

Date	Description
07.08.2019	Footing/Foundation Permit
08.21.2019	Permit

STRUCTURAL NOTES

CANNERY TRAIL RESIDENCES - 1750 N OXFORD AVE. - EAU CLAIRE, WI

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DESIGN DATA

APPLICABLE CODES/STANDARDS:
...INTERNATIONAL BUILDING CODE - 2018
...ASCE 7-16 MIN DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE/SEI

STRUCTURAL DESIGN STANDARDS (DESIGN SHALL CONFORM TO THE CURRENT EDITION UNDER THE APPLICABLE CODE)
...ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY
...ACI 530/531 BLDG CODE REQUIREMENTS AND SPECS FOR MASONRY STRUCTURES (AND RELATED COMMENTARIES)
...ANSI/AISC 340-16 SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS
...AWS D1.1/D1.1M STRUCTURAL WELDING CODE-STEEL

DEFLECTION LIMITS			
MEMBERS	LIVE	SNOW OR WIND	DEAD + LIVE OR SNOW
ROOF MEMBERS			
SUPPORTING GYPSUM BOARD CEILINGS	L/360	L/360	L/240
SUPPORTING FLEXIBLE CEILINGS	L/360	L/360	L/240
NOT SUPPORTING CEILING	L/240	L/240	L/180
SUPPORTING RIGID MATERIALS (BRICK, MASONRY, ETC.)	L/600	L/600	L/600
FLOOR MEMBERS			
SUPPORTING RIGID MATERIALS (BRICK, MASONRY, ETC.)	L/400	L/400	L/400
SUPPORTING GYPSUM BOARD CEILINGS	L/540	N/A	L/360
SUPPORTING FLEXIBLE MATERIALS	L/540	N/A	L/360
WOOD TRUSSES	L/480	L/360	L/240
INTEL/HEADER/BEAM MEMBERS			
SUPPORTING RIGID MATERIALS (BRICK, MASONRY, ETC.)	L/400	L/400	L/400
SUPPORTING FLEXIBLE MATERIALS (EIFS, SIDING, ETC.)	L/360	L/360	L/240
EXTERIOR WALLS			
WITH RIGID FINISHES (BRICK, MASONRY, ETC.)	N/A	L/400	N/A
WITH FLEXIBLE FINISHES (EIFS, SIDING, ETC.)	N/A	L/360	N/A

BUILDING DESIGN LOADS/CRITERIA

DESIGN LIVE LOADS:	
...FLOOR FRAMING (RETAIL, OFFICE, RESTAURANT, RECREATIONAL)	100 psf
...FLOOR FRAMING (RESIDENTIAL AREAS)	40 psf
...STAIRWAYS, EXITS	100 psf
...BALCONIES	75 psf
...PRIVATE GARAGES (PASSENGER VEHICLES ONLY)	40 psf
...INTERIOR PARTITION WALLS (UNIFORMLY DISTRIBUTED WEIGHT)	15 psf
...CORRIDORS 1st FLOOR	100 psf
...CORRIDORS 2nd 3rd FLOORS	40 psf
...CORNICES	60 psf
SNOW LOADS & DESIGN DATA:	
...DESIGN SNOW LOAD	42 psf (BALANCED SNOW LOAD)
...FLAT ROOF SNOW LOAD (P _s) = (0.7Ce*Cl _s *P _g)	42 psf
...SNOW EXPOSURE FACTOR (Ce)	1.0
...SNOW LOAD IMPORTANCE FACTOR (Is)	1.0
...ROOF THERMAL FACTOR (Cl)	1.0
...GROUND SNOW (P _g)	60 psf
...SLOPED ROOF FACTOR (Cs)	1.0
WIND DESIGN DATA:	
...WIND IMPORTANCE FACTOR (Iw)	1.0
...RISK CATEGORY II	
...BASIC WIND SPEED (3-SECOND GUST, ULTIMATE)	115 MPH
...BASIC WIND SPEED (3-SECOND GUST, NOMINAL)	90 MPH
...MEAN ROOF HEIGHT	33 FT
...WIND EXPOSURE CATEGORY	B
...WIND EXPOSURE CLASSIFICATION	ENCLOSED
...VELOCITY EXPOSURE COEFFICIENT K _v	0.720
...TOPOGRAPHIC FACTOR (K _t)	1.0
...DESIGN PROCEDURE	METHOD 1 (SIMPLIFIED PROCEDURE)

MATERIAL STRENGTHS

CAST-IN-PLACE CONCRETE:

FOOTINGS	MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS F _c = 3,000 PSI
...MAXIMUM WATER-CEMENTITIOUS RATIO	0.59
...MAXIMUM AGGREGATE SIZE	1 1/2"
...SLUMP LIMIT	5" +/- 1"
...AIR CONTENT	NO
EXTERIOR PIERS, WALLS, AND COLUMNS	
...MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS F _c = 4,000 PSI	
...MAXIMUM WATER-CEMENTITIOUS RATIO	0.48
...MAXIMUM AGGREGATE SIZE	3/4"
...SLUMP LIMIT	4" +/- 1"
...AIR CONTENT	YES 4% to 6%
INTERIOR SLABS ON GRADE	
...MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS F _c = 4,000 PSI	
...MAXIMUM WATER-CEMENTITIOUS RATIO	0.48
...MAXIMUM AGGREGATE SIZE	3/4"
...SLUMP LIