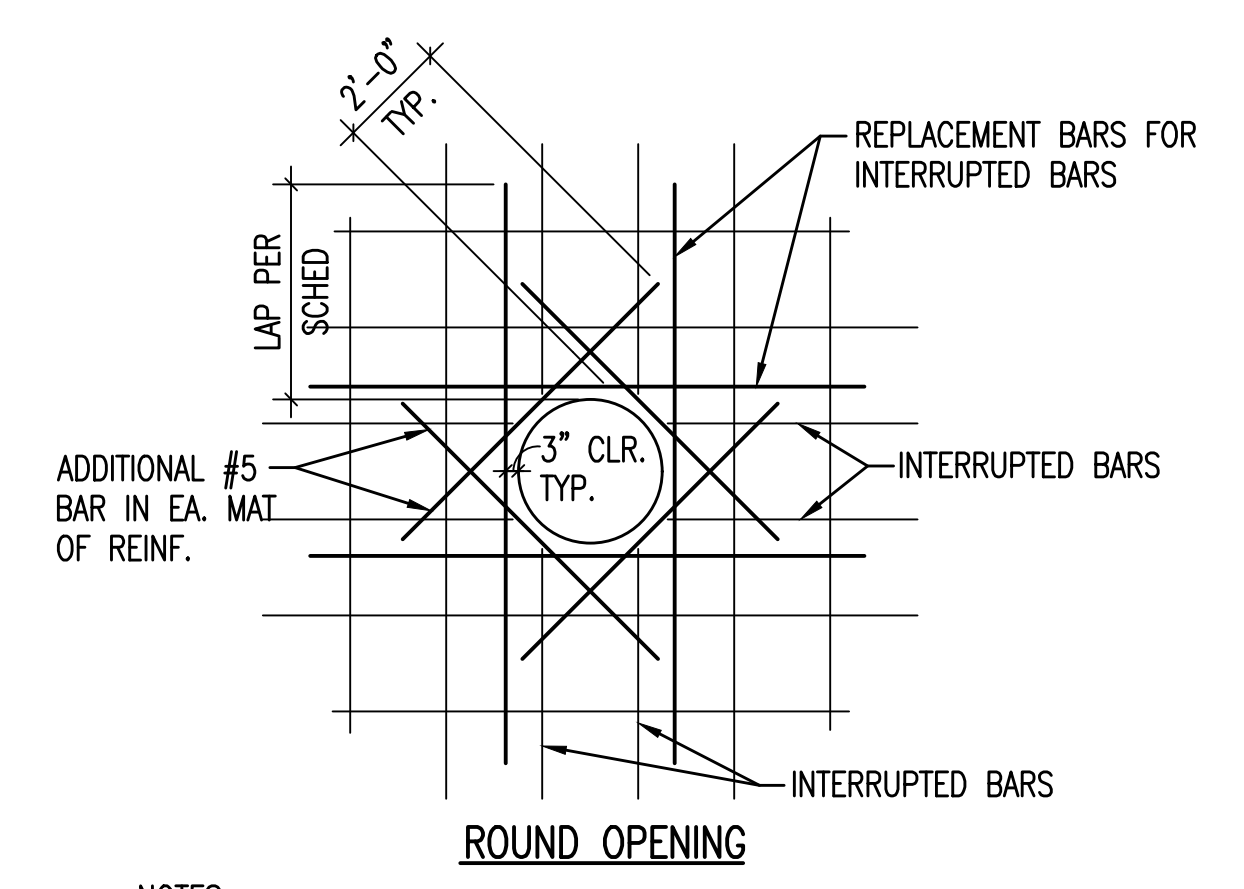
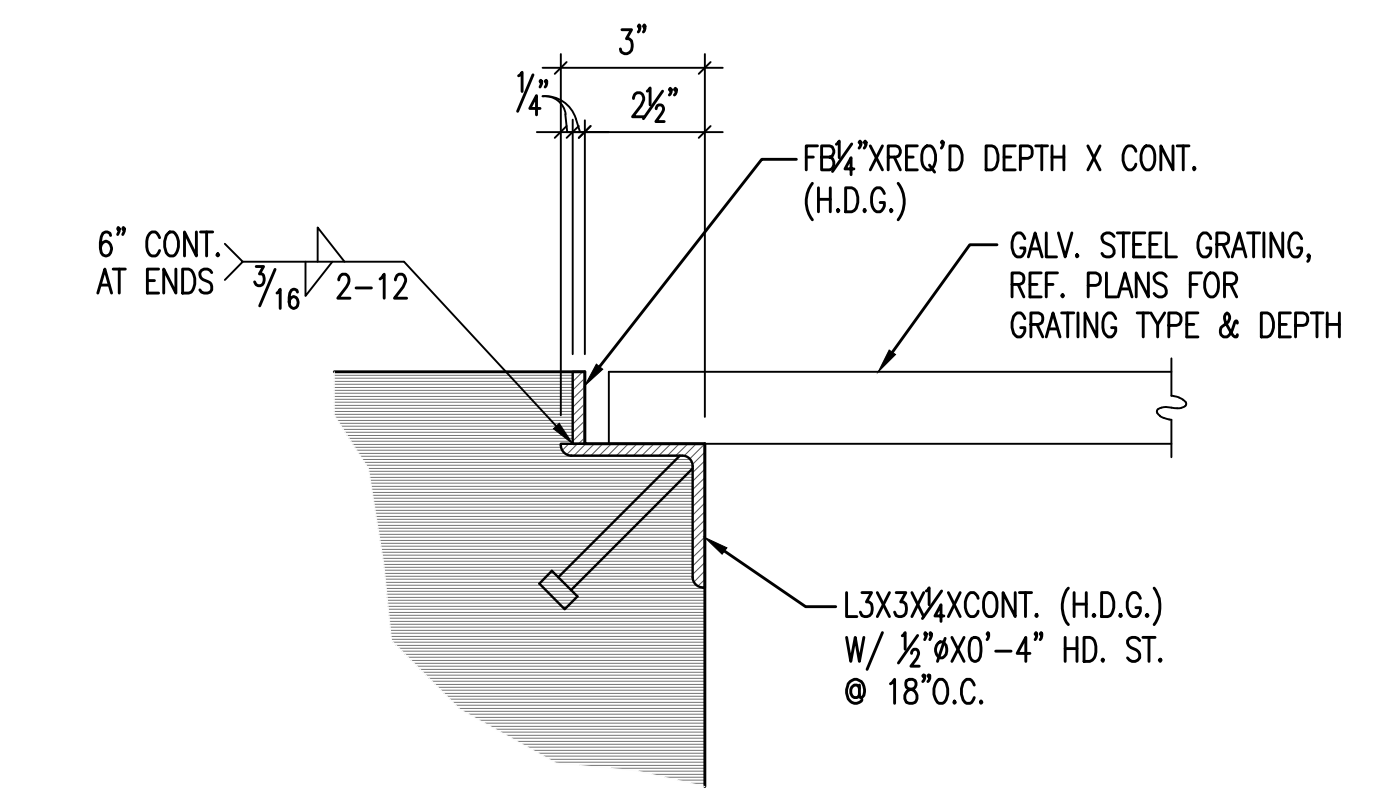
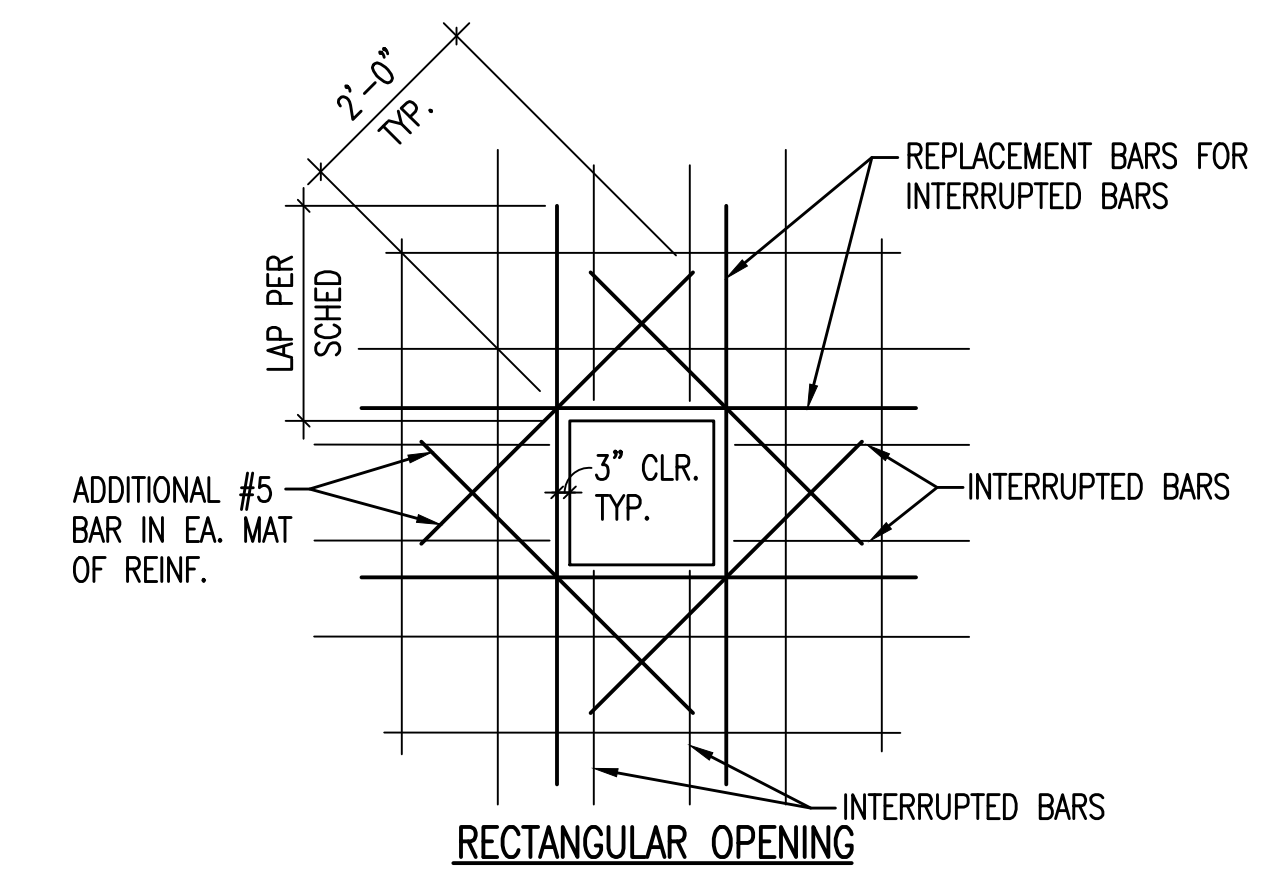


