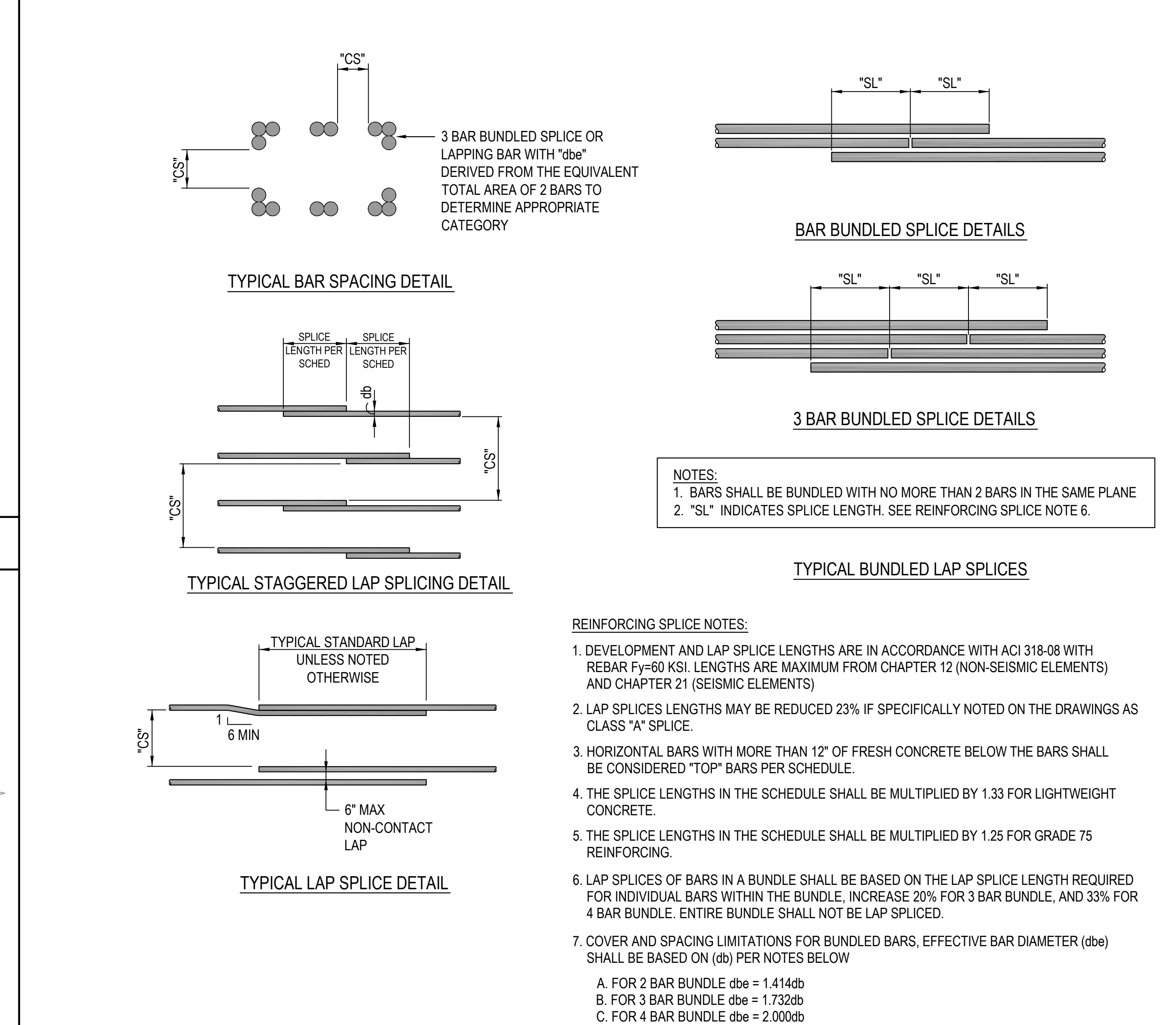
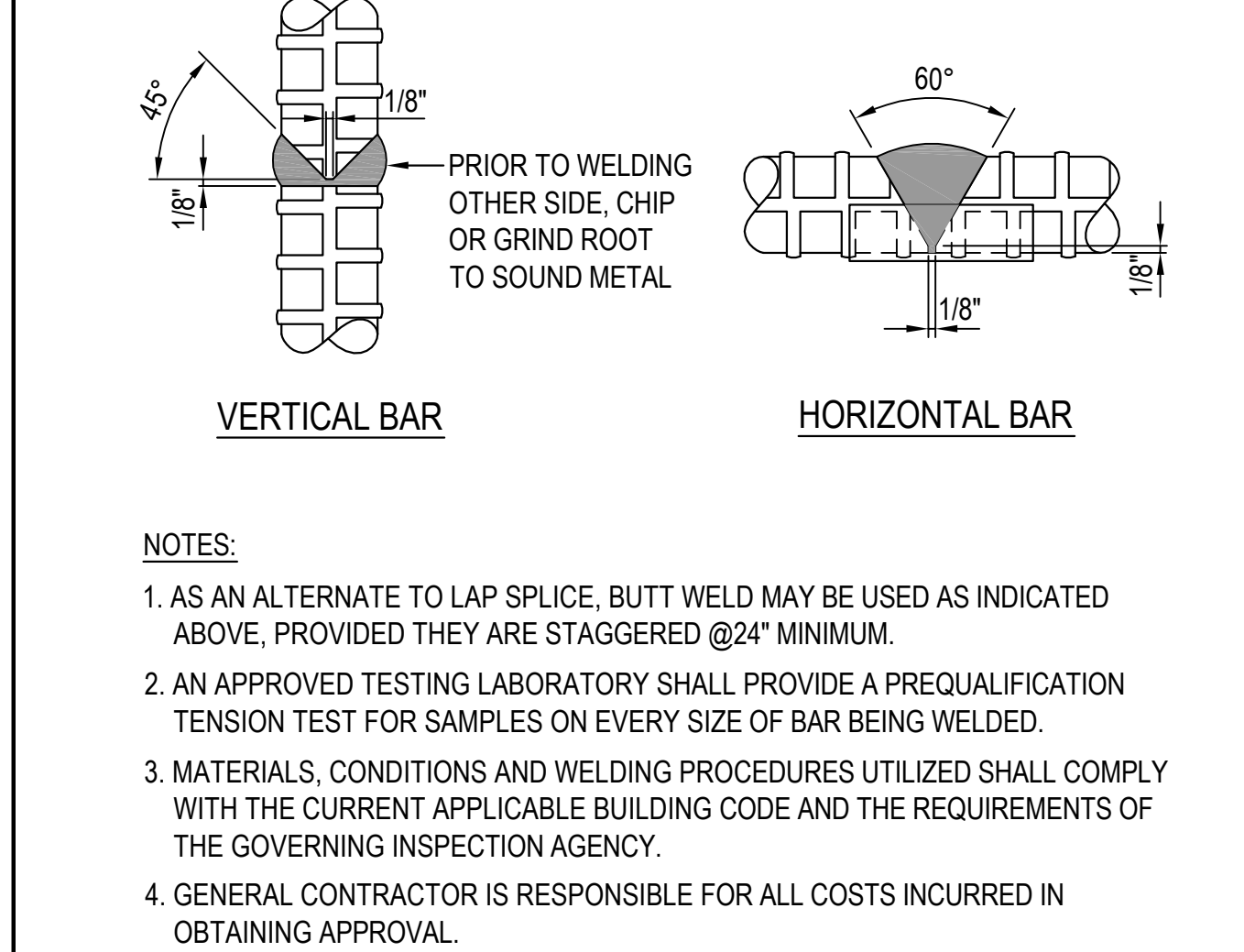
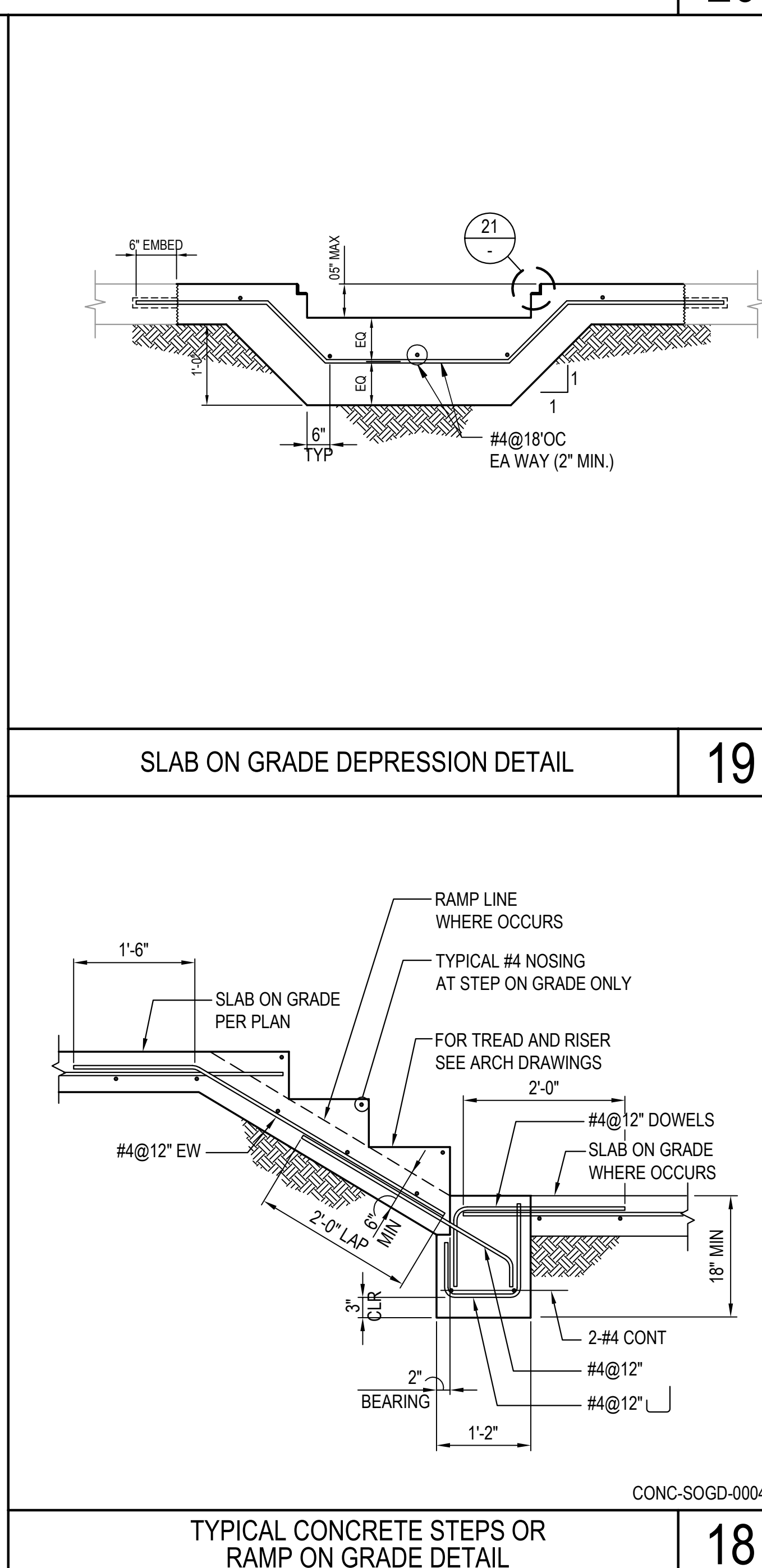
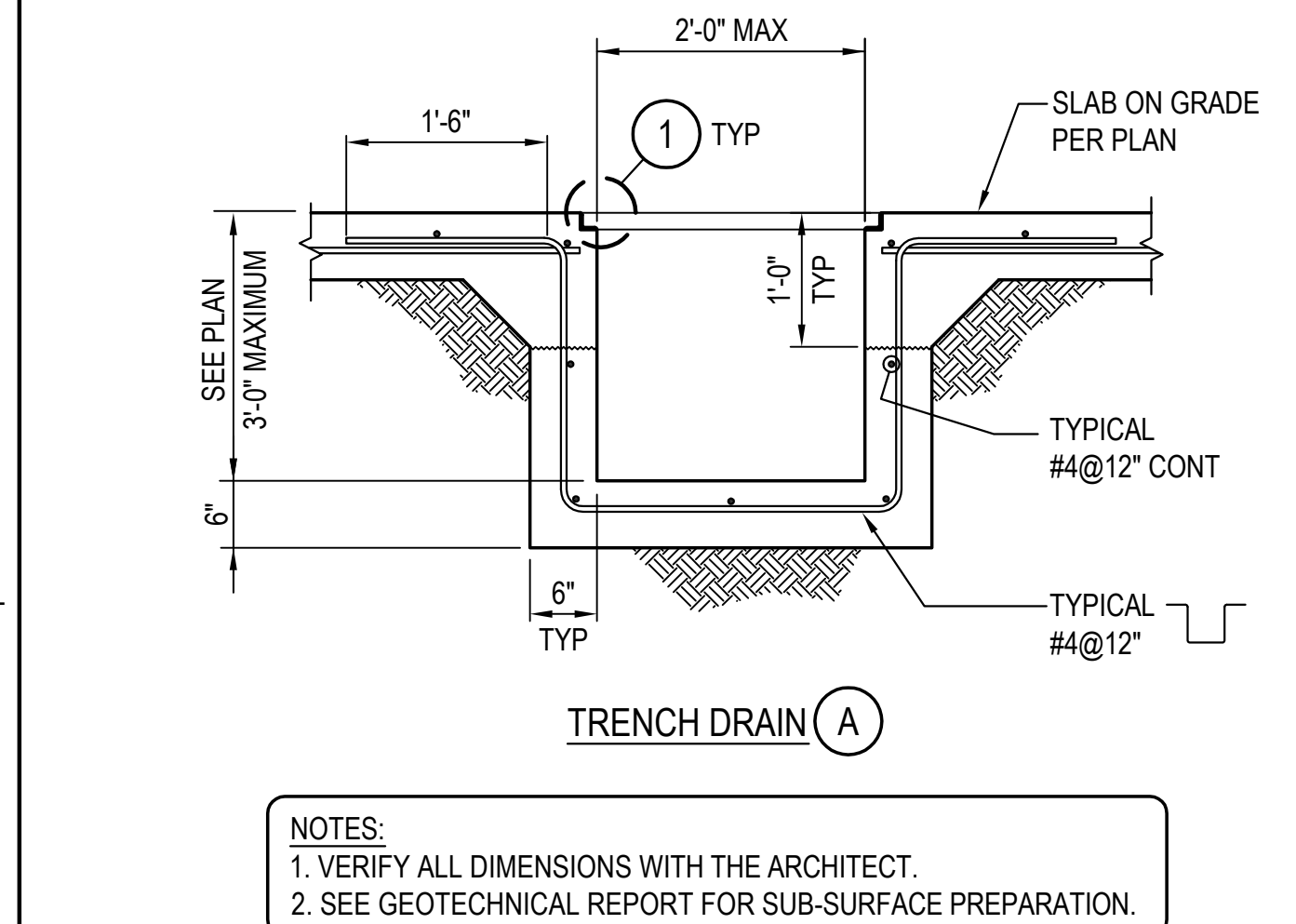
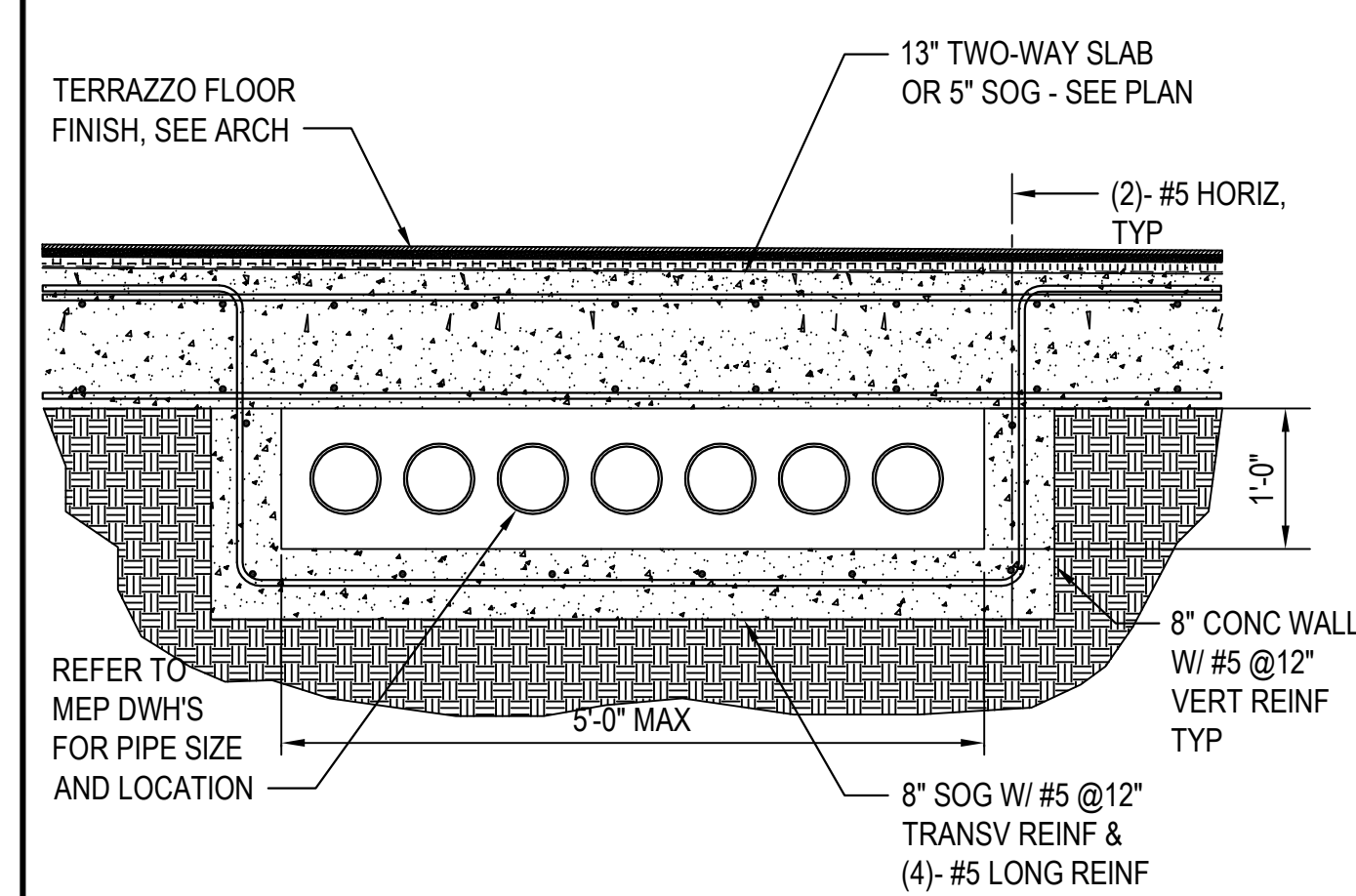
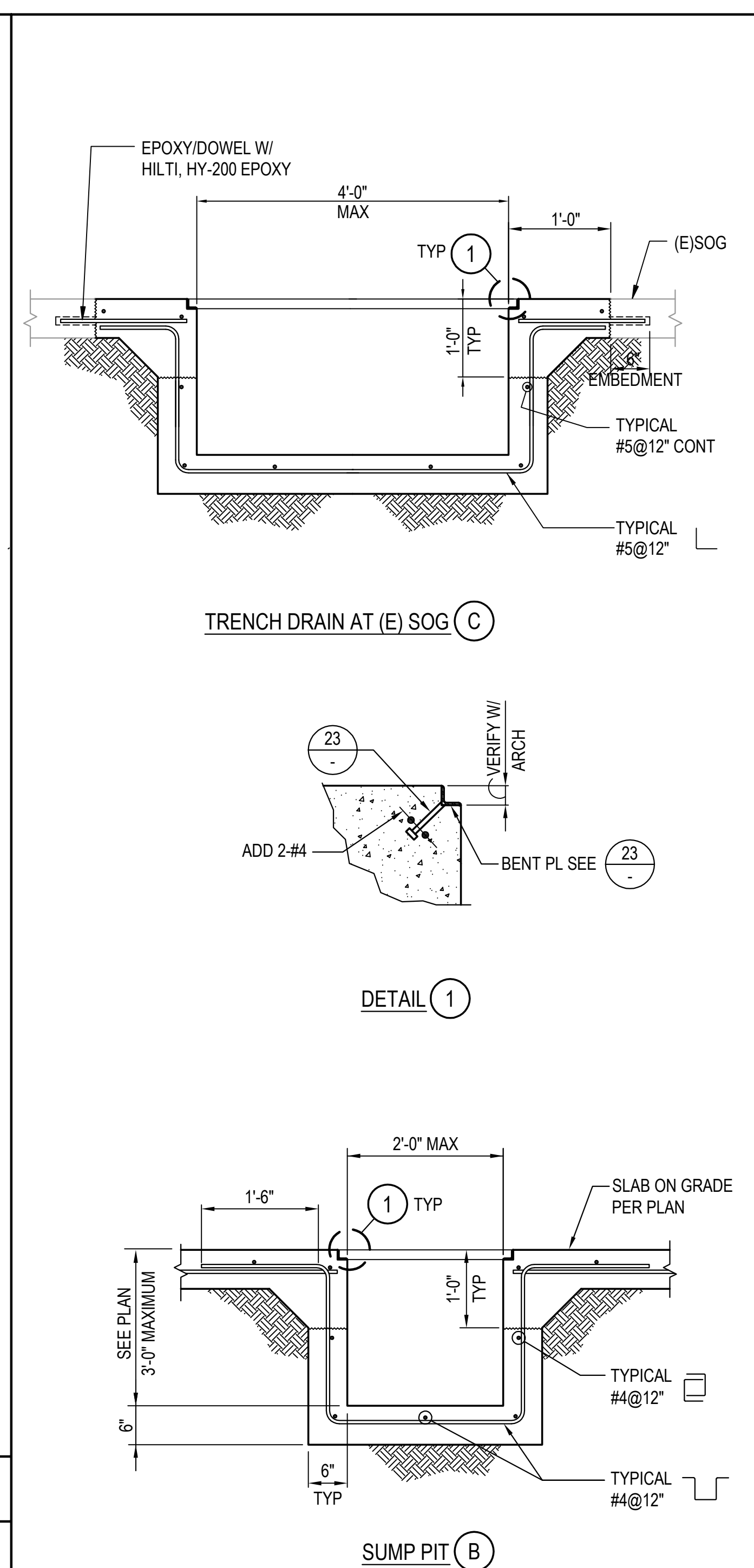
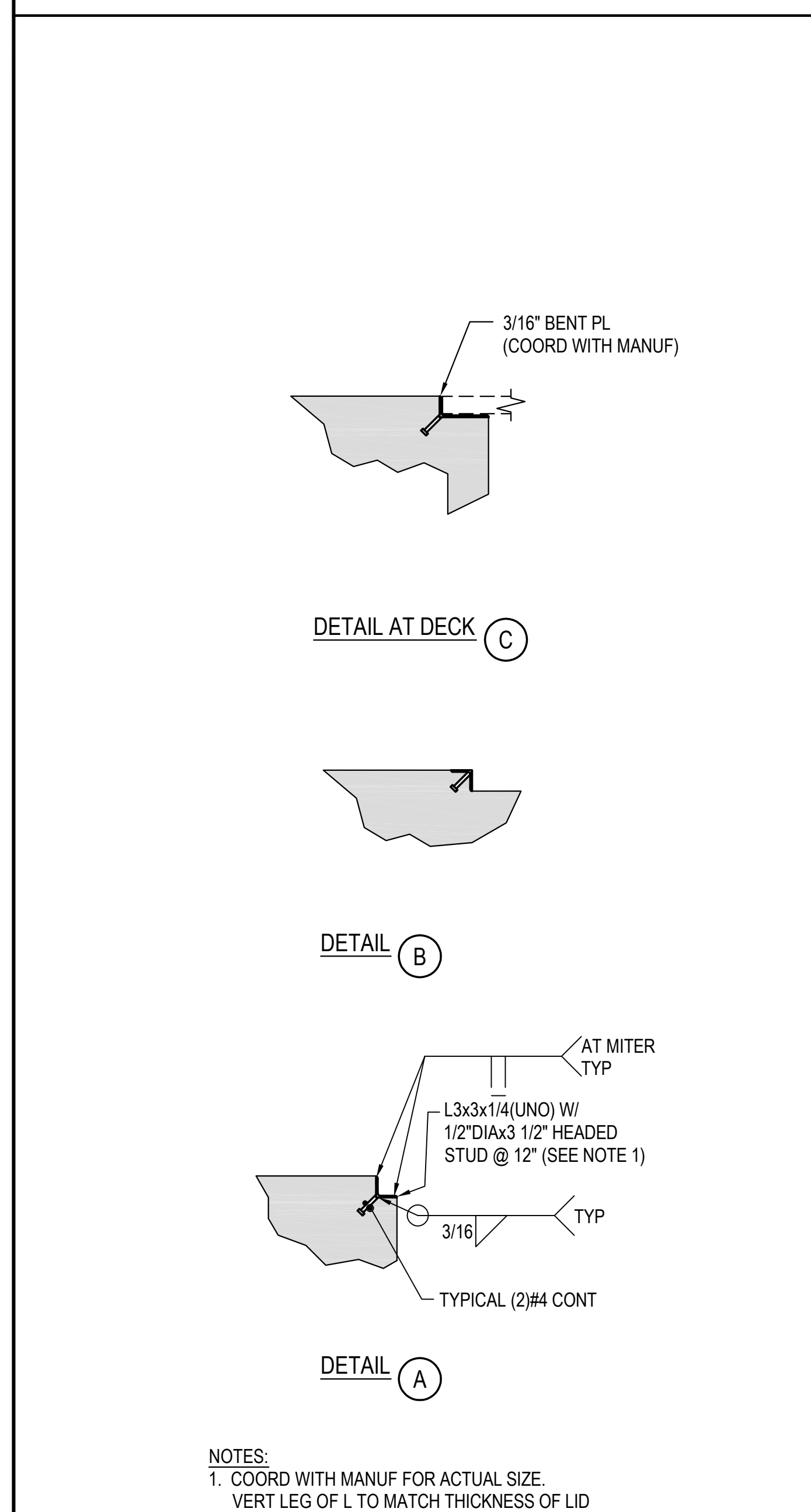
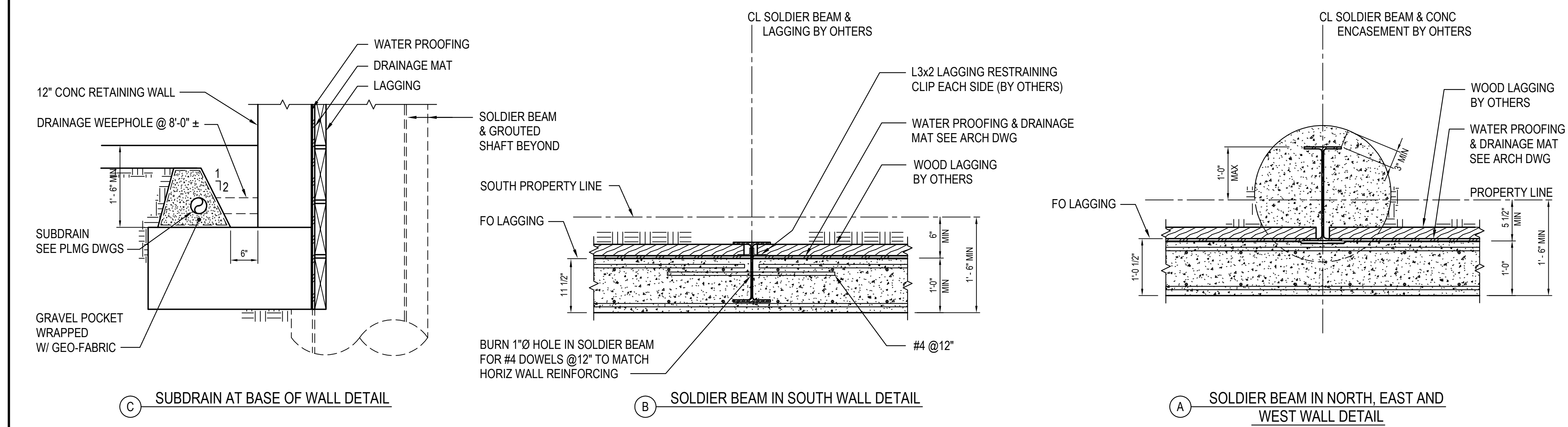




SPlice Length Schedule																			
NORMAL WEIGHT CONCRETE (fc PSI)		3000 PSI						4000 PSI						5000 PSI					
CATEGORY		1		2		3		1		2		3		1		2		3	
BAR SIZE	BAR DIAMETER (in)	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS
#4	0.500	23	18	38	29	56	43	20	15	33	25	49	37	18	14	29	23	44	34
#5	0.625	28	22	47	36	70	54	25	19	41	31	61	47	22	17	36	28	54	42
#6	0.750	34	26	56	43	84	65	29	23	49	37	73	56	26	20	44	34	65	50
#7	0.875	49	38	81	63	122	94	43	33	71	54	106	81	38	29	63	49	95	73
