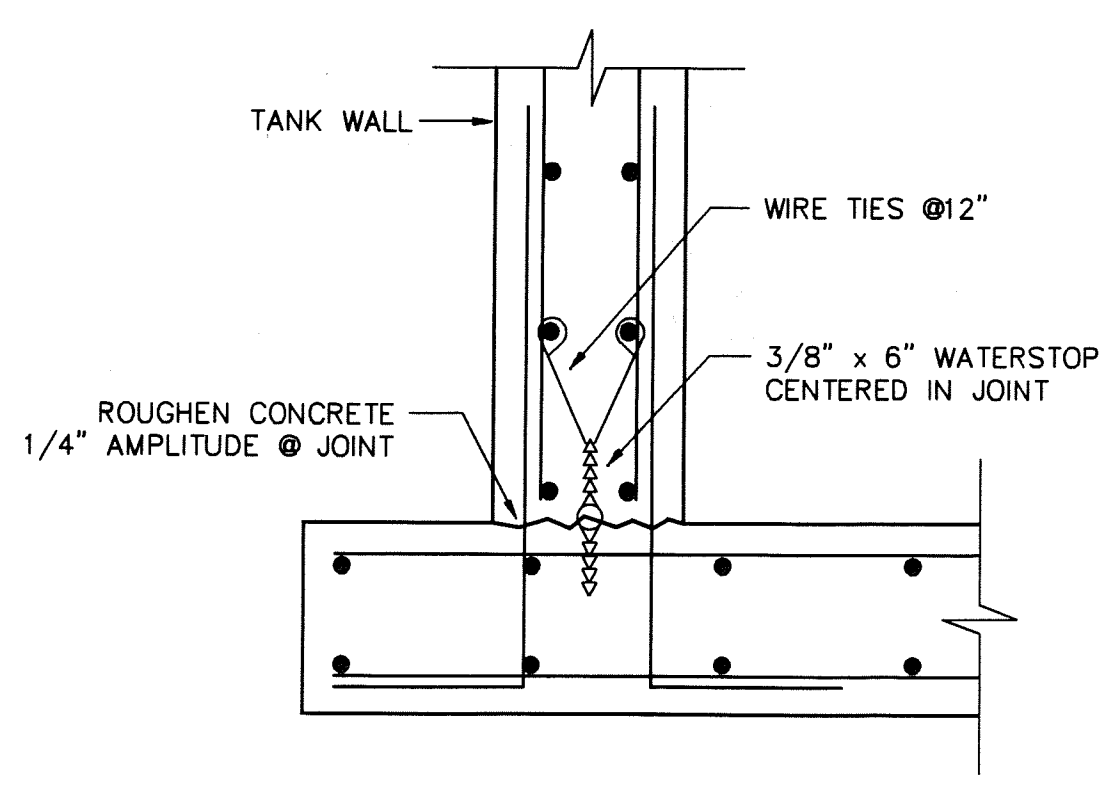


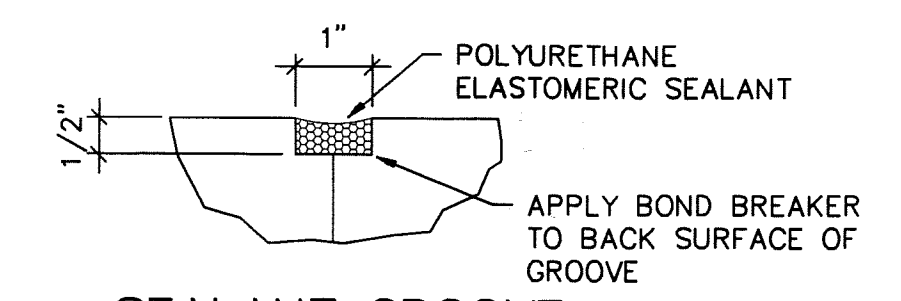
## GENERAL NOTES

1. THESE NOTES SUPPLEMENT THE SPECIFICATIONS WHICH SHALL BE REFERRED TO FOR ADDITIONAL REQUIREMENTS.
2. GOVERNING BUILDING CODE: UBC 1994.
3. DISCOVERY:
  - A. DURING CONSTRUCTION, THE CONTRACTOR MAY ENCOUNTER EXISTING CONDITIONS WHICH ARE NOT KNOWN OR ARE AT VARIANCE WITH PROJECT DOCUMENTATION (DISCOVERY). SUCH CONDITIONS MAY INTERFERE WITH NEW CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ALL DISCOVERIES HE BELIEVES MAY INTERFERE WITH PROPER EXECUTION OF THE WORK PRIOR TO PROCEEDING WITH WORK RELATED TO SUCH DISCOVERIES.
4. LIVE LOADS USED IN DESIGN:
 

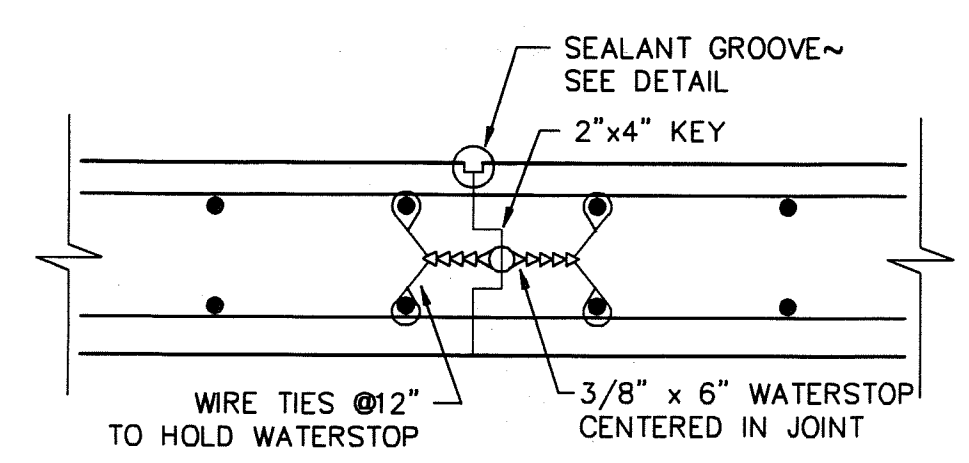
A. SEISMIC LOADS PER UBC 1994	
ZONE	1
SEISMIC ZONE FACTOR, "Z"	0.075
SITE COEFFICIENT, "S"	1
OCCUPANCY CATEGORY	4
IMPORTANCE FACTOR, "I"	1.0
RW	8
B. ROOF	90 PSF (NOT REDUCED)
OR DRIFTING SNOW PER UBC APPENDIX CH 16 USING A GROUND SNOW LOAD OF 80 PSF. (WHICHEVER IS GREATER)	
C. PUMP ROOM	125 psf (NOT REDUCED)
D. EARTH BACKFILL	120 psf
5. CONCRETE:
  - A. CONCRETE: NORMAL WEIGHT AGGREGATE, DEVELOP 4000 PSI MINIMUM COMPRESSIVE STRENGTH IN 28 DAYS.
  - B. SEE SPECIFICATIONS FOR ADDITIONAL CONCRETE REQUIREMENTS.
  - C. REINFORCING: MILD STEEL REINFORCING MINIMUM YIELD STRENGTH 60 KSI.
  - D. REINFORCEMENT PROTECTION:
    1. CONCRETE PLACED AGAINST EARTH 3"
    2. CONCRETE PLACED IN FORMS BUT EXPOSED TO WEATHER, EARTH OR WATER:
      - a. BARS #5 AND SMALLER 2"
      - b. BARS LARGER THAN #5 2"
    3. GRADE BEAMS 1-1/2"
    4. SLABS OR WALLS NOT EXPOSED TO WEATHER OR EARTH 1"
  - E. REINFORCING PLACING TOLERANCES: PER UBC 1994
  - F. NO SPLICING OF REINFORCEMENT PERMITTED EXCEPT AS NOTED, DETAILED OR AUTHORIZED BY STRUCTURAL ENGINEER. MAKE BARS CONTINUOUS AROUND CORNERS. WHERE PERMITTED, SPLICES MAY BE MADE BY CLASS B OR MECHANICAL CONNECTORS. REFER TO THE LAP SPLICE SCHEDULE FOR LAP LENGTHS.
  - G. DETAIL BARS IN ACCORDANCE WITH THE LATEST EDITIONS OF "ACI DETAILING MANUAL", PUBLICATION SP-66 AND "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318.
  - H. PROVIDE ACCESSORIES NECESSARY TO PROPERLY SUPPORT REINFORCING AT POSITIONS SHOWN ON PLANS. ALL DOWELS, BOLTS, AND EMBEDDED PLATES SHALL BE SET AND TIED IN PLACE BEFORE THE CONCRETE IS POURED. "STABBING" DOWELS, BOLTS OR PLATES INTO PREVIOUSLY PLACED CONCRETE IS NOT PERMITTED.
  - I. PLACE 2-#5 (1 EACH FACE) WITH 2"-0" PROJECTION AROUND OPENINGS IN CONCRETE. IN SLABS-ON-GRADE OPENINGS LARGER THAN 12" IN ANY DIMENSION SHALL BE REINFORCED WITH 1-#4 X 4'-0" PLACED DIAGONALLY TO EACH CORNER.
  - J. CONSTRUCTION JOINTS:
    1. SLABS AND GRADE BEAMS SHALL NOT HAVE JOINTS IN A HORIZONTAL PLANE. ANY STOP IN CONCRETE WORK MUST BE MADE AT CENTER ONE-THIRD OF SPAN OR AT CENTER OF SUPPORT. REFER TO SPECIFICATIONS FOR KEY REQUIREMENTS AT CONSTRUCTION JOINTS. CONSTRUCTION JOINT LOCATIONS SHALL BE AS OUTLINED OR AUTHORIZED BY ARCHITECT AND STRUCTURAL ENGINEER.
    2. SURFACE OF CONCRETE AT CONSTRUCTION JOINTS SHALL BE CLEANED AND LAITANCE REMOVED. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, THE CONSTRUCTION JOINT SHALL BE WETTED AND ALL STANDING WATER REMOVED.
    3. ROUGHENED JOINTS: WHERE CONSTRUCTION JOINTS ARE NOTED AS "ROUGHENED" ON THE DRAWINGS, THE ENTIRE JOINT SURFACE SHALL BE MECHANICALLY ROUGHENED TO A 1/4" AMPLITUDE AND THOROUGHLY CLEANED. THE ROUGHENING SHALL EXPOSE THE COARSE AGGREGATE IN THE HARDENED CONCRETE AND ALL LOOSE MATERIAL SHALL BE REMOVED.
  - K. CONTINUOUS TOP AND BOTTOM BARS IN WALLS AND GRADE BEAMS SPLICED AS FOLLOWS:
    1. TOP BARS - AT MIDSPAN
    2. BOTTOM BARS - OVER SUPPORT
  - L. WIRE FABRIC REINFORCEMENT: LAP ONE AND ONE HALF MESH SPACES AT SPLICES AND WIRE TOGETHER. PROVIDE ACCESSORIES TO PROPERLY SUPPORT MESH AT POSITION SPECIFIED.
  - M. NO WELDING OF REINFORCING SHALL BE PERMITTED UNLESS SPECIFICALLY CALLED FOR OR APPROVED BY THE STRUCTURAL ENGINEER. WHERE PERMITTED, WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWS D1.4, LATEST EDITION.
  - N. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS BEFORE PLACING CONCRETE. DO NOT CUT ANY REINFORCING WHICH MAY CONFLICT. CORING OF CONCRETE IS NOT PERMITTED EXCEPT AS SHOWN OR AS APPROVED BY THE STRUCTURAL ENGINEER. NOTIFY THE STRUCTURAL ENGINEER IN ADVANCE OF CONDITIONS NOT SHOWN ON THE DRAWINGS. ALL REINFORCING BAR BENDS SHALL BE MADE IN THE FABRICATOR'S SHOP UNLESS OTHERWISE NOTED ON THE DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
  - P. INCLUDE IN THE BILL THE COST FOR THE MATERIAL, FABRICATION AND PLACING OF 500 LINEAR FEET OF #5 REINFORCING BARS AND 500 LINEAR FEET OF #6 REINFORCING BARS. THE REINFORCING WILL BE ADDED TO THE SHOP DRAWINGS AND IN FIELD OBSERVATION REPORTS BY THE ENGINEER AS "ADDED PER GENERAL NOTES." AN UP-TO-DATE TOTAL OF LINEAR FEET ADDED WILL BE MAINTAINED AND SUBSTANTIATED BY SHOP DRAWINGS AND FIELD OBSERVATION REPORTS.
  - Q. CONTRACTOR SHALL SUBMIT DRAWINGS SHOWING PROPOSED CONSTRUCTION JOINT LOCATION AND CASTING SEQUENCE TO THE ENGINEER FOR REVIEW.
6. FOUNDATIONS:
  - A. REFERENCE PROJECT SOILS REPORTS PREPARED BY HEPWORTH-PAWLAK GEOTECHNICAL ENGINEERING, INC., NUMBER 498343A (WET WELL) NOV. 12, 1998 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
  - B. FOOTING TOTAL LOAD SOIL BEARING PRESSURE USED IN DESIGN 4500 PSF FOR THE WET WELL.
  - C. EQUIVALENT FLUID PRESSURE USED FOR WALL DESIGN = 55 PCF FOR "AT REST" CONDITION AND 35 PCF FOR "ACTIVE" CONDITION.
7. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE ARCHITECT SHALL BE NOTIFIED OF ALL DISCREPANCIES OR INCONSISTENCIES.
8. ARCHITECT'S APPROVAL SHALL BE SECURED FOR ALL SUBSTITUTIONS.
9. DRAWINGS SHALL NOT BE SCALED.
10. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES AND SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN. DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. DETAILS NOTED TYPICAL APPLY TO ALL SIMILAR CONDITIONS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ELSEWHERE ON THE PROJECT.
11. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND OTHER DISCIPLINE'S DRAWINGS FOR ADDITIONAL INFORMATION RELATED TO THE STRUCTURE.
12. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING AND SHORING FOR CONSTRUCTION LOADS AND WORKER SAFETY REQUIREMENTS. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
13. OPENINGS, POCKETS, ETC., SHALL NOT BE PLACED IN WALLS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
14. SPECIAL INSPECTION IS REQUIRED FOR THE FOLLOWING TYPES OF WORK. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL TESTING AND SPECIFIC REQUIREMENTS.
  - A. ALL CAST-IN-PLACE CONCRETE WORK AND REINFORCING PLACEMENT, EXCEPT NONSTRUCTURAL CONCRETE.
  - B. ALL BOLTS AND EMBEDMENTS IN CONCRETE.



**WATERSTOP DETAIL**



**SEALANT GROOVE**



**HORIZONTAL & VERTICAL JOINT DETAIL**

### AS BUILT

MARTIN/MARTIN BY PJS DATE 01/25/00

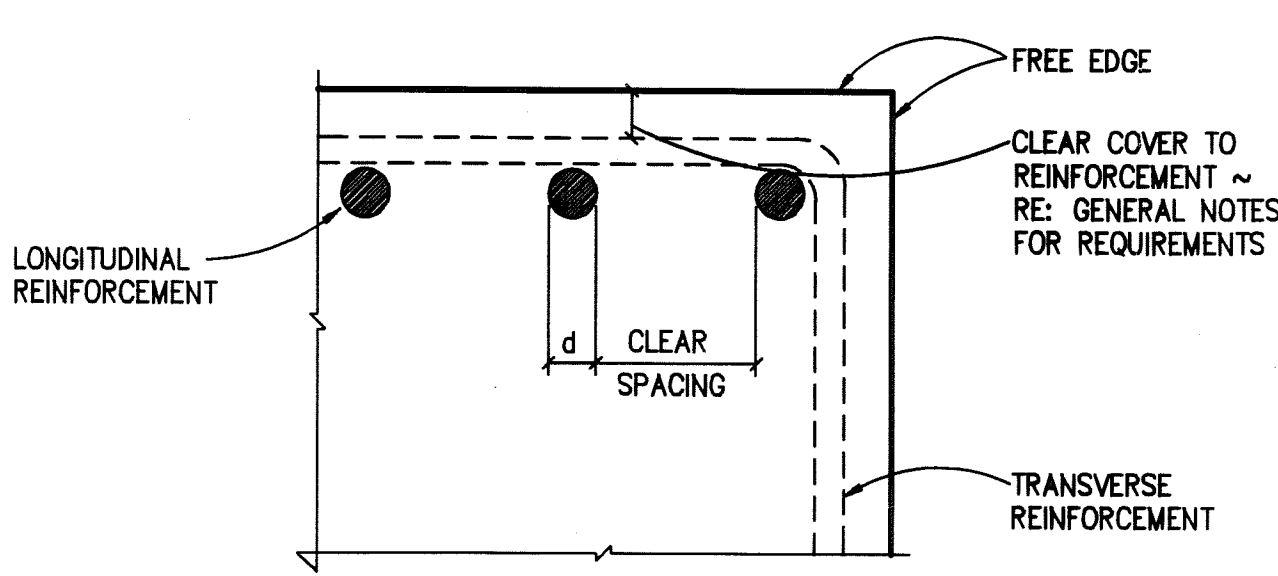
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		SCHEDULE I					
		LAP SPLICE 'L' IN INCHES					
		f <sub>c</sub> = 3,000 PSI		f <sub>c</sub> = 4,000 PSI		f <sub>c</sub> = 5,000 PSI	
BAR SIZE		CLASS A	CLASS B	CLASS A	CLASS B	CLASS A	CLASS B
#3	#10	17	22	15	19	13	17
#4	#13	22	29	19	25	17	23
#5	#16	28	36	24	31	22	28
#6	#19	33	43	29	37	26	34
#7	#22	48	63	42	54	38	49
#8	#25	55	72	48	62	43	56
#9	#29	62	81	54	70	48	63
#10	#32	78	102	68	88	61	79
#11	#36	96	125	83	108	74	97

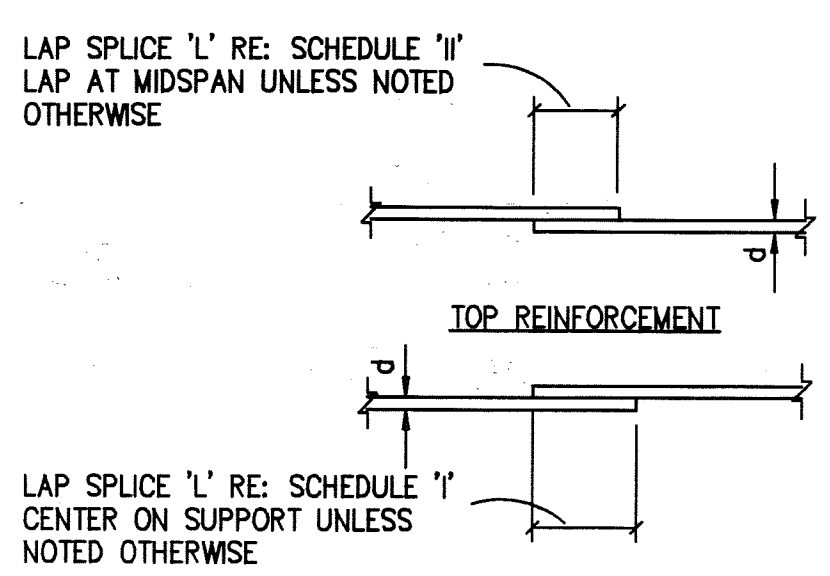
LOCATION IN STRUCTURE ~ BOTTOM BARS OF BEAMS, WALLS, JOIST AND SLABS. TOP BARS OF SLABS 14" OR LESS IN DEPTH AND VERTICAL STEEL.

		SCHEDULE II					
		LAP SPLICE 'L' IN INCHES					
		f <sub>c</sub> = 3,000 PSI		f <sub>c</sub> = 4,000 PSI		f <sub>c</sub> = 5,000 PSI	
BAR SIZE		CLASS A	CLASS B	CLASS A	CLASS B	CLASS A	CLASS B
#3	#10	22	28	19	24	17	22
#4	#13	29	37	25	33	23	29
#5	#16	36	47	31	41	28	36
#6	#19	43	56	37	49	34	43
#7	#22	63	81	54	71	49	63
#8	#25	72	93	62	81	56	72
#9	#29	81	105	70	91	63	81
#10	#32	102	132	88	115	79	103
#11	#36	125	162	108	141	97	126

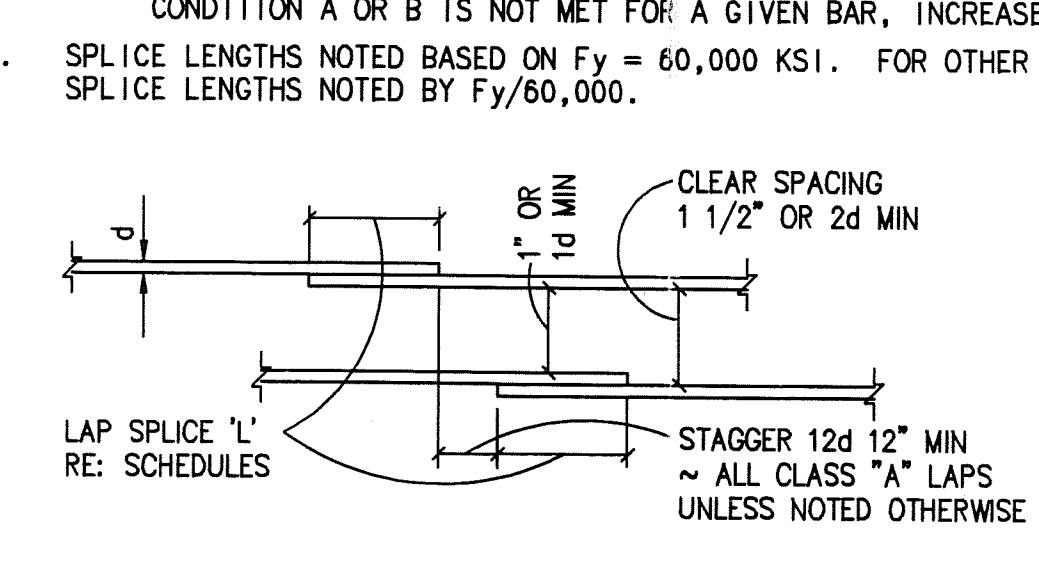
LOCATION IN STRUCTURE ~ TOP BARS IN BEAMS AND JOISTS AND SLABS GREATER THAN 14" IN DEPTH. HORIZONTAL WALL STEEL.



**TYPICAL REINFORCED CONCRETE MEMBER (SECTION)**



**BOTTOM REINFORCEMENT BEAM SPLICE DETAIL**



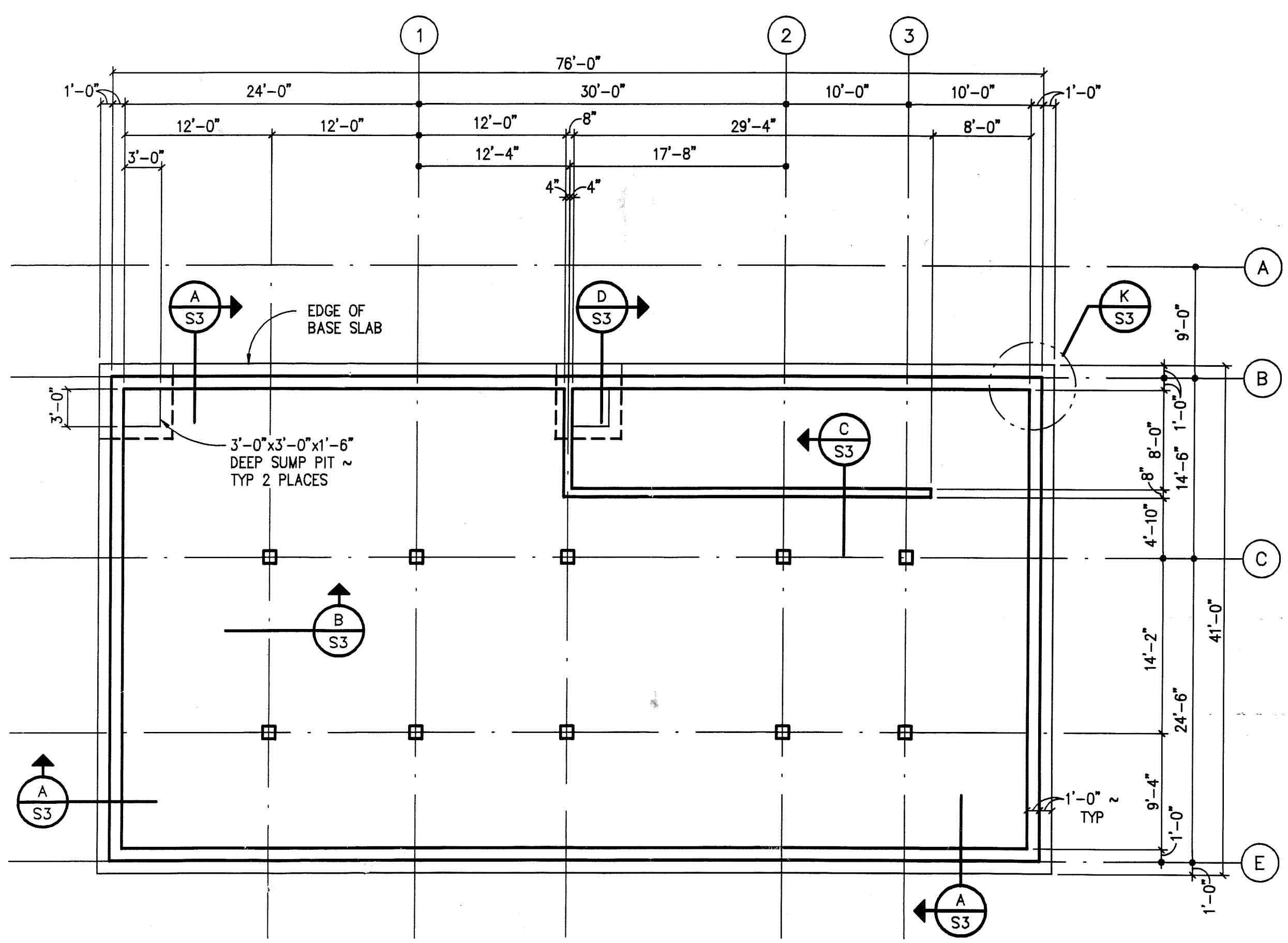
**WALL AND SLAB SPLICE DETAIL**

### B REINFORCING BAR - LAP SPLICE/DEVELOPMENT LENGTH SCHEDULE NO SCALE

- LAP SPLICE NOTES:**
1. ALL SPLICES SHALL BE WIRED IN CONTACT.
  2. ALL SPLICES ARE "CLASS B" UNLESS NOTED OTHERWISE.
  3. SMALLER BAR LAP LENGTH MAY BE USED WHEN SPLICING DIFFERENT SIZED BARS.
  4. LAP LENGTHS SPECIFICALLY DETAILED ON DRAWINGS SHALL GOVERN IN LIEU OF LAP LENGTHS SCHEDULED.
  5. BUNDLED BAR SPLICES:
    - A. INDIVIDUAL BAR SPLICES WITHIN THE BUNDLE SHALL BE STAGGERED.
    - B. INCREASE LAP LENGTH 20% FOR A 3 BAR BUNDLE.
    - C. INCREASE LAP LENGTH 33% FOR A 4 BAR BUNDLE.
  6. IF A NOTE OR DETAIL CALLS FOR A BAR TO BE EMBEDDED 1d (DEVELOPMENT LENGTH) INTO CONCRETE, THIS LENGTH SHALL CORRESPOND TO A "CLASS A" LAP.
- ADJUSTMENT(S) TO GIVEN LAP LENGTHS**
1. IF REINFORCING IS SPECIFIED AS EPOXY COATED, INCREASE SCHEDULED LAP LENGTHS BY 50%.
  2. IF LIGHTWEIGHT AGGREGATE IS SPECIFIED, INCREASE SCHEDULED LAP LENGTHS BY 30%.
  3. SCHEDULED LAP LENGTHS ASSUME:
    - A. CLEAR COVER IS GREATER THAN BAR DIAMETER.
    - B. CLEAR SPACING BETWEEN BARS IS GREATER THAN 2 BAR DIAMETERS.
    - C. THE TRANSVERSE REINFORCEMENT INDEX, K, IS ASSUMED TO BE ZERO. IF EITHER CONDITION A OR B IS NOT MET FOR A GIVEN BAR, INCREASE LENGTHS BY 50%.
  4. SPLICE LENGTHS NOTED BASED ON F<sub>y</sub> = 60,000 KSI. FOR OTHER YIELD STRENGTHS, MULTIPLY SPLICE LENGTHS NOTED BY F<sub>y</sub>/60,000.



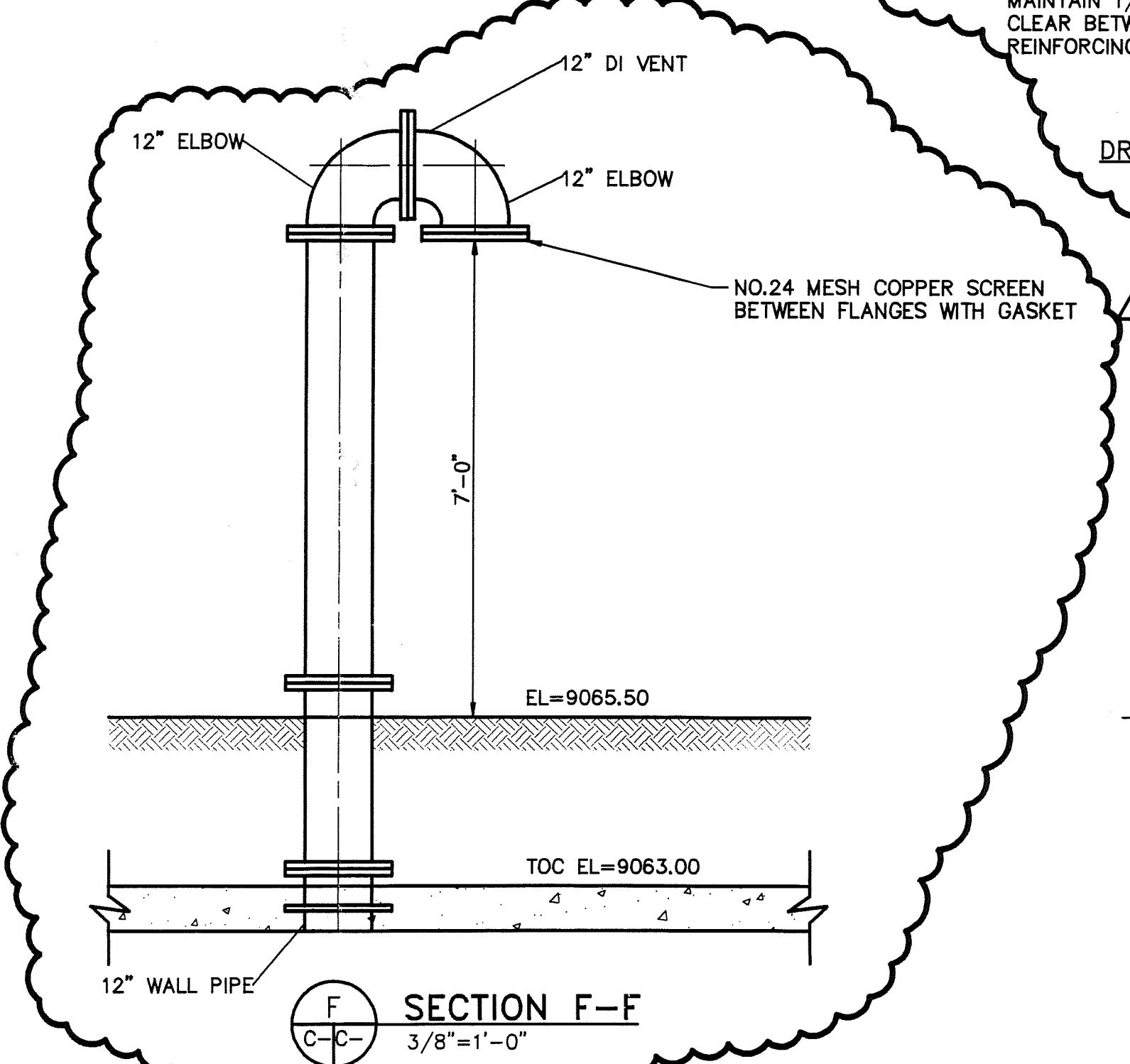
PROJECT: FARMERS KORNER  
 DWG UPDATED BY: MATIU  
 PROJECT MANAGER: JOHN MAAS  
 DESIGNED BY: JOHN MAAS  
 DRAWN BY: JOHN MAAS  
 SHEET NO. S2  
 JOB NO. 13709.01  
 SHEET NO. S2  
 job no. 13709.01  
 sheet no. S2  
 plot date 05/28/99  
 paper space PLOT  
 model space  
 main file S2.DWG  
 reference TREAT.PMP.DWG



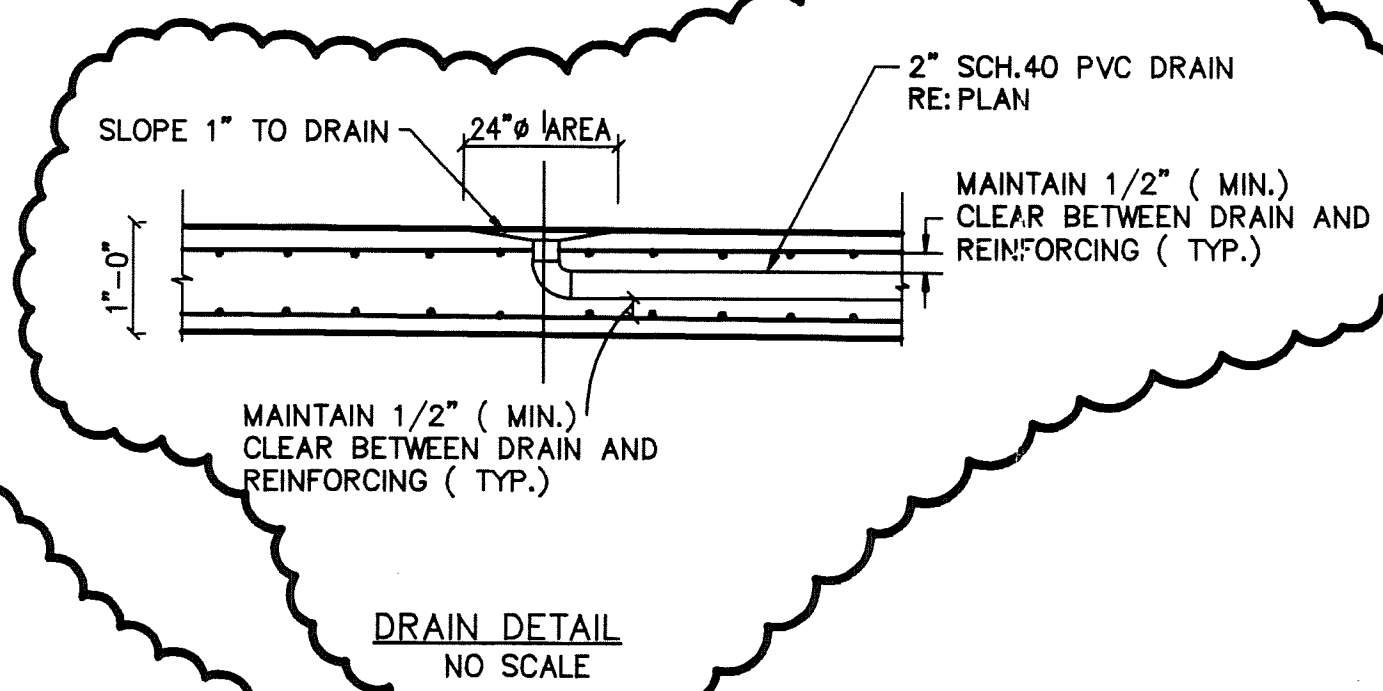
**TANK BASE SLAB PLAN** 1/8"=1'-0"

