

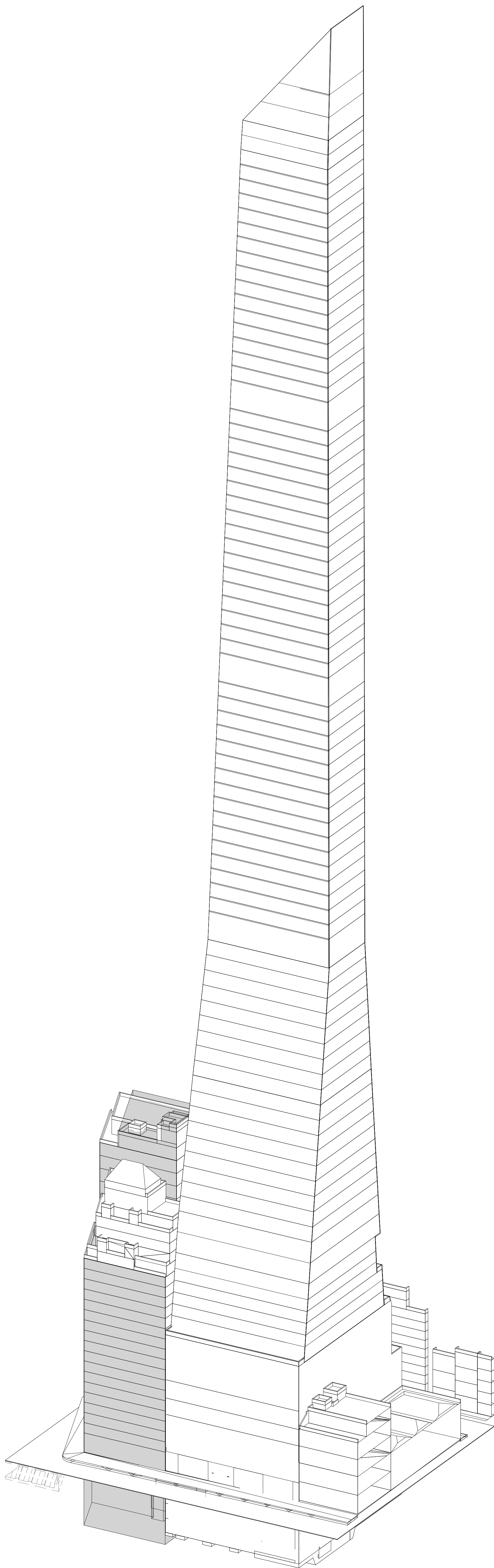
217 WEST 57TH STREET  
NEW YORK, NEW YORK

CLIENT  
EXTELL DEVELOPMENT

ARCHITECT  
AAI ARCHITECTS, P.C.

STRUCTURAL ENGINEER  
WSP CANTOR SEINUK

DRAWING LIST				
SHEET NO.	DWG. NO	TITLE	REVISION / ISSUE	
			DATE	SUBMISSION
1	FO-001	GENERAL NOTES ABBEVIATIONS AND LEGEND	23 JAN. 2013	D.O.B. SUBMISSION
2	FO-100	FOUNDATION PLAN	23 JAN. 2013	D.O.B. SUBMISSION
3	FO-200	TYPICAL CONCRETE DETAILS 1	23 JAN. 2013	D.O.B. SUBMISSION
4	FO-201	TYPICAL CONCRETE DETAILS 2	23 JAN. 2013	D.O.B. SUBMISSION
5	FO-202	TYPICAL CONCRETE DETAILS 3	23 JAN. 2013	D.O.B. SUBMISSION
6	FO-300	FOUNDATION SECTIONS I	23 JAN. 2013	D.O.B. SUBMISSION
7	FO-301	FOUNDATION SECTIONS II	23 JAN. 2013	D.O.B. SUBMISSION
8	FO-302	FOUNDATION SECTIONS III	23 JAN. 2013	D.O.B. SUBMISSION
9	FO-303	FOUNDATION WALL ELEVATIONS	23 JAN. 2013	D.O.B. SUBMISSION
10	S-950	COLUMN SCHEDULE	23 JAN. 2013	D.O.B. SUBMISSION



Damian Titus

Buildings

APPROVED

Under Directive 2 of 1975

Date/Time: Feb 12, 2014 – 10:36 AM

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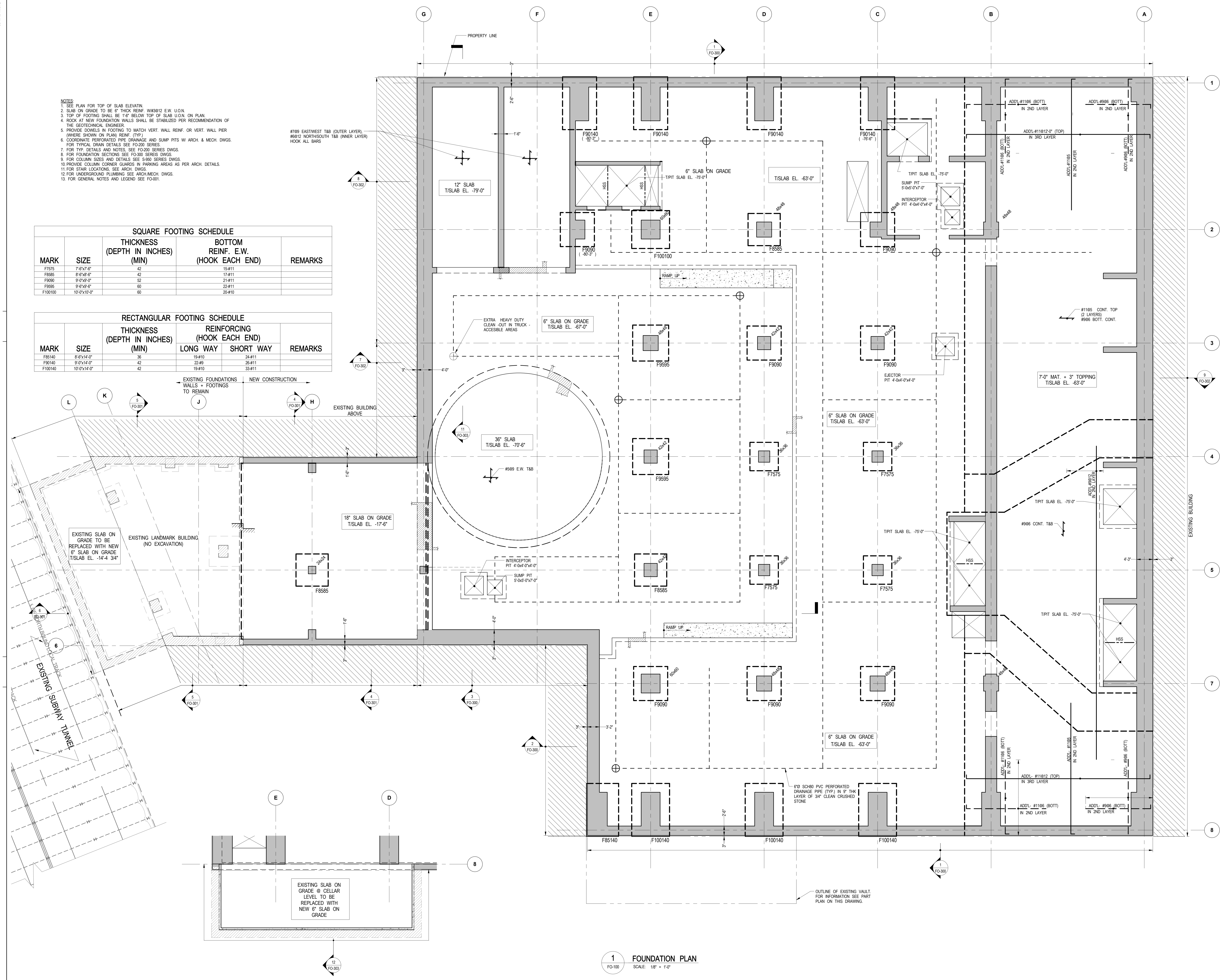


36" x 48" x 1/2" SHEET SIZE

- NOTES:
1. SEE PLAN FOR TOP OF SLAB ELEVATION.
  2. SLAB ON GRADE TO BE 6" THICK REINFORCED WITH #10 @ 12" O.C.
  3. TOP OF FOOTING SHALL BE 1'-0" BELOW TOP OF SLAB U.O.N. ON PLAN.
  4. ROCK AT NEW FOUNDATION WALLS SHALL BE STABILIZED PER RECOMMENDATION OF THE GEOTECHNICAL ENGINEER.
  5. PROVIDE DOWELS IN FOOTING TO MATCH VERT. WALL REINFORCING OR VERT. WALL PIER (WHERE SHOWN ON PLAN REINFORCING (TYP.)).
  6. COORDINATE PERFORATED PIPE DRAINAGE AND SLUMP PITS W/ ARCH. & MECH. DWGS. FOR TYPICAL DRAIN DETAILS SEE F0-200 SERIES.
  7. FOR TYP. DETAILS AND NOTES, SEE F0-300 SERIES DWGS.
  8. FOR FOUNDATION SECTIONS SEE F0-300 SERIES DWGS.
  9. FOR COLUMN SIZES AND DETAILS SEE S-600 SERIES DWGS.
  10. PROVIDE COLUMN CORNER GUARDS IN PARKING AREAS AS PER ARCH. DETAILS.
  11. FOR STAIR LOCATIONS, SEE ARCH. DWGS.
  12. FOR UNDERGROUND PLUMBING SEE ARCH. MECH. DWGS.
  13. FOR GENERAL NOTES AND LEGEND SEE F0-001.

SQUARE FOOTING SCHEDULE				
MARK	SIZE	THICKNESS (DEPTH IN INCHES) (MIN)	BOTTOM REINFORCING E.W. (HOOK EACH END)	REMARKS
F7575	7'-6"x7'-6"	42	15-#11	
F8585	8'-6"x8'-6"	42	17-#11	
F9090	9'-0"x9'-0"	52	21-#11	
F9595	9'-6"x9'-6"	60	22-#11	
F100100	10'-0"x10'-0"	60	20-#10	

RECTANGULAR FOOTING SCHEDULE					
MARK	SIZE	THICKNESS (DEPTH IN INCHES) (MIN)	REINFORCING (HOOK EACH END)		REMARKS
			LONG WAY	SHORT WAY	
F85140	8'-6"x14'-0"	36	15-#10	24-#11	
F90140	9'-0"x14'-0"	42	22-#9	26-#11	
F100140	10'-0"x14'-0"	42	19-#10	33-#11	



2 PART PLAN AT EXISTING VAULT  
SCALE: 1/8" = 1'-0"

1 FOUNDATION PLAN  
SCALE: 1/8" = 1'-0"

KEY PLAN:

PROJECT NORTH

DEVELOPER:  
**EXTELL DEVELOPMENT COMPANY**  
805 THIRD AVENUE, 7TH FLOOR  
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No.	DESCRIPTION:	DATE:
00	MTA SUBMISSION	17 SEPT 2012
01	D.O.B. SUBMISSION	23 JAN. 2013

0 4'-0" 8'-0" 16'-0"

D.O.B. SUBMISSION

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PROJECT:  
**217 WEST 57TH STREET**  
NEW YORK, NY

DRAWING TITLE:  
**FOUNDATION PLAN**

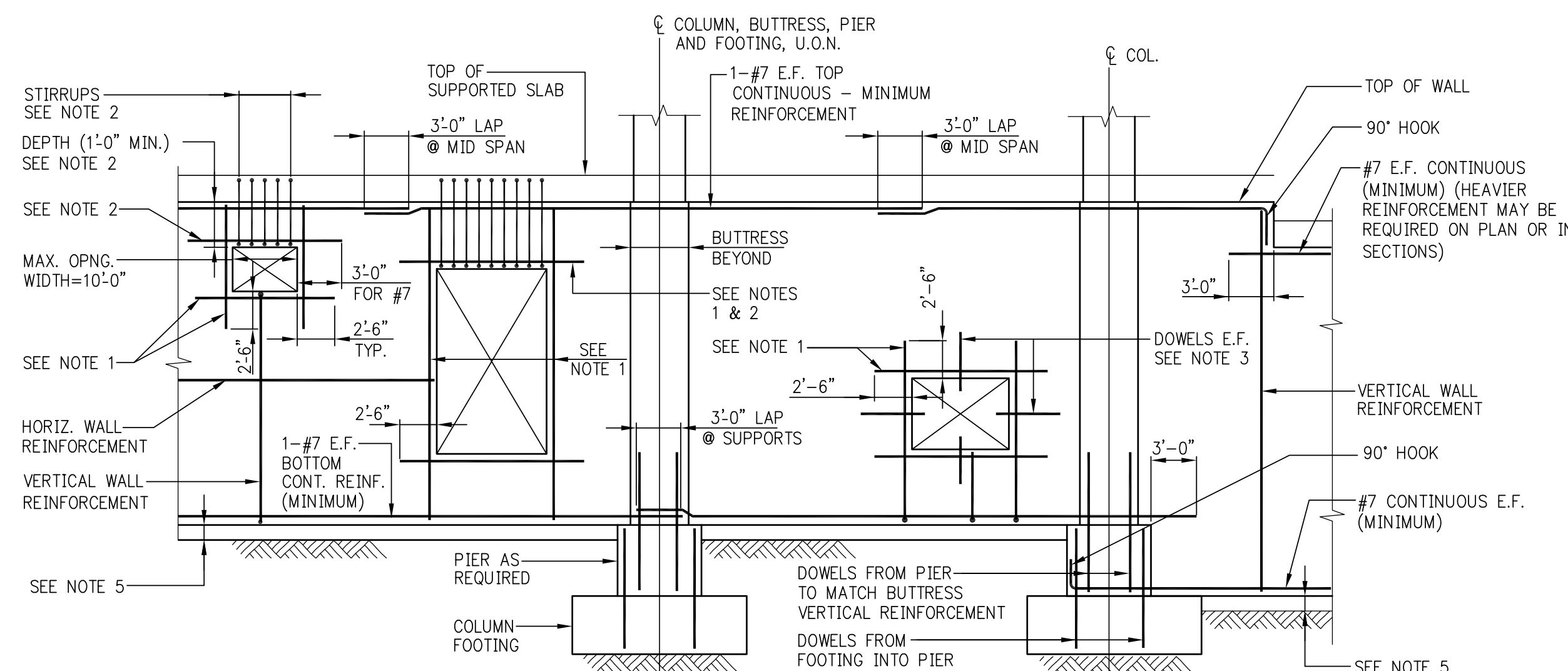
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	23 JAN. 2013
PROJECT No:	2012133
DRAWN: CADD	REV:
CHK: BS	
SCALE: 1/8" = 1'-0"	
DWG No:	
DOB PAGE No:	2 OF 10
DOB EMPLOYEE STAMP:	DOB B-SCAN