#8	1.000	56	43	93	72	139	107	49	37	81	62	121	93	44	34	72	56	108	83
#9	1.128	63	49	105	81	157	121	55	42	91	70	136	105	49	38	81	63	122	94
#10	1.270	71	55	118	91	177	136	62	47	102	79	153	118	55	43	92	71	137	106
#11	1.410	79	61	131	101	196	151	68	53	114	87	170	131	61	47	102	78	152	117

SPlice Length Schedule																			
NORMAL WEIGHT CONCRETE (fc PSI)		6000 PSI						7000 PSI						8000 PSI					
CATEGORY		1		2		3		1		2		3		1		2		3	
BAR SIZE	BAR DIAMETER (in)	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS
#4	0.500	16	13	27	21	40	31	15	12	25	19	37	28	14	12	23	18	35	27
#5	0.625	20	16	33	26	50	38	19	14	31	24	46	35	18	14	29	22	42	33
#6	0.750	24	19	40	31	59	46	22	17	37	28	55	42	21	16	35	27	52	40
#7	0.875	35	27	58	45	86	67	32	25	54	41	80	62	30	23	50	39	75	58
#8	1.000	56	31	66	51	99	76	37	28	61	47	91	70	35	27	57	44	86	66
#9	1.128	45	35	74	57	111	86	42	32	69	53	103	79	39	30	64	50	96	74
#10	1.270	50	39	84	64	125	96	47	36	77	60	116	89	44	34	72	56	108	84
#11	1.410	56	43	93	71	139	107	52	40	86	66	129	99	48	37	80	62	120	93

NOTES:									
1.	<table border="1"> <thead> <tr> <th>CATEGORY</th><th>DESCRIPTION</th></tr> </thead> <tbody> <tr> <td>1</td><td>2db ≤ CC AND 4db ≤ CS</td></tr> <tr> <td>2</td><td>db ≤ CC < 2db OR 2db ≤ CS < 4db</td></tr> <tr> <td>3</td><td>1/2db ≤ CC < db OR db ≤ CS < 2db</td></tr> </tbody> </table> CC INDICATES CONCRETE COVER, CS INDICATES BAR CLEAR SPACING.	CATEGORY	DESCRIPTION	1	2db ≤ CC AND 4db ≤ CS	2	db ≤ CC < 2db OR 2db ≤ CS < 4db	3	1/2db ≤ CC < db OR db ≤ CS < 2db
CATEGORY	DESCRIPTION								
1	2db ≤ CC AND 4db ≤ CS								
2	db ≤ CC < 2db OR 2db ≤ CS < 4db								
3	1/2db ≤ CC < db OR db ≤ CS < 2db								