**FOUNDATION NOTES**

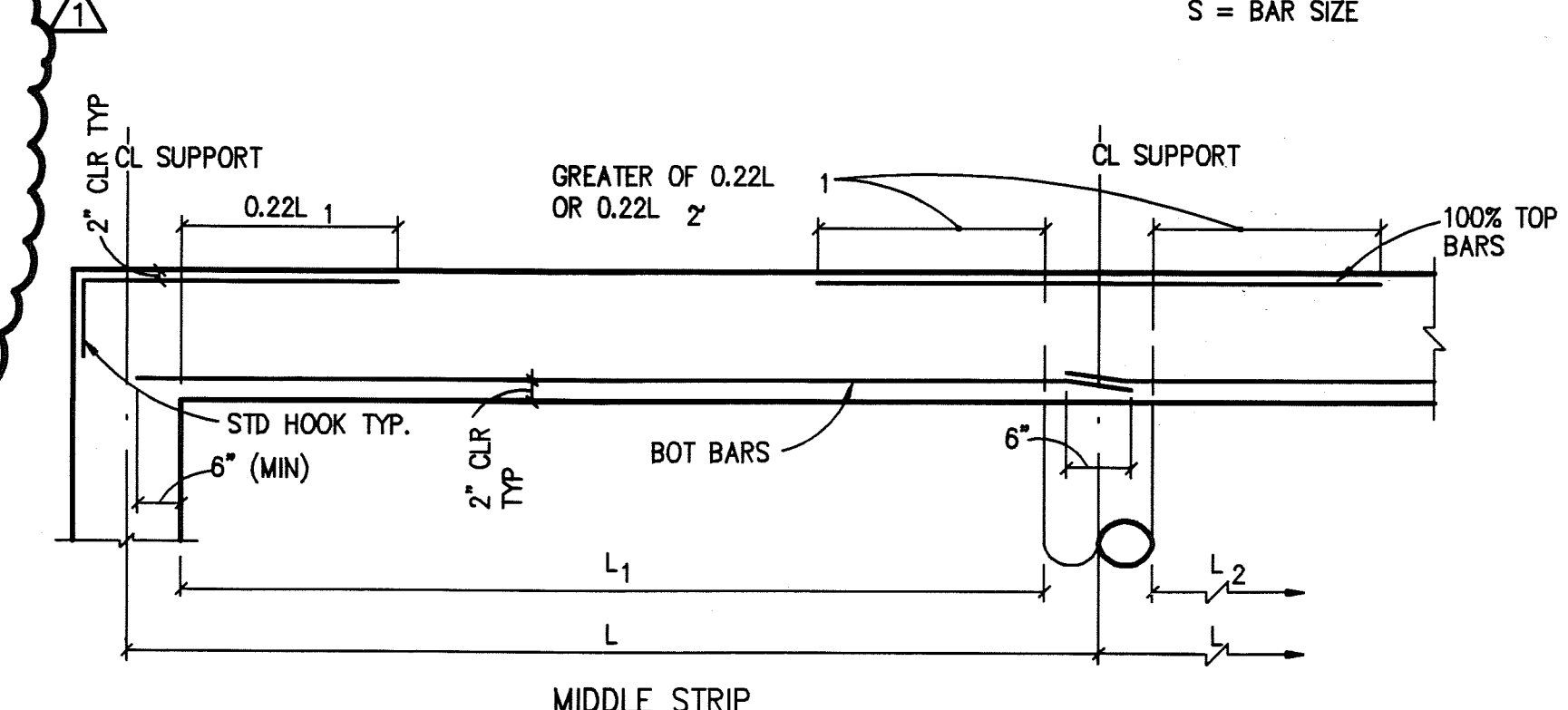
- A. SLABS-ON-GRADE
- SLABS-ON-GRADE SHALL BE 12" THICK NORMAL WEIGHT CONCRETE ON 4 INCH FREE-DRAINING GRAVEL ON NATURAL, UNDISTURBED SOILS OR PROPERLY COMPACTED STRUCTURAL FILL. RE: SOILS REPORT AND SPECIFICATIONS FOR REQUIREMENTS.
  - REINFORCE SLABS-ON-GRADE WITH #4 @ 12" BOTTOM AND #6 @ 9" TOP EACH WAY.
  - ELEVATION TOP OF SLABS-ON-GRADE SHALL BE 9048'-0 UNLESS NOTED ON PLAN THIS: XXX'-XX"
  - PLACE EAST-WEST SLAB REINFORCEMENT ABOVE NORTH-SOUTH REINFORCING BARS ~ TYP



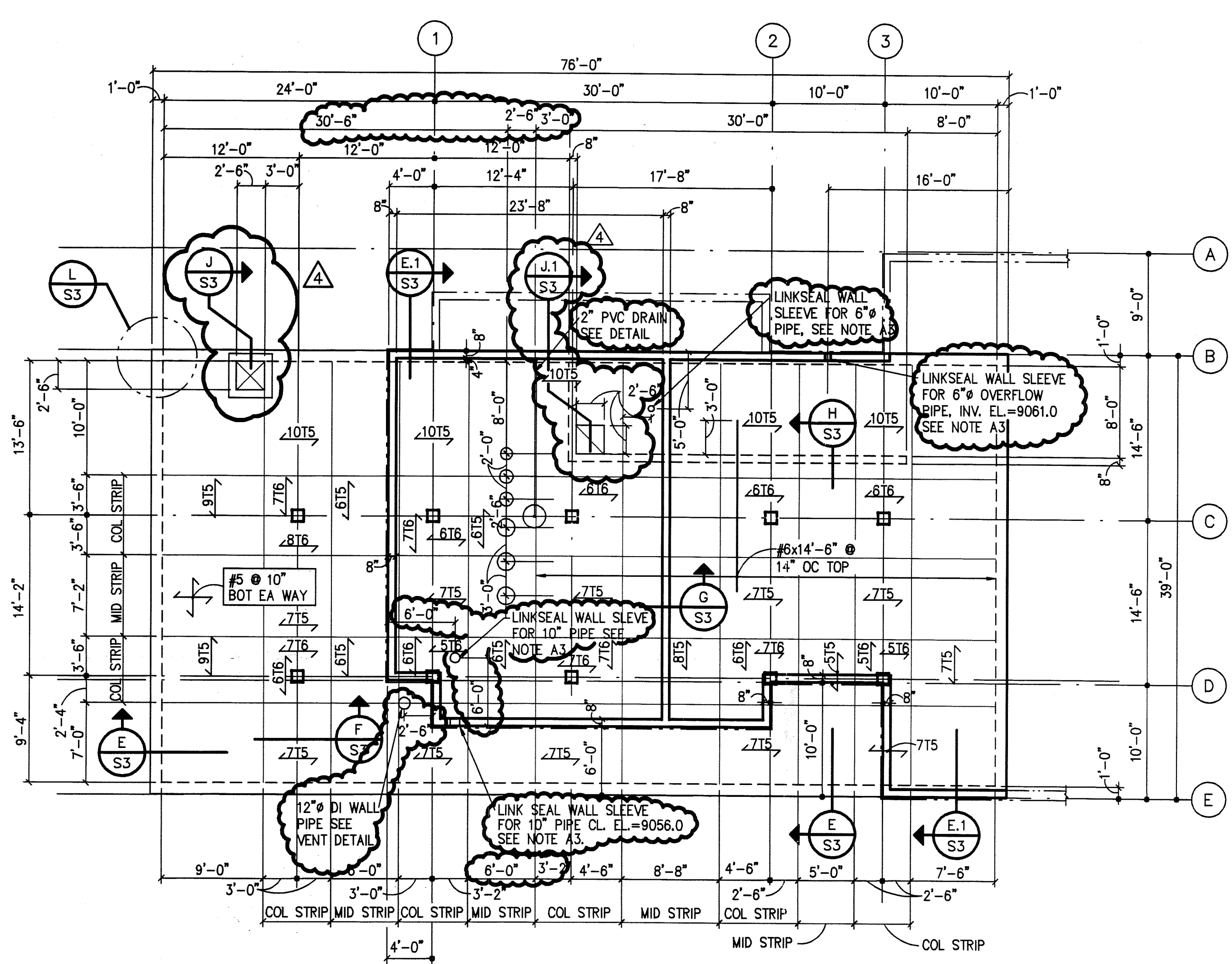
**SECTION F-F**  
3/8"=1'-0"



**DRAIN DETAIL**  
NO SCALE



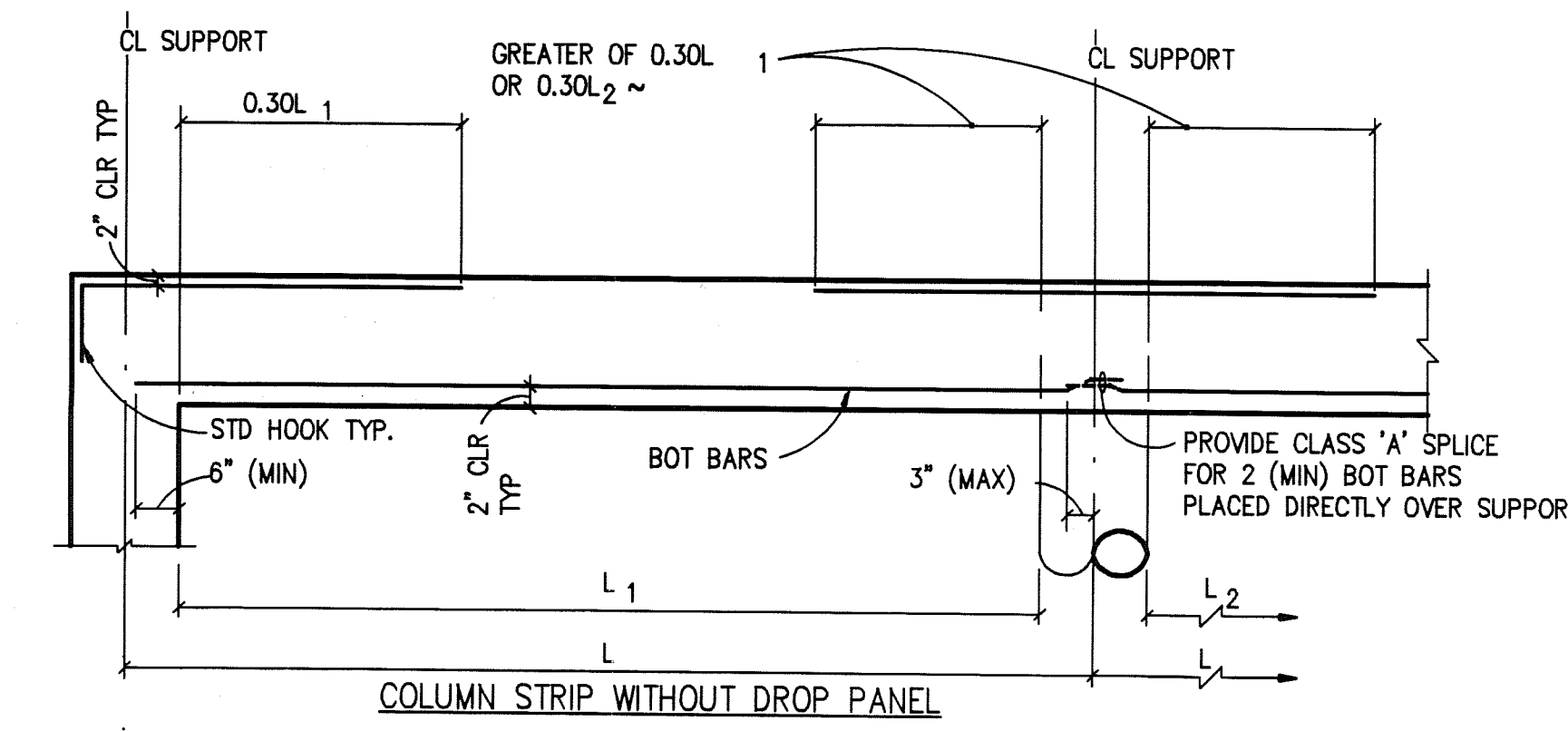
**TYPICAL FLAT PLATE REINFORCEMENT PLACING DIAGRAM**  
NO SCALE



**TANK TOP SLAB PLAN** 1/8"=1'-0"

**MILD REINFORCED CONCRETE SLAB**

- A. GENERAL:
- ELEVATION TOP OF CONCRETE 9063'-0 UNLESS NOTED ON PLAN. THUS: REINFORCING SHALL BE PLACED IN THE FOLLOWING SEQUENCE, UNLESS NOTED OTHERWISE:
    - E-W BOTTOM BARS IN COLUMN AND MID-STRIP
    - N-S BOTTOM BARS IN COLUMN AND MID-STRIP
    - N-S TOP BARS IN COLUMN AND MID-STRIP
    - E-W TOP BARS IN COLUMN AND MID-STRIP
  - EXACT LOCATION OF PIPE PENETRATIONS IN TOP SLAB AND WALL TO BE DETERMINED BY ENGINEER. PROVIDE AND INSTALL LINKSEAL WALL SLEEVES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
  - SEE DRAWING SX2 FOR SIZE, TYPE AND LOCATION OF PIPE PENETRATION.
- B. STRUCTURAL SLAB:
- TYPICAL SLAB SHALL BE 12" THICK UNLESS NOTED OTHERWISE
  - RE: PLAN FOR TYPICAL SLAB REINFORCING.
  - SLAB REINFORCEMENT NOTED ON PLAN THIS: NLS  
 N = NUMBER OF BARS  
 L = LOCATION (T = TOP B = BOTTOM)  
 S = BAR SIZE



**COLUMN STRIP WITHOUT DROP PANEL**

**AS BUILT**

MARTIN/MARTIN BY PJS DATE 1/24/00

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 Email: civ@martinmartin.com

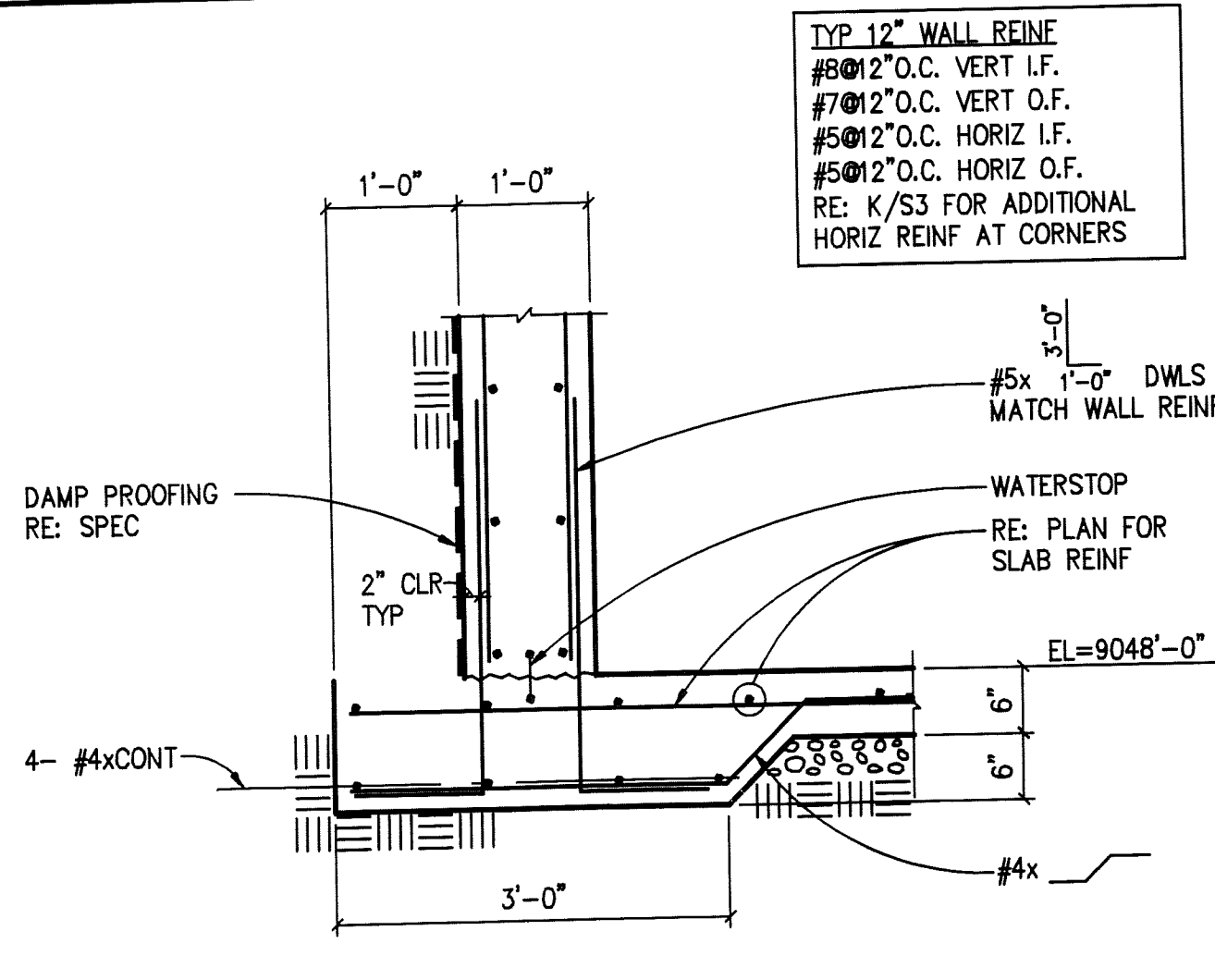
**FARMERS KORNER**  
**UNDERGROUND WATER**  
**STORAGE TANK**  
**PLANS**

no	description of revisions	date	name
1	ADDENDUM #1	06/09/99	PJS
2	ADDENDUM #3	08/09/99	PJS
4	ADDENDUM #4	8/31/99	MJU
5	AS CONSTRUCTED	1/24/00	PJS

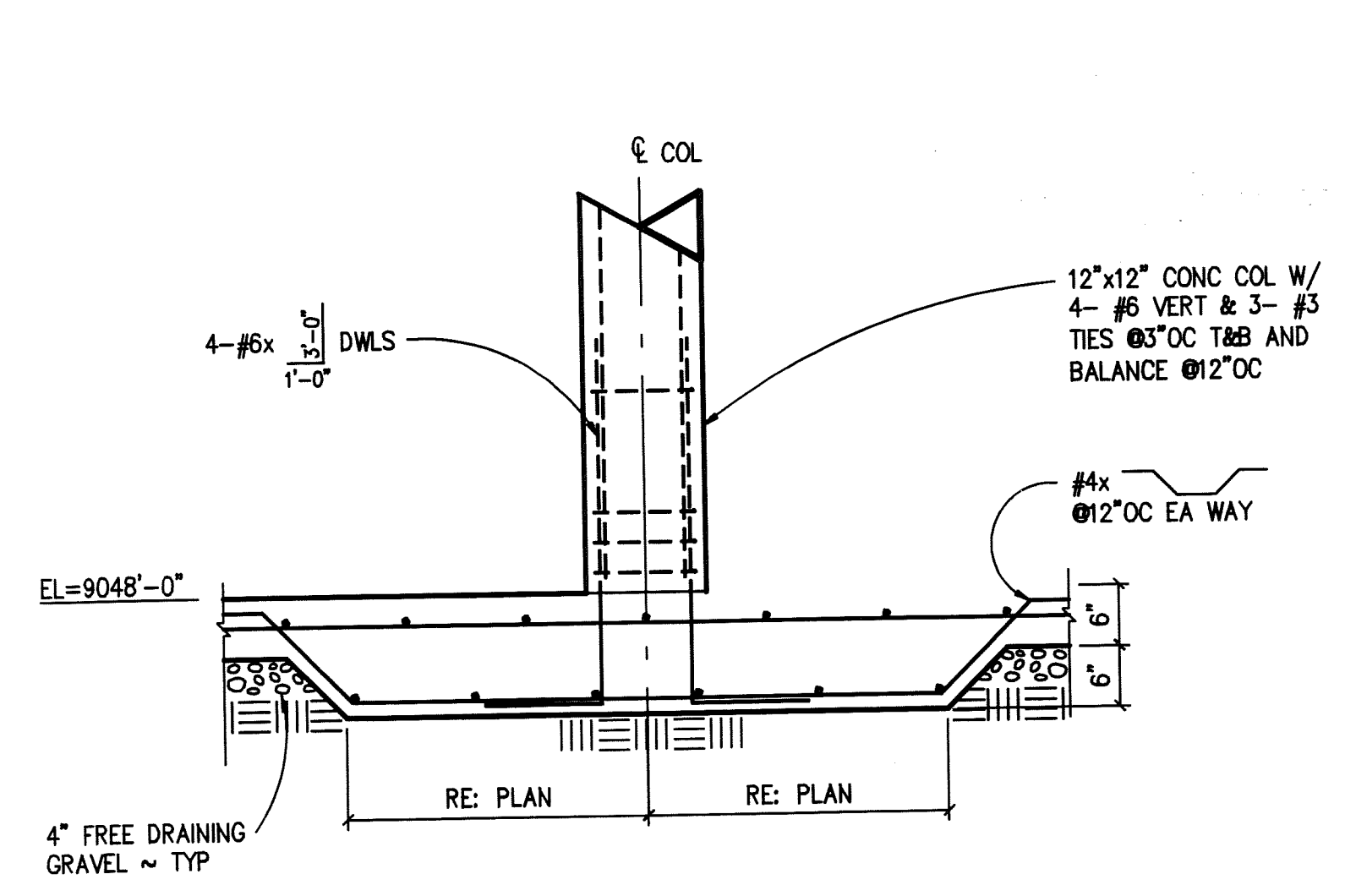
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 design by JOHN MAAS  
 drawn by KB  
 checked by JOHN MAAS

sheet number

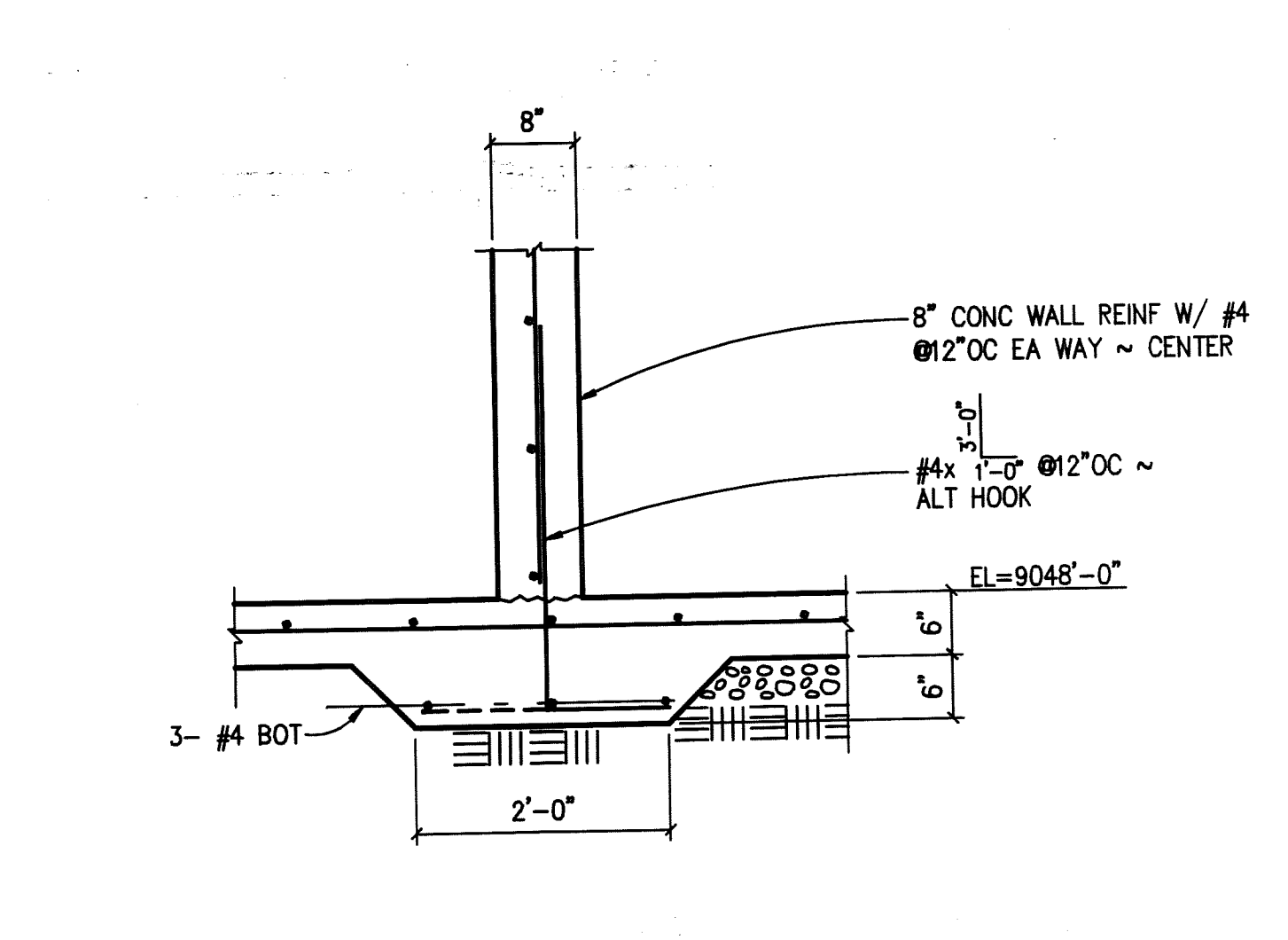
**S2**



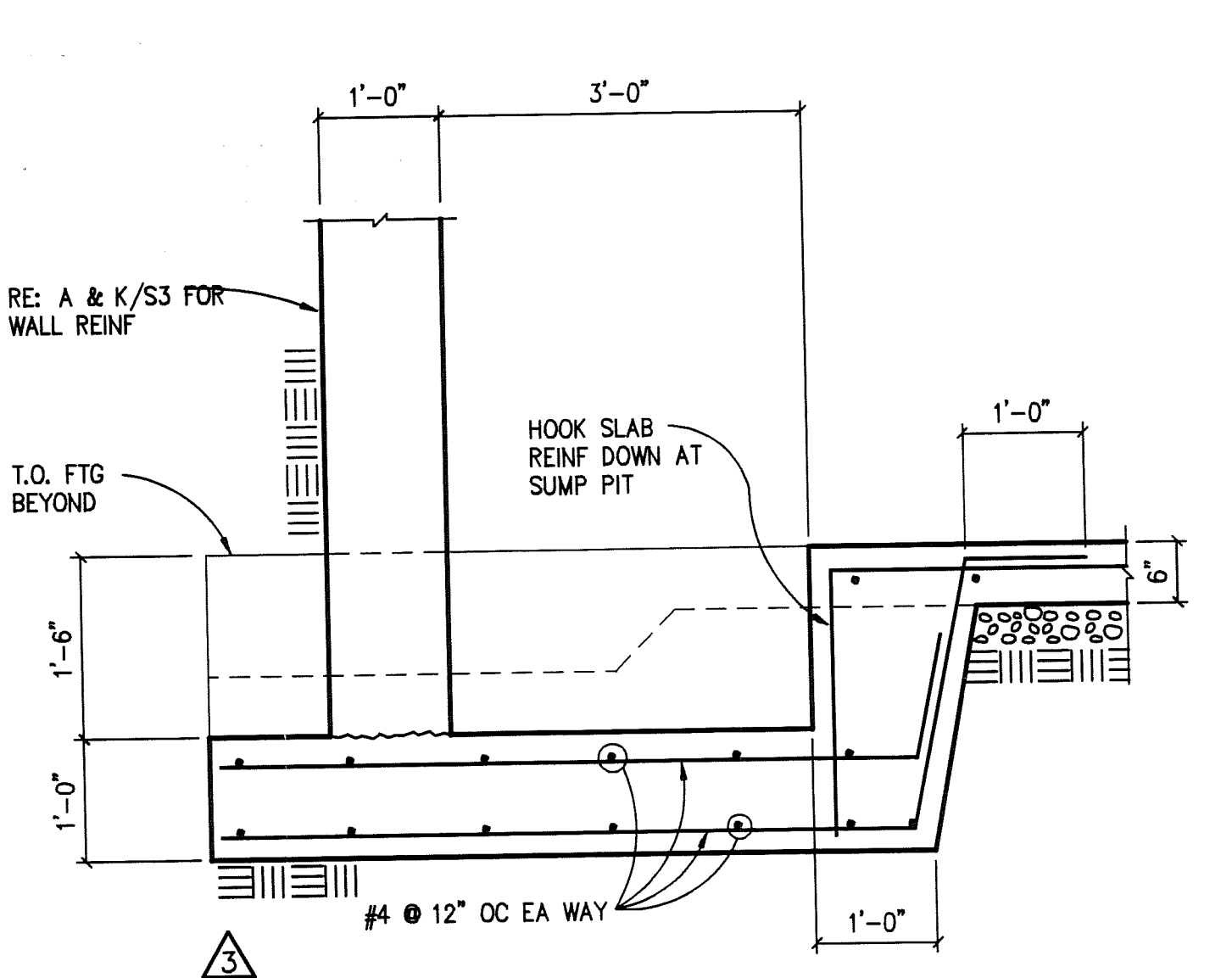
**A** FOUNDATION DETAIL  
3/4"=1'-0"



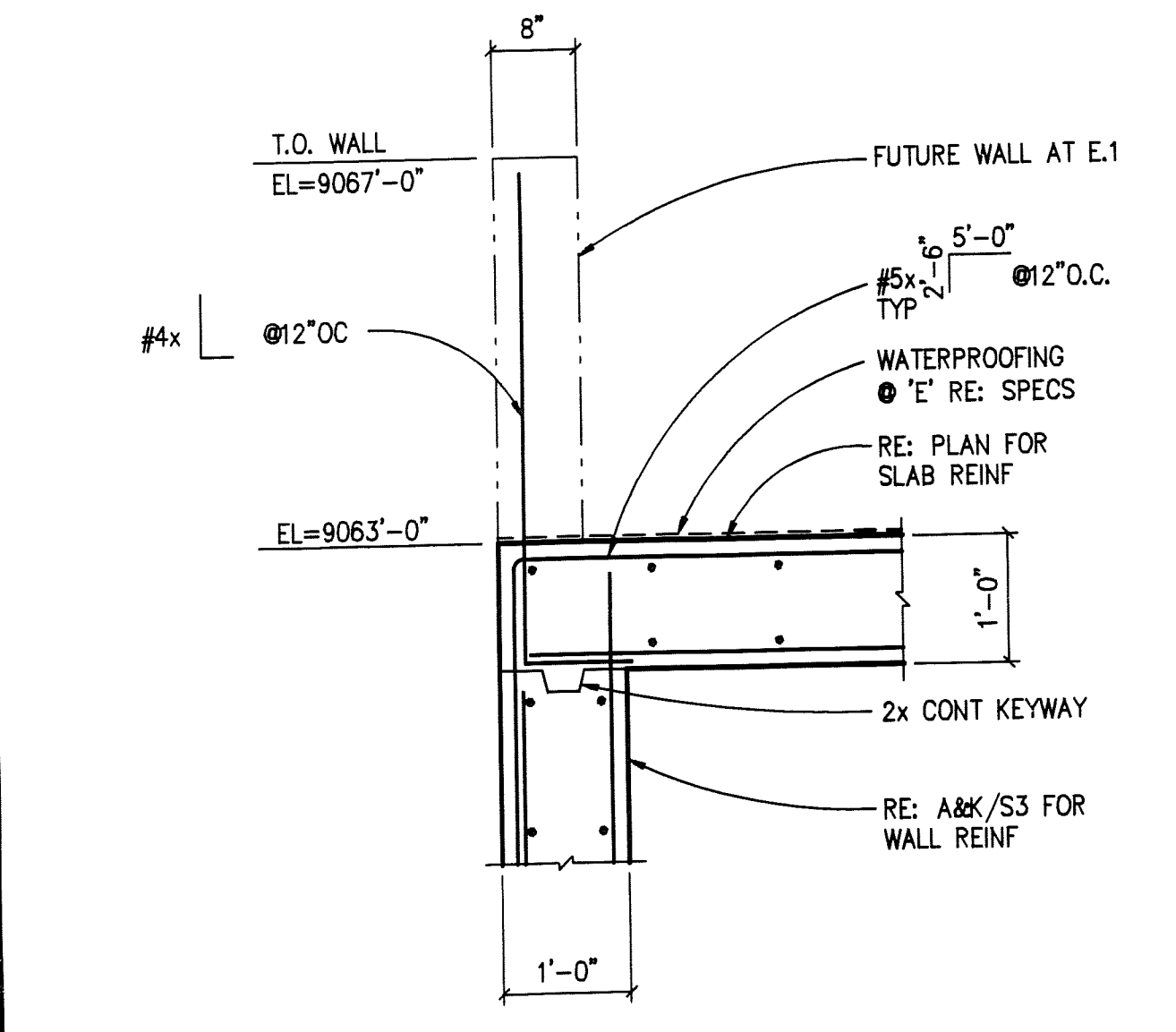
**B** INTERIOR FOOTING DETAIL  
3/4"=1'-0"



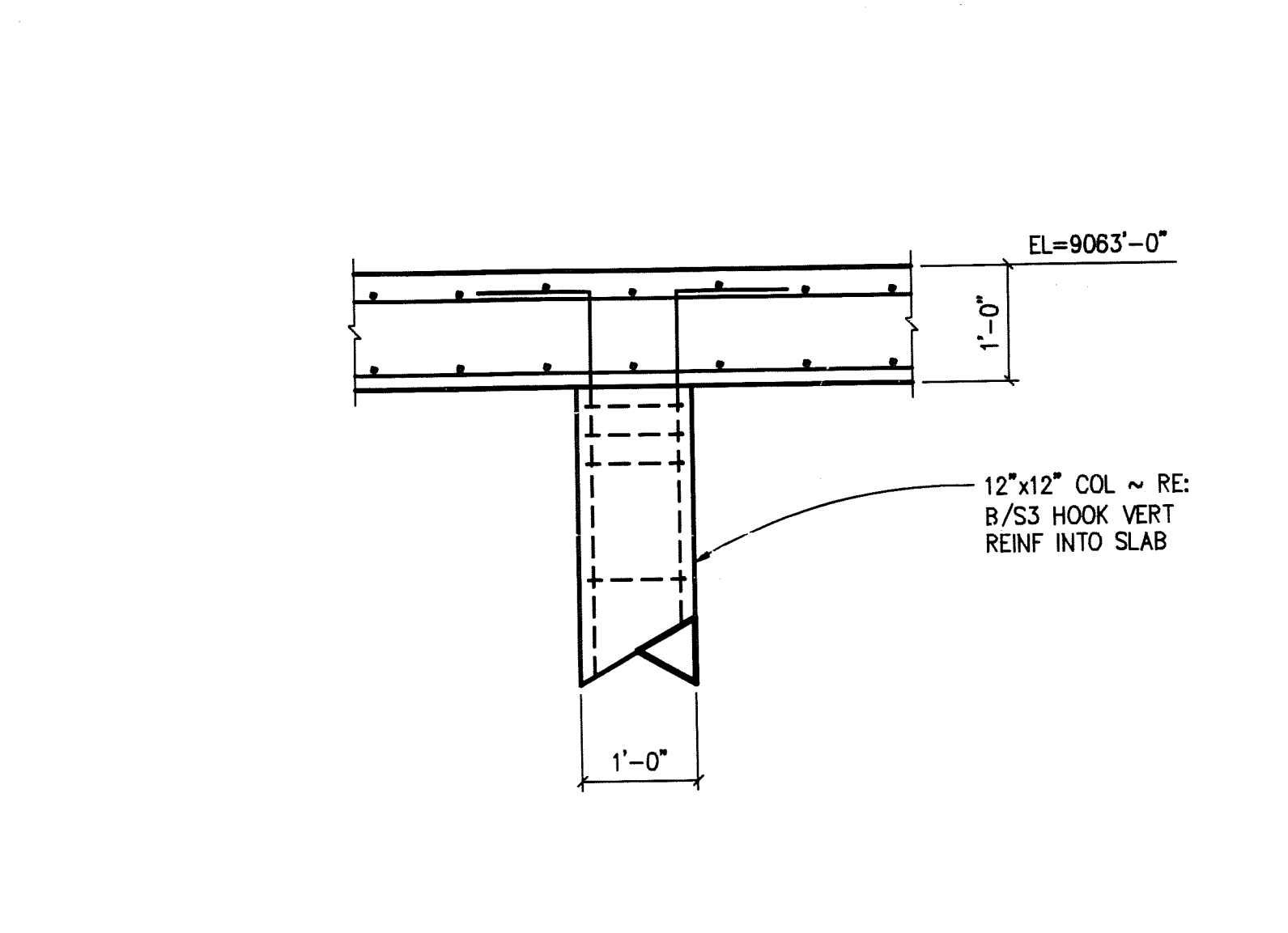
**C** BAFFLE WALL DETAIL  
3/4"=1'-0"



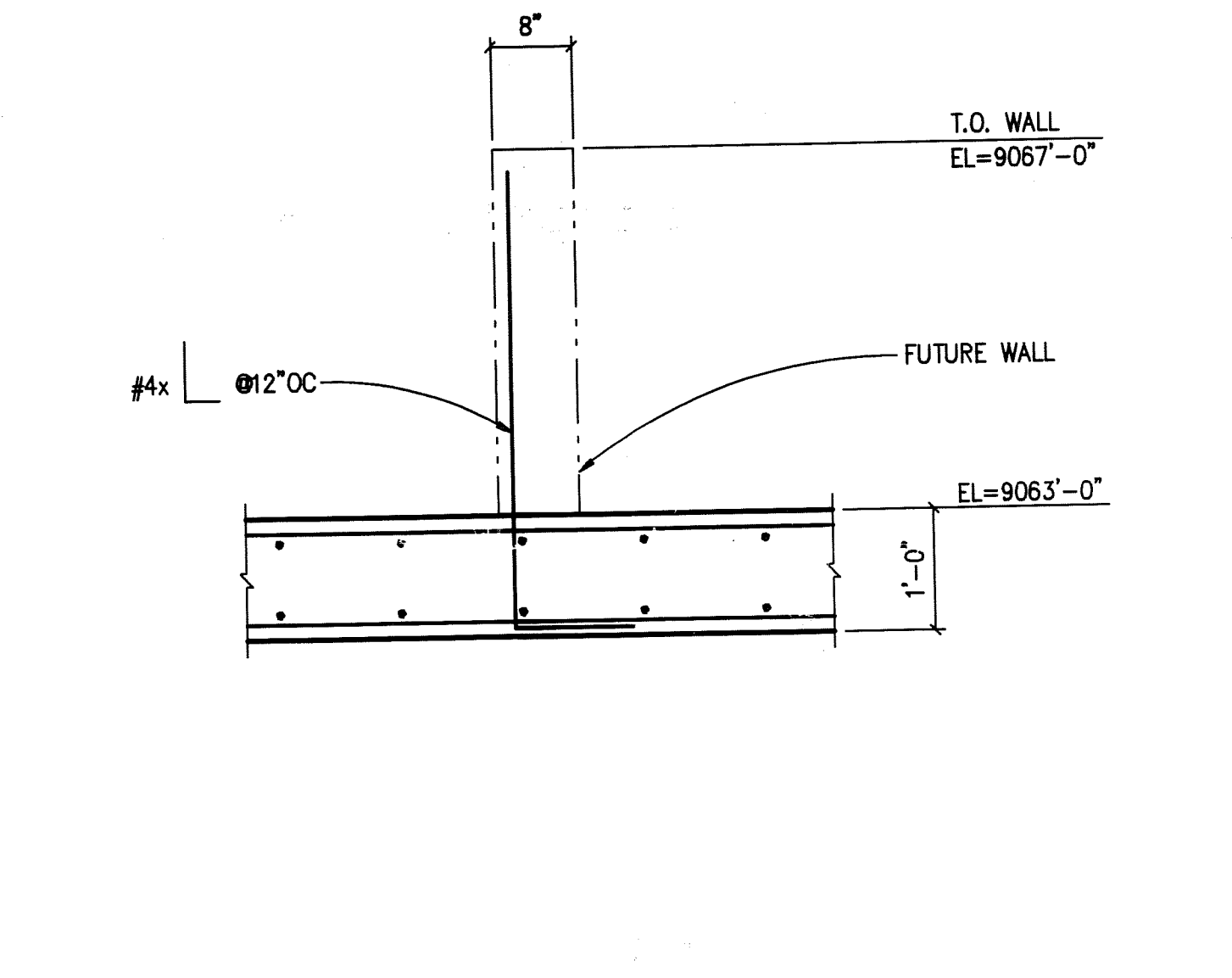
**D** SUMP PT DETAIL  
3/4"=1'-0"



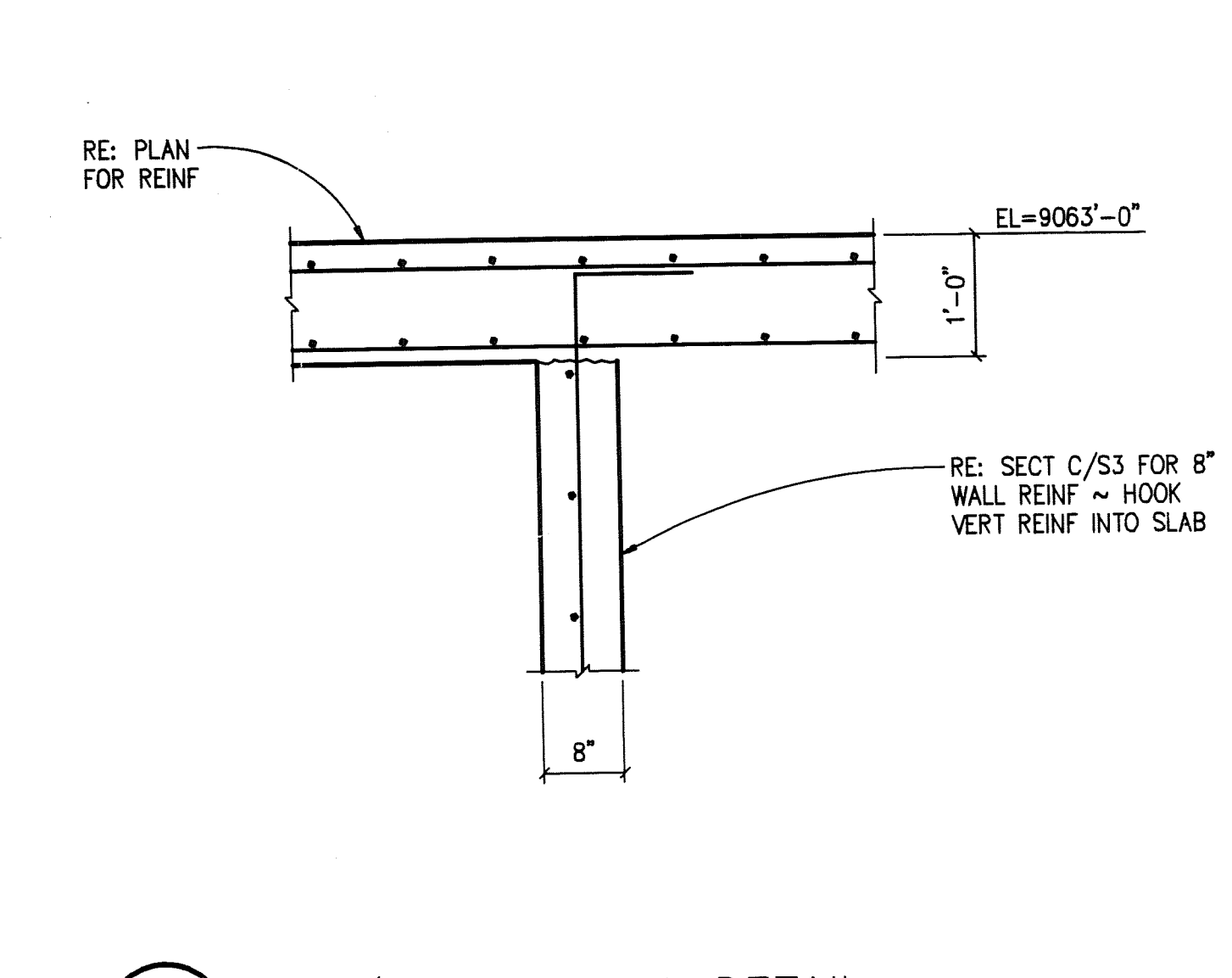
**E** E.1 TOP OF TANK DETAIL  
3/4"=1'-0"



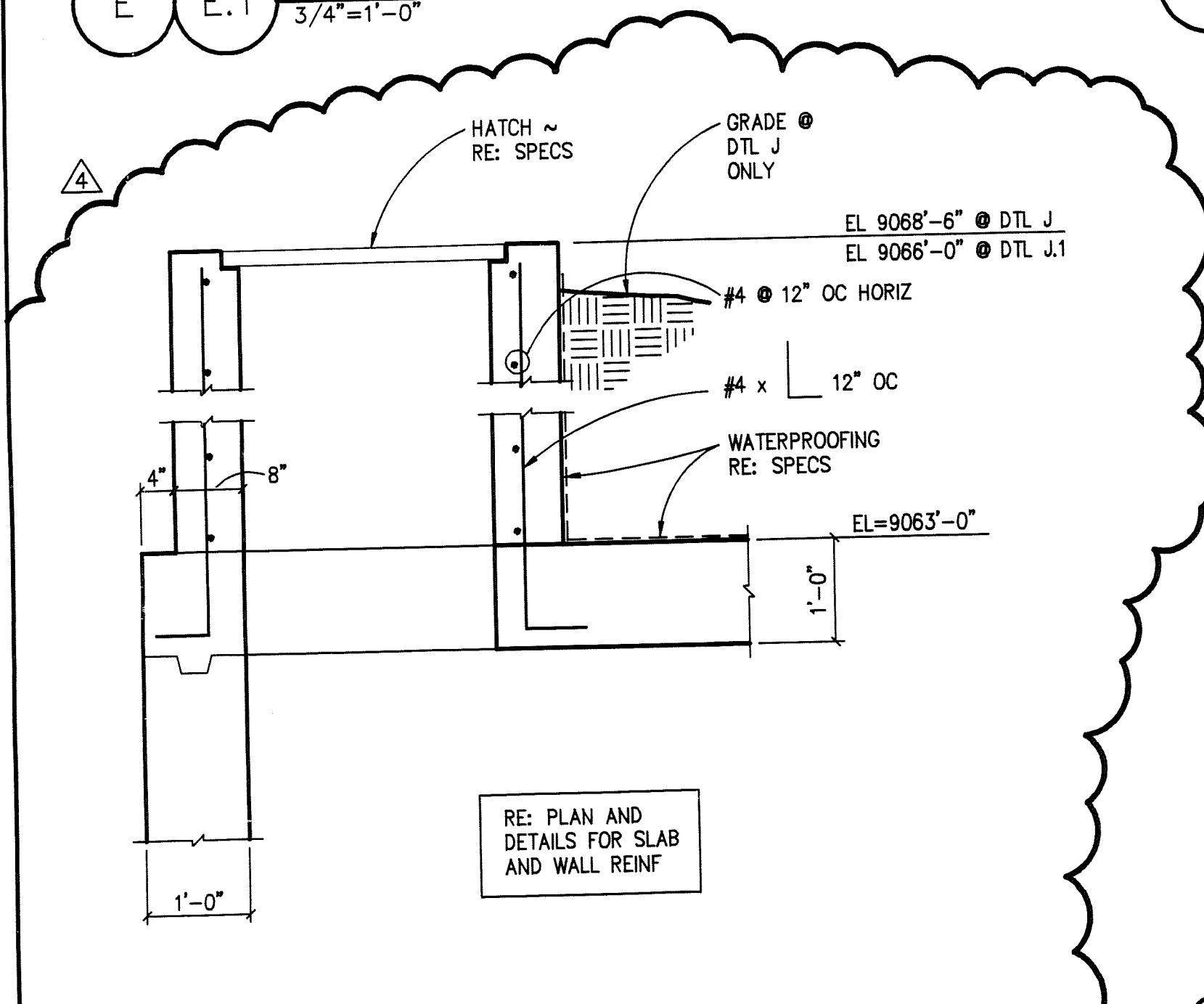
**F** COLUMN/SLAB DETAIL  
3/4"=1'-0"



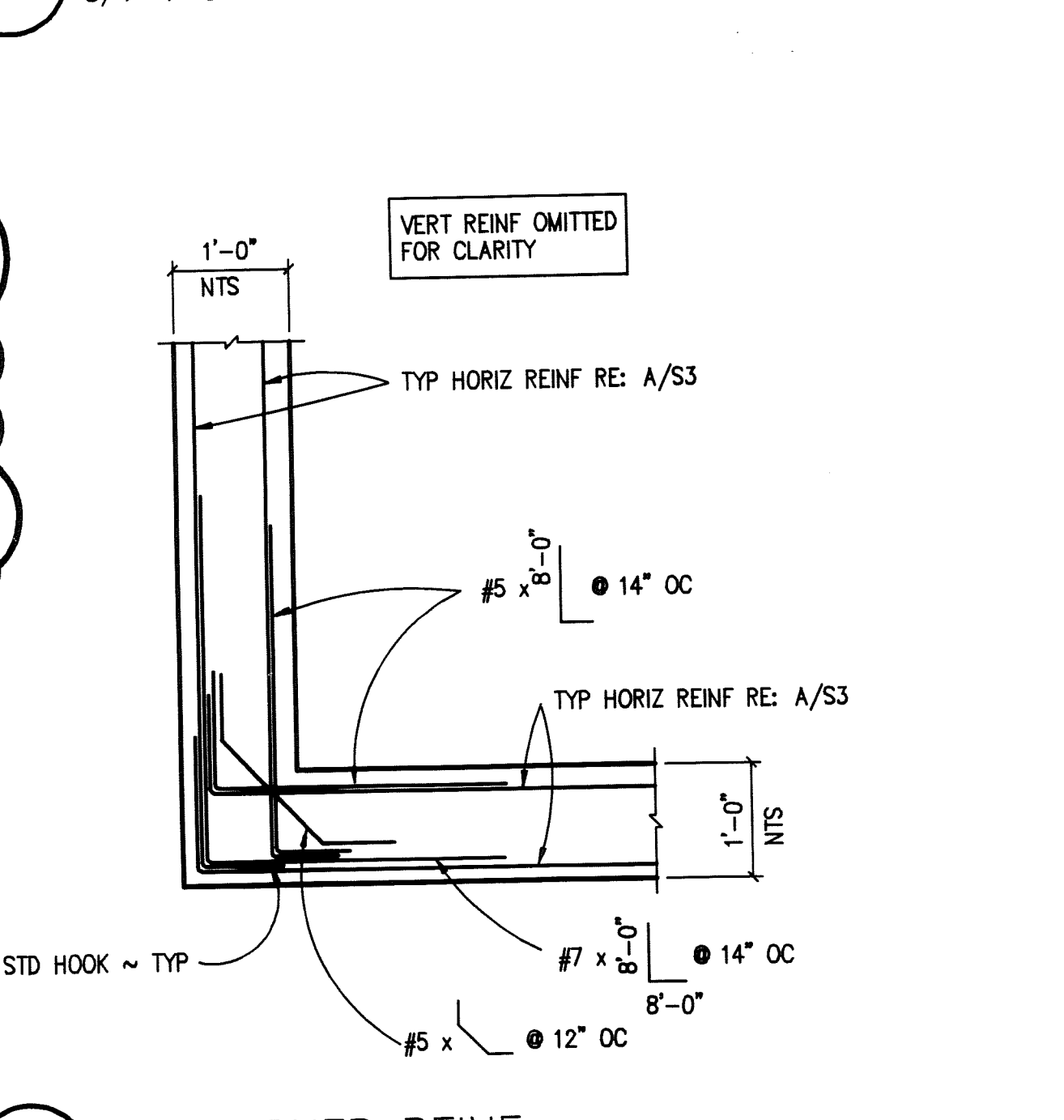
**G** FUTURE STEM WALL DETAIL  
3/4"=1'-0"



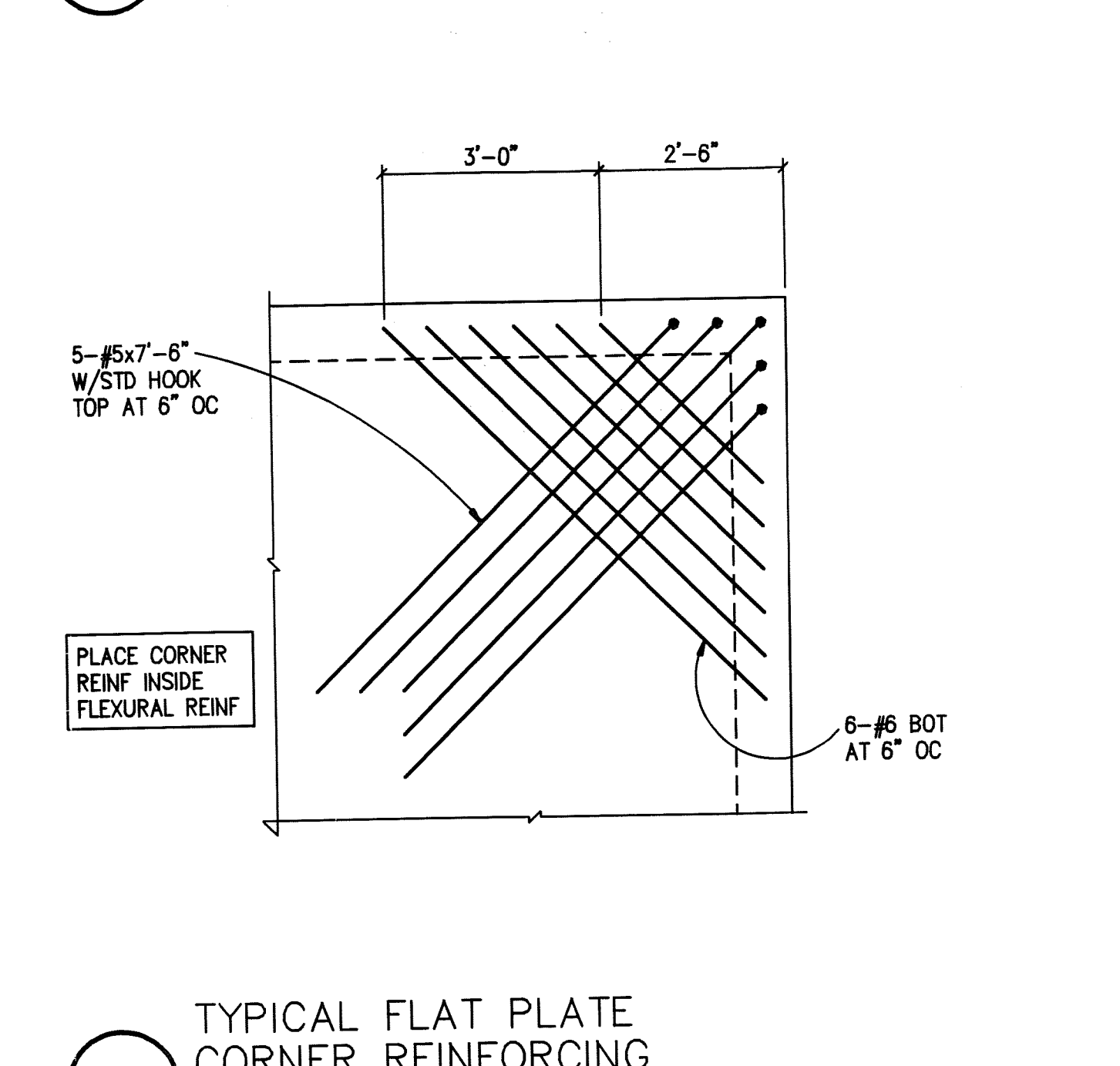
**H** SLAB/BAFFLE WALL DETAIL  
3/4"=1'-0"



**J** J.1 HATCH DETAIL  
3/4"=1'-0"



**K** TYP CORNER REINF  
3/4"=1'-0"



**L** TYPICAL FLAT PLATE CORNER REINFORCING

**AS BUILT**  
MARTIN/MARTIN BY PJS DATE 01/25/00  
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**FARMERS KORNER**  
**UNDERGROUND WATER**  
**STORAGE TANK**  
**SECTIONS**

no	description of revisions	date	name
1	ADDENDUM #1	06/09/99	PJS
3	ADDENDUM #3	08/09/99	MDU
4	ADDENDUM #4	08/31/99	MDU

date	job number	design by	drawn by	checked by
MAY 28, 1999	13709.01	JOHN MAAS	WCS	JOHN MAAS