**Buildings**

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Under Directive 2 of 1975

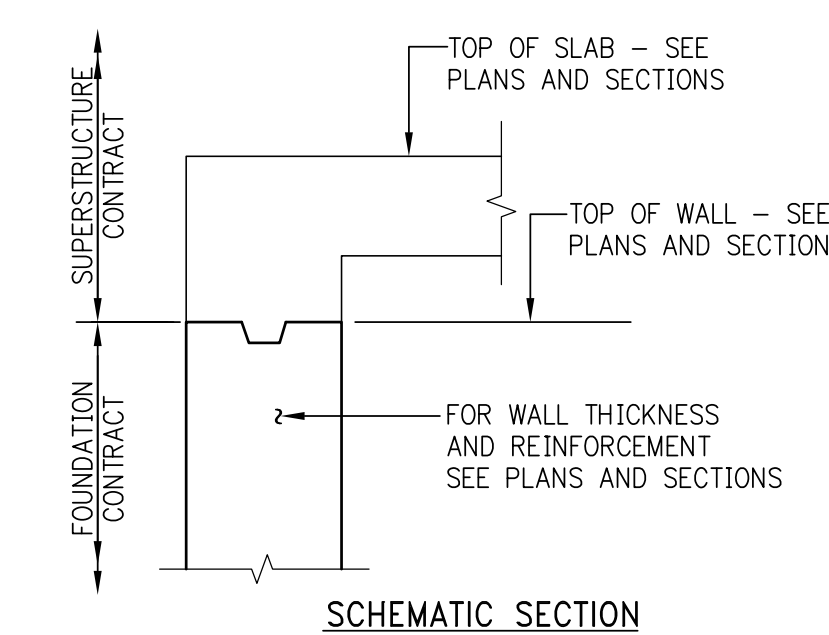
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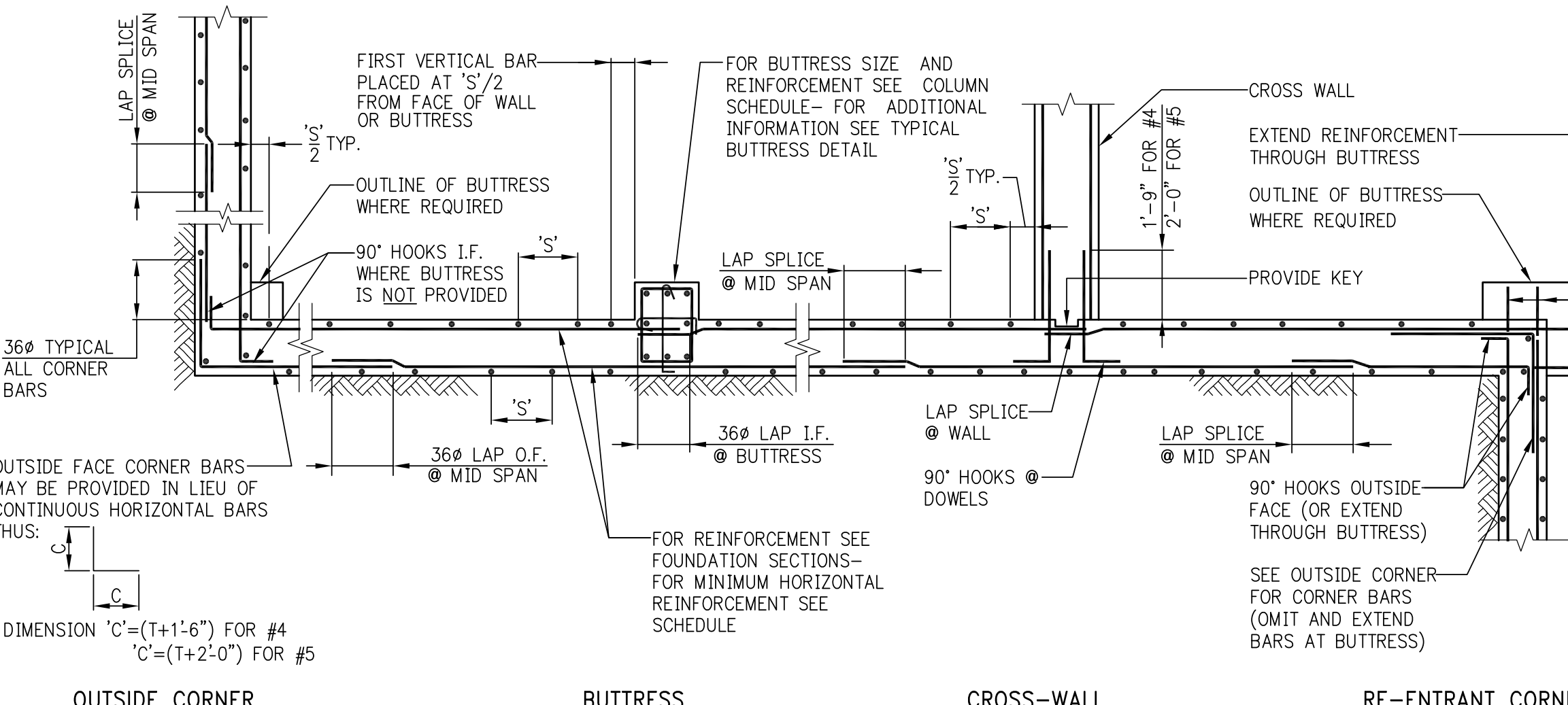


FOUNDATION WALL ELEVATION SHOWING REINFORCEMENT AT OPENINGS AND MISCELLANEOUS DETAILS

- NOTES:**
1. ADD #5 BARS (HORIZ. & VERT.) AT ALL FOUR EDGES OF OPENINGS. AREA OF ADDED BARS AT EACH EDGE TO BE EQUAL TO ONE HALF OF AREA OF INTERRUPTED BARS IN THE CORRESPONDING DIRECTION. PROVIDE A MINIMUM OF 1-#5 E.F.
  2. WHERE TOP EDGE OF OPENING IS LESS THAN 2'-6" FROM TOP OF WALL ADD 1-#7 E.F. (IN LIEU OF #5) OVER OPENING. PROVIDE #4 L1 STIRRUPS @ 8" - EXTEND INTO SLAB WITH 2" COVER AT TOP OF STIRRUPS.
  3. AT UTILITY ACCESS OPENINGS WHICH ARE TO BE FILLED IN WITH CONCRETE, PROVIDE DOWELS PROJECTING 1'-0" INTO OPENING. EITHER EXTEND HORIZONTAL AND VERTICAL WALL REINFORCEMENT, OR ADD #4@12 E.F. DOWELS x2'-6" LONG.
  4. FOR ACTUAL OPENING SIZES AND LOCATIONS, SEE PLANS, SECTIONS, ARCHITECTURAL DWGS., AND MEP DWGS. SUBMIT SHOP DRAWINGS WITH WALL ELEVATIONS SHOWING ALL OPENINGS AND REINFORCEMENT.
  5. PROVIDE FOOTING OR CONCRETE MUD SLAB TO SUPPORT WALL FORMS AND WET CONCRETE. SEE FOUNDATION SECTIONS ON FS-300 SERIES DRAWINGS FOR ADDITIONAL DETAILS.



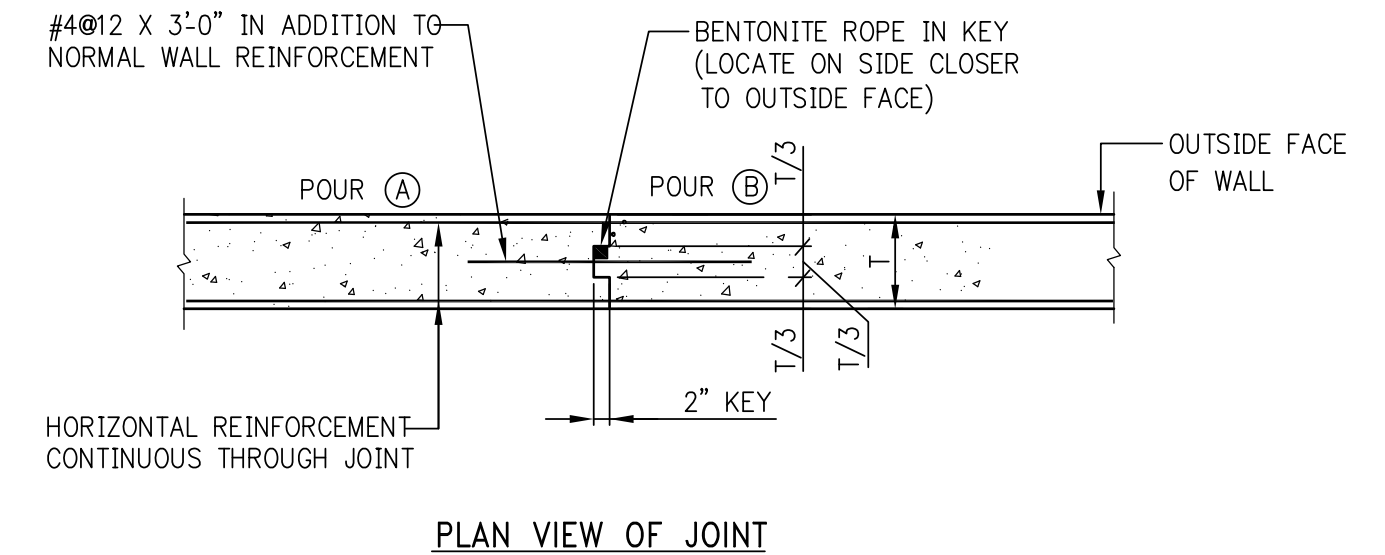
SCHEMATIC SECTION AT TOP OF WALL



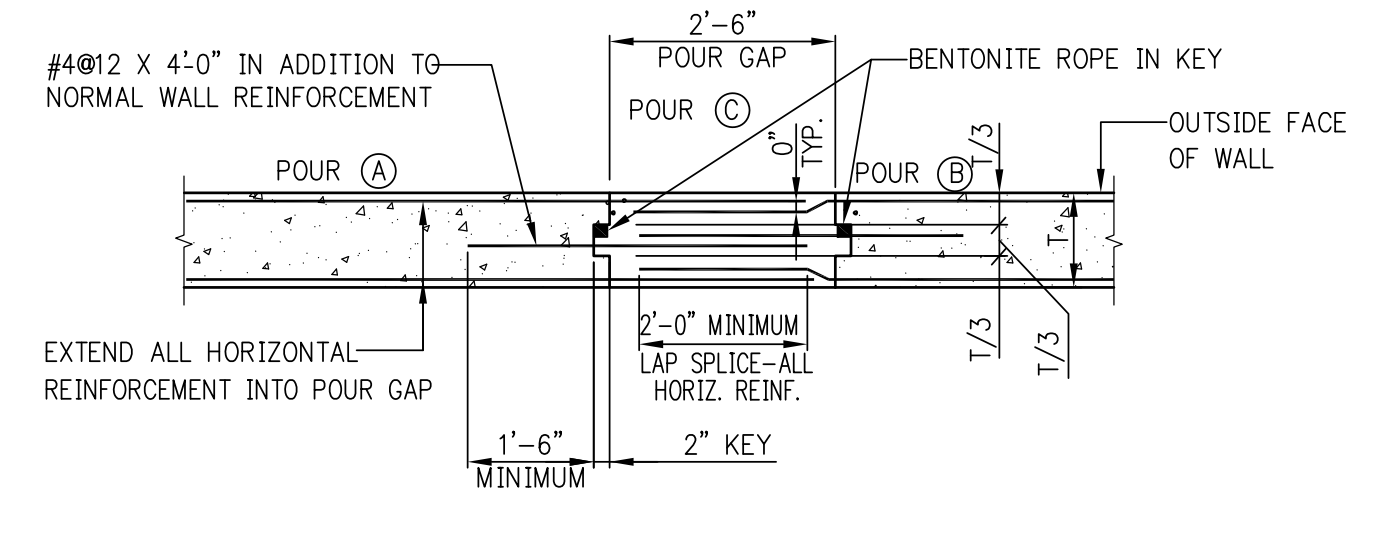
HORIZONTAL SECTION SHOWING PLACEMENT OF FOUNDATION WALL REINFORCEMENT

MINIMUM HORIZONTAL WALL REINFORCEMENT REQUIRED AT EACH FACE	HORIZONTAL REINFORCEMENT
T = WALL THICKNESS	
UP TO 10"	#4@8 E.F.
11" TO 12"	#4@6 E.F.
13" TO 16"	#4@4 E.F.
17" TO 20"	#4@2 OR #5@15 E.F.
21" TO 22"	#4@2 OR #5@12 E.F.
23" TO 24"	#4@2 OR #5@10 E.F.
OVER 24"	SEE PLANS AND SECTIONS

**NOTE:**  
VERTICAL CONSTRUCTION JOINT IN WALL IS NOT SHOWN HERE - SEE TYPICAL CONSTRUCTION JOINT DETAIL.

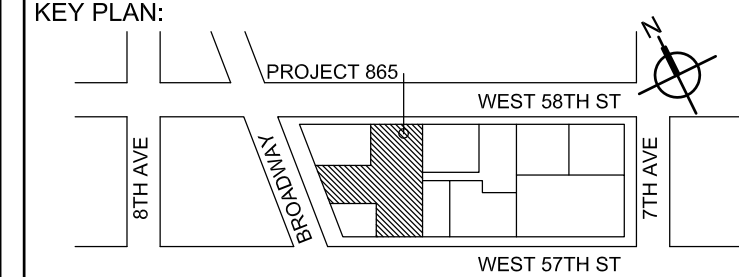


PLAN VIEW OF JOINT



ALTERNATIVE-POUR GAP VERTICAL CONSTRUCTION JOINT IN FOUNDATION WALL

- NOTES:**
1. CONSTRUCTION JOINTS IN WALLS SHALL BE LOCATED AT LEAST FOUR FEET FROM FACE OF SUPPORTING PIER, FOOTING, PILE CAP, ETC. OR FROM WALL OPENING.
  2. MAXIMUM SPACING BETWEEN JOINTS SHALL BE FORTY FEET UNLESS NOTED OTHERWISE ON THE FOUNDATION DRAWINGS.
  3. CONCRETE SHALL NOT BE PLACED IN THE POUR GAP UNTIL 24 HOURS AFTER PLACEMENT OF THE MOST RECENT ADJACENT SECTION.
  4. FOR JOINTS IN SHEARWALLS SEE DETAILS IN FS-400 OR S-400 SERIES.



KEY PLAN



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01	D.O.B. SUBMISSION	23 JAN. 2013

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**PROJECT:**  
**217 WEST 57TH STREET**  
NEW YORK, NY

**DRAWING TITLE:**

**TYPICAL CONCRETE DETAILS 1**

**SEAL & SIGNATURE:**

**DATE:** 11 OCT. 2012

**PROJECT No:** 2012133

**DRAWN:** CAD **REV:**

**CHK:** B.S. **SCALE:** 3/8" = 1'-0"

**DWG No:**

**DOE EMPLOYEE NAME:** 3 OF 10

**DOE EMPLOYEE No:** DOE B-SCAN

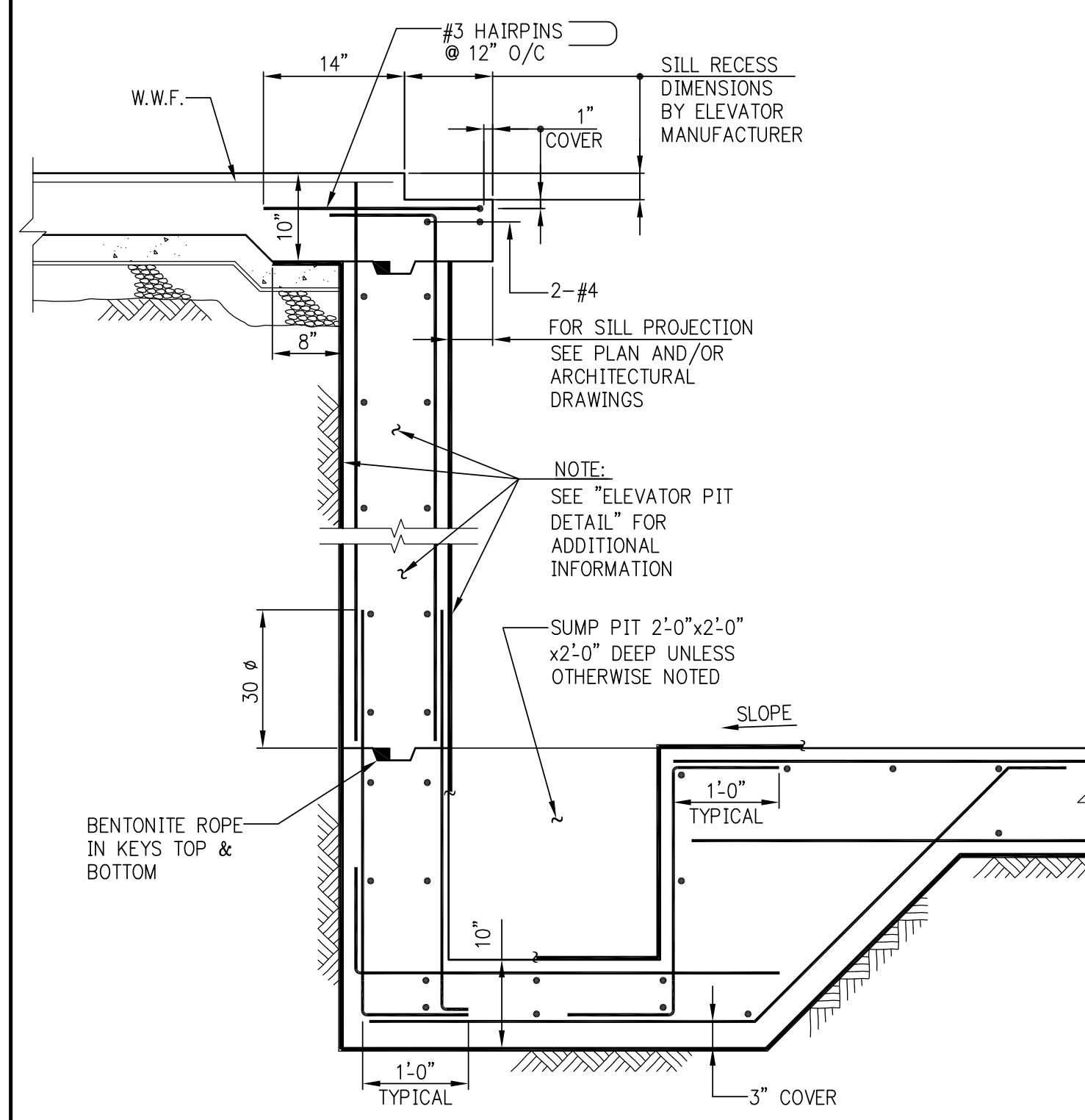
**Buildings**

**APPROVED**

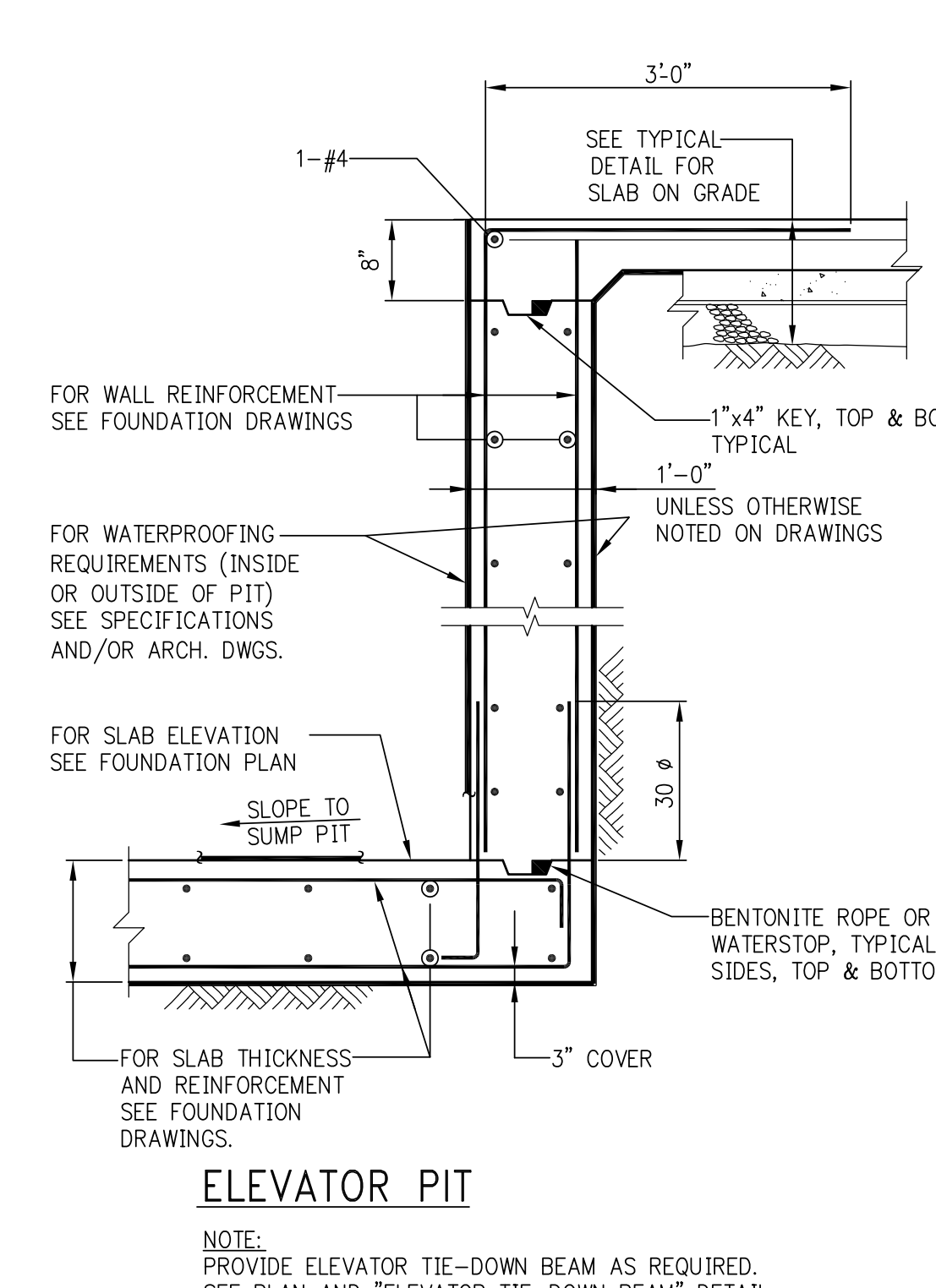
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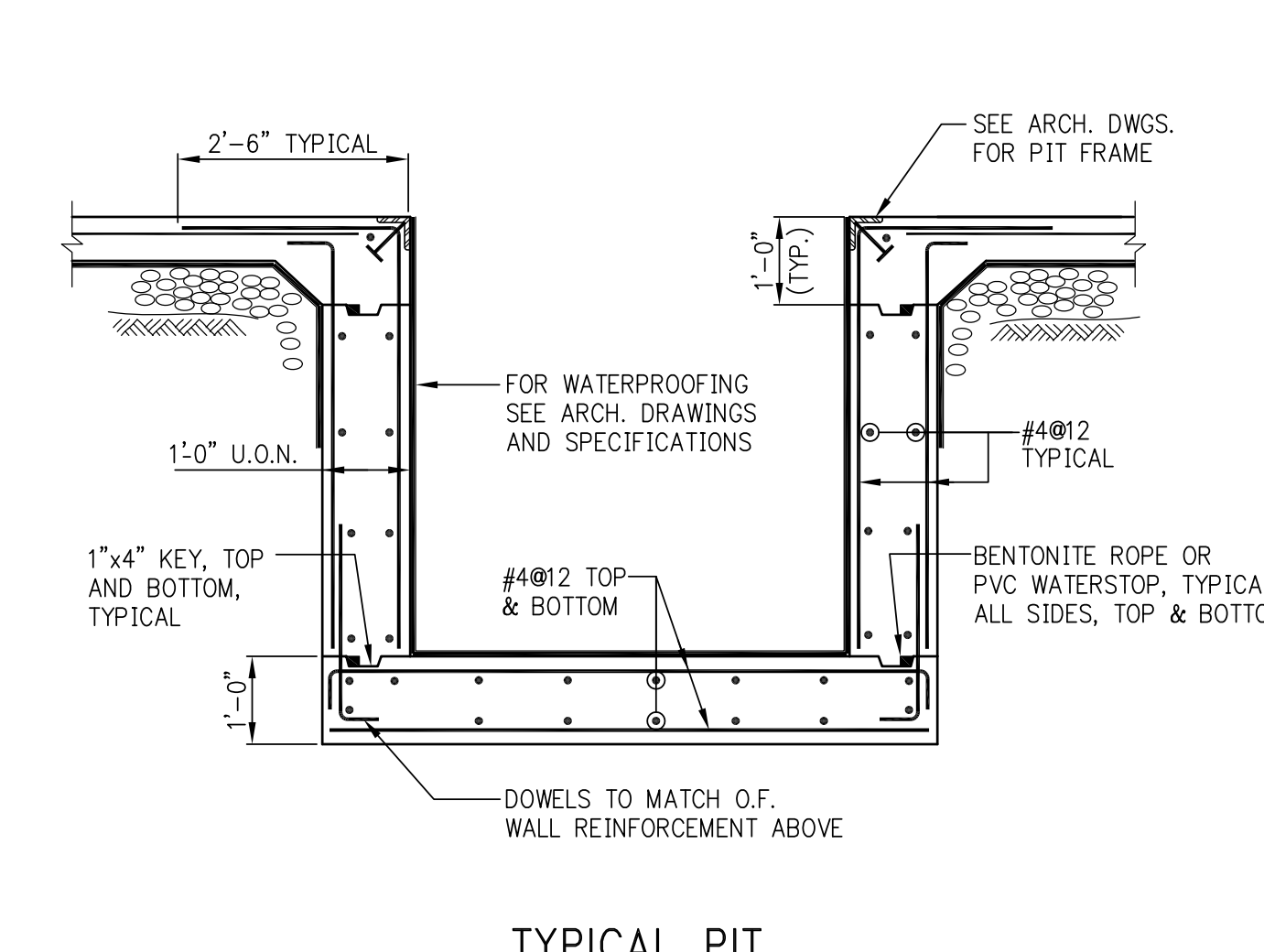
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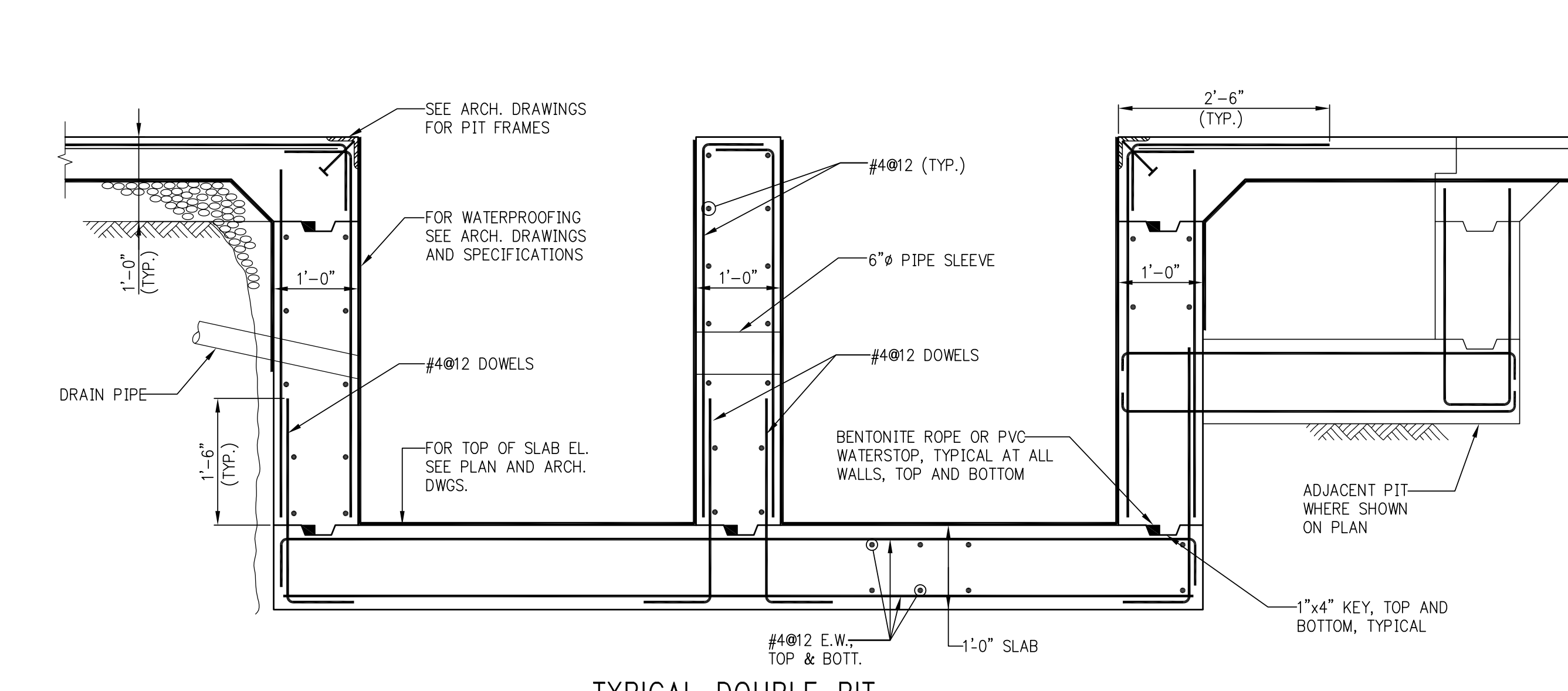
ELEVATOR PIT SILL AND SUMP PIT



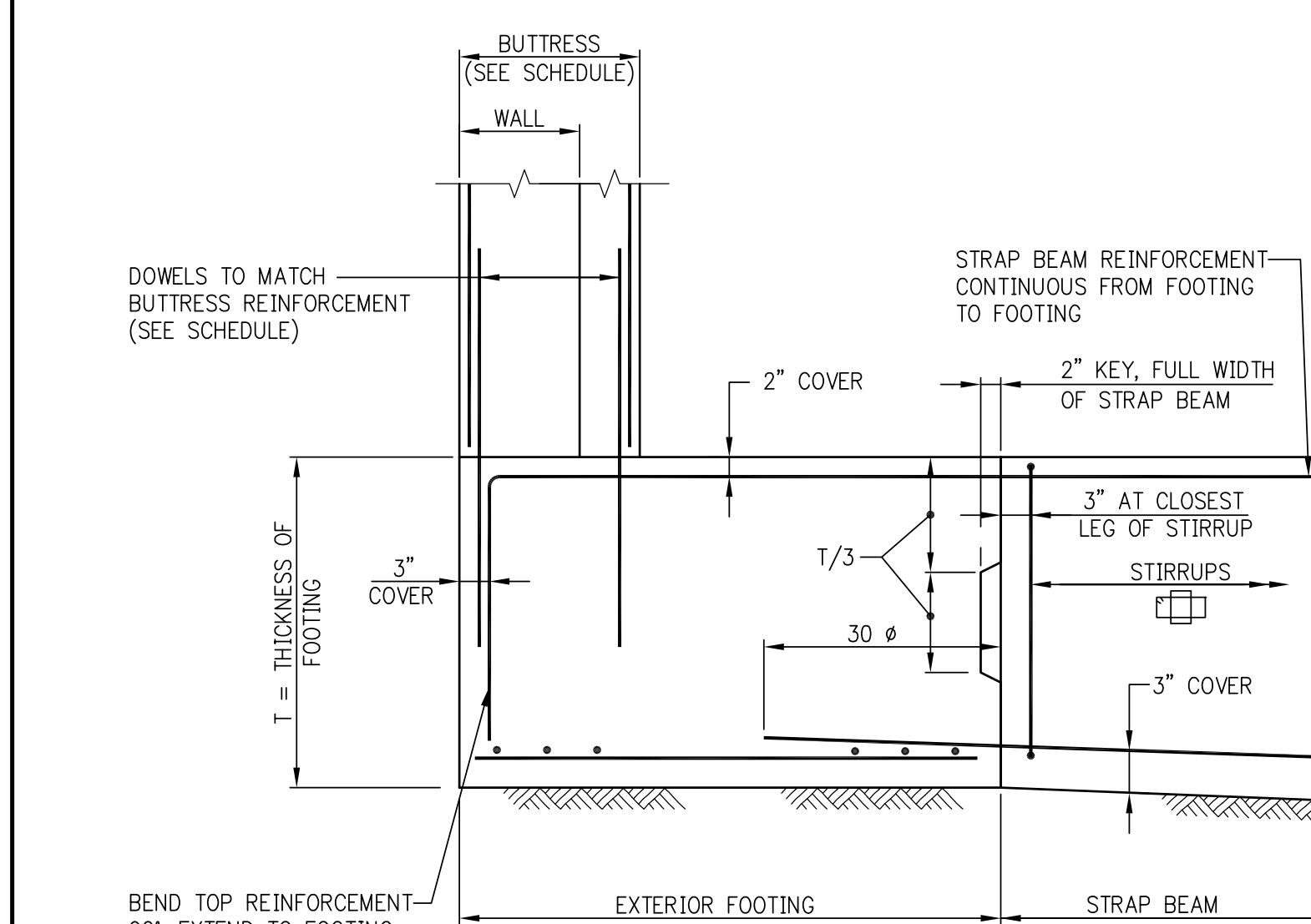
ELEVATOR PIT



TYPICAL PIT

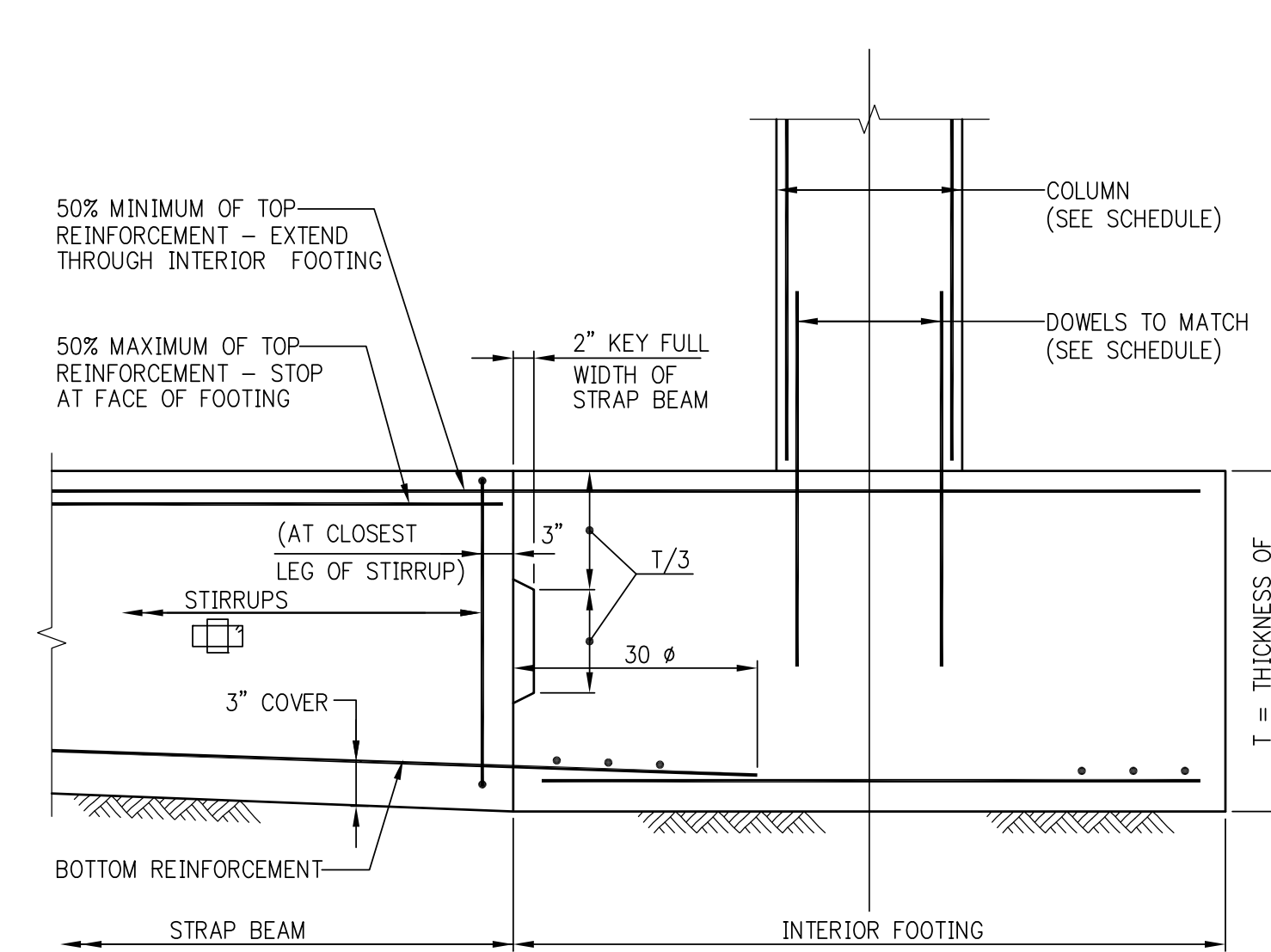


TYPICAL DOUBLE PIT

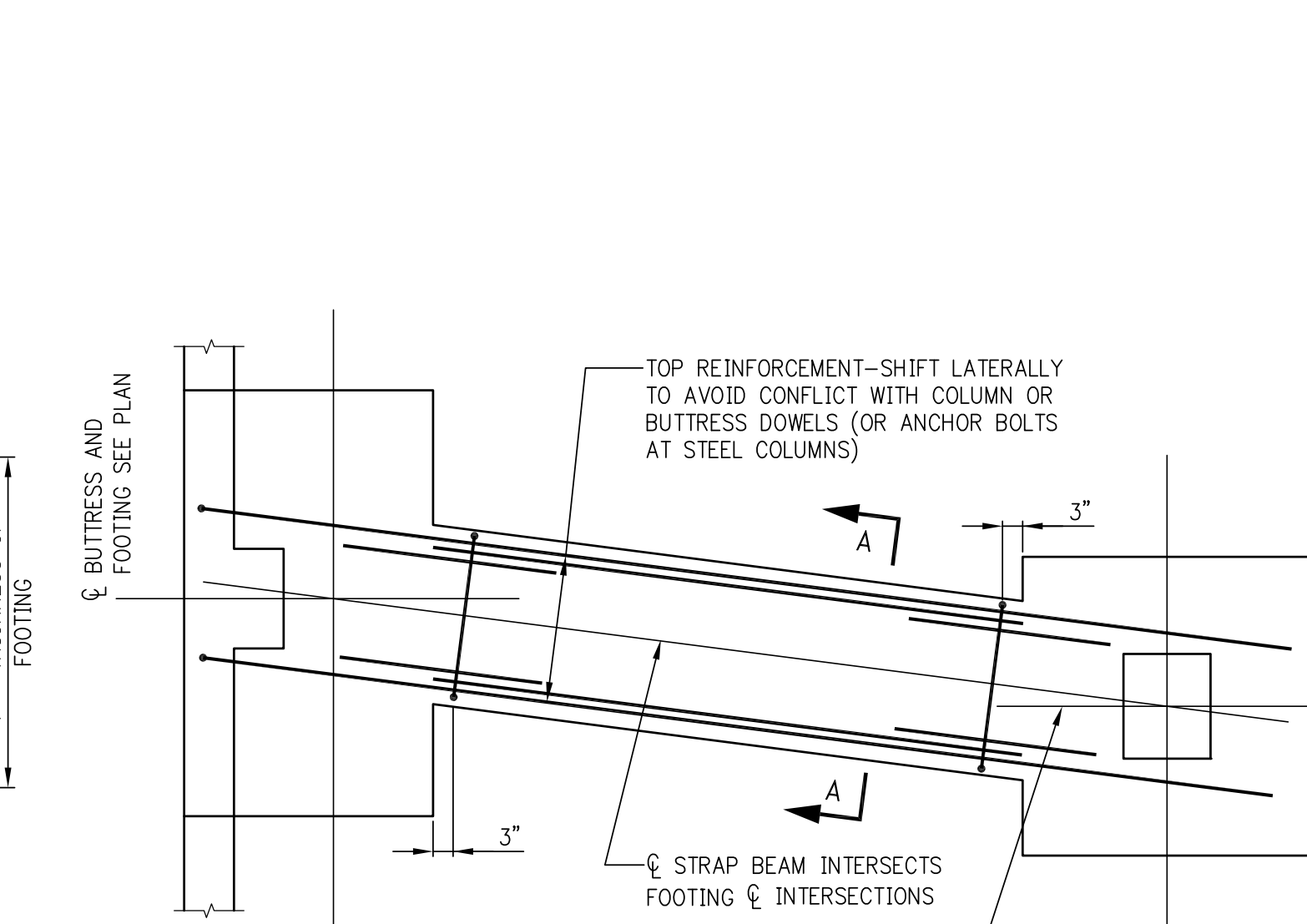


ELEVATION - EXTERIOR FOOTING

**NOTE:**  
SEE FOUNDATION DRAWINGS FOR STRAP BEAM SIZE, REINFORCEMENT, AND STIRRUPS.



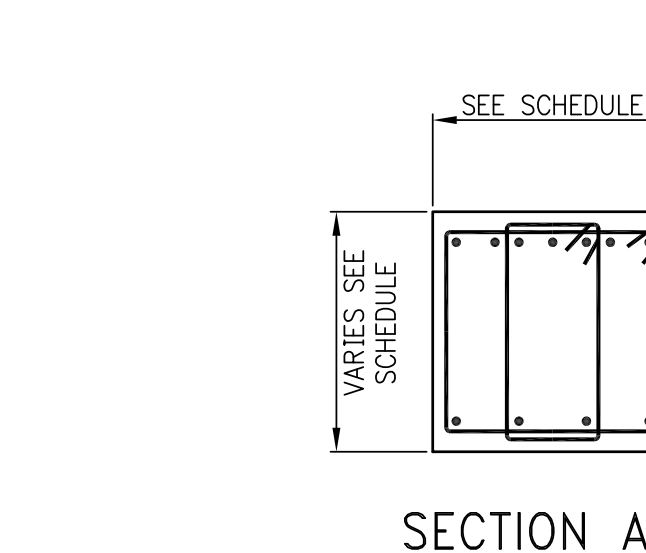
ELEVATION - INTERIOR FOOTING



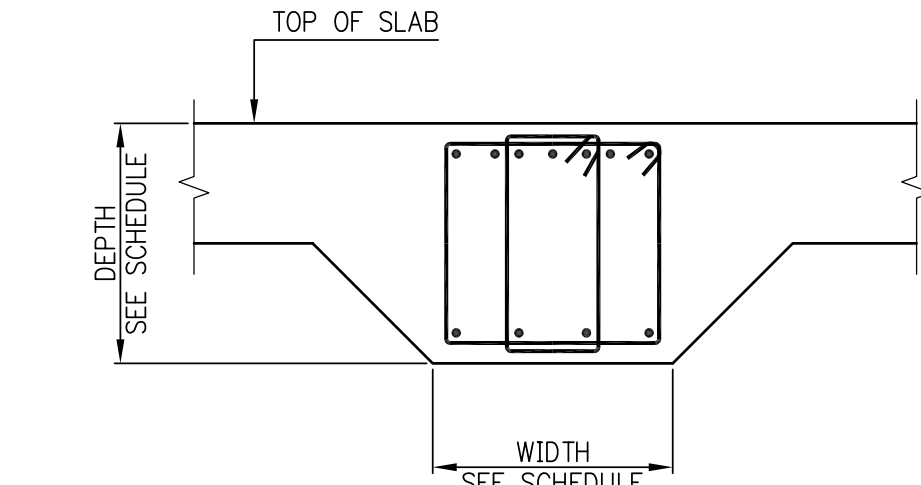
PLAN

**STRAP BEAM FOR FOOTINGS ON SOIL OR ROCK**

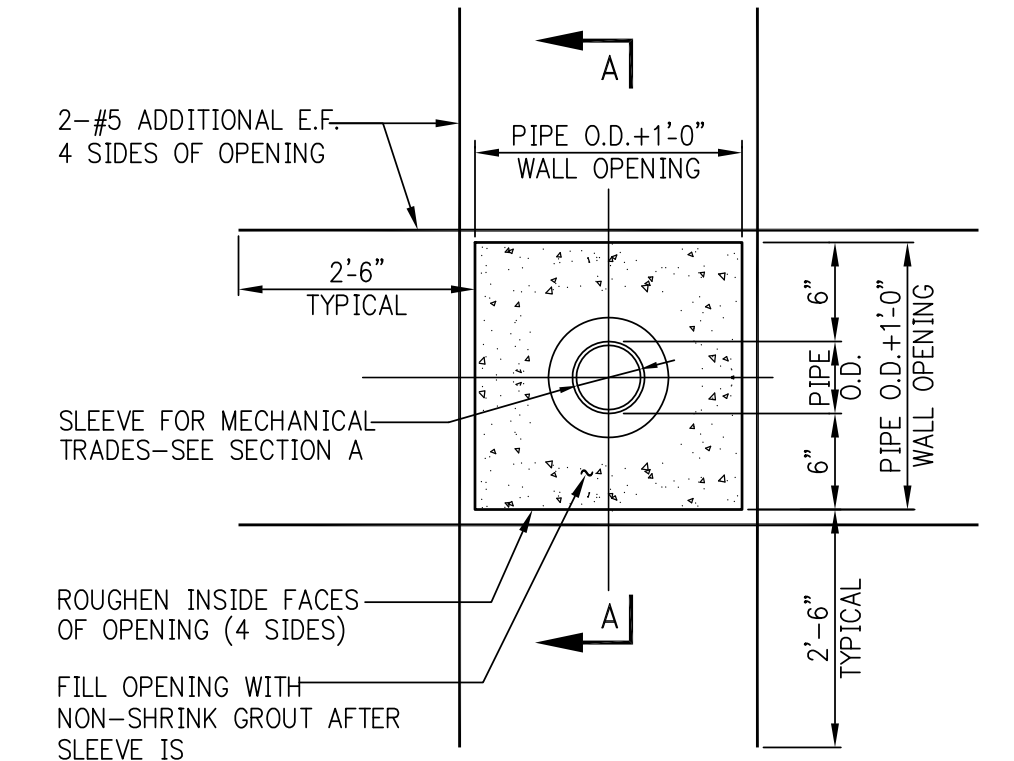
**NOTE:**  
STRAP BEAM MUST FRAME DIRECTLY TO FOOTINGS. STRAP BEAMS MAY NOT FRAME TO PIERS OR BUTTRESSES.



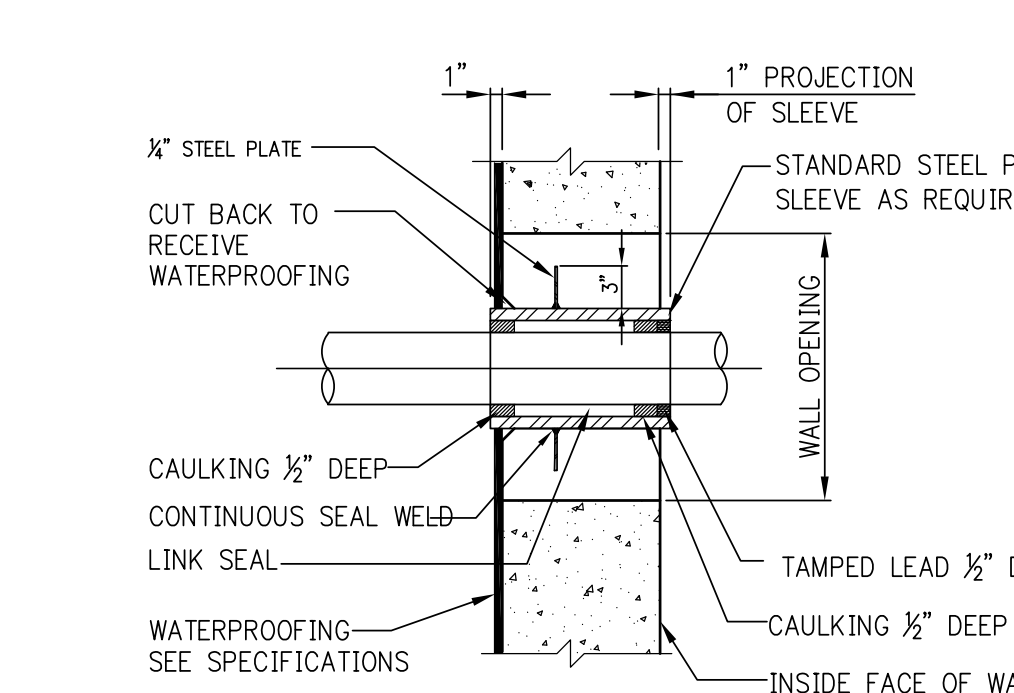
SECTION A-A



ALTERNATIVE SECTION A-A (AT STRAP BEAM MONOLITHIC WITH SLAB)

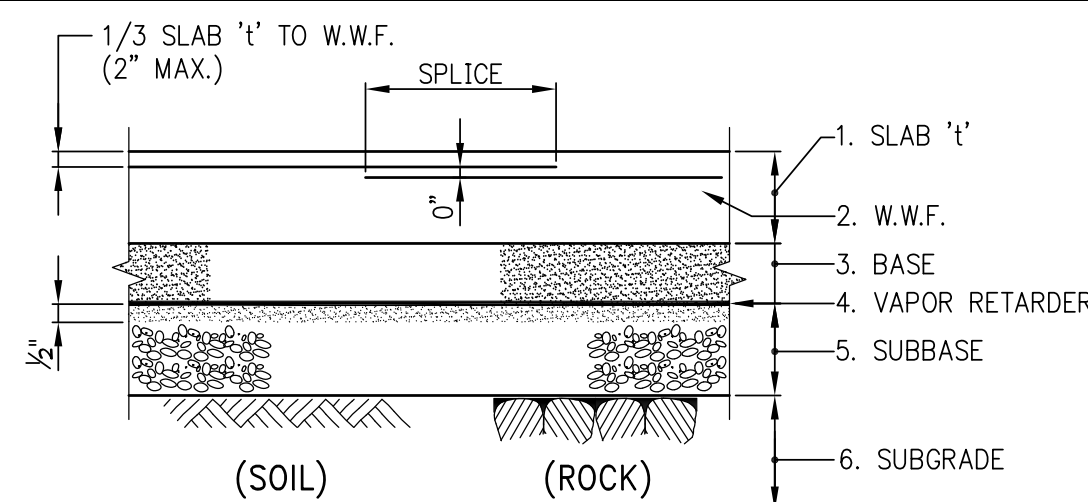


BOX-OUT OPENING THROUGH FOUNDATION WALL



WATERPROOFED SLEEVE THROUGH WALL WITH WATERPROOFING



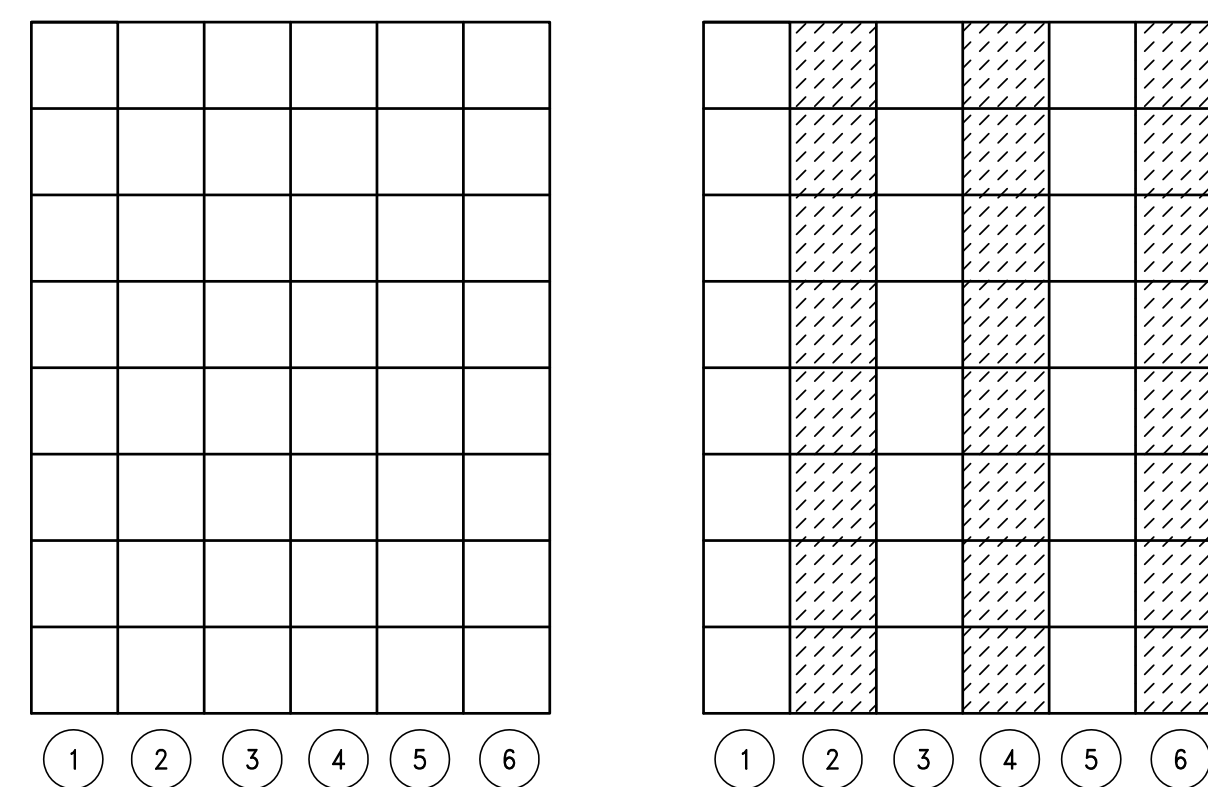


TYPICAL DETAIL - SLAB ON GROUND

## NOTES:

1. SLAB THICKNESS 1'-0" UNLESS OTHERWISE NOTED ON PLANS.
2. W.W.F. REINFORCEMENT: SEE TABLE.
3. BASE = 3" LAYER OF PROCESSED AGGREGATE, SIZE NO. 10 PER ASTM D448. (SAND OF UNIFORM PARTICLE SIZE OR CONCRETE FINE AGGREGATE IS NOT ACCEPTABLE).
4. VAPOR RETARDER (VAPOR "BARRIER"): 10 MILS THICK POLYETHYLENE.
5. SLAB BASE: 4" LAYER OVER SOIL, 5" MIN. OVER ROCK SUBGRADE, COMPACTABLE GRANULAR FILL. COVER ROUGH FILL WITH 1/2" OF BASE AGGREGATE AND COMPACT IT ONTO SUBBASE.
6. SUBGRADE: COMPACTED FILL, BACKFILL OR UNDISTURBED SOIL, OR LEVELED ROCK SURFACE.

SLAB '1'	SLAB REINFORCEMENT (UNLESS OTHERWISE NOTED) W.W.F.
5"	6 x 6 - W2.1 x W2.1
6"-7"	6 x 6 - W2.9 x W2.9
8"-9"	6 x 6 - W4.0 x W4.0
10" OR MORE	REBAR PER DRAWINGS



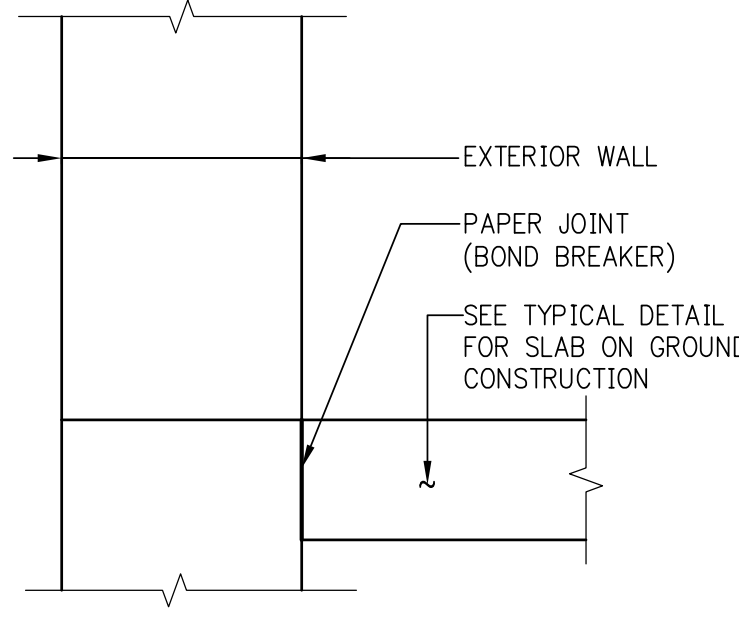
SUGGESTED SEQUENCE OF CASTING STRIPS

## SLAB ON GROUND NOTES:

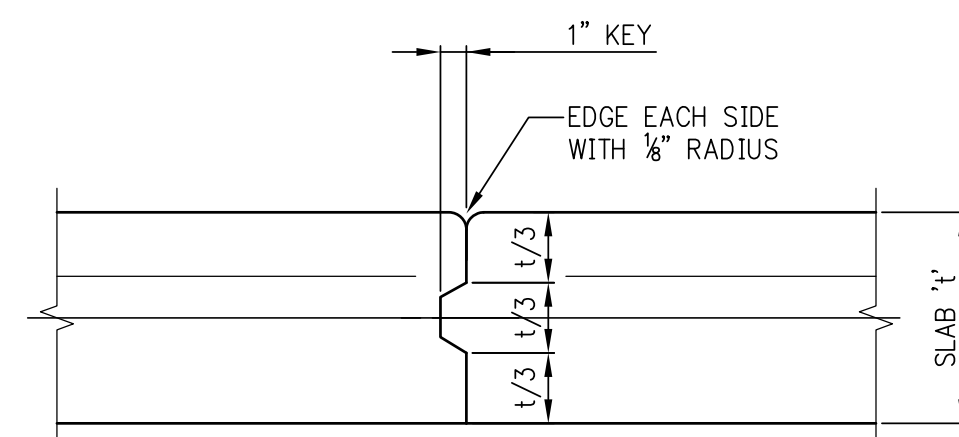
1. SLAB ON GROUND SHALL BE PLACED IN STRIPS, AS SHOWN IN "SUGGESTED SEQUENCE OF CASTING STRIPS".
2. CONTROL JOINTS SHALL BE SAWCUT AS SOON AS CONCRETE IS HARD ENOUGH NOT TO BE TORN OR DAMAGED BY THE BLADE, AND BEFORE THE CONCRETE STARTS TO COOL. TYPICALLY JOINTS SHOULD BE CUT 4 TO 12 HOURS AFTER THE SLAB HAS BEEN FINISHED, DEPENDING UPON WEATHER AND JOB CONDITIONS.
3. SPACING OF SAWCUT CONTROL JOINTS (IN FEET) TO BE APPROXIMATELY THREE TIMES THE SLAB THICKNESS IN INCHES, WITH A MAXIMUM OF TWENTY (20) FEET.
4. A MAXIMUM RATIO OF 1:5 SHALL BE MAINTAINED BETWEEN LONG AND SHORT DIMENSIONS OF PANELS FORMED BY CONSTRUCTION AND CONTROL JOINTS.

## LEGEND:

- STRIPS CAST FIRST
- INFILL STRIPS
- FORMED JOINTS
- SAWCUT JOINTS

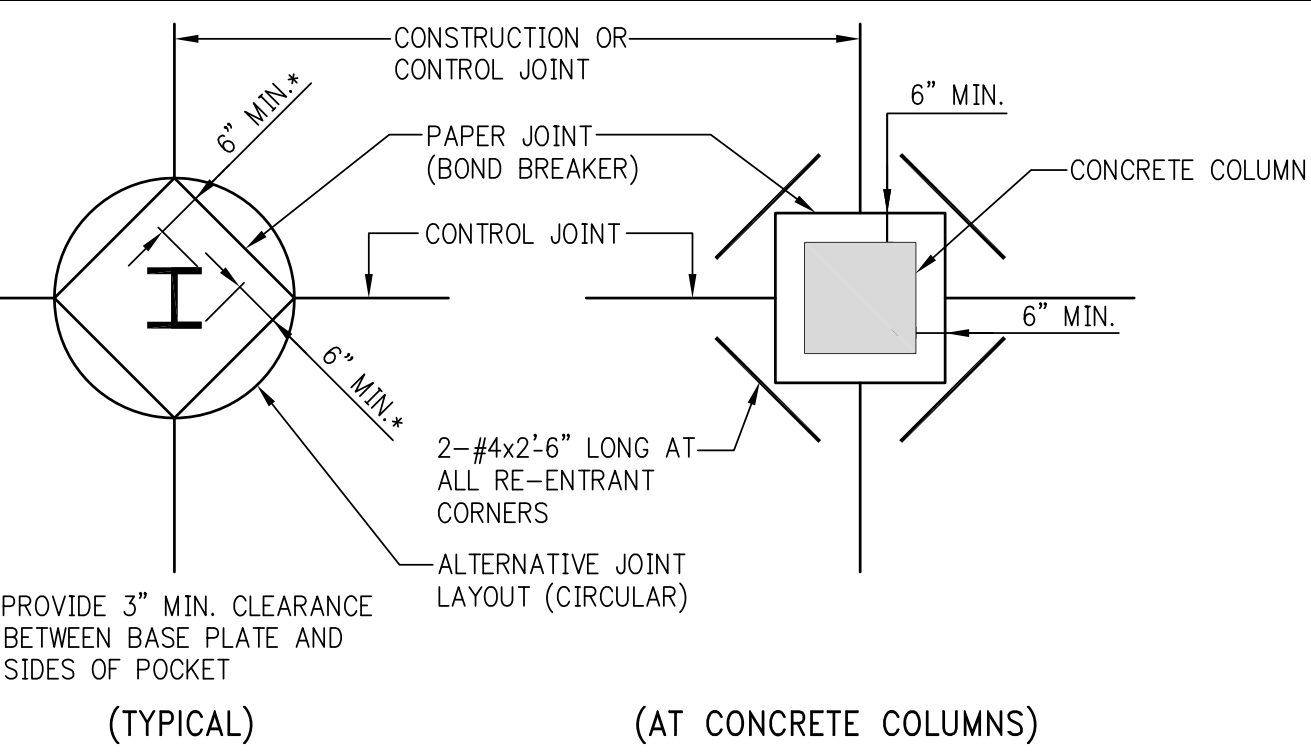


ISOLATION JOINT AT PERIMETER WALL



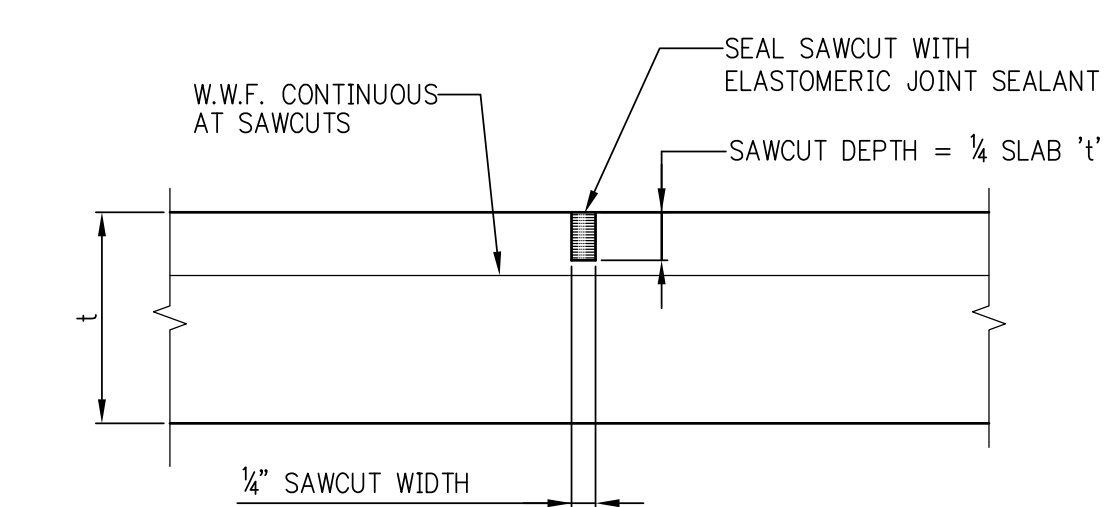
CONSTRUCTION JOINT

SLAB ON GROUND



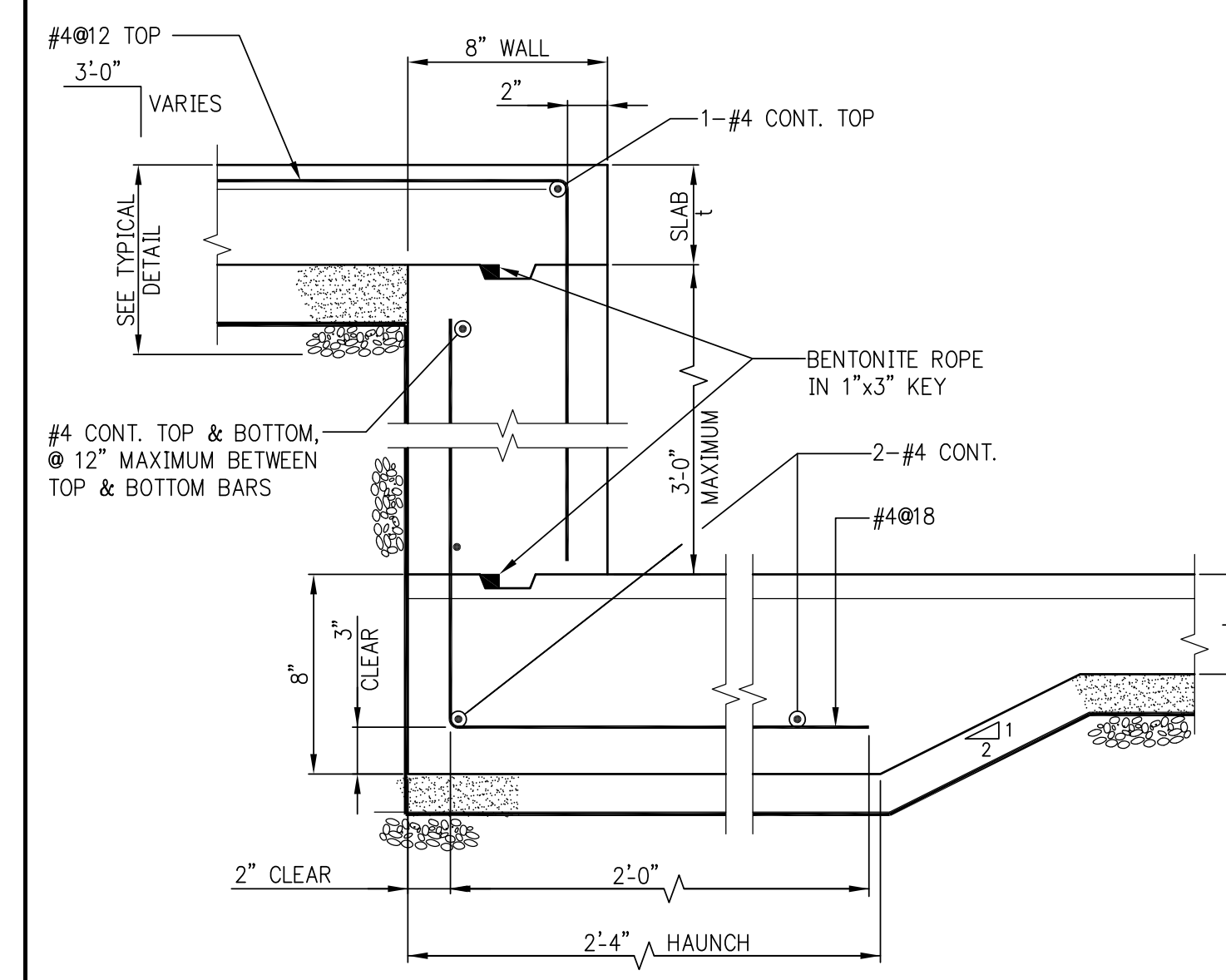
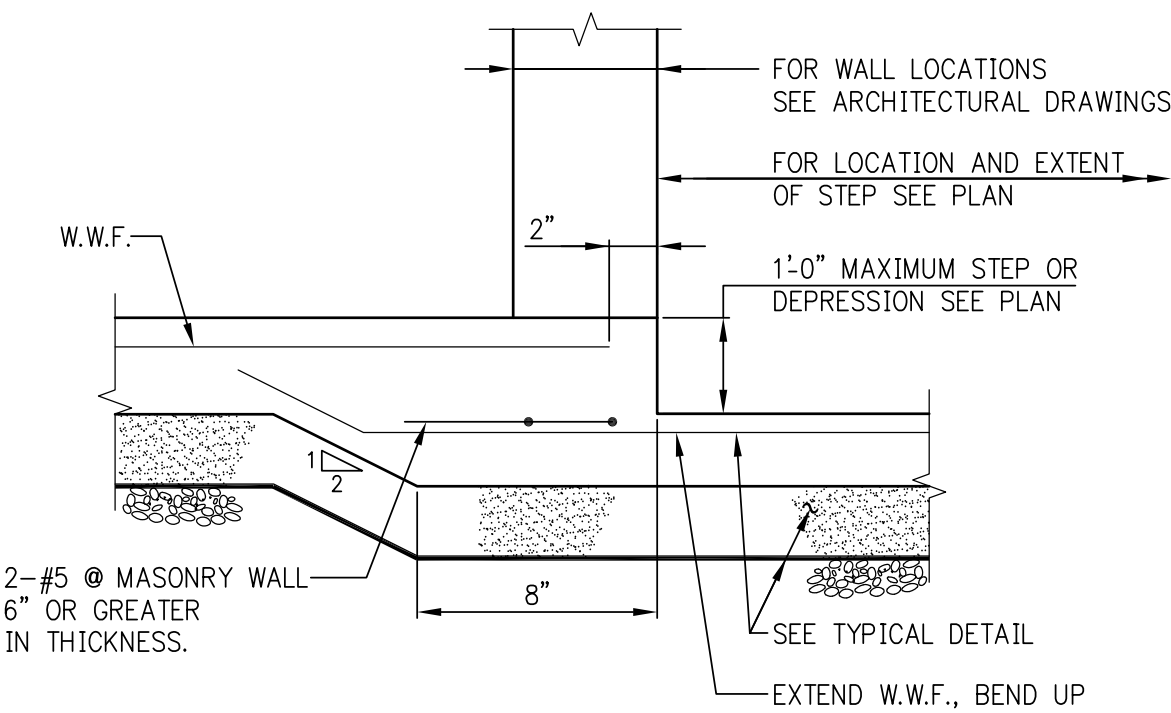
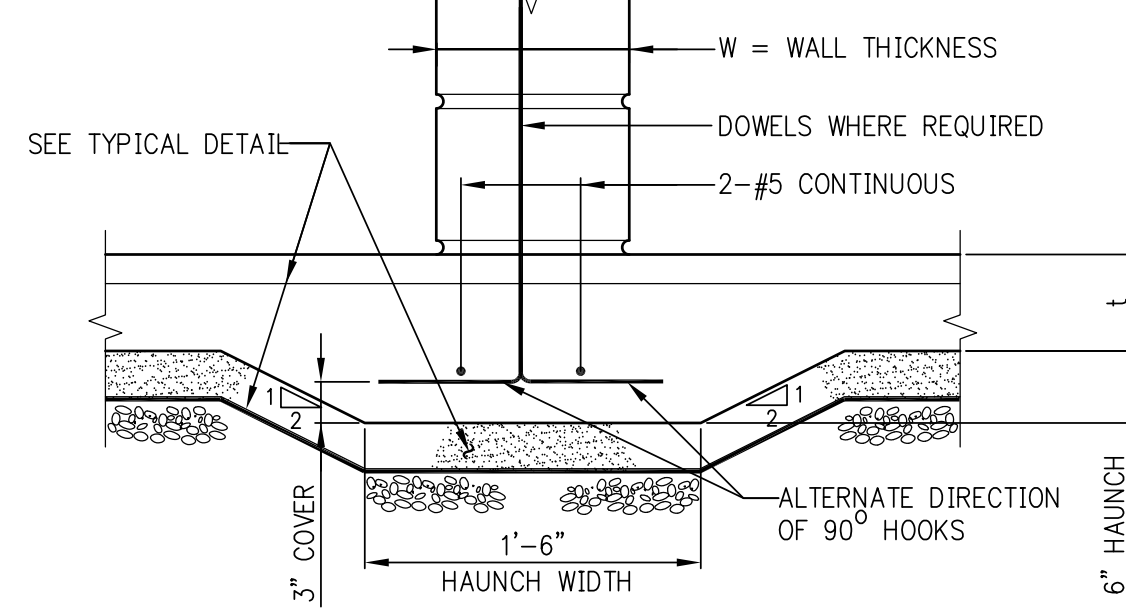
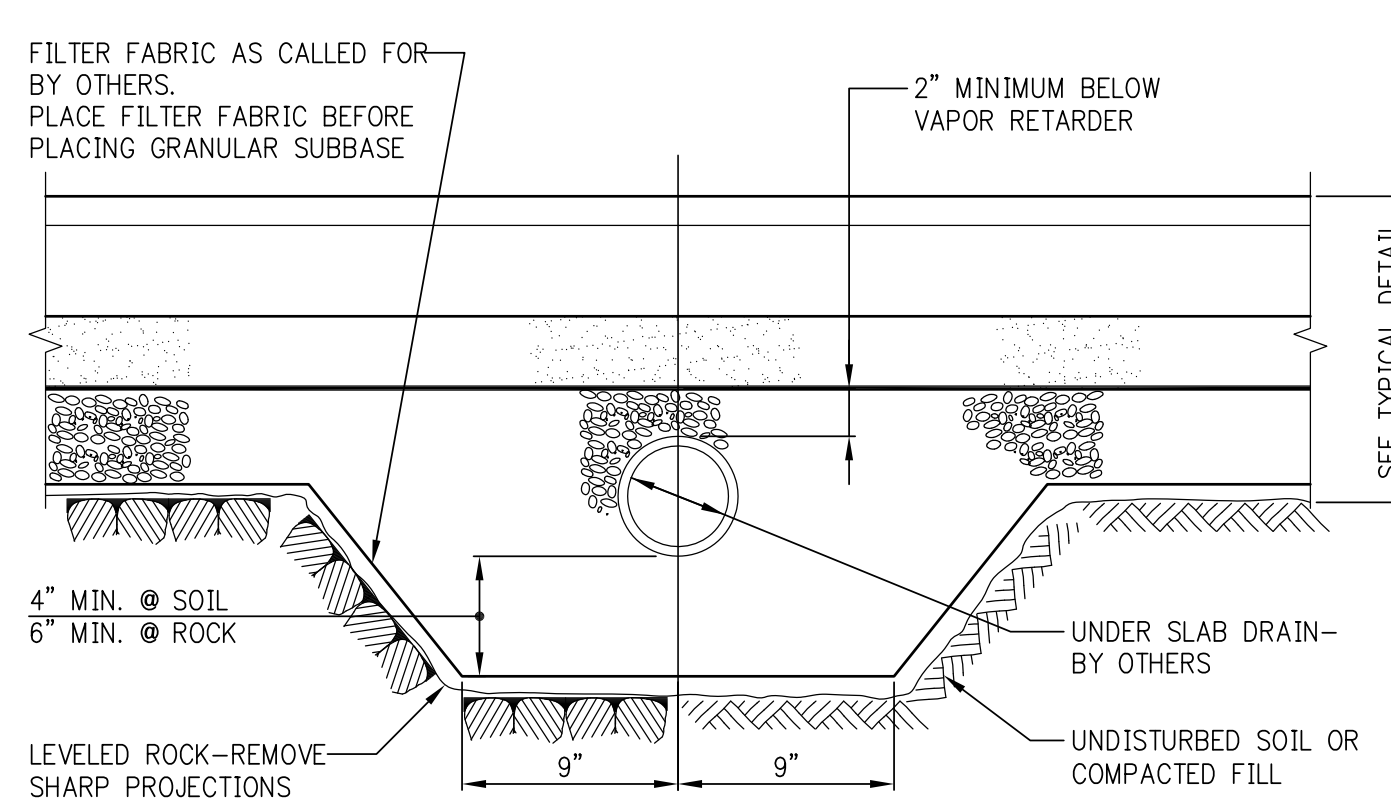
(TYPICAL) (AT CONCRETE COLUMNS)

CONTROL JOINT LAYOUT AT COLUMNS



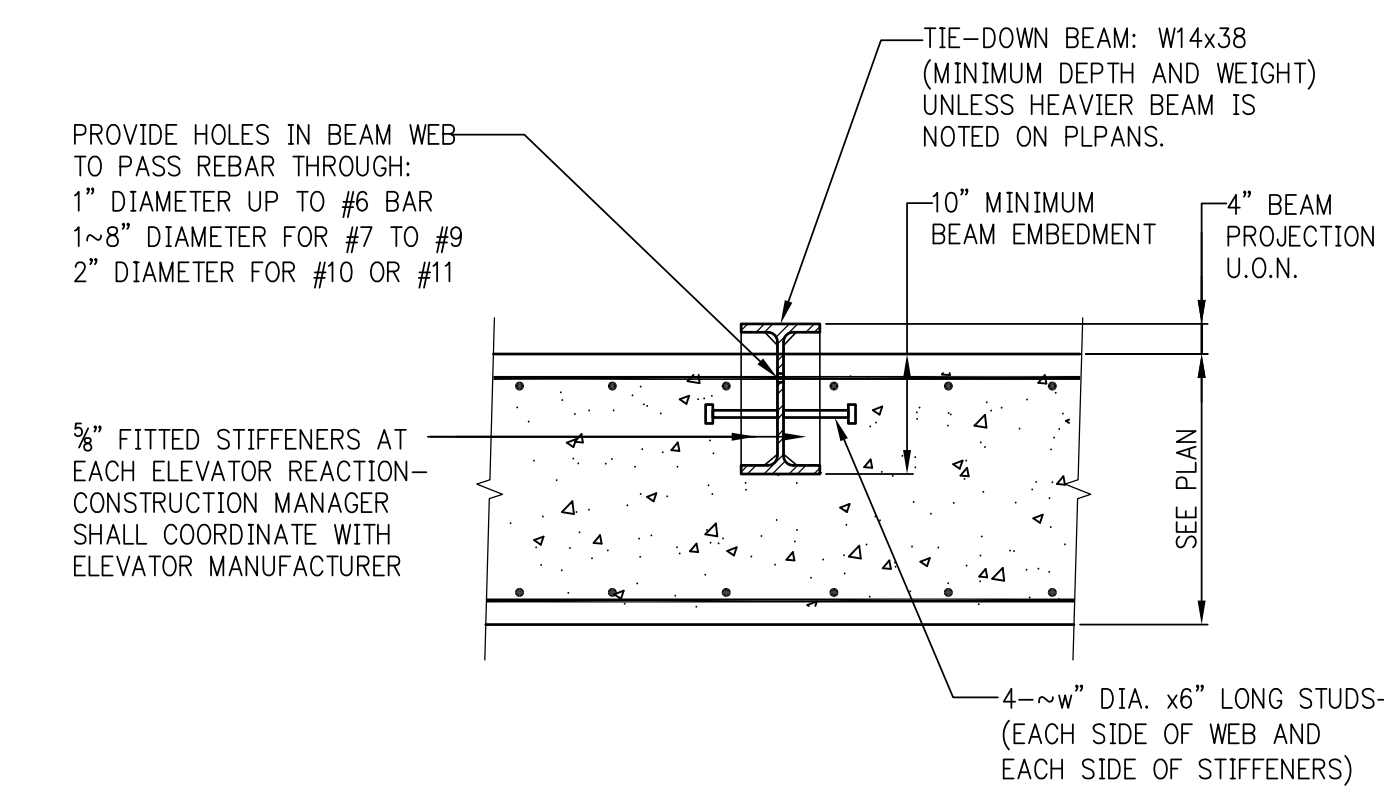
SAWCUT CONTROL JOINT

JOINT DETAILS

SLAB ON GROUND STEP OR DEPRESSION  
GREATER THAN 1'-0"SLAB ON GROUND STEP OR DEPRESSION  
1'-0" OR LESSTHICKENED SLAB AT MASONRY  
WALLS 6" THICK OR GREATER

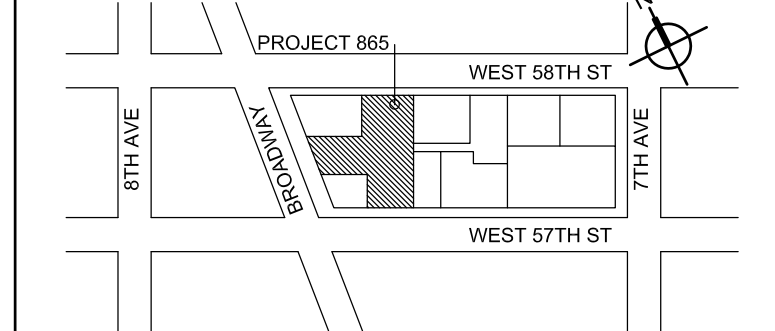
UNDER SLAB DRAIN

NOTE:  
THIS DETAIL IS INTENDED SOLELY TO SHOW TRENCHING IN  
SUBGRADE WHERE DRAINS ARE CALLED FOR BY OTHERS.

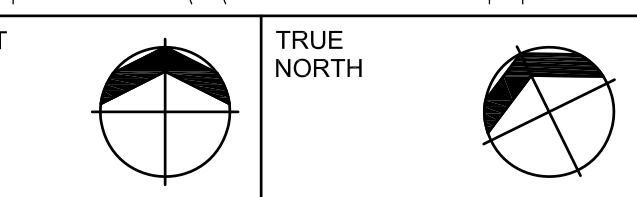


ELEVATOR TIE-DOWN BEAM

## KEY PLAN:



## PROJECT NORTH



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## PROJECT:

**217 WEST 57TH STREET**  
NEW YORK, NY

## DRAWING TITLE:

TYPICAL CONCRETE  
DETAILS 2

## SEAL &amp; SIGNATURE:

DATE: PROJECT No: 2012133

DRAWN: CAD REV: CHK: B.S.

SCALE: 3/8" = 1'-0"

DWG No: 2012133

DOB PAGE No: 4 OF 10

EMPLOYEE NAME: DOB B-SCAN:

APPROVED Under Directive 2 of 1975

Date/Time: Feb 12, 2014 - 10:36 AM

**NYC Development Hub**



# TABLE #1:

## TENSION LAP SPLICE LENGTHS (CLASS B MINIMUM)

**TABLE 1.A: ¾" COVER TO OUTER LAYER BARS**  
OUTER LAYER LAP LENGTHS (IN INCHES)

CONC. STRENGTH (PSI)	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000
#3	16	16	16	16	16	16	16	16
#4	21	20	20	20	20	20	20	20
#5	31	27	24	24	24	24	24	24
#6	43	37	33	30	29	29	29	29
#7	69	60	53	49	45	42	40	38
#8	85	74	66	60	56	52	49	47
#9	103	89	80	73	67	63	59	56
#10	121	105	94	86	79	74	70	66
#11	140	122	109	99	92	86	81	77

**TABLE 1.C: 1½" COVER TO OUTER LAYER BARS**  
OUTER LAYER LAP LENGTHS (IN INCHES)

NOTE: USE TABLE 1.A IF BAR SPACING IS LESS THAN 4" O/C UP TO #8, 5" O/C FOR #9, #10, #11

CONC. STRENGTH (PSI)	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000
#3	16	16	16	16	16	16	16	16
#4	20	20	20	20	20	20	20	20
#5	24	24	24	24	24	24	24	24
#6	29	29	29	29	29	29	29	29
#7	42	37	34	34	34	34	34	34
#8	53	46	41	39	39	39	39	39
#9	66	57	51	46	44	44	44	44
#10	79	68	61	56	51	49	49	49
#11	92	80	72	65	60	57	54	54

**TABLE 1.B: ¾" COVER TO OUTER LAYER BARS**  
INNER LAYER LAP LENGTHS (IN INCHES)

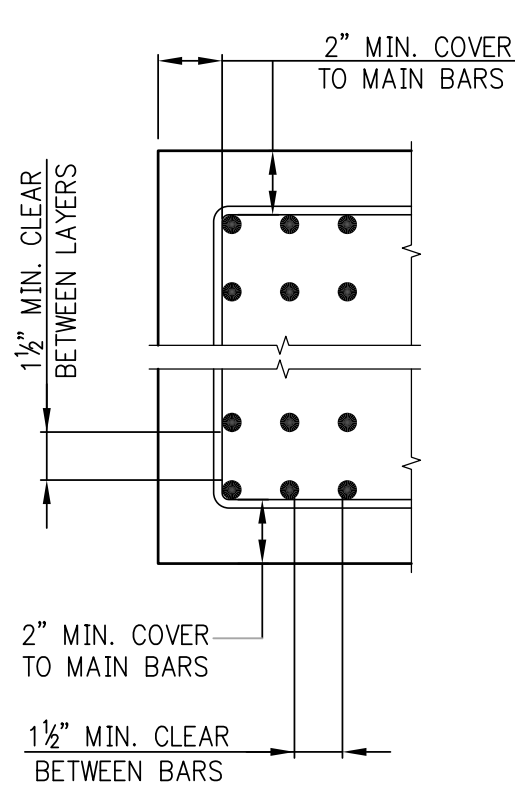
NOTE: USE TABLE 1.A IF BAR SPACING IS LESS THAN 4" O/C UP TO #8, 5" O/C FOR #9, #10, #11

CONC. STRENGTH (PSI)	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000
#3	16	16	16	16	16	16	16	16
#4	20	20	20	20	20	20	20	20
#5	24	24	24	24	24	24	24	24
#6	30	29	29	29	29	29	29	29
#7	46	42	38	34	34	34	34	34
#8	61	53	47	43	40	39	39	39
#9	75	65	58	53	49	46	44	44
#10	89	77	69	63	58	55	51	49
#11	104	90	81	74	68	64	60	57

**TABLE 1.D: 1½" COVER TO OUTER LAYER BARS**  
INNER LAYER LAP LENGTHS (IN INCHES)

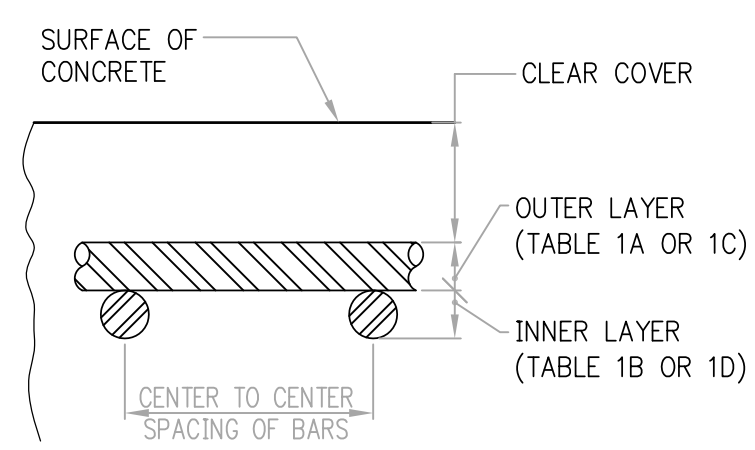
NOTE: USE TABLE 1.A IF BAR SPACING IS LESS THAN 5" O/C UP TO #8, 6" O/C FOR #9, #10, #11

CONC. STRENGTH (PSI)	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000
#3	16	16	16	16	16	16	16	16
#4	20	20	20	20	20	20	20	20
#5	24	24	24	24	24	24	24	24
#6	29	29	29	29	29	29	29	29
#7	37	34	34	34	34	34	34	34
#8	43	39	39	39	39	39	39	39
#9	53	46	44	44	44	44	44	44
#10	64	55	49	49	49	49	49	49
#11	75	65	58	54	54	54	54	54



MULTIPLE LAYERS

PROVIDE MINIMUM COVER AND CLEARANCES SHOWN, USE TABLE 1.A FOR LAP SPLICE LENGTHS.



## NOTES FOR TENSION LAP SPLICES

1. REINFORCEMENT IS UNCOATED, WITH  $F_y=60,000$  PSI.
2. CONCRETE IS NORMAL WEIGHT (144-150#/CF.).
3. FOR "TOP" BAR SPLICE LENGTHS ("TOP" IS DEFINED BY ACI 318 AS HAVING MORE THAN 12 INCHES OF FRESH CONCRETE CAST BELOW THE BAR), TABULATED LENGTHS MUST BE MULTIPLIED BY 1.3.
4. LENGTHS TABULATED MUST BE MULTIPLIED BY THE FOLLOWING MODIFICATION FACTORS:
  - a. LIGHTWEIGHT CONCRETE .....1.3
  - b. EPOXY-COATED BARS:
    - 1) BARS WITH COVER < 3db, OR WITH CLEAR SPACING < 6db ...1.5 FOR BOTTOM & VERTICAL BARS.
    - 2) ALL OTHER CONDITIONS .....1.2
5. WHERE TENSION DEVELOPMENT LENGTH ( $L_d$ ) IS REQUIRED ON PLANS OR IN DETAILS, SEE TENSION DEVELOPMENT LENGTH TABLES.
6. CLASS A LAP SPLICE LENGTHS ARE EQUAL TO TENSION DEVELOPMENT LENGTHS. SEE TABLES FOR TENSION DEVELOPMENT LENGTHS ( $L_d$ ). APPLY APPROPRIATE MODIFICATION FACTORS TO CLASS A SPLICE LENGTHS.

### TABLE #2:

#### TENSION DEVELOPMENT LENGTHS ( $L_d$ ) (IN INCHES)

##### TABLE 2.A: ¾" COVER TO OUTER LAYER BARS OUTER LAYER DEVELOPMENT LENGTHS

CONC. STRENGTH (PSI)	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000
#3	12	12	12	12	12	12	12	12
#4	16	14	13	12	12	12	12	12
#5	24	21	19	17	16	15	14	13
#6	33	28	25	23	22	20	19	18
#7	53	46	41	37	35	32	31	29
#8	66	57	51	46	43	40	38	36
#9	79	69	61	56	52	49	46	43
#10	93	81	72	66	61	57	54	51
#11	108	94	84	76	71	66	62	59

##### TABLE 2.C: 1½" COVER TO OUTER LAYER BARS OUTER LAYER DEVELOPMENT LENGTHS

CONC. STRENGTH (PSI)	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000
#3	12	12	12	12	12	12	12	12
#4	13	12	12	12	12	12	12	12
#5	16	14	13	13	13	13	13	13
#6	20	17	15	15	15	15	15	15
#7	32	28	25	23	21	20	19	18
#8	41	36	32	29	27	25	24	23
#9	50	44	39	36	33	31	29	28
#10	60	52	47	43	40	37	35	33
#11	71	61	55	50	46	43	41	39

##### TABLE 2.B: ¾" COVER TO OUTER LAYER BARS INNER LAYER DEVELOPMENT LENGTHS

CONC. STRENGTH (PSI)	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000
#3	12	12	12	12	12	12	12	12
#4	13	12	12	12	12	12	12	12
#5	16	14	13	13	13	13	13	13
#6	23	20	18	16	15	15	15	15
#7	37	32	29	26	24	23	22	20
#8	47	41	36	33	31	29	27	26
#9	57	50	44	41	38	35	33	31
#10	68	59	53	48	45	42	40	38
#11	80	69	62	57	52	49	46	44

##### TABLE 2.D: 1½" COVER TO OUTER LAYER BARS INNER LAYER DEVELOPMENT LENGTHS

CONC. STRENGTH (PSI)	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000
#3	12	12	12	12	12	12	12	12
#4	13	12	12	12	12	12	12	12
#5	16	14	13	13	13	13	13	13
#6	20	17	15	15	15	15	15	15
#7	29	25	22	20	19	18	18	18
#8	33	28	25	23	22	20	20	20
#9	41	35	31	29	27	25	23	23
#10	49	42	38	35	32	30	28	27
#11	58	50	45	41	38	35	33	32

NOTES FOR TENSION DEVELOPMENT LENGTHS ( $L_d$ )

1. REINFORCEMENT IS UNCOATED, WITH  $F_y=60,000$  PSI.
2. CONCRETE IS NORMAL WEIGHT (144-150#/CF.).
3. FOR "TOP" BAR DEVELOPMENT LENGTHS ("TOP" IS DEFINED BY ACI 318 AS HAVING MORE THAN 12 INCHES OF FRESH CONCRETE CAST BELOW THE BAR), TABULATED LENGTHS MUST BE MULTIPLIED BY 1.3.
4. LENGTHS TABULATED MUST BE MULTIPLIED BY THE FOLLOWING MODIFICATION FACTORS:
  - a. LIGHTWEIGHT CONCRETE .....1.3
  - b. EPOXY-COATED BARS:
    - 1) BARS WITH COVER < 3db, OR WITH CLEAR SPACING < 6db ...1.5 FOR BOTTOM & VERTICAL BARS.
    - 2) ALL OTHER CONDITIONS .....1.2 FOR "TOP" BARS
5. WHERE TENSION DEVELOPMENT LENGTH ( $L_d$ ) IS REQUIRED ON PLANS OR IN DETAILS, SEE TENSION DEVELOPMENT LENGTH TABLES.
6. CLASS A LAP SPLICE LENGTHS ARE EQUAL TO TENSION DEVELOPMENT LENGTHS ( $L_d$ ). APPLY APPROPRIATE MODIFICATION FACTORS TO CLASS A SPLICE LENGTHS.

TABLE #3 TENSION DEVELOPMENT LENGTHS FOR STANDARD END HOOKS ( $l_{dh}$ ) (LENGTHS IN INCHES)									
BAR SIZE	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000	
#3	9	7	7	6	6	6	6	6	
#4	11	10	9	8	7	7	7	6	
#5	14	12	11	10	9	9	8	8	
#6	17	15	13	12	11	10	10	9	
#7	19	17	15	14	13	12	11	11	
#8	22	19	17	16	15	14	13	12	
#9	25	22	19	18	16	15	15	14	
#10	28	24	22	20	19	17	16	16	
#11	31	27	24	22	21	19	18	17	
#14	37	32	29	27	25	23	22	21	
#18	50	43	39	35	33	31	29	27	

## NOTES:

1. TABLE 2 CONFORMS TO ACI 318-2002 (AND 2005). TABULATED VALUES ARE BASED UPON ACI 12.5.2, ASSUMING GRADE 60 REINFORCEMENT AND NORMALWEIGHT CONCRETE.
2. PER ACI 12.5.3 a), FOR #11 AND SMALLER BARS, IF COVER TO BAR IS 2 1/2 INCHES OR MORE, AND FOR 90 DEGREE HOOK WITH COVER ON BAR EXTENSION BEYOND HOOK NOT LESS THAN 2 INCHES, A MODIFICATION FACTOR OF 0.7 MAY BE APPLIED. MINIMUM  $l_{dh}$  SHALL NOT BE LESS THAN 8db NOR 6 INCHES.

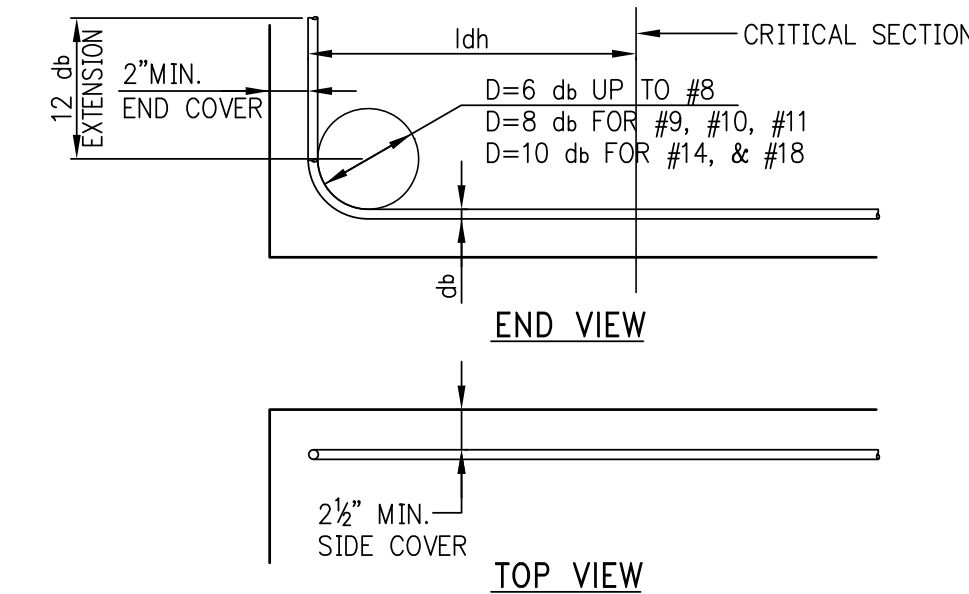


TABLE #4 COMPRESSION LAP SPLICES (LENGTHS IN INCHES)			
BAR SIZE	GRADE OF REINFORCEMENT	60 KSI (40 D.I.A.)	80 KSI (48 D.I.A.)
#3		12	18
#4		15	22
#5		19	28
#6		23	33
#7		27	39
#8		30	44
#9		34	50
#10		38	56
#11		43	62
#14 AND #18			

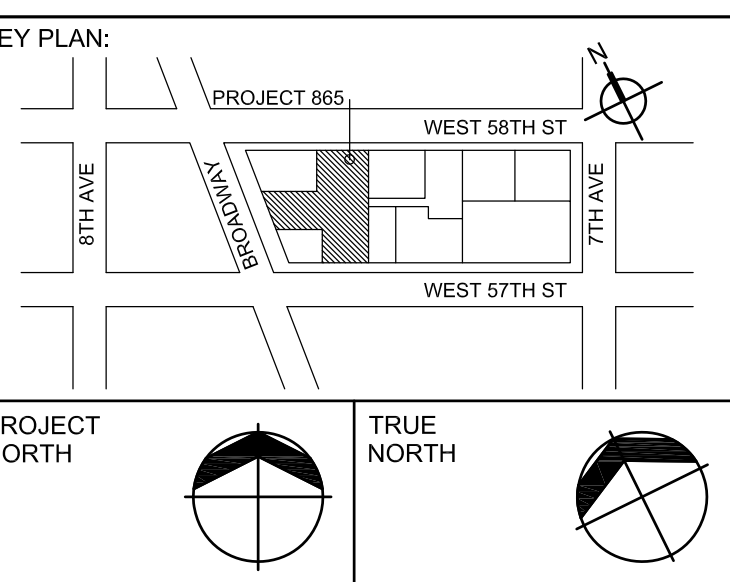
1. LAP SPLICES ARE NOT PERMITTED. USE MECHANICAL CONNECTIONS OR WELDED SPLICES FOR #14 AND #18. PER ACI 318 (12.14.3).
2. LAP SPLICES OF #14 AND #18 BARS TO #11 AND SMALLER BARS ARE PERMITTED PER ACI 318 (12.16.2).
3. FOR BARS OF DIFFERENT SIZE, USE LARGER OF: SPLICE LENGTH OF SMALLER BAR (TABLE #3) OR DEVELOPMENT LENGTH OF LARGER BAR (FROM TABLE #4) PER ACI 318 (12.16.2).

NOTE:  
TABLE #3 APPLIES FOR NORMALWEIGHT CONCRETE WITH  $f_c = 3,000$  PSI OR GREATER.

TABLE #5 DEVELOPMENT LENGTHS FOR BARS IN COMPRESSION (LENGTHS IN INCHES)												
BAR SIZE	$f_y = 60,000$ PSI			$f_y = 75,000$ PSI			$f_y = 80,000$ PSI					
	CONC. $f_c$ (IN PSI)	3,000	4,000	CONC. $f_c$ (IN PSI)	3,000	4,000	CONC. $f_c$ (IN PSI)	3,000	4,000	CONC. $f_c$ (IN PSI)	3,000	4,000
#3		12	12	12	12	12	12	12	12	12	12	12
#4		12	12	12	14	12	12	15	13	12	12	12
#5		14	12	12	17	15	14	18	16	15	15	15
#6		17	15	14	21	18	17	22	19	18	18	18
#7		19	17	16	24	21	20	26	22	21	21	21
#8		22	19	18	28	24	23	29	25	24	24	24
#9		25	22	21	31	27	25	33	28	27	27	27
#10		28	24	23	34	30	28	36	31	30	30	30
#11		31	27	26	38	33	31	40	34	33	33	33
#14		37	32	31	48	42	39	51	44	42	42	42
#18		50	43	41	62	54	51	65	56	54	54	54

1. LAP SPLICES ARE NOT PERMITTED. USE MECHANICAL CONNECTIONS OR WELDED SPLICES FOR #14 AND #18. PER ACI 318 (12.14.3).
2. LAP SPLICES OF #14 AND #18 BARS TO #11 AND SMALLER BARS ARE PERMITTED PER ACI 318 (12.16.2).
3. FOR BARS OF DIFFERENT SIZE, USE LARGER OF: SPLICE LENGTH OF SMALLER BAR (TABLE #3) OR DEVELOPMENT LENGTH OF LARGER BAR (FROM TABLE #4) PER ACI 318 (12.16.2).

NOTE:  
TABLE #3 APPLIES FOR NORMALWEIGHT CONCRETE WITH  $f_c = 3,000$  PSI OR GREATER.



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**EXTELL DEVELOPMENT COMPANY**  
805 THIRD AVENUE, 7TH FLOOR  
New York, NY 10022 USA  
TEL: 212-712-6000 FAX: 212-712-6100

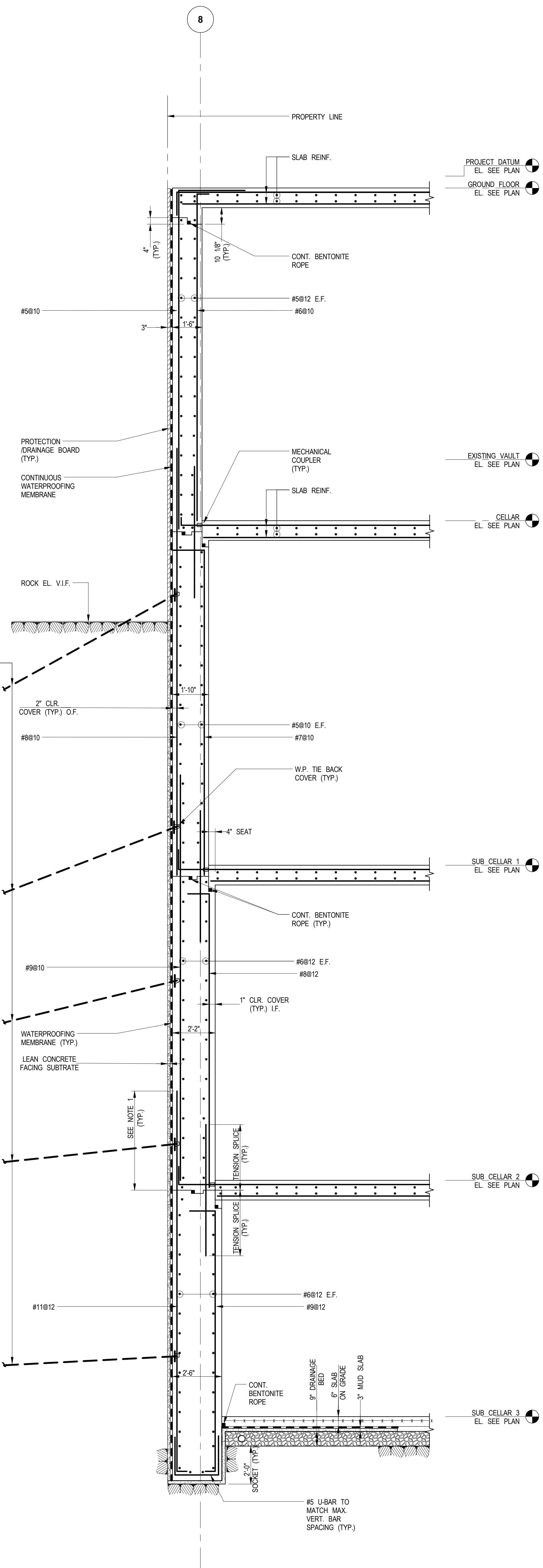
ARCHITECT OF RECORD: Base Building Shell & Core  
**AAI ARCHITECTS, P.C.**  
401 Wellington St. W., 3rd Floor  
Toronto, ON M5V 1E7 Canada  
TEL: 416-967-1500 FAX: 416-967-7150

STRUCTURAL ENGINEERS:  
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225 EAST 48th Street  
New York, NY 10017 USA  
TEL: 212-687-9888 FAX: 646-487-5501

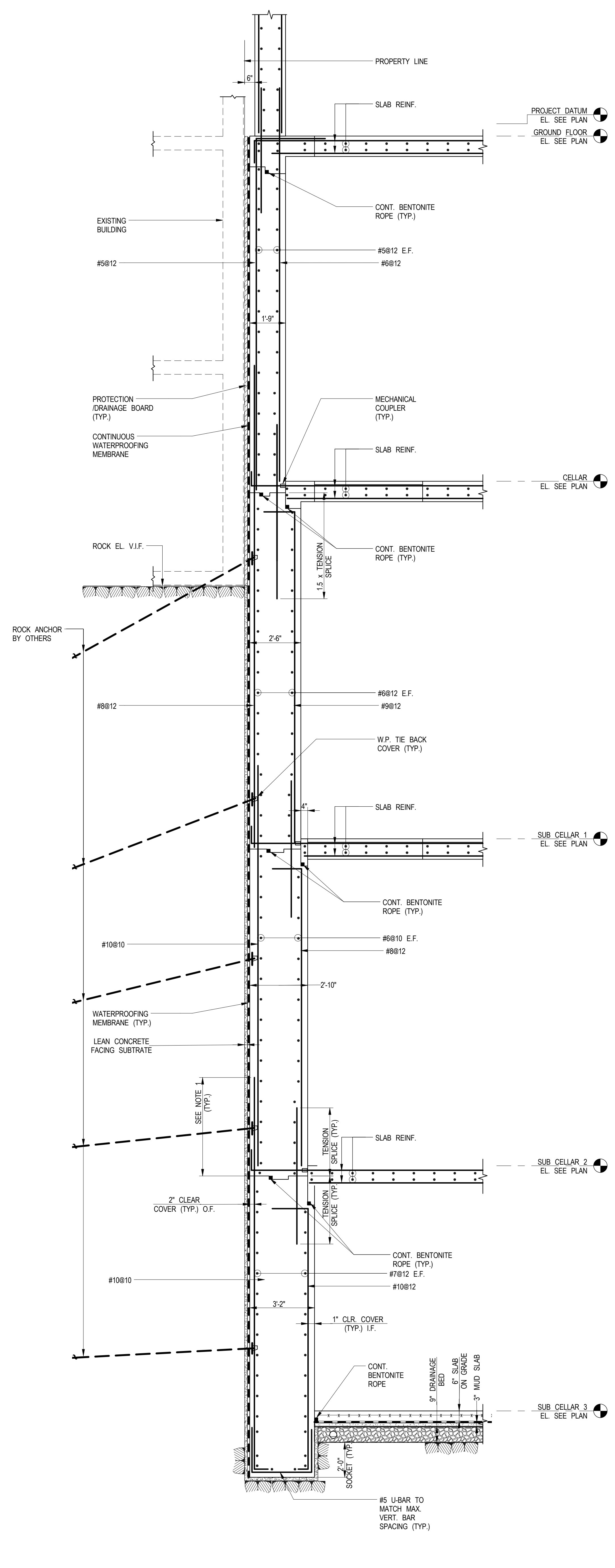
MEP ENGINEERS:  
**AKF GROUP**  
1501 Broadway  
New York, NY 10036 USA  
TEL: 212-354-6666 FAX: 212-354-6668

GEOTECHNICAL ENGINE

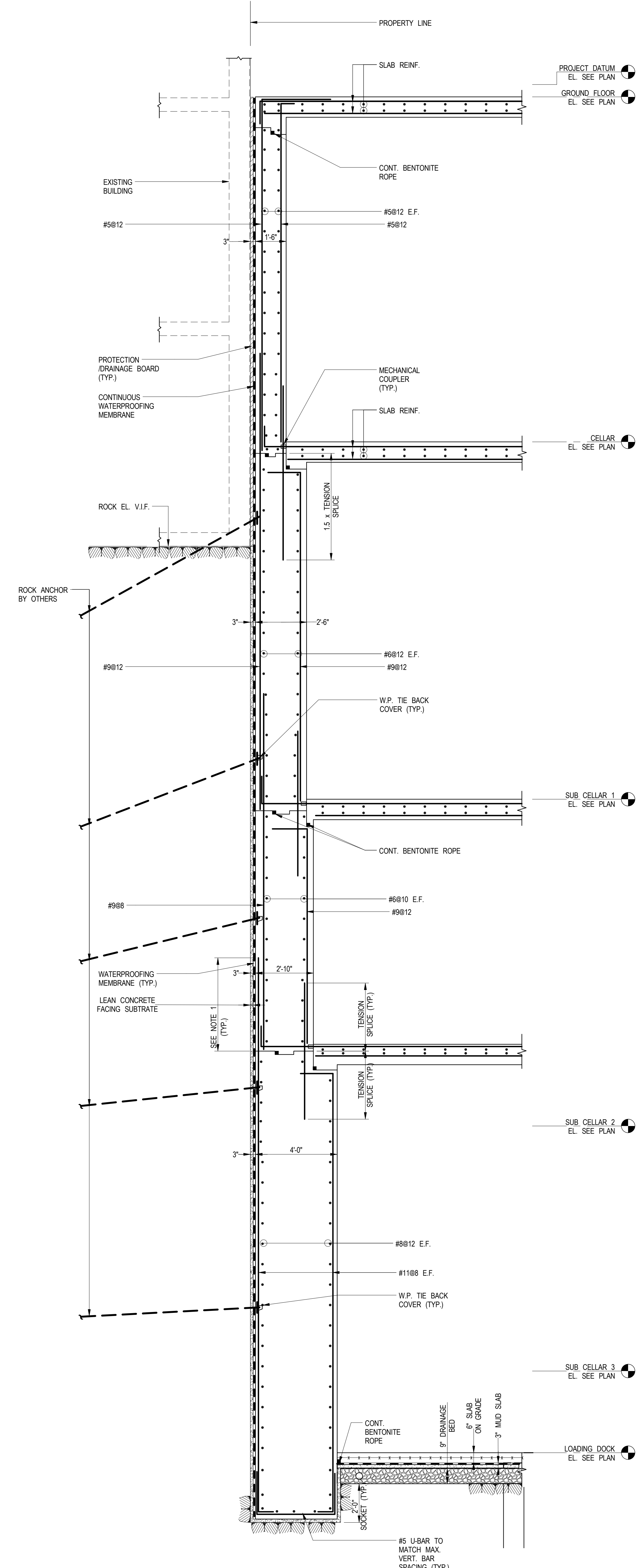




**1 SECTION**  
FO-300 SCALE: 3/8" = 1'-0"



**2 SECTION**  
FO-300 SCALE: 3/8" = 1'-0"



**3 SECTION**  
FO-300 SCALE: 3/8" = 1'-0"

- NOTES:**
1. TENSION SPLICES ON EXTERIOR WALL FACE SHALL EXTEND 0.3x(FLOOR TO FLOOR HEIGHT)
  2. SEE FO-200 FOR SPLICE TABLES
  3. SEE FO-400 FOR GENERAL NOTES AND LEGEND
  4. FOR WATERPROOFING: HORIZONTAL APPLICATIONS: PREPARE 300R  
VERTICAL APPLICATIONS: BLIND SIDE: PREPARE 100R  
TWO-FACED WALL: BUTYLSH 4000

**KEY PLAN:**

PROJECT: 217 WEST 57TH STREET

DEVELOPER: **EXTELL DEVELOPMENT COMPANY**  
805 THIRD AVENUE, 7TH FLOOR  
New York, NY 10022 USA  
TEL: 212-712-6000 FAX: 212-712-6100

ARCHITECT OF RECORD: Base Building Shell & Core  
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New York, NY 10017 USA  
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MEP ENGINEERS:  
**AKF GROUP**  
1501 Broadway  
New York, NY 10036 USA  
TEL: 212-354-5656 FAX: 212-354-5668

GEOTECHNICAL ENGINEERS:  
**Langan Engineering & Environmental Services**  
21 Penn Plaza - 360 West 31st Street, 8th Floor  
New York, NY 10001-2727  
TEL: 212-479-5400 FAX: 212-479-5444

CODE CONSULTANTS:  
**Construction Consulting Associates**  
100 Church Street  
New York, NY 10007  
TEL: 212-385-1818 FAX: 212-385-1911

**WSP CANTOR SEINUK**  
STRUCTURAL ENGINEERS  
228 EAST 43RD STREET NEW YORK, NEW YORK 10017  
TEL: 212-687-9888 FAX: 646-487-5501 WWW.WSPCANTORSEINUK.COM

No.	DESCRIPTION:	DATE:
00	MTA SUBMISSION	17 SEPT 2012
01	D.O.B. SUBMISSION	23 JAN. 2013

**D.O.B. SUBMISSION**

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STRUCTURAL ENGINEERS  
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TEL: 212-687-9888 FAX: 646-487-5501 WWW.WSPCANTORSEINUK.COM

PROJECT:  
**217 WEST 57TH STREET**  
NEW YORK, NY

DRAWING TITLE:  
**FOUNDATION SECTIONS 1**

SEAL & SIGNATURE:	DATE:
	23 JAN. 2013

PROJECT No: 2012133  
DRAWN: CADD REV: BS  
CHK: BS  
SCALE: 3/8" = 1'-0"  
DWG No: 2012133-01  
DOB PAGE No: 6 OF 10  
DOB B-SCAN: 2012133-01

**Buildings**

APPROVED  
Under Directive 2 of 1975

Date/Time: Feb 12, 2014 - 10:36 AM  
**NYC Development Hub**





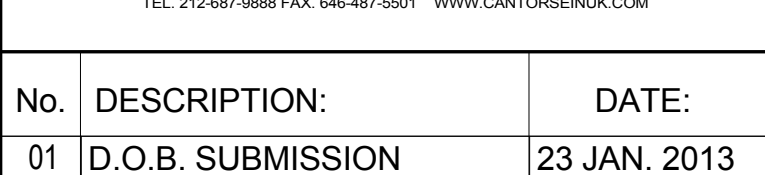




- NOTES:**
1. TENSION SPLICES ON EXTERIOR WALL FACE SHALL EXTEND 0.3x(FLOOR TO FLOOR HEIGHT)
  2. SEE FO-202 FOR SPLICE TABLES.
  3. SEE FO-001 FOR GENERAL NOTES AND LEGEND.
  4. FOR WATERPROOFING: HORIZONTAL APPLICATIONS- PREPRUFE 300R  
VERTICAL APPLICATIONS- BLIND SIDE-PREPRUFE 160R  
-TWO-FACED WALL- BITUTHENE 4000





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PROJECT:

**217 WEST 57TH STREET**  
NEW YORK, NY

DRAWING TITLE:

## FOUNDATION WALL ELEVATIONS

SEAL & SIGNATURE:	DATE:	23 JAN. 2013
	PROJECT No:	2012133

DRAWN:	CADD	REV:
--------	------	------

CHK:	BS
------	----

SCALE: As indicated

DWG No:

50+303.00

Unit Price: \$3.00

DOB PAGE No: 9 OF 10

DOB B-SCAN:



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APPROVED

Directive 2 of 1975

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12, 2014 - 10:36 AM

element: 11.6

Development **HUB**

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