STRAIGHT DEVELOPMENT LENGTH SCHEDULE																															
NORMAL WEIGHT CONCRETE (fc PSI)		3000 PSI										4000 PSI										5000 PSI									
CATEGORY		1		2		3		SEISMIC SEE NOTE 11		1		2		3		SEISMIC SEE NOTE 11		1		2		3		SEISMIC SEE NOTE 11							
BAR SIZE	MAX. DEVELOPMENT LENGTH (in.)	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS						
#4	0.000	18	14	29	22	43	33	28	22	15	12	25	19	37	29	24	19	14	12	23	17	34	26	22	17						
#5	0.625	22	17	36	28	54	42	35	27	19	15	31	24	47	36	30	23	17	13	28	22	42	32	27	21						
#6	0.750	26	20	43	33	65	50	42	32	23	18	37	29	56	43	36	28	20	16	34	26	50	39	32	25						
#7	0.875	38	29	63	48	94	72	48	37	33	25	54	42	81	63	42	32	29	23	49	38	73	56	38	29						
#8	1.000	43	33	72	55	107	83	55	43	37	29	62	48	93	72	48	37	34	26	56	43	83	64	43	33						
#9	1.128	49	38	81	62	121	93	62	48	42	33	70	54	105	81	54	42	38	29	63	48	94	72	48	37						
#10	1.270	55	42	91	70	136	105	70	54	47	37	79	61	118	91	61	47	43	33	71	54	106	81	54	42						
#11	1.410	61	47	101	78	151	116	78	60	53	41	87	67	131	101	67	52	47	36	78	60	117	90	60	47						
#12	1.693	73	56	121	93	181	140	-	-	63	49	105	81	157	121	-	-	57	44	94	72	141	108	-	-						
#18	2.257	97	75	161	124	242	186	-	-	84	65	140	108	209	161	-	-	75	58	125	96	187	144	-	-						

STRAIGHT DEVELOPMENT LENGTH SCHEDULE																															
NORMAL WEIGHT CONCRETE (fc (PSI))		6000 PSI										7000 PSI										8000 PSI									
CATEGORY		1		2		3		SEISMIC SEE NOTE 11		1		2		3		SEISMIC SEE NOTE 11		1		2		3		SEISMIC SEE NOTE 11							
BAR SIZE	BAR SPACING (IN)	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS						
#4	0.500	13	12	21	16	31	24	20	15	12	12	19	15	28	22	20	15	12	12	18	14	27	21	20	15						
#5	0.625	16	12	26	20	38	30	25	19	14	12	24	18	35	27	23	18	14	12	22	17	33	26	21	17						
#6	0.750	19	14	31	24	46	35	30	23	17	13	28	22	42	33	27	21	16	13	27	21	40	31	26	20						
#7	0.875	27	21	45	34	67	51	34	27	25	19	41	32	62	48	32	25	23	18	39	30	58	45	30	23						
#8	1.000	31	24	51	39	76	59	39	30	28	22	47	36	70	54	36	28	27	21	44	34	66	51	34	26						
#9	1.128	35	27	57	44	86	66	44	34	32	25	53	41	79	61	41	32	50	38	74	57	38	30	24							
#10	1.270	39	30	64	50	96	74	50	38	36	28	60	46	89	69	46	36	34	26	56	43	84	64	43	33						
#11	1.410	43	33	71	55	107	82	55	43	40	31	66	51	99	76	51	39	37	29	62	48	93	71	48	37						
#14	1.693	52	40	86	66	128	99	-	-	48	37	79	61	119	92	-	-	45	35	74	57	111	86	-	-						
#18	2.257	69	53	114	88	171	132	-	-	64	49	106	81	158	122	-	-	60	46	99	76	148	114	-	-						

NOTES:	
1.	CATEGORY DESCRIPTION
1	2db ≤ CC AND 4db ≤ CS
2	db ≤ CC < 2db OR 2db ≤ CS < 4db
3	1/2db ≤ CC < db OR db ≤ CS < 2db
SEISMIC	SMB BEAM REINFORCEMENT ANCHORED IN SMC FRAME COLUMNS
CC INDICATES CONCRETE COVER, CS INDICATES BAR CLEAR SPACING.	
2.	ALL LENGTHS INDICATED ARE IN INCHES.
3.	TOP BARS ARE DEFINED AS HORIZONTAL BARS WITH MORE THAN 12" OF FRESH CONCRETE POURED BELOW THE BARS.
4.	FOR LIGHTWEIGHT CONCRETE, THE LENGTHS IN THE SCHEDULE SHALL BE MULTIPLIED BY 1.33.
5.	FOR GRADE 75 REINFORCING, THE LENGTHS IN THE SCHEDULE SHALL BE MULTIPLIED BY 1.25.
6.	FOR 3 BAR BUNDLE, THE LENGTHS IN THE SCHEDULE SHALL BE MULTIPLIED BY 1.20. FOR 4 BUNDLE, THE LENGTHS IN THE SCHEDULE SHALL BE MULTIPLIED BY 1.33.
7.	FOR BUNDLED BARS, AN EFFECTIVE BAR DIAMETER SHALL BE USED FOR DETERMINING COVER AND SPACING LIMITATIONS: A. FOR 2 BAR BUNDLE dbe = 1.414db B. FOR 3 BAR BUNDLE dbe = 1.732db C. FOR 4 BAR BUNDLE dbe = 2.00db
8.	DEVELOPMENT LENGTH OF STRAIGHT BARS IN SHEAR WALLS AND COUPLING BEAMS SHALL BE INCREASED 25% FOR CONDITIONS 1, 2 AND 3.
9.	FOR EPOXY COATED BARS WITH CC ≤ 3db OR CS ≤ 6db, INCREASE DEVELOPMENT LENGTH BY 50% FOR ALL OTHER CASES.

HOOKED DEVELOPMENT LENGTH SCHEDULE									
NORMAL WEIGHT CONCRETE (f'_c PSI)		3000 PSI		4000 PSI		5000 PSI			
BAR SIZE	BAR DIAMETER (DB)	STANDARD	SEISMIC (SEE NOTE 10)	STANDARD	SEISMIC (SEE NOTE 10)	STANDARD	SEISMIC (SEE NOTE 10)		
#3	0.375	6	7	6	6	6	6		
#4	0.500	6	7	6	6	6	6		
#5	0.625	10	11	9	10	8	9		
#6	0.750	12	13	10	11	9	10		
#7	0.875	14	15	12	13	11	12		
#8	1.000	16	17	14	15	12	14		
#9	1.128	18	20	15	17	14	15		
#10	1.270	20	22	17	19	16	17		
#11	1.410	22	24	19	21	17	19		
#14	1.693	38	-	33	-	29	-		
#18	2.257	50	-	43	-	39	-		