLE PROPELLER	45000	22.8	56"	48"	385	510	1	3/60/460	6/3	MCCA-1
*P-2	PUMP #2	SUBMERSIBLE PROPELLER	45000	22.8	56"	48"	385	510	1	3/60/460	6/3	MCCA-2
*P-3	PUMP #3	SUBMERSIBLE PROPELLER	45000	22.8	56"	48"	385	510	1	3/60/460	6/3	MCCB-1
*P-4	PUMP #4	SUBMERSIBLE PROPELLER	45000	22.8	56"	48"	385	510	1	3/60/460	6/3	MCCB-2
P-5	DEWATERING PUMP	SCREW CENTRIFUGAL	1000	29	8"	6"	10	1160	1	3/60/460	1/3	MCCA-3

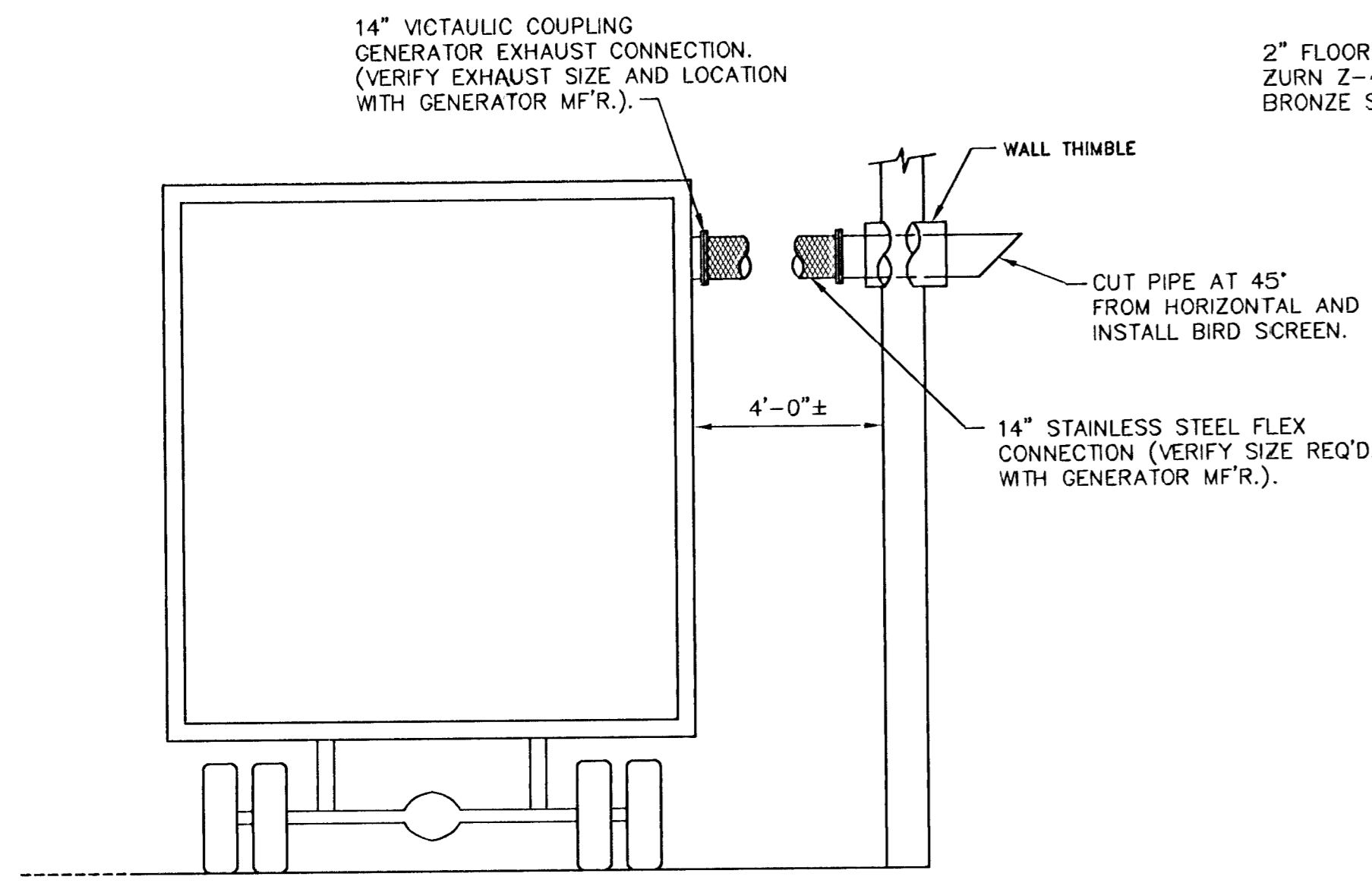
* NOTE: PUMPS P-1, P-2, P-3, & P-4 PROVIDED BY ITT FLYGT.



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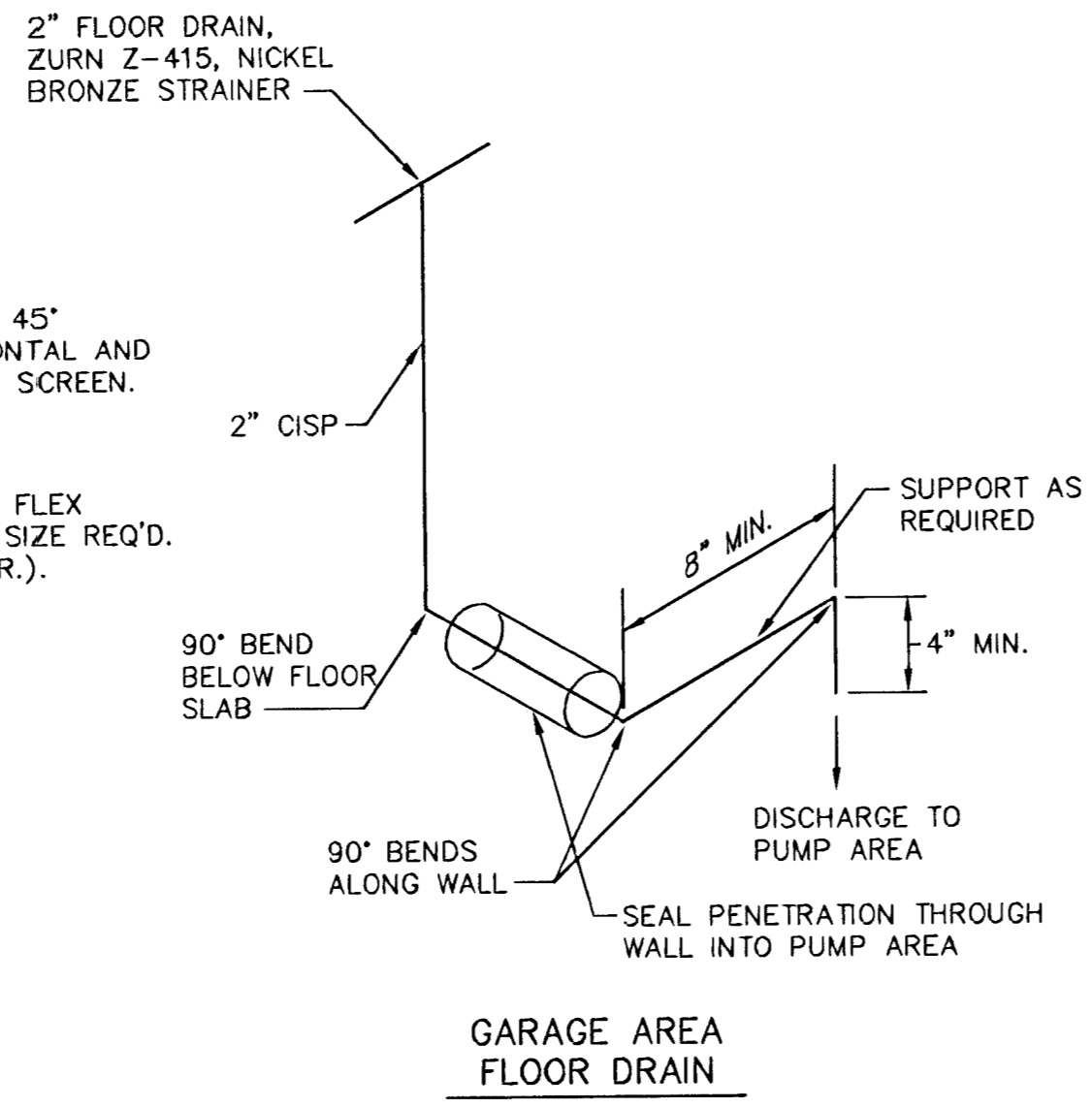
SOUTH SENECA DRAINAGE IMPROVEMENTS DRAINAGE OUTFALL PUMP STATION
PROJECT NAME
PIPING & MECHANICAL LOWER & UPPER LEVEL PLANS
SHEET TITLE

DAC DESIGN BY. RRT DRAWN BY. RCB CHECKED BY.
MARCH, 1996 DATE. 93035 JOB NO. 24 / 30 SHEET OF



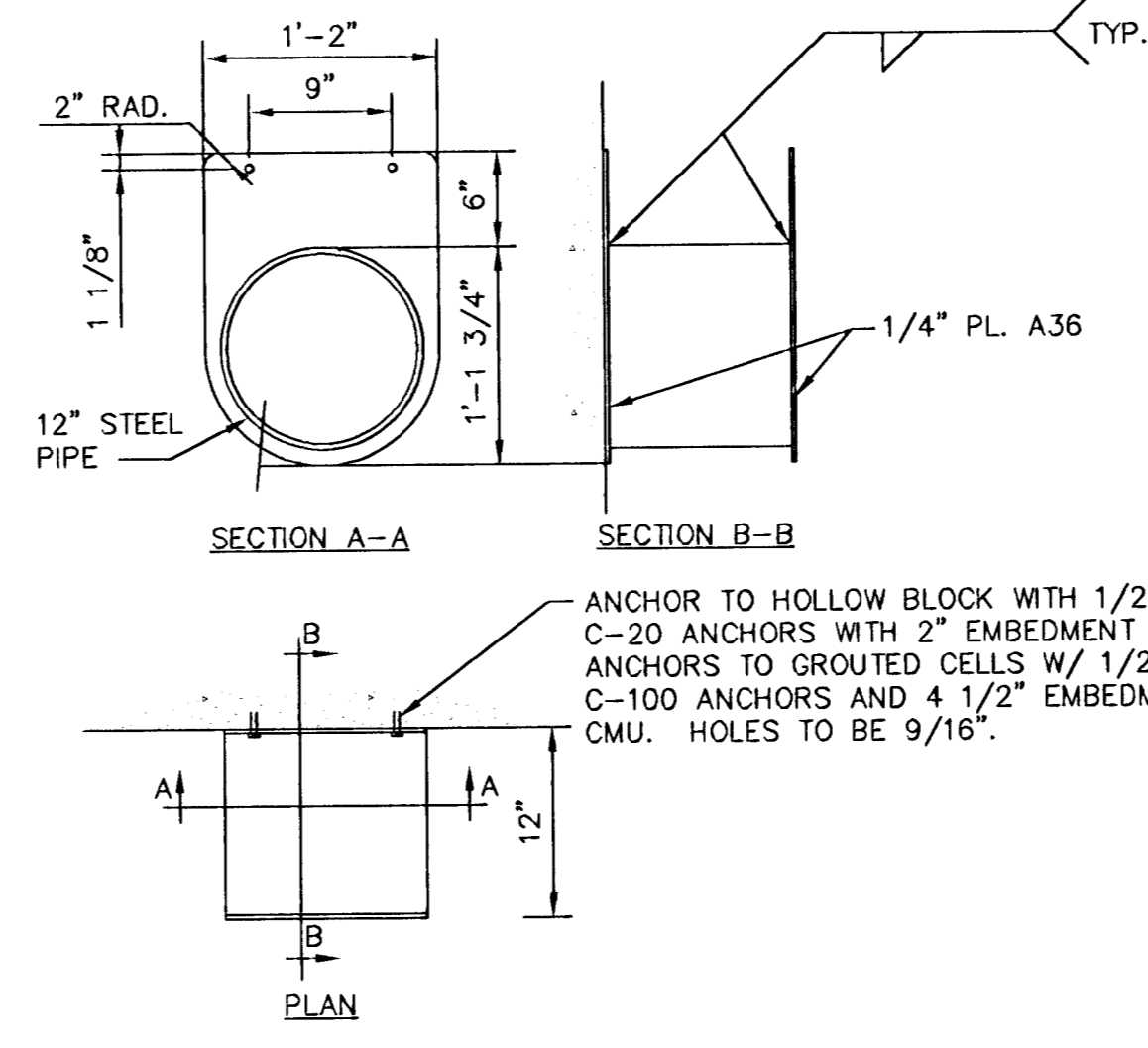
EMERGENCY GENERATOR EXHAUST PIPING

NO SCALE



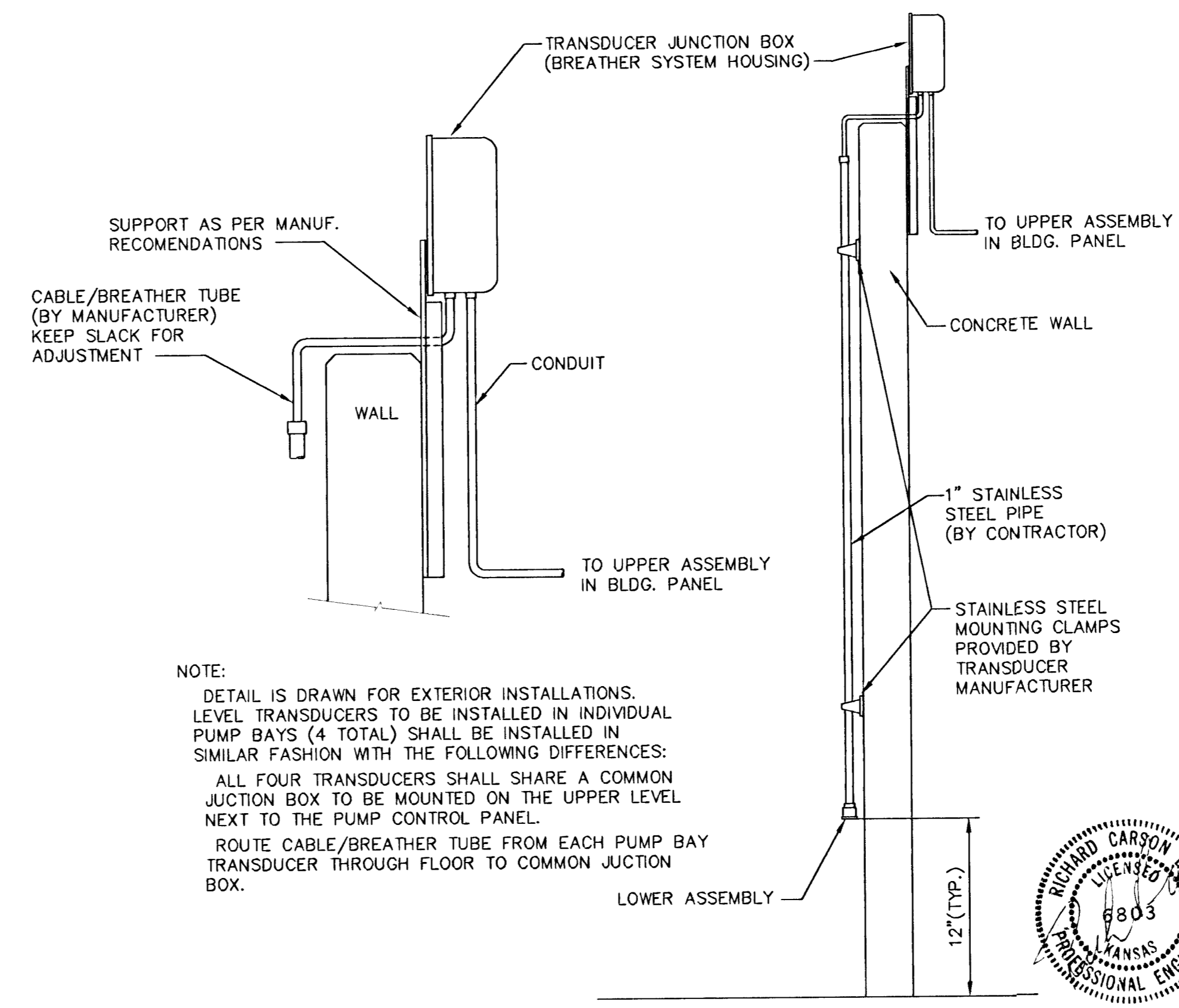
FLOOR DRAIN DETAIL

NO SCALE



PUMP POWER CABLE RACK / HOSE RACK

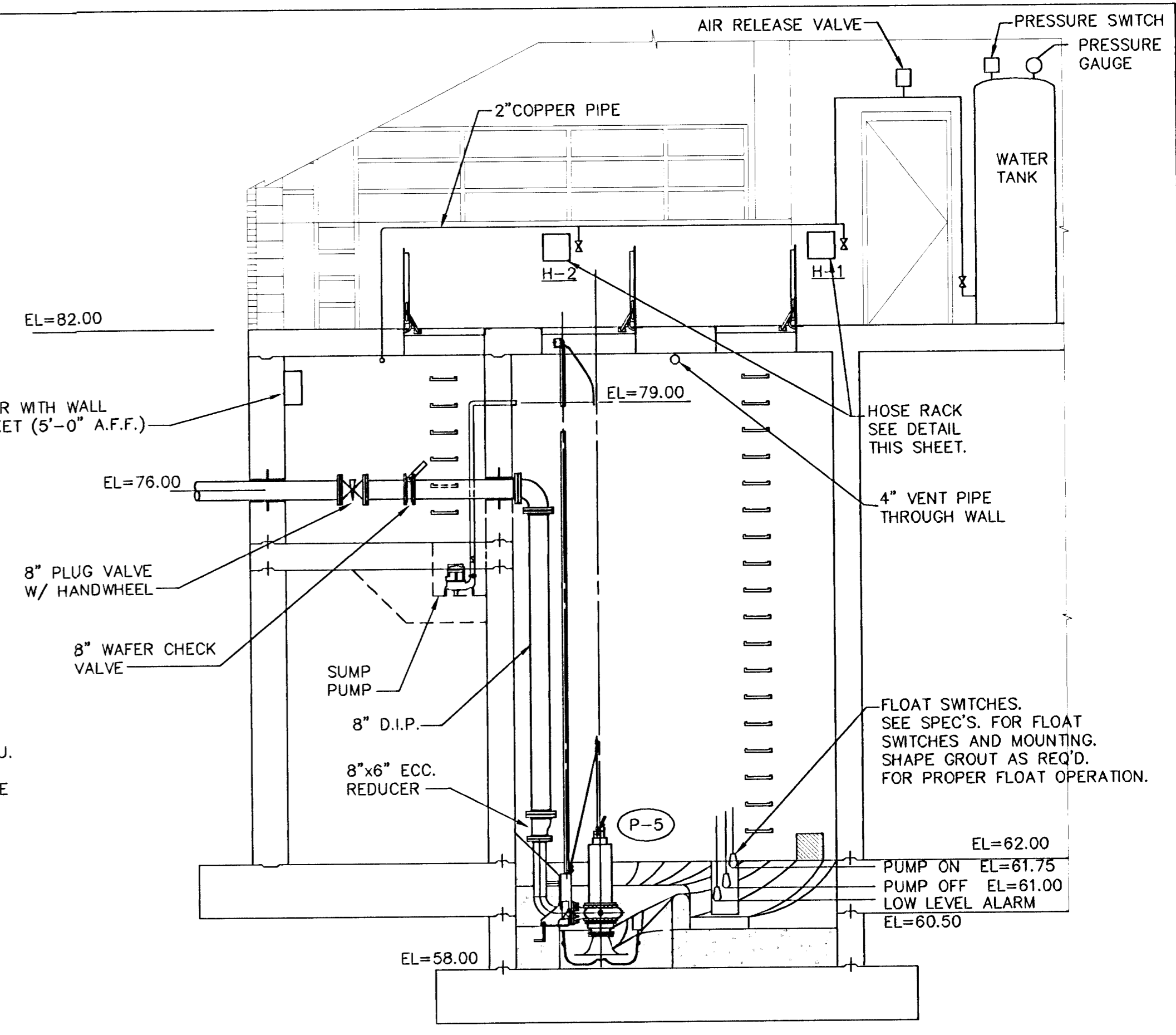
SCALE: 1" = 1'-0"



NOTE:
 DETAIL IS DRAWN FOR EXTERIOR INSTALLATIONS.
 LEVEL TRANSDUCERS TO BE INSTALLED IN INDIVIDUAL PUMP BAYS (4 TOTAL) SHALL BE INSTALLED IN SIMILAR FASHION WITH THE FOLLOWING DIFFERENCES:
 ALL FOUR TRANSDUCERS SHALL SHARE A COMMON JUNCTION BOX TO BE MOUNTED ON THE UPPER LEVEL NEXT TO THE PUMP CONTROL PANEL.
 ROUTE CABLE/BREATHER TUBE FROM EACH PUMP BAY TRANSDUCER THROUGH FLOOR TO COMMON JUNCTION BOX.

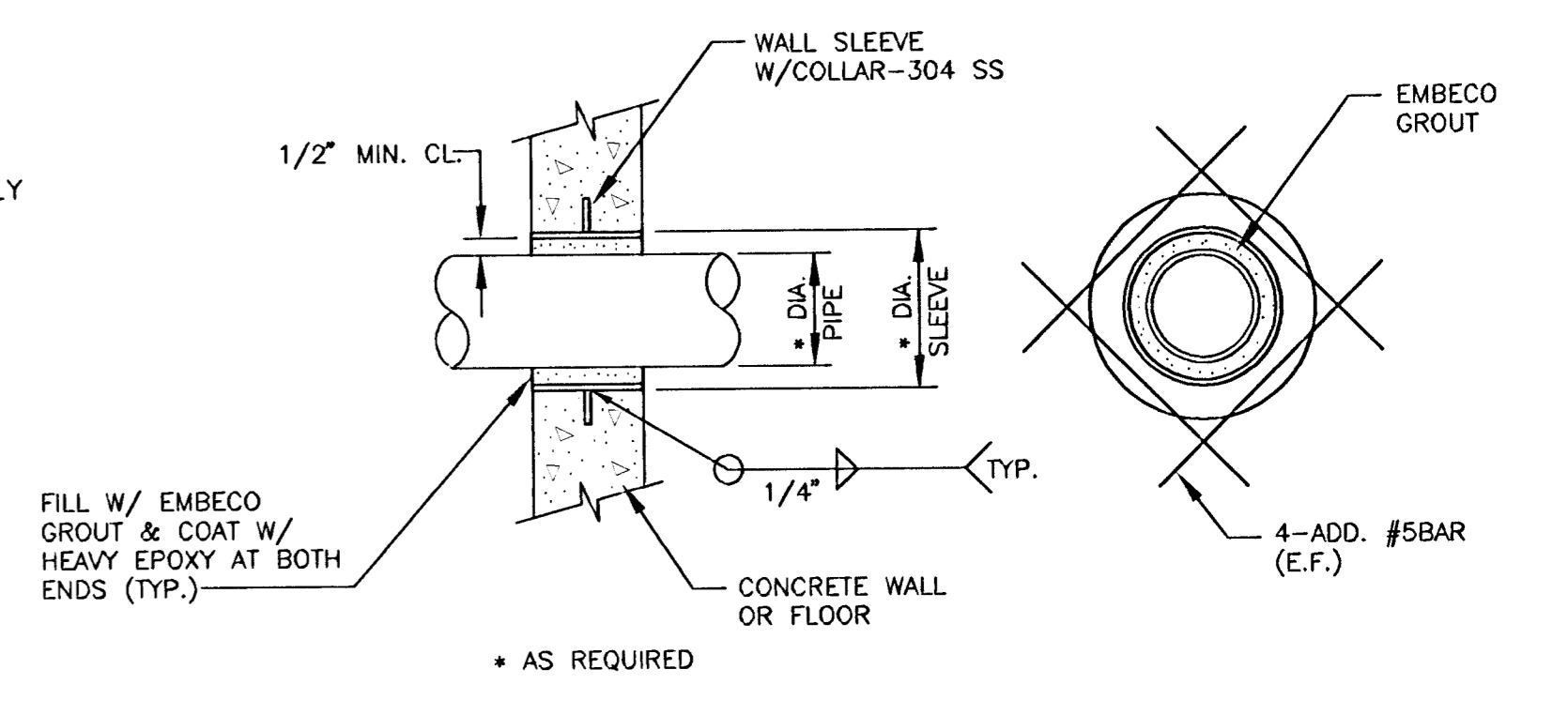
TYPICAL LEVEL TRANSDUCER MOUNTING DETAIL

NO SCALE



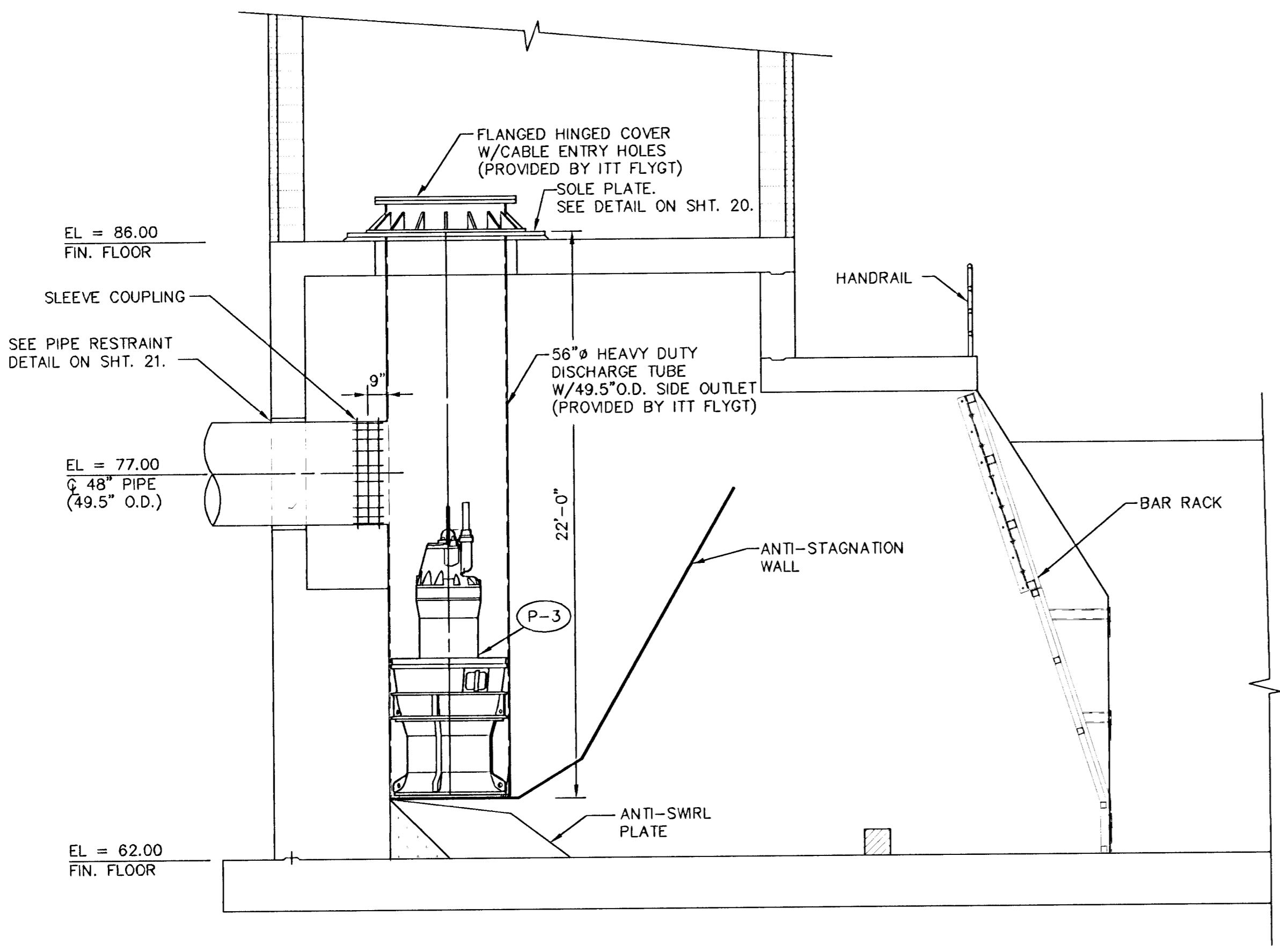
SECTION B

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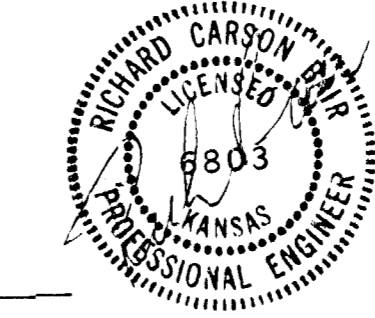
TYPICAL WALL/FLOOR SLEEVE DETAIL

NO SCALE



SECTION A

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



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SOUTH SENECA DRAINAGE IMPROVEMENTS DRAINAGE OUTFALL PUMP STATION

PROJECT NAME
PIPING & MECHANICAL SECTIONS & DETAILS
 SHEET TITLE

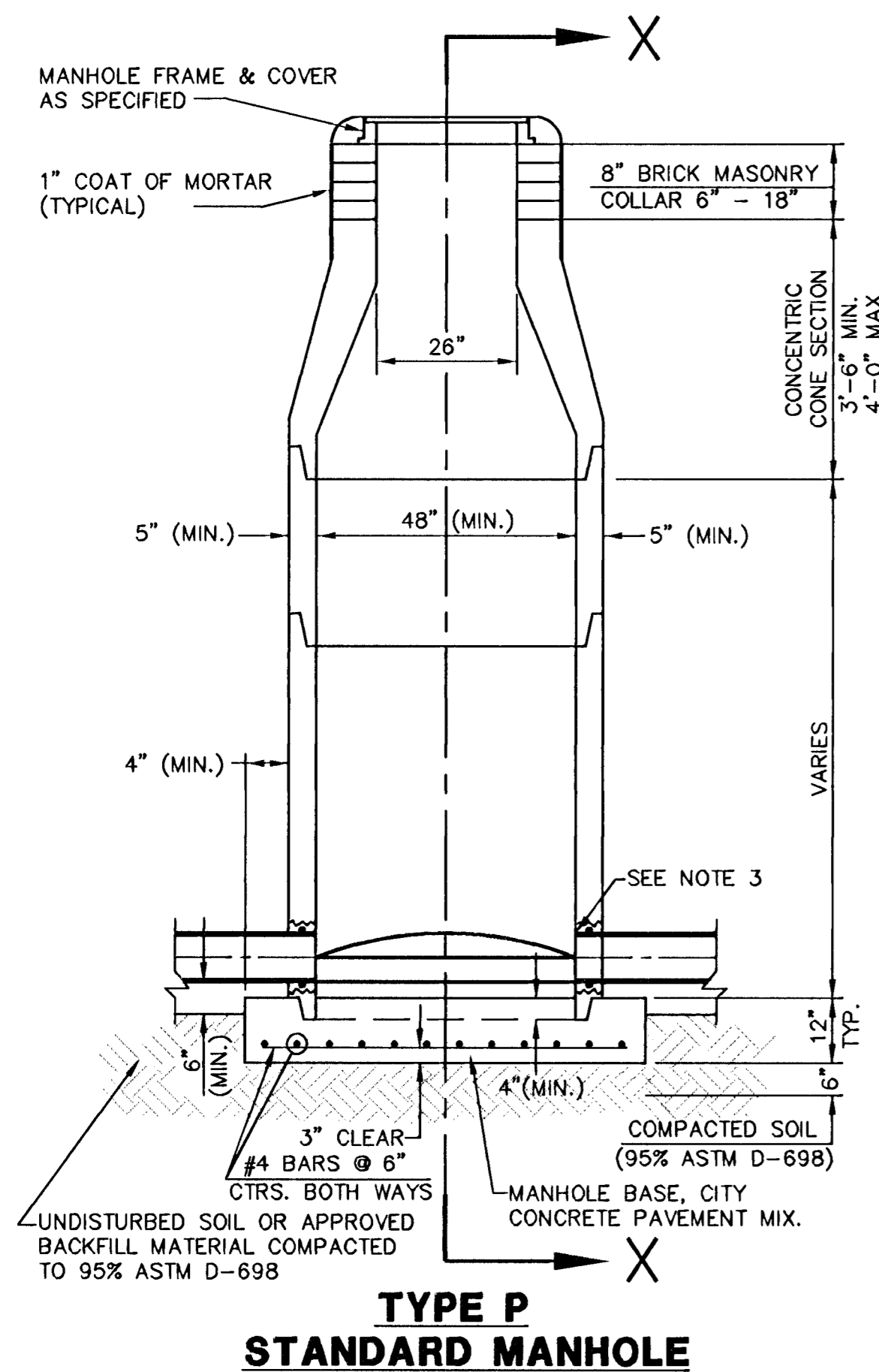
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MARCH, 1996 DATE	93035 JOB NO.	25 / 30 SHEET OF

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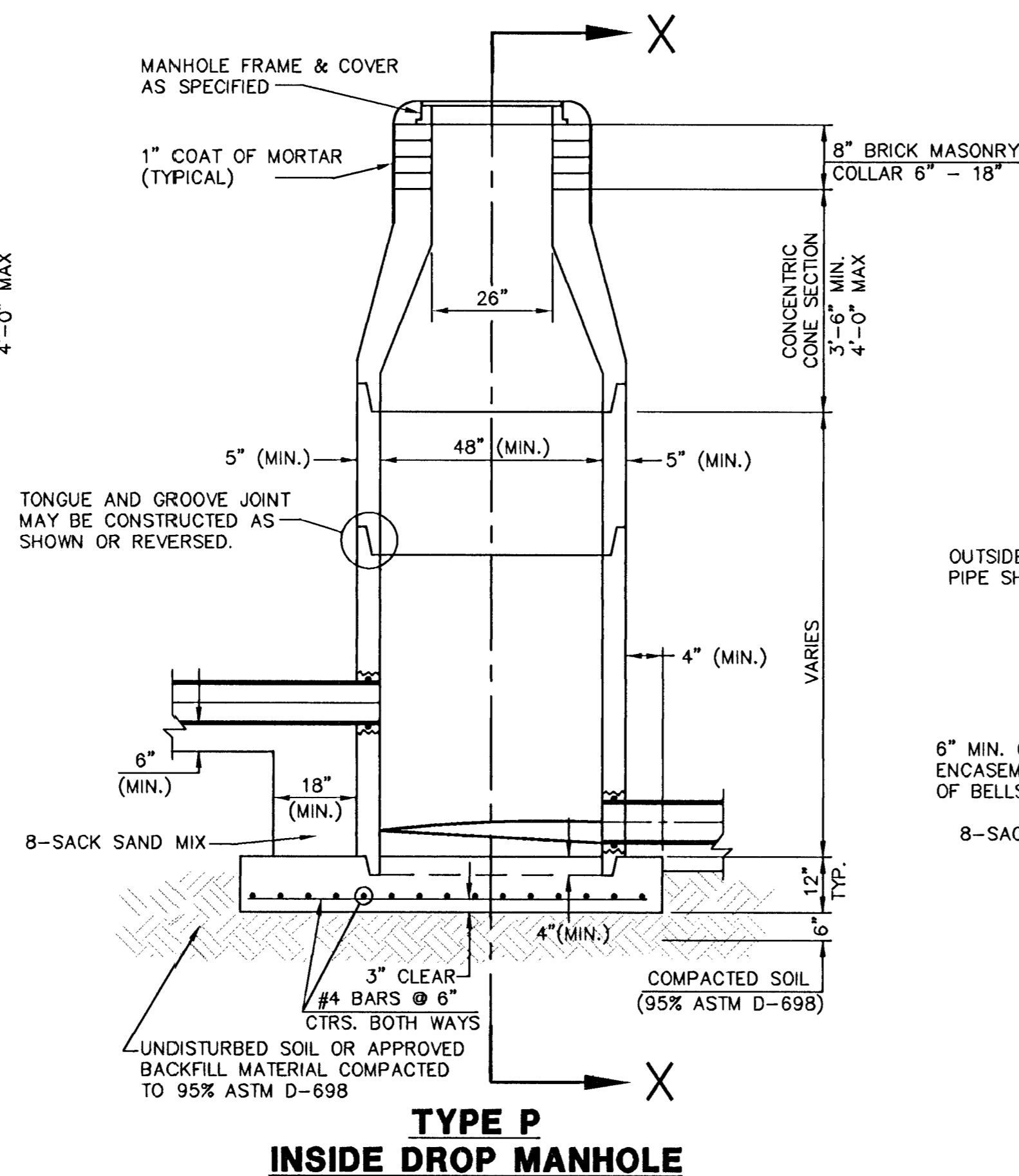
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SEWER APPURTENANCES DETAILS

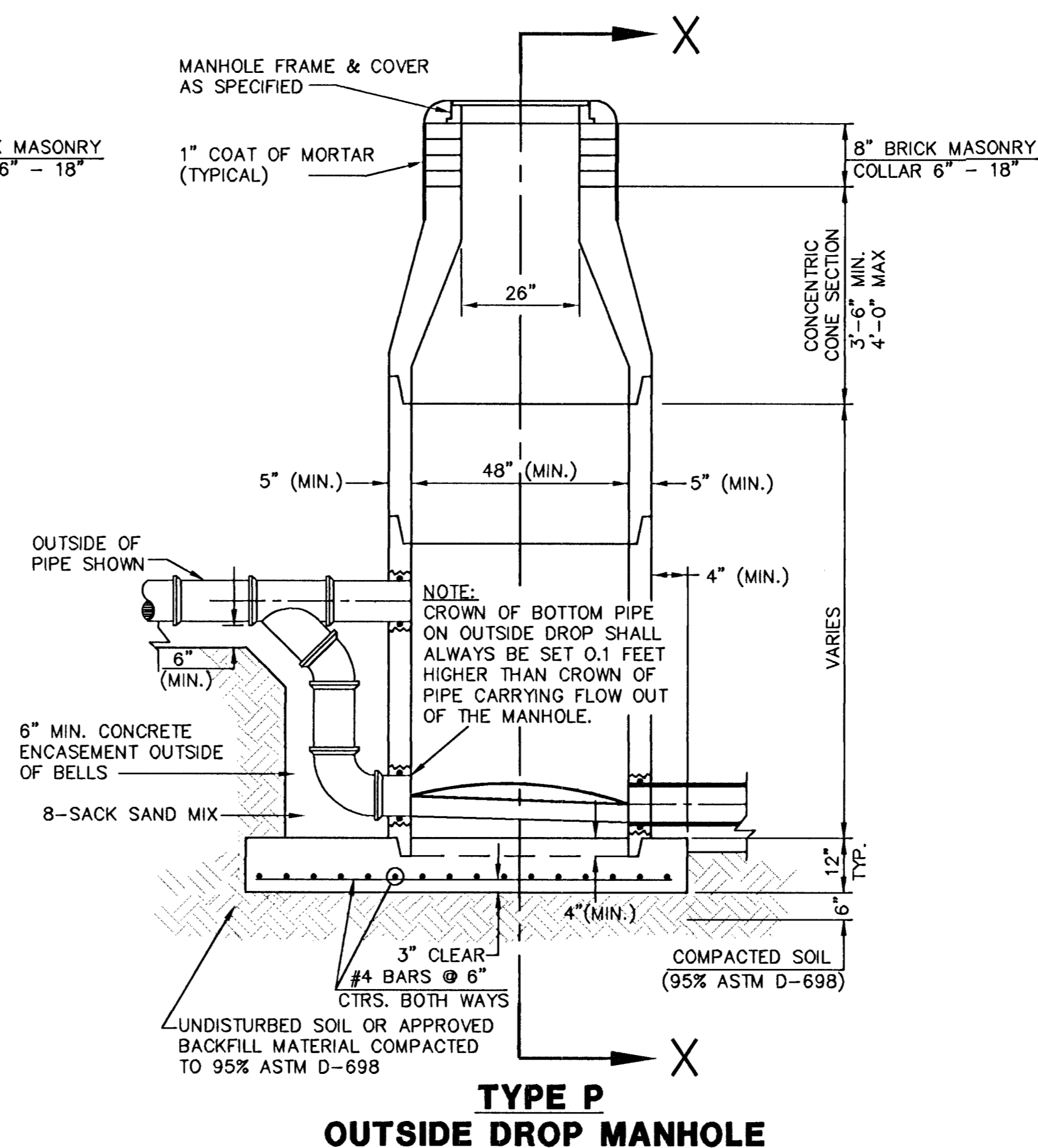
ADOPTED AS STANDARD DESIGN
BY
CITY OF WICHITA



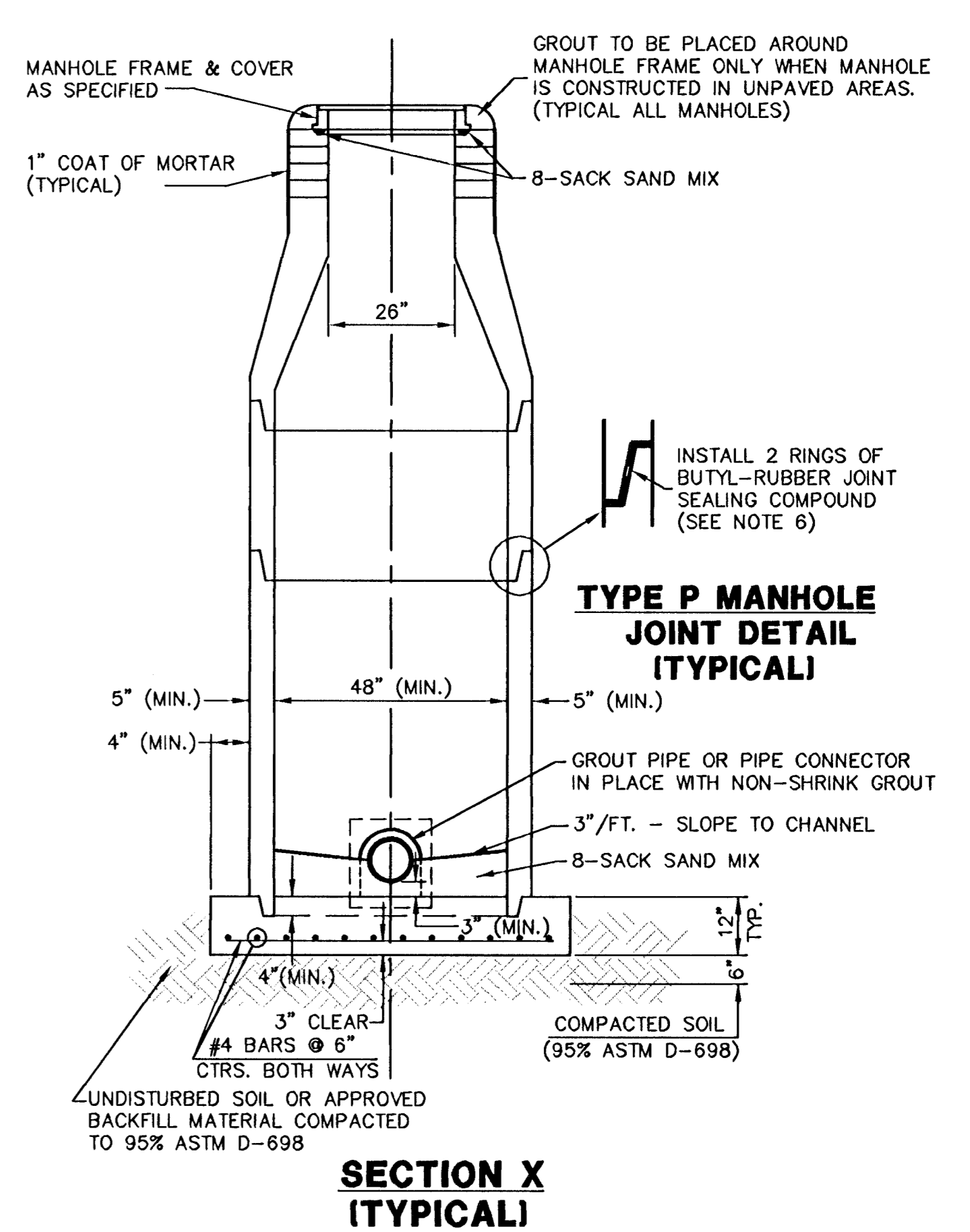
**TYPE P
STANDARD MANHOLE**



**TYPE P
INSIDE DROP MANHOLE**



**TYPE P
OUTSIDE DROP MANHOLE**

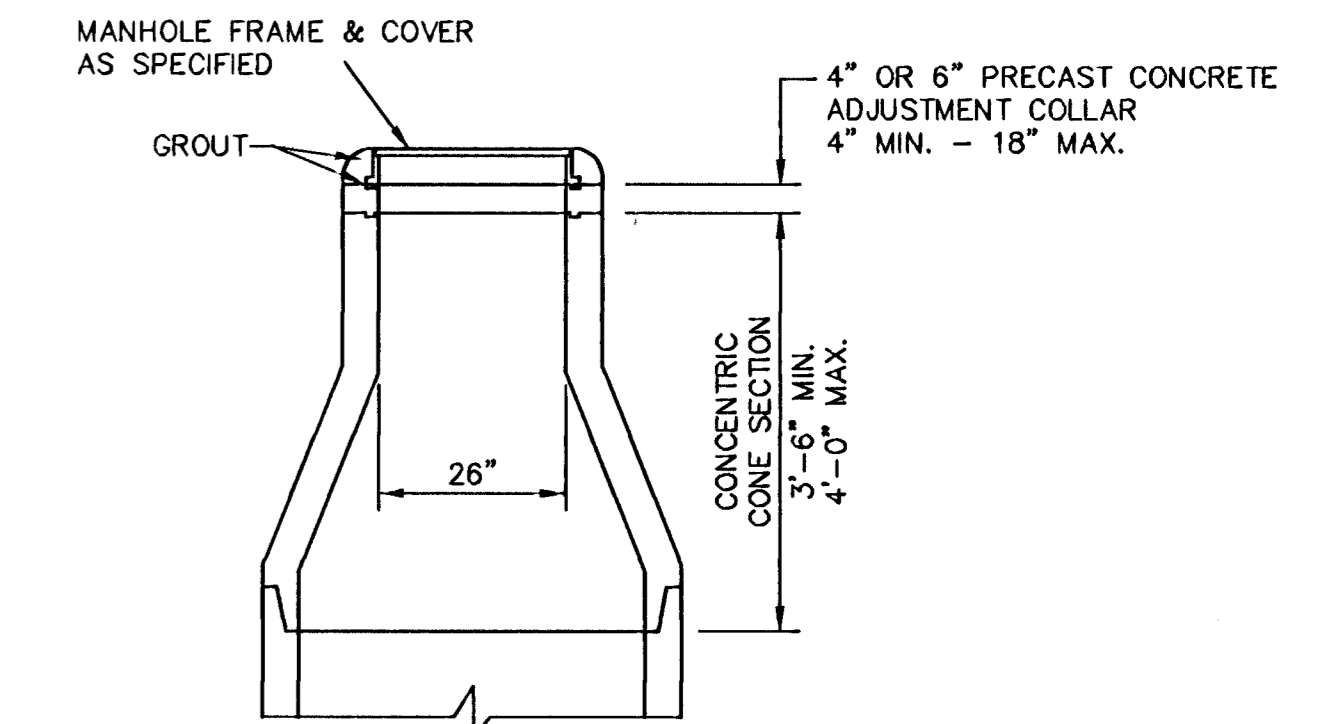


**SECTION X
(TYPICAL)**

**TYPE P MANHOLE
JOINT DETAIL
(TYPICAL)**

GENERAL NOTES - PRECAST MANHOLE NOTES

- ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
- NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
- APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A.B.S. COMPOSITE PIPE OR P.V.C. PIPE IS USED. FOR OTHER TYPES OF PIPE THE SEWER SHALL BE GROUTED IN PLACE WITH NON-SHRINK GROUT. THE SEWER PIPE SHALL BE SUPPORTED WITH CONCRETE ENCASEMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
- ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS TNEEC SERIES 66 HI-BUILD EPOXOLINE, DRY THICKNESS OF 8 MILS (MIN.)
- EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINUS COATING.
- JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
- PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
- TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
- LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
- MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24" SHALL HAVE AN INSIDE DIAMETER OF 4". MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE 24" OR LARGER SHALL HAVE AN INSIDE DIAMETER OF 5". COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
- REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
- OPENINGS SHALL BE CUT INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS CUT INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. AND A.B.S. COMPOSITE PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
- THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS EXCEPT FOR INSIDE DROP MANHOLES. FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE CONSTRUCTED AS INDICATED BY THE DRAWING. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
- PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. WHEN CLAY PIPE IS USED, THE CRADLE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE CRADLE SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. COST OF CRADLE WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
- MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
- THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 2' FOR INFLOWING PIPES. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
- STANDARD MANHOLES AND STANDARD INSIDE DROP MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
- A BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR.



**ALTERNATE CONSTRUCTION
IN UNPAVED AREAS**

REVISED: 6-12-88

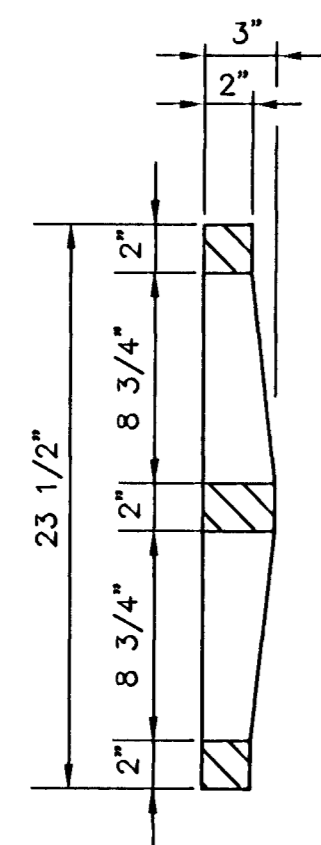
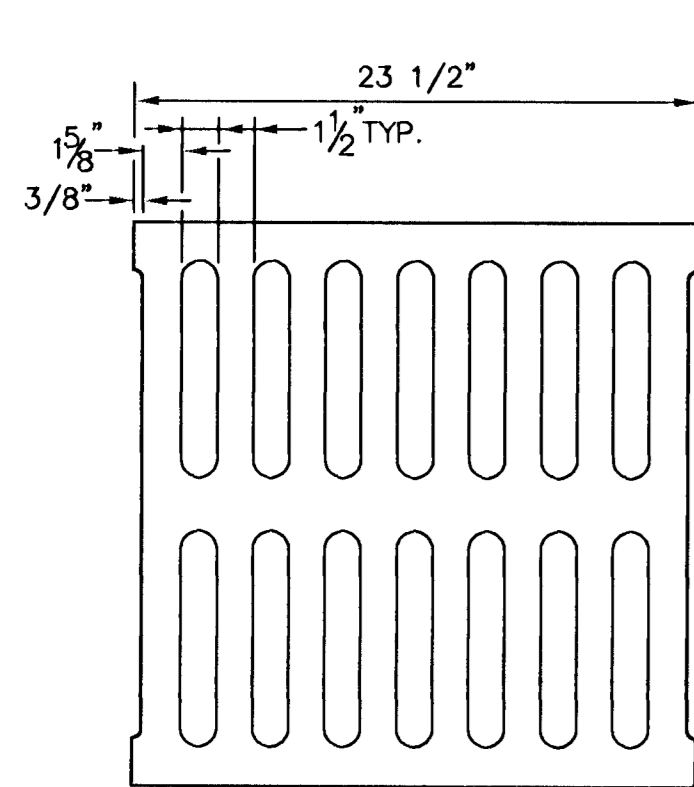
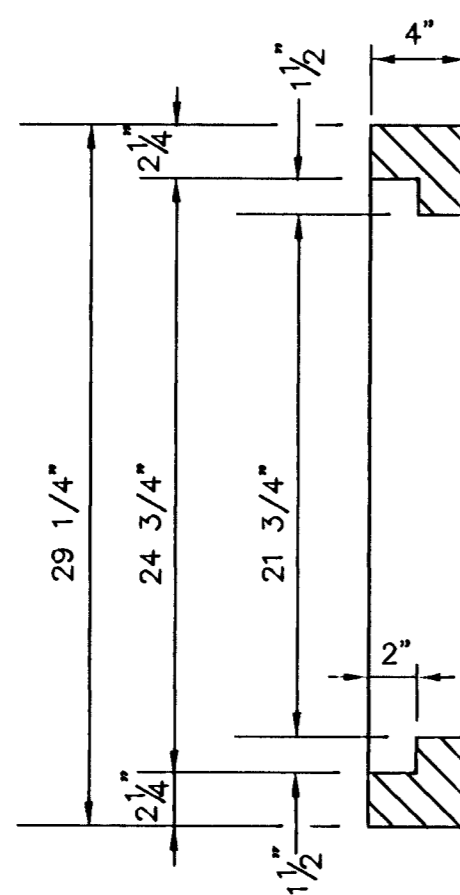
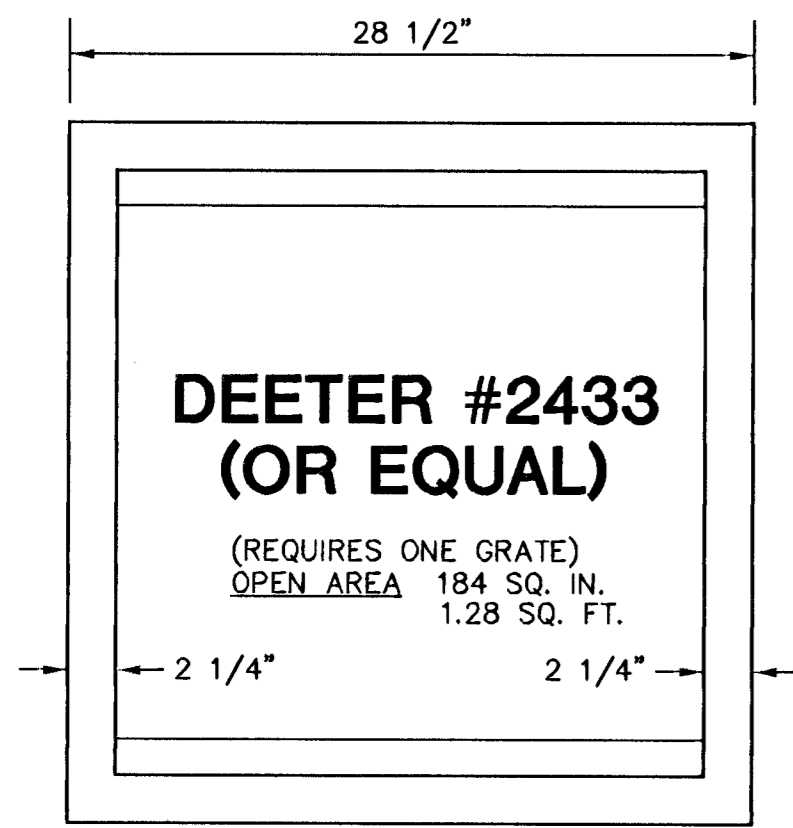
26 / 30
SHEET / OF

MANHOLE DETAILS

CITY OF WICHITA, KANSAS

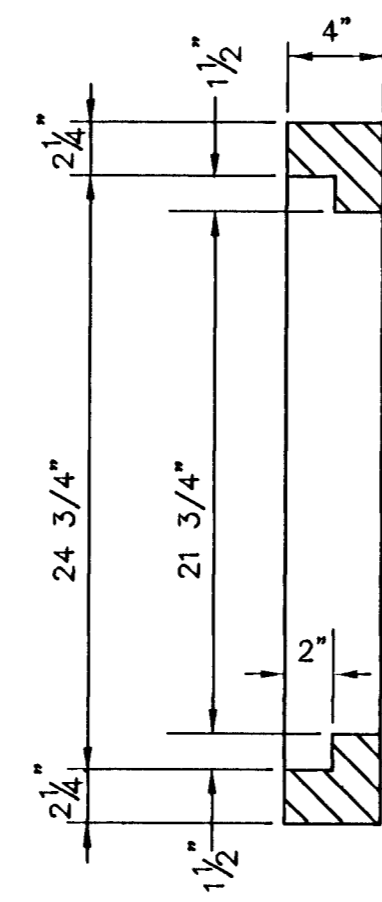
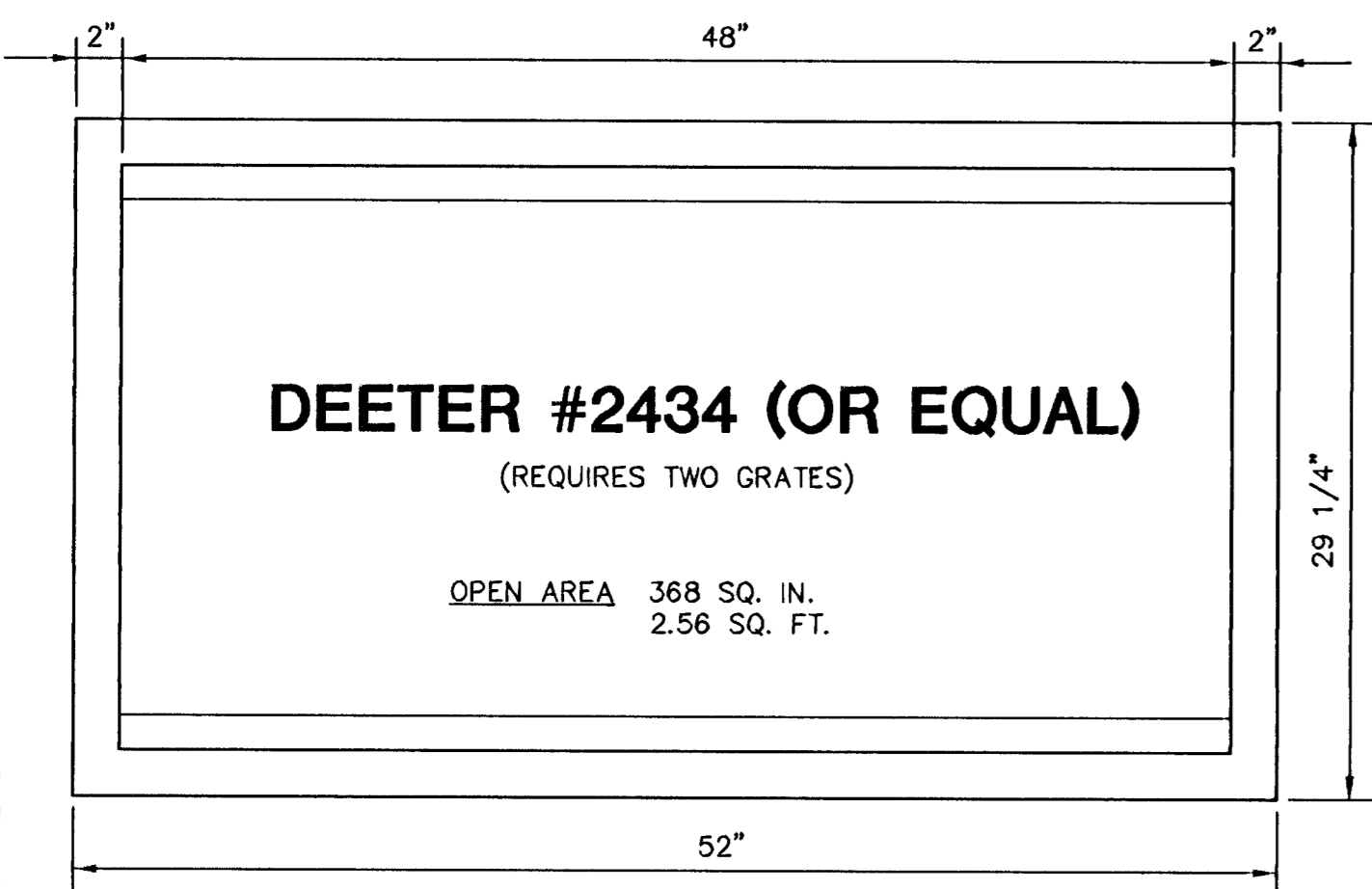
Design	C.O.W.	Checked by	Checked by	
Drawn by		Date	Date	Job No.

NOTE: GRATES SHALL BE IMPRINTED ON THE TOP SURFACE WITH "CITY OF WICHITA" USING LETTERS AT LEAST 1" IN HEIGHT. OTHER MARKING METHODS MAY BE USED ONLY IF APPROVED BY THE ENGINEER.

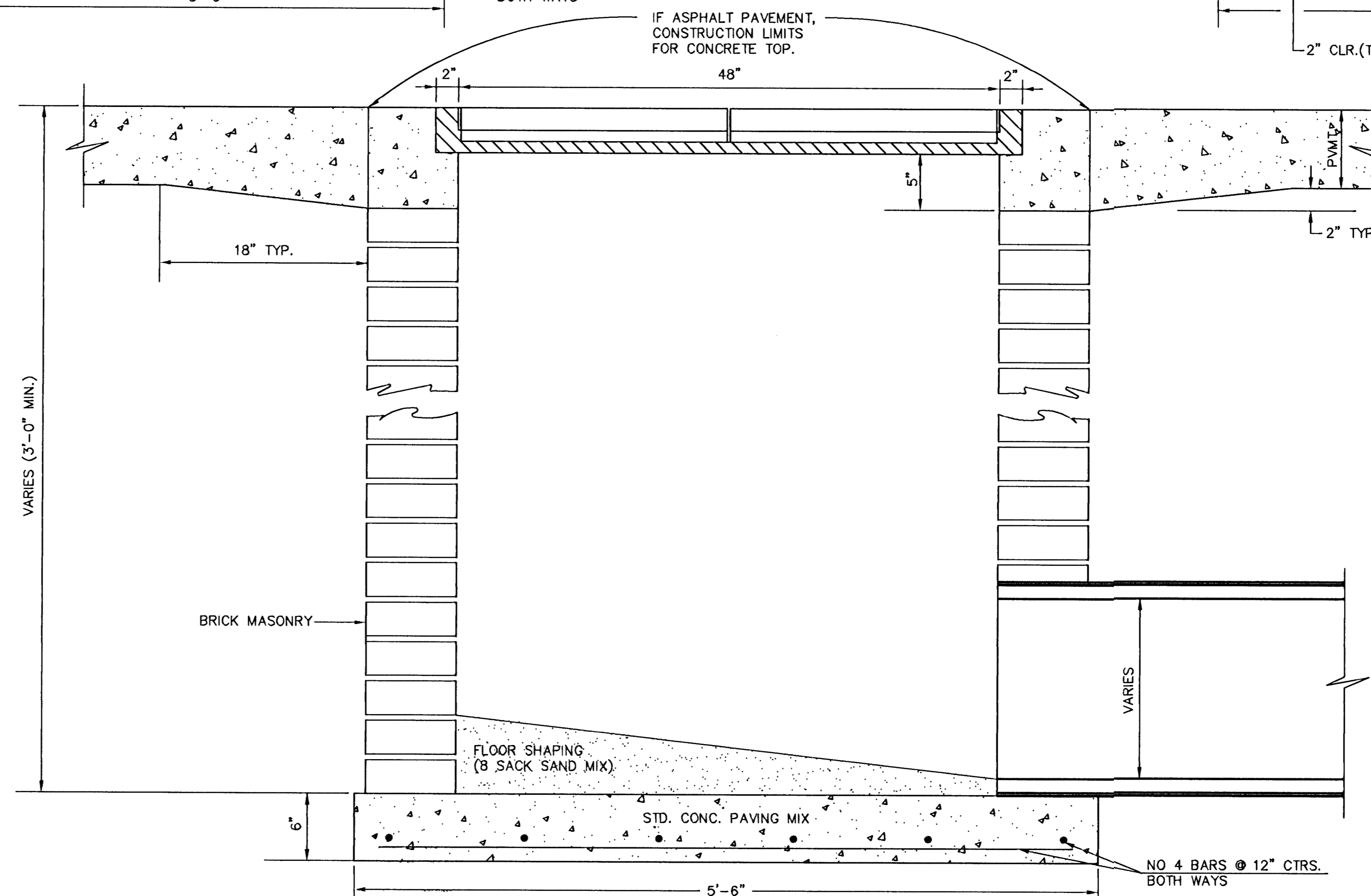
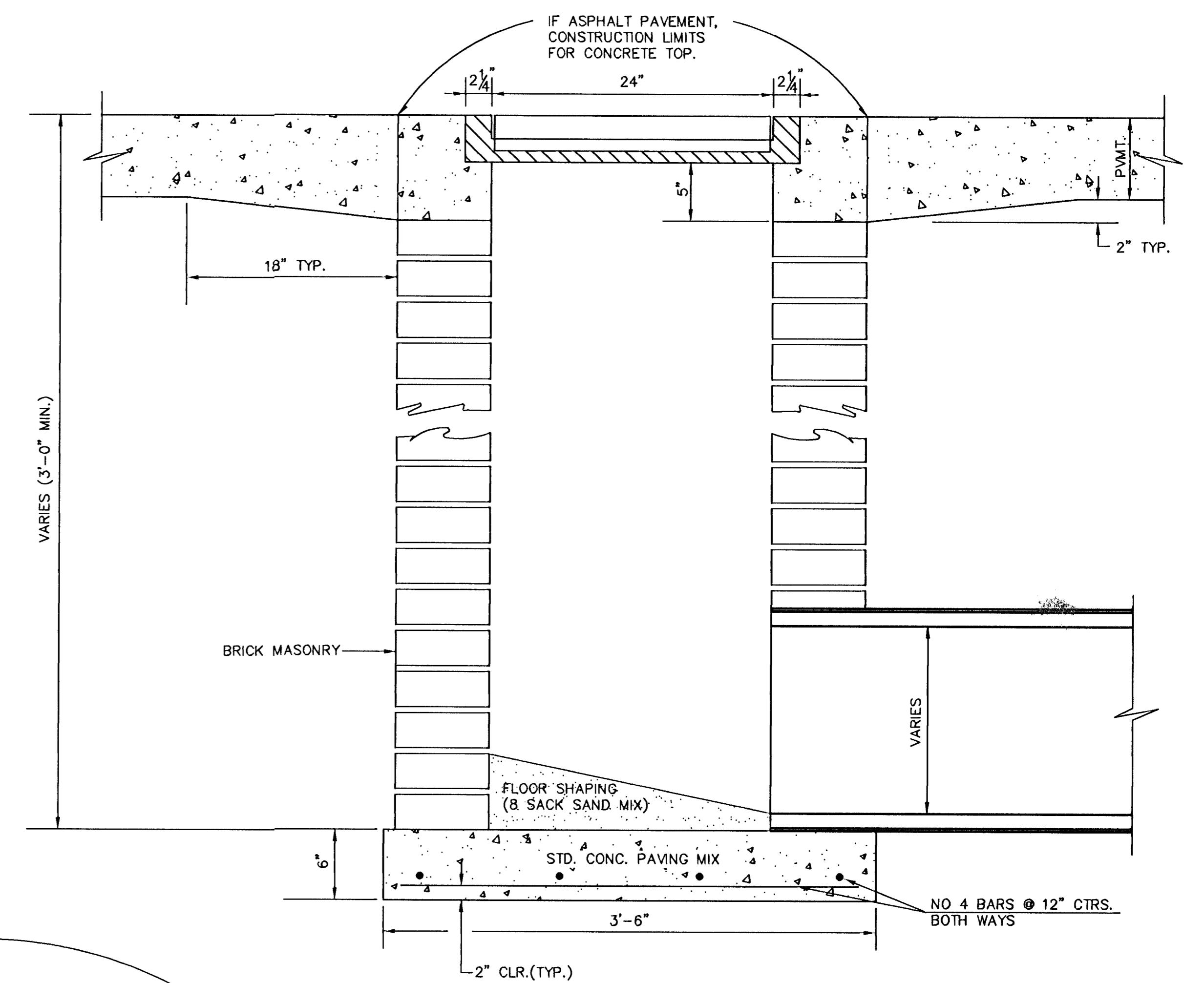
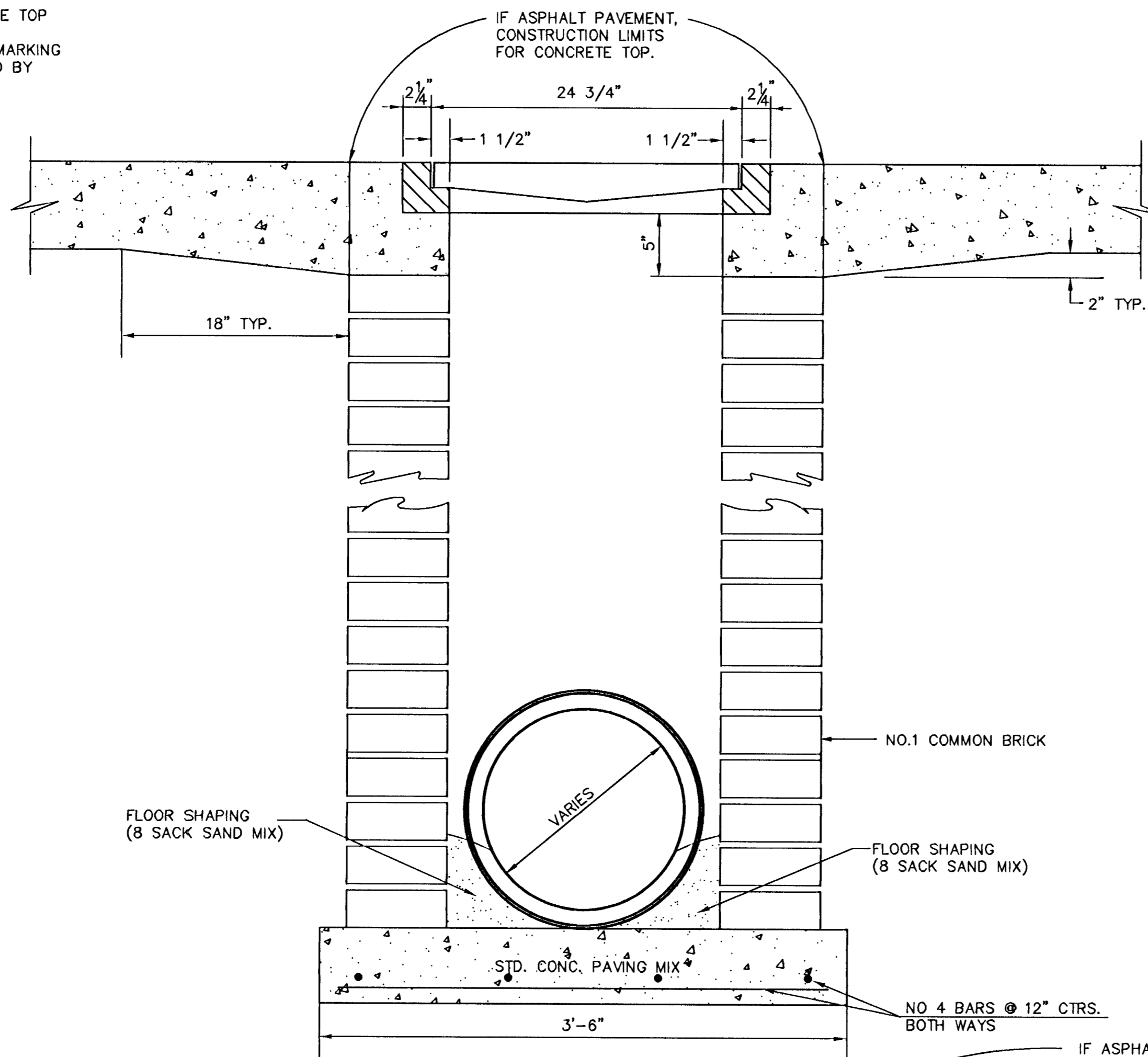


GRATE

24"x24" FRAME & GRATE DETAIL



DOUBLE 24"x24" FRAME DETAIL



ORIFICE EQUATION		
$Q=C \cdot A \cdot \sqrt{2gh}$ $C=0.60$		
h (DEPTH)	#2433 (SINGLE)	#2434 (DOUBLE)
0.1	1.95 cfs	3.89 cfs
0.2	2.75 cfs	5.50 cfs
0.3	3.37 cfs	6.74 cfs
0.4	3.89 cfs	7.78 cfs
0.5	4.35 cfs	8.70 cfs
0.6	4.77 cfs	9.53 cfs
0.7	5.15 cfs	10.30 cfs
0.8	5.50 cfs	11.01 cfs
0.9	5.84 cfs	11.67 cfs
1.0	6.15 cfs	12.30 cfs

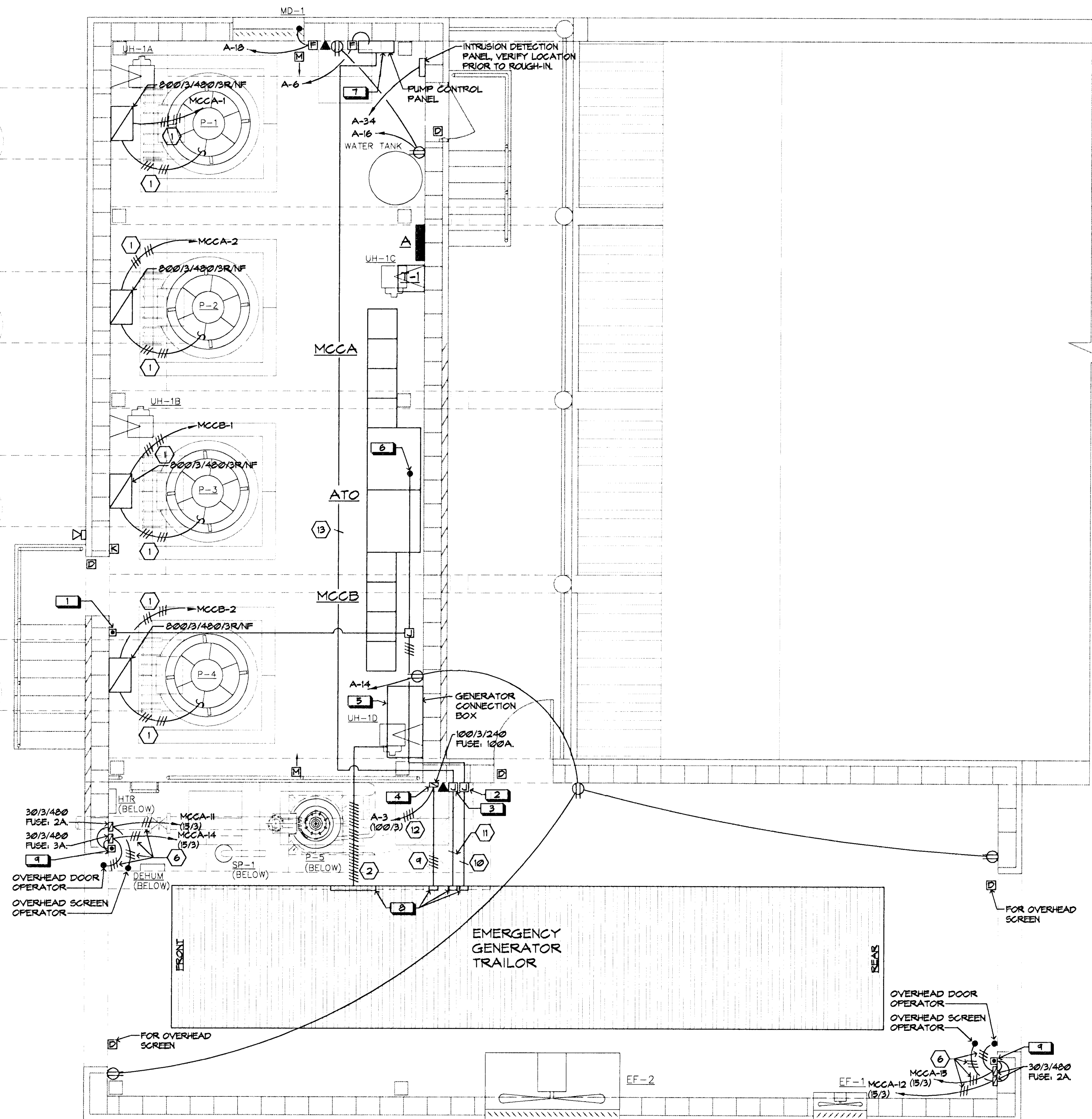
REVISED: 5-8-90 JNJ

DROP INLET DETAILS

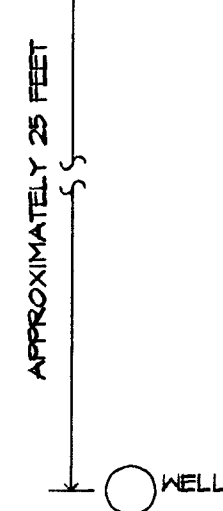
CITY OF WICHITA, KANSAS

Design	C.O.W.	Checked by	Checked by
Drawn by	Date	Date	Job No.

T: VENERY\33035\33035.DROP-IN DWG



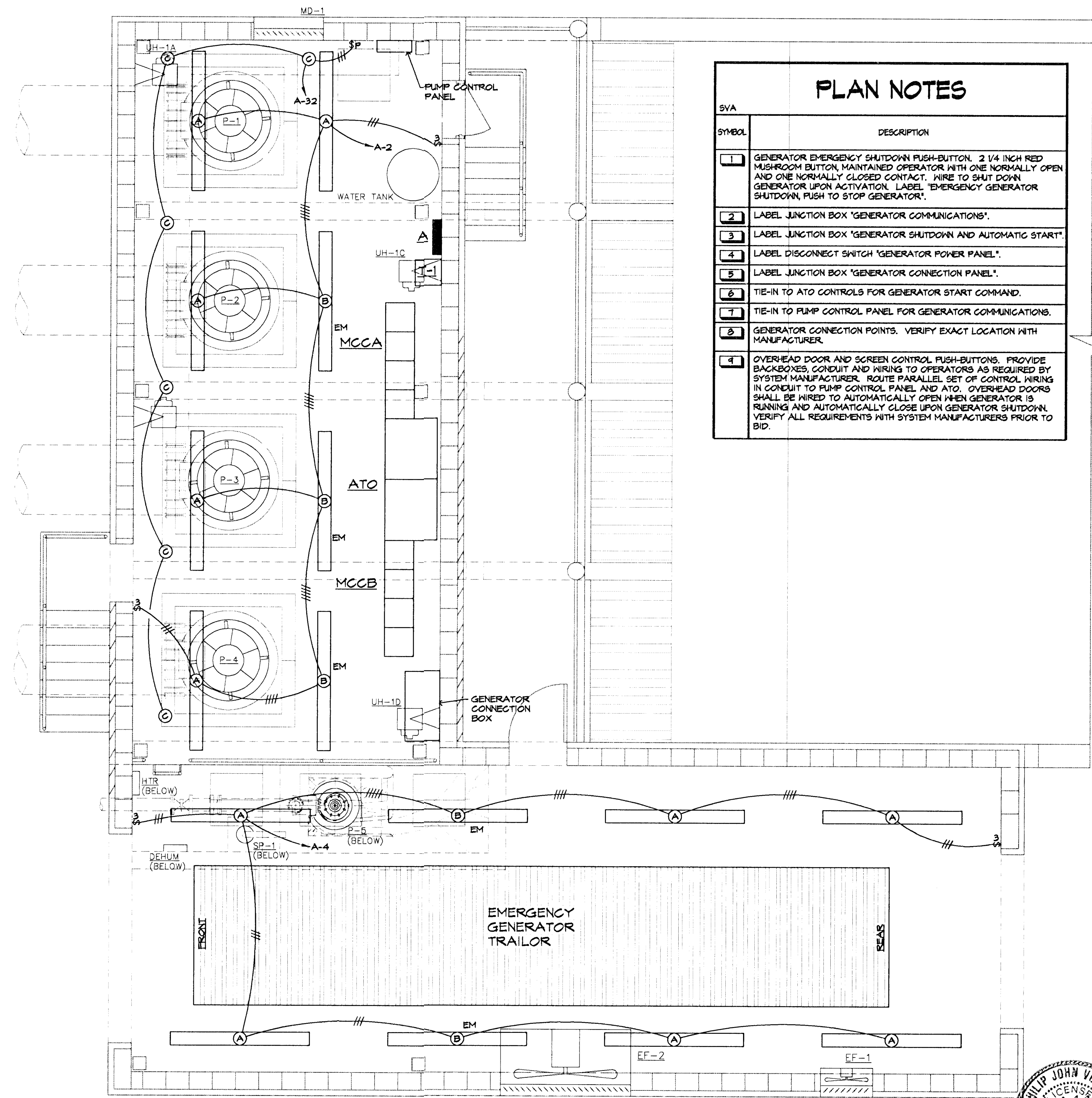
UPPER LEVEL POWER PLAN
SCALE: 1/4" = 1'-0"



INTRUSION DETECTION SYSTEM
PROVIDE AND INSTALL A COMPLETE MICROPROCESSOR CONTROLLED INTRUSION DETECTION SYSTEM. PROVIDE AND INSTALL ALL DEVICES AS SHOWN AND WIRE TO PROVIDE A COMPLETE AND FUNCTIONAL OFF-SITE REPORTING INTRUSION DETECTION SYSTEM BY SIMPLEX OR MULTI-MEDIA SECURITY SYSTEMS. OFF-SITE REPORTING SHALL BE VIA TELEPHONE LINES. PROVIDE SYSTEM WITH ONE YEAR MONITORING CONTRACT WITH OPTIONS FOR A MINIMUM OF 5 YEARS ADDITIONAL MONITORING AT OWNERS OPTION. ALL WIRING TO BE IN CONDUIT. VERIFY ALL REQUIREMENTS WITH SYSTEM MANUFACTURERS PRIOR TO BID.

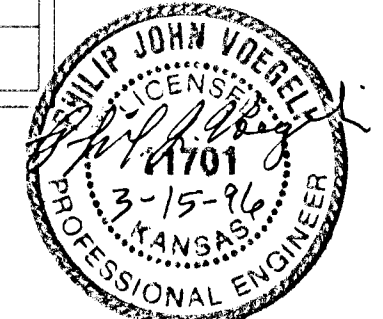
NOTES:
1. BRANCH CIRCUITS ARE INDICATED AS ONE CIRCUIT HOME RUNS FOR CLARITY ONLY. CONTRACTOR MAY GROUP SINGLE POLE BRANCH CIRCUITS IN MULTIPLE CIRCUIT HOME RUNS. (3 CIRCUIT MAXIMUM). A GROUND CONDUCTOR SIZED PER N.E.C. ARTICLE 250 IS REQUIRED IN ALL POWER, RECEPTACLE, AND LIGHTING CIRCUITS.
2. FOR ELECTRICAL CONNECTIONS TO ITEMS SUPPLIED BY OTHER CONTRACTORS, SEE EQUIPMENT CONNECTION SCHEDULE.

Stefan, Borgelli Associates Inc.
Electrical Engineering and Design
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UPPER LEVEL LIGHTING PLAN
SCALE: 1/4" = 1'-0"

PLAN NOTES	
SYMBOL	DESCRIPTION
1	GENERATOR EMERGENCY SHUTDOWN PUSH-BUTTON. 2 1/4 INCH RED MUSHROOM BUTTON, MAINTAINED OPERATOR WITH ONE NORMALLY OPEN AND ONE NORMALLY CLOSED CONTACT. WIRE TO SHUT DOWN GENERATOR UPON ACTIVATION. LABEL "EMERGENCY GENERATOR SHUTDOWN, PUSH TO STOP GENERATOR".
2	LABEL JUNCTION BOX "GENERATOR COMMUNICATIONS".
3	LABEL JUNCTION BOX "GENERATOR SHUTDOWN AND AUTOMATIC START".
4	LABEL DISCONNECT SWITCH "GENERATOR POWER PANEL".
5	LABEL JUNCTION BOX "GENERATOR CONNECTION PANEL".
6	TIE-IN TO ATO CONTROLS FOR GENERATOR START COMMAND.
7	TIE-IN TO PUMP CONTROL PANEL FOR GENERATOR COMMUNICATIONS.
8	GENERATOR CONNECTION POINTS. VERIFY EXACT LOCATION WITH MANUFACTURER.
9	OVERHEAD DOOR AND SCREEN CONTROL PUSH-BUTTONS. PROVIDE BACKBOXES, CONDUIT AND WIRING TO OPERATORS AS REQUIRED BY SYSTEM MANUFACTURER. ROUTE PARALLEL SET OF CONTROL WIRING IN CONDUIT TO PUMP CONTROL PANEL AND ATO. OVERHEAD DOORS SHALL BE WIRED TO AUTOMATICALLY OPEN WHEN GENERATOR IS RUNNING AND AUTOMATICALLY CLOSE UPON GENERATOR SHUTDOWN. VERIFY ALL REQUIREMENTS WITH SYSTEM MANUFACTURERS PRIOR TO BID.



SOUTH SENECA DRAINAGE IMPROVEMENTS DRAINAGE OUTFALL PUMP STATION
PROJECT NAME
ELECTRICAL UPPER LEVEL PLANS
SHEET TITLE

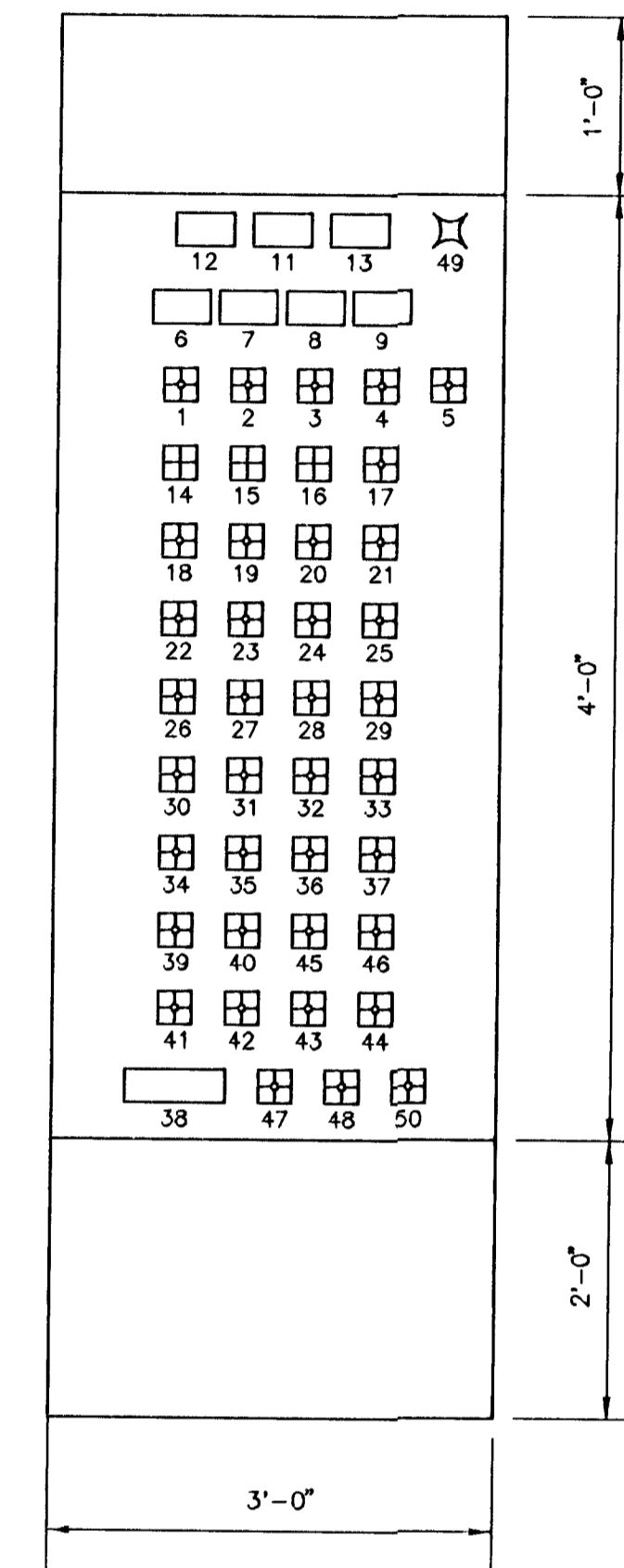
MID-KANSAS ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

SVA DESIGN BY:	SVA DRAWN BY:	SVA CHECKED BY:
MARCH, 1996 DATE	93035 JOB NO.	29 / 30 SHEET / OF

SOUTH SENECA PUMP STATION CONTROL PANEL

PUMP CONTROL PANEL			
PANEL DESIGNATION			
ITEM NO.	DESCRIPTION	SERVICE SWITCHES	INDICATING LAMPS
1	Pump #1 On-Off-Auto	Indication and Control	G-R-W
2	Pump #2 On-Off-Auto	Indication and Control	G-R-W
3	Pump #3 On-Off-Auto	Indication and Control	G-R-W
4	Pump #4 On-Off-Auto	Indication and Control	G-R-W
**5	Dewatering Pump On-Off-Auto-Alarm	Indication and Control	G-R-W-A
+6	Pump #1 Water Level	Indication and Control	N/A
+7	Pump #2 Water Level	Indication and Control	N/A
+8	Pump #3 Water Level	Indication and Control	N/A
+9	Pump #4 Water Level	Indication and Control	N/A
10	Number Not Used		
*11	Bar Rack Upstream Water Level	Indication and Control	N/A
*12	Upstream Channel Water Level - High Level Alarm	Indication and Control	N/A
*13	Floodway Water Level - High Level Alarm	Indication and Control	N/A
14	Pump #1 Low Level Alarm	Indication and Control	A
15	Pump #2 Low Level Alarm	Indication and Control	A
16	Pump #3 Low Level Alarm	Indication and Control	A
17	Pump #4 Low Level Alarm	Indication and Control	A
18	Pump #1 Bar Rack Plugged Alarm	Indication and Control	A
19	Pump #2 Bar Rack Plugged Alarm	Indication and Control	A
20	Pump #3 Bar Rack Plugged Alarm	Indication and Control	A
21	Pump #4 Bar Rack Plugged Alarm	Indication and Control	A
22	Pump #1 Junction Box Water Intrusion Alarm	Indication and Control	A
23	Pump #2 Junction Box Water Intrusion Alarm	Indication and Control	A
24	Pump #3 Junction Box Water Intrusion Alarm	Indication and Control	A
25	Pump #4 Junction Box Water Intrusion Alarm	Indication and Control	A
26	Pump #1 Stator Housing Water Intrusion Alarm	Indication and Control	A
27	Pump #2 Stator Housing Water Intrusion Alarm	Indication and Control	A
28	Pump #3 Stator Housing Water Intrusion Alarm	Indication and Control	A
29	Pump #4 Stator Housing Water Intrusion Alarm	Indication and Control	A
30	Pump #1 Stator Overtemperature Alarm	Indication and Control	A
31	Pump #2 Stator Overtemperature Alarm	Indication and Control	A
32	Pump #3 Stator Overtemperature Alarm	Indication and Control	A
33	Pump #4 Stator Overtemperature Alarm	Indication and Control	A
34	Pump #1 Lower Thrust Bearing Temperature Monitor/Alarm	Indication and Control	A
35	Pump #2 Lower Thrust Bearing Temperature Monitor/Alarm	Indication and Control	A
36	Pump #3 Lower Thrust Bearing Temperature Monitor/Alarm	Indication and Control	A
37	Pump #4 Lower Thrust Bearing Temperature Monitor/Alarm	Indication and Control	A
38	Microprocessor - based Controller/Transceiver (MCT)	Control	N/A
39	Generator Remote Local Switch On-Off	Indication and Control	G-R
40	Generator Alarm	Indication	A
41	Large Coiling Door Open-Closed	Indication and Control	G-R
42	Large Coiling Grille Open-Closed	Indication and Control	G-R
43	Small Coiling Door Open-Closed	Indication and Control	G-R
44	Small Coiling Grille Open-Closed	Indication and Control	G-R
45	Power Failure Alarm	Indication and Control	A
46	Well On-Off-Auto-Alarm	Indication and Control	G-R-W-A
47	Entry Alarm	Indication	A
48	Control Panel Low Battery Voltage Alarm	Indication	A
49	Horn	Audio	N/A
50	Silence Switch Alarm - Normal - Silence	Indication and Control	A-W

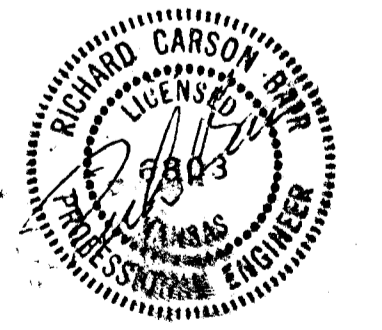
* Level Transducer
** Float Switches



- NOTES:
- CONTROL & STATUS UNITS PROVIDED BY IIT FLYGT TO BE INSTALLED IN CONTROL PANEL. THE PANEL CONTROLS AND INSTRUMENTS SUPPLIER WILL BE REQUIRED TO INCORPORATE THESE UNITS INTO THE CONTROLS.
 - SWITCH LOCATIONS AS SHOWN ARE APPROXIMATE ONLY. CONTROLS SUPPLIER MAY ARRANGE SWITCHES AS REQ'D. TO FIT HIS CONTROL AND INSTRUMENTATION LAYOUT.

PUMP CONTROL PANEL INSTRUMENTATION LAYOUT

NO SCALE



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**SOUTH SENECA DRAINAGE IMPROVEMENTS
DRAINAGE OUTFALL PUMP STATION**
PROJECT NAME
ELECTRICAL
PUMP CONTROL PANEL
SHEET TITLE

DAC DESIGN BY:	BDM DRAWN BY:	RCB CHECKED BY:
MARCH, 1996 DATE	93035 JOB NO.	30 / 30 SHEET OF