1 **TYP. CORNER AND INTERSECT. REINF.**  
S3 NO SCALE (LIQUID RETAINING STRUCTURE)



2 **TYP. WALL/ELEVATED SLAB OPENING REINF.**  
S3 NO SCALE

NOTES:  
1. USE THIS DETAIL FOR ALL OPENINGS GREATER THAN 8" IN CONCRETE WALLS AND ELEVATED SLABS, PROVIDE #5 ON DIAGONAL AT EACH CORNER AS SHOWN. EXTEND BARS 2'-0" PAST OPENING. REPLACE ALL VERTICAL AND HORIZONTAL BARS INTERRUPTED BY THE OPENING WITH AN EQUAL NUMBER AND SIZE BARS EVENLY DIVIDED ON EACH SIDE OF THE OPENING UNLESS NOTED OTHERWISE.  
2. REFER TO ARCHITECTURAL, STRUCTURAL & MECHANICAL PLANS FOR ALL OPENING LOCATIONS.



3 **TYP. GRATING SUPPORT DETAIL**  
S3 NO SCALE

TABLE A - REINFORCEMENT LAPS, EMBEDMENTS, AND HOOK LENGTHS.  
fy = 60000 PSI f'c = 4000 PSI

BAR SIZE (d)	CLEAR SPACING (S) (in)			EMBEDMENT & CLASS A LAP (in)				CLASS B LAP (in)				HOOK (in)				
				TOP BAR		OTHER BARS		TOP BAR		OTHER BARS						
	2d	3d	5d	2d < S < 3d	S > 3d	2d < S < 5d	S > 5d	2d < S < 3d	S > 3d	2d < S < 5d	S > 5d					
3	3/4	1 1/8	1 7/8	28	18	12	21	14	12	36	24	14	28	18	12	8
4	1	1 1/2	2 1/2	37	25	15	28	19	12	48	32	19	37	25	15	10
5	1 1/4	1 7/8	3 1/8	46	31	18	36	24	14	60	40	24	46	31	18	12
6	1 1/2	2 1/4	3 3/4	55	37	22	43	28	17	72	48	29	55	37	22	15
7	1 3/4	2 3/8	4 1/8	81	54	32	62	42	25	105	70	42	81	54	32	18
8	2	3	5	92	62	37	71	47	28	120	80	48	92	62	37	20
9	2 1/4	3 3/8	5 5/8	104	70	42	80	54	32	136	90	54	104	70	42	22
10	2.54	3.81	6.35	117	78	47	90	60	36	153	102	61	117	78	47	25
11	2.82	4.23	7.05	130	87	52	100	67	40	170	113	68	130	87	52	27

NOTES:  
1. LENGTHS SHOWN CONFORM WITH NON-SEISMIC PROVISIONS OF ACI 318 FOR UNCOATED BARS.  
2. BAR CLEAR SPACING IS THE CENTER TO CENTER BAR SPACING MINUS ONE BAR DIAMETER.  
3. CLASS A LAP LENGTHS APPLY WHEN BAR LAPS ARE STAGGERED TO LAP HALF THE BARS AT THE SAME LOCATION. USE CLASS B LAP FOR ALL OTHER CASES.  
4. TOP BARS ARE HORIZONTAL REINFORCEMENT PLACED SO THAT MORE THAN 12 INCHES OF CONCRETE IS CAST BELOW THE REINFORCEMENT.  
5. MULTIPLY LAP AND EMBEDMENT LENGTHS GIVEN BY 2.0 FOR BARS WITH CLEAR SPACING OF TWO BAR DIAMETERS OR LESS, OR CONCRETE COVER OF ONE BAR DIAMETER OR LESS.  
6. TABLE FOR NORMAL WEIGHT CONCRETE AND UNCOATED REINFORCING BARS ONLY.

4 **TABLE A**  
S3 NO SCALE

	No.	Revision	By	Date
	CITY OF WICHITA			
	<b>TYPICAL STRUCTURAL DETAILS</b>			
	LIME LAGOON OUTFALL			
		PROFESSIONAL ENGINEERING CONSULTANTS, P.A. 303 SOUTH TOPEKA WICHITA, KS 67202 316-262-2691 www.pec1.com		
Designed by	DKC	Job No.	34-160316-003	Sht. S3 of 3
Drawn by	DGC	Date	JULY 2017	