

- Notes
- 1) Pit Floor Slab Shall Be 14" Thick Reinforce As Shown
  - 2) 3" Topping Slab Shall Be Reinf w/ 6x6 x W14xW14 W/WF Placed In Upper 1/3 OF Slab
  - 3) From B Mech & Trs see Sheets for Pipe Sleeves & Block Outs



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

07087881.tif

"AS RECORDED"  
FROM INFORMATION  
PROVIDED BY THE  
CONTRACTOR  
DATE: 11/11/04

NO.	DATE	DESCRIPTION	BY	APPROV.
1	11/11/04	As Built	J.D.W.	J.M.H.

GRAND JUNCTION / MESA COUNTY,  
COLORADO  
**PERSIGO WASH  
WASTEWATER TREATMENT  
PLANT**

SECTION IV STRUCTURAL  
**ANAEROBIC DIGESTERS**  
PIT FRAMING PLAN

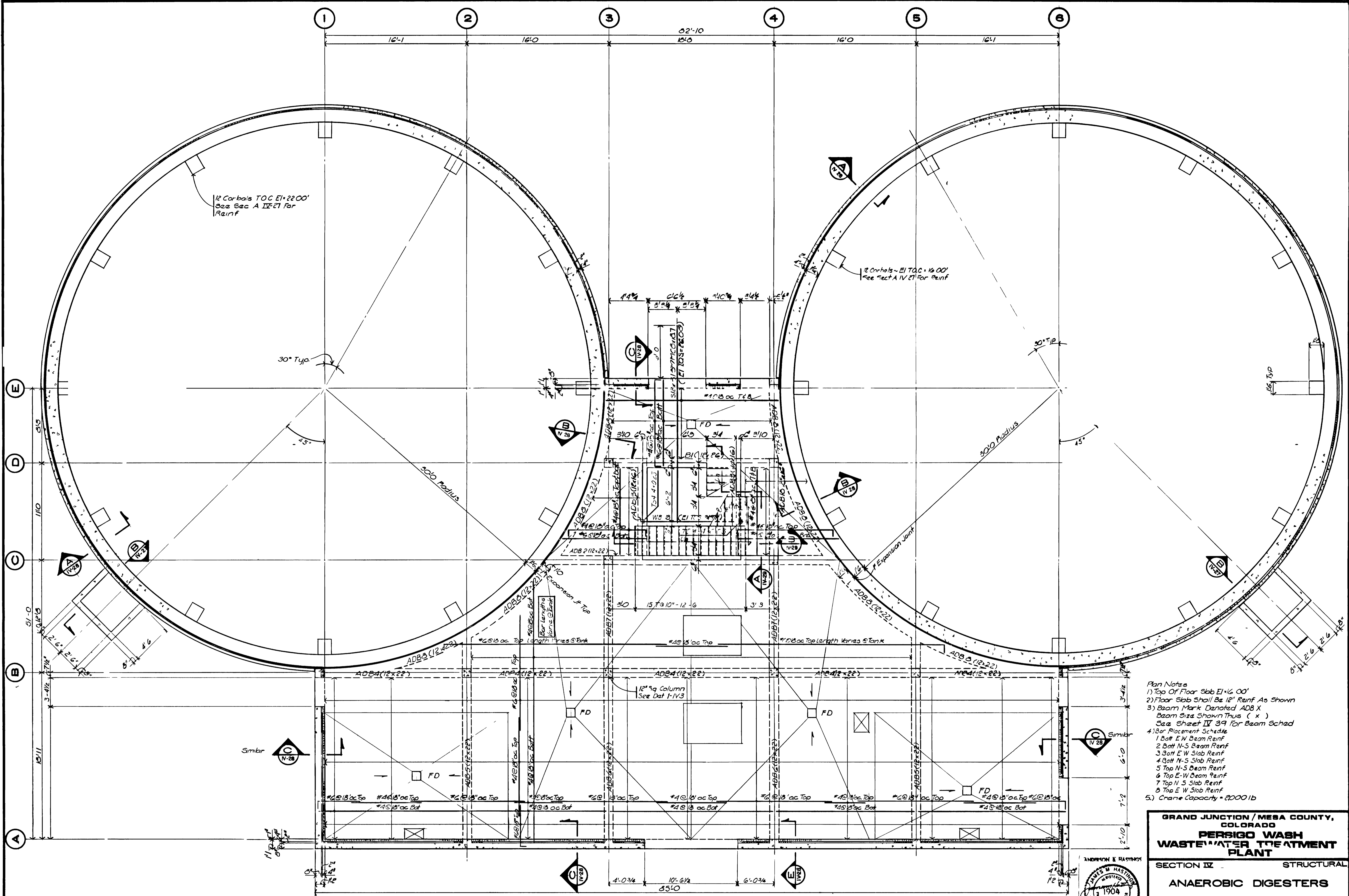
HENNINGSON, DURHAM & RICHARDSON, INC.  
ENGINEERS PLANNERS CONSULTANTS  
DENVER COLORADO GRAND JUNCTION COLORADO

JOB NO. 734510  
DESIGNED: J.D.W. CHECKED: J.M.H.  
DATE: 11/11/04 APPROVED: HENNINGSON  
DATE: 11/11/04

DATE: 11/11/04

11/11/04

IV-25  
DWG 82 OF 191



- Plan Notes
- 1) Top Of Floor Slab El +6.00'
  - 2) Floor Slab Shall Be 12" Reinf As Shown
  - 3) Beam Mark Denoted ADB X  
Beam Size Shown Thus ( X )  
See Sheet IV 39 For Beam Sched
  - 4) For Placement Schedule
  - 1) Bot E-W Beam Reinf
  - 2) Bot N-S Beam Reinf
  - 3) Bot E-W Slab Reinf
  - 4) Bot N-S Slab Reinf
  - 5) Top N-S Beam Reinf
  - 6) Top E-W Beam Reinf
  - 7) Top N-S Slab Reinf
  - 8) Top E-W Slab Reinf
  - 5) Crane Capacity = 2000 lb

GRAND JUNCTION / MESA COUNTY,  
COLORADO

**PERSIGO WASH  
WASTE WATER TREATMENT  
PLANT**

SECTION IV STRUCTURAL  
**ANAEROBIC DIGESTERS**

GRADE LEVEL PLAN

**HENNINGSON, DURHAM & RICHARDSON, INC**  
ENGINEERS PLANNERS CONSULTANTS  
DENVER COLORADO GRAND JUNCTION COLORADO

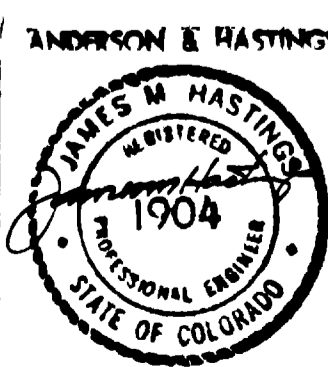
DESIGNED: J.D.W. CHECKED: J.M.H. SHEET: IV-28  
APPROVED: E.HENRICHSEN DATE: APPROV: DATE: REVISIONS: MADE: APPROV:

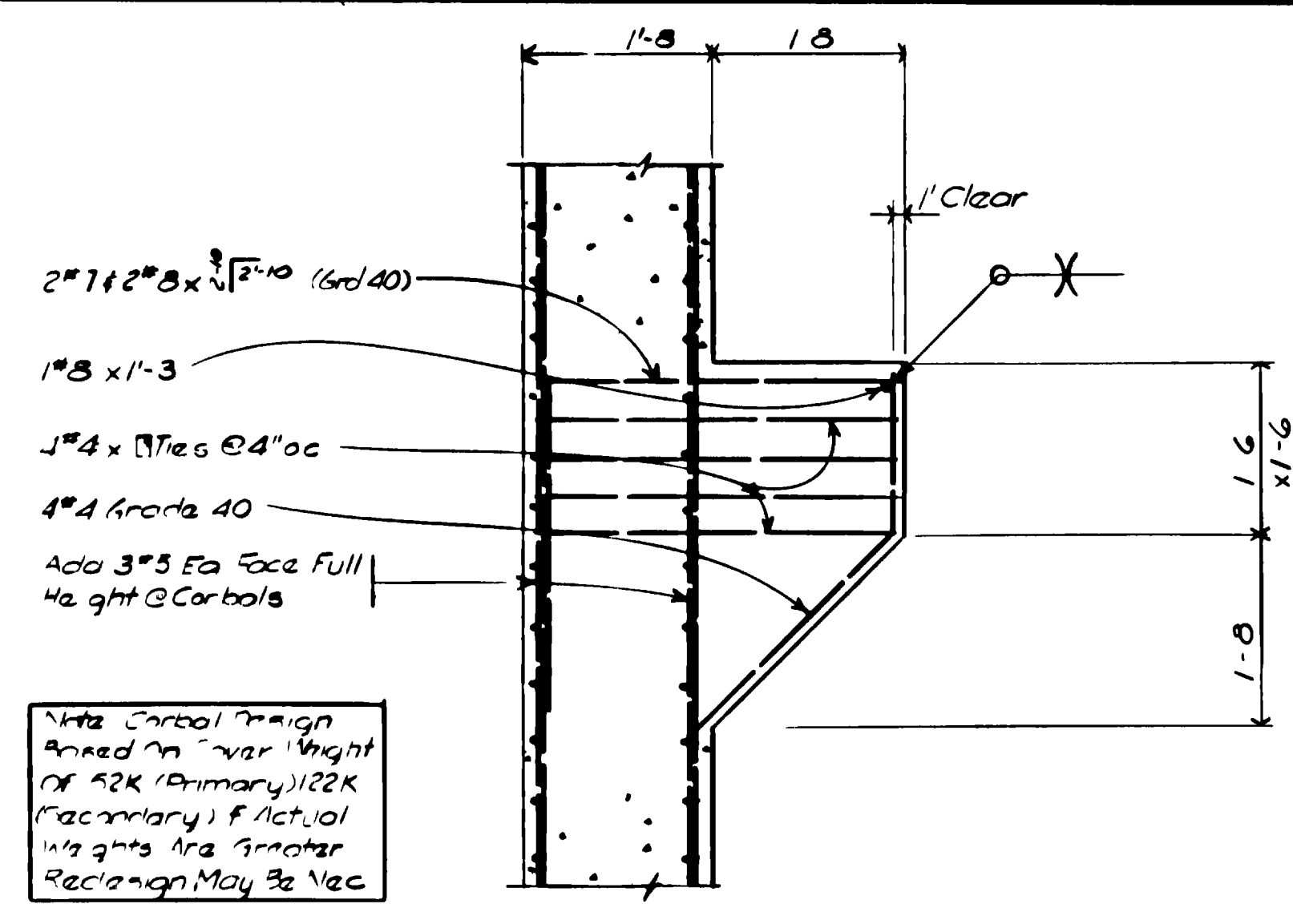
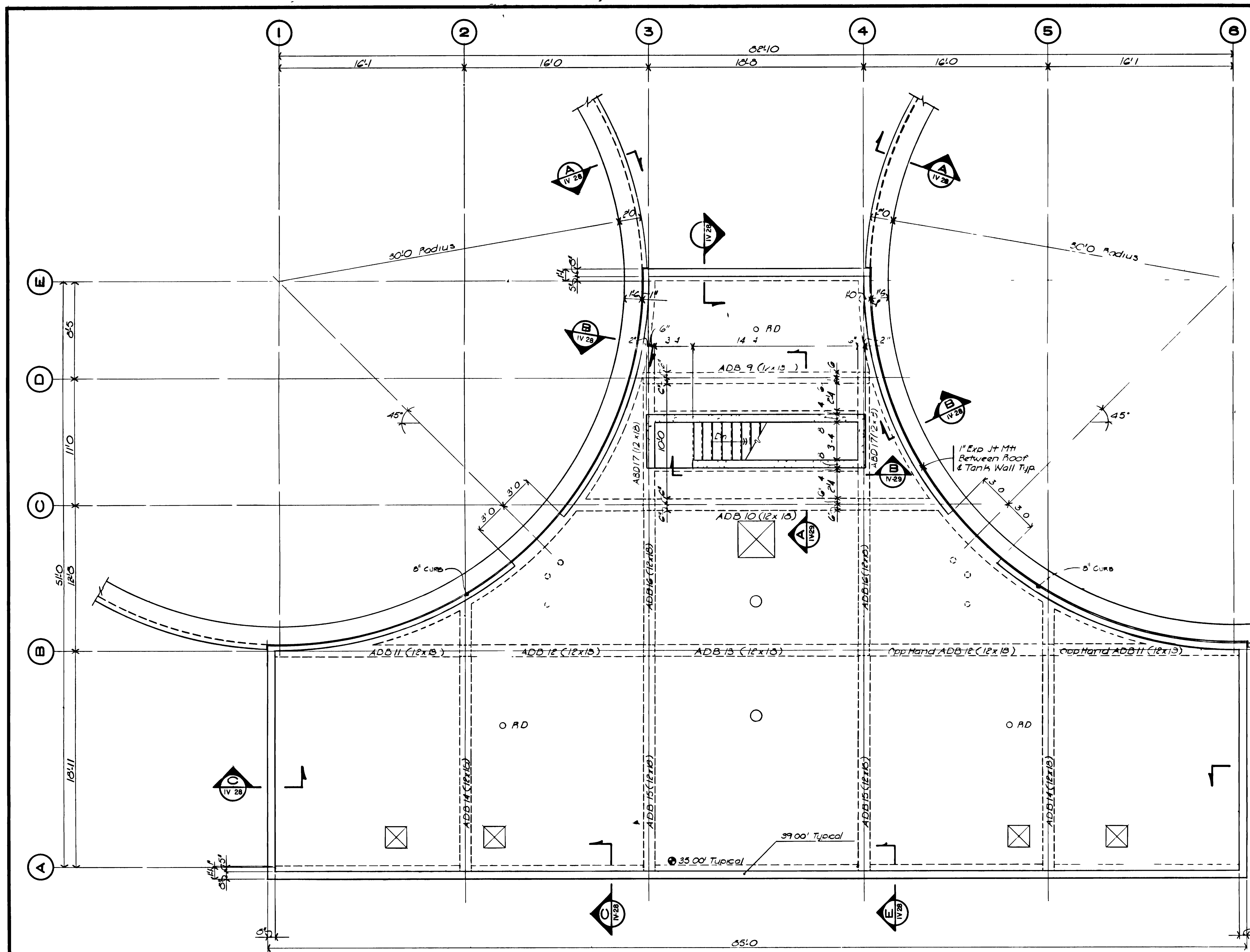
734510

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

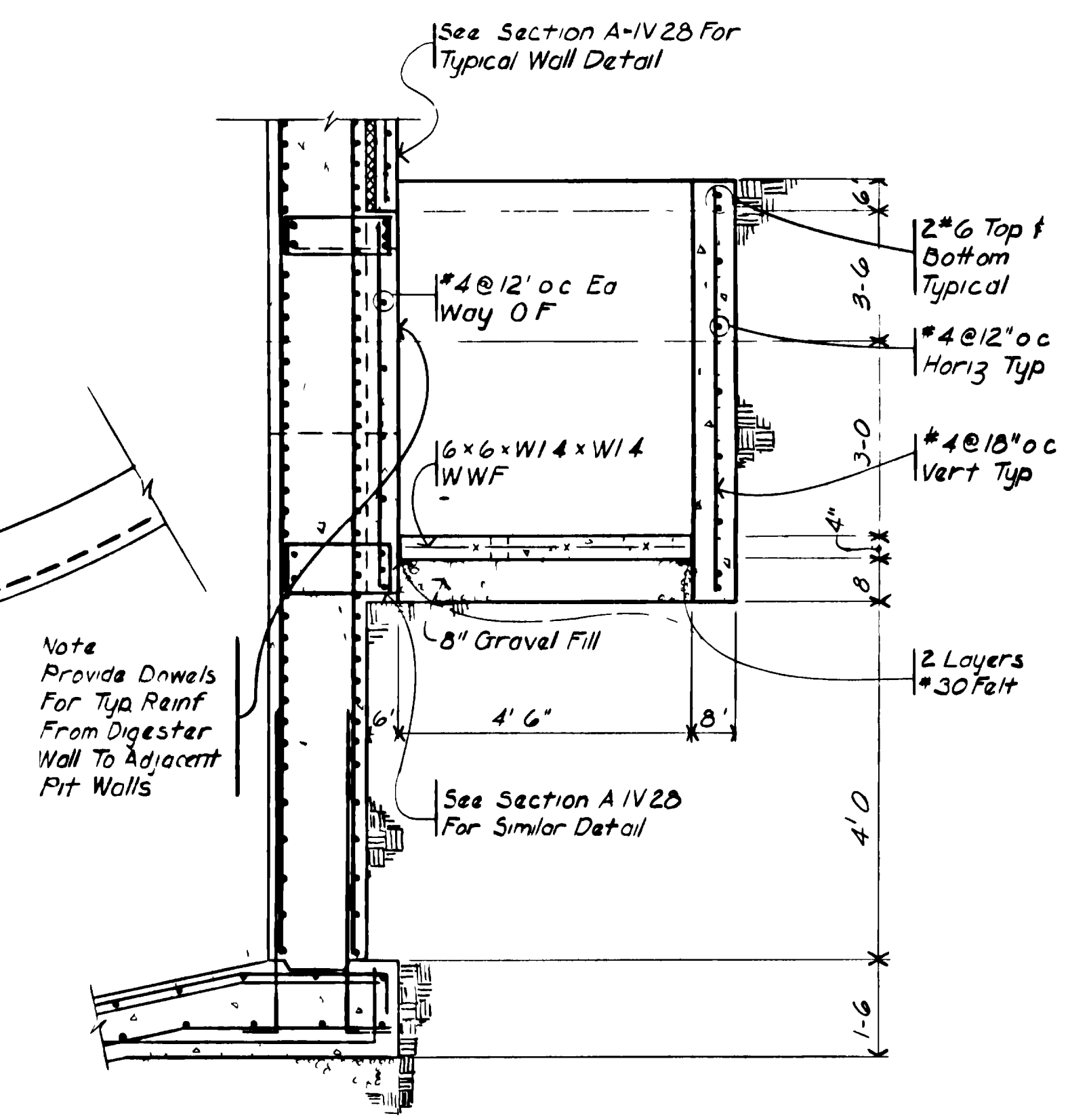
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CONTRACTOR  
DATE: NOV

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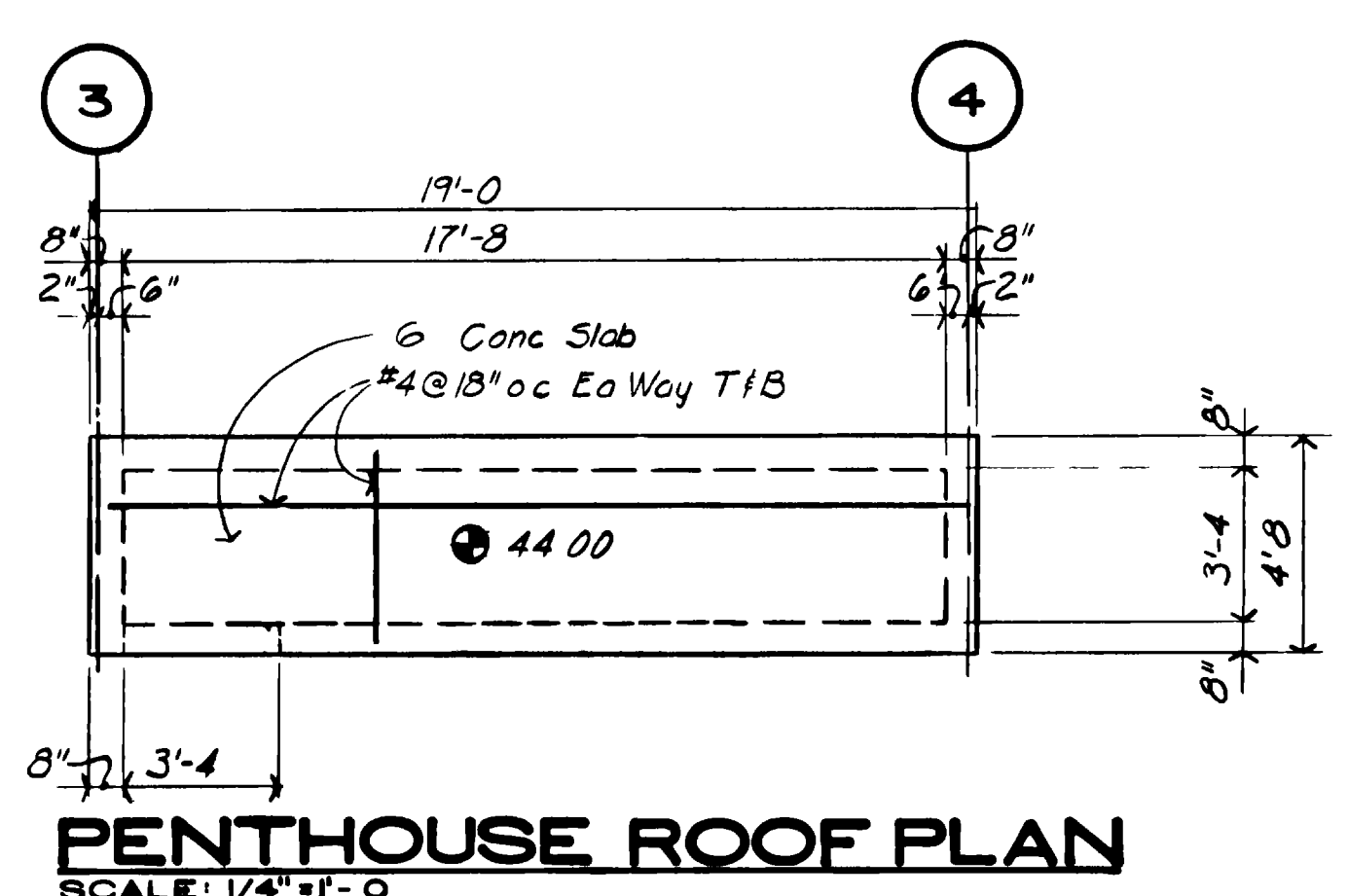


SECTION A  
SCALE 3/4" = 1'-0" (IV-27)



SECTION B  
SCALE 1/2" = 1'-0" (IV-27)

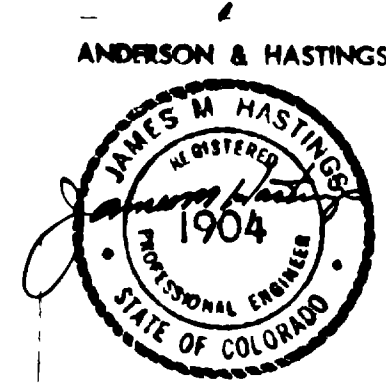
- Plan Notes
- 1) Roof Slab Shall Be of Reinf #7 #4 @ 12" Ea Way Top & #4 @ 12" Ea Way Bot
  - 2) Top Reinf Shall Be Cont Over Beams And Spliced Only At Midspan
  - 3) Bot Reinf Shall Be Cont Splice Only @ Beam
  - 4) ADB X Denotes Beam Mark Beam Size Shown Thus ( X ) See 311-113 For Beam Schedule & Reinforcement
  - 5) Top Of Roof Slab Noted Thus ( XX )
  - 6) Top Of Parapet Noted Thus ( XXX )
  - 7) Refer To Mech & Process Sheets for Pipe Sleeves & Block Outs



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

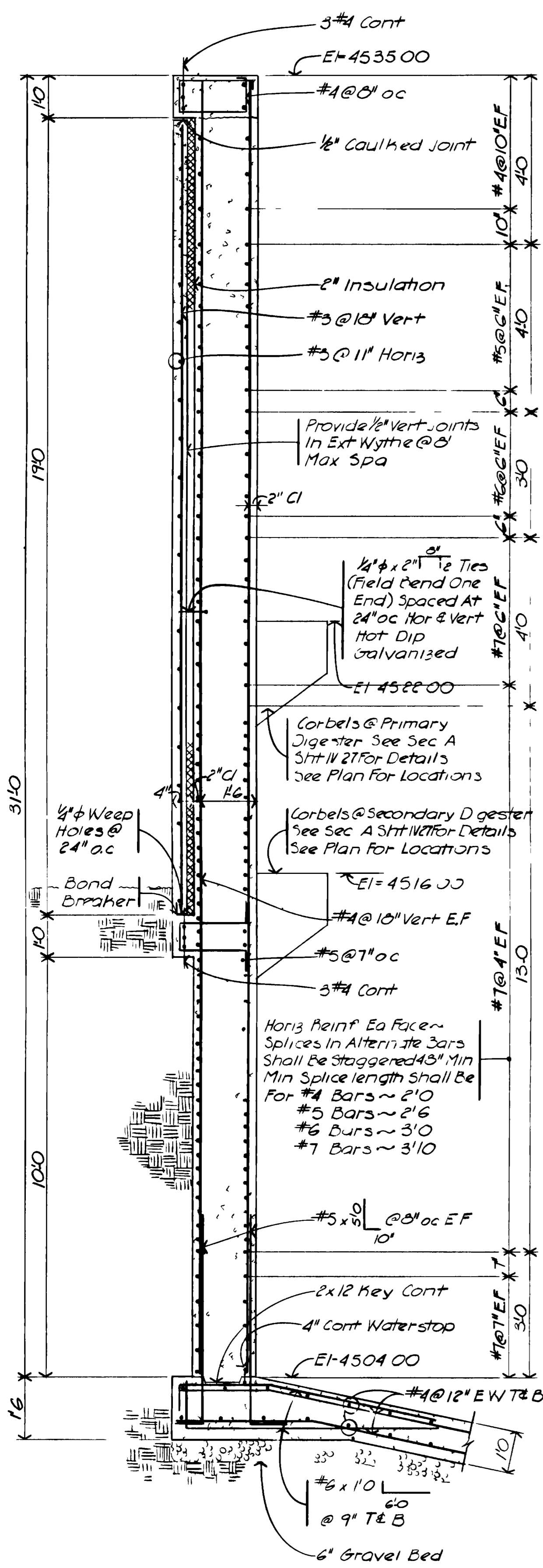
ROOF FRAMING PLAN  
SCALE 1/4" = 1'-0"

GRAND JUNCTION / MESA COUNTY, COLORADO  
**PERSIGO WASH WASTE WATER TREATMENT PLANT**  
SECTION IV STRUCTURAL  
**ANAEROBIC DIGESTERS**  
ROOF FRAMING PLAN

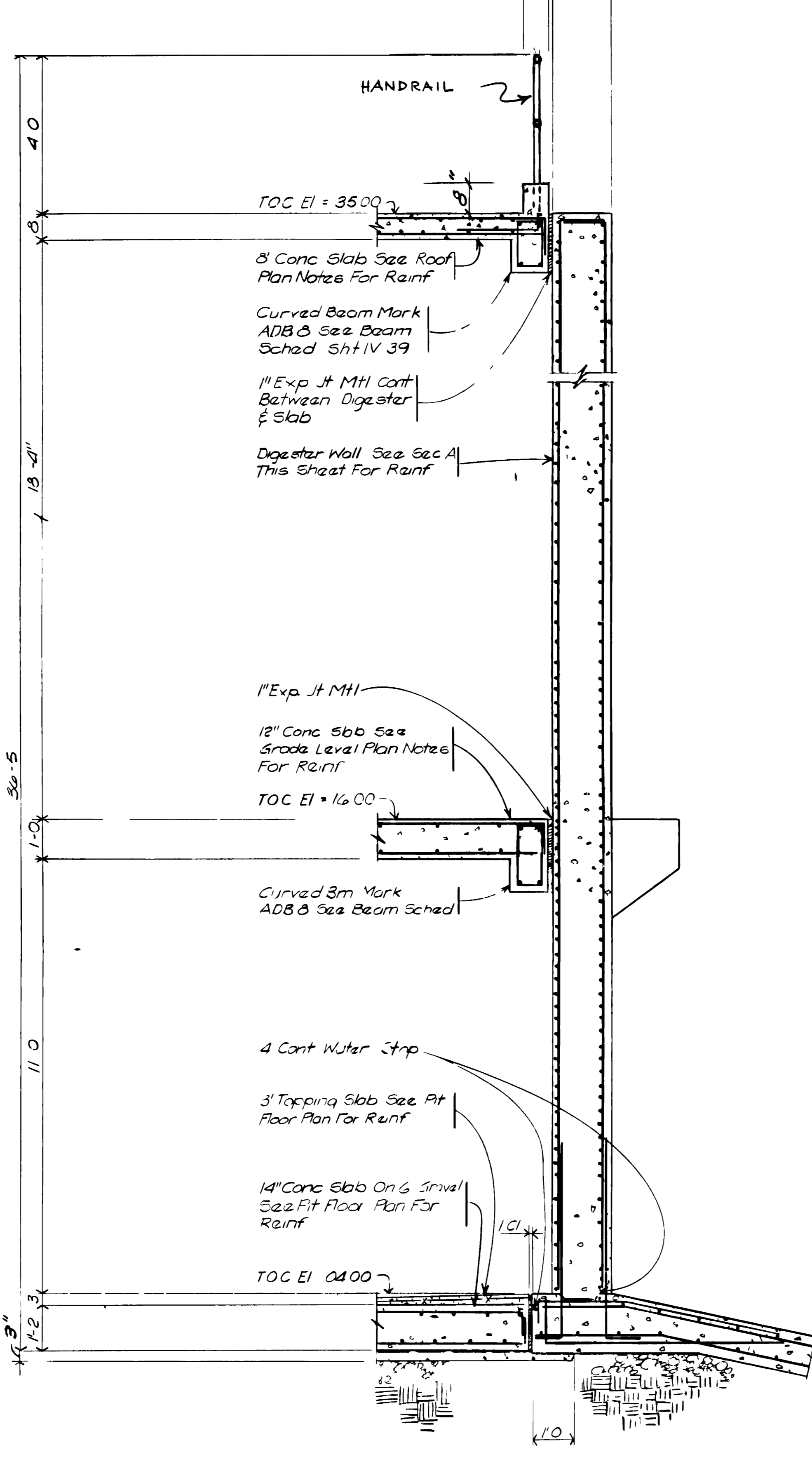


HENNINGSON, DURHAM & RICHARDSON, INC. ENGINEERS PLANNERS CONSULTANTS DENVER COLORADO GRAND JUNCTION COLORADO	
DESIGNED J.D.W. JOB 73480	APPROVED & HENNINGSON DATE SHEET IV-27

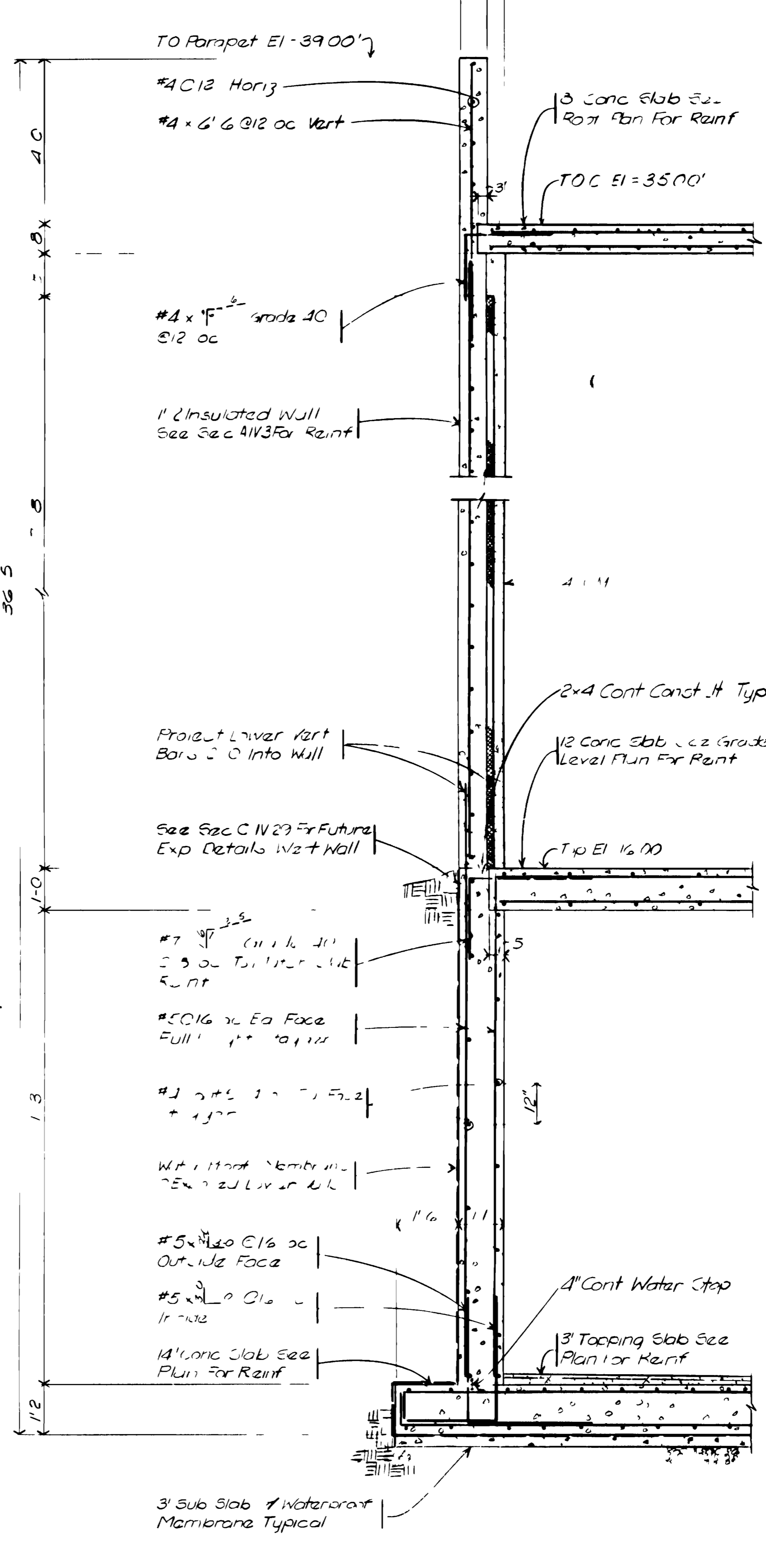
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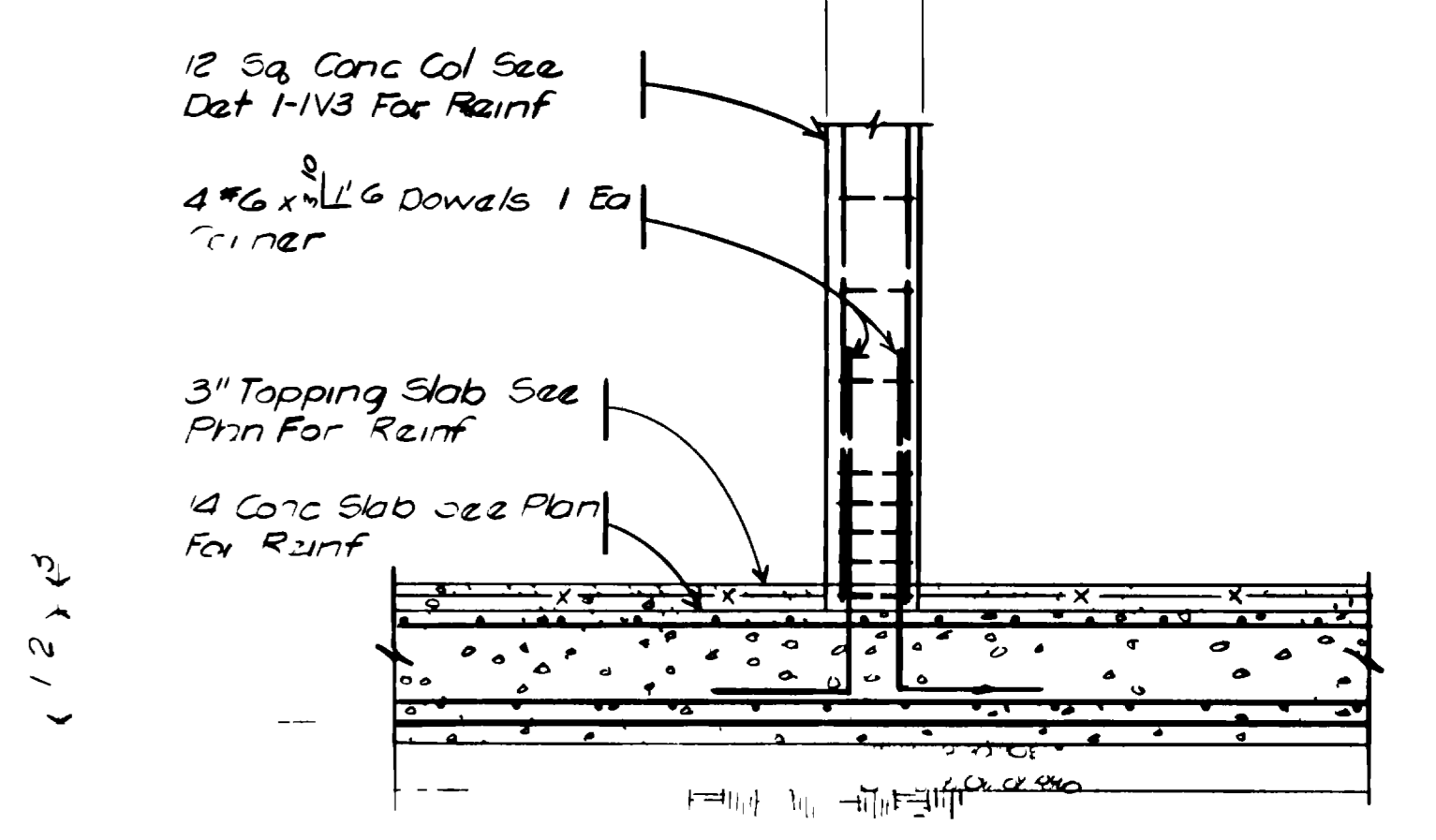
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IV-28



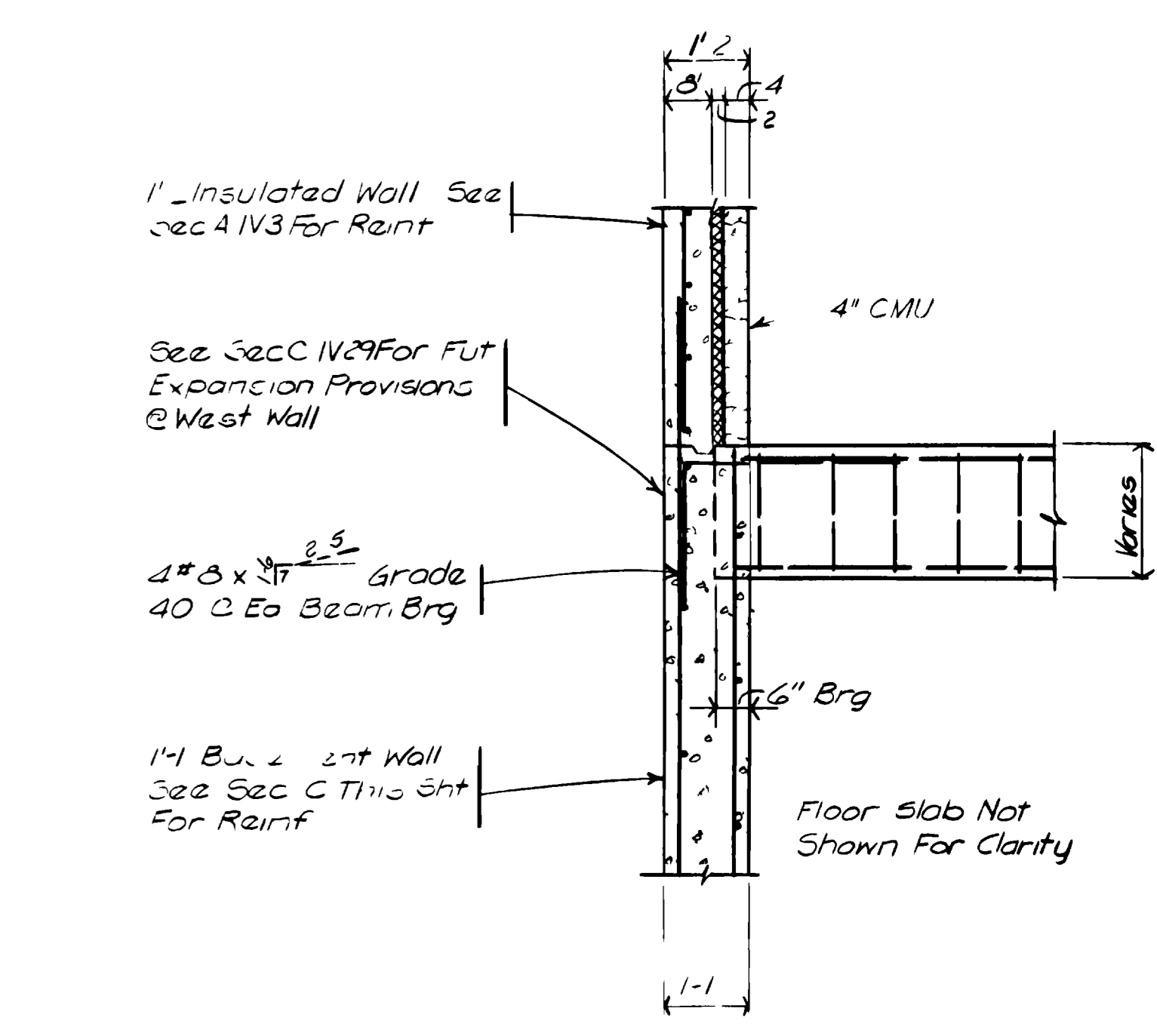
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SCALE 1/2" = 1'-0"  
IV-28



**SECTION C**  
SCALE 1/2" = 1'-0"  
IV-28



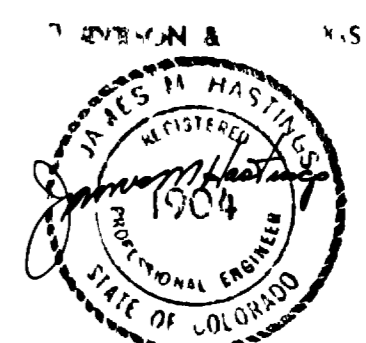
**SECTION D**  
SCALE 1/2" = 1'-0"  
IV-28



**SECTION E**  
SCALE 1/2" = 1'-0"  
IV-28

"AS RECORDED"  
FROM INFORMATION  
PROVIDED BY THE  
CONTRACTORS  
DATE: MAY 1988

**GRAND JUNCTION / MESA COUNTY, COLORADO**  
**PERSIGO WASH WASTE/WATER TREATMENT PLANT**  
SECTION IV STRUCTURAL  
**ANAEROBIC DIGESTERS**  
SECTIONS



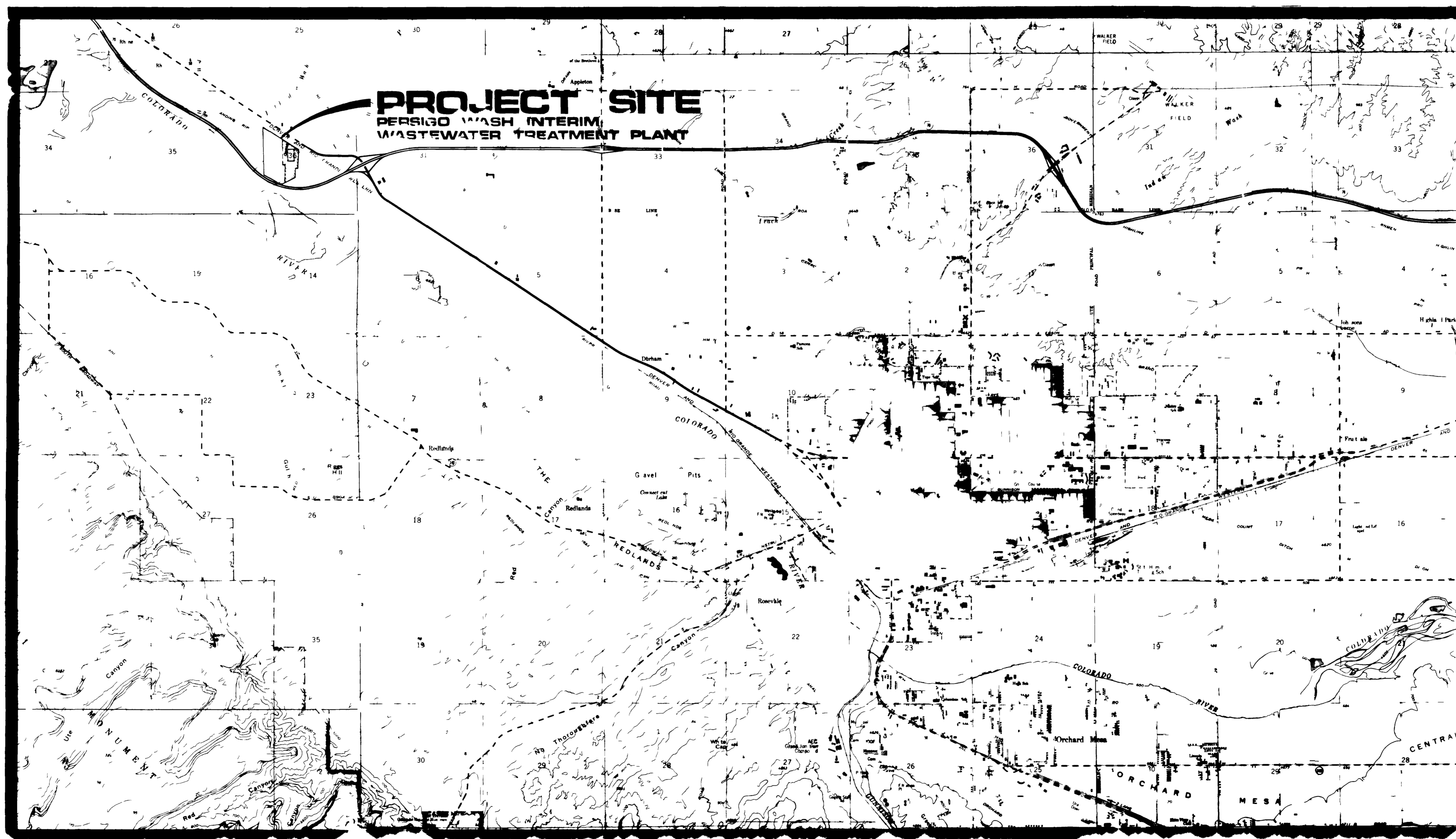
**HENNINGSON, DURHAM & RICHARDSON, INC.**  
ENGINEERS PLANNERS CONSULTANTS  
DENVER COLORADO GRAND JUNCTION COLORADO

JOB NO. 734510  
DESIGNED: J.D.W.  
CHECKED: J.M.H.  
DATE: 4/7/88  
APPROVED: J.HENNINGSON  
DATE: 4/7/88

NO.	DATE	DESCRIPTION	BY	APPROV.
1	4/7/88	AS BUILT	J.D.W.	J.M.H.

# GRAND JUNCTION / MESA COUNTY COLORADO

## PERSIGO WASTE INTERIM WASTEWATER TREATMENT PLANT 1980



GRAND JUNCTION & VICINITY MAP

**HENNINGSON, DURHAM & RICHARDSON**  
ENGINEERS · PLANNERS · CONSULTANTS  
DENVER · GRAND JUNCTION

INDEX TO DRAWINGS  
SHEET NO. TITLE

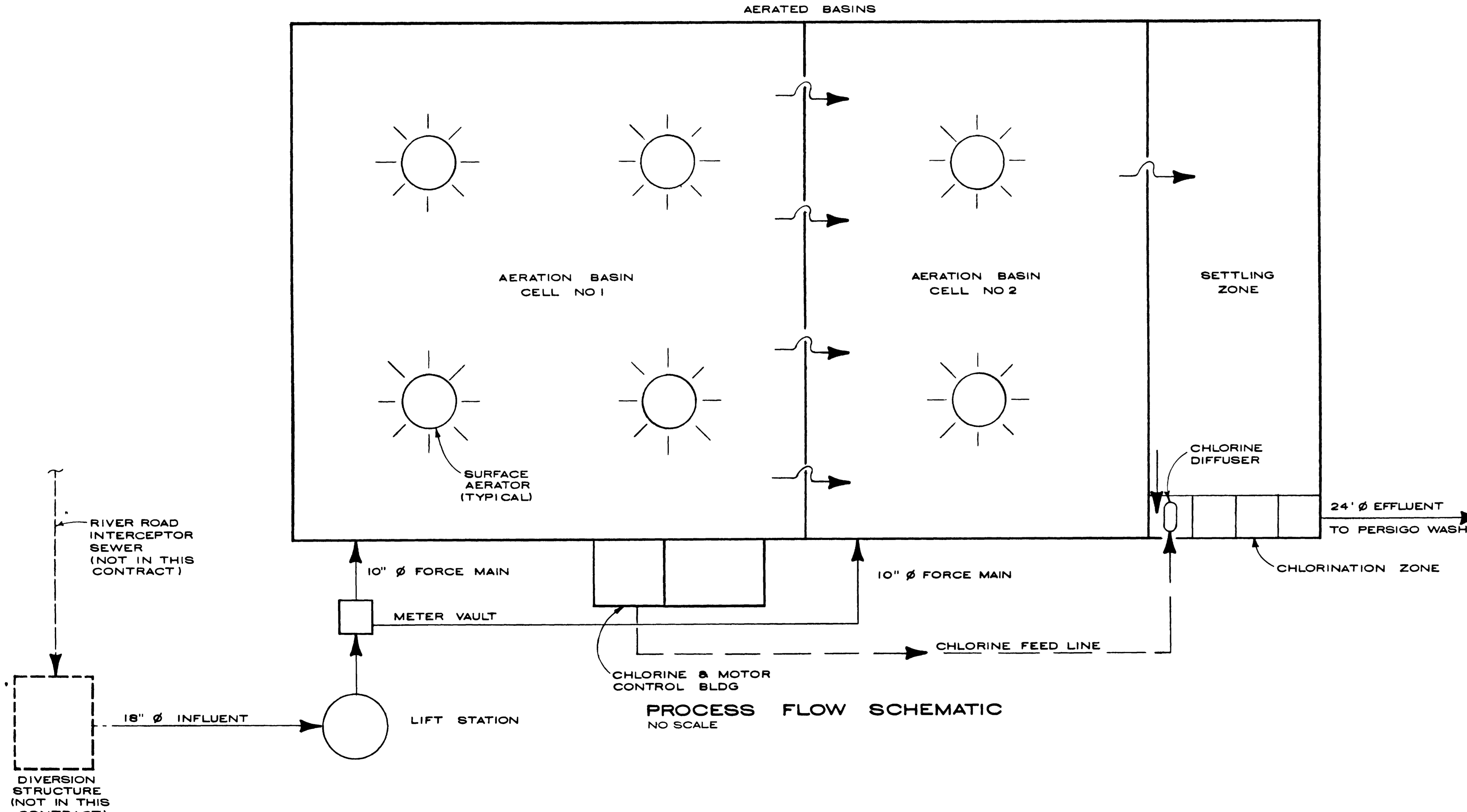
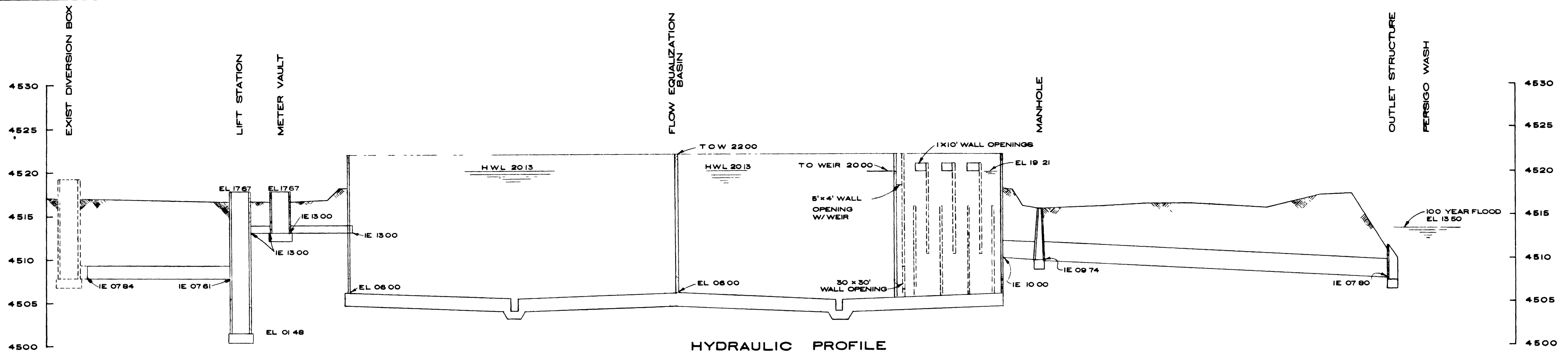
- GENERAL**
- 1 COVER SHEET - LOCATION MAP - INDEX
  - 2 HYDRAULIC PROFILE - PROCESS FLOW SCHEMATIC
  - 3 OVERALL SITE PLAN
  - 4 GRADING AND LAYOUT PLAN
  - 5 GRADING AND LAYOUT PLAN
  - 6 YARD PIPING PLAN
  - 7 YARD PIPING PLAN
  - 8 YARD PIPING PROFILES
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- 17 AERATED BASIN PLAN - CELL NO 1
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  - 26 AERATED BASIN CELL NO 2 - LIGHTING - POWER PLAN
  - 27 AERATED BASINS - MISCELLANEOUS - PLANS - SECTIONS - DETAILS
  - 28 ONE LINE DIAGRAM FOR MCC-II

2500 0 100  
SCALE IN FEET



FILED WITH THE CITY OF GRAND JUNCTION AND MESA COUNTY, COLORADO, JULY 9, 1980  
DATE  
APPROVED *James E. Little*  
CITY OF GRAND JUNCTION AND MESA COUNTY  
DATE: JULY 9, 1980

"RECORDED"  
FROM RECORDATION  
PROVIDED BY T E  
FACTORS  
DATE: February 1982



**"AS RECORDED"**  
 PROVIDED FOR  
 PROVIDE TO THE  
 CONTRACTORS  
 DATE February 1982

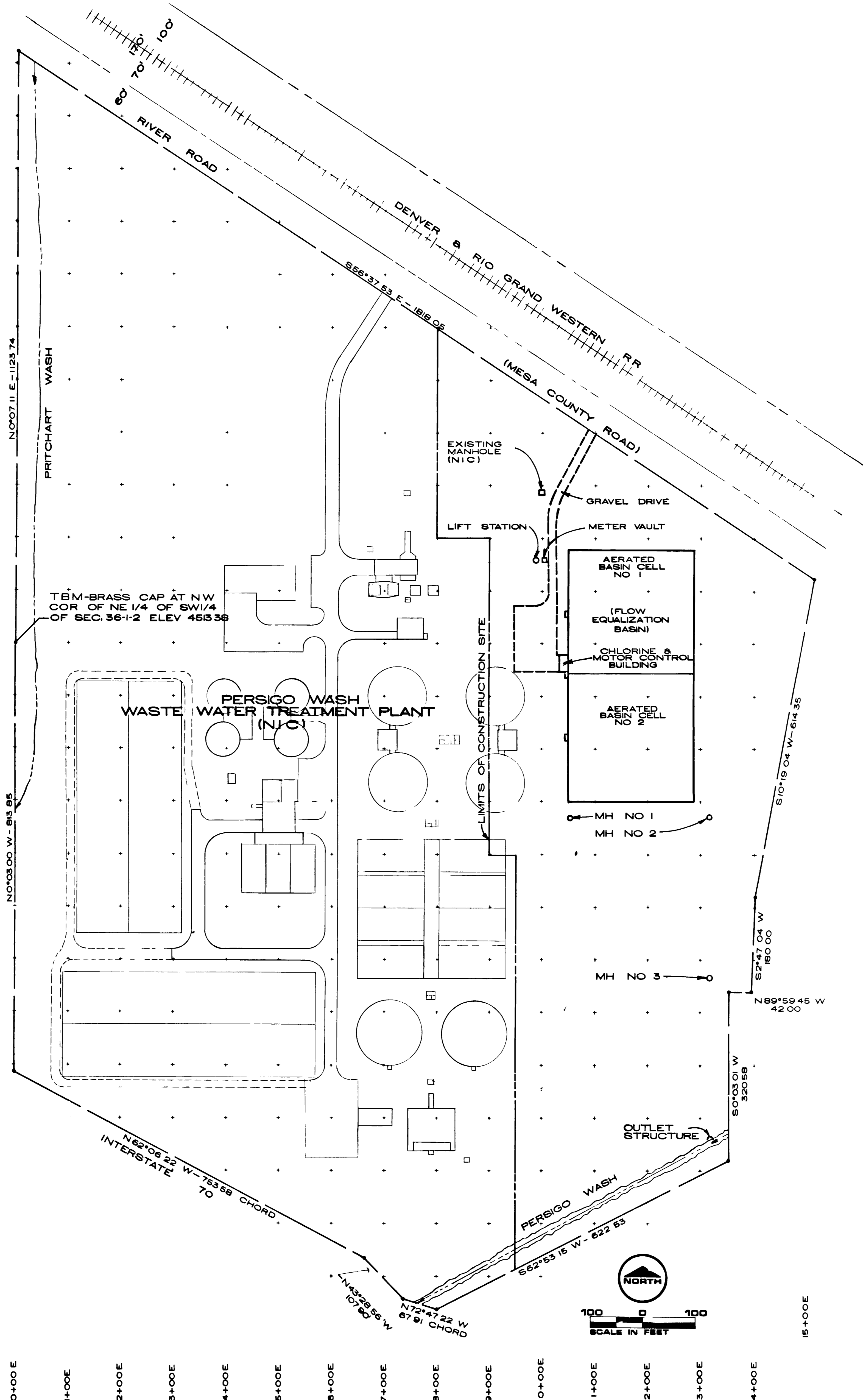
PROFILE SCALE  
 HORIZONTAL SCALE NONE  
 VERTICAL SCALE 1"=5'-0"

**GRAND JUNCTION / MESA COUNTY,  
 COLORADO**  
**PERSIGO WASH INTERIM  
 WASTEWATER TREATMENT  
 PLANT**  
 GENERAL  
**HYDRAULIC PROFILE &  
 PROCESS FLOW  
 SCHEMATIC**

**HERRINGTON, DURHAM & RICHARDSON, INC.**  
 ENGINEERS PLANNERS CONSULTANTS  
 DENVER COLORADO GRAND JUNCTION COLORADO

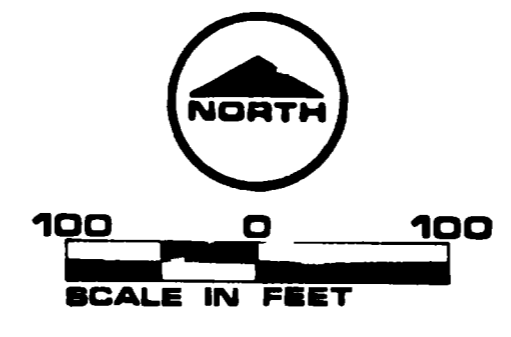
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APPROVED S. HENRICHSEN			DATE JAN. 31, 80		
DETAILED P. KREMER			DATE JAN. 31, 80		

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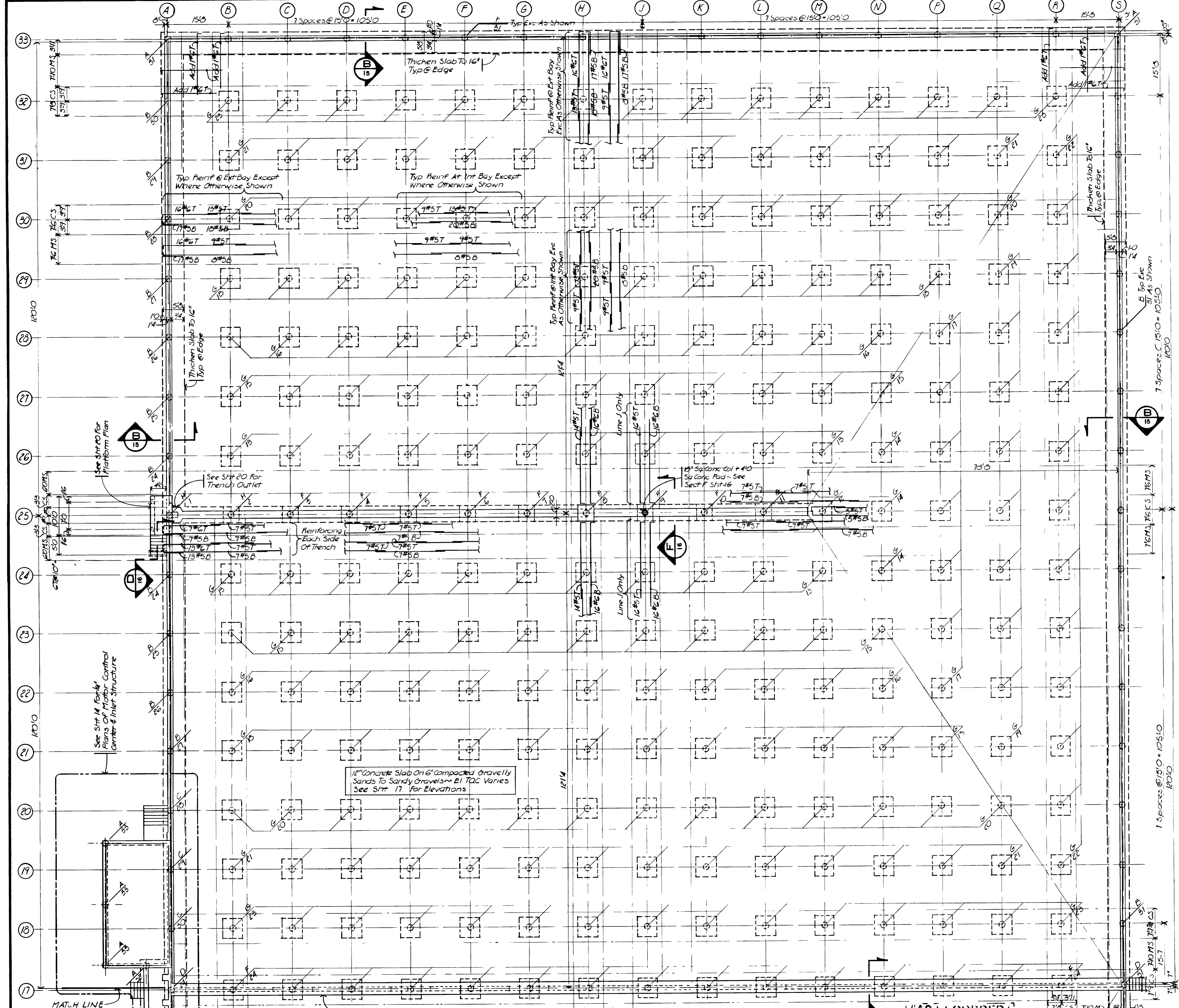
- LEGEND**
- PROPOSED STRUCTURES
  - FUTURE STRUCTURES
  - PROPOSED GRAVEL DRIVE
  - PROPERTY LINE

"AS RECORDED"  
FROM THE ORIGINAL  
PROVIDED BY THE  
CONTRACTORS  
DATE February 1982



<b>GRAND JUNCTION / MESA COUNTY, COLORADO</b>			
<b>PERSIGO WASH INTERIM WASTEWATER TREATMENT PLANT</b>			
<b>GENERAL</b>			
<b>OVERALL SITE PLAN</b>			
<b>HENNINGSON, DURHAM &amp; RICHARDSON, INC.</b>			
ENGINEERS PLANNERS CONSULTANTS DENVER, COLORADO GRAND JUNCTION COLORADO			
JOB 735510	DESIGNED J. HORST CHECKED J. HORST APPROVED K. HEINRICHSEN DATE JAN 31, 82	DETAILS HINMAN	SHEET 3 OF 28

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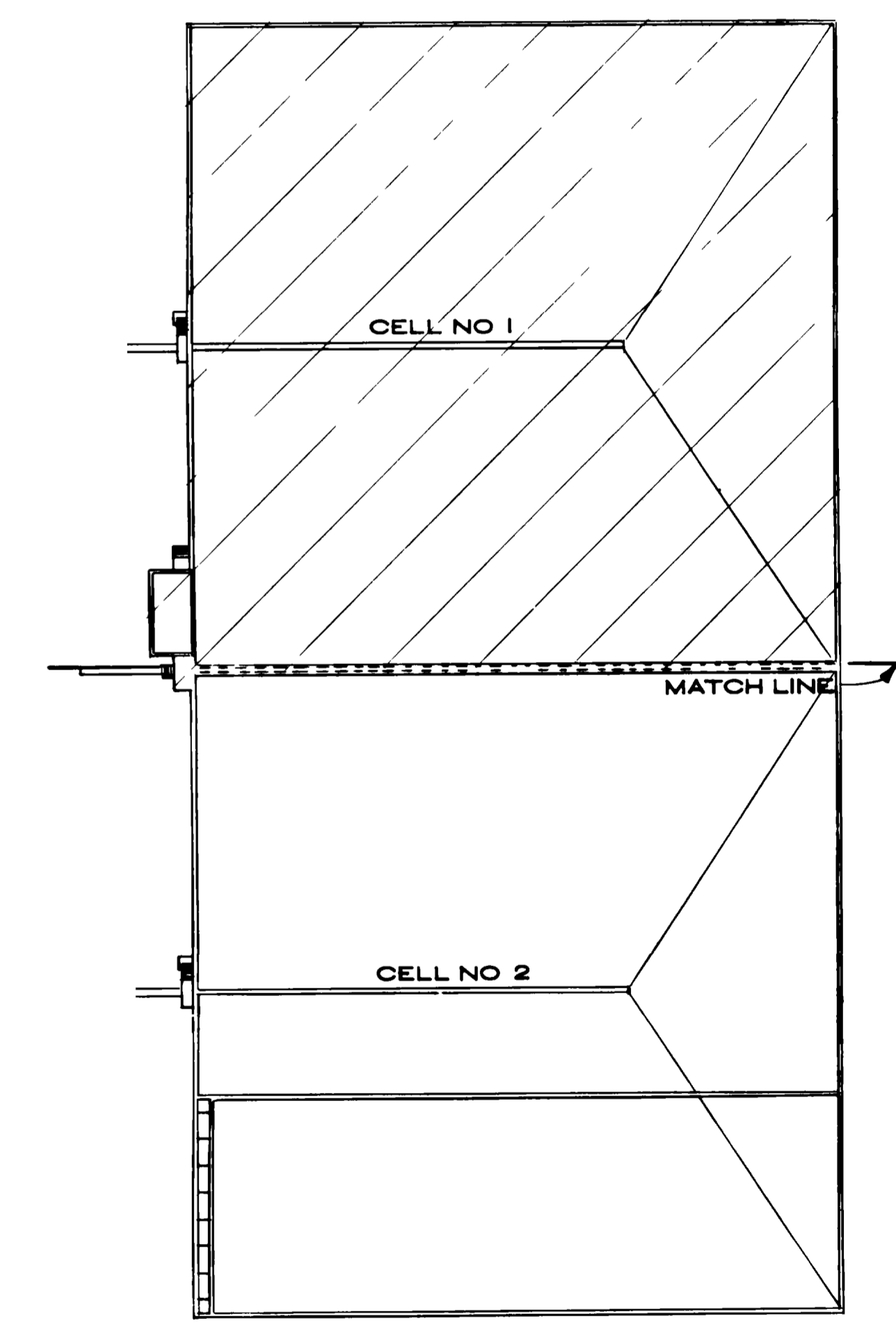


### CAISSON SCHEDULE

Penetration And Reinforcing			Top Of Caisson Elevation				
Mark	Penetration	Vert Reinf	Ties	Mark	Elev	Mark	Elev
A	4'	#5	#6@10"	1	450200	13	450363
B	5'	#5	do	2	204	14	369
C	6'	#5	do	3	208	15	370
D	7'	#5	do	4	212	16	378
E	7'	#7	#6@10"	5	216	17	381
F	8'	#7	#6@10"	6	219	18	385
G	8'	#8	#6@10"	7	223	19	392
H	9'	#7	#6@10"	8	226	20	393
				9	231	21	400
				10	234	22	403
				11	238	23	408
				12	242	24	414

Notes 1 See Section F, Sht 15 For Caisson Detail  
 2 All Caissons shall be 24" dia

PLAN NOTES  
 1 Slab Shall Be Placed In Checkerboard Pattern In 30 Foot Square Sections, See Det 2 Sht 15 For Keyed Construction Joints  
 2 Walls Shall Be Placed In Alternate 60 Foot Long Sections See Det 3 Sht 15 For Keyed Construction Joints



**KEY MAP**  
 SCALE 1" = 50'

GRAND JUNCTION / MESA COUNTY,  
 COLORADO  
**PERSIGO WASH INTERIM  
 WASTEWATER TREATMENT  
 PLANT**  
 STRUCTURAL  
**AERATED BASIN  
 CELL NO. 1  
 (FLOW EQUILIZATION BASIN)  
 FOUNDATION PLAN**

HENNINGSON DURHAM & RICHARDSON, INC.  
 ENGINEERS PLANNERS CONSULTANTS  
 DENVER COLORADO GRAND JUNCTION COLORADO

JOB DESIGNED R.L.S. CHECKED J.M.K. SHEET  
 735510 DETAILED R.N.T. APPROVED DATE: MARCH 2, 1982 12 OF 28

**AERATED BASIN PLAN CELL NO. 1  
 (FLOW EQUILIZATION BASIN)**  
 SCALE 1" = 10'

AS RECORDED  
 FOR INFORMATION  
 PROVIDED BY THE  
 CONTRACTORS  
 DATE: February 1982

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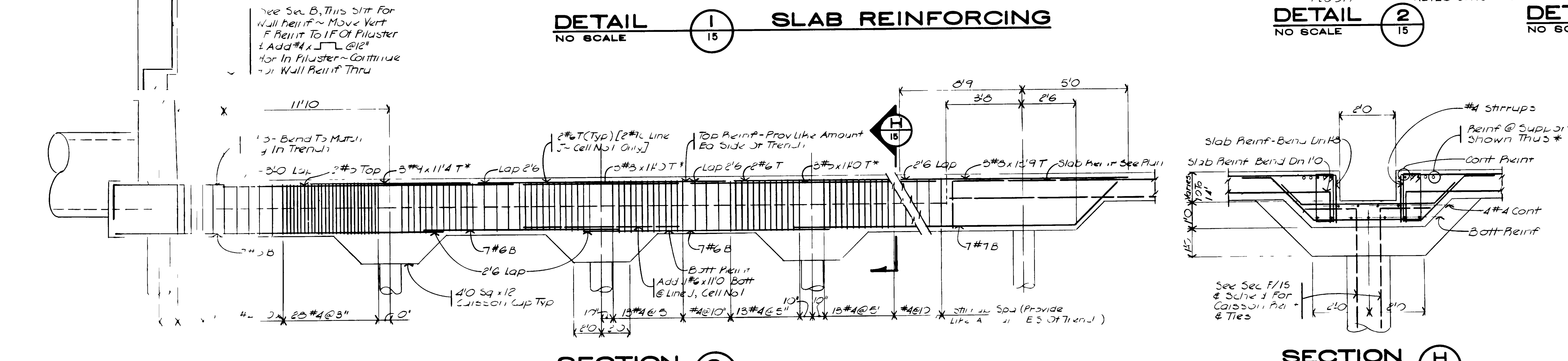
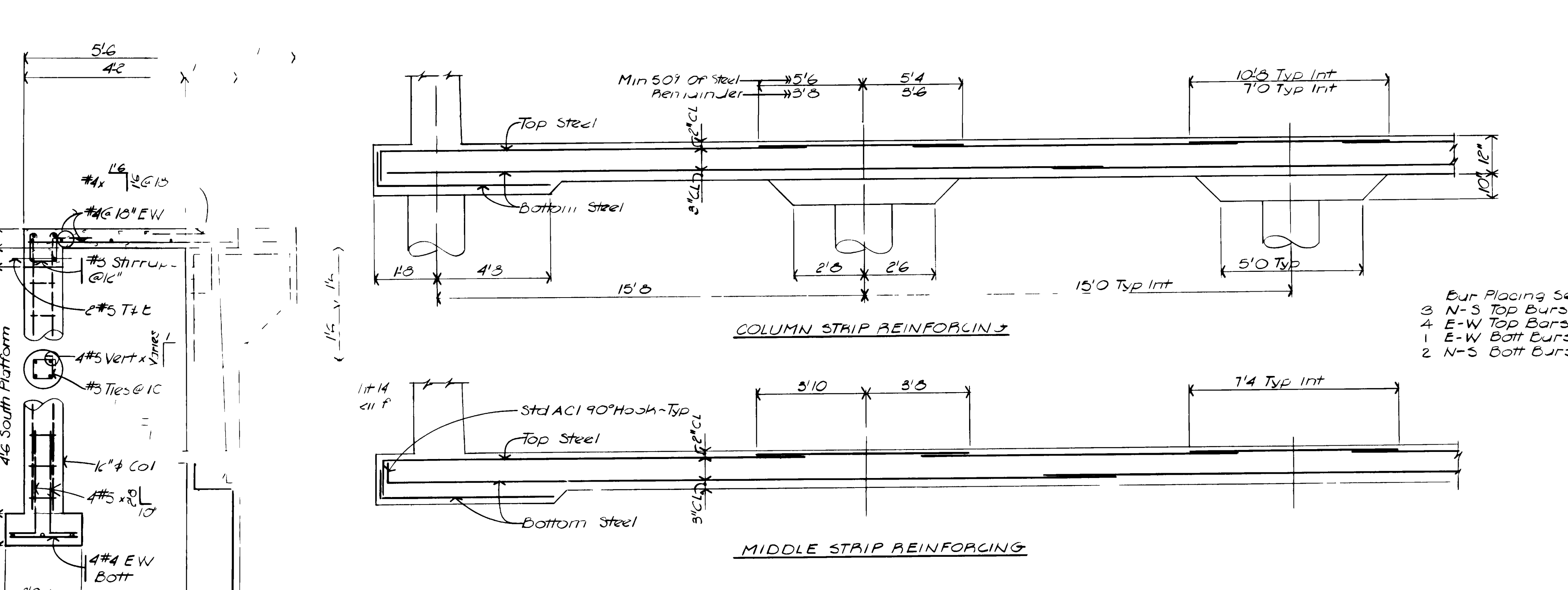
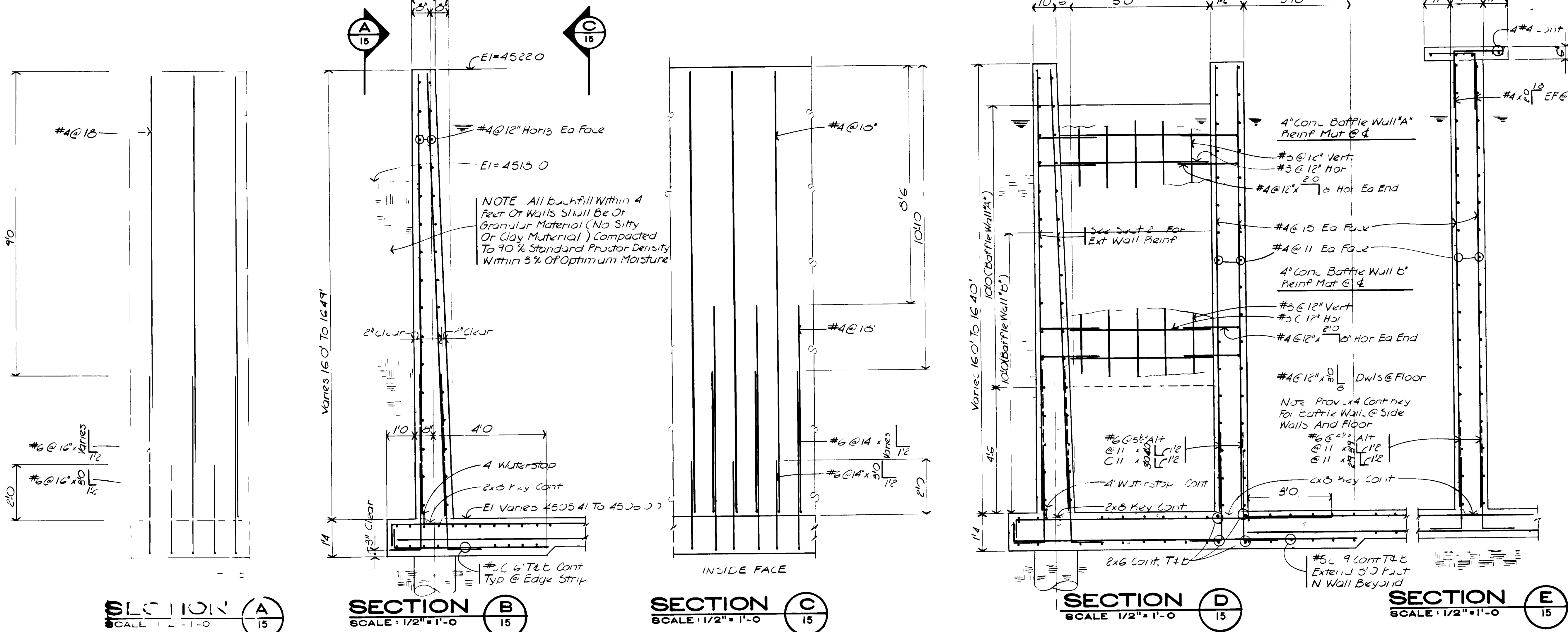






- LIVE LOADS USED IN DESIGN
 

1 MOTOR CONTROL CENTER	B BASIN
2 ROOF 30 psf (SNOW)	1 HIGH WATER LINE E1 4520 00
3 WIND 20 psf	2 HIGH WATER TABLE E1 4515 00
3 SEISMIC Zone 1	3 LATERAL EARTH PRESSURE (DRY SAND - 35 psf) (WET SAND - 85 psf)
- CONCRETE
  - ALL CONCRETE SHALL BE MADE WITH STONE AGGREGATE AND TYPE II CEMENT AND SHALL DEVELOP 4000 PSI COMPRESSIVE STRENGTH IN 28 DAYS
  - ALL REINFORCING SHALL BE HIGH STRENGTH DEFORMED BARS (GRADE 60 ASTM A615-76a) WITH 60 000 PSI MINIMUM YIELD POINT
- REINFORCEMENT PROTECTION
  - CONCRETE POURED AGAINST EARTH
  - CONCRETE POURED IN FORMS BUT EXPOSED TO WEATHER OR EARTH
    - IF BARS ARE LARGER THAN No 5
    - IF BARS ARE No 5 OR SMALLER
- SLABS (TOP BARS)
  - ALL BAR LENGTHS ARE DRAWN TO SCALE UNLESS NOTED. NO SPLICES OF REINFORCEMENT SHALL BE MADE EXCEPT AS DETAILED OR AS AUTHORIZED BY THE STRUCTURAL ENGINEER. LAP SPLICES WHERE PERMITTED SHALL BE A MINIMUM OF 36 BAR DIAMETERS OR AS DETAILED. MAKE ALL BARS CONTINUOUS AROUND CORNERS.
  - DETAIL BARS IN ACCORDANCE WITH ACI DETAILING MANUAL AND ACI BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE. LATEST EDITIONS.
  - PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCING AT POSITIONS SHOWN ON THE PLANS.
  - PLACE 2-No 5 (1 EACH FACE) WITH 2'-0" PROJECTION AROUND ALL OPENINGS IN CONCRETE.
  - SLABS AND WALLS SHALL NOT HAVE JOINTS IN A HORIZONTAL PLANE. ANY STOP IN CONCRETE WORK MUST BE MADE AT CENTER OF SPAN WITH VERTICAL BULKHEADS AND HORIZONTAL KEYS UNLESS OTHERWISE SHOWN. ALL CONSTRUCTION JOINTS SHALL BE AS DETAILED OR AS APPROVED BY THE ARCHITECT.
  - WIRE MESH REINFORCEMENT MUST LAP ONE FULL MESH AT SIDE AND END LAPS AND SHALL BE WIRED TOGETHER.
- STEEL
  - ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM SPECIFICATION A36
  - STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH LATEST PROVISIONS OF AISC MANUAL OF STEEL CONSTRUCTION AND CODE OF STANDARD PRACTICE
  - USE STANDARD FRAMED BEAM CONNECTIONS WITH 3/4" Ø BOLTS (OR WELDED EQUIVALENT) UNLESS OTHERWISE NOTED. SELECT CONNECTIONS TO SUPPORT ONE HALF THE TOTAL LOAD CAPACITY FOR EACH GIVEN BEAM AND SPAN. THE EFFECT OF CONCENTRATED LOADS SHALL ALSO BE CONSIDERED.
  - STEEL JOISTS SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH STEEL JOIST INSTITUTE SPECIFICATIONS.
- STEEL DECK
  - ALL STEEL DECK SHALL BE ERECTED IN ACCORDANCE WITH DECK MANUFACTURER'S SUGGESTED SPECIFICATIONS.
  - STEEL DECK BY OTHER MANUFACTURERS MAY BE SUPPLIED IN LIEU OF THAT SHOWN PROVIDED SECTION PROPERTIES ARE SIMILAR TO THOSE OF DECK SPECIFIED AND IF APPROVED BY THE ARCHITECT.
  - DECK SUPPLIER SHALL PROVIDE ALL ADDITIONAL FRAMING AS REQUIRED FOR OPENINGS THROUGH DECK.
- DECK WELDING SHALL BE AS FOLLOWS FOR 1/4" METAL DECK
  - AT EXTERIOR SUPPORTS WELD EDGE OF DECK WITH 3/4" PUDDLE WELDS AT 12" O.C. AND END OF DECK WITH 3/4" PUDDLE WELDS SPACED 4" PER PANEL.
  - AT INTERIOR SUPPORTS WELD WITH 3/4" PUDDLE WELDS SPACED 4" PER PANEL.
  - AT DECK JOINTS BUTT PUNCH OR 1/4" SEAM WELD AT 24" O.C. AT ADJACENT DECK MEMBERS.
- ALL WELDERS SHALL HAVE EVIDENCE OF PASSING THE AWS STANDARD QUALIFICATION TESTS.
- SEE ARCHITECTURAL DRAWINGS FOR NAILER HOLES, ETC.

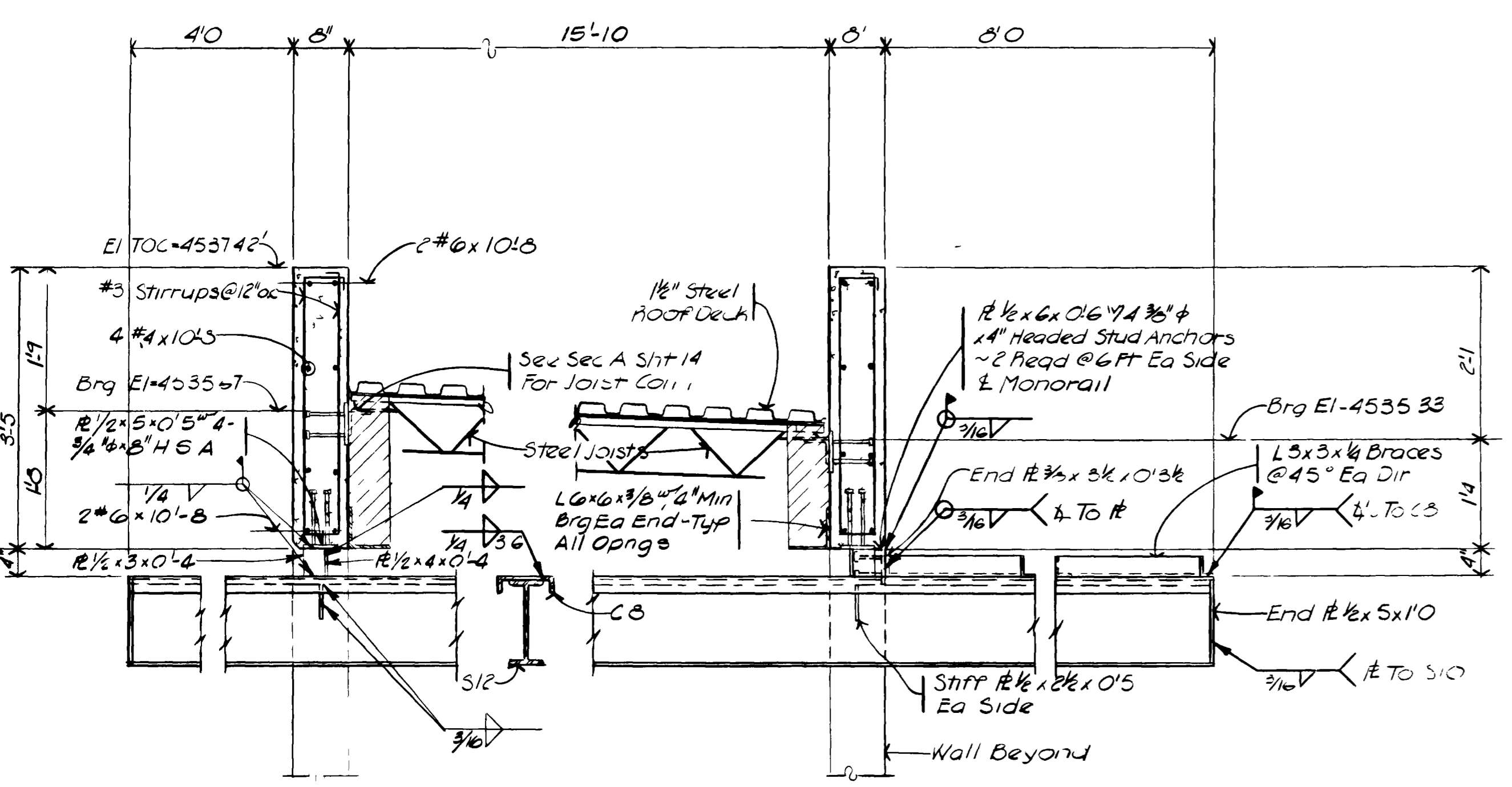


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INDEXED  
FEBRUARY 1982

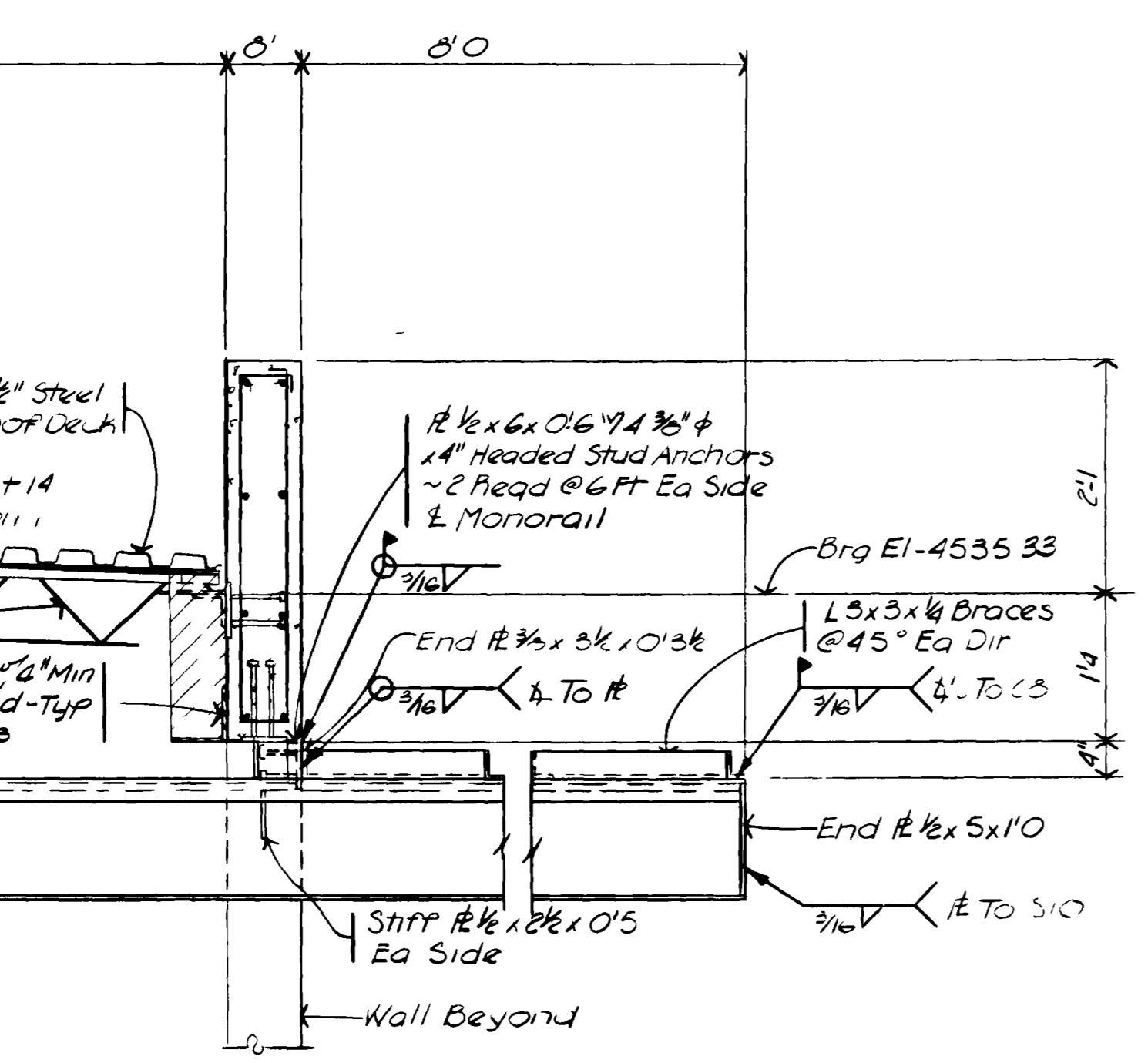
GRAND JUNCTION / MESA COUNTY, COLORADO  
**PERSIGO WASH INTERIM WASTEWATER TREATMENT PLANT**  
STRUCTURAL

**AERATED BASIN**  
SECTIONS & DETAILS

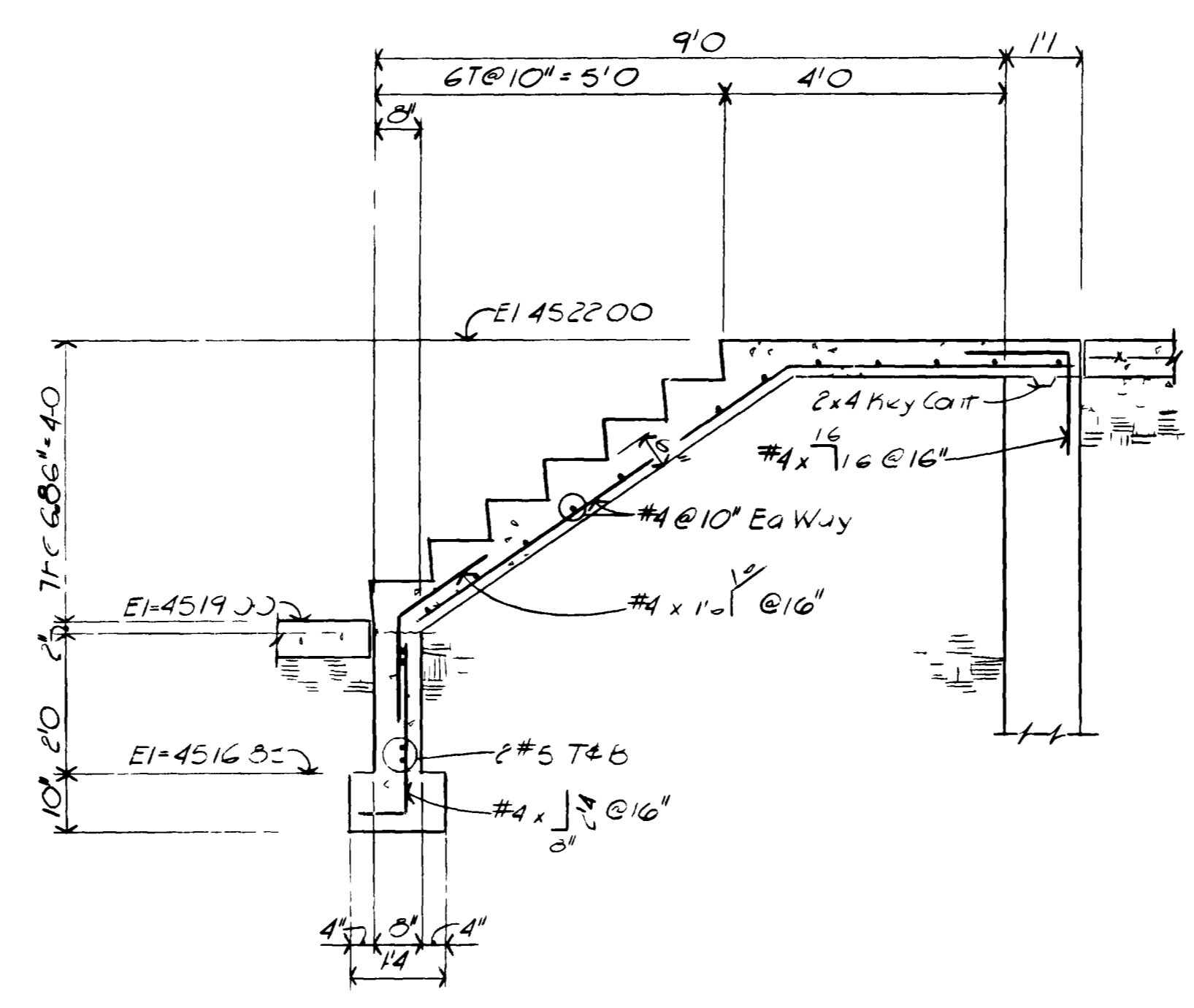
HENNINGSON, DURHAM & RICHARDSON, INC.  
ENGINEERS, PLANNERS & CONSULTANTS  
DENVER, COLORADO GRAND JUNCTION, COLORADO



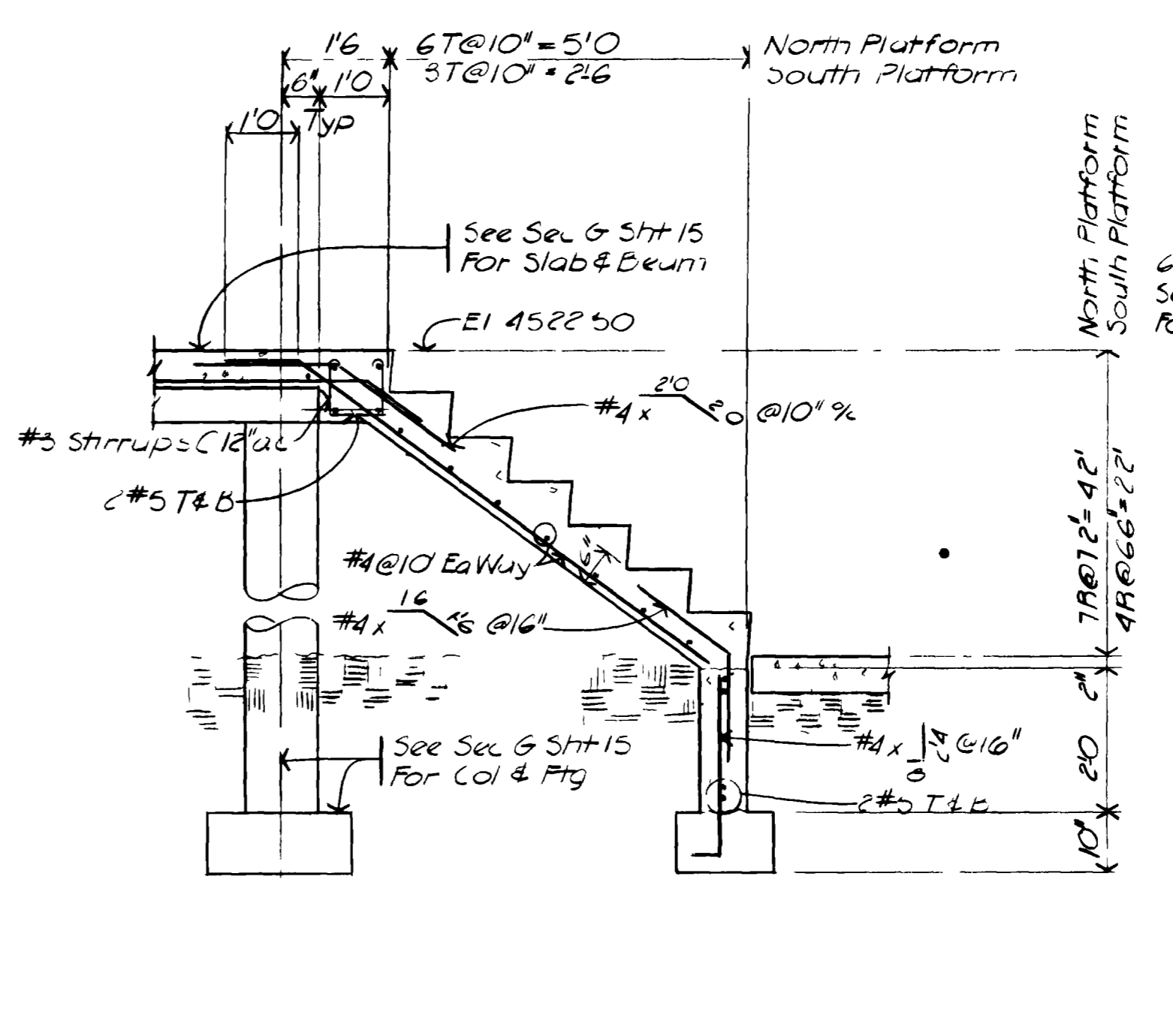
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SCALE: 3/4" = 1'-0"  
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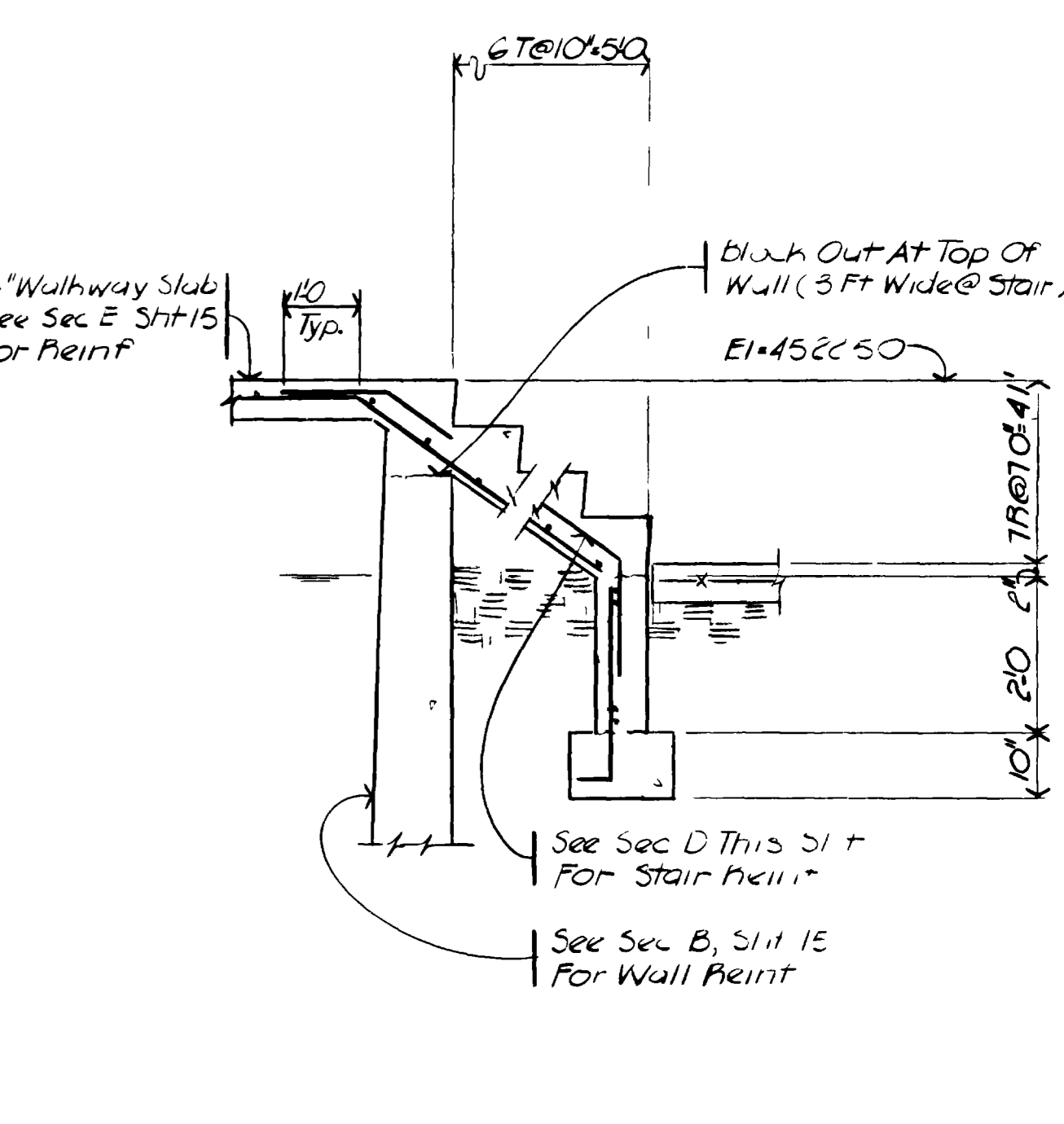
**SECTION B**  
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16



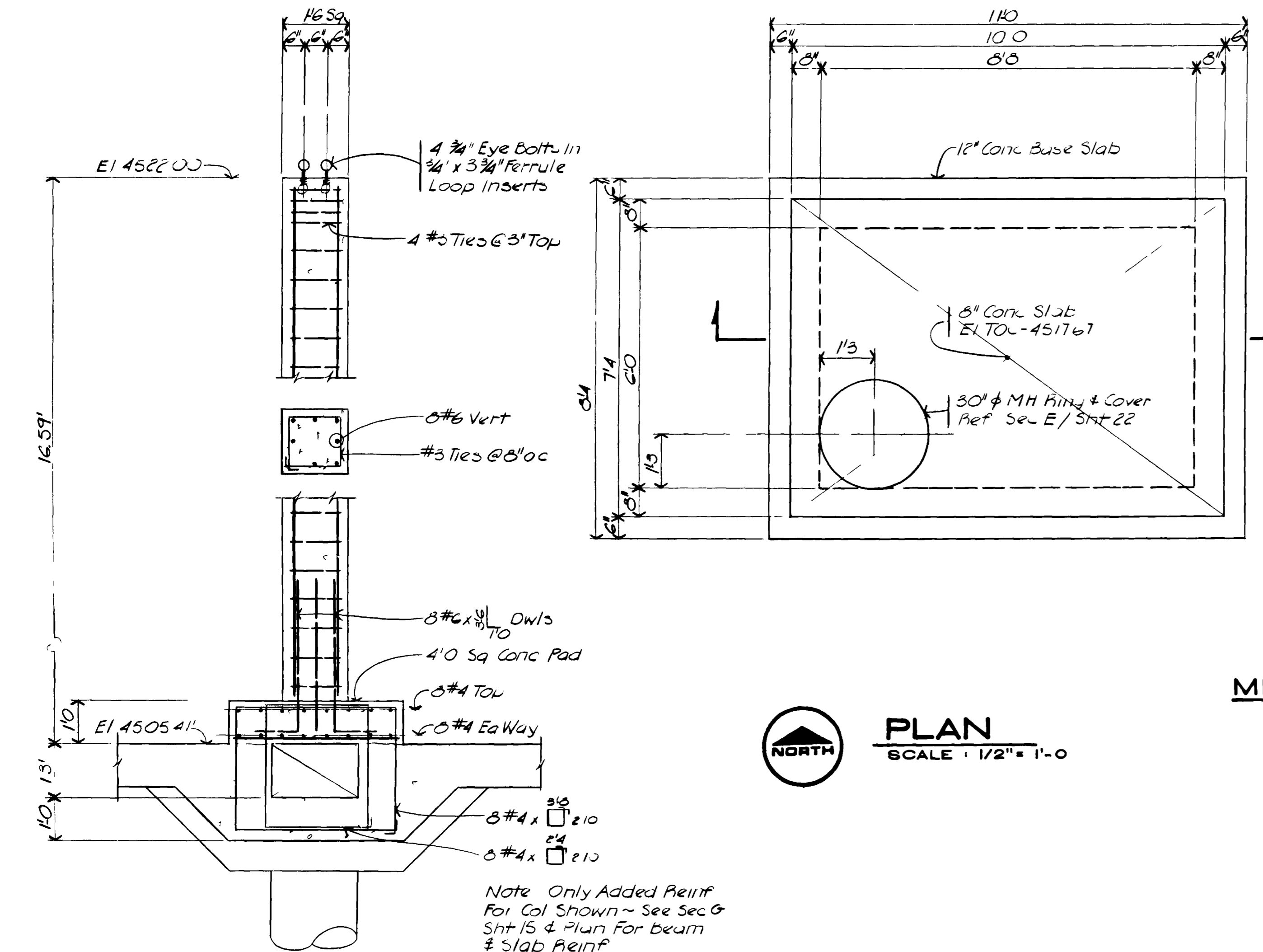
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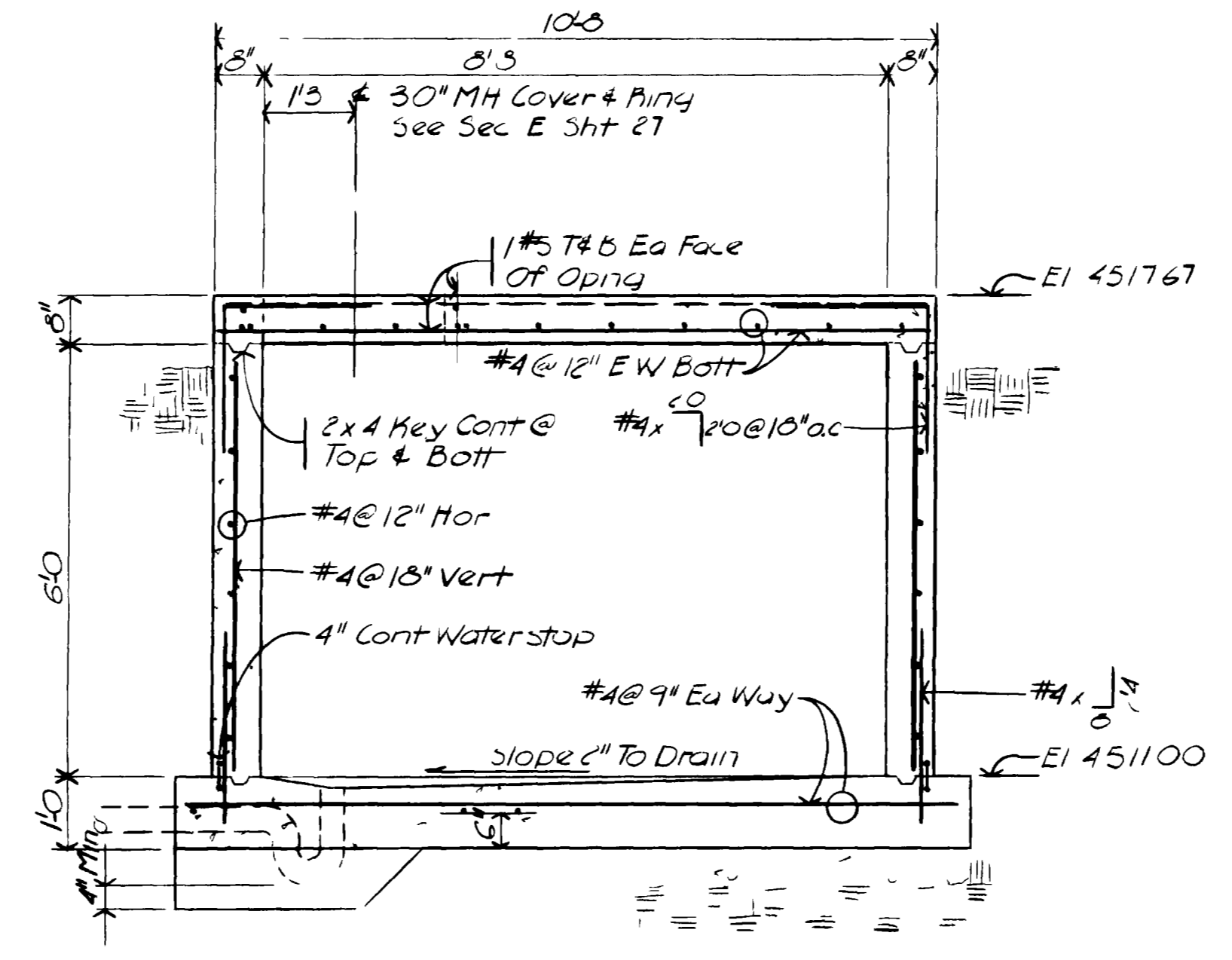
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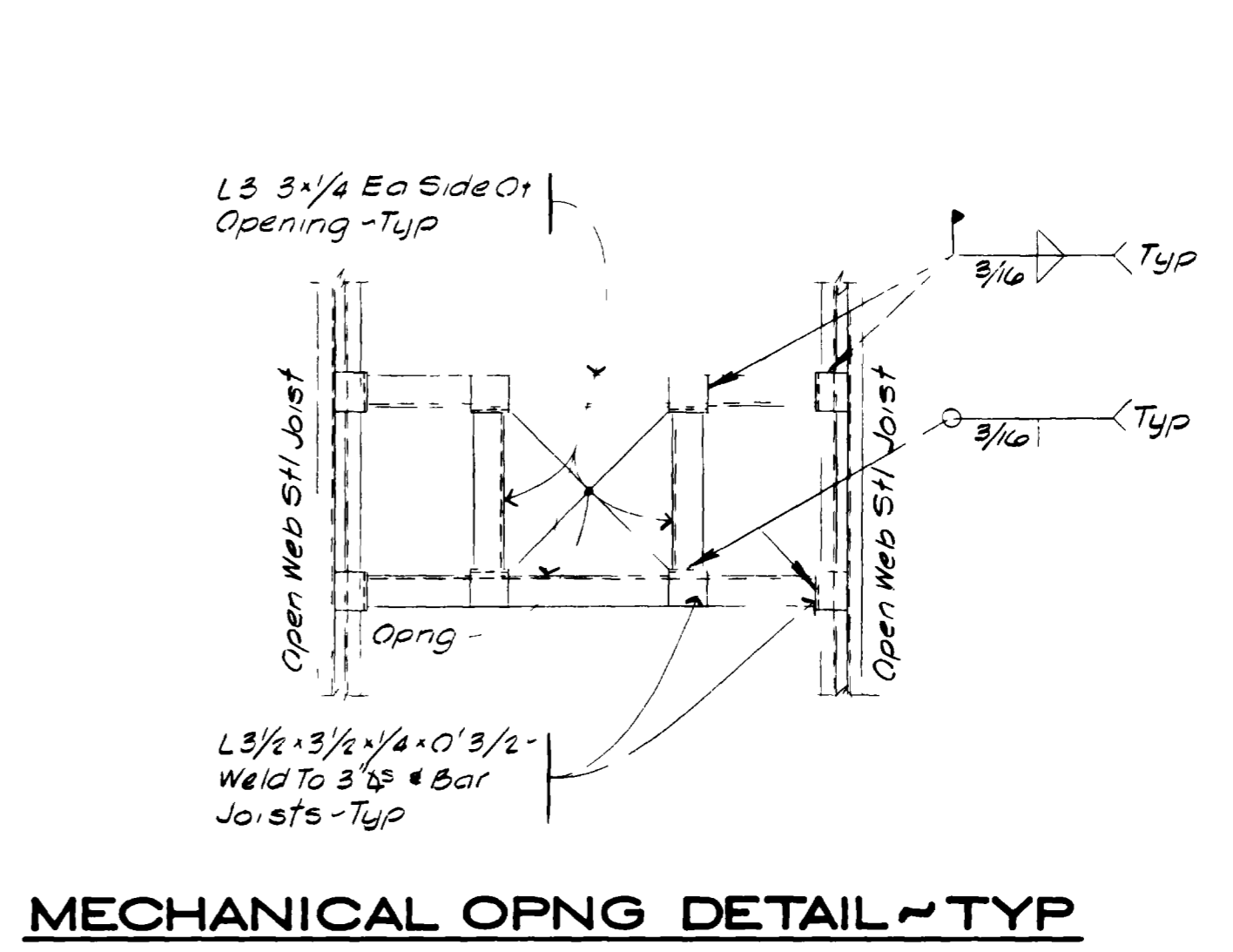
**SECTION E**  
SCALE: 1/2" = 1'-0"  
16



**SECTION F**  
SCALE: 1/2" = 1'-0"  
16

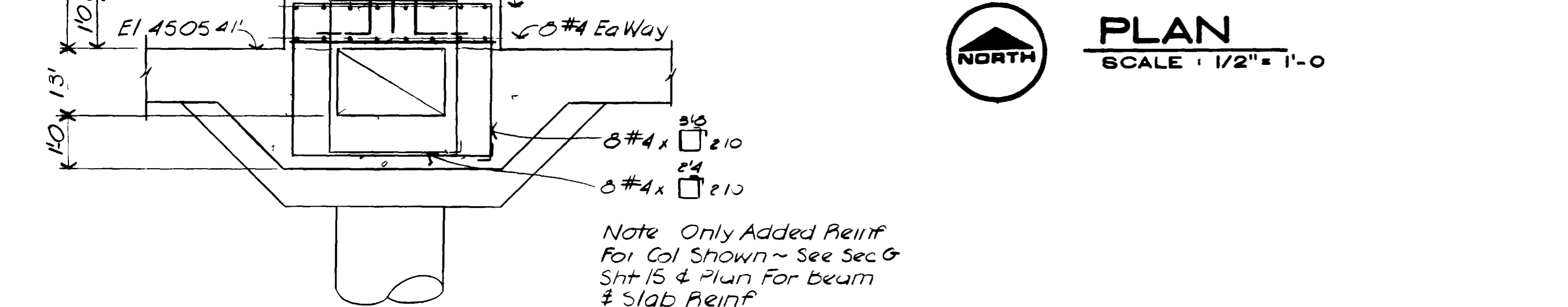


**SECTION G**  
SCALE: 1/2" = 1'-0"  
16



**MECHANICAL OPNG DETAIL - TYP**

**PLAN SECTION H**  
NO SCALE  
16



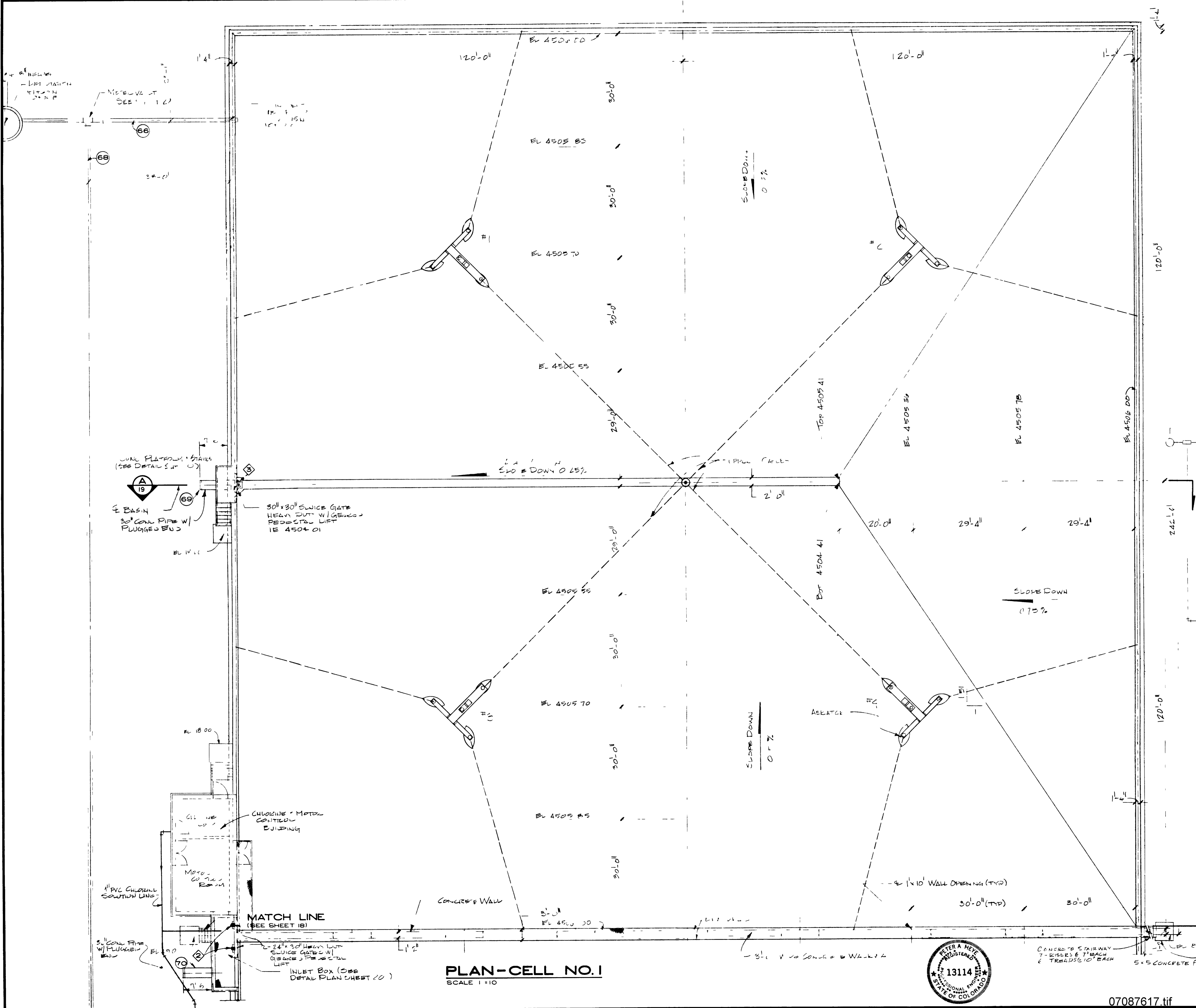
**PLAN**  
SCALE: 1/2" = 1'-0"  
16

**METER VAULT**

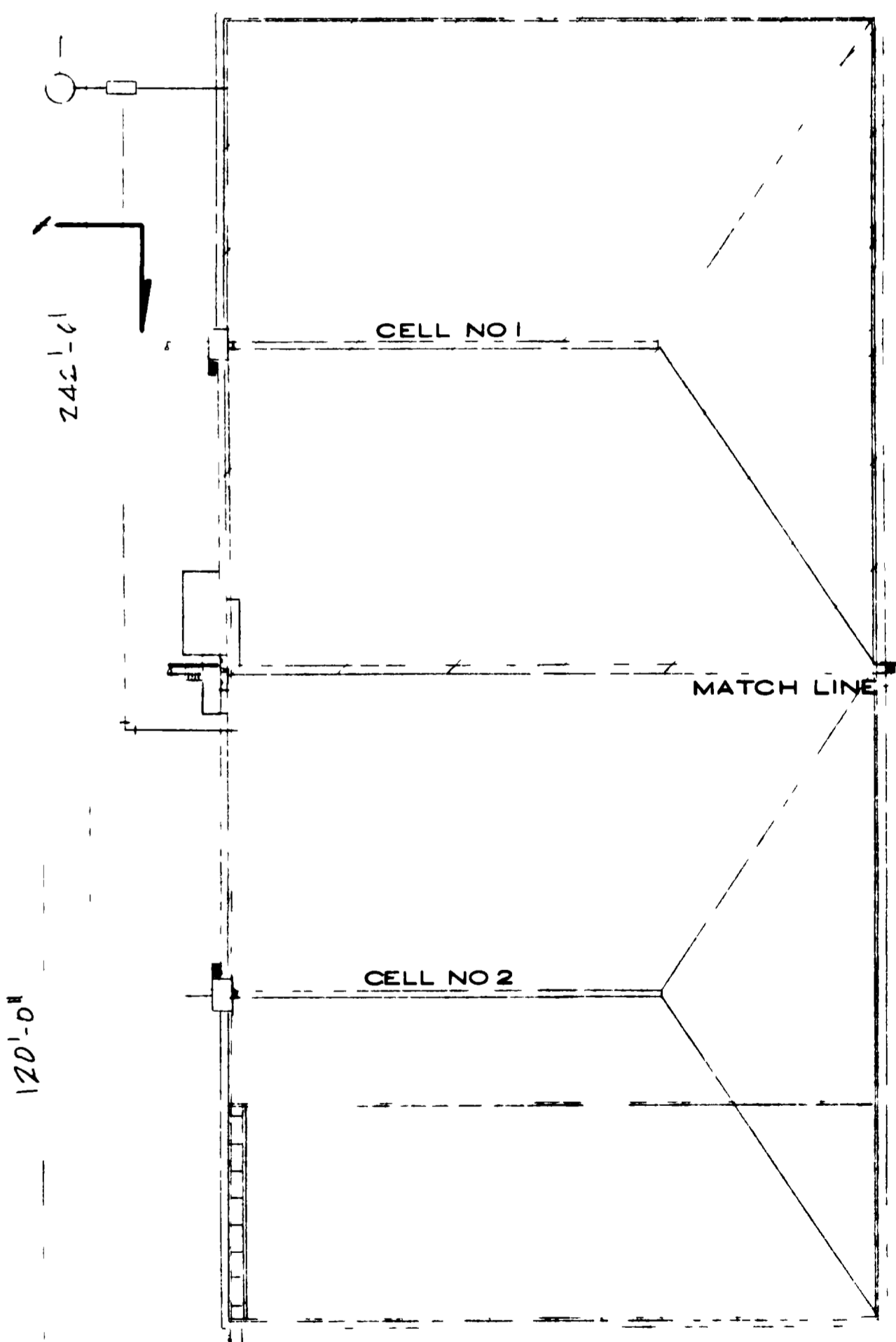
APPROVED FOR CONSTRUCTION  
BY THE  
COMMISSIONERS  
DATE February 1982

**GRAND JUNCTION / MESA COUNTY, COLORADO**  
**PERSIGO WASH INTERIM WASTEWATER TREATMENT PLANT**  
STRUCTURAL  
**AERATED BASIN**  
MISCELLANEOUS DETAILS  
**HENNINGSON, DURHAM & RICHARDSON, INC.**  
ENGINEERS PLANNERS CONSULTANTS  
DENVER COLORADO GRAND JUNCTION COLORADO

JOB NO. 735510	DESIGNED RLS	CHECKED J.M.H.	DRAWN R.N.T.	APPROVED J.M.H.	DATE 2/12/82	SHEET 16 OF 28
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KEY MAP  
SCALE 1" = 50'



"AS RECORDED"  
FROM FOUNDATION  
PROVIDED BY THE  
CONTRACTORS  
DATE February 1982

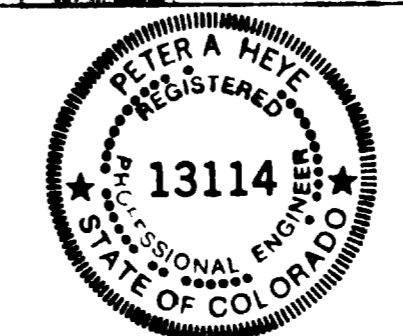
GRAND JUNCTION / MESA COUNTY,  
COLORADO  
**PERSIGO WASH INTERIM  
WASTEWATER TREATMENT  
PLAN**

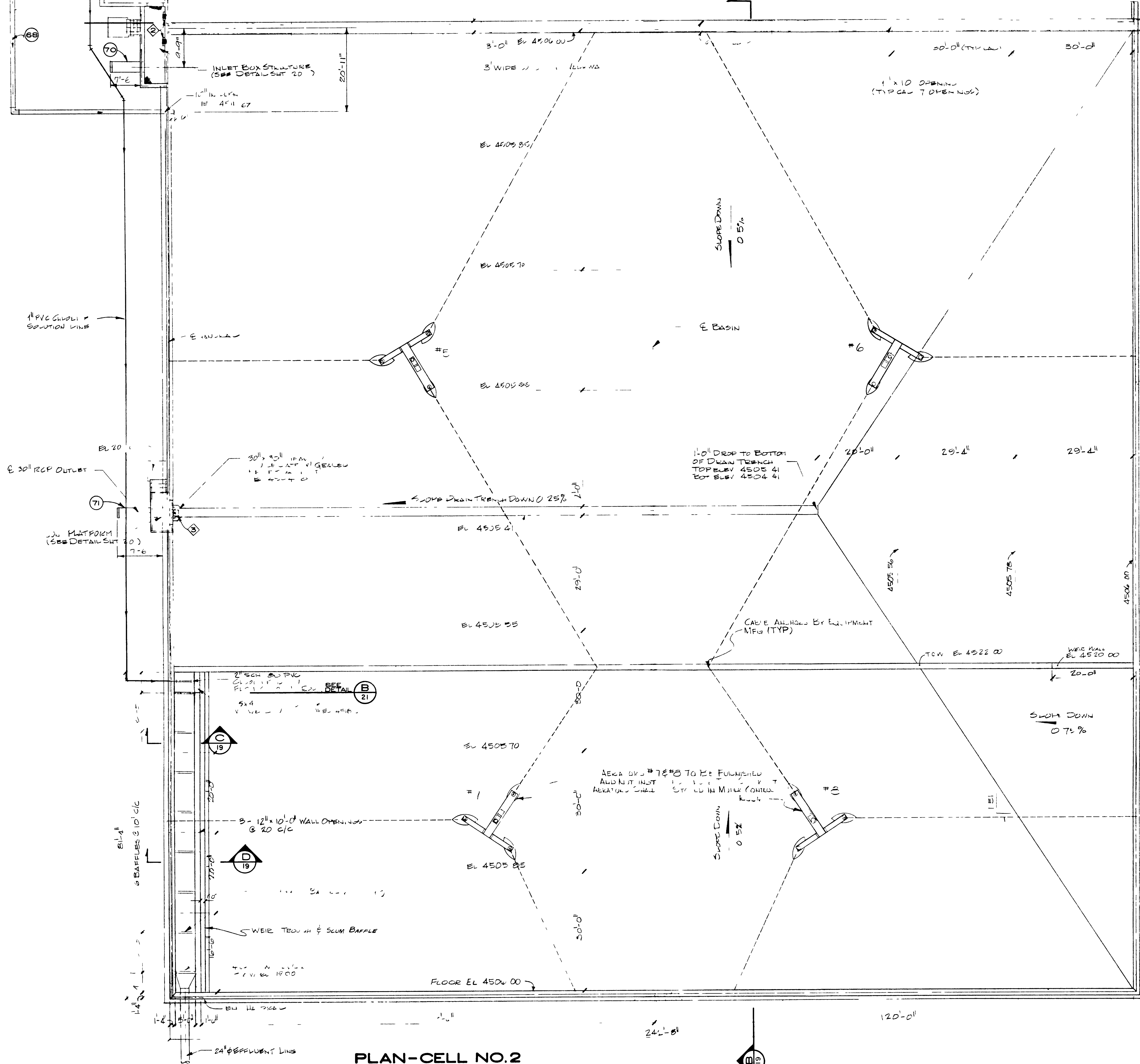
PROCESSING  
**AERATED BASIN PLAN  
CELL NO 1**  
(FLOW EQUALIZATION BASIN)

**HENNINGSON, DURHAM & RICHARDSON, INC.**  
ENGINEERS PLANNERS CONSULTANTS  
DENVER COLORADO GRAND JUNCTION COLORADO

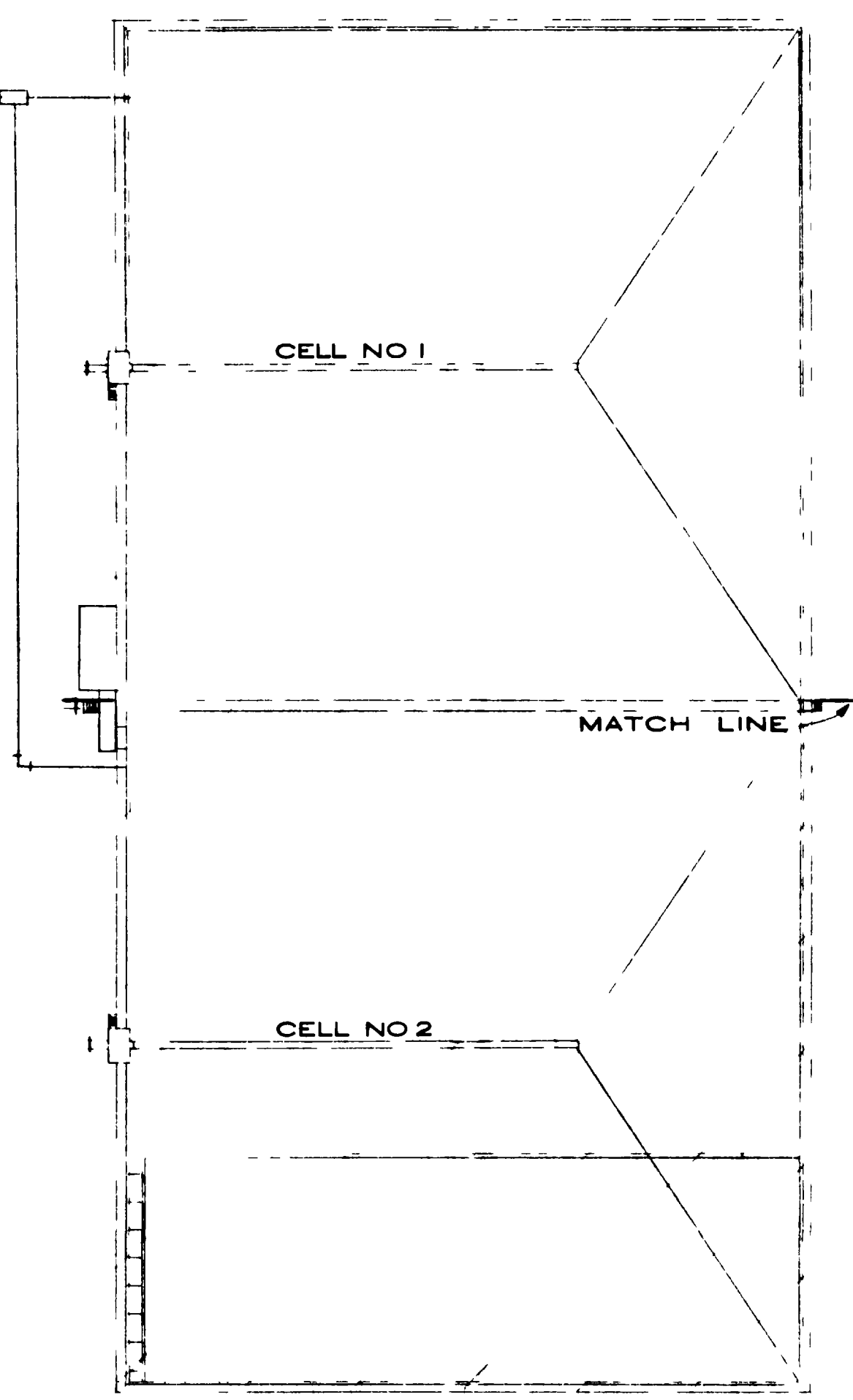
JOB: 735510  
DESIGNED: J. HORST  
CHECKED: J. HORST  
APPROVED: S. HENRICHSEN  
DATE: JAN. 31, 80  
SHEET: 17 of 28

**PLAN-CELL NO. 1**  
SCALE 1" = 10'





MATCH LINE  
(SEE SHEET 17)



KEY MAP  
SCALE 1 = 50



"AS RECORDED"  
FROM INFORMATION  
PROVIDED BY THE  
CONTRACTORS  
DATE February 1982



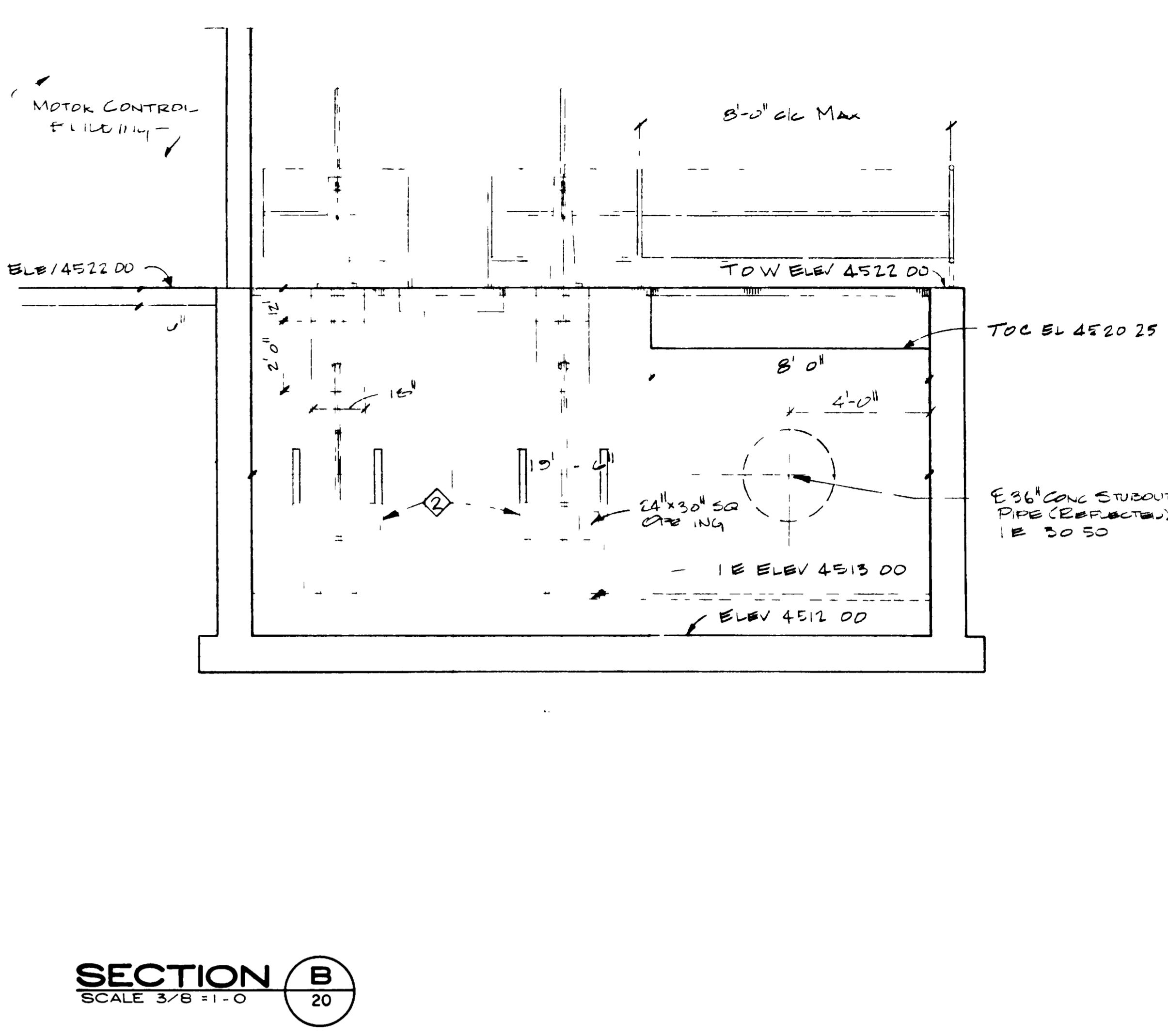
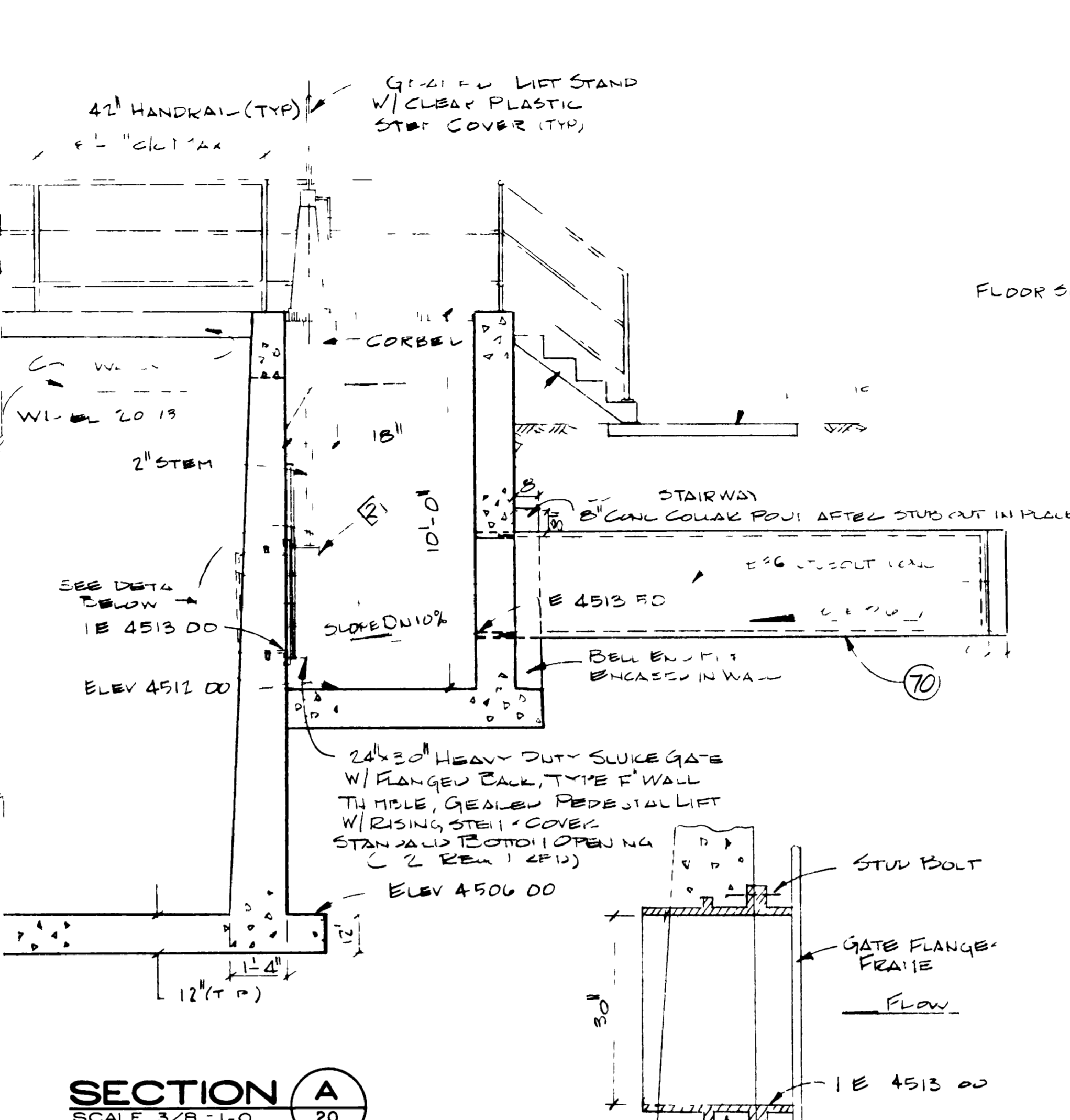
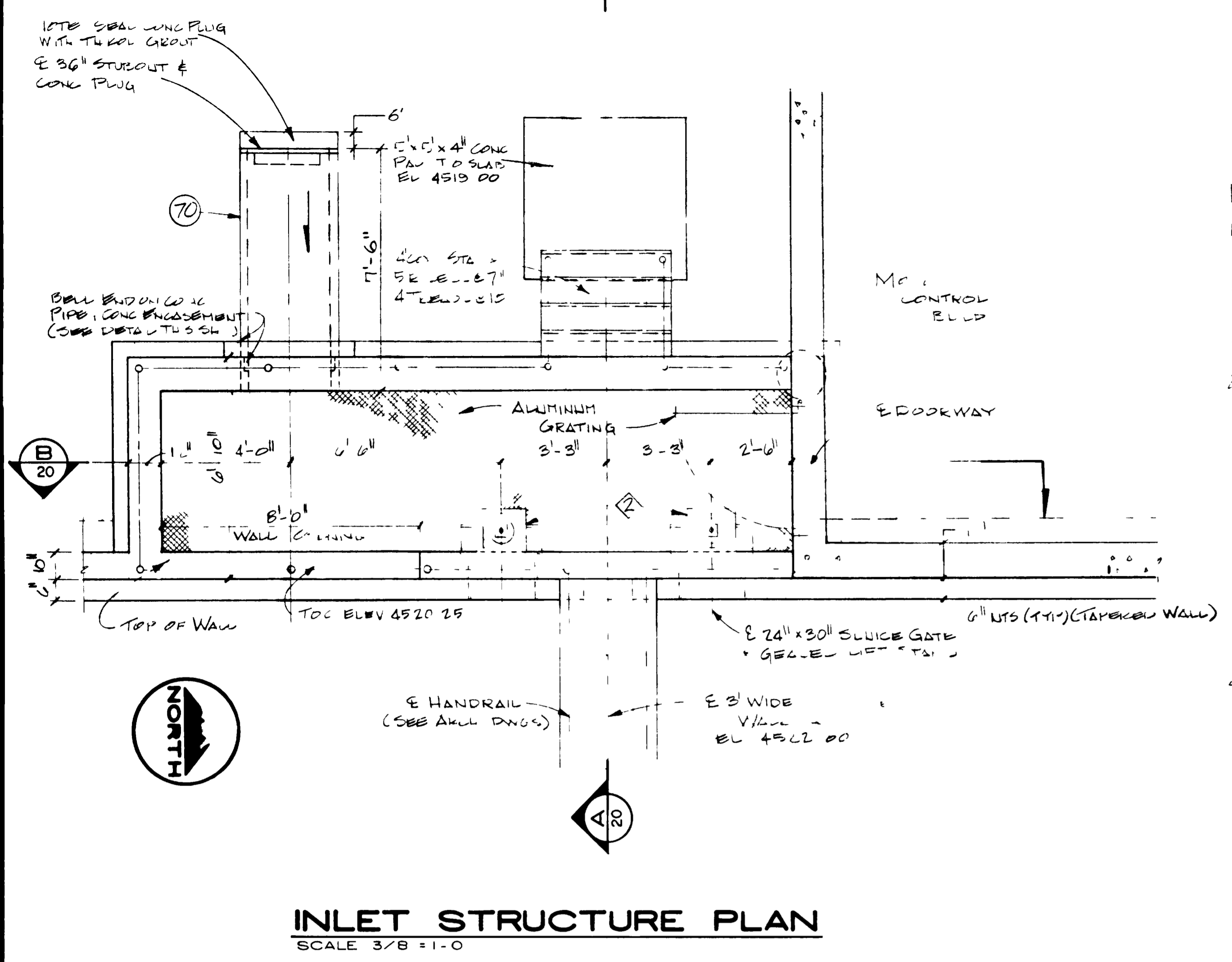
GRAND JUNCTION / MEBA COUNTY,  
COLORADO  
**PERSIGO WASH INTERIM  
WASTEWATER TREATMENT  
PLAN 1**  
PROCESSING  
**AERATED BASIN PLAN  
CELL NO 2**  
(FLOW EQUALIZATION BASIN)

**HENNINGSON, DURHAM & RICHARDSON, INC.**  
ENGINEERS PLANNERS CONSULTANTS  
DENVER COLORADO GRAND JUNCTION COLORADO

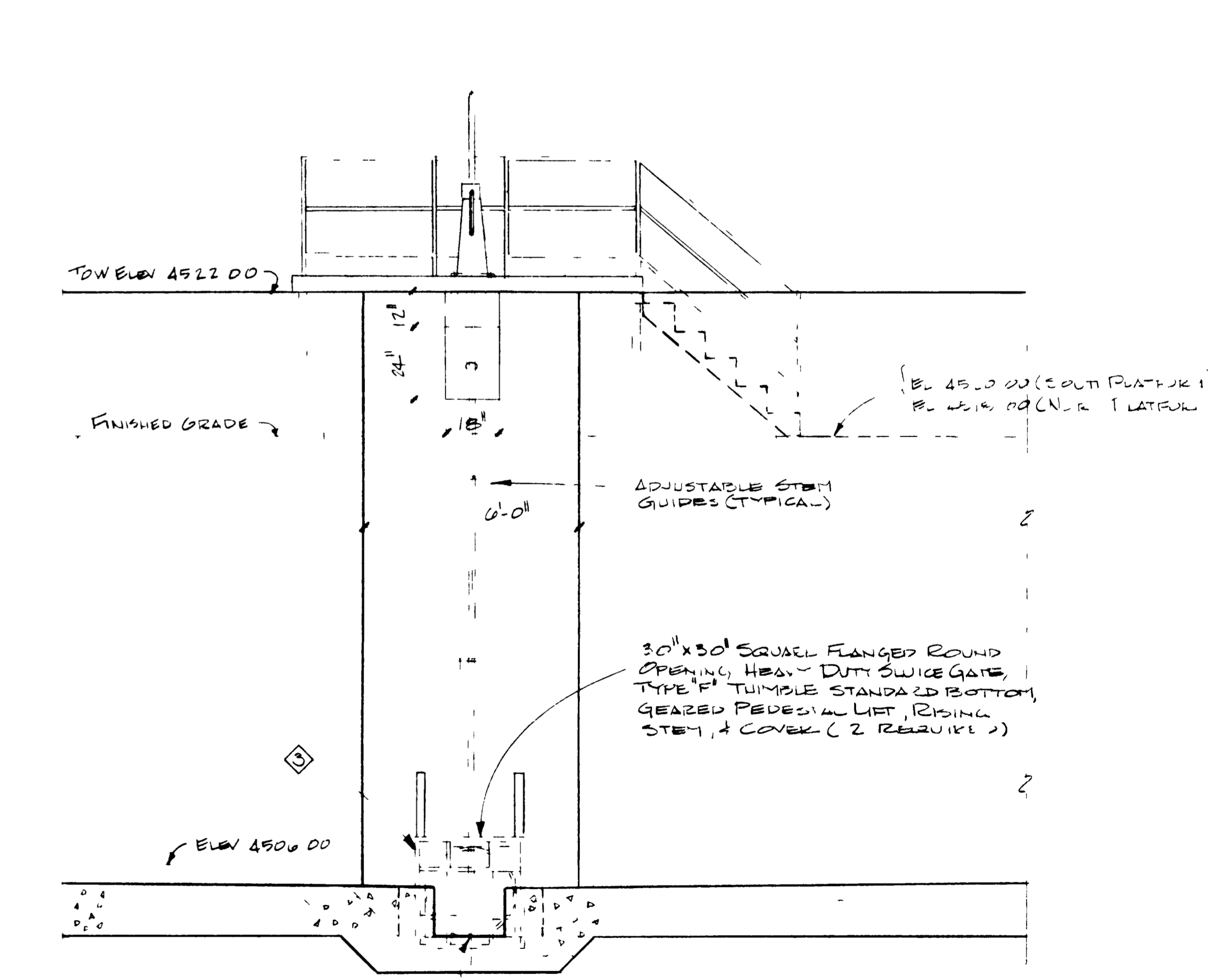
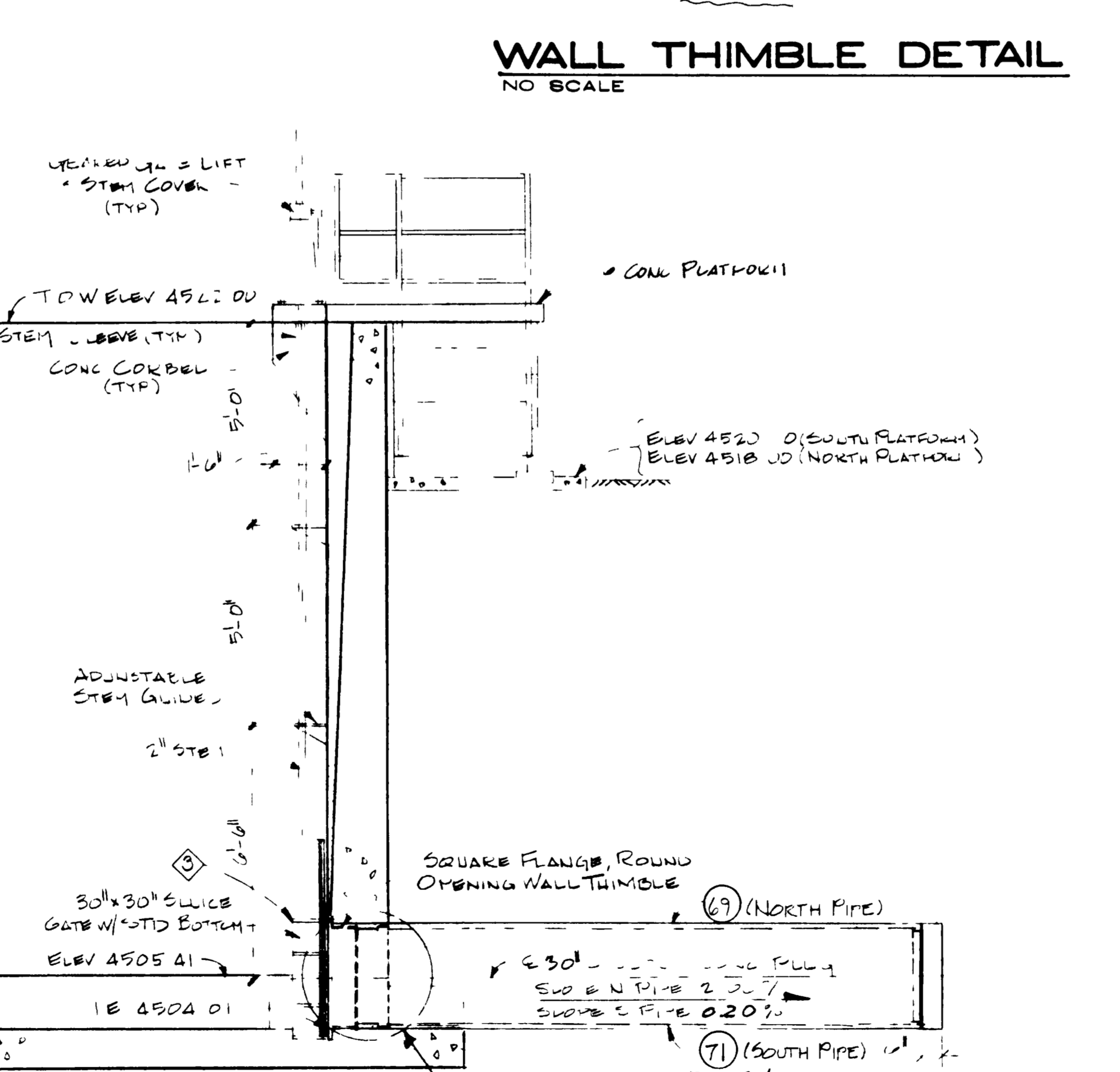
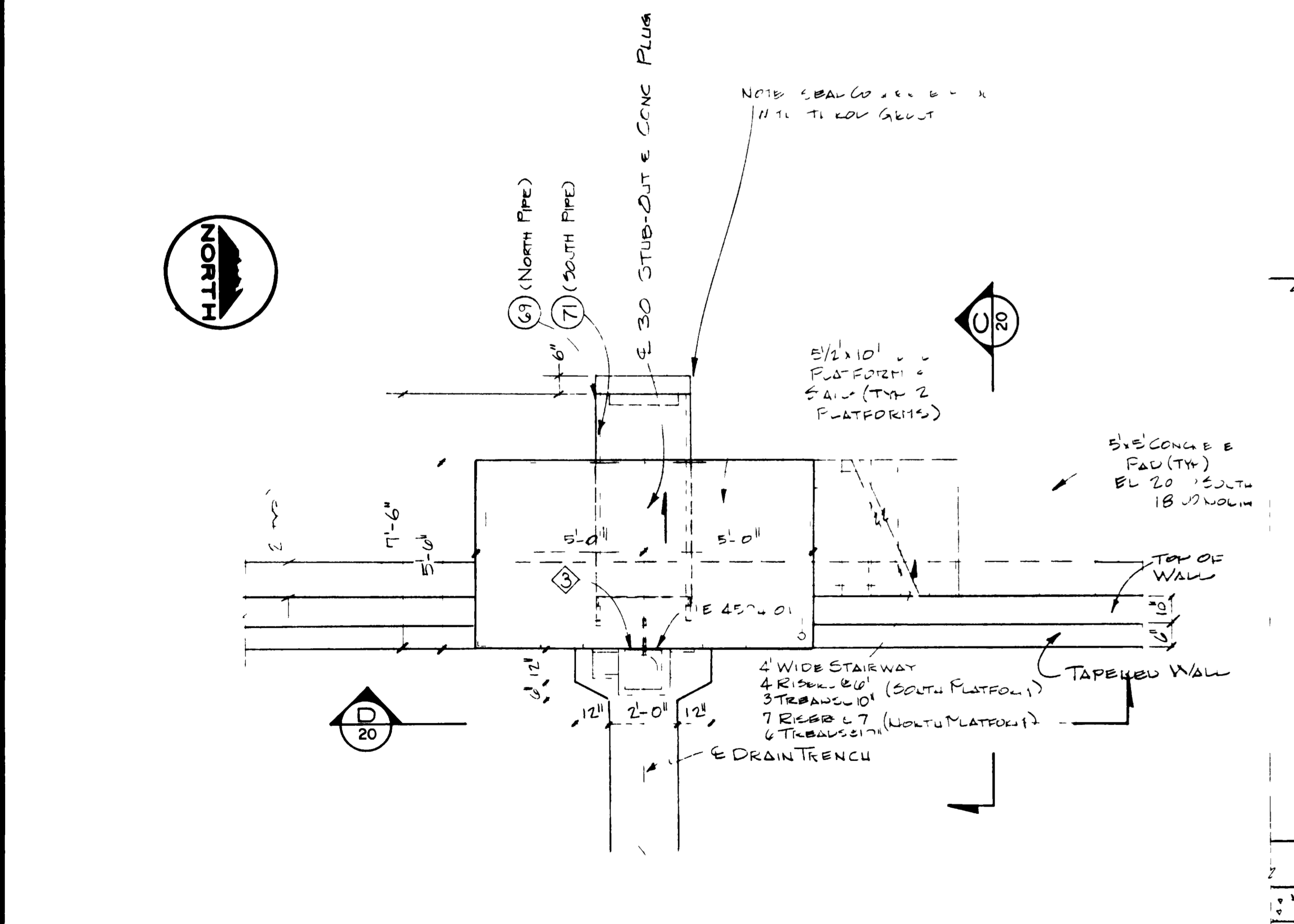
JOB 735510  
DESIGNED J. HORST  
CHECKED J. HORST  
APPROVED K. HENRICHSEN  
DATE JAN 31, 80  
SHEET 18 of 28

**PLAN-CELL NO. 2**  
SCALE 1 = 10





**WALL THIMBLE DETAIL**  
NO SCALE



**DETAIL I**  
NO SCALE

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

"AS RECORDED"  
FROM INFORMATION  
PROVIDED BY THE  
CONTRACTORS  
DATE FEBRUARY 1982

**GRAND JUNCTION / MESA COUNTY, COLORADO**  
**PERSIGO WASH INTERIM WASTEWATER TREATMENT PLANT**  
PROCESSING  
**AERATED BASINS**

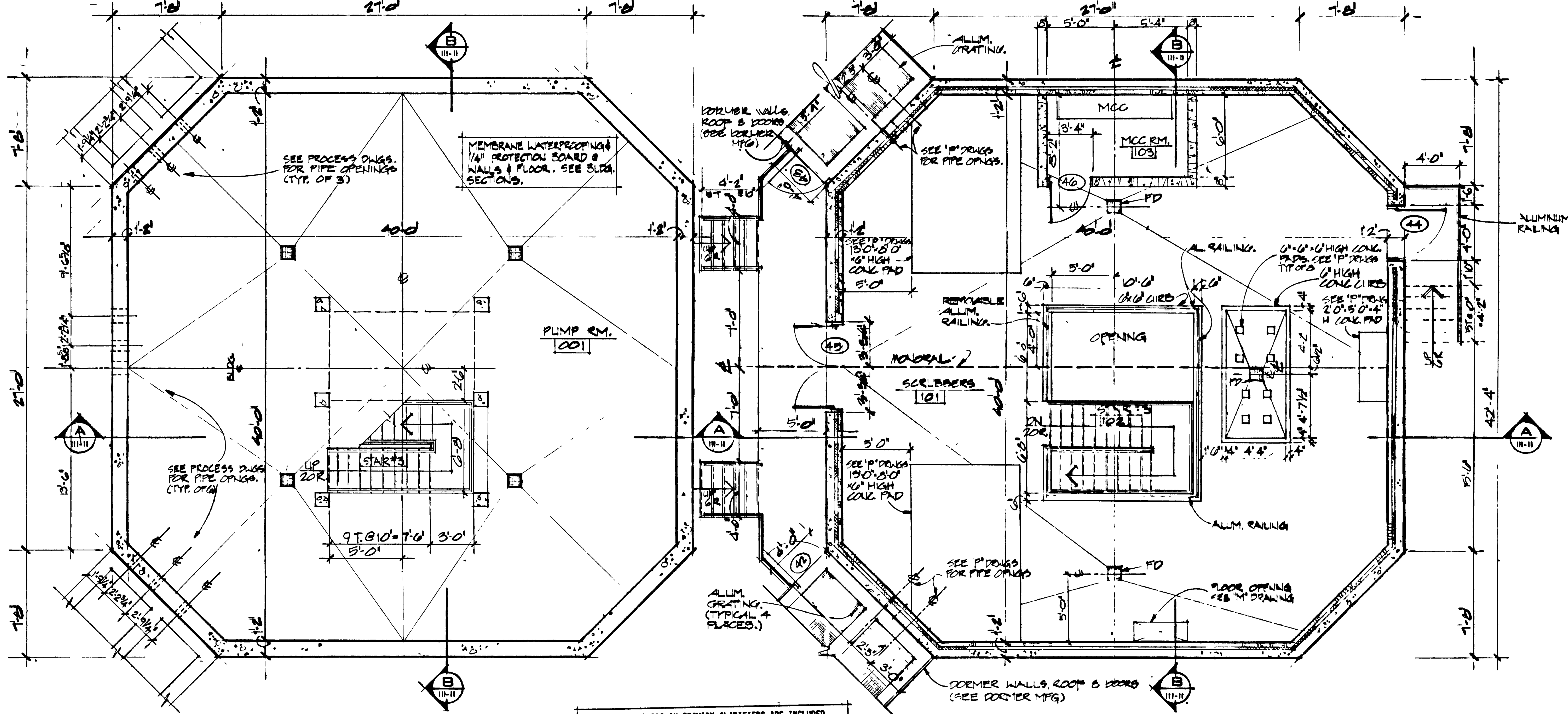
SECTIONS      DETAILS

**HENNINGSON, DURHAM & RICHARDSON, INC.**  
BUSINESS PLANNERS      CONSULTANTS  
DENVER COLORADO      GRAND JUNCTION COLORADO

JOB NO. 735510	DESIGNED BY J. HORST	CHECKED BY J. HORST	DRAWN BY
DATE JAN. 3, 80	APPROVED BY K. MEADOR	APPROVED BY J. HENNINGSON	DATE JAN. 3, 80

20 of 28

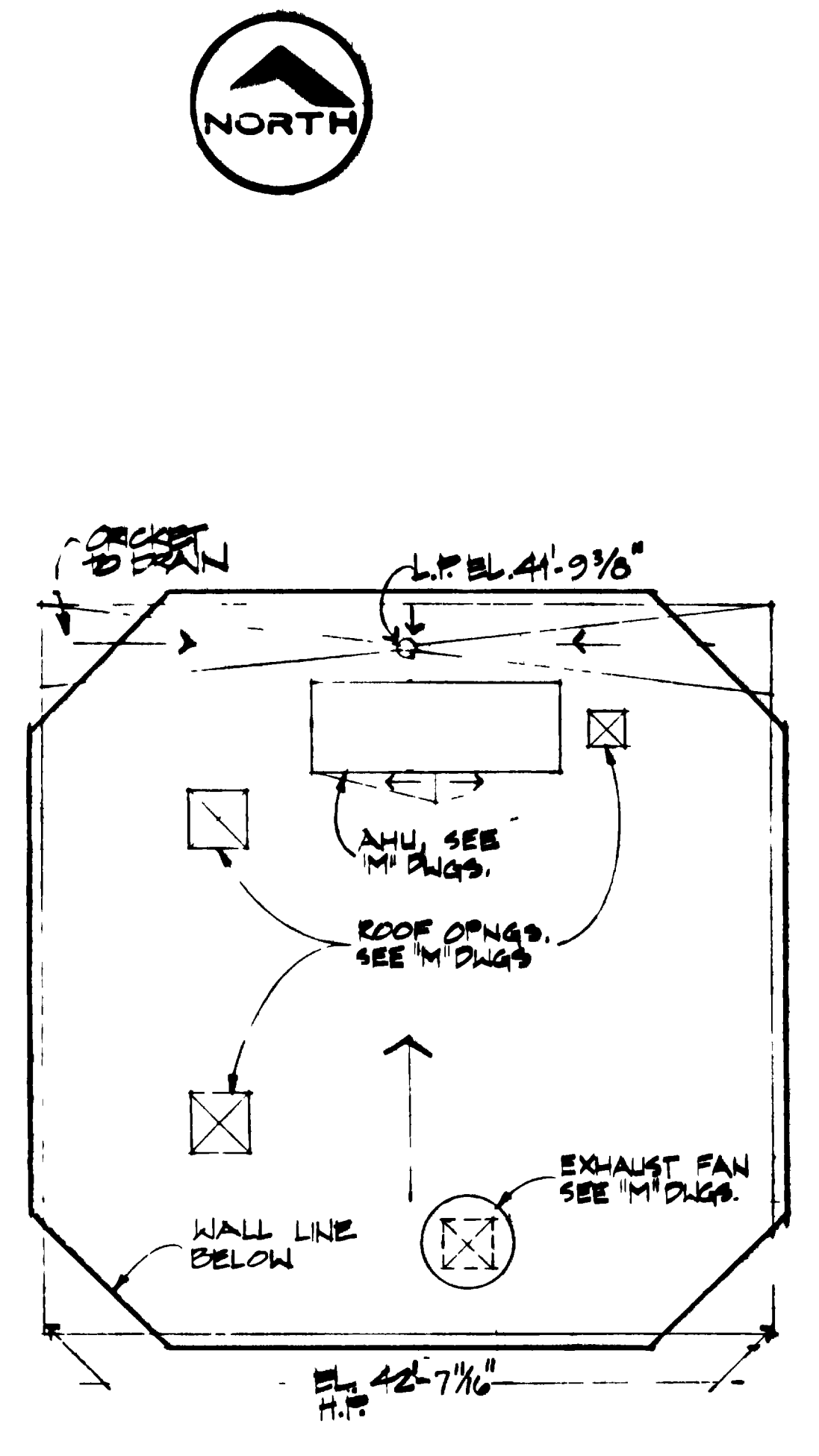




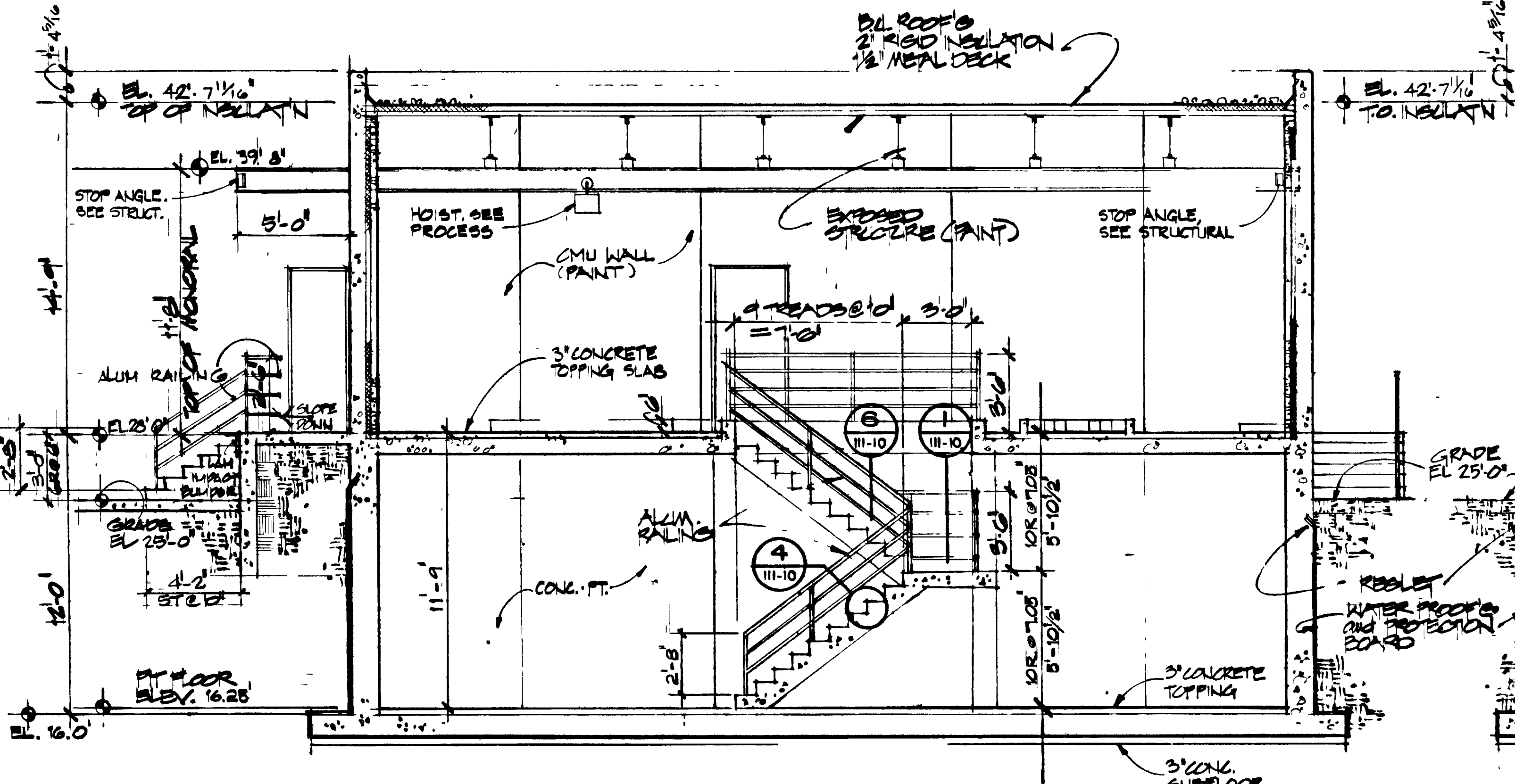
**PIT FLOOR PLAN**  
SCALE: 1/4" = 1'-0"

NOTE: DOME COVERS ON PRIMARY CLARIFIERS ARE INCLUDED IN CONSTRUCTION SCHEDULE "C." SEE SPECIFICATIONS.

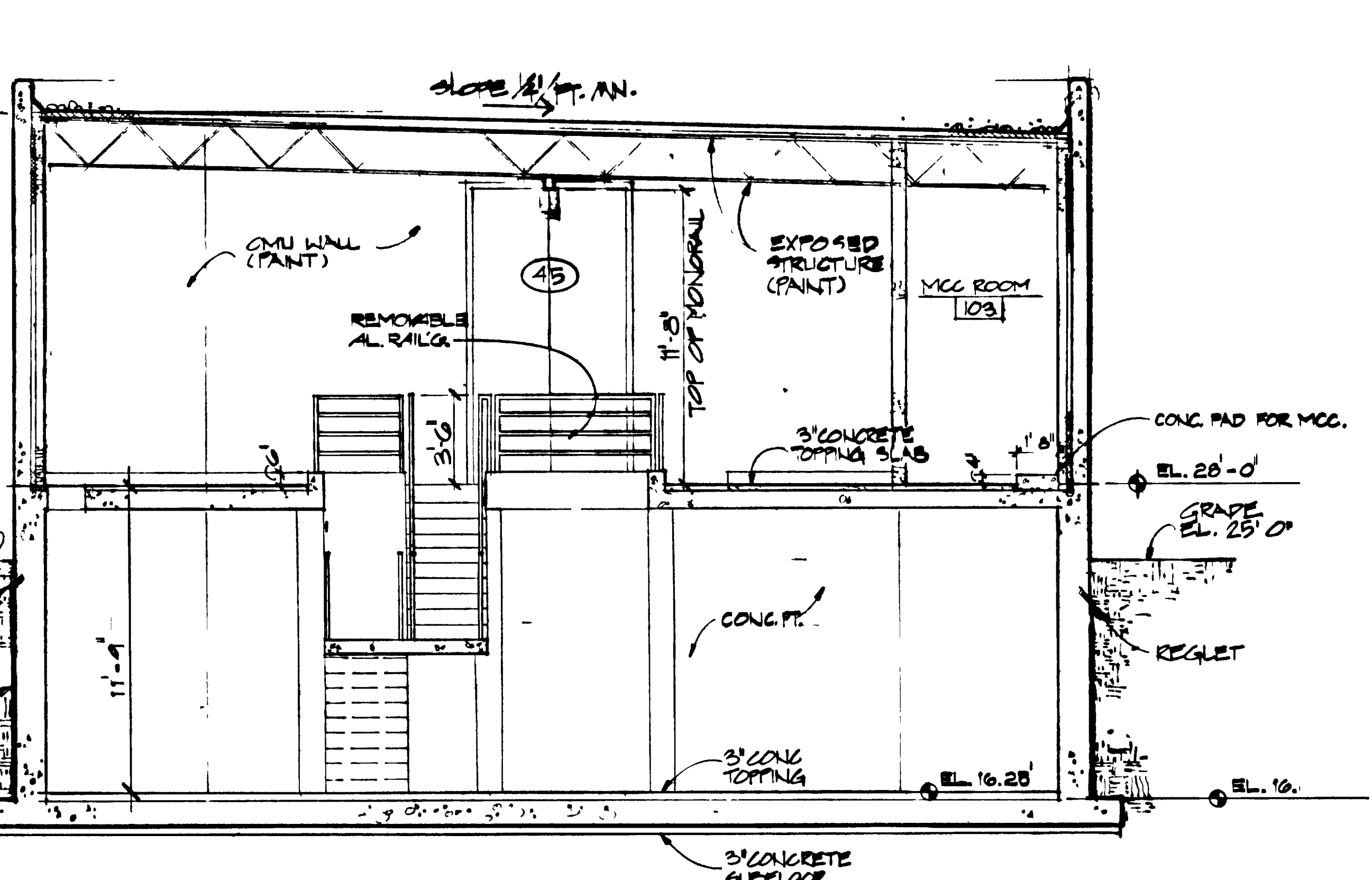
**GROUND FLOOR PLAN**  
SCALE: 1/4" = 1'-0"



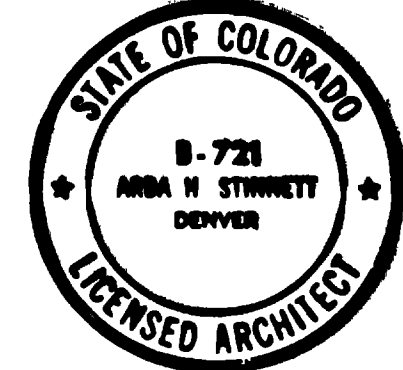
**ROOF PLAN**  
SCALE: 1/8" = 1'-0"



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



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



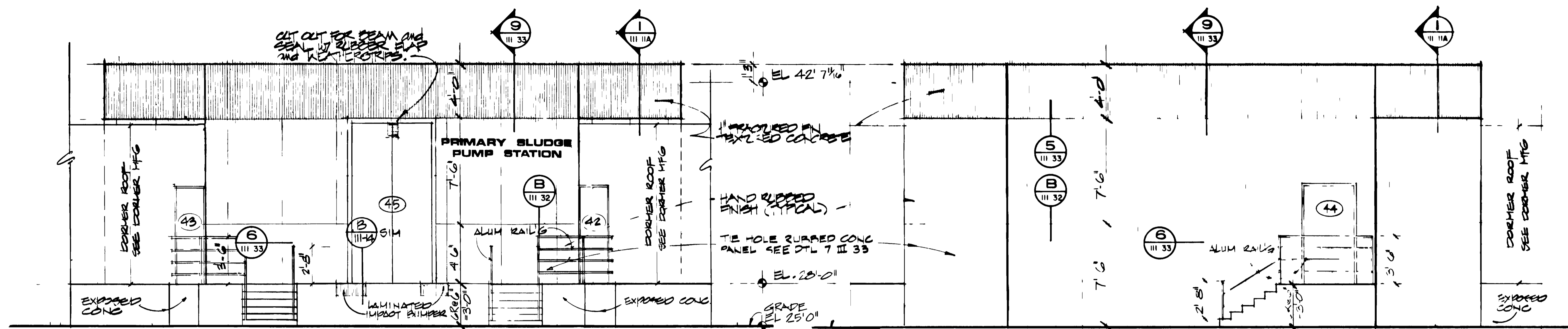
GRAND JUNCTION / MESA COUNTY, COLORADO  
**PERSIGO WASH WASTEWATER TREATMENT PLANT**  
 SECTION III ARCHITECTURAL  
**PRIMARY SLUDGE PUMP STATION**  
 PLANS, SECTIONS

**MINNINGSON, DURNHAM & RICHARDSON, INC.**  
 ENGINEERS - PLANNERS - CONSULTANTS  
 DENVER, COLORADO GRAND JUNCTION, COLORADO

DESIGNED BY: J. KRONE  
 CHECKED BY: S. STINNETT  
 DATE: NOV. 1980

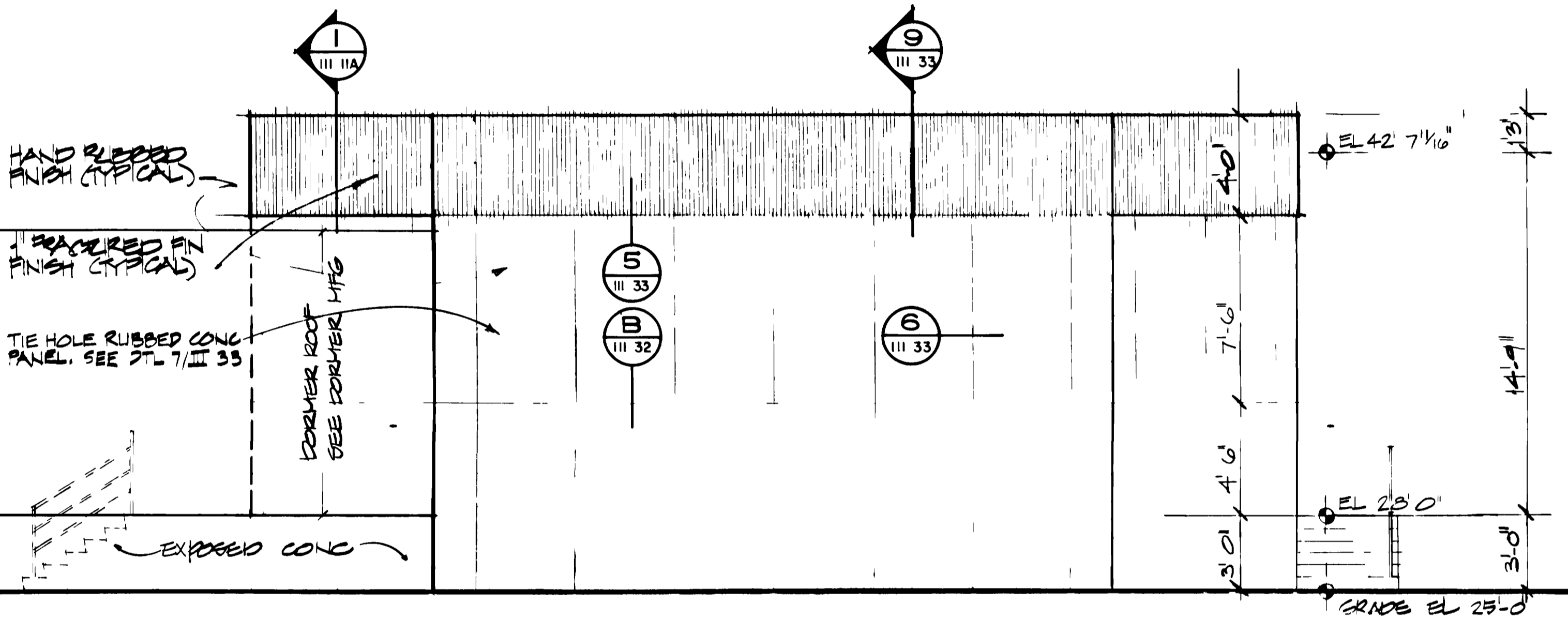
"AS RECORDED"  
 FROM INFORMATION PROVIDED BY THE CONTRACTOR  
 DATE: NOV. 1980

NO.	DATE	DESCRIPTION	BY	CHKD.	APPROV.
1	11/17/80	As BUILT	DJR		

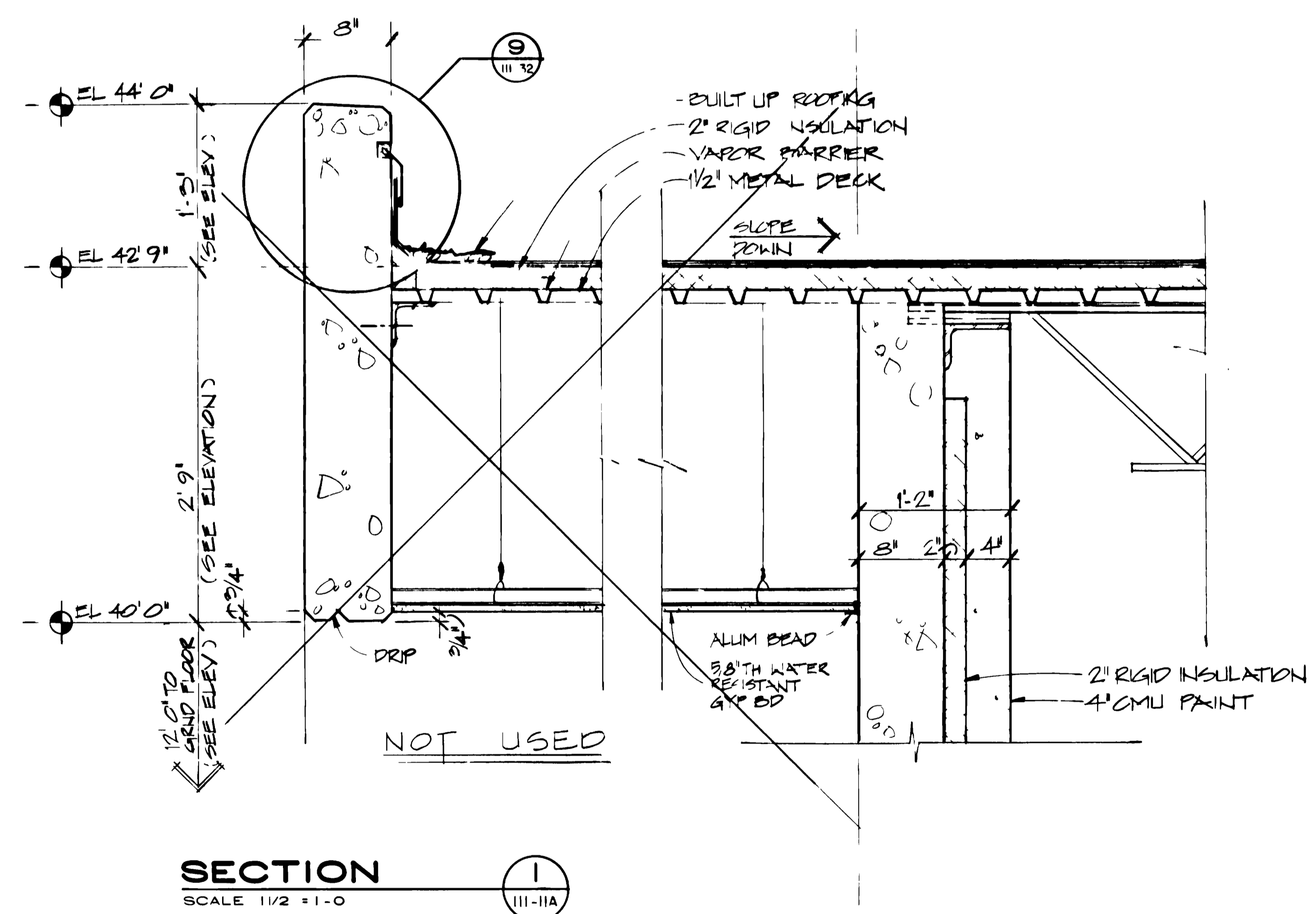


**WEST ELEVATION**  
SCALE 1/4" = 1'-0"

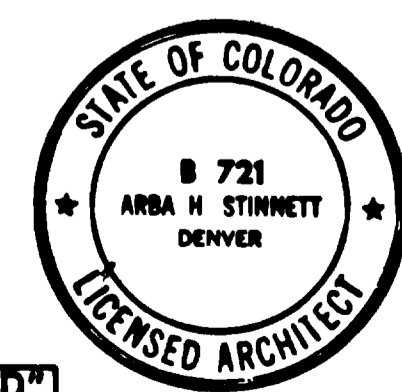
**EAST ELEVATION**  
SCALE 1/4" = 1'-0"



**SOUTH ELEVATION  
(NORTH ELEVATION  
OPPOSITE HAND)**  
SCALE 1/4" = 1'-0"



**SECTION**  
SCALE 1/2" = 1'-0"



"AS RECORDED"  
FROM INFORMATION  
PROVIDED BY THE  
CONTRACTOR  
DATE MAY 1988

**GRAND JUNCTION / MESA COUNTY,  
COLORADO**  
**PERSIGO WASH  
WASTEWATER TREATMENT  
PLANT**

SECTION III ARCHITECTURAL  
**PRIMARY SLUDGE  
PUMP STATION**

DETAILS, ELEVATIONS

**HENNINGSON, DURHAM & RICHARDSON, INC.**  
ENGINEERS PLANNERS CONSULTANTS  
DENVER COLORADO GRAND JUNCTION COLORADO

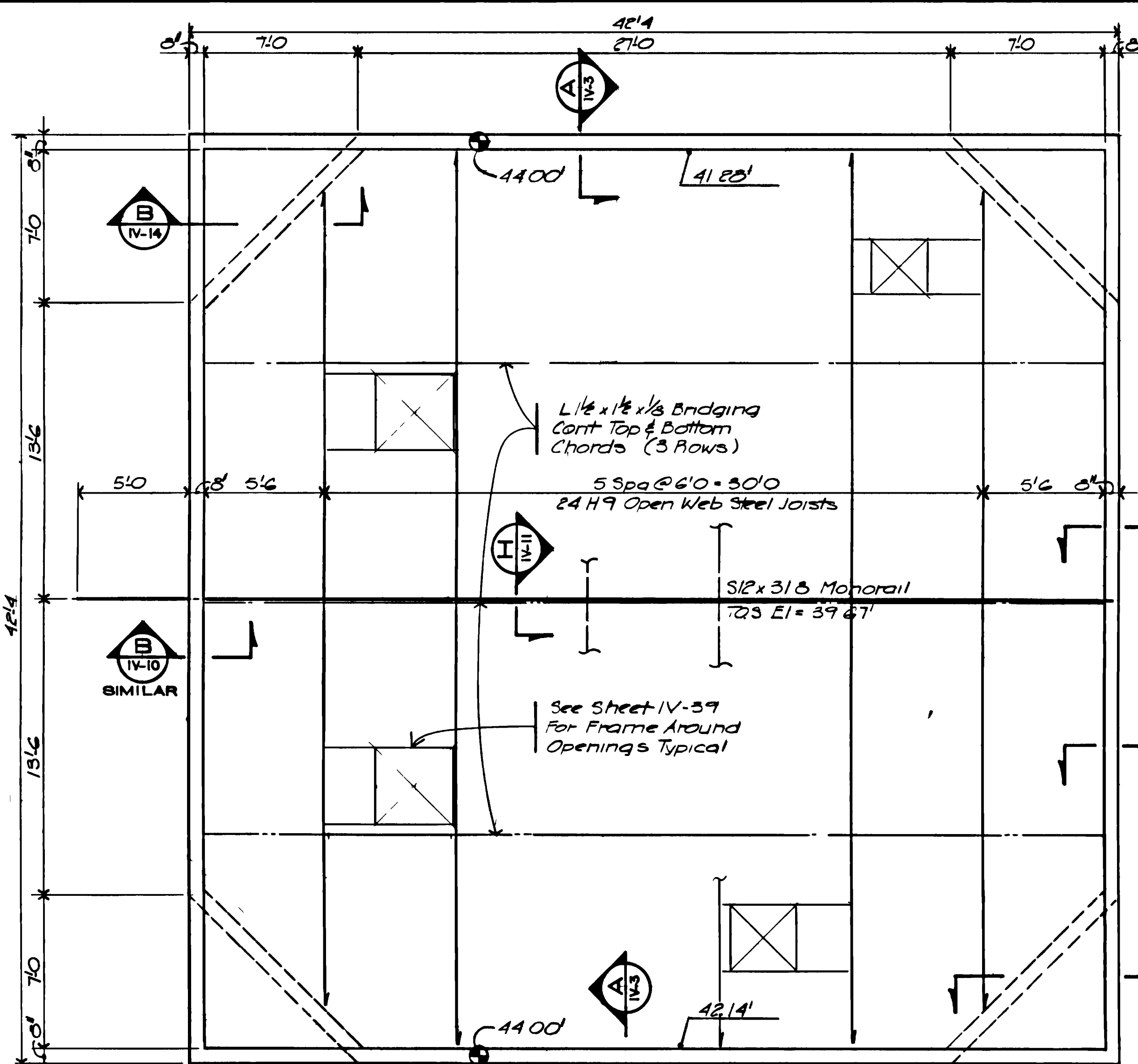
DESIGNED P. KWONH  
CHECKED A. STINNETT  
APPROVED K. HENRICHSEN  
DATE NOV 1980

DATE MAY 1988

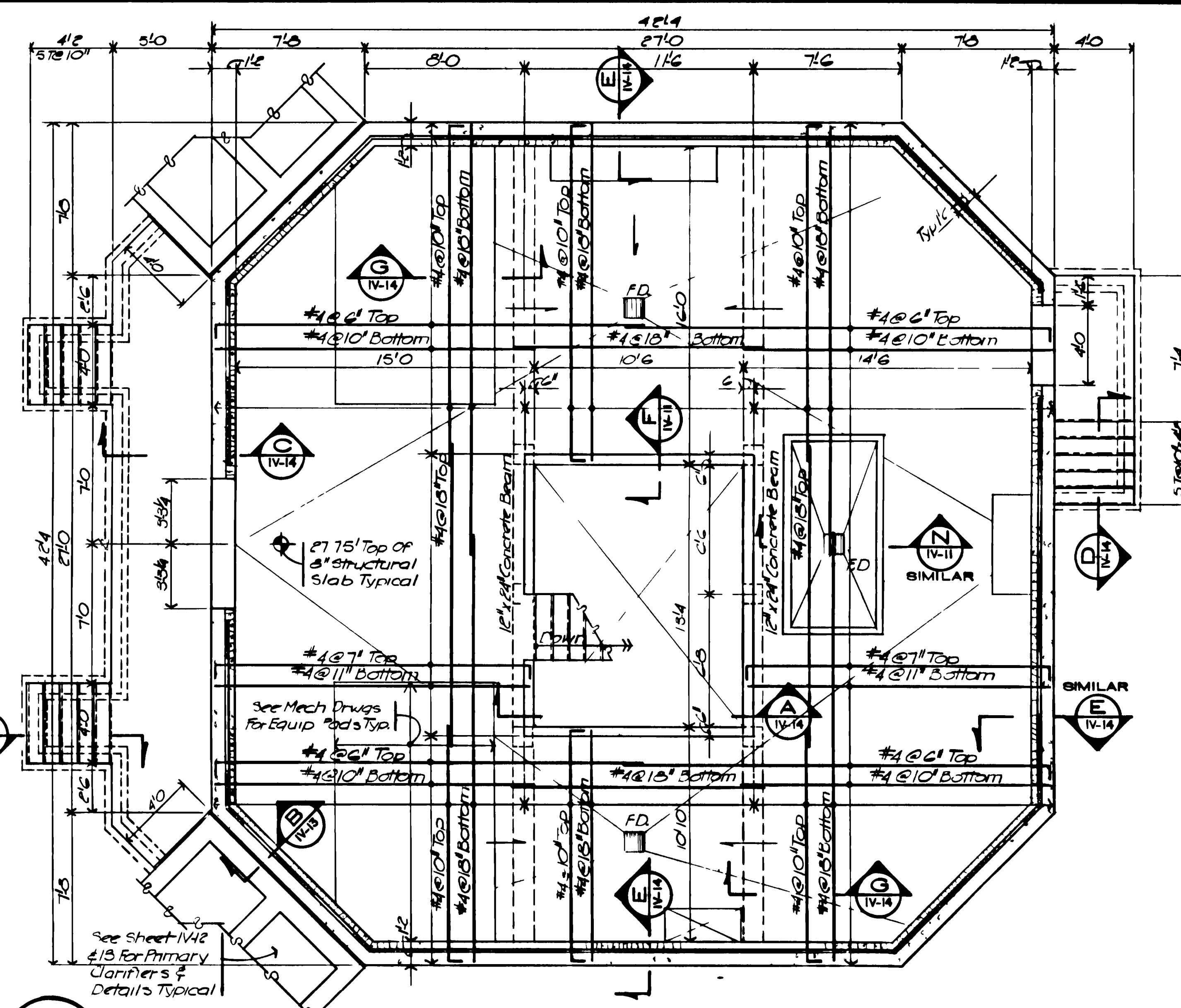
NO.	DATE	DESCRIPTION	BY	APPROV.
1	4/1/88	As Built	DA	



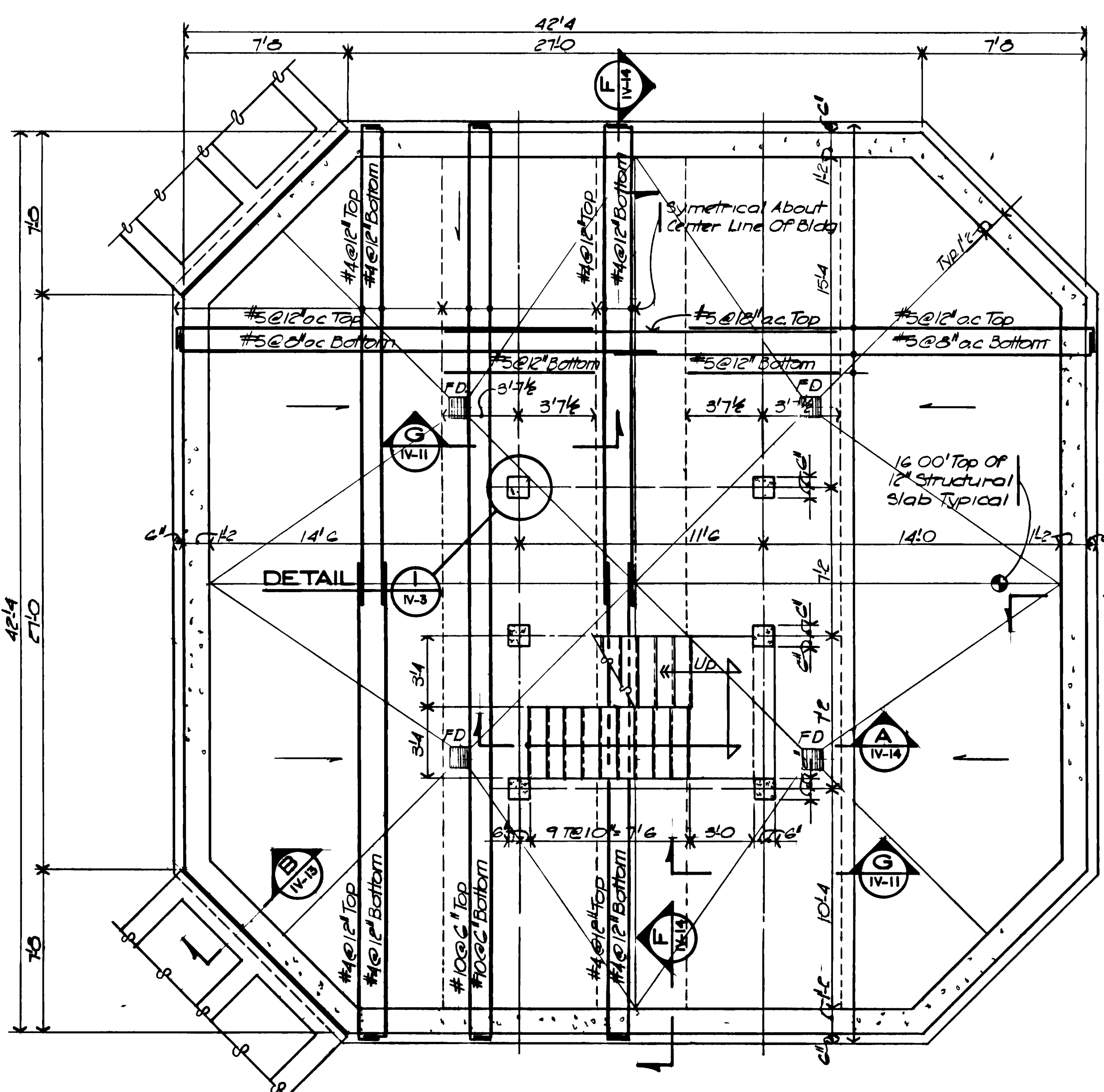




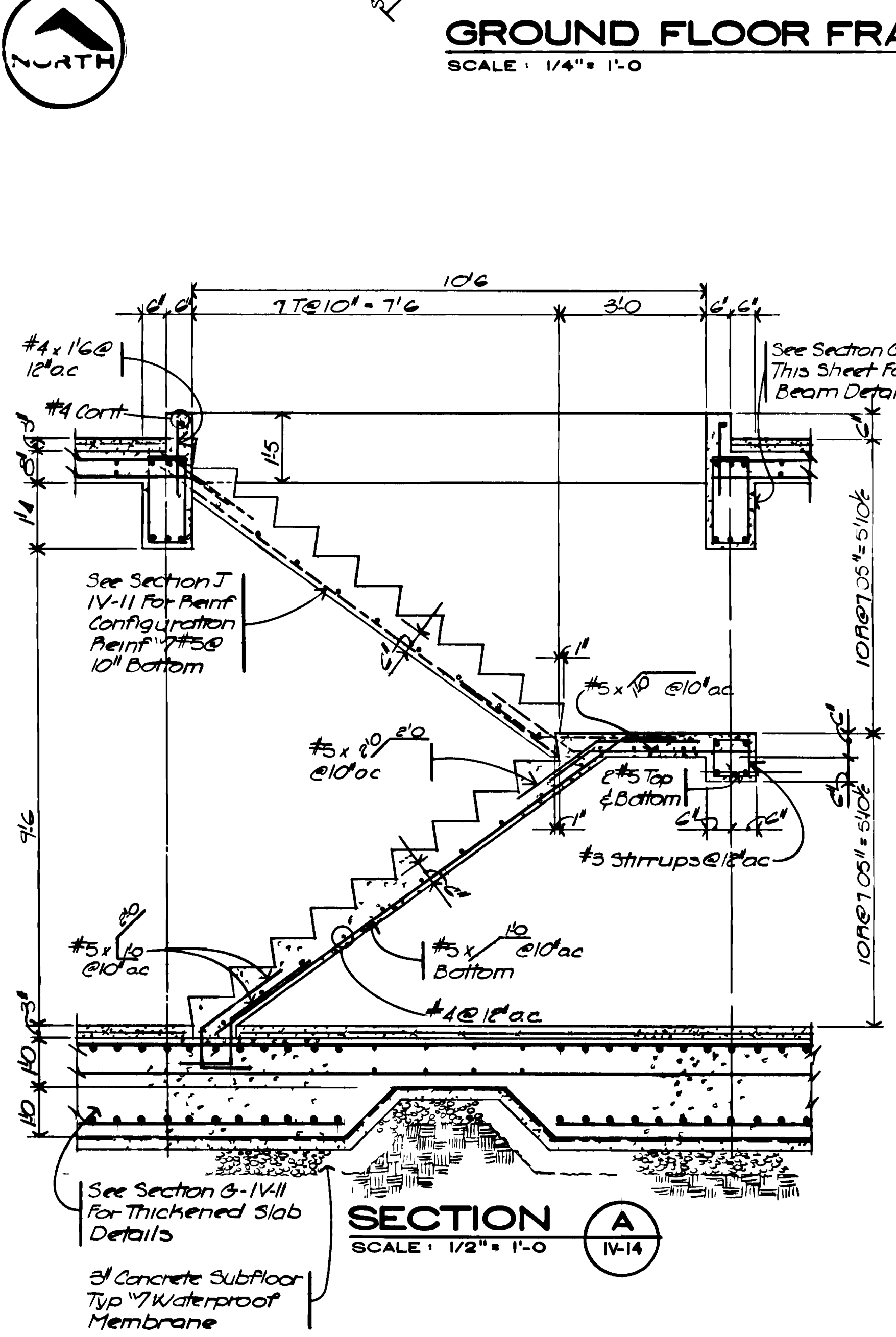
**ROOF FRAMING PLAN**  
SCALE: 1/4" = 1'-0"



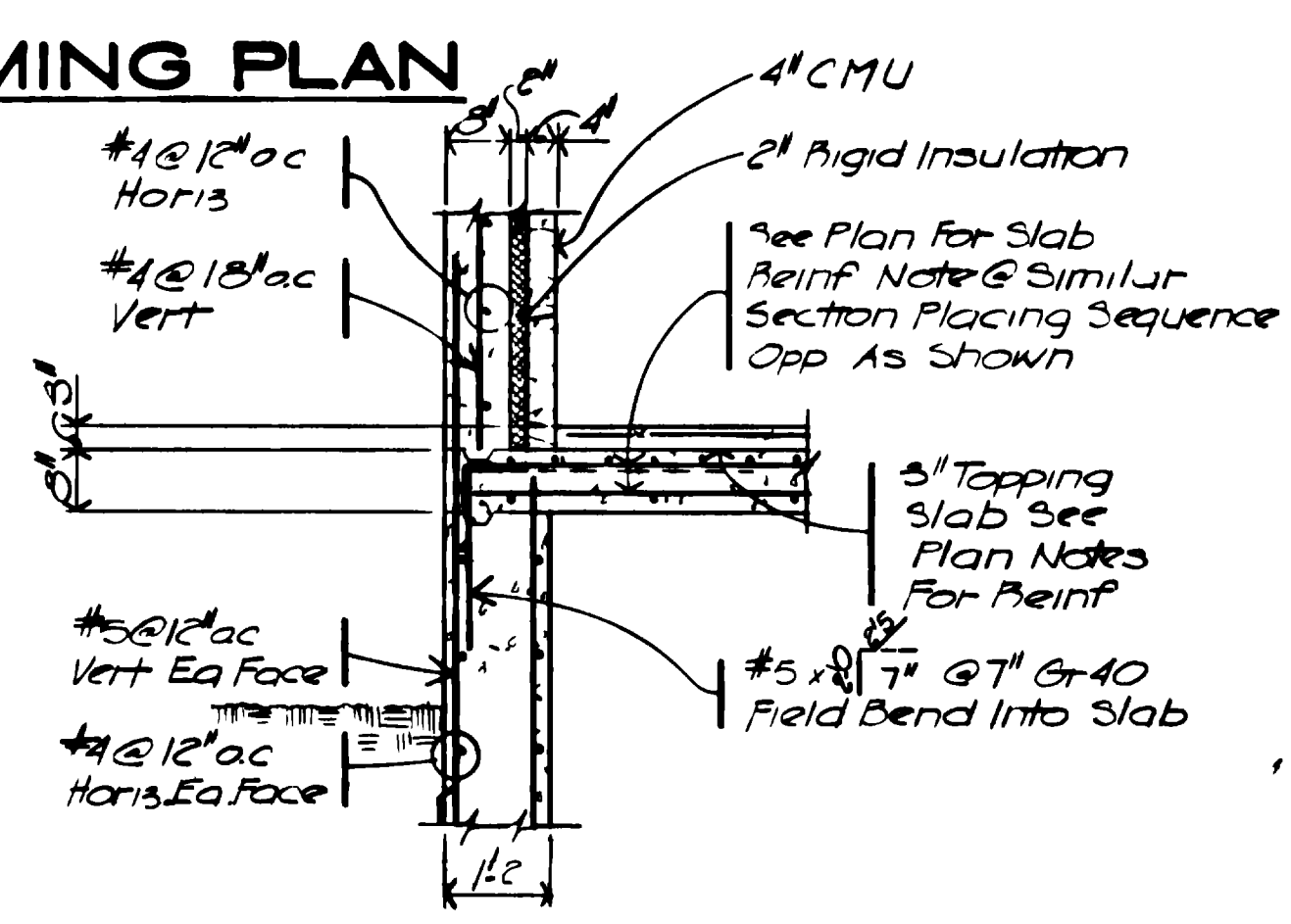
**GROUND FLOOR FRAMING PLAN**  
SCALE: 1/4" = 1'-0"



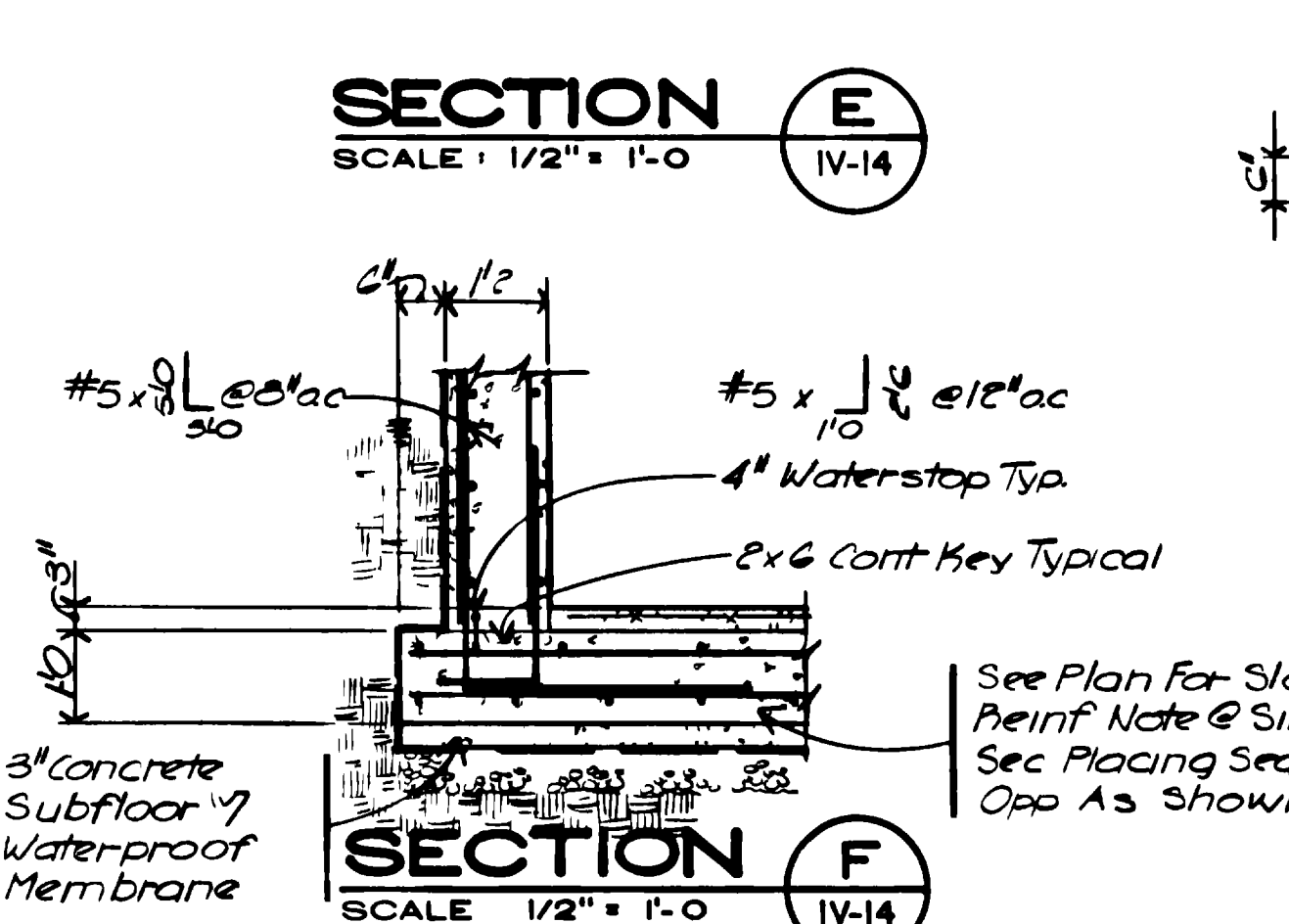
**PIT FLOOR FRAMING PLAN**  
SCALE: 1/4" = 1'-0"



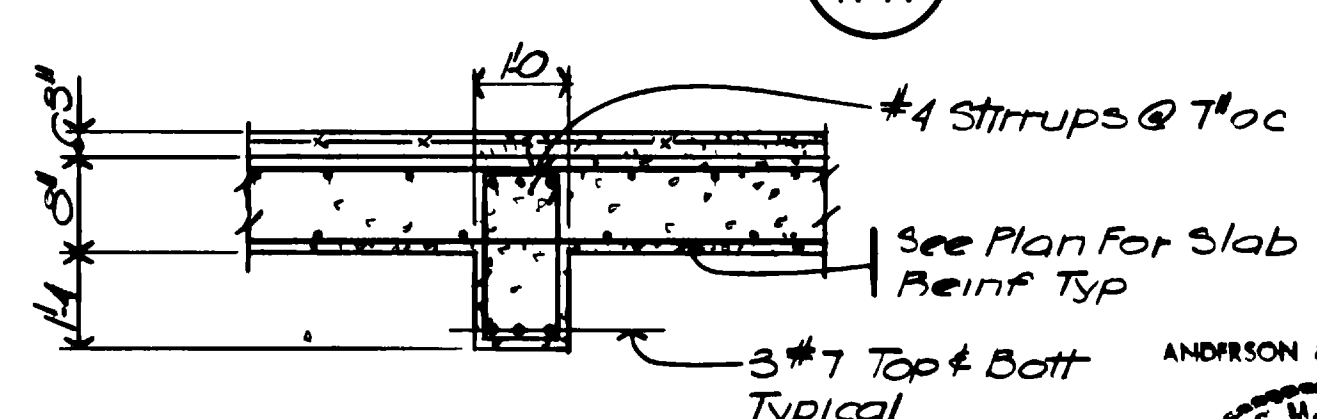
**SECTION A**  
SCALE: 1/2" = 1'-0"



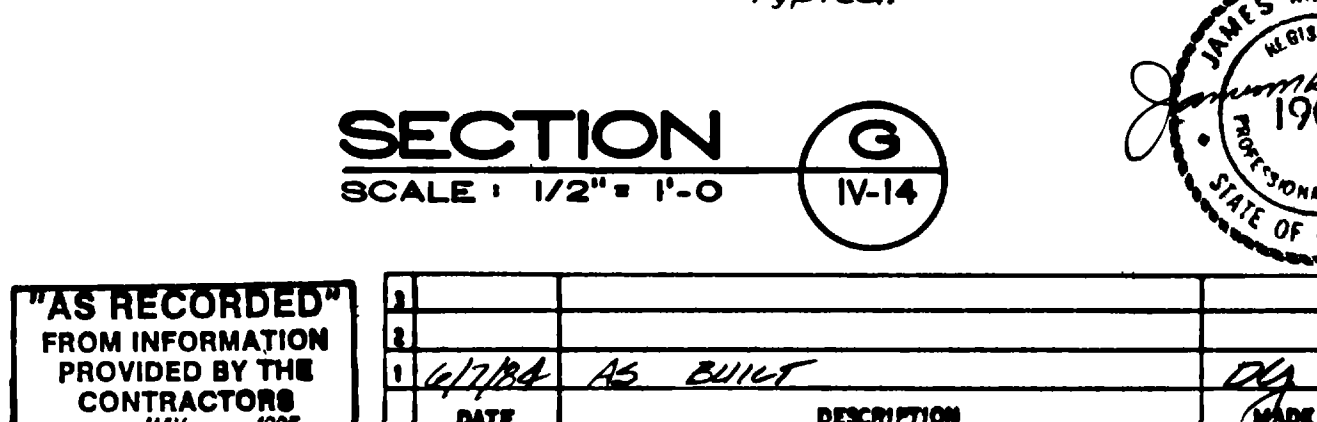
**SECTION B**  
SCALE: 1/2" = 1'-0"



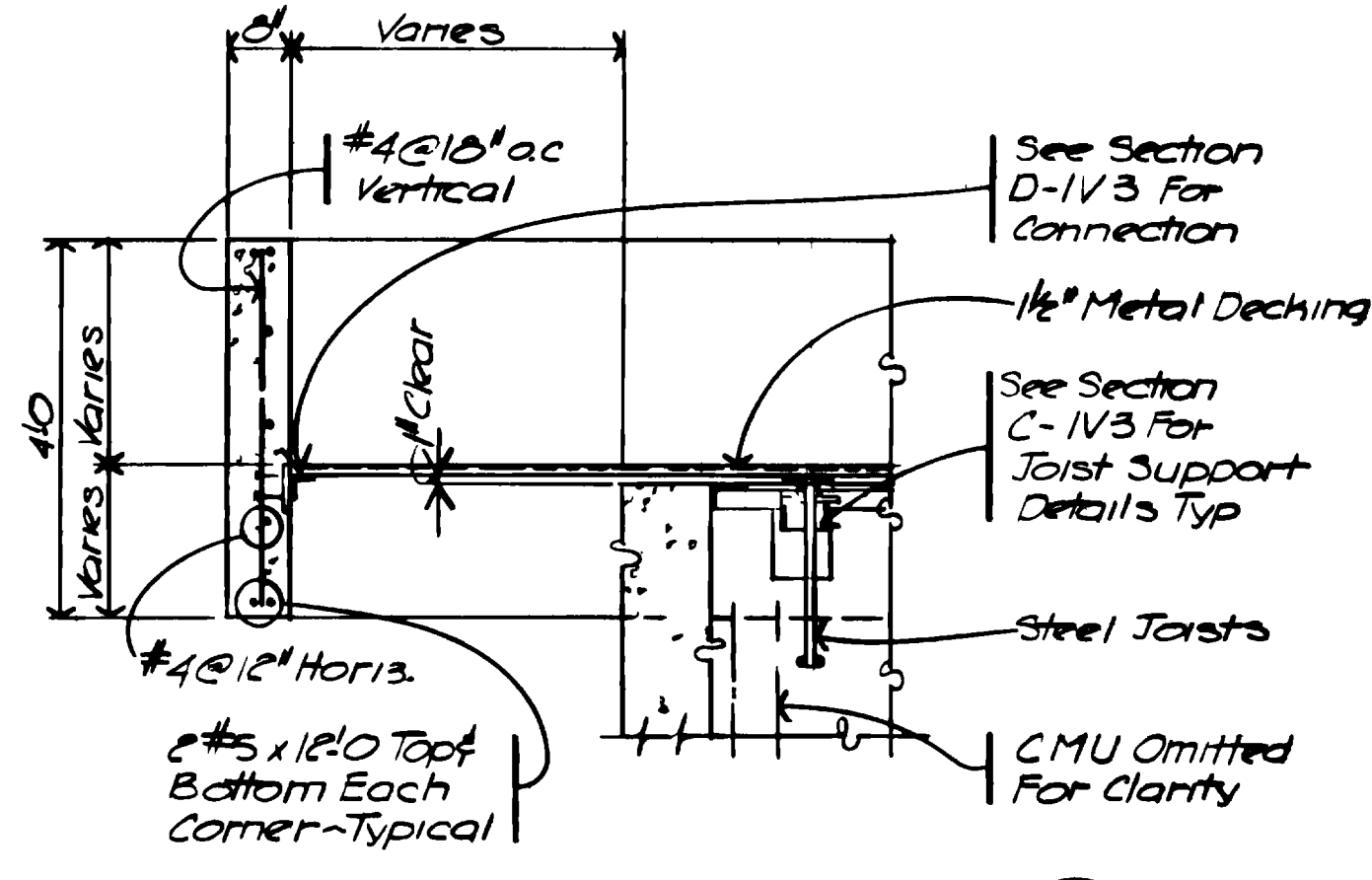
**SECTION C**  
SCALE: 1/2" = 1'-0"



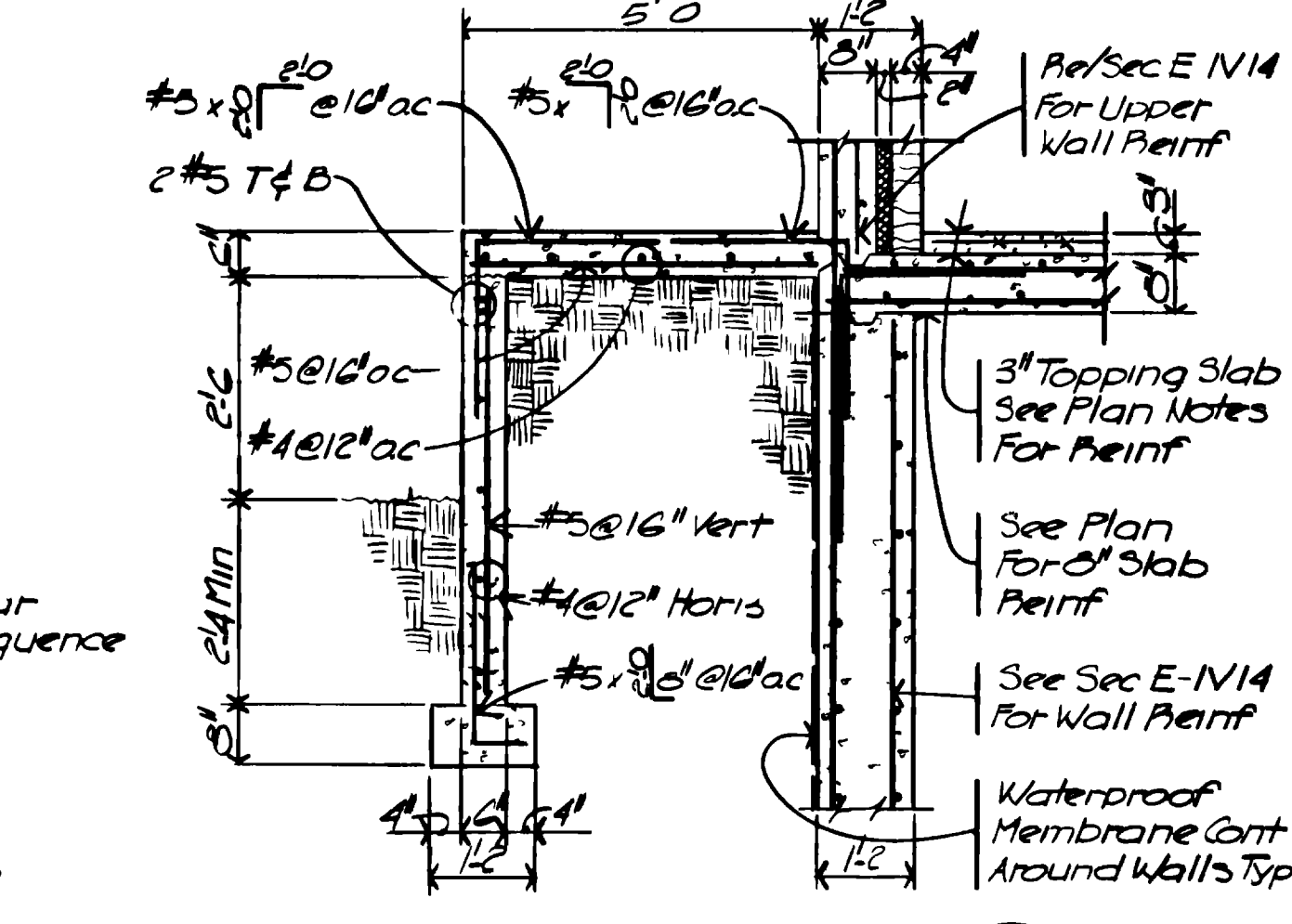
**SECTION D**  
SCALE: 1/2" = 1'-0"



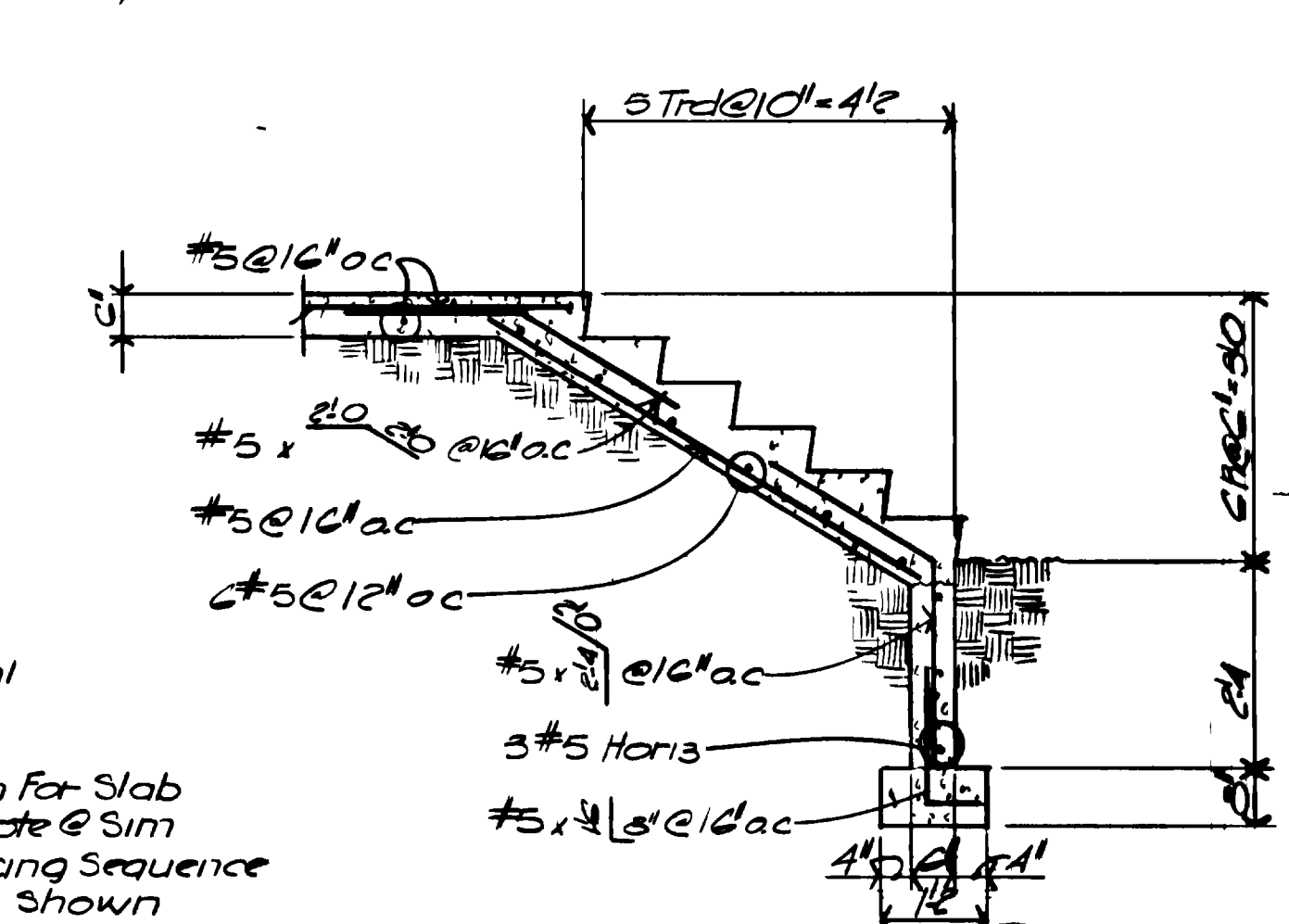
**SECTION E**  
SCALE: 1/2" = 1'-0"



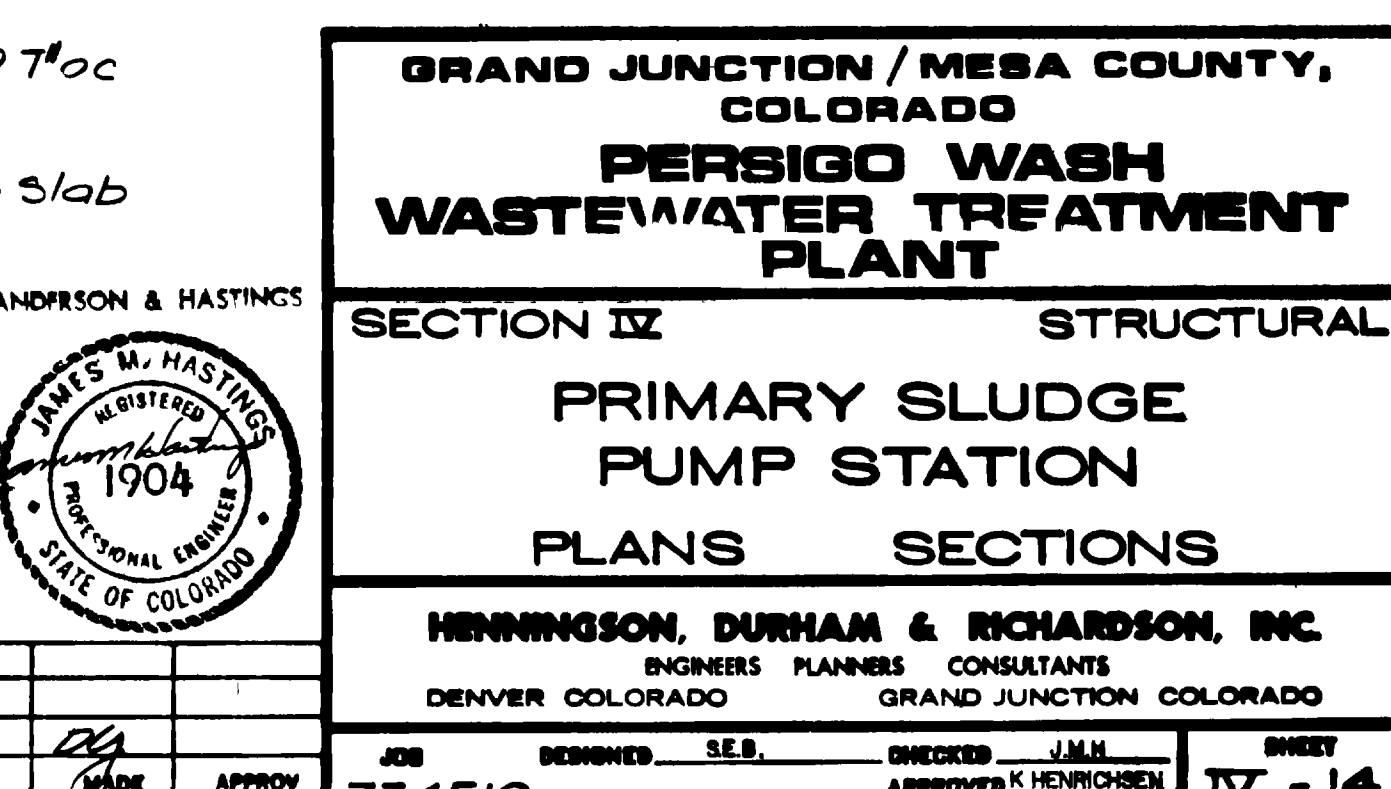
**SECTION F**  
SCALE: 1/2" = 1'-0"



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



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



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

- Plan Notes**
1. Roof Dech To Be 1/2" x 22 Gauge Wide Rib Metal Decking With Min 3" x 204 in<sup>2</sup>
  2. Joist Bearing Elevation Noted Thus  $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$
  3. Top Of Concrete Elevation Noted Thus  $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$
  4. Reinforce Topping Slab 7/8" x 2 W14 x W14 KLUF In Upper 1/2 of Slab Typical @ Ground Level & Pit Level
  5. Reinforcing Placing Sequence  
1. East-West Bottom 2. North-South Bottom  
3. North-South Top 4. East-West Top
  6. Grain Pail Capacity = 4,000 Lb
  7. Refer To Mech & Process Sheets For Pipe Sleeves & Block Outs

"AS RECORDED" FROM INFORMATION PROVIDED BY THE CONTRACTORS		DATE: MAY 1999
1	4/17/99	AS BUILT
2		
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**GRAND JUNCTION / MESA COUNTY, COLORADO**  
**PERSIGO WASH WASTEWATER TREATMENT PLANT**

**SECTION IX STRUCTURAL**  
**PRIMARY SLUDGE PUMP STATION**  
**PLANS SECTIONS**

**HENNINGSON, DURHAM & RICHARDSON, INC.**  
ENGINEERS PLANNERS CONSULTANTS  
DENVER COLORADO GRAND JUNCTION COLORADO

**ANDERSON & HASTINGS**  
REGISTERED PROFESSIONAL ENGINEER  
STATE OF COLORADO

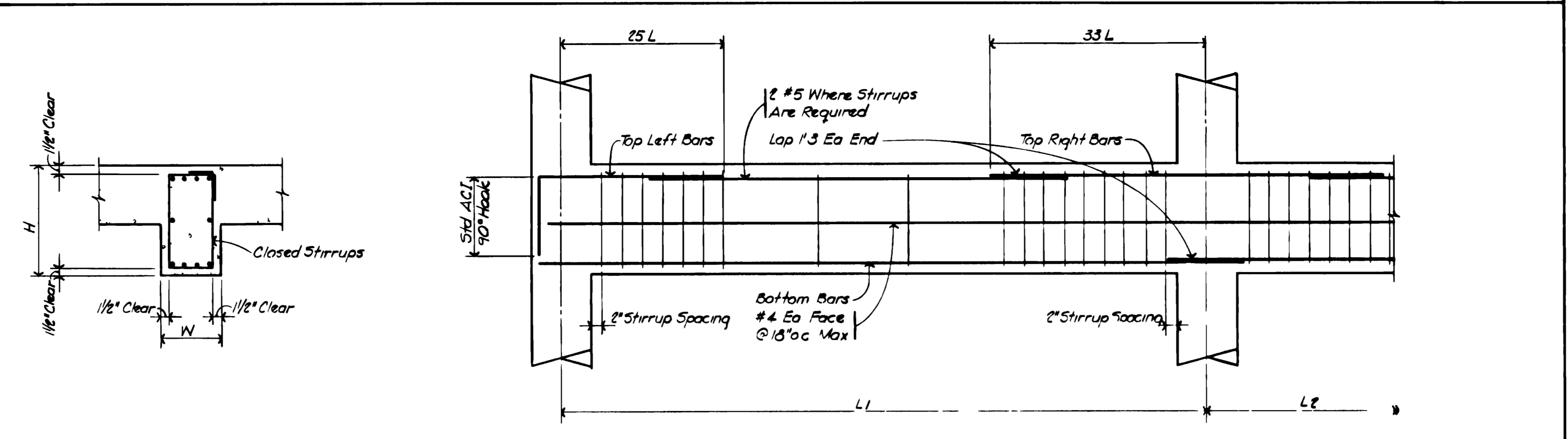
JOB NO. 734510  
DESIGNED BY: [Signature]  
CHECKED BY: [Signature]  
DATE: [Date]

SHEET **IX - 14**

**GENERAL NOTES**

- LIVE LOADS USED IN DESIGN
  - ROOF 30 psf (SNOW)
  - FLOORS - OFFICES 50 psf
  - CORRIDORS & WALKWAYS 100 psf
  - EQUIPMENT STAIRWAYS 200 psf (MIN)
  - FOUNDATION WALLS 60 psf WATER
  - 35 psf (BELOW WATER TABLE)
  - 85 psf (BELOW WATER TABLE)
  - WIND ZONE 25
  - SEISMIC ZONE 2
- CONCRETE
  - ALL CONCRETE SHALL BE MADE WITH STONE AGGREGATE AND SHALL DEVELOP 4000 PSI COMPRESSIVE STRENGTH IN 28 DAYS.
  - ALL REINFORCING SHALL BE HIGH STRENGTH DEFORMED BARS (GRADE 60 ASTM A615-76a) WITH 60 000 PSI MINIMUM YIELD POINT, (EXCEPT #3 COLUMN TIES AND BEAM STIRRUPS WHICH MAY BE GRADE 40)
  - REINFORCEMENT PROTECTION
    - CONCRETE POURED AGAINST EARTH 3"
    - CONCRETE POURED IN FORMS BUT EXPOSED TO WEATHER OR EARTH
      - IF BARS ARE LARGER THAN NO. 5 2"
      - IF BARS ARE NO. 5 OR SMALLER 1 1/2"
    - COLUMNS, GIRDERS AND BEAMS 1 1/2"
    - SLABS AND WALLS (INTERIOR EXPOSURE) 3/4"
    - SLABS AND WALLS (IN CONTACT WITH WATER) 2"
  - ALL BAR LENGTHS ARE DRAWN TO SCALE UNLESS NOTED. NO SPLICES OF REINFORCEMENT SHALL BE MADE EXCEPT AS DETAILED OR AS AUTHORIZED BY THE STRUCTURAL ENGINEERS. MAKE ALL BARS CONTINUOUS AROUND CORNERS.
  - DETAIL BARS IN ACCORDANCE WITH ACI DETAILING MANUAL AND ACI BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, LATEST EDITIONS.
  - PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCING AT POSITIONS SHOWN ON PLANS.
  - PLACE 2-NO 5 (1 EACH FACE) WITH 2'-0" PROJECTION AROUND ALL OPENINGS IN CONCRETE.
  - SLABS AND BEAMS SHALL NOT HAVE JOINTS IN A HORIZONTAL PLANE. ANY STOP IN CONCRETE WORK MUST BE MADE AT CENTER OF SPAN WITH VERTICAL BULHEADS AND HORIZONTAL KEYS, UNLESS OTHERWISE SHOWN. ALL CONSTRUCTION JOINTS SHALL BE AS DETAILED OR AS APPROVED BY THE ARCHITECT.
  - CONTINUOUS TOP & BOTTOM BARS IN WALLS, BEAMS & GRADE WALLS SHALL BE SPLICED AS FOLLOWS:
    - TOP BARS - MIDSPAN
    - BOTTOM BARS - OVER SUPPORT
  - ALL STIRRUPS SHALL HAVE 2 NO. 3 SPACERS FOR LENGTH OF STIRRUP SPACING.
  - WIRE MESH REINFORCEMENT MUST LAP ONE FULL MESH AT SIDE AND END LAPS, AND SHALL BE WIRED TOGETHER.
- STEEL
  - ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM SPECIFICATION A36.
  - STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH LATEST PROVISIONS OF AISC MANUAL OF STEEL CONSTRUCTION CODE OF STANDARD PRACTICE.
  - USE STANDARD FRAMED BEAM CONNECTIONS WITH 3/4" BOLTS (OR WELDED EQUIVALENT) UNLESS OTHERWISE NOTED. SELECT CONNECTIONS TO SUPPORT ONE HALF THE TOTAL LOAD CAPACITY FOR EACH GIVEN BEAM AND 50% OF THE EFFECT OF CONCENTRATED LOADS SHALL ALSO BE CONSIDERED.
  - STEEL JOISTS SHALL BE WELDED, FABRICATED AND ERECTED IN ACCORDANCE WITH STEEL JOIST INSTITUTE SPECIFICATIONS.
    - ALL STEEL DECK SHALL BE ERECTED IN ACCORDANCE WITH DECK MANUFACTURER'S JOISTED SPECIFICATIONS.
    - STEEL DECK BY OTHER MANUFACTURERS MAY BE SUPPLIED IN LIEU OF THAT SPECIFIED PROVIDED SECTION PROPERTIES ARE SIMILAR TO THOSE OF DECK SPECIFIED, AND IS APPROVED BY ARCHITECT.
    - DECK SUPPLIER SHALL PROVIDE ALL ADDITIONAL FRAMING AS REQUIRED FOR OPENINGS THROUGH DECK.
  - DECK WELDING SHALL BE AS FOLLOWS FOR 1/4" METAL DECK:
    - AT EXTERIOR SUPPORTS WELD EDGE OF DECK WITH 1/2" R Puddle Welds at 12" O.C. AND END OF DECK WITH 1/2" R Puddle Welds Spaced 4 PER PANEL.
    - AT INTERIOR SUPPORTS WELD WITH 1/2" R Puddle Welds Spaced 4 PER PANEL.
    - AT DECK JOINTS BUTT JUNCTION OF 1/4" SEAM WELD AT 24" O.C. AT ADJACENT DECK MEMBERS.
    - ALL WELDERS SHALL HAVE EVIDENCE OF PASSING THE AWS STANDARD QUALIFICATION TESTS.
    - CONNECTIONS MADE WITH HIGH STRENGTH STEEL BOLTS SHALL CONFORM IN ALL RESPECTS TO THE CURRENT SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 BOLTS AS ENDORSED BY AISC. NO PAINT ON CONTACT SURFACES.
    - SEE ARCHITECTURAL DRAWINGS FOR NAILER HOLES, ETC.
- MASONRY
  - ALL REINFORCING IN MASONRY WALLS SHALL BE FULLY GROUTED IN PLACE.
  - FILL ALL VOIDS AND BLOCK CELLS SOLIDLY WITH MORTAR FOR A DISTANCE OF 24" BENEATH AND 12" EACH SIDE OF ALL BEAM REACTIONS OR OTHER CONCENTRATED LOADS.
- FOUNDATIONS - SOIL BEARING PRESSURE USED IN DESIGN
  - 2000 psf SHALLOW FOOTINGS TO 10 ft. BELOW EXISTING GRADE.
  - 3000 psf FOOTING BEARINGS AT 10 ft. TO 15 ft. BELOW EXISTING GRADE.
  - 4000 psf FOOTINGS BEARING BELOW 15 ft.
- BASED ON REPORT NO. 16,747 PREPARED BY CHEN & ASSOCIATES, INC., CONSULTING ENGINEERS, DATED AUGUST 31, 1978.
- ALL DIMENSIONS ON STRUCTURAL DRAWINGS SHALL BE CHECKED AGAINST ARCHITECTURAL.
- ARCHITECT'S APPROVAL MUST BE SECURED FOR ALL SUBSTITUTIONS.
- DO NOT PLACE BACKFILL AGAINST BASEMENT WALLS UNTIL BASEMENT AND FIRST FLOORS ARE IN PLACE.
- VERIFY ALL OPENINGS THROUGH FLOOR AND WALLS WITH MECHANICAL AND ELECTRICAL CONTRACTORS.

**BEAM SCHEDULE**



Mark	Size	Reinforcing			Stirrup Size	Spacing of Stirrups			W Or N	Sketch	E Or S	Remarks
		Top L	Bottom	Top R		Left End	Middle	Right End				
ADB 1	12"	2#8	4#8	2#8	#3		@ 12"					
ADB 2	12"	2#8	4#8	2#8	#3	10 @ 4"	@ 12"	10 @ 4"				Extend Top Bars into Curved Beams, Stirrups Ea Side Of Column
ADB 3	12"	3#5	3#5	3#5	#3		@ 7"					
ADB 4	12"	2#8	2#8	4#8	#3	10 @ 6"	@ 10"	10 @ 6"				90° Bend @ North & South Walls Only
ADB 5	12"	2#7	4#8	2#7	#3		@ 8"					Extend Top Right Bars into Curved Bms, *Stirrups Full Length Of Beam
ADB 6	12"	2#8	3#7	4#8	#3	10 @ 6"	@ 10"	10 @ 6"				
ADB 7	12"	2#8	2#8	2#8	#3	10 @ 6"	@ 10"	10 @ 6"				Splice Top Bars @ Center Span, Bottom Bars @ Supports
ADB 8	12"	2#8	2#8	2#8	#3		@ 12"					See Section A & 3 Sht IV For Placement Of Reinforcing
ADB 9	12"	3#5	3#5	3#5	#3		@ 9"					Extend Top Bars into Curved Bms, Stirrups Ea Side Of Support
ADB 10	12"	4#5	4#7	4#5	#3	25 @ 4 @ 8"	@ 12"	4 @ 25 @ 4"				Cap Hand @ South Beam
ADB 11	12"	4#6	2#5	4#7	#3	10 @ 7"	@ 12"	10 @ 7"				
ADB 12	12"	3#6	3#6	3#6	#3	10 @ 7"	@ 12"	10 @ 7"				
ADB 13	12"	4#7	3#6	4#7	#3	10 @ 8"	@ 12"	10 @ 8"				
ADB 14	12"	2#5	3#7	2#5	#3	6 @ 7"	@ 12"	20 @ 7"				Extend Top Bars into Curved Bms, Stirrups Ea Side Of Support
ADB 15	12"	3#8	3#8	3#8	#3	11 @ 8"	@ 12"	11 @ 8"				
ADB 16	12"	3#8	3#8	3#8	#3	7 @ 8"	@ 10"	7 @ 8"				
ADB 17	12"	3#8	3#8	3#8	#3	20 @ 4"	@ 8"	@ 8"				Extend Top Bars 3'-8" Dist Col &
ADB 18	12"	2#4	2#4	2#4	#3		@ 7"	@ 7"				
SPB 1	24"	3#9	6#9	6#9	#4	8 @ 6"	@ 12"	16 @ 6"				Cap Hand @ South Beam
SPB 2	30"	5#8	7#10	5#8	#4	4 @ 6"	@ 12"	4 @ 6"				
SPB 3	12"	2#5	3#6	2#5	#3		@ 12"					
SPB 4	24"	3#9	6#9	3#9	#4	7 @ 9"	@ 12"	7 @ 9"				Share Beam While Wall Above is Being Constructed
SPB 5	24"	3#9	6#9	3#9	#4	7 @ 9"	@ 12"	7 @ 9"				
SPB 6	12"	3#6	3#6	2#5	#3		@ 12"					
SPB 7	12"	3#6	3#6	2#5	#3		@ 12"					
SPB 8	12"	2#5	3#6	3#6	#3		@ 12"					
SPB 9	12"	2#5	2#6	2#5	#3		@ 12"					
SPB 10	12"	2#5	4#5	2#5	#3		@ 12"					

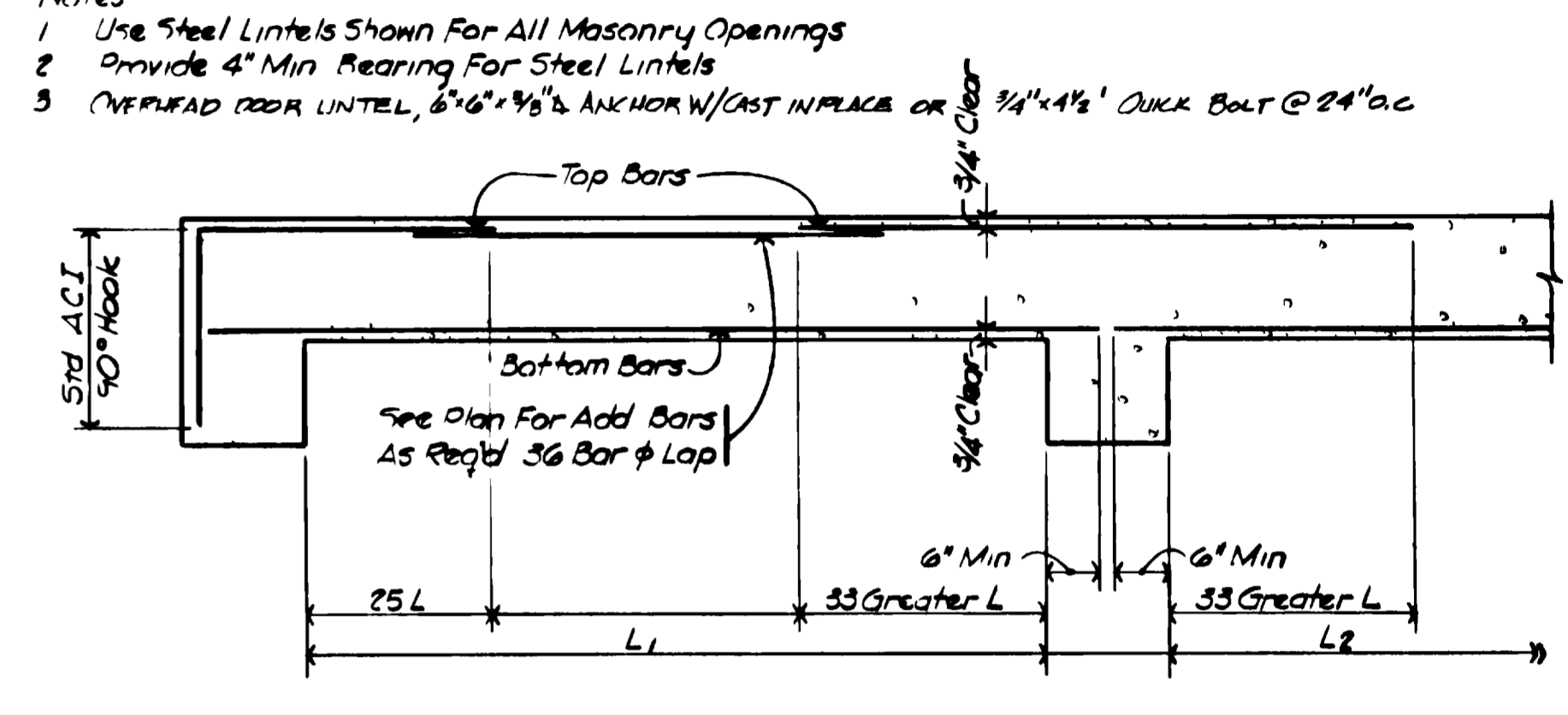
**FOOTING SCHEDULE**

Mark	Size	Reinforcing
(1)	4'0 5g x 1'0	4 #4 Ea Way Bottom
(2)	5'0 5g x 1'0	5 #4 Ea Way Bottom
(3)	6'0 5g x 1'0	6 #4 Ea Way Bottom
(4)	7'0 5g x 1'0	7 #5 Ea Way Bottom
(5)	8'0 5g x 1'0	8 #5 Ea Way Bottom
(6)	9'0 5g x 1'0	9 #6 Ea Way Bottom
(7)	10'0 5g x 1'0	10 #6 Ea Way Bottom
(8)	1'6 x 5'6 x 0'10	#4 @ 12" Ea Way Bottom
(9)	3'0 5g x 1'0	3 #4 Ea Way Bottom

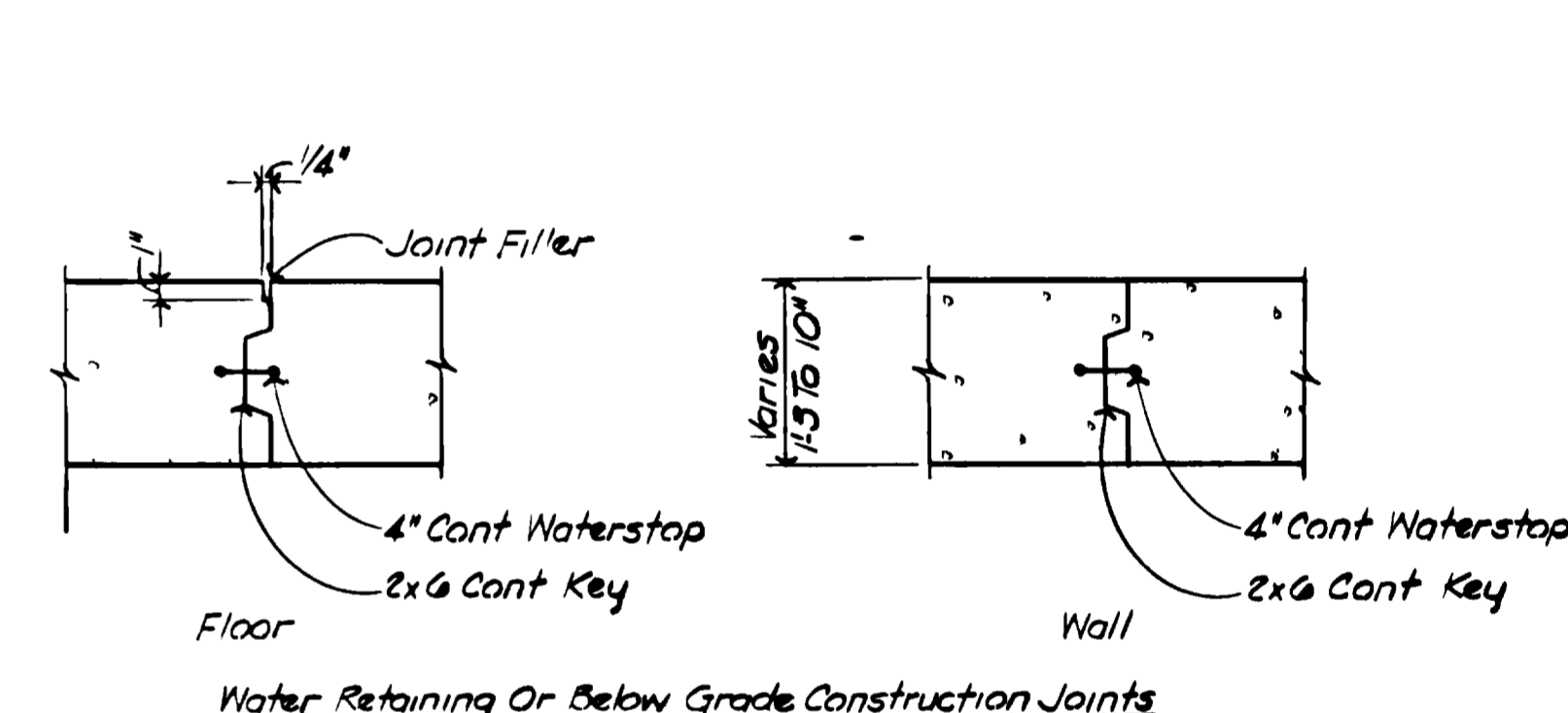
**LOOSE LINTEL SCHEDULE**

Maximum Opening	Size Of L Per 4" Masonry
3'6	L 3/2 x 3/2 x 1/4
5'6	L 4 x 3/2 x 1/4
7'6	L 6 x 3/2 x 1/4

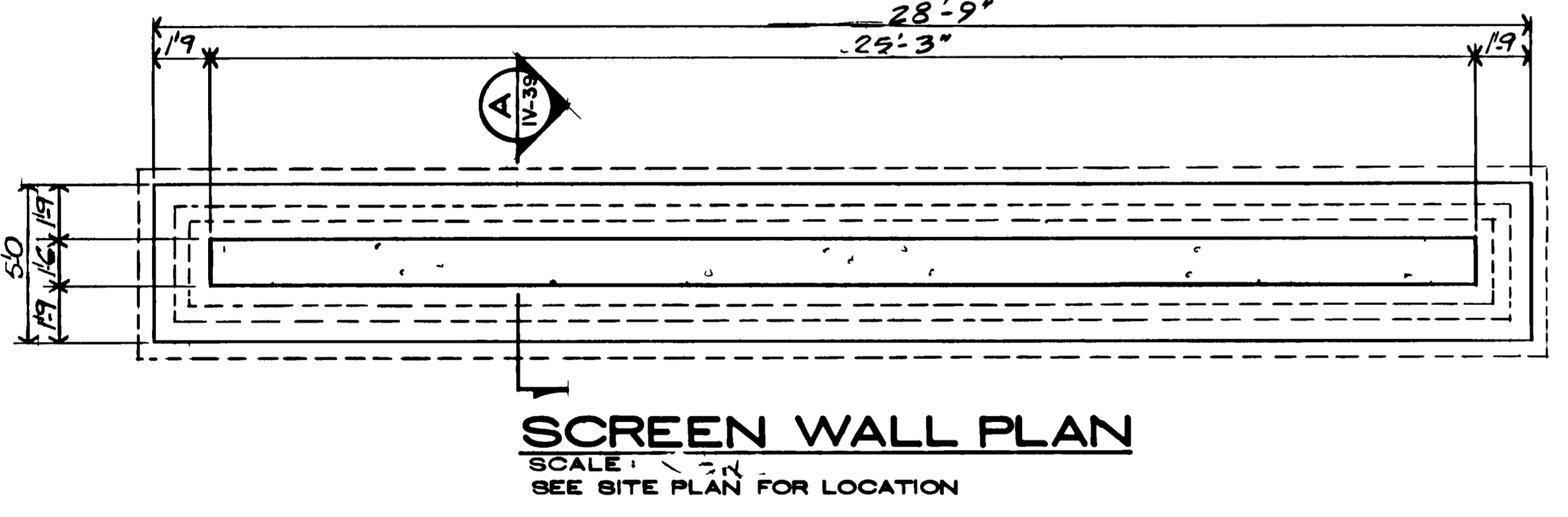
Notes: 1. Use Steel Lintels Shown For All Masonry Openings  
 2. Provide 4" Min Bearing For Steel Lintels  
 3. OVERHEAD DOOR LINTEL, 6"6 x 6"6 ANCHOR W/CAST IN PLACE OR 3/4" x 1/2" DUCK BOLT @ 24" OC



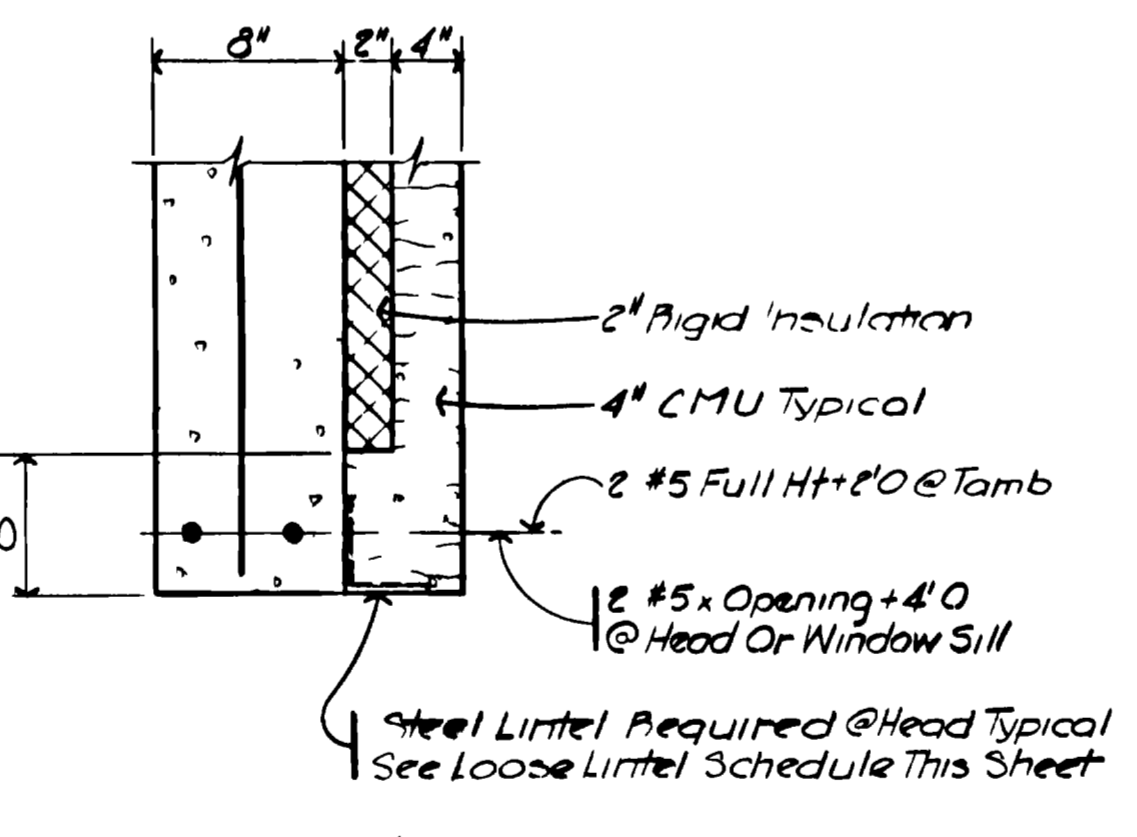
**TYPICAL SLAB REINFORCING**  
NO SCALE



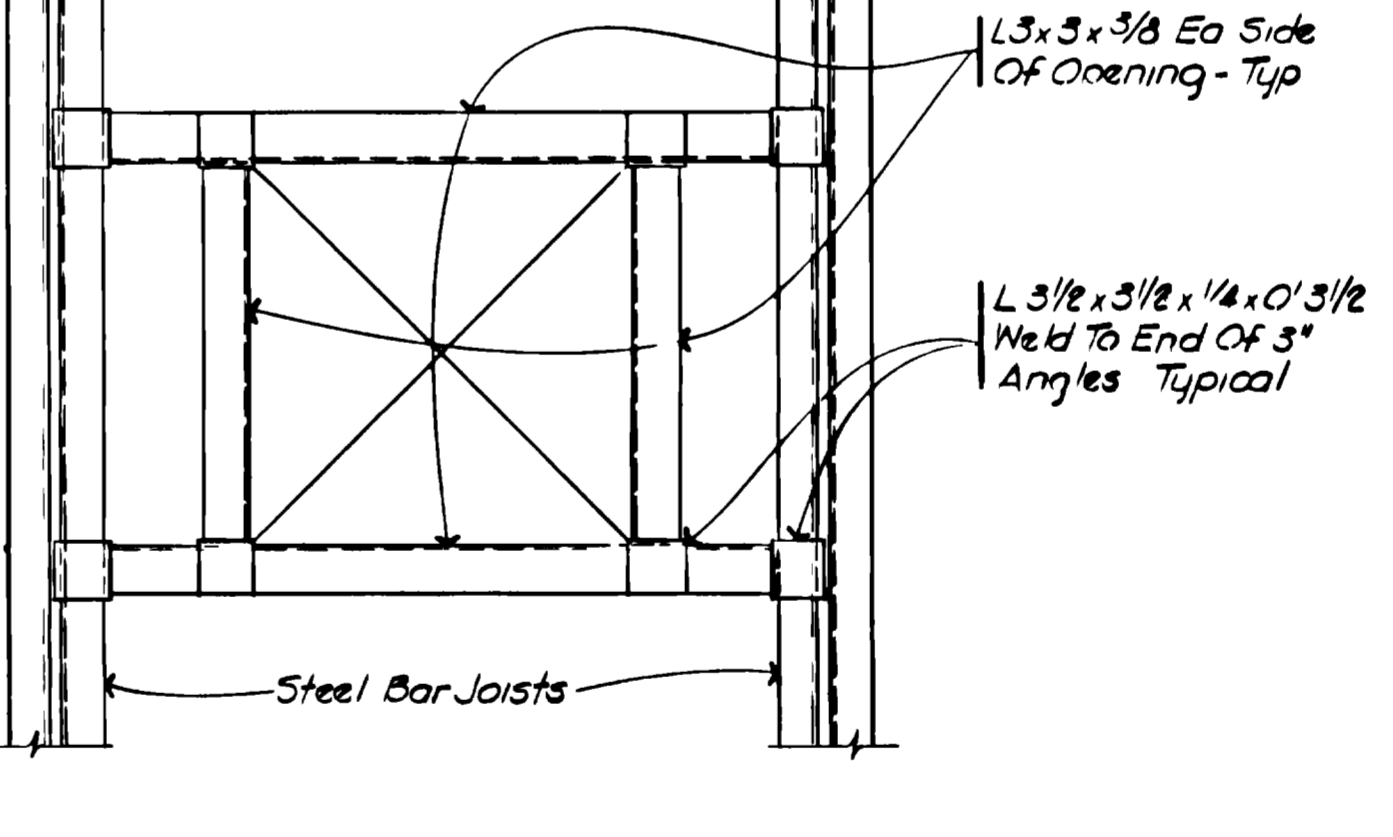
3. UNLESS OTHERWISE MENTIONED SPLICES SHALL BE MIN OF 40 BAR DIAMETERS  
 4. ALL SPLICES IN STRUCTURAL SLABS ON GRADE SHALL BE CLASS C TENSION SPLICES WITH A MIN LAP OF 17 1/2"



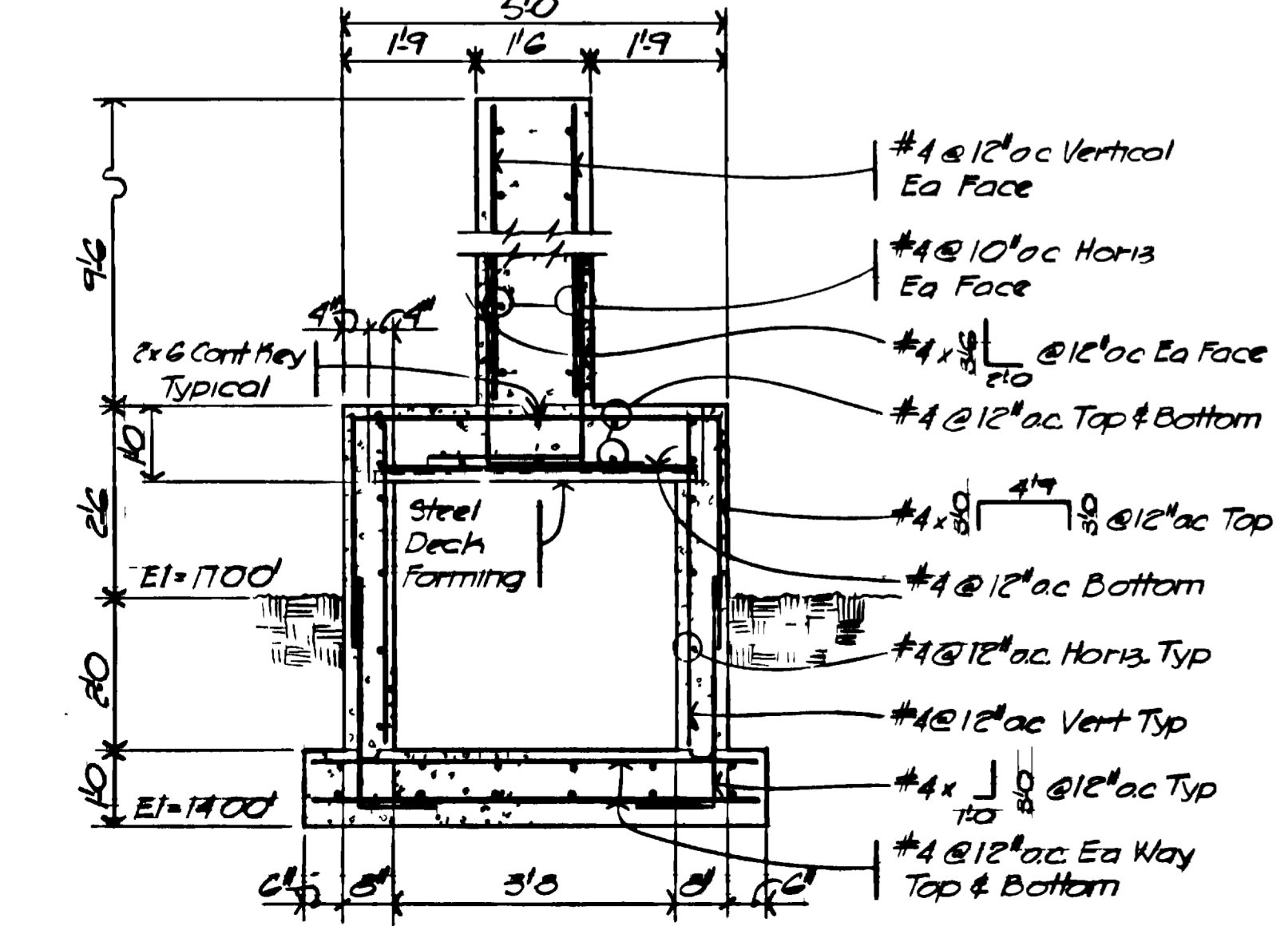
**SCREEN WALL PLAN**  
SCALE: 1/4" = 1'-0"  
SEE SITE PLAN FOR LOCATION



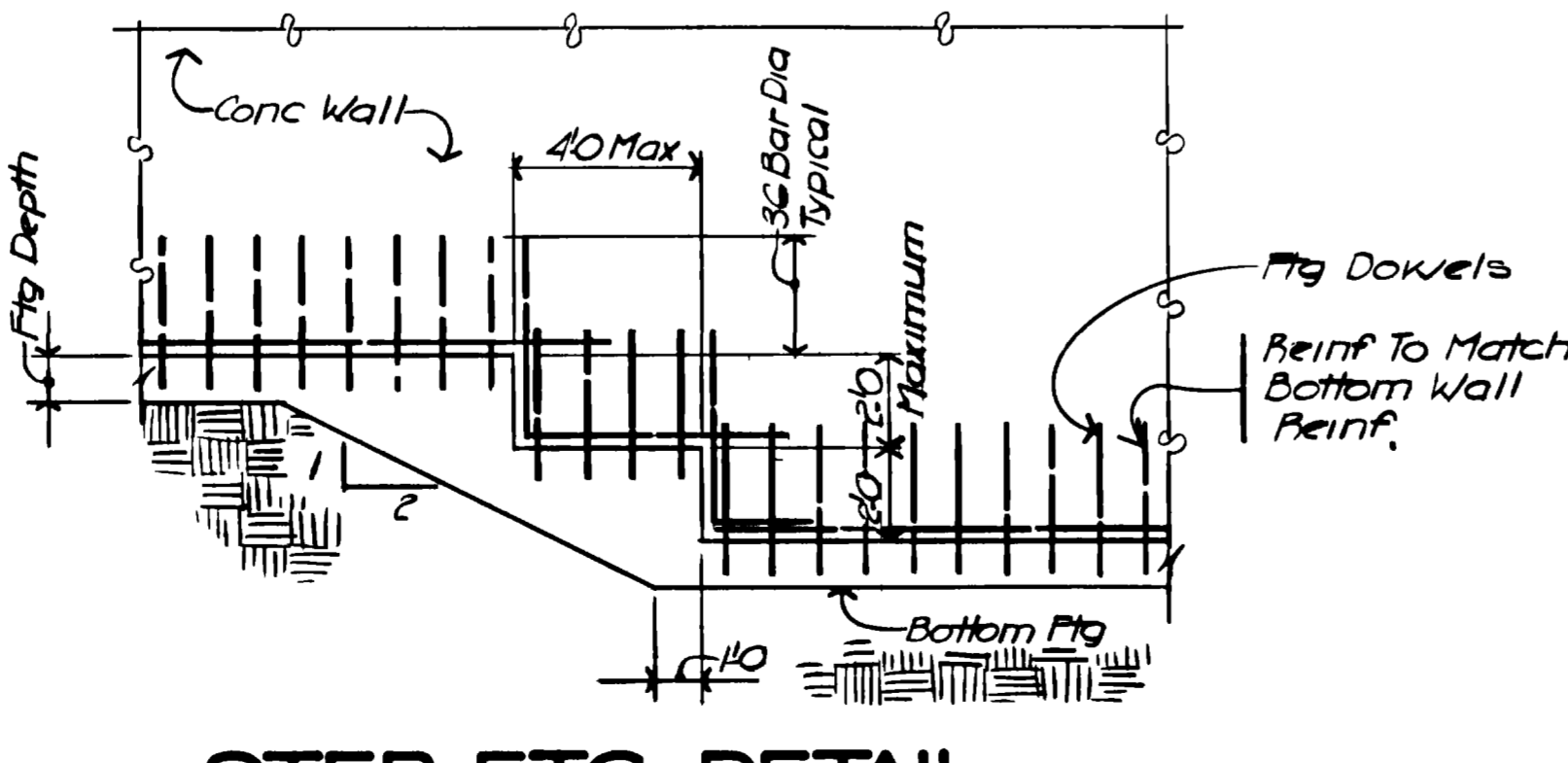
**Typical Head, Sill & Jamb Detail**



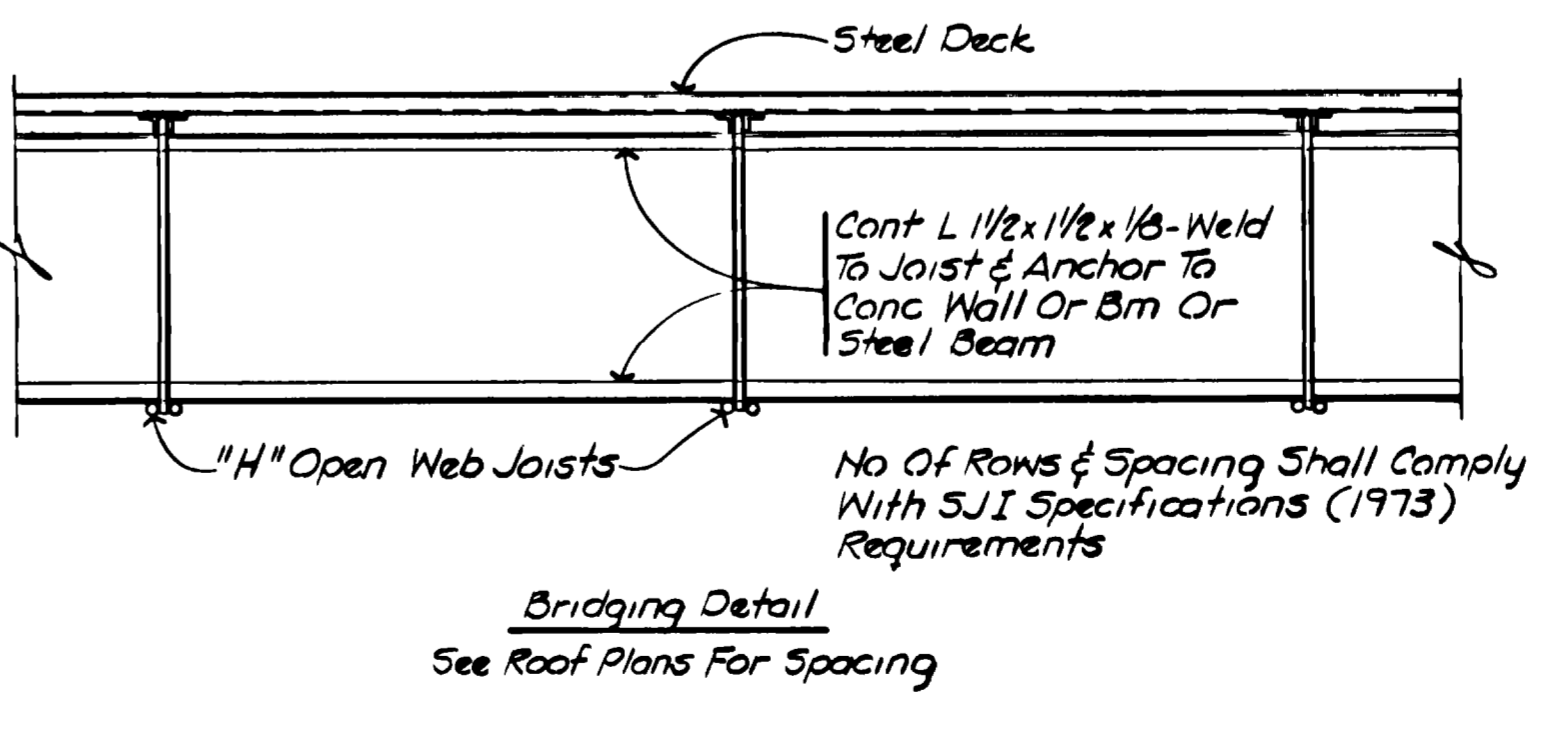
**Typical Framing @ Mech Opening**



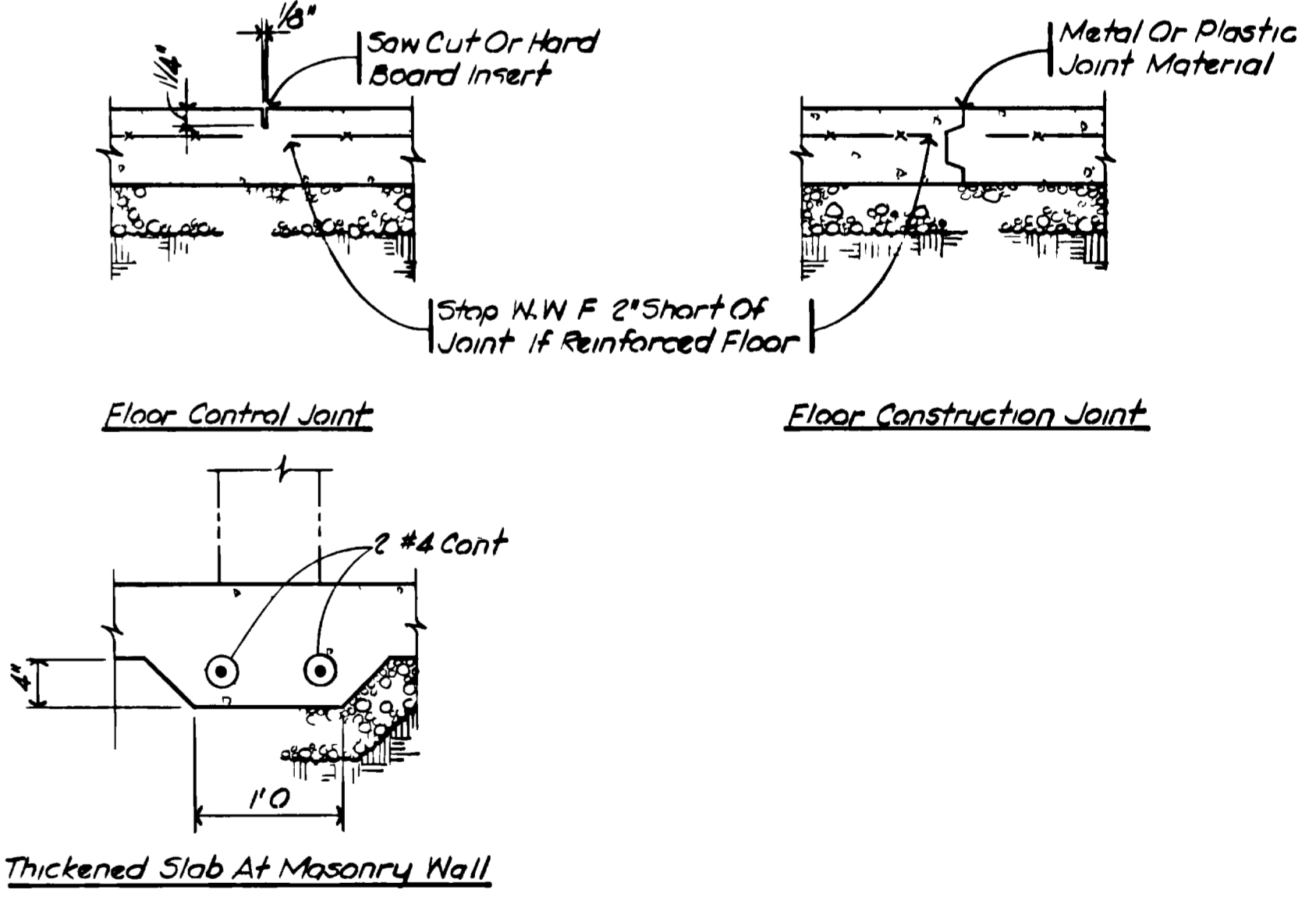
**SECTION A-A**  
SCALE: 1/2" = 1'-0"  
IV-39



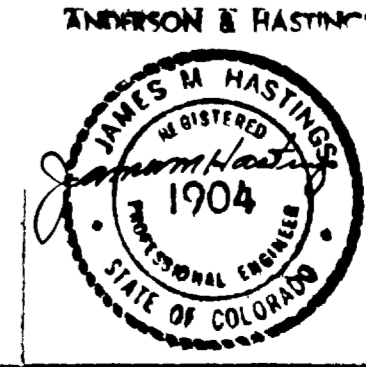
**STEP FTG. DETAIL**  
NO SCALE



**TYPICAL DETAILS**  
NO SCALE

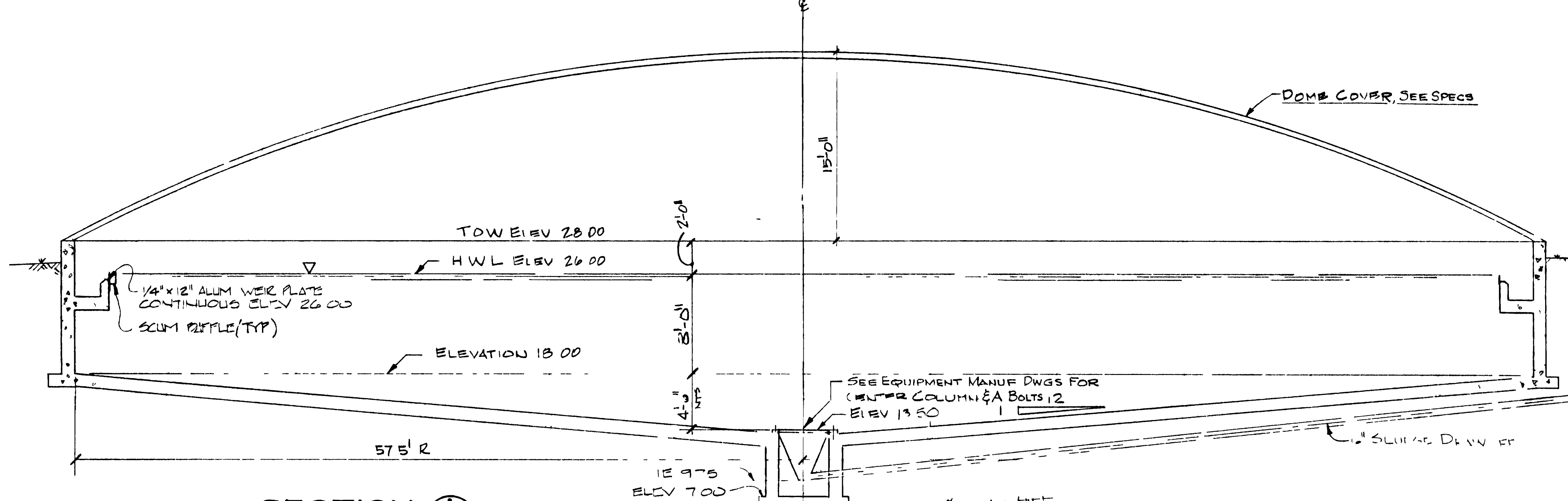


**Thickened Slab At Masonry Wall**

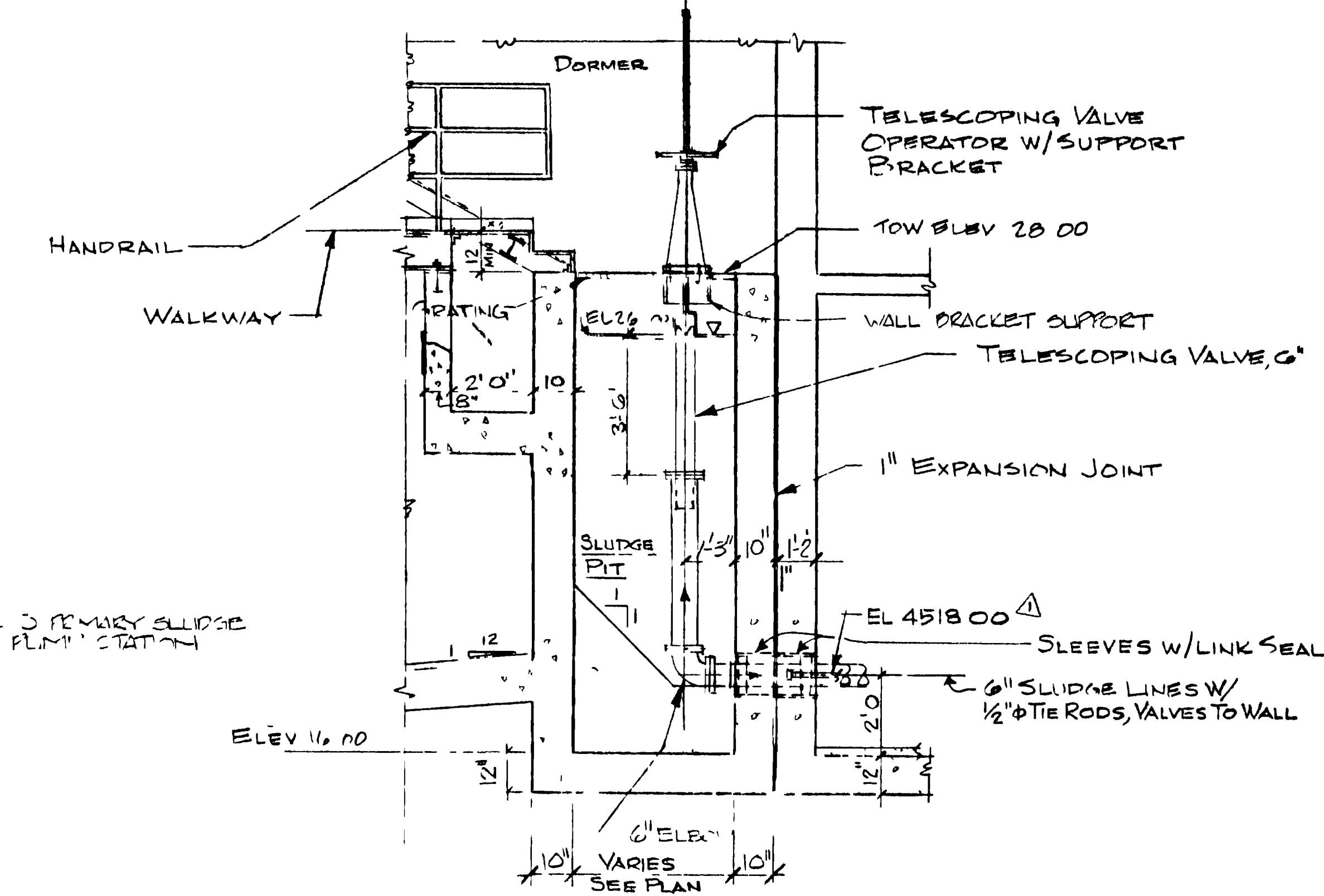


**GRAND JUNCTION / MESA COUNTY, COLORADO**  
**PERSICO WASH WASTE WATER TREATMENT PLANT**  
 SECTION IV STRUCTURAL  
**GENERAL**  
 GENERAL NOTES, SCHEDULES AND TYPICAL DETAILS  
**WINNINGSON, BURHAM & RICHARDSON, INC.**  
 ENGINEERS, PLANNERS & ARCHITECTS  
 DENVER, COLORADO GRAND JUNCTION, COLORADO  
 JOB NO. 734510 DRAWN BY: KEF CHECKED BY: JJK  
 DATE: 11/10/00  
 AS BUILT  
 DWG. NO. 14 OF 19

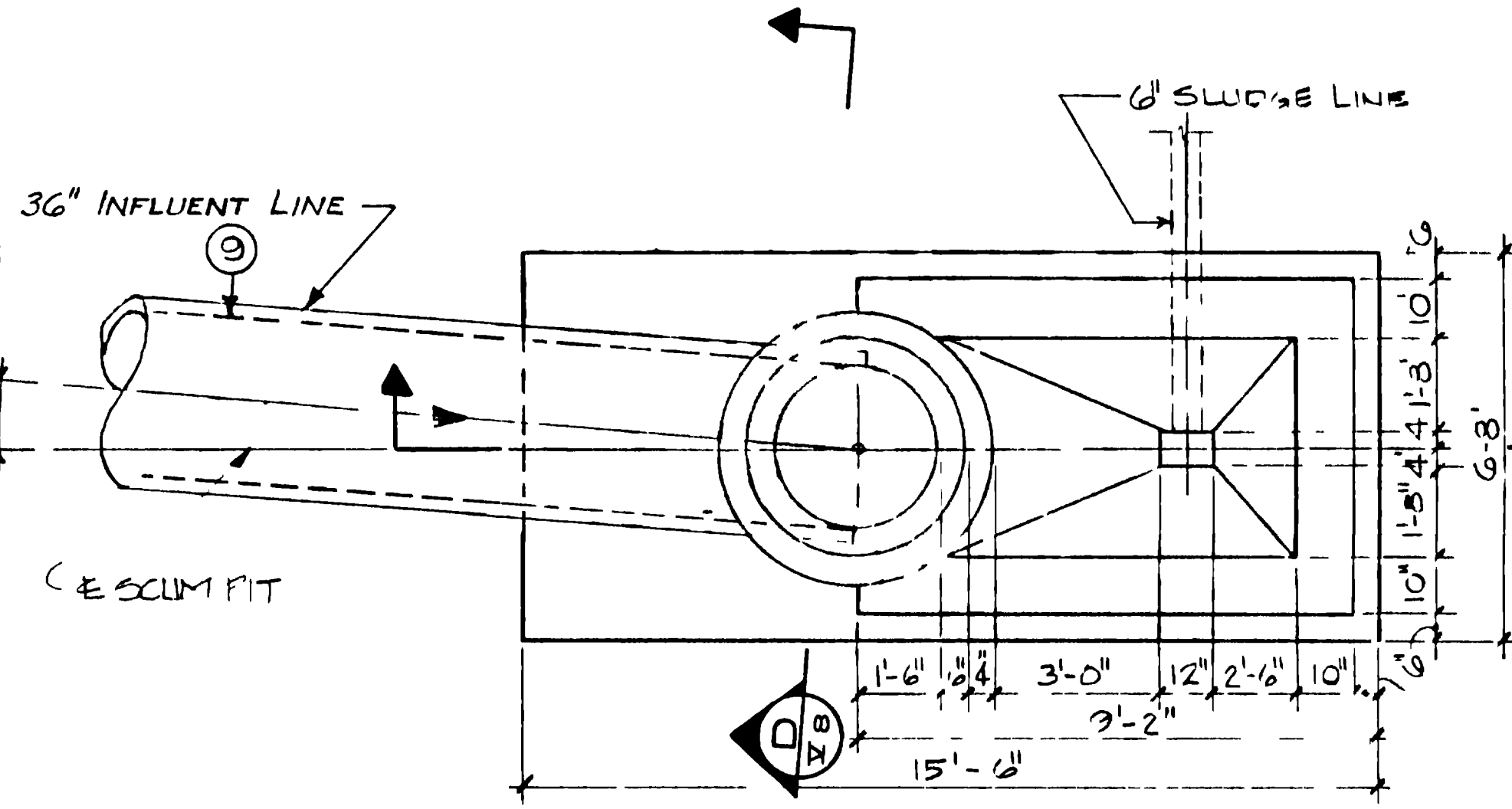




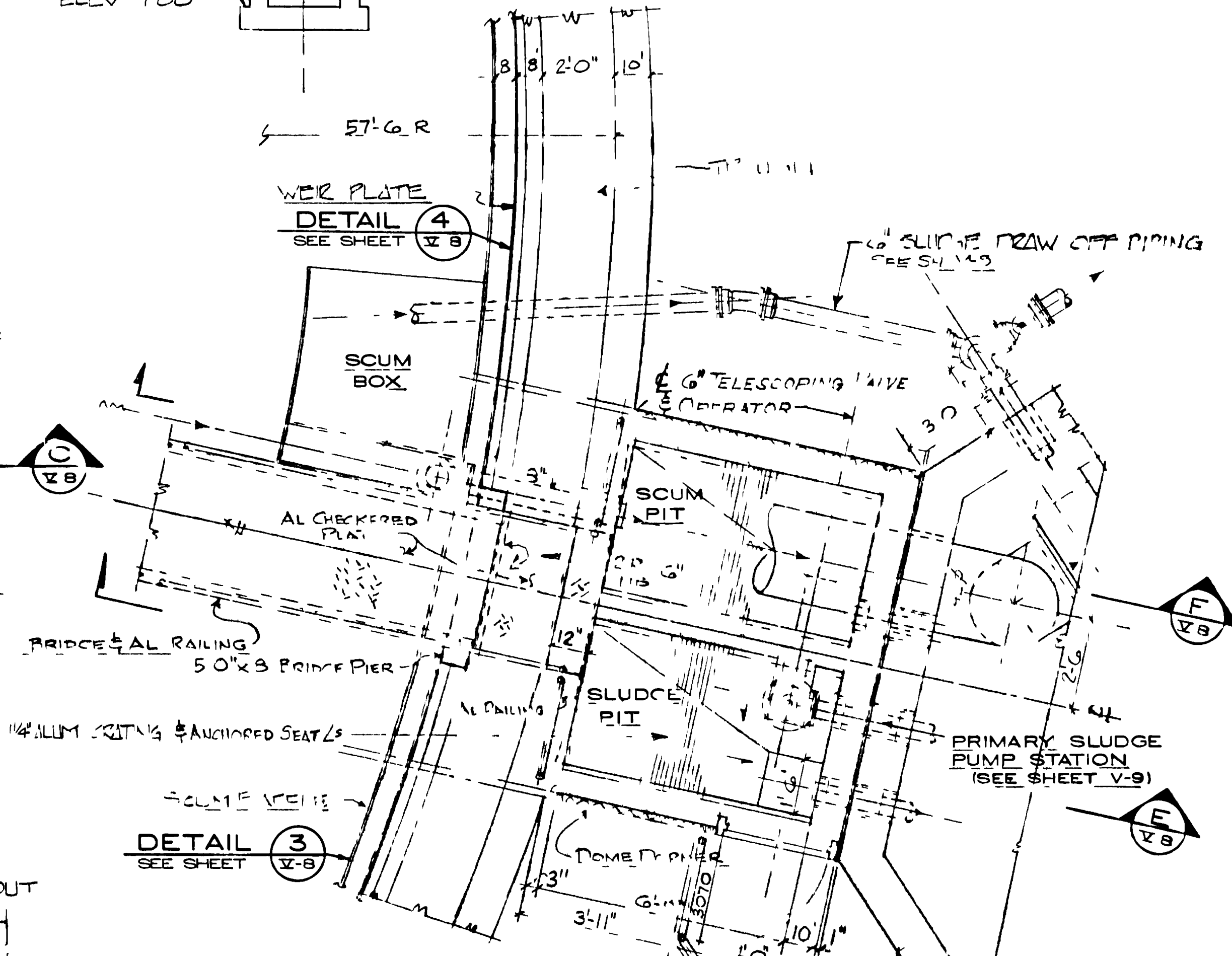
**SECTION A**  
SCALE 3/8" = 1'-0"  
X-8



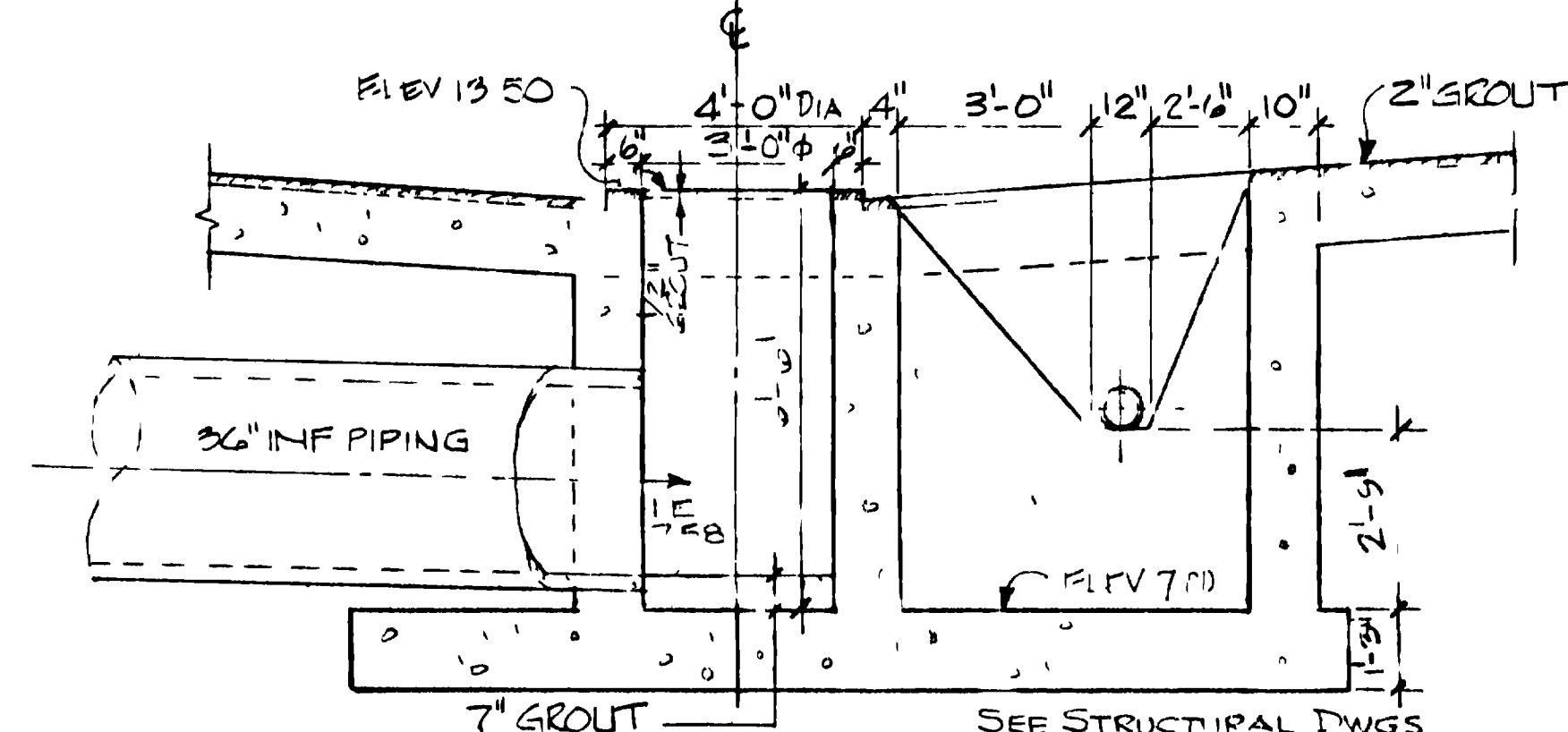
**SECTION E**  
SCALE 3/8" = 1'-0"  
X-8



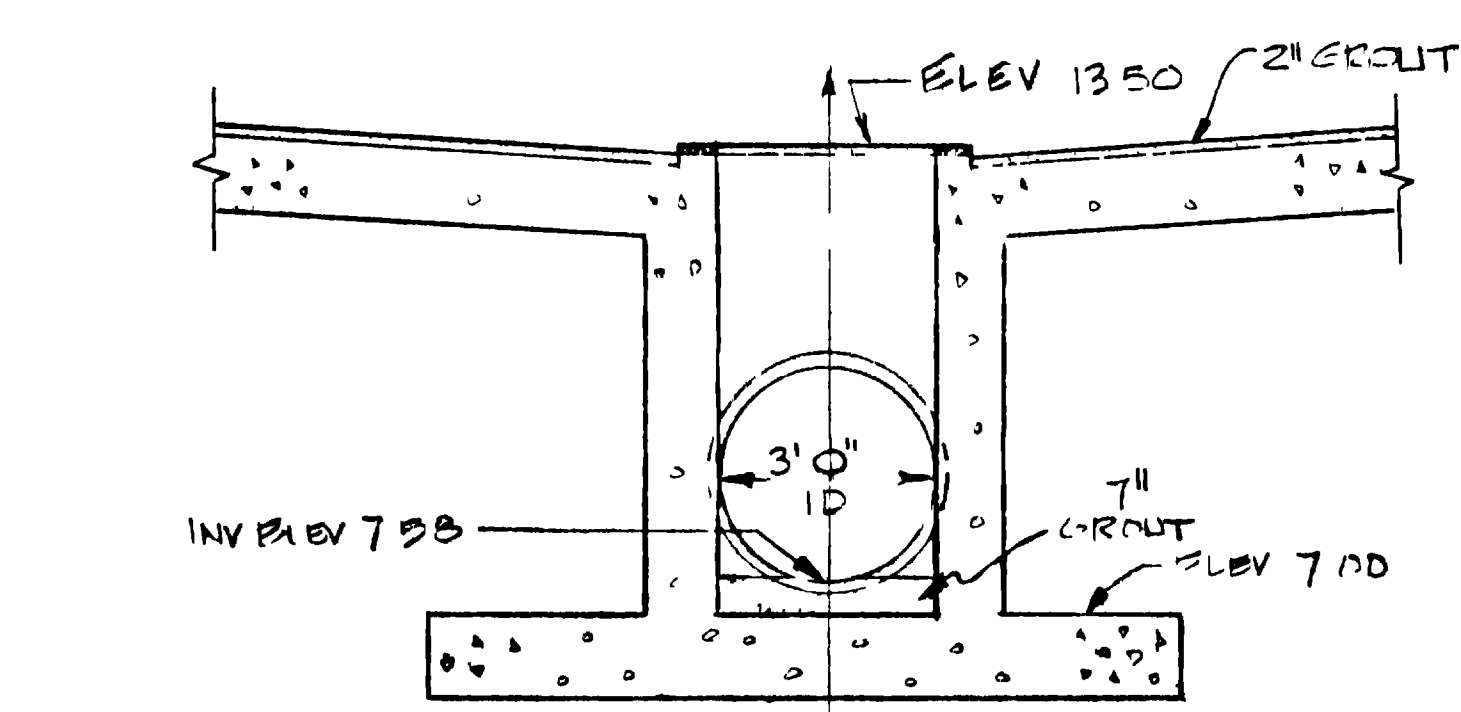
**DETAIL PLAN 1**  
SCALE 3/8" = 1'-0"  
X-8



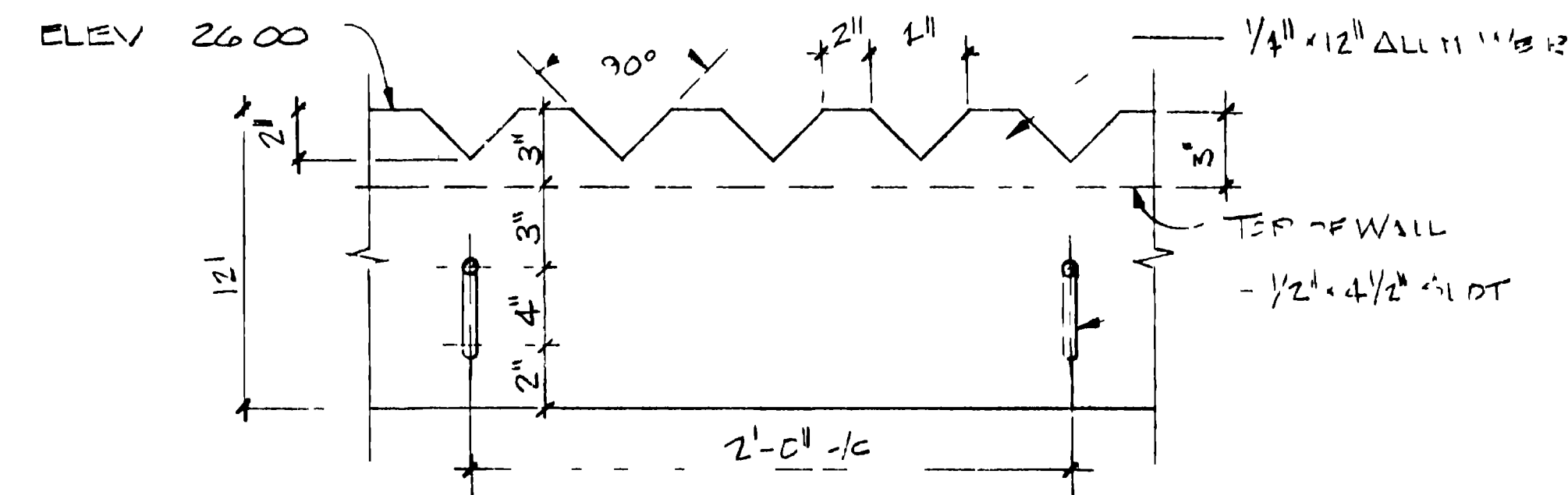
**DETAIL PLAN 2**  
SCALE 3/8" = 1'-0"  
X-8



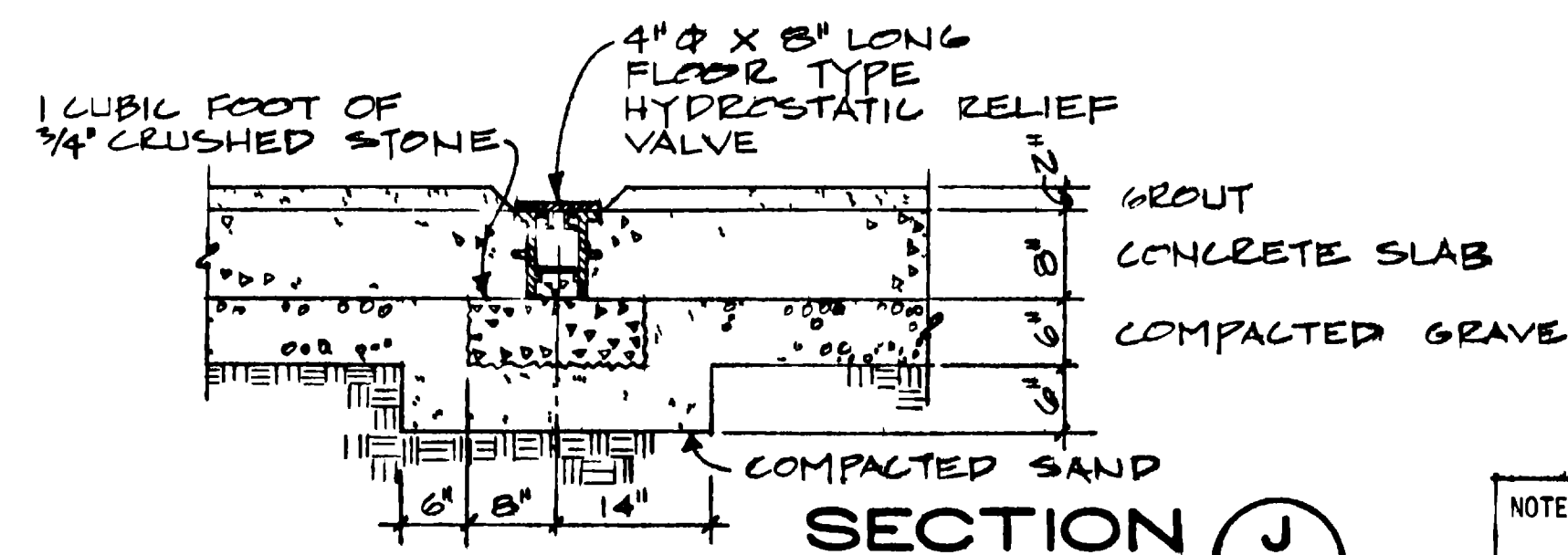
**SECTION C**  
SCALE 3/8" = 1'-0"  
X-8



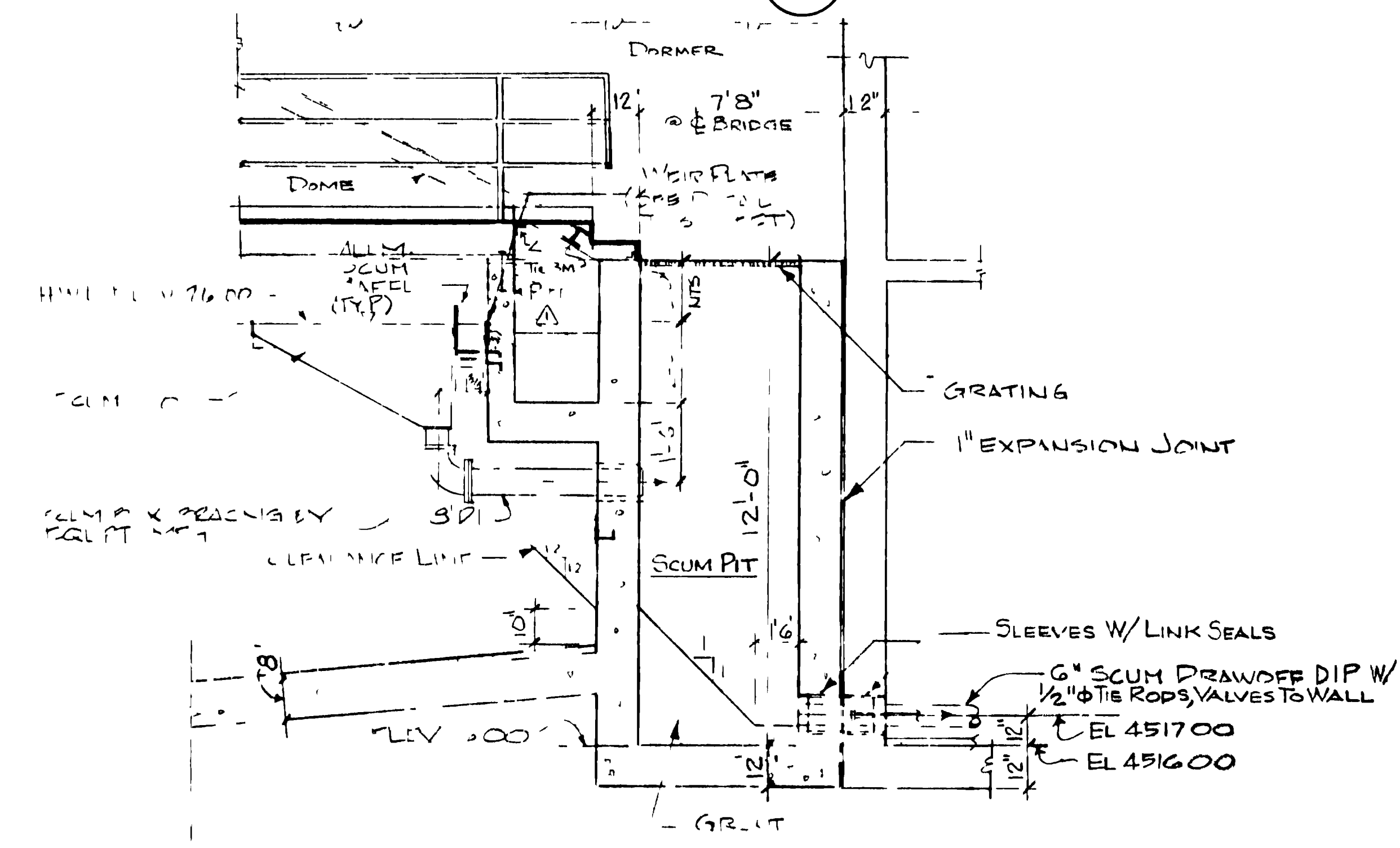
**SECTION D**  
SCALE 3/8" = 1'-0"  
X-8



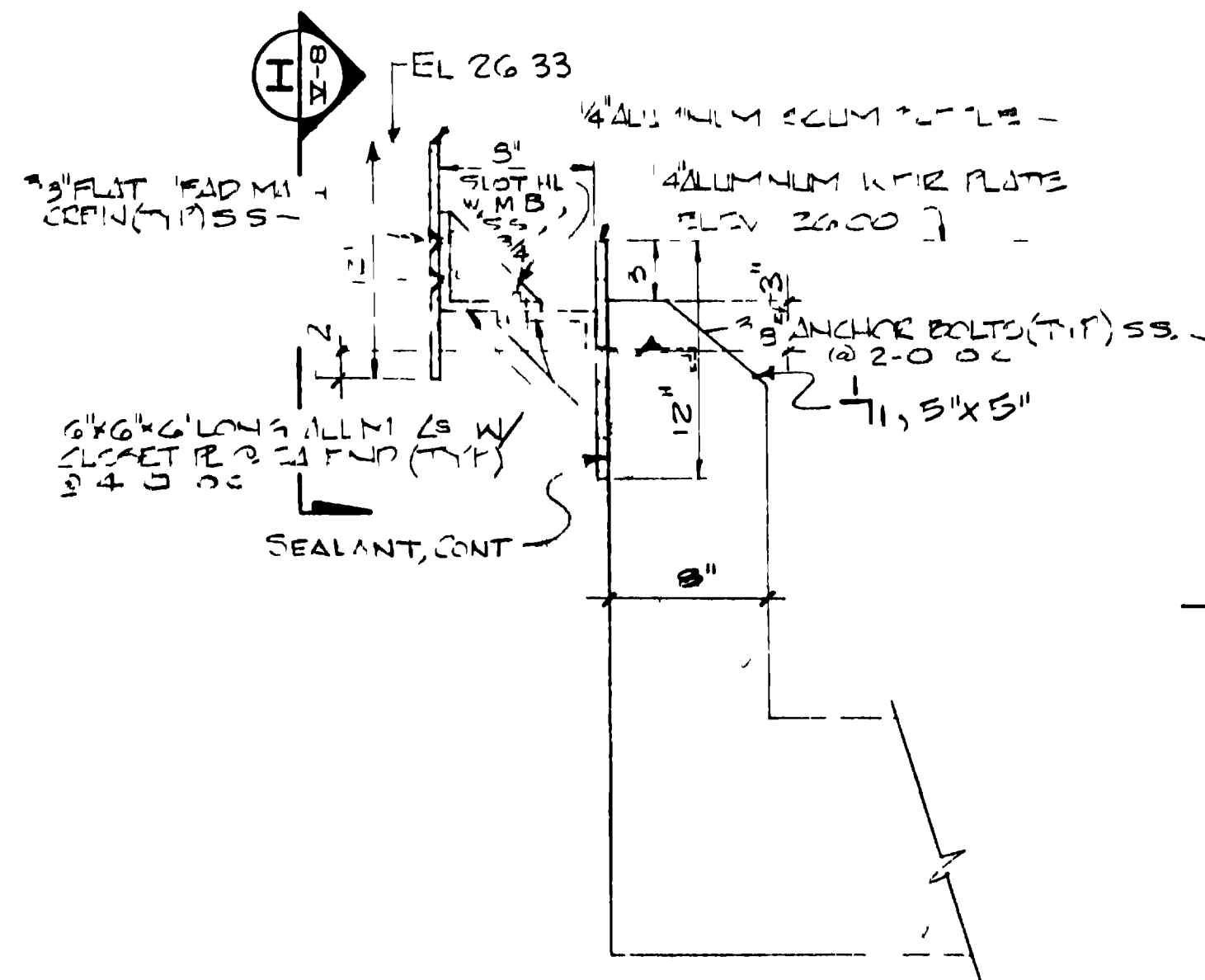
**WEIR PLATE DETAIL 4**  
SCALE 2" = 1'-0"  
X-8



**SECTION J**  
SCALE 3/4" = 1'-0"  
X-8



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



**SCUM BAFFLE DETAIL 3**  
SCALE 1 1/2" = 1'-0"  
X-8

**GRAND JUNCTION / MESA COUNTY, COLORADO**  
**PERRIGO WASH WASTEWATER TREATMENT PLANT**

SECTION X PROCESS

**PRIMARY CLARIFIER**

PLANS SECTIONS DETAILS

**HERRINGTON, DURHAM & RICHARDSON, INC.**  
ENGINEERS PLANNERS CONSULTANTS  
DENVER COLORADO GRAND JUNCTION COLORADO

DESIGNED BY: P. HEYE  
CHECKED BY: HENRICHSEN  
DATE: NOV 1980

13114

DATE: 11/7/84  
BY: AS BUILT  
DATE: 3/27/91  
BY: JUM & SLUDGE PITS REVISED

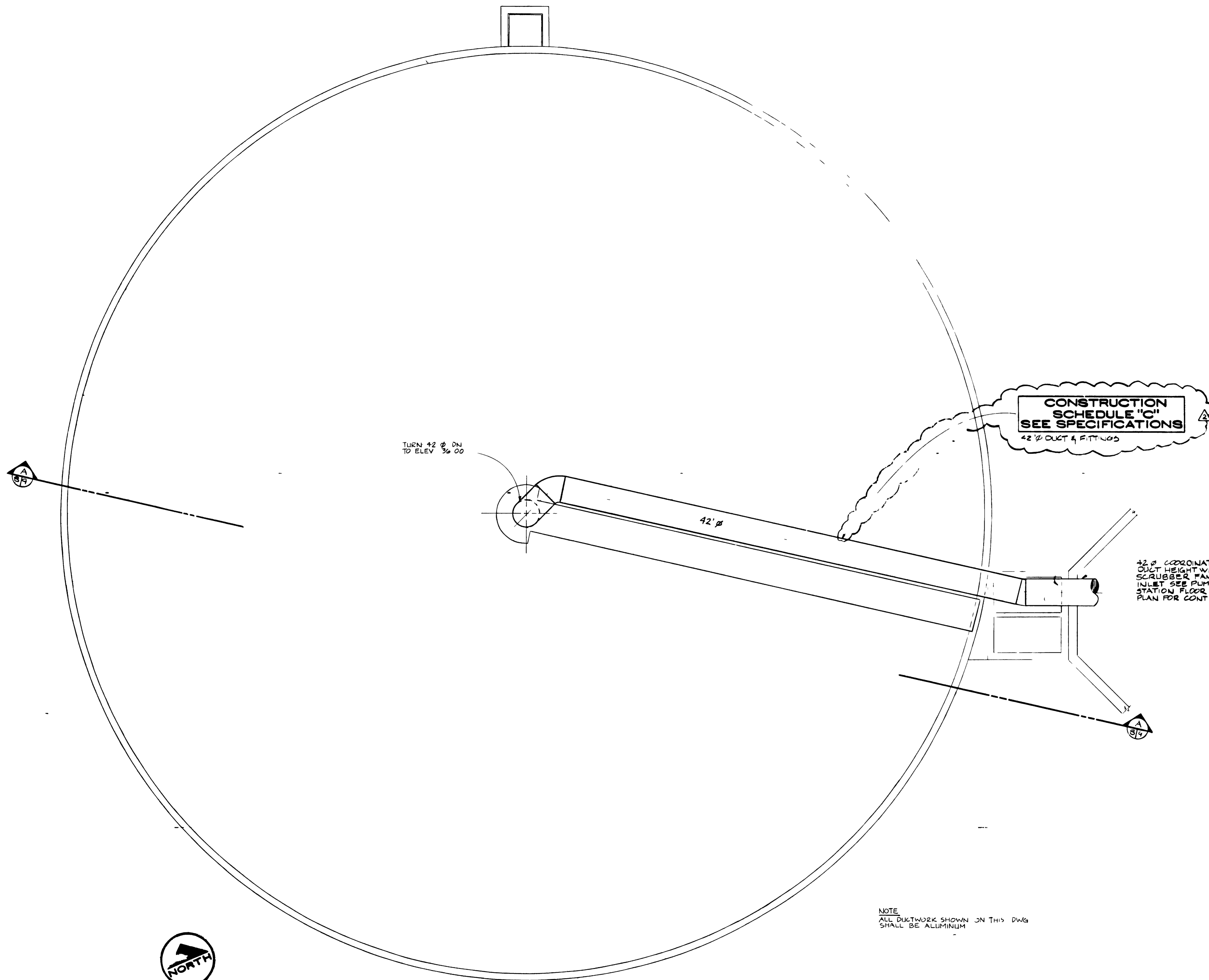
DATE: 11/7/84  
BY: P. HEYE  
DATE: 11/7/84  
BY: HENRICHSEN

07087903.tif

DWG 104 OF 194

NOTE: DOME COVERS ON PRIMARY CLARIFIERS ARE INCLUDED IN CONSTRUCTION SCHEDULE "C" - SEE SPECIFICATIONS





**CONSTRUCTION SCHEDULE "C" SEE SPECIFICATIONS**  
42" Ø DUCT & FITTINGS

TURN 42" Ø DN TO ELEV 30.00

42" Ø COORDINATE DUCT HEIGHT WITH SCRUBBER FAN INLET SEE PUMP STATION FLOOR PLAN FOR CONT

NOTE  
ALL DUCTWORK SHOWN ON THIS DWG SHALL BE ALUMINUM



**PRIMARY CLARIFIER NO. 1**  
SCALE 3/16" = 1'-0"  
(CLARIFIER NO 2 SIMILAR)



**GRAND JUNCTION / MESA COUNTY, COLORADO**  
**PERSIGO WASH WASTEWATER TREATMENT PLANT**  
SECTION VI MECHANICAL  
**PRIMARY CLARIFIER MECHANICAL PLAN**

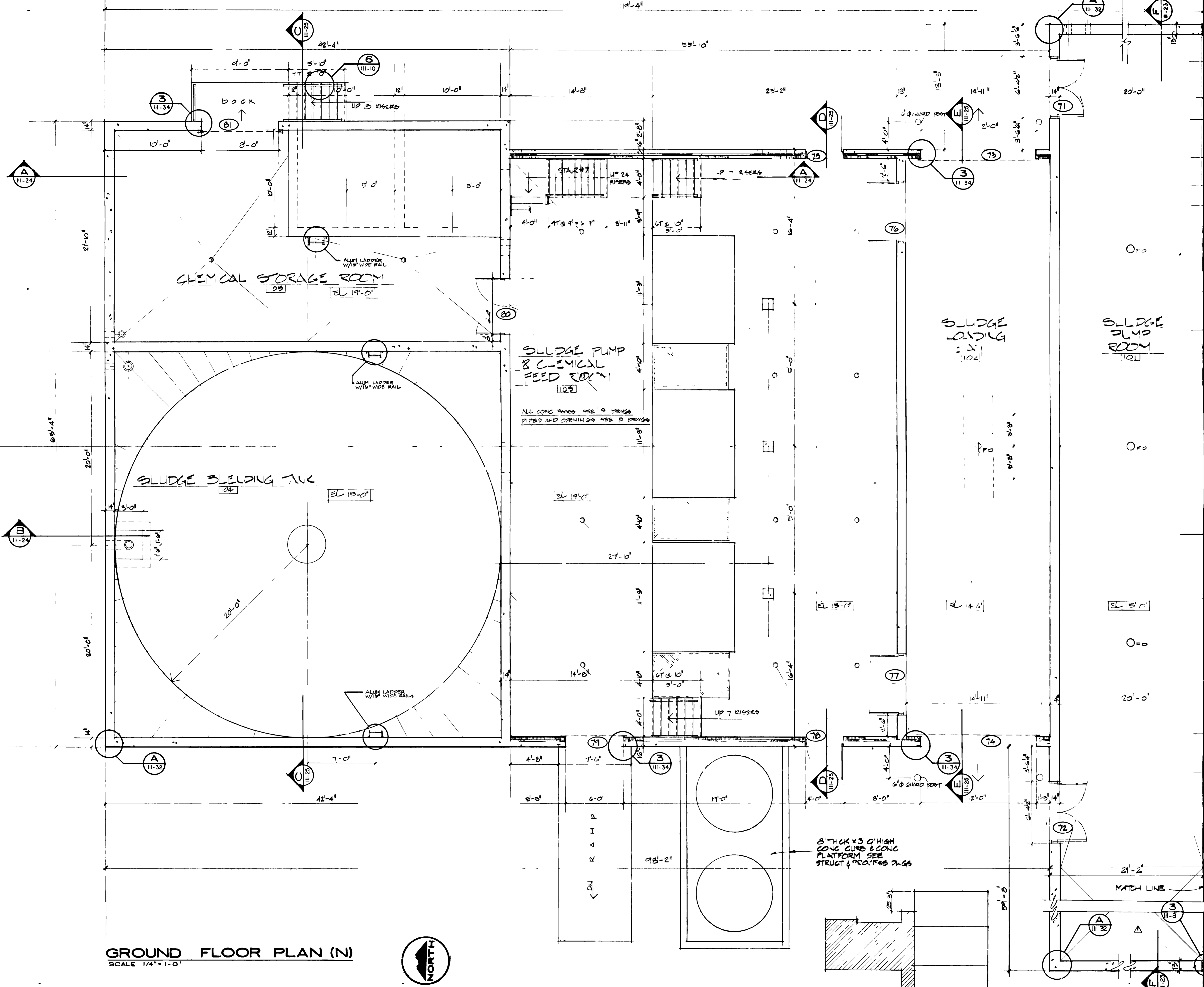
**HENNINGSON, DURHAM & RICHARDSON, INC.**  
ENGINEERS PLANNERS CONSULTANTS  
DENVER COLORADO GRAND JUNCTION COLORADO

JOB	DESIGNED	CHECKED	APPROVED	SHEET
734510	UJ3	EM	EM	VI-8
DATE	DATE	DATE	DATE	
	UJ3	4-14-81	4-14-81	

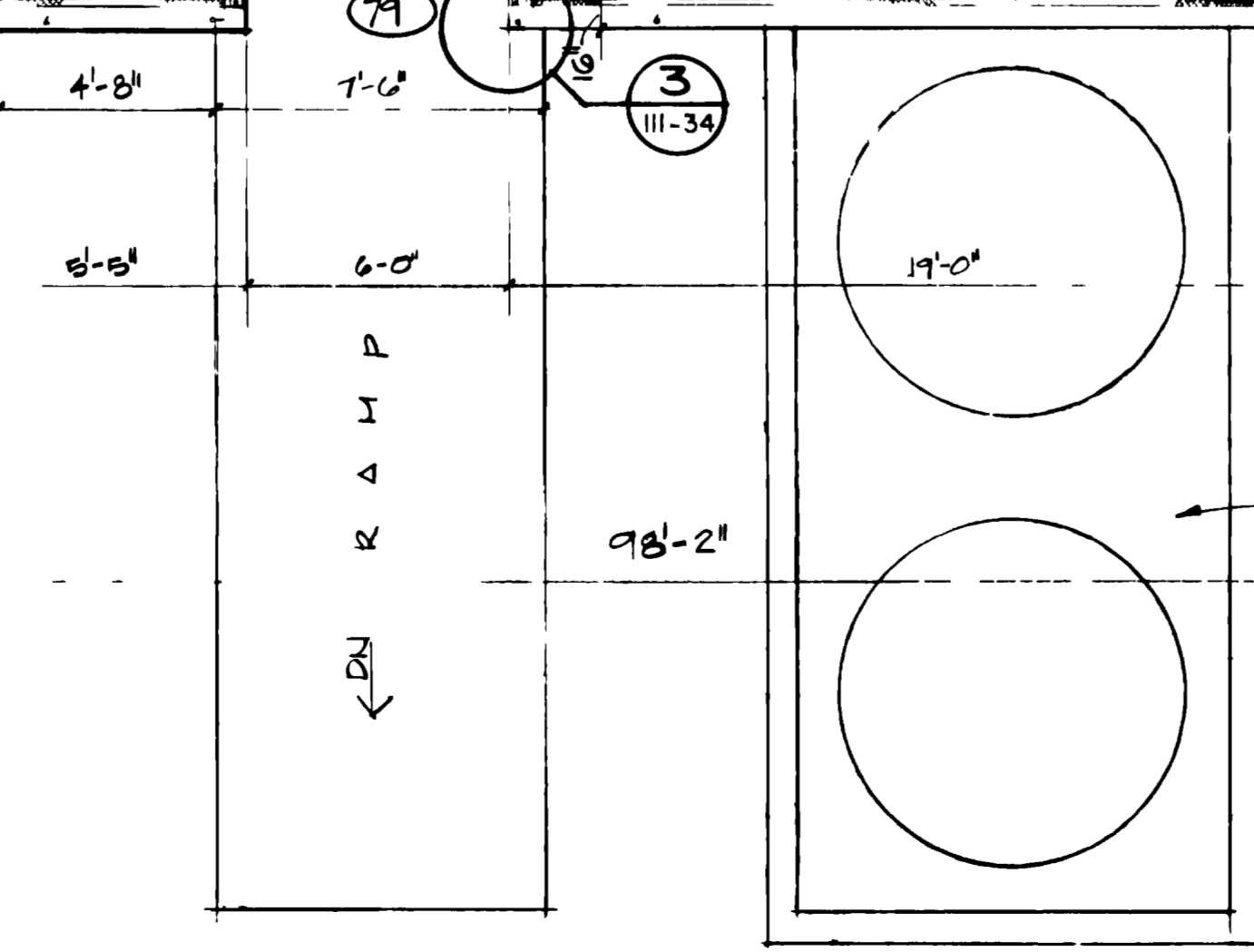
"AS RECORDED"  
FROM INFORMATION PROVIDED BY THE CONTRACTORS  
DATE: MAY 1981

12/15/84	As BUILT			
8-17-81	PRE-BID REVISION			
4-14-81	Misc REVISIONS			
DATE	DESCRIPTION	MADE	APPROV	
	REVISIONS			

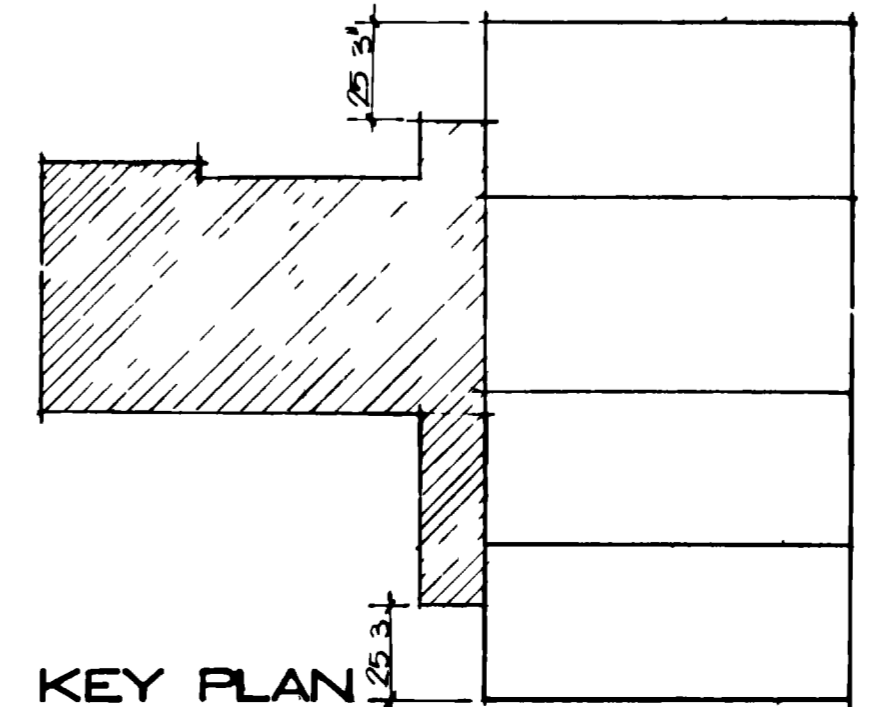




**GROUND FLOOR PLAN (N)**  
SCALE 1/4" = 1'-0"



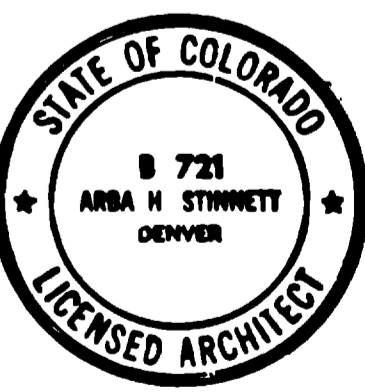
8" THICK X 3' 0" HIGH  
CONC CURB & CONC  
PLATFORM SEE  
STRUCT & MECH PAGES



**KEY PLAN**

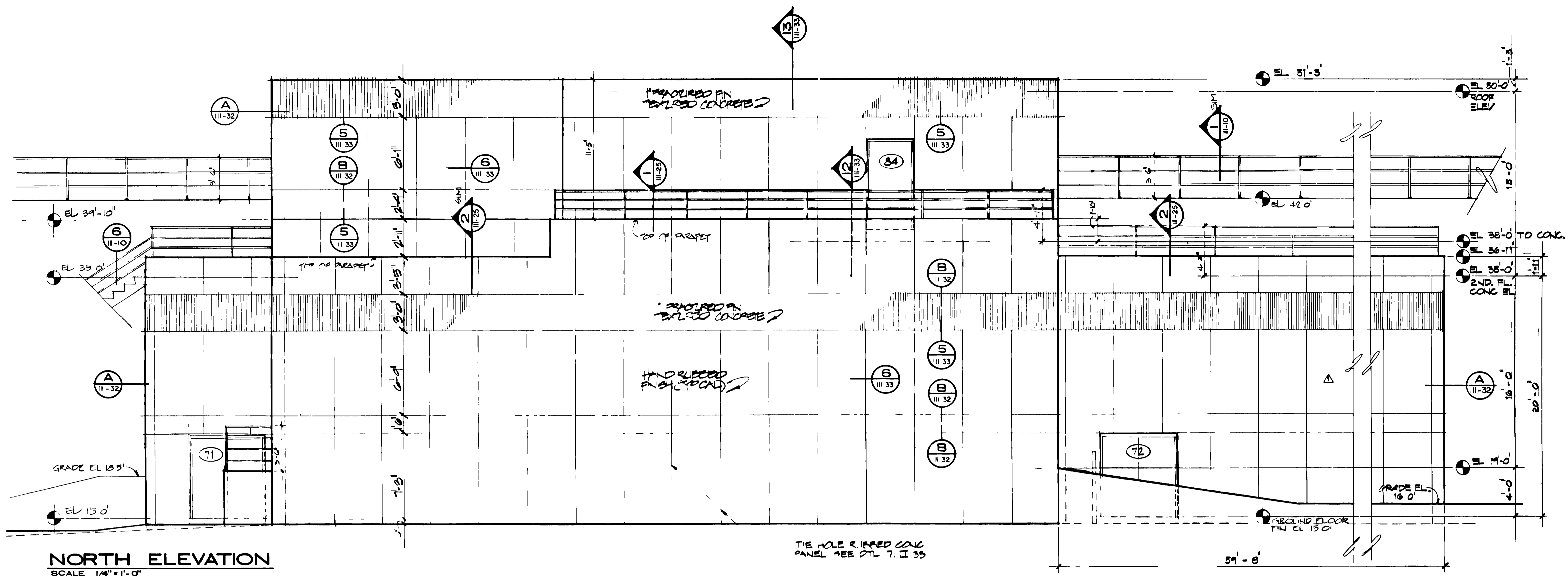
**CONSTRUCTION SCHEDULE "B" SEE SPECIFICATIONS**

"AS RECORDED"  
FROM INFORMATION  
PROVIDED BY THE  
CONTRACTOR  
DATE: MAY 1985

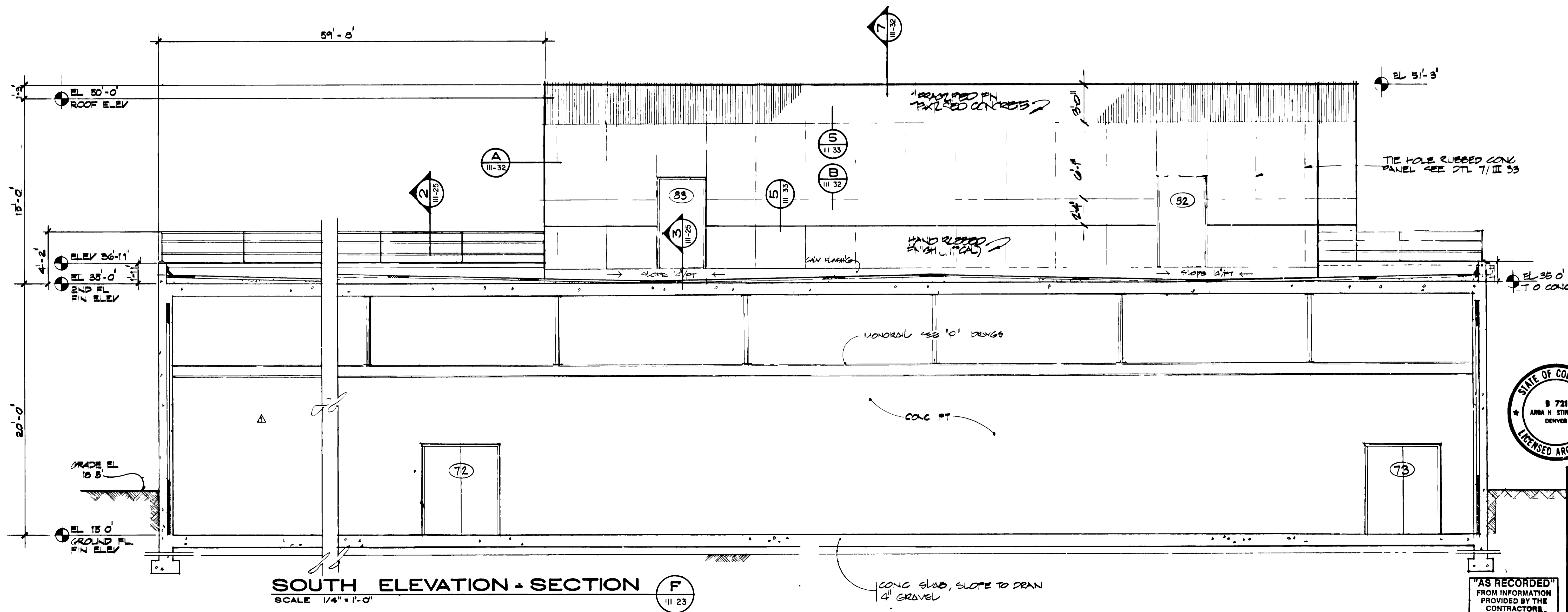


**GRAND JUNCTION / MESA COUNTY, COLORADO**  
**PERSIGO WASH WASTE WATER TREATMENT PLANT**  
SECTION III ARCHITECTURAL  
**SLUDGE PROCESSING UNIT**  
GROUND FLOOR PLAN

**HENNINGSON, DURHAM & RICHARDSON, INC**  
ENGINEERS PLANNERS CONSULTANTS  
DENVER COLORADO GRAND JUNCTION COLORADO  
JOB NO. 7345  
DESIGNED BY: KWONG  
CHECKED BY: STINNETT  
DATE: NOV 1982  
APPROVED BY: HENNINGSON  
DATE: NOV 1982  
SHEET III - 20

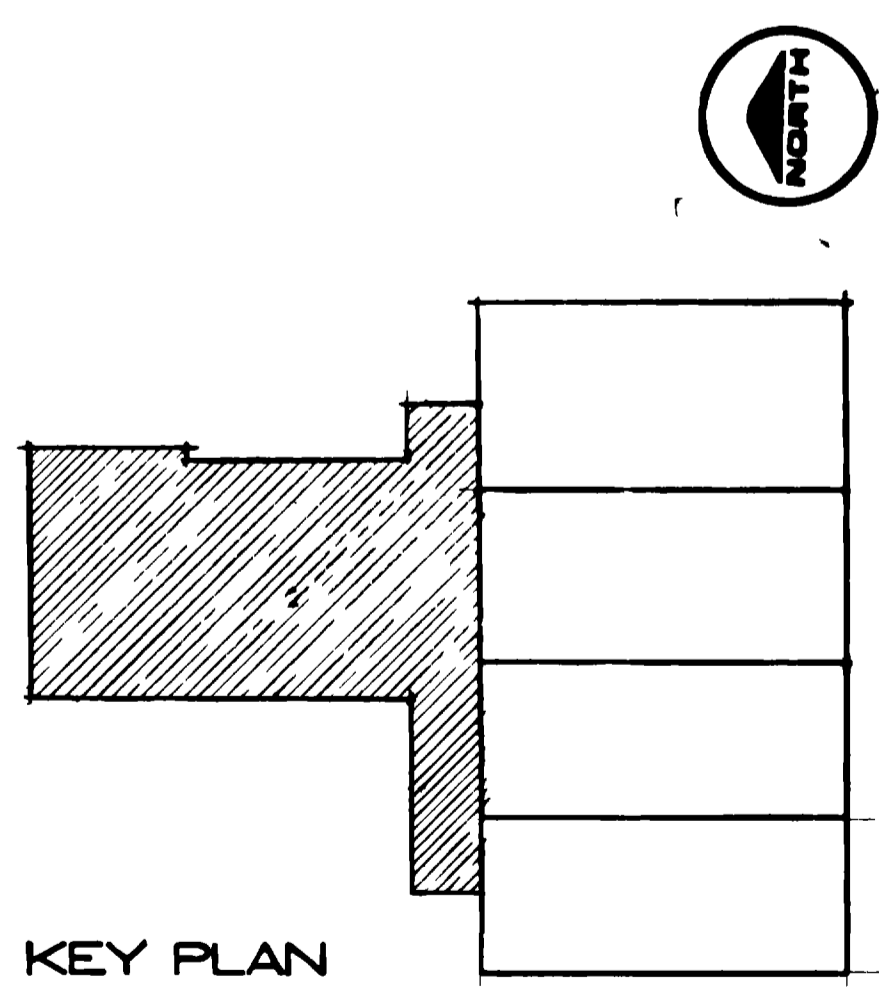


**NORTH ELEVATION**  
SCALE 1/4" = 1'-0"



**SOUTH ELEVATION - SECTION F**  
SCALE 1/4" = 1'-0"

**CONSTRUCTION SCHEDULE "B" SEE SPECIFICATIONS**

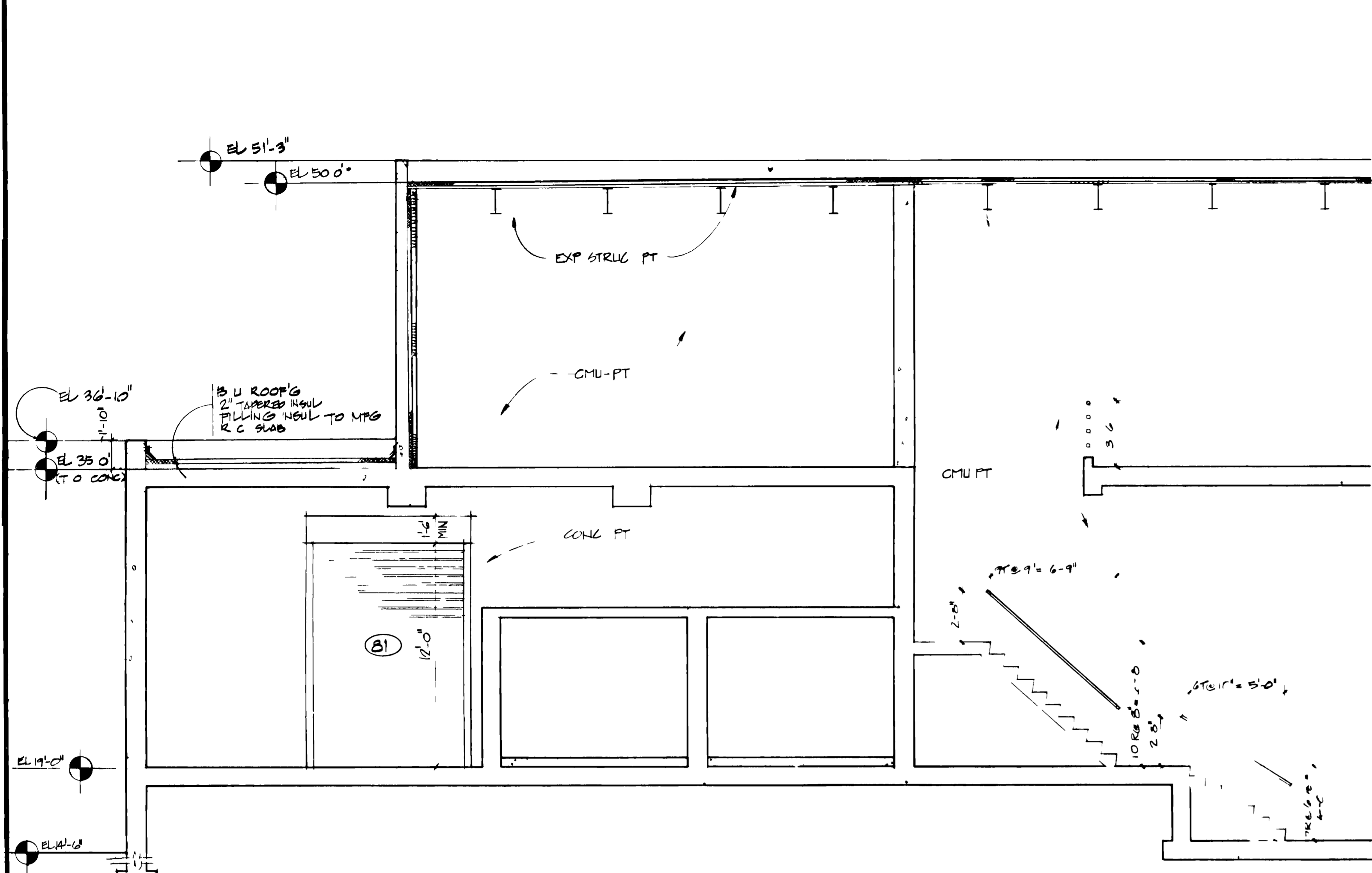


**GRAND JUNCTION / MESA COUNTY, COLORADO**  
**PERSIGO WASH WASTE WATER TREATMENT PLANT**  
SECTION III ARCHITECTURAL  
**SLUDGE PROCESSING UNIT**  
ELEVATIONS & SECTION

**HENNINGSON, DURHAM & RICHARDSON, INC.**  
ENGINEERS PLANNERS CONSULTANTS  
DENVER COLORADO GRAND JUNCTION COLORADO

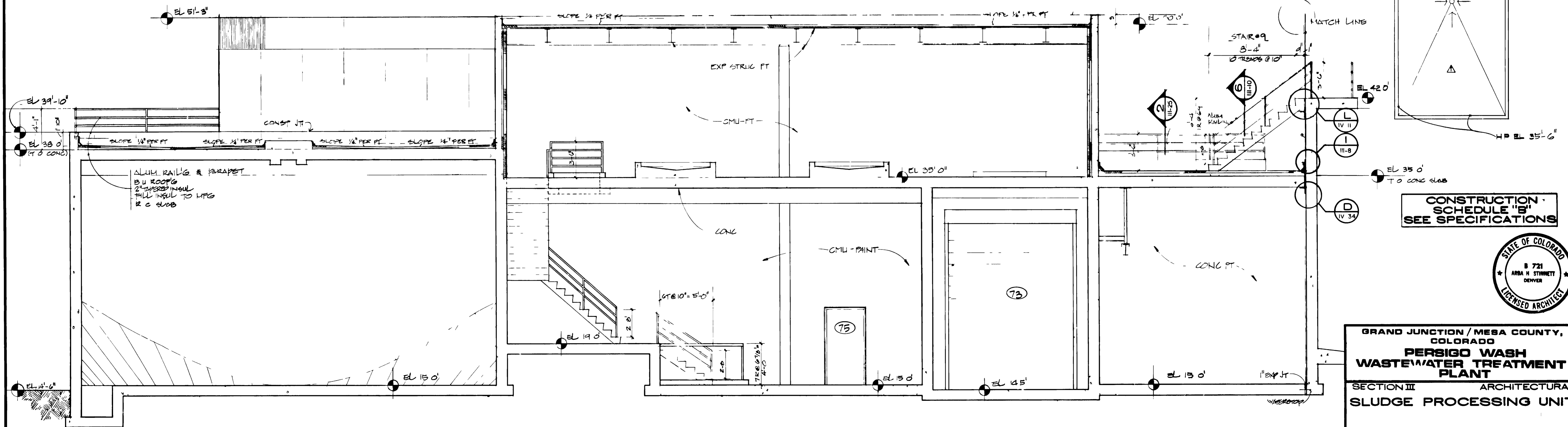
DATE	DESCRIPTION	REVISIONS	MADE	APPROV
6/7/88	AS BUILT			
3/30/81	EXTENDED SLUDGE PUMP RM			

"AS RECORDED"  
FROM INFORMATION  
PROVIDED BY THE  
CONTRACTOR  
DATE 11/83



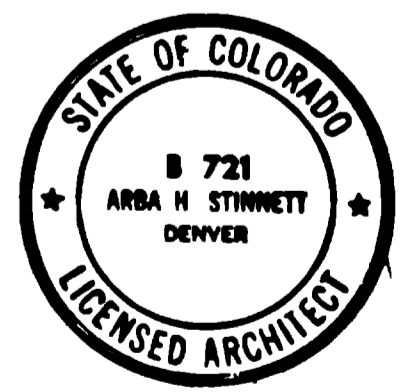
**SECTION A**  
SCALE 1/4" = 1'-0"  
III 24

**ROOF PLAN**  
SCALE 1/8" = 1'-0"



**SECTION B**  
SCALE 1/4" = 1'-0"  
III 24

**CONSTRUCTION SCHEDULE 'B'**  
SEE SPECIFICATIONS



**GRAND JUNCTION / MESA COUNTY, COLORADO**  
**PERSIGO WASH WASTEWATER TREATMENT PLANT**  
SECTION III ARCHITECTURAL  
**SLUDGE PROCESSING UNIT**  
SECTIONS & ROOF PLAN

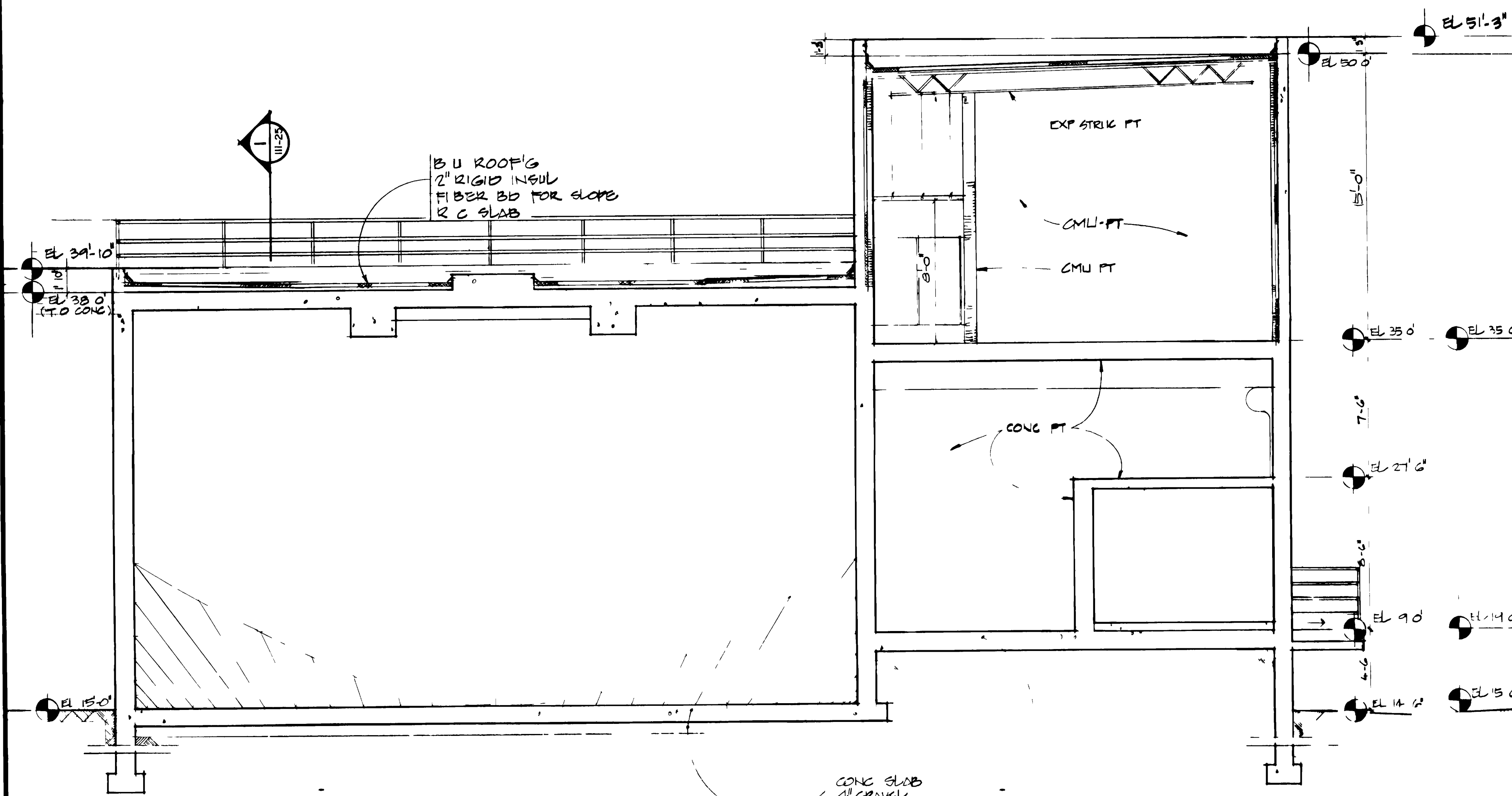
**HENNINGSON DURHAM & RICHARDSON, INC.**  
ENGINEERS PLANNERS CONSULTANTS  
DENVER COLORADO GRAND JUNCTION COLORADO

"AS RECORDED"  
FROM INFORMATION  
PROVIDED BY THE  
CONTRACTOR  
DATE MAY 1980

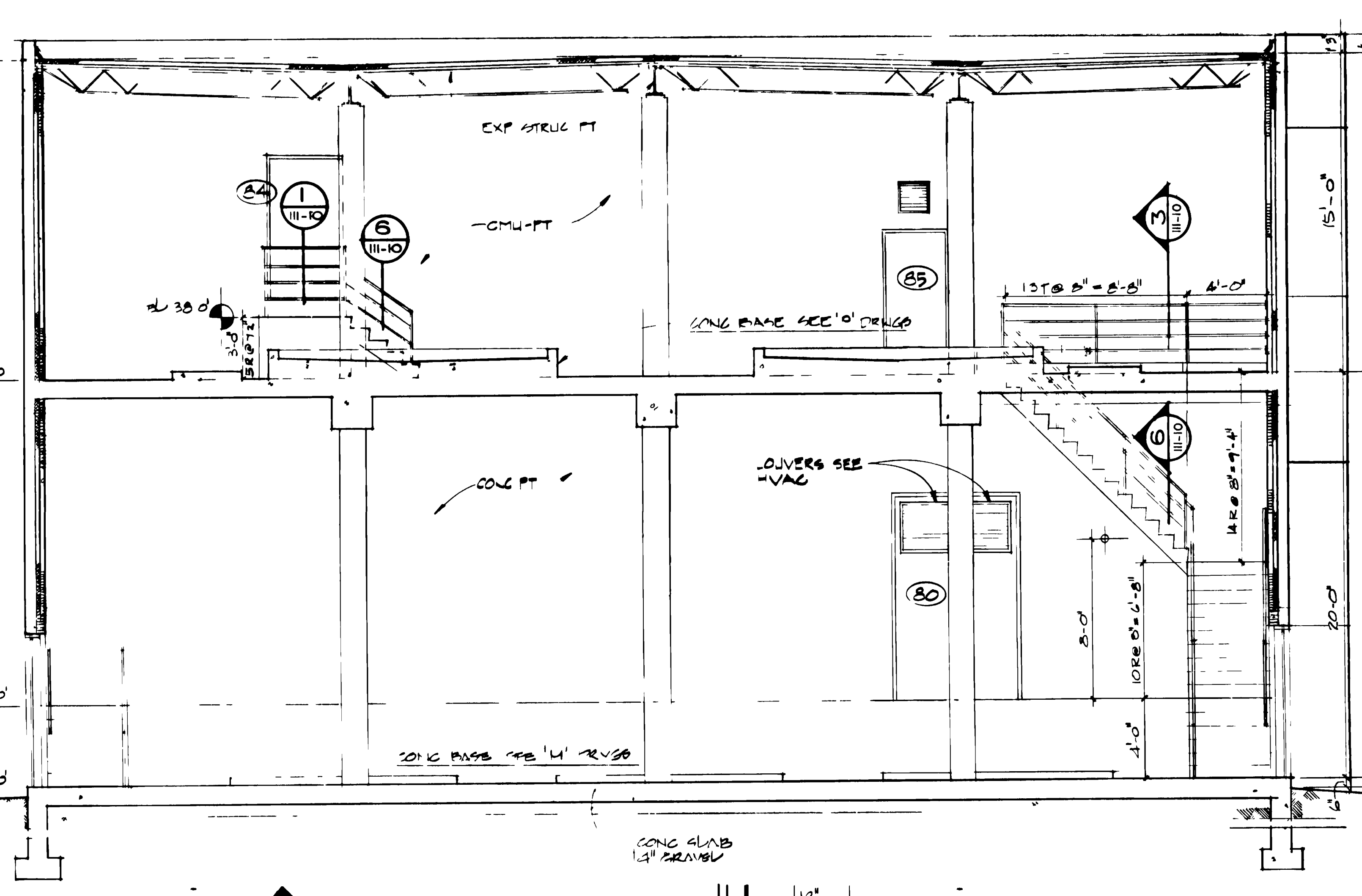
NO.	DATE	DESCRIPTION	BY	CHK	PH
1	11/78	AS BUILT	PKL	PH	
2	5/80	EXTENDED REF IN SLUDGE PRM	PKL	PH	

DESIGNED BY P. KWONG  
CHECKED BY A. STINNETT  
APPROVED BY K. HENNINGSON  
DATE NOV. 1980

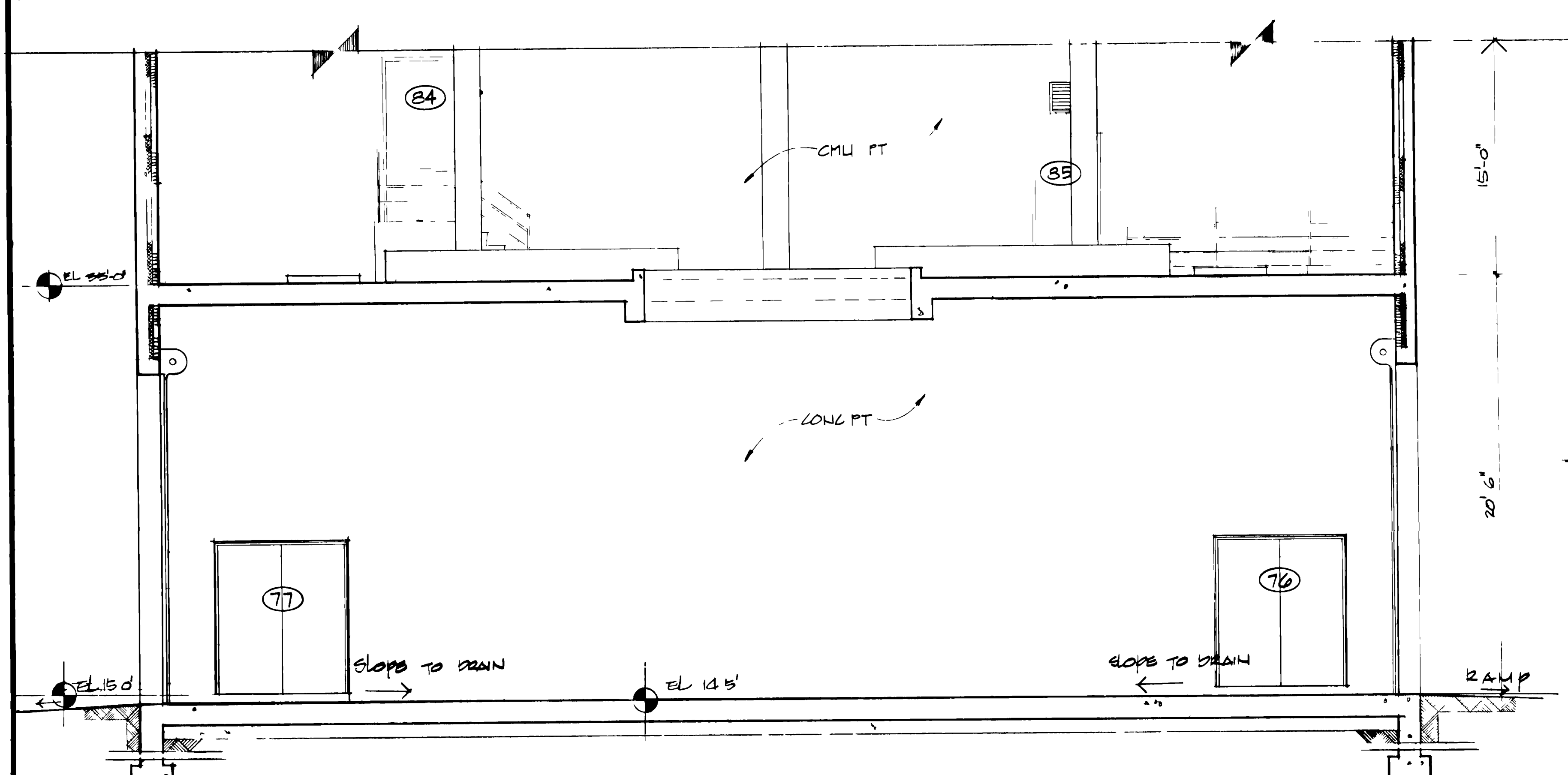
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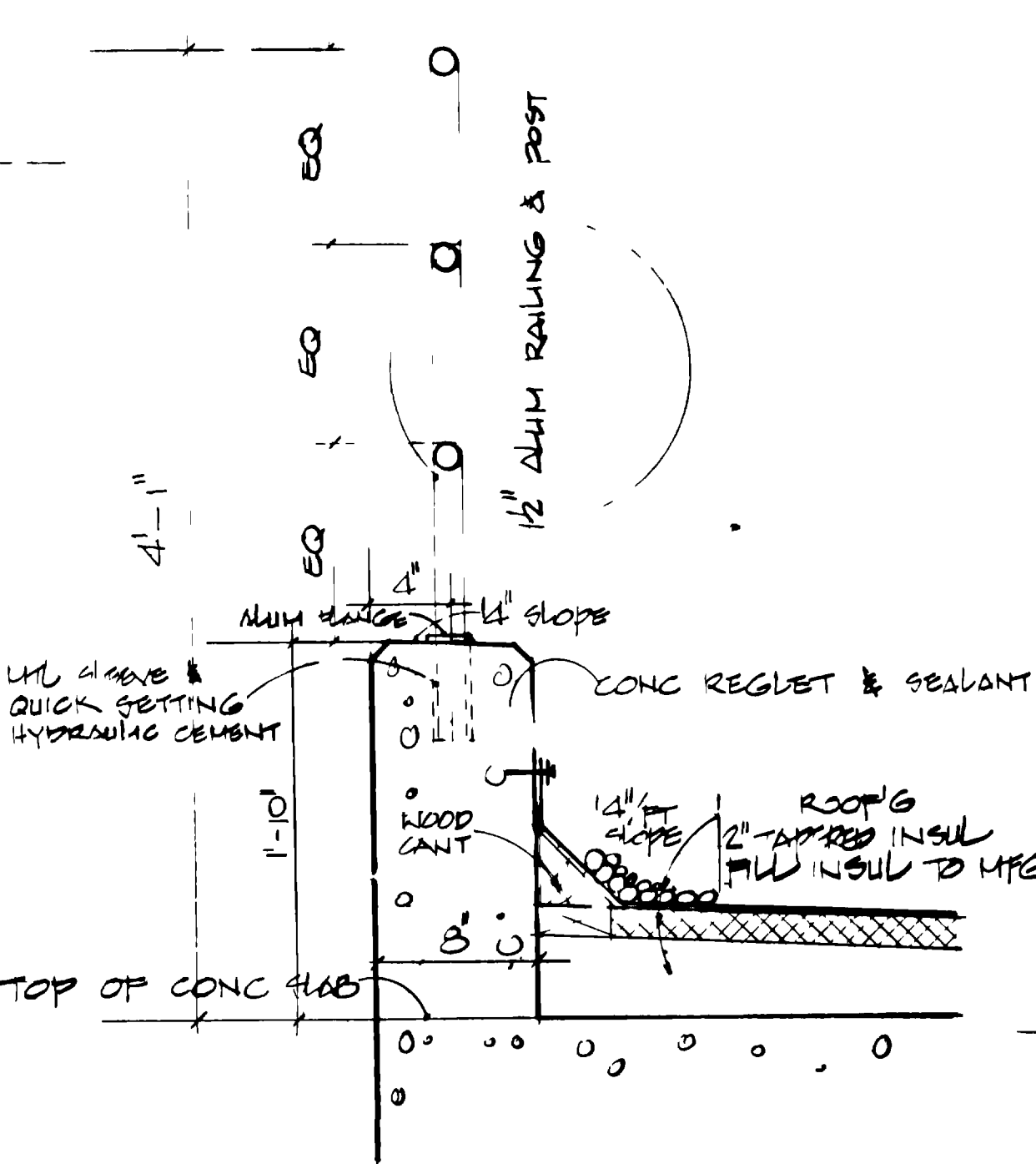
**SECTION C**  
SCALE 1/4" = 1'-0"



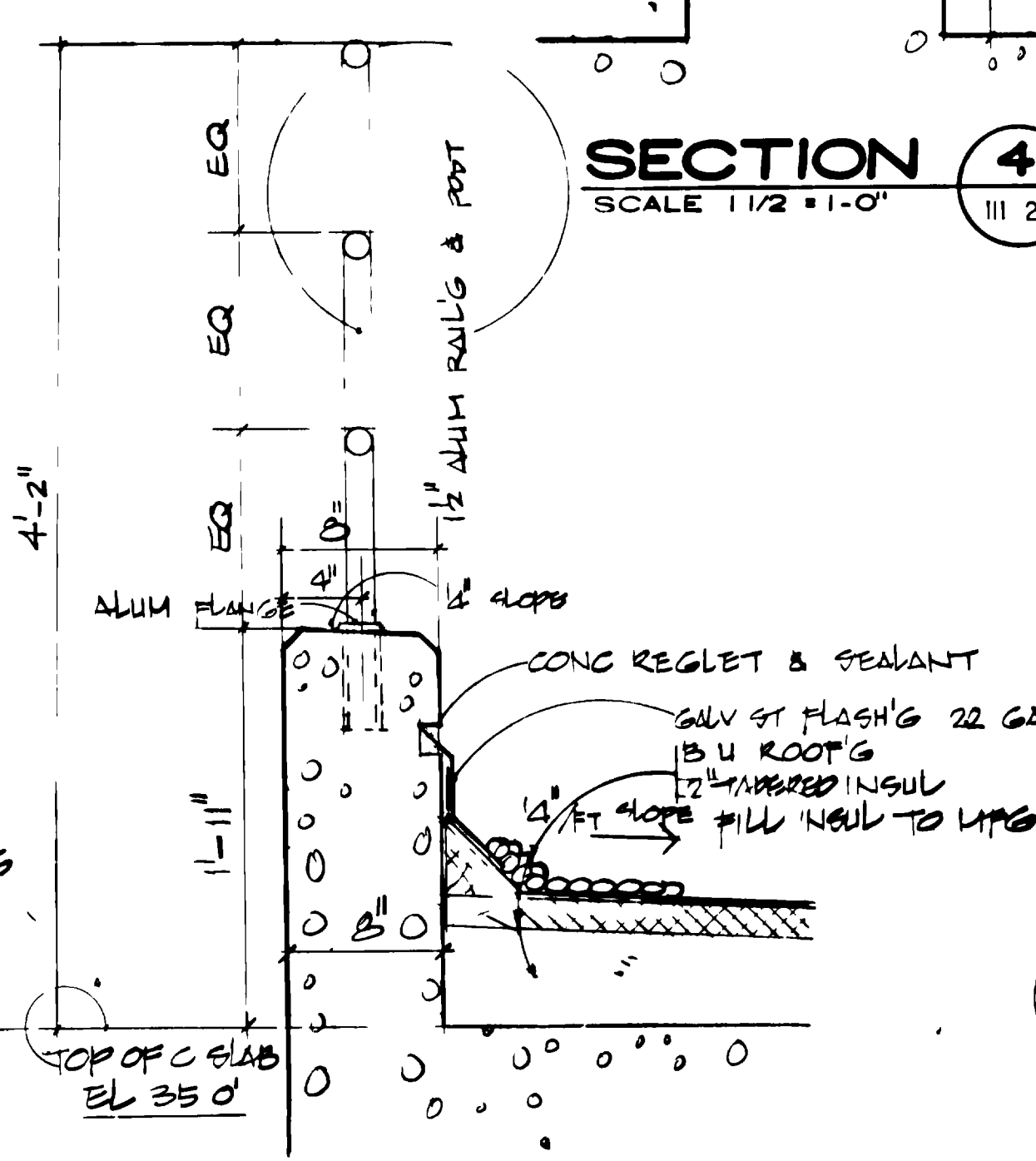
**SECTION D**  
SCALE 1/4" = 1'-0"



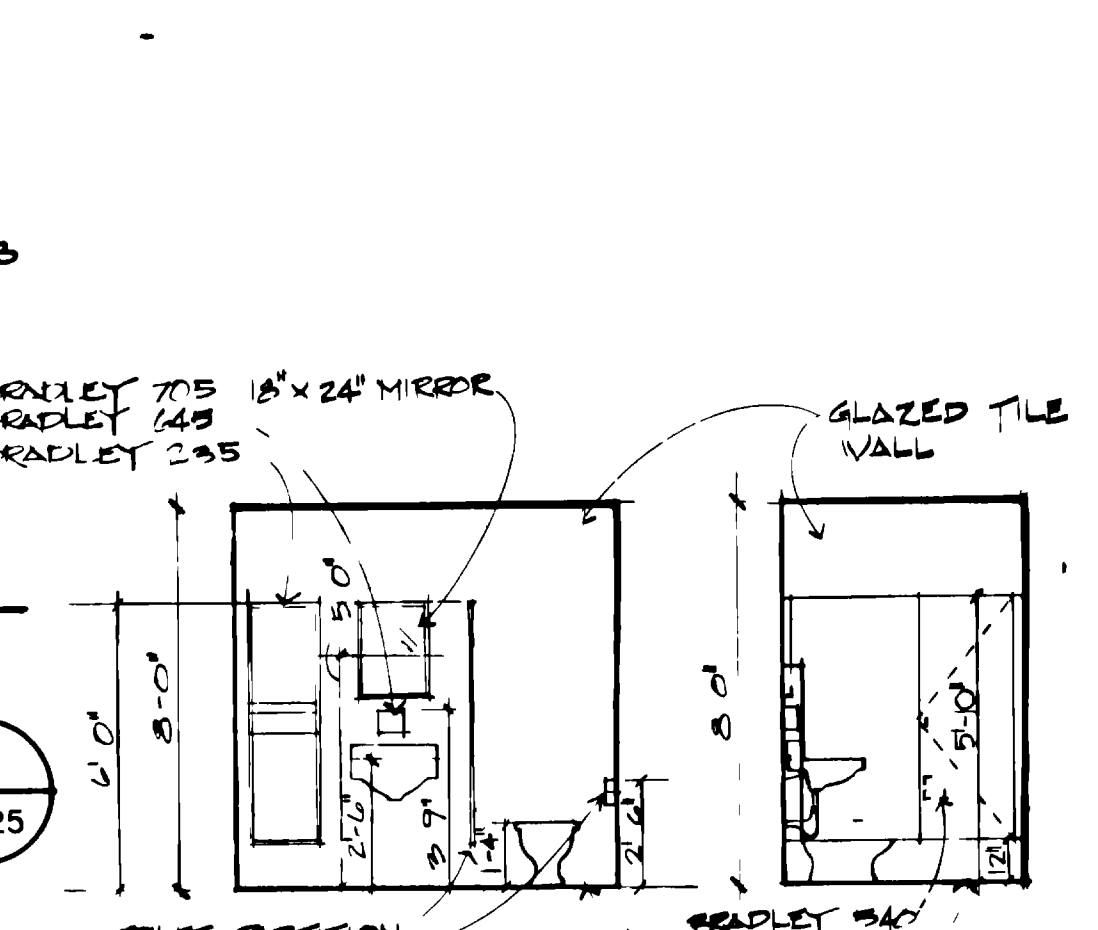
**SECTION E**  
SCALE 1/4" = 1'-0"



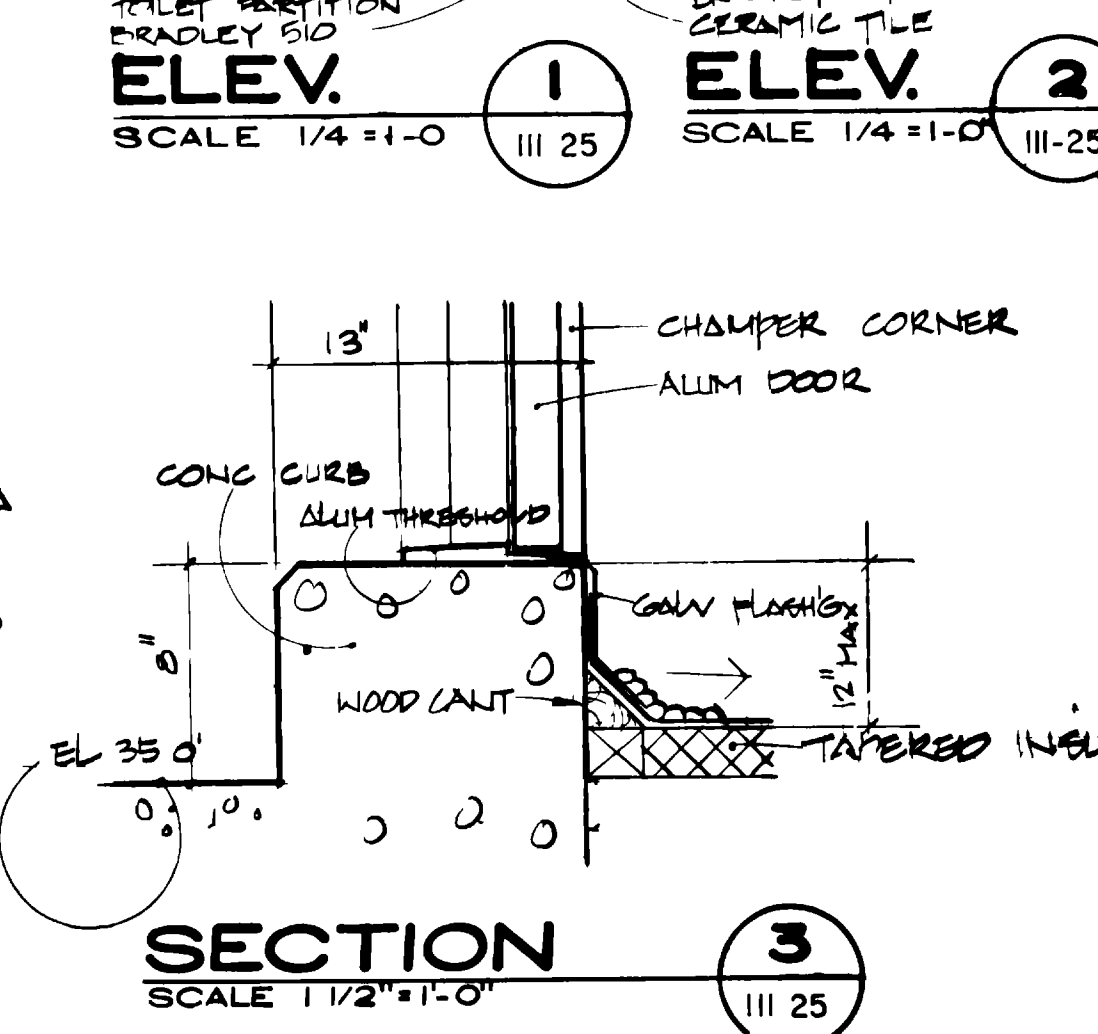
**SECTION 1**  
SCALE 1 1/2" = 1'-0"



**SECTION 2**  
SCALE 1 1/2" = 1'-0"



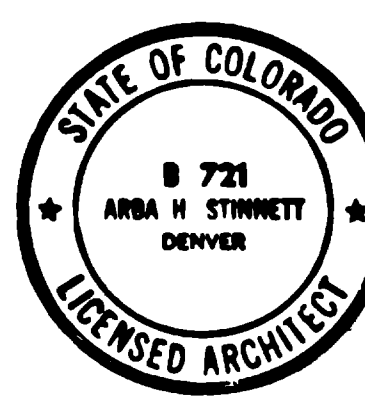
**SECTION 3**  
SCALE 1 1/2" = 1'-0"



**SECTION 4**  
SCALE 1 1/2" = 1'-0"

NOTE SECTION F SEE SOUTH ELEVATION SECTION ON DRWG III-23

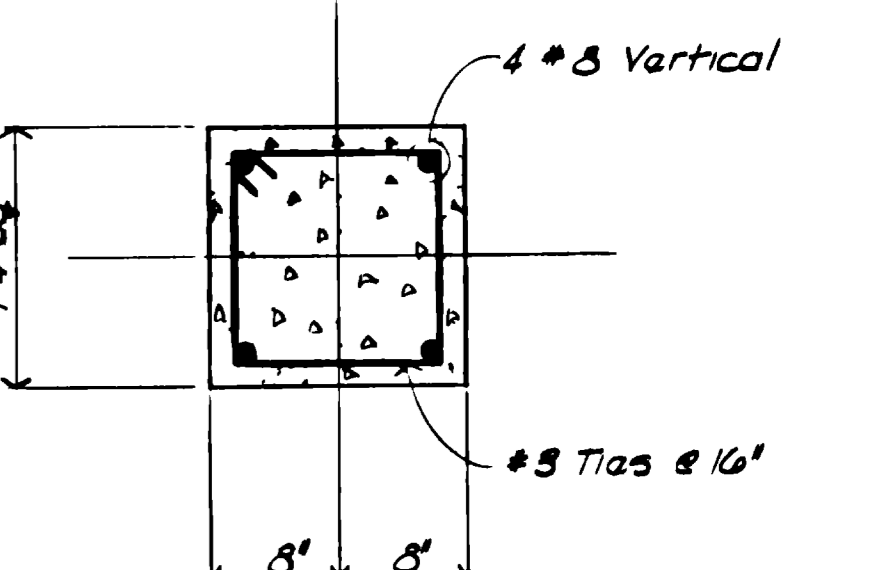
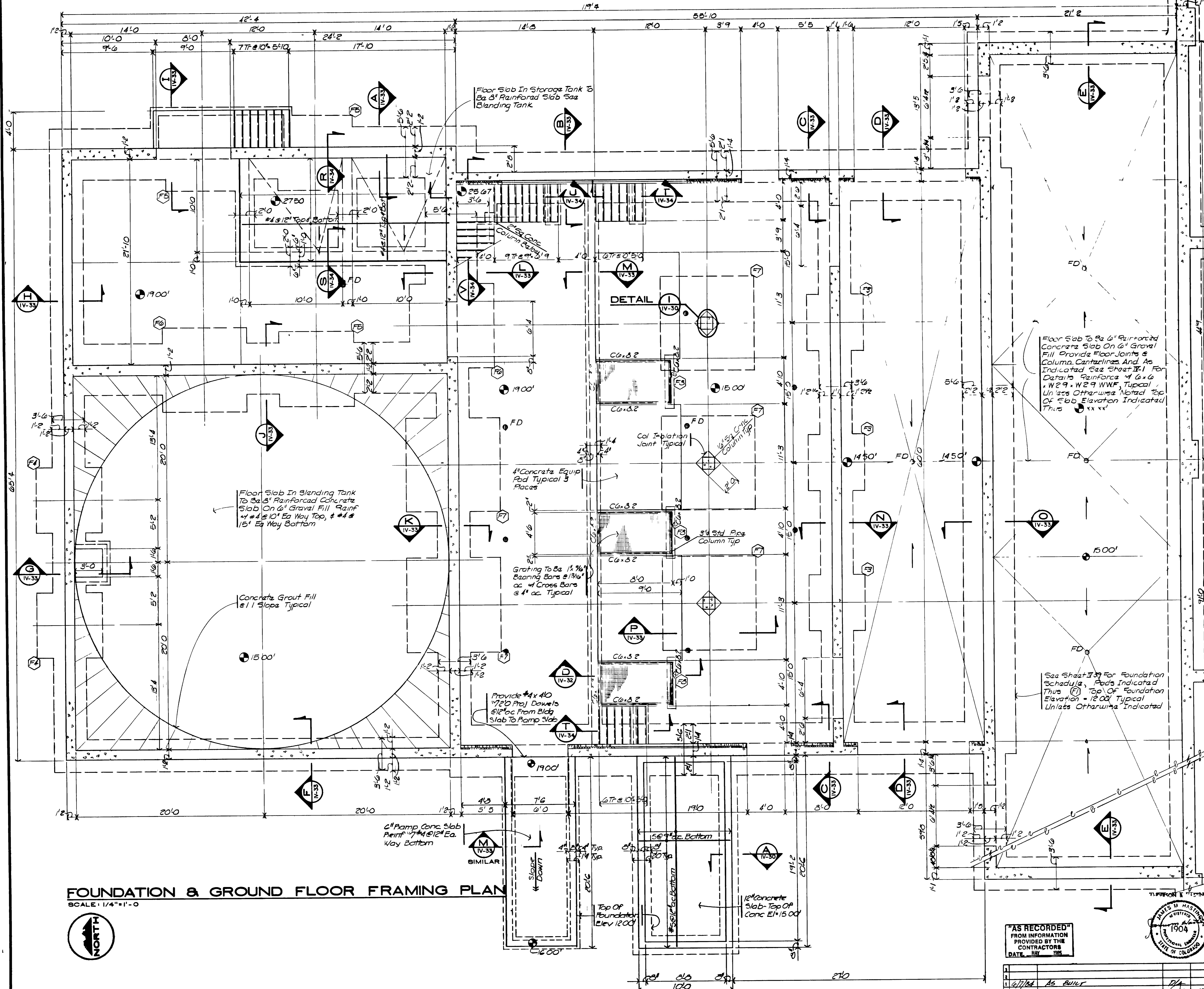
CONSTRUCTION SCHEDULE "B" SEE SPECIFICATIONS



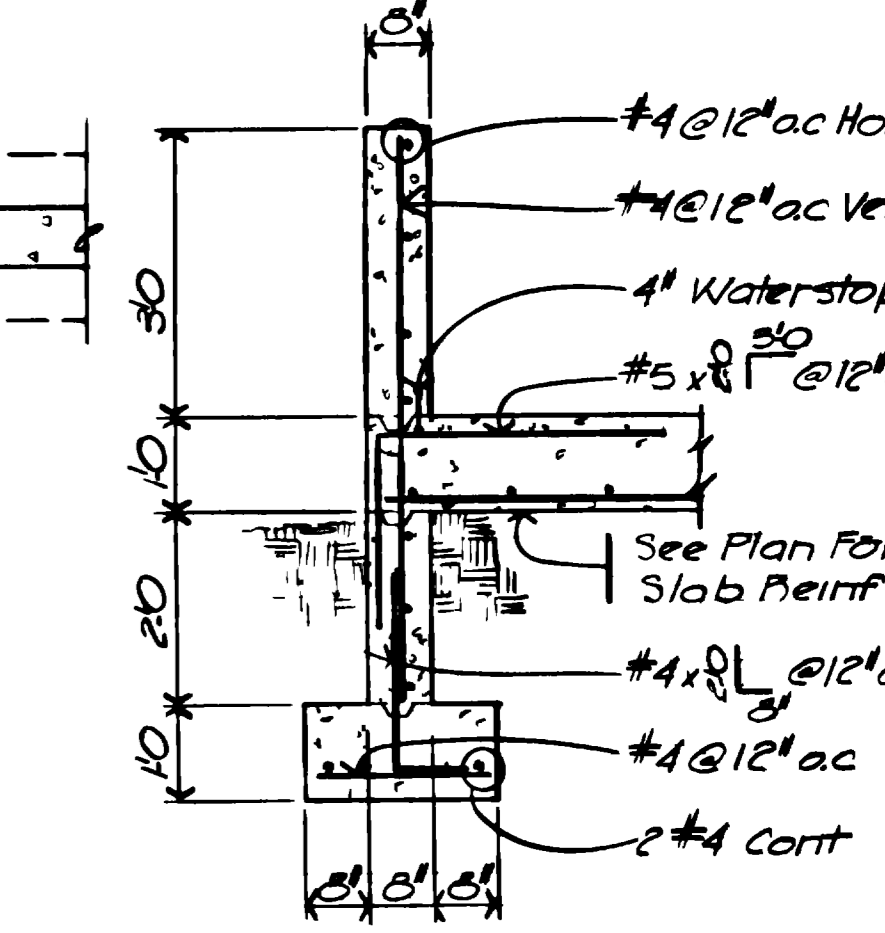
GRAND JUNCTION / MESA COUNTY, COLORADO  
**PERSIGO WASH WASTE WATER TREATMENT PLANT**  
SECTION III ARCHITECTURAL  
SLUDGE PROCESSING UNIT  
SECTIONS, INTERIOR ELEV'S & DETAILS

HENNINGSON DURHAM & RICHARDSON, INC.  
ENGINEERS PLANNERS CONSULTANTS  
DENVER COLORADO GRAND JUNCTION COLORADO  
JOB NO. 734510  
DESIGNED BY: K.W.C.H. CHECKED BY: A. STINNELLY  
DATE: 11/13/95 APPROVED BY: H. RICHMOND  
DATE: 11/13/95  
DRAWN BY: [ ]  
DATE: [ ]  
REVISIONS: [ ]  
SHEET III - 25

"AS RECORDED" FROM INFORMATION PROVIDED BY THE CONTRACTOR DATE: 11/13/95



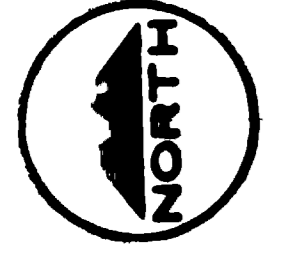
**DETAIL I**  
SCALE: 1" = 1'-0"  
IV-30



**SECTION A**  
SCALE: 1/2" = 1'-0"  
IV-30

See Sheet IV-35 For  
Aerobic Digester  
Plan

**FOUNDATION & GROUND FLOOR FRAMING PLAN**  
SCALE: 1/4" = 1'-0"



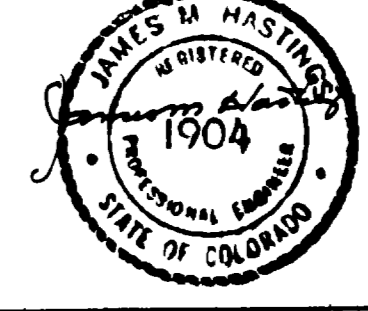
**CONSTRUCTION SCHEDULE "B" SEE SPECIFICATIONS**

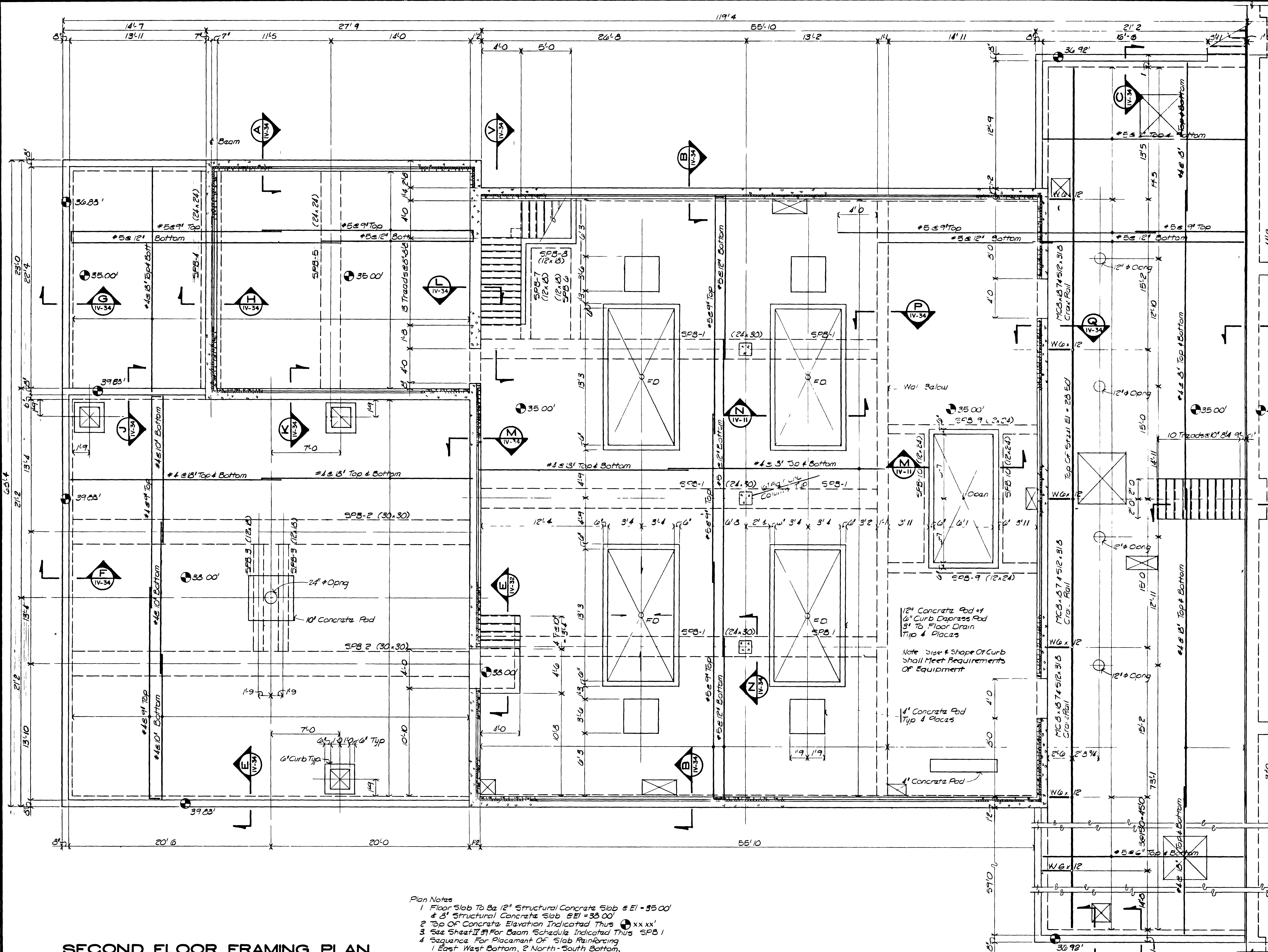
GRAND JUNCTION / MESA COUNTY, COLORADO  
**PERSIGO WASH WASTE WATER TREATMENT PLANT**

SECTION IV STRUCTURAL  
**SLUDGE PROCESSING UNIT FOUNDATION & GROUND FLOOR PLAN**

**HINNINGSON, DURHAM & RICHARDSON, INC.**  
ENGINEERS PLANNERS CONSULTANTS  
DENVER COLORADO GRAND JUNCTION COLORADO  
JOB NO. 734510  
DATE: 6/7/84  
DESCRIPTION: AS BUILT  
REVISIONS: 1/1  
DRAWN: J.M.H.  
CHECKED: J.M.H.  
APPROVED: H. HENRICHSEN  
DATE: 1/1/85  
SHEET: IV-30  
DWG. 87 OF 191

"AS RECORDED"  
FROM INFORMATION PROVIDED BY THE CONTRACTOR  
DATE: MAY 1985





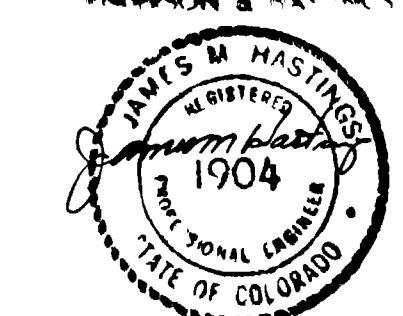
- Plan Notes
- 1 Floor Slab To Be 12" Structural Concrete Slab @ El = 35.00'
  - 2 8" Structural Concrete Slab @ El = 38.00'
  - 3 Top Of Concrete Elevation Indicated Thus  $\oplus$  xx'xx"
  - 4 See Sheet II 37 For Beam Schedule Indicated Thus SPB 1
  - 5 Sequence For Placement Of Slab Reinforcing  
1 East-West Bottom, 2 North-South Bottom,  
3 North-South Top, 4 East-West Top
  - 6 Crane Rail Capacity = 4000 lb
  - 7 Refer To Mech & Process Sheets For Pipe Sleeves  
& Block Outs

**SECOND FLOOR FRAMING PLAN**  
SCALE 1/4"=1'-0"



"AS RECORDED"  
FROM INFORMATION  
PROVIDED BY THE  
CONTRACTOR  
DATE MAY 1988

NO.	DATE	DESCRIPTION	BY	APPROV.
1	6/7/88	AS BUILT		



**CONSTRUCTION SCHEDULE "B" SEE SPECIFICATIONS**

**GRAND JUNCTION / MESA COUNTY, COLORADO**  
**PERSIGO WASH WASTE WATER TREATMENT PLANT**

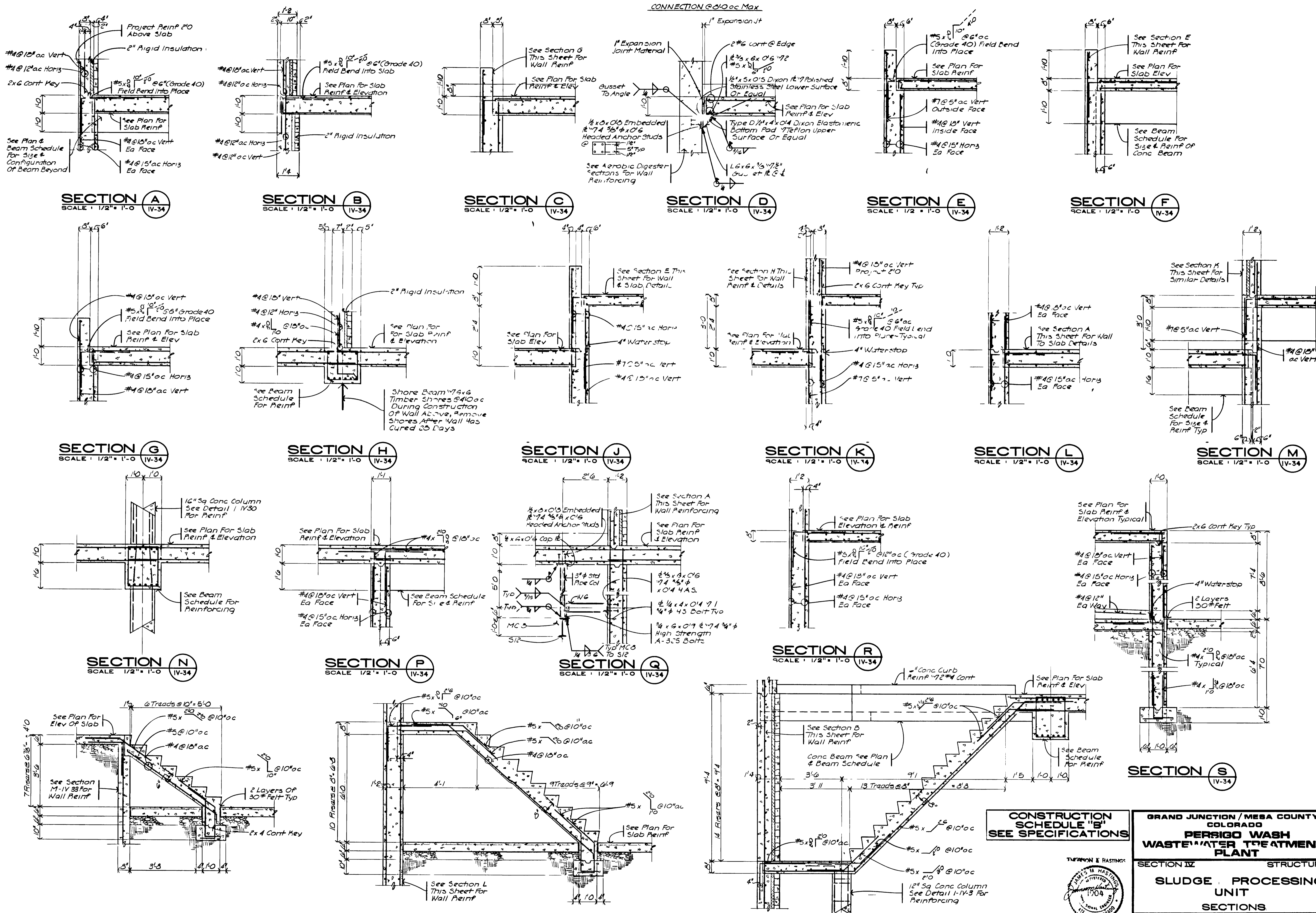
SECTION IX STRUCTURAL  
**SLUDGE PROCESSING UNIT**  
**SECOND FLOOR PLAN**

**HINNINGSON, DURHAM & RICHARDSON, INC.**  
ENGINEERS PLANNERS CONSULTANTS  
DENVER COLORADO GRAND JUNCTION COLORADO

JOB NO. 734510	DESIGNED S.E.B.	DRAWN J.H.M.	CHECKED K.HENRICHSEN	DATE	SHEET IV - 31
	DATE				

DWG. NO. OF 19





CONNECTION @ 10' oc Max

**SECTION A**  
SCALE: 1/2" = 1'-0"  
IV-34

**SECTION B**  
SCALE: 1/2" = 1'-0"  
IV-34

**SECTION C**  
SCALE: 1/2" = 1'-0"  
IV-34

**SECTION D**  
SCALE: 1/2" = 1'-0"  
IV-34

**SECTION E**  
SCALE: 1/2" = 1'-0"  
IV-34

**SECTION F**  
SCALE: 1/2" = 1'-0"  
IV-34

**SECTION G**  
SCALE: 1/2" = 1'-0"  
IV-34

**SECTION H**  
SCALE: 1/2" = 1'-0"  
IV-34

**SECTION J**  
SCALE: 1/2" = 1'-0"  
IV-34

**SECTION K**  
SCALE: 1/2" = 1'-0"  
IV-34

**SECTION L**  
SCALE: 1/2" = 1'-0"  
IV-34

**SECTION M**  
SCALE: 1/2" = 1'-0"  
IV-34

**SECTION N**  
SCALE: 1/2" = 1'-0"  
IV-34

**SECTION P**  
SCALE: 1/2" = 1'-0"  
IV-34

**SECTION Q**  
SCALE: 1/2" = 1'-0"  
IV-34

**SECTION R**  
SCALE: 1/2" = 1'-0"  
IV-34

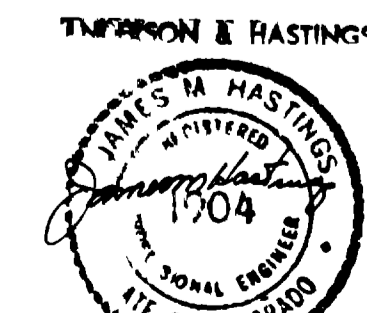
**SECTION S**  
SCALE: 1/2" = 1'-0"  
IV-34

**SECTION T**  
SCALE: 1/2" = 1'-0"  
IV-34

**SECTION U**  
SCALE: 1/2" = 1'-0"  
IV-34

**SECTION V**  
SCALE: 1/2" = 1'-0"  
IV-34

**CONSTRUCTION SCHEDULE "B" SEE SPECIFICATIONS**



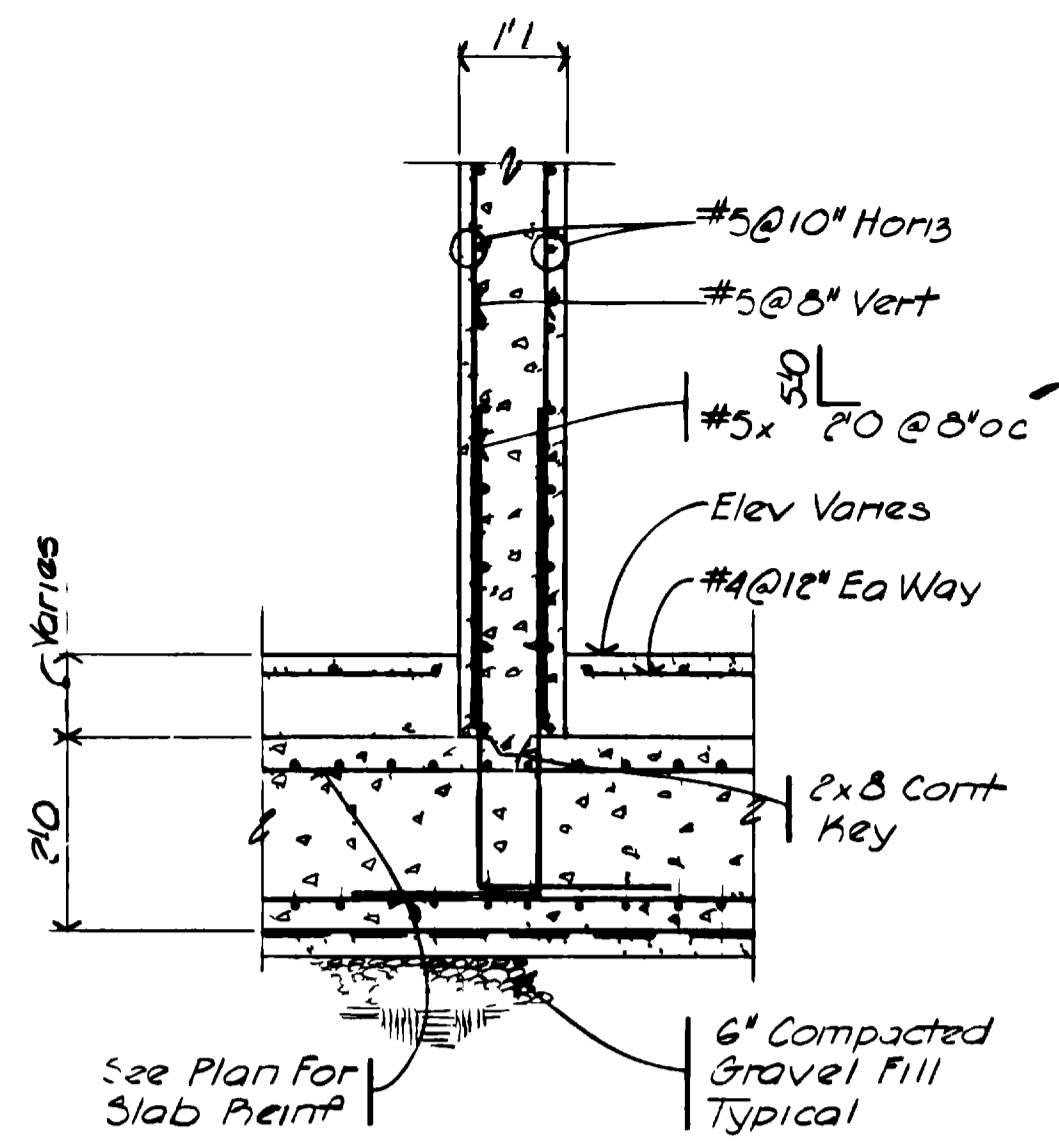
**GRAND JUNCTION / MESA COUNTY, COLORADO**  
**PERSIGO WASH WASTE WATER TREATMENT PLANT**  
SECTION IV STRUCTURAL  
**SLUDGE PROCESSING UNIT**  
SECTIONS

**HENNINGSON, DURHAM & RICHARDSON, INC.**  
ENGINEERS PLANNERS CONSULTANTS  
DENVER COLORADO GRAND JUNCTION COLORADO

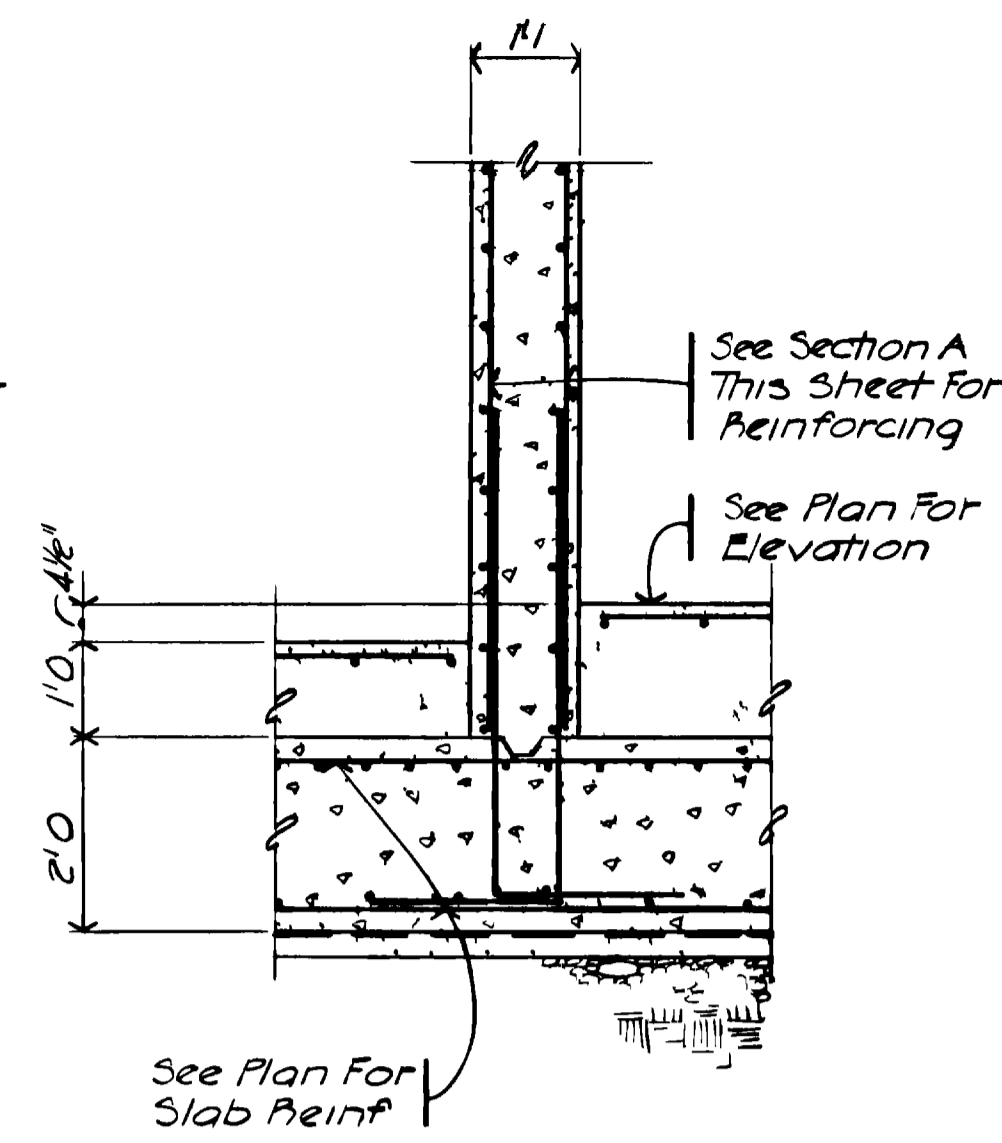
JOB DESIGNED: SEB CHECKED: J.M.H. SHEET  
734510 DETAILED: SEB DATE: APPROVED: X.HENNINGSON DATE: APPROV: IV-34

AS RECORDED FROM INFORMATION PROVIDED BY THE CONTRACTOR DATE: MAY 1995

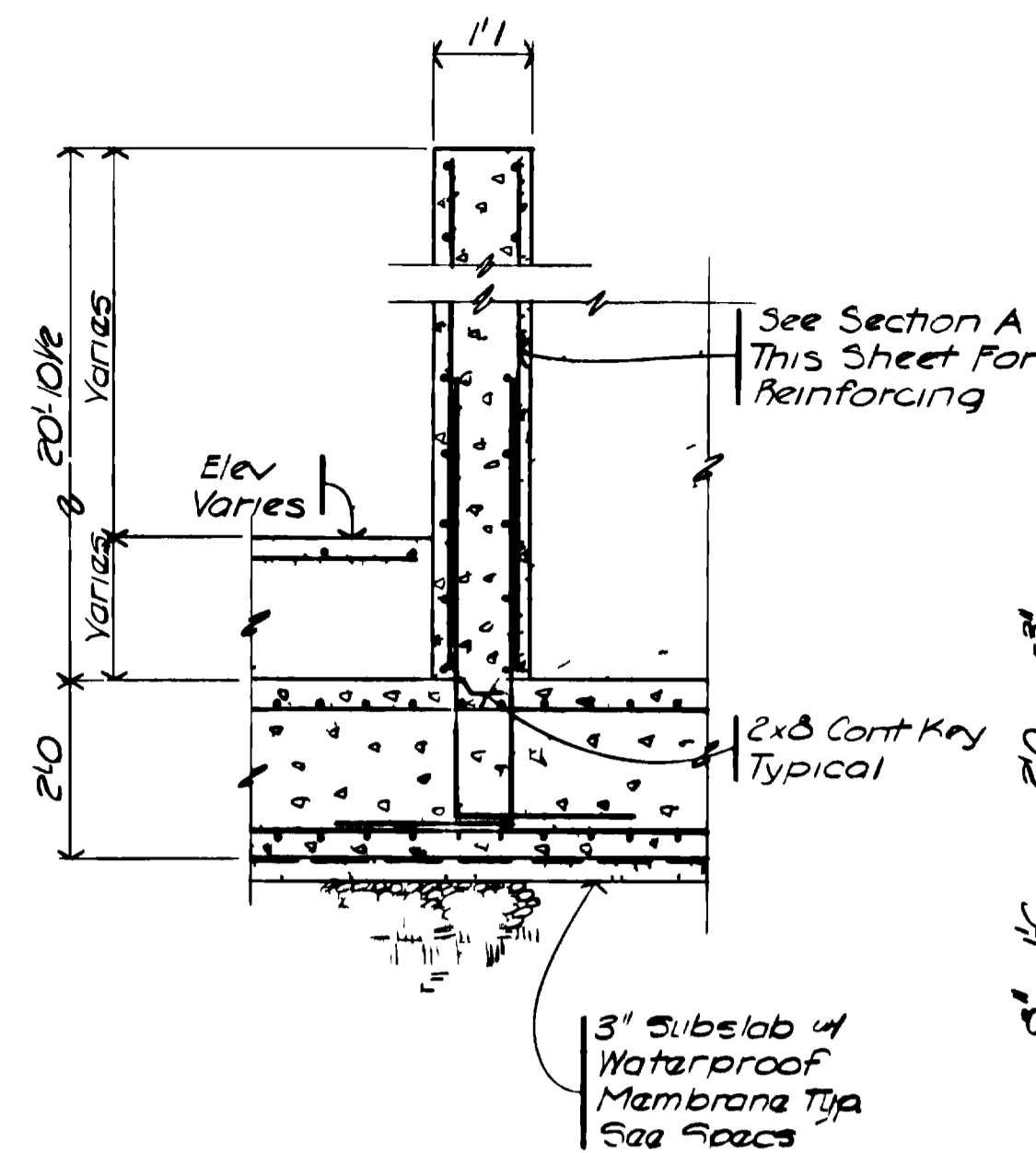
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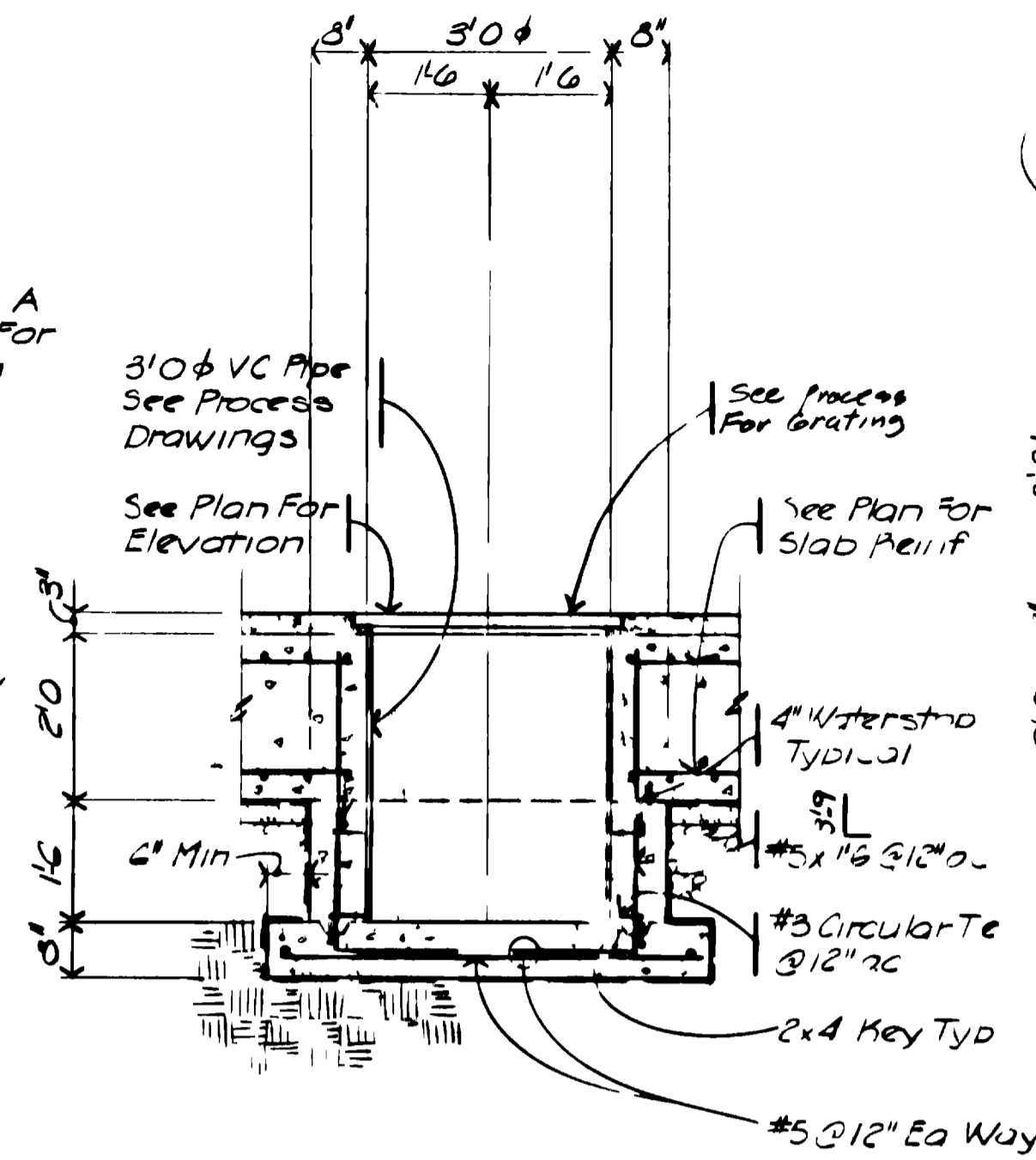
**SECTION A**  
SCALE: 1/2" = 1'-0"  
IV-11



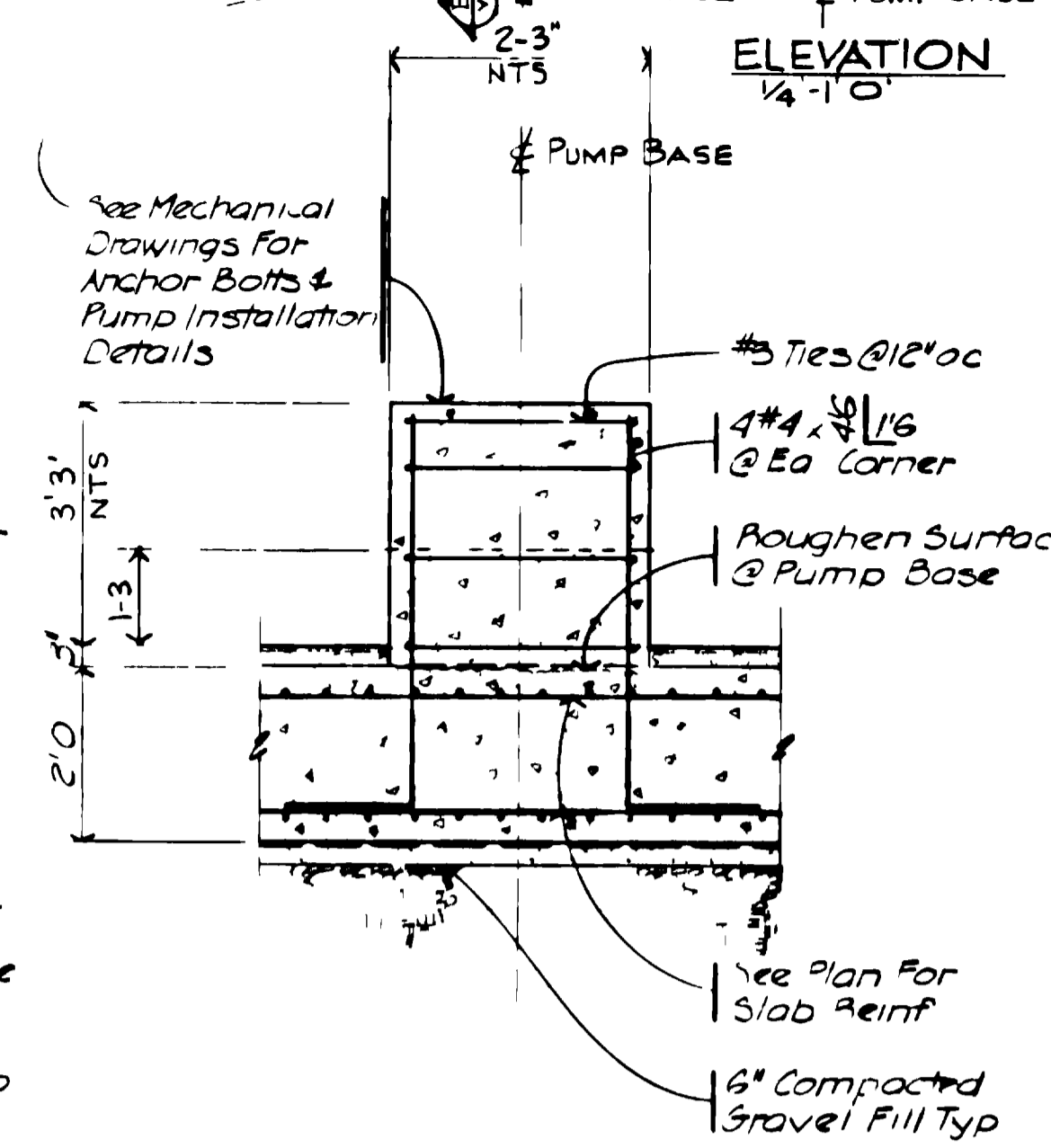
**SECTION B**  
SCALE: 1/2" = 1'-0"  
IV-11



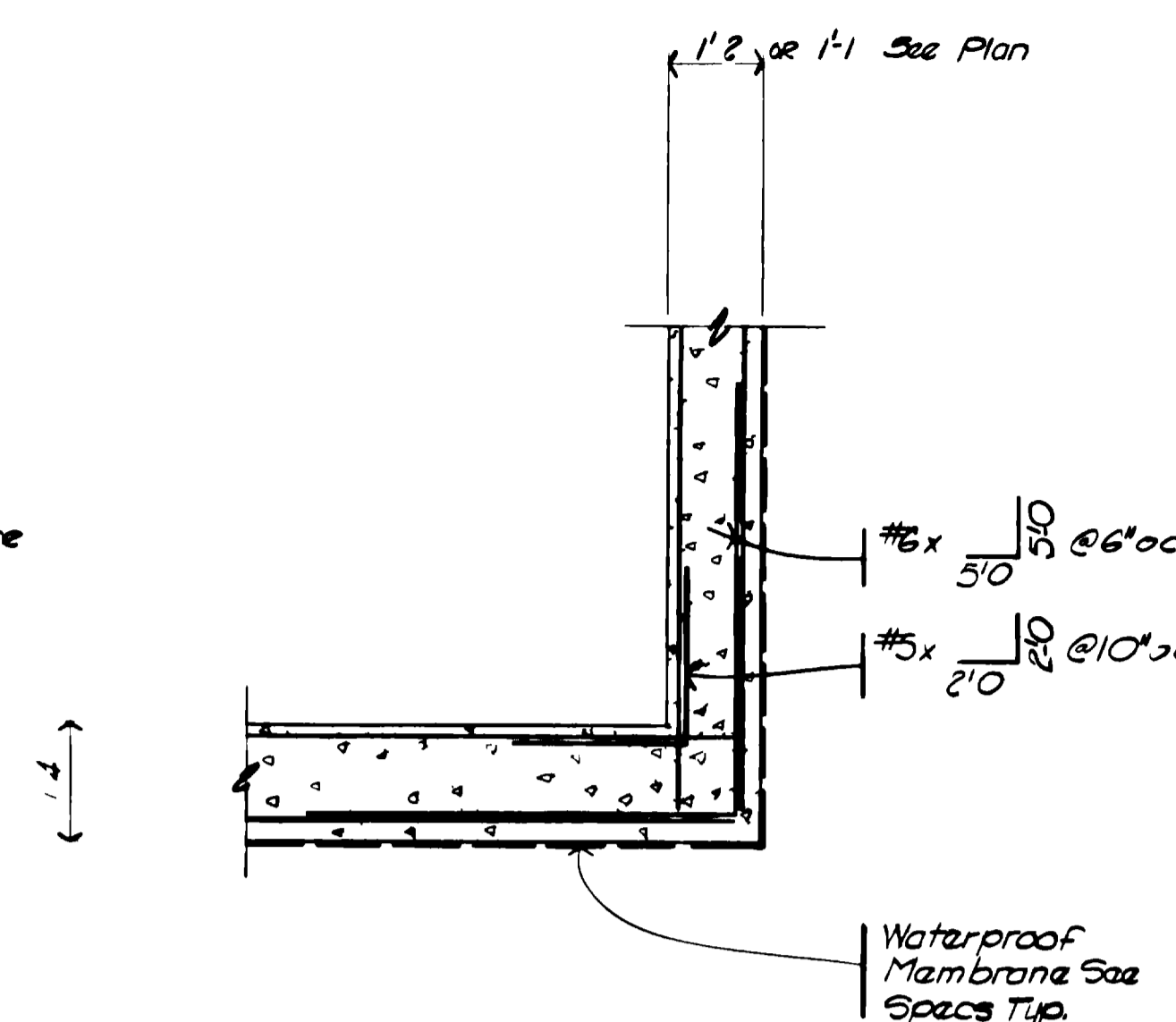
**SECTION C**  
SCALE: 1/2" = 1'-0"  
IV-11



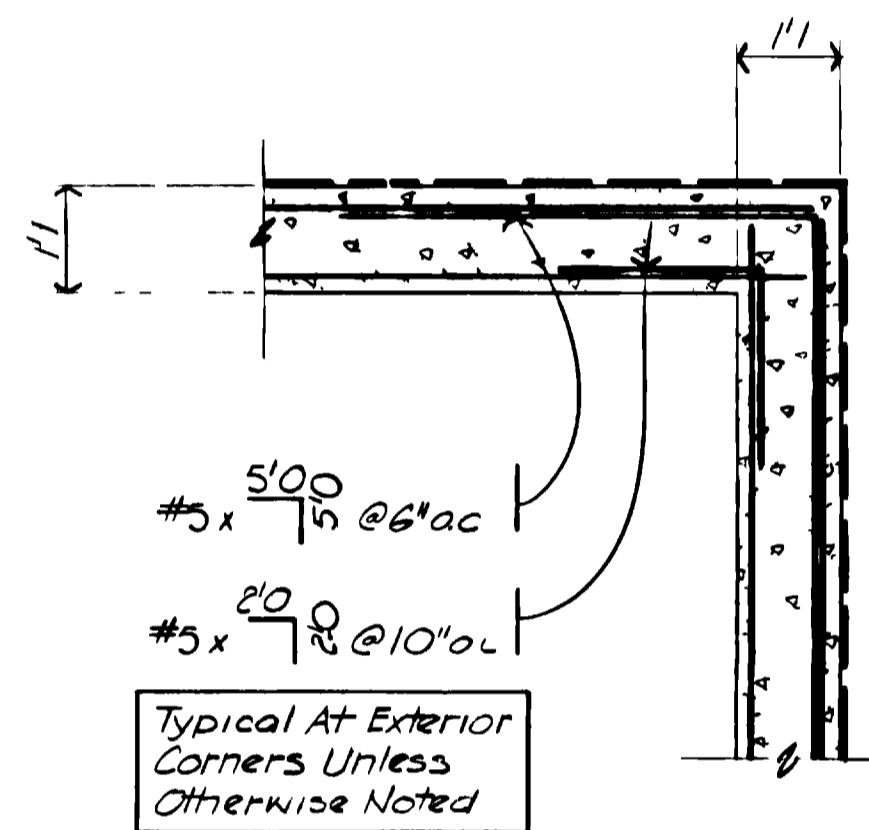
**SECTION D**  
SCALE: 1/2" = 1'-0"  
IV-11



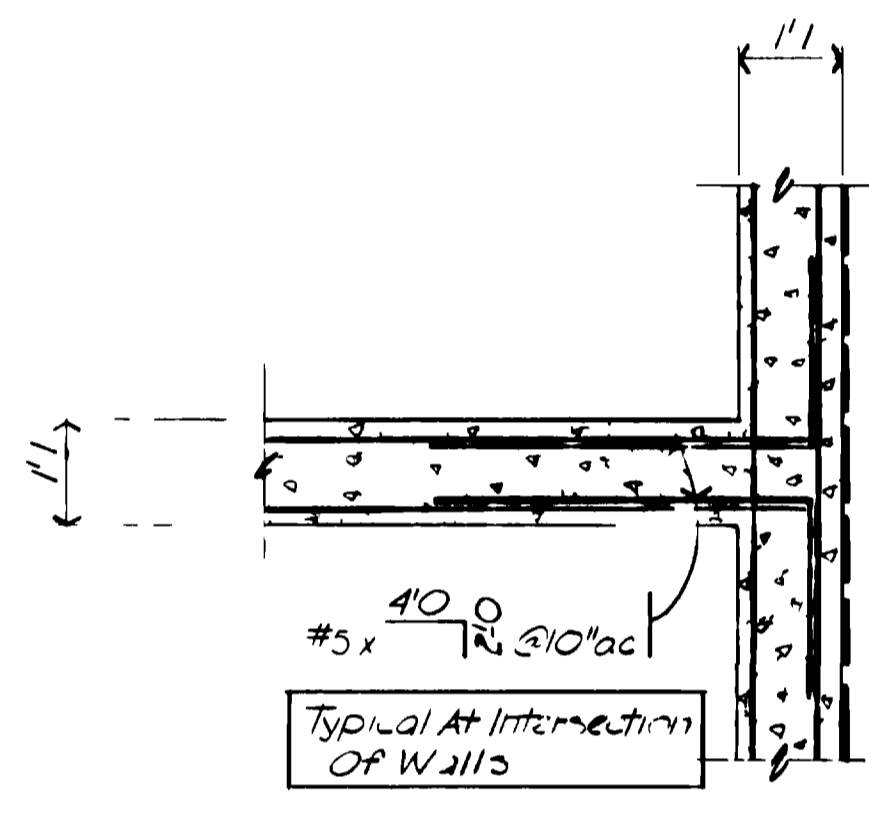
**SECTION E**  
SCALE: 1/2" = 1'-0"  
IV-11



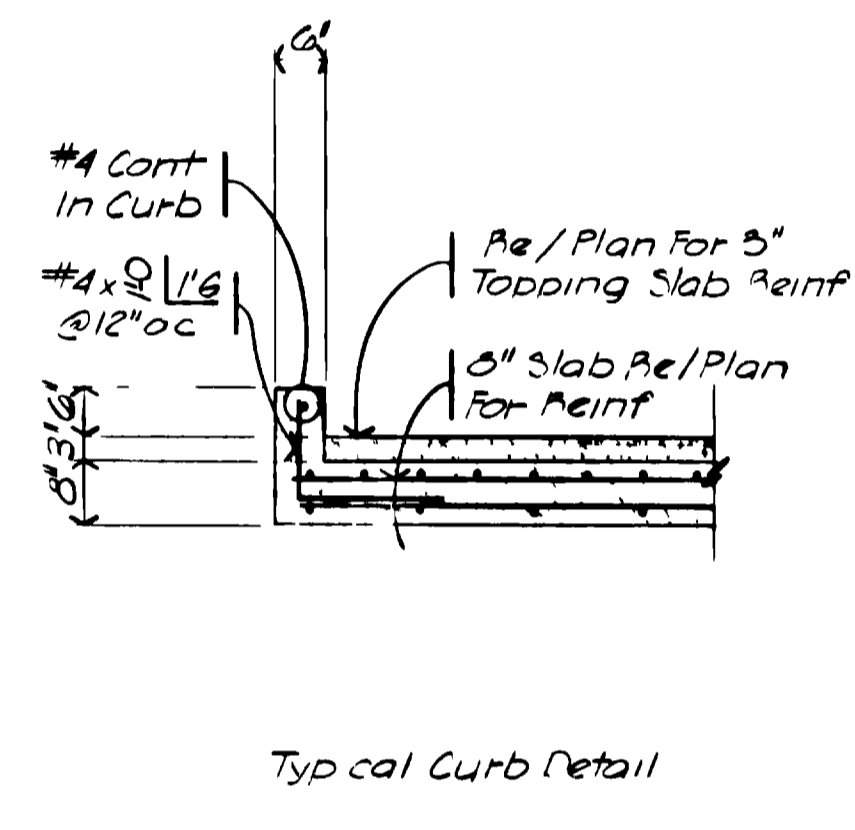
**DETAIL I**  
SCALE: 1/2" = 1'-0"  
IV-11



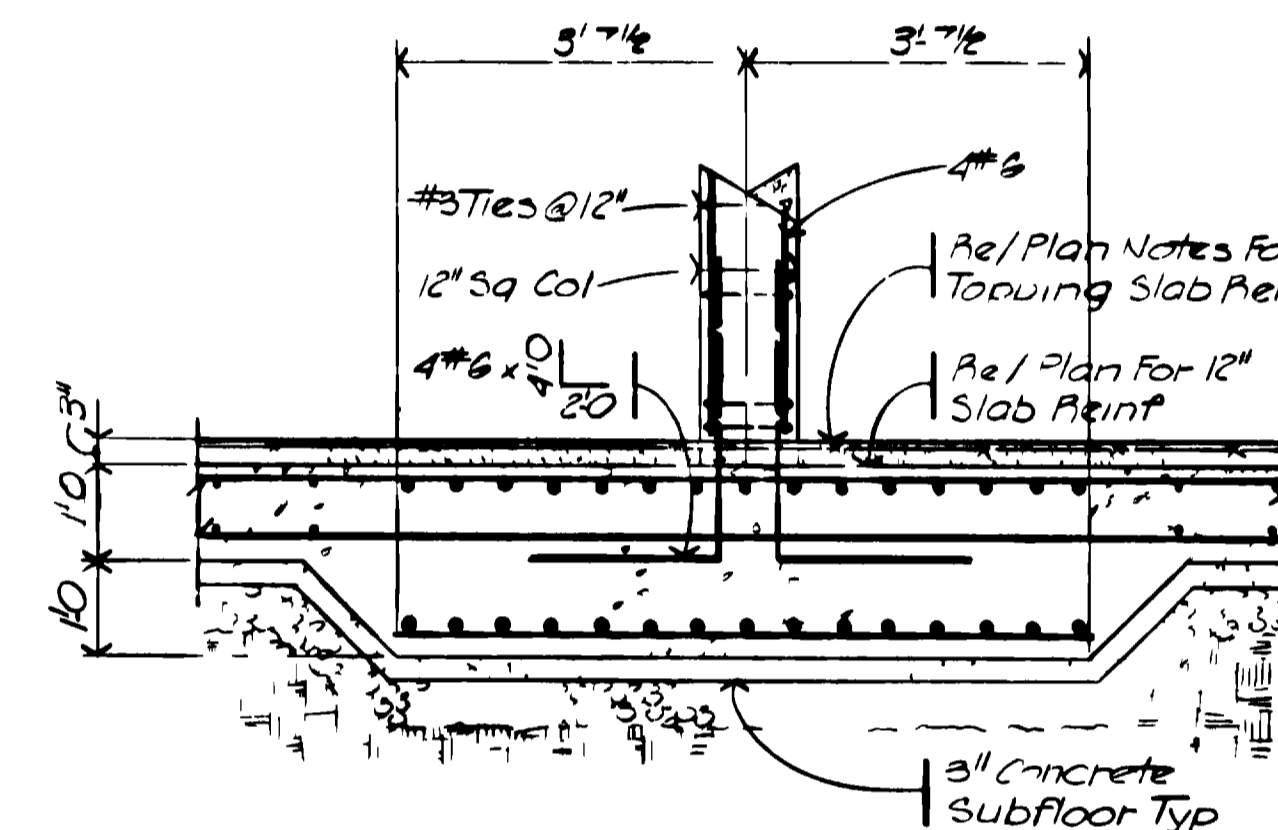
**DETAIL 2**  
SCALE: 1/2" = 1'-0"  
IV-11



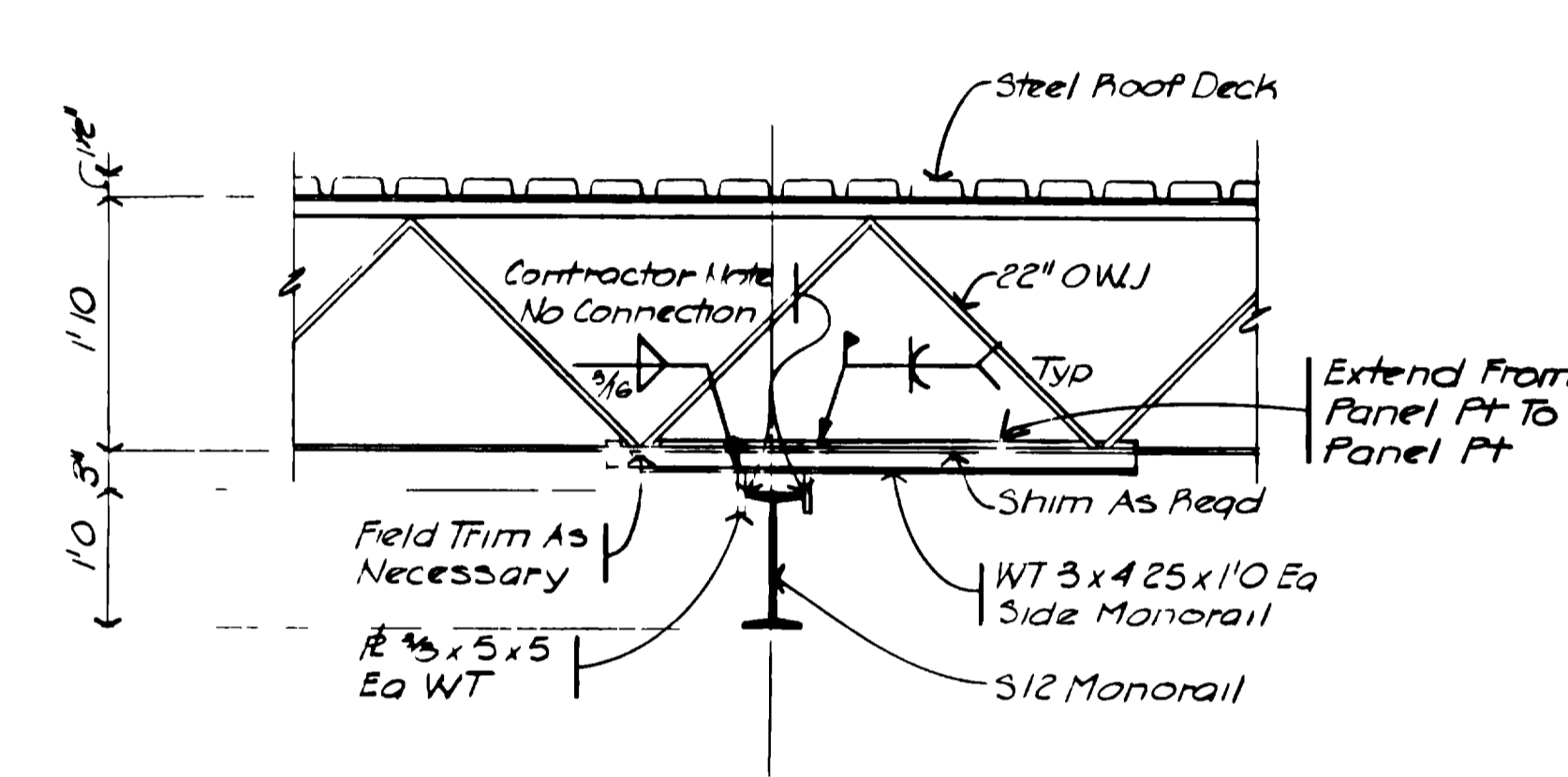
**DETAIL 3**  
SCALE: 1/2" = 1'-0"  
IV-11



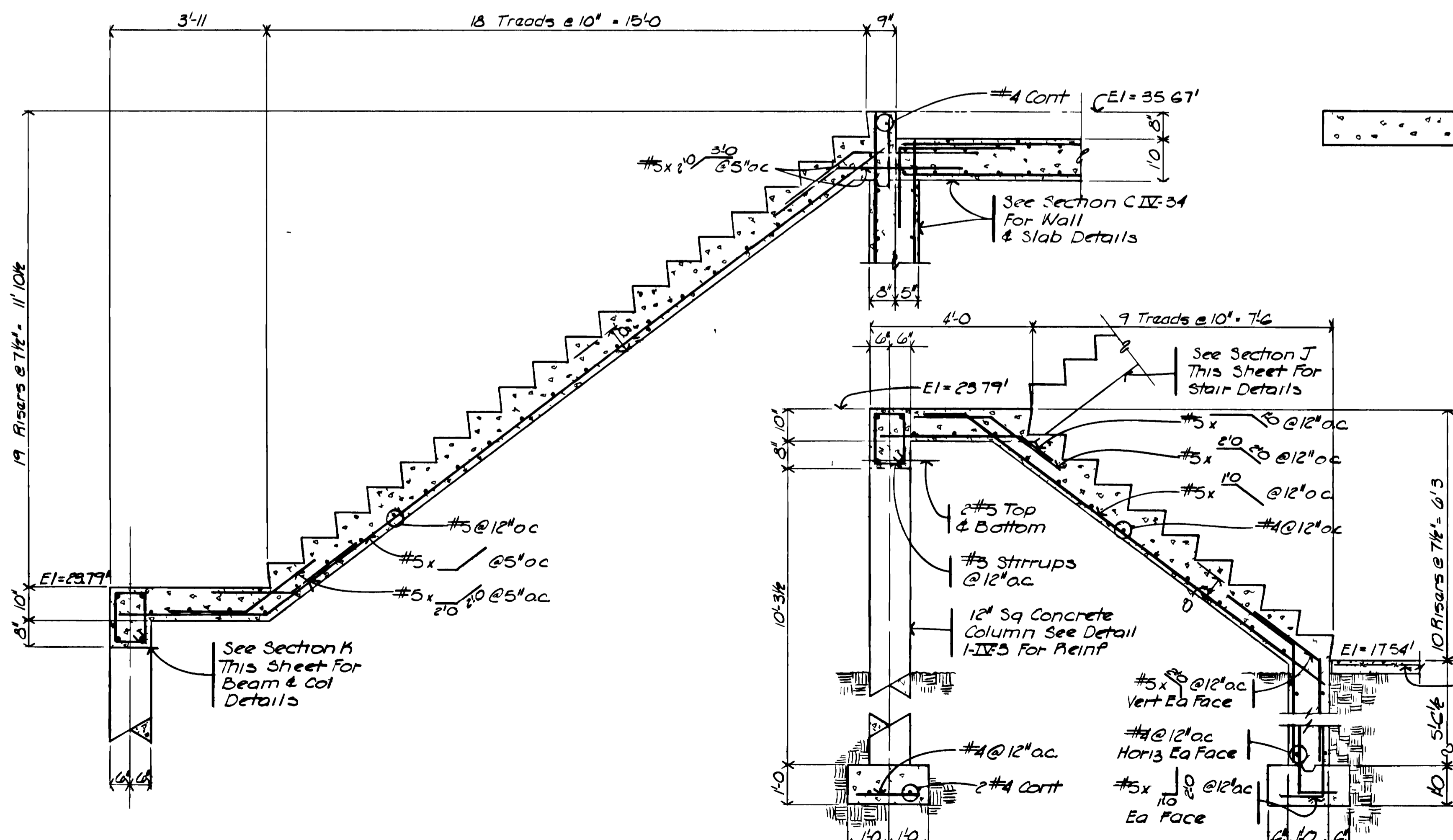
**SECTION F**  
SCALE: 1/2" = 1'-0"  
IV-11



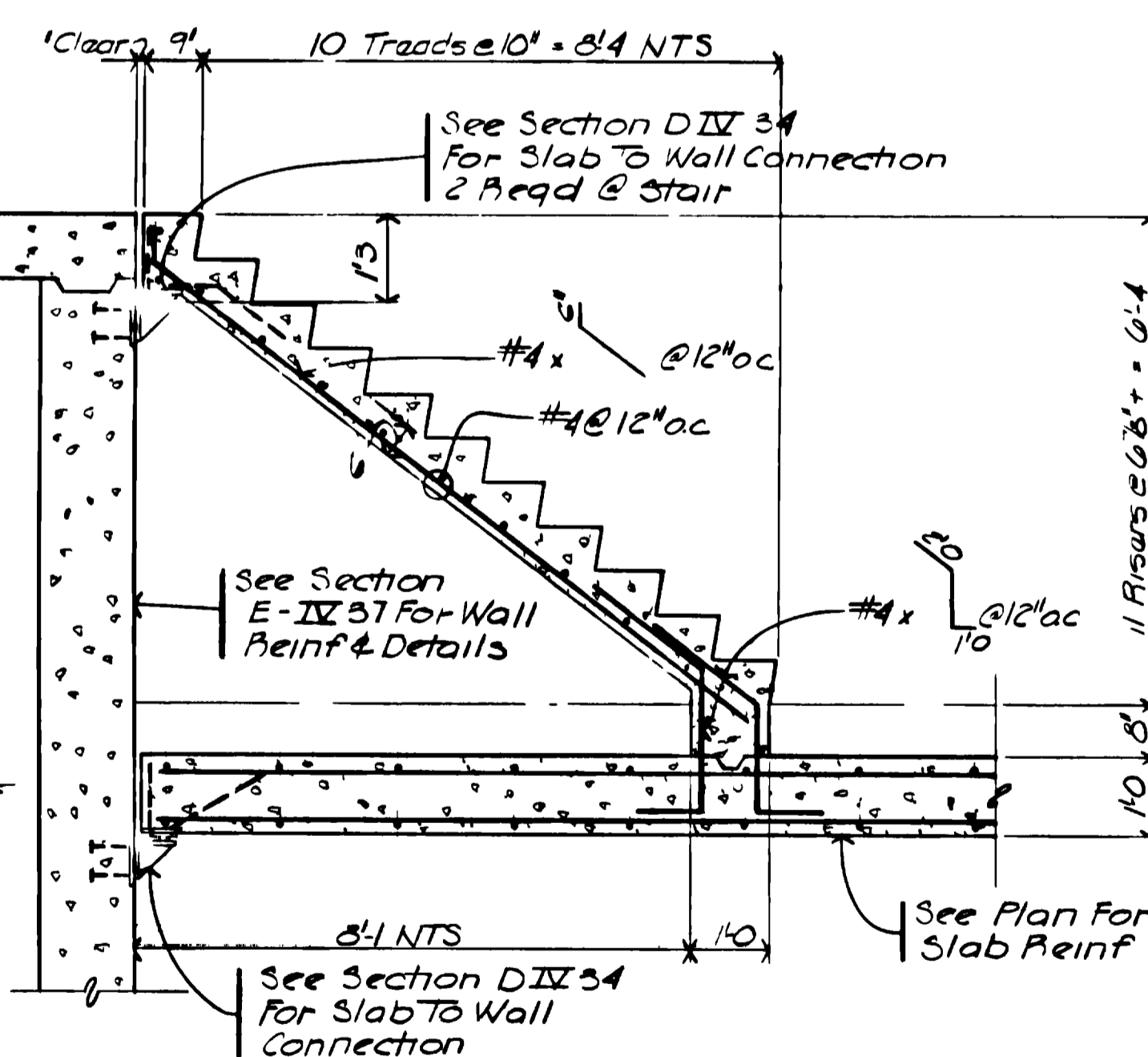
**SECTION G**  
SCALE: 1/2" = 1'-0"  
IV-11



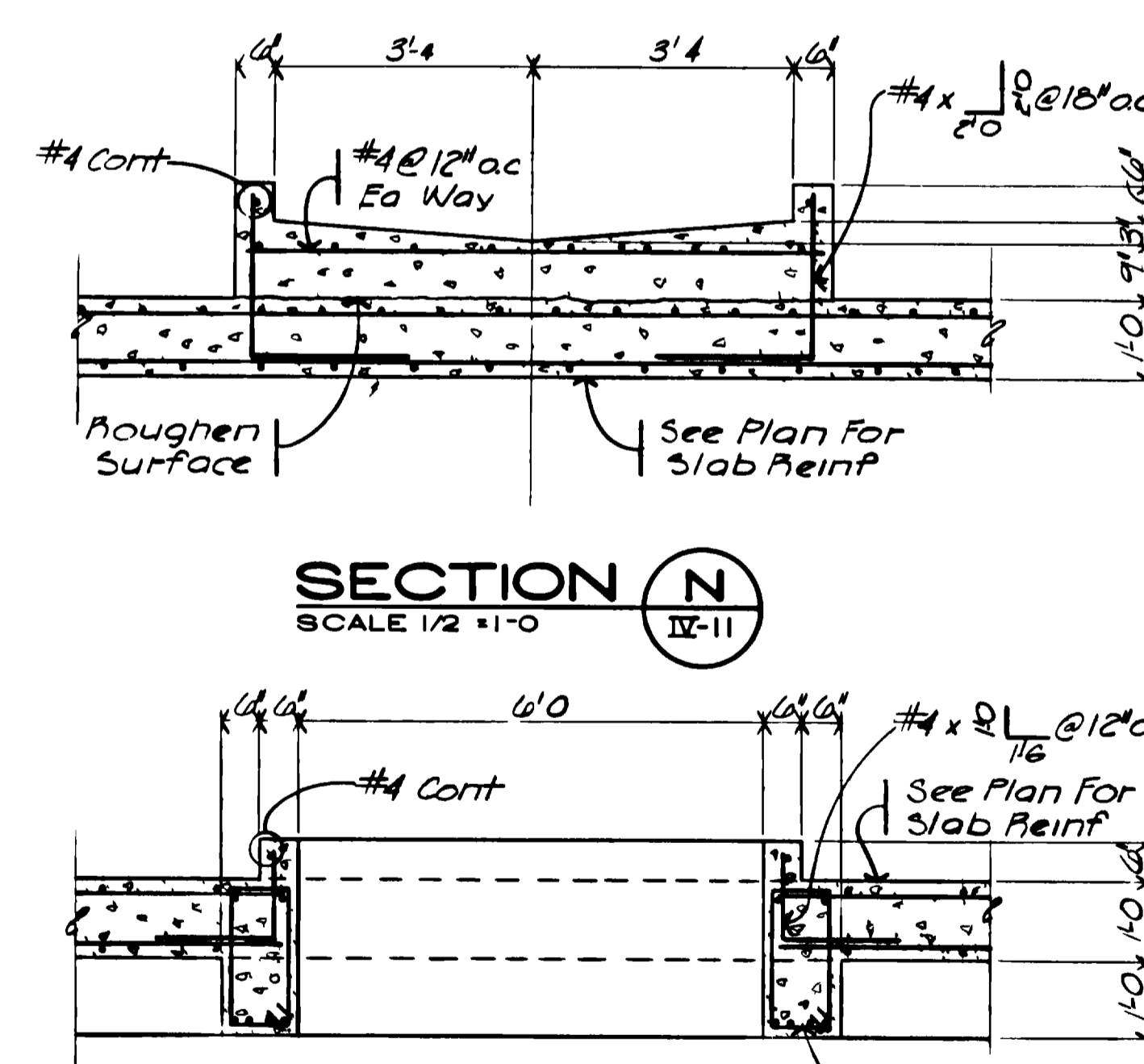
**SECTION H**  
SCALE: 3/4" = 1'-0"  
IV-11



**SECTION J**  
SCALE: 1/2" = 1'-0"  
IV-11



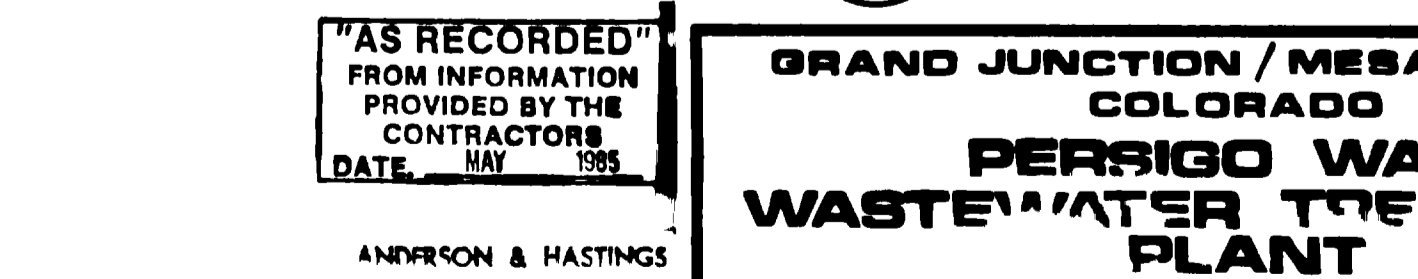
**SECTION K**  
SCALE: 1/2" = 1'-0"  
IV-11



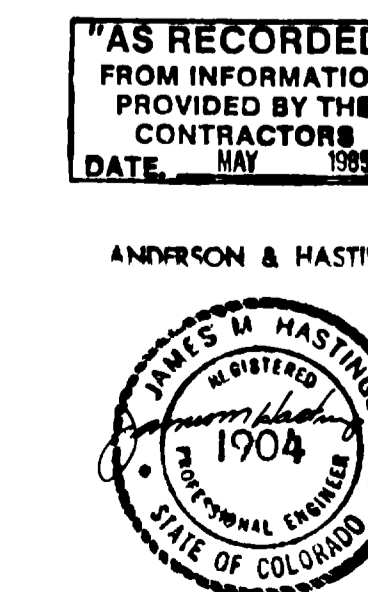
**SECTION L**  
SCALE: 1/2" = 1'-0"  
IV-11



**SECTION M**  
SCALE: 1/2" = 1'-0"  
IV-11



**SECTION N**  
SCALE: 1/2" = 1'-0"  
IV-11



**AS RECORDED**  
FROM INFORMATION PROVIDED BY THE CONTRACTOR'S DATE: MAY 1988

ANDERSON & HASTINGS

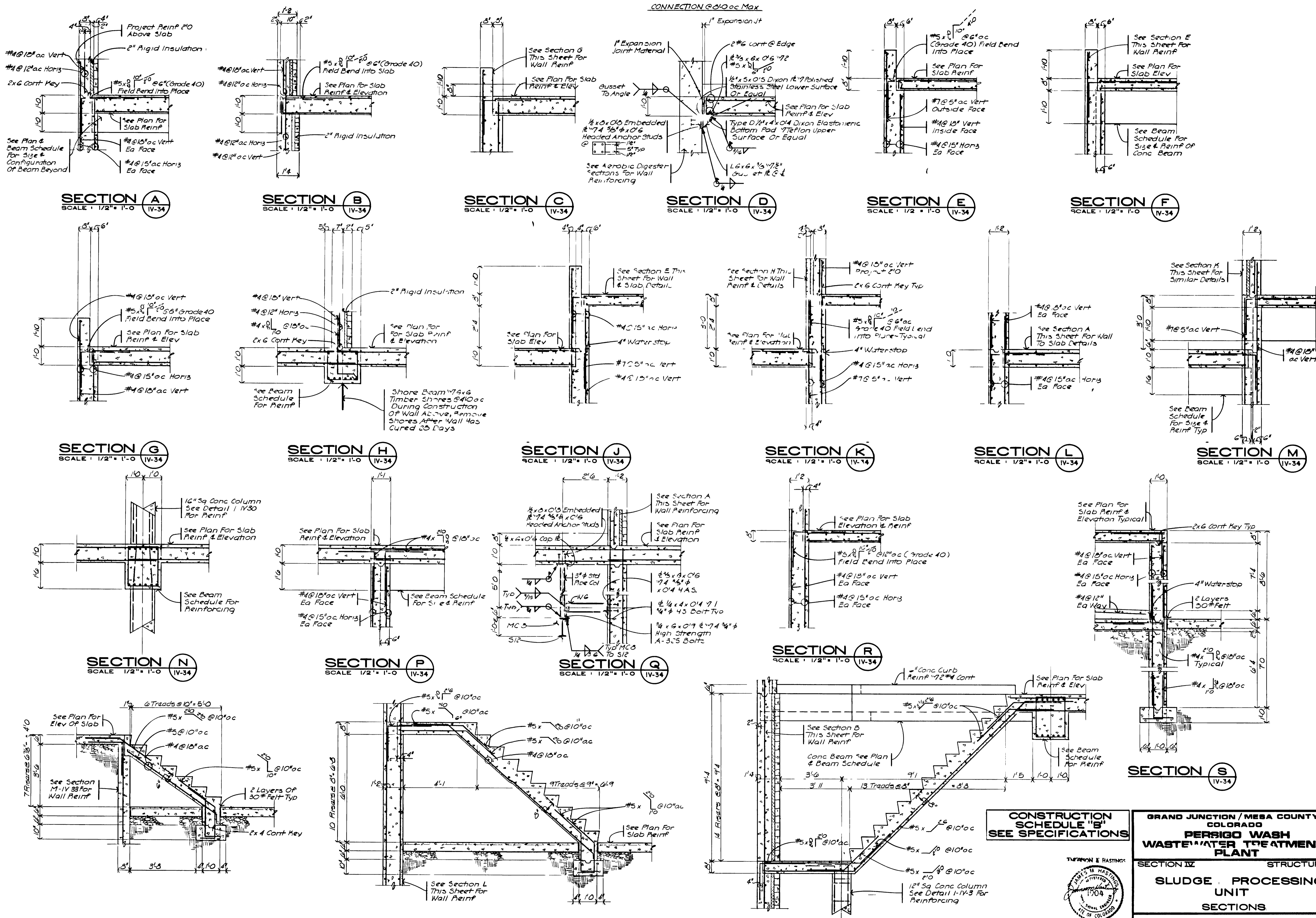
**GRAND JUNCTION / MESA COUNTY, COLORADO**  
**PERRIGO WASH WASTE WATER TREATMENT PLANT**

**SECTION IV STRUCTURAL**  
**RAW SEWAGE PUMP STATION**  
**SECTIONS**

**HENNINGSON, DURHAM & RICHARDSON, INC.**  
ENGINEERS PLANNERS CONSULTANTS  
DENVER COLORADO GRAND JUNCTION COLORADO

JOB DESIGNED: S.E.B. CHECKED: J.M.H. SHEET  
APPROVED: S.HENNINGSON DATE: IV-11

NO.	DATE	DESCRIPTION	BY	APPROV.
1	11/28/84	AS BUILT		
2				
3				



**CONSTRUCTION SCHEDULE "B" SEE SPECIFICATIONS**

**GRAND JUNCTION / MESA COUNTY, COLORADO**  
**PERSIGO WASH WASTE WATER TREATMENT PLANT**  
 SECTION IV STRUCTURAL  
**SLUDGE PROCESSING UNIT**  
 SECTIONS

**HENNINGSON, DURHAM & RICHARDSON, INC.**  
 ENGINEERS PLANNERS CONSULTANTS  
 DENVER COLORADO GRAND JUNCTION COLORADO

JOB NO.	DESIGNED BY	CHECKED BY	DATE	SHEET
734510	SEE B	J.M.A.		IV-34
DATE	DESCRIPTION	APPROVED BY	DATE	
	REVISIONS			

**"AS RECORDED"**  
 FROM INFORMATION PROVIDED BY THE CONTRACTOR  
 DATE: MAY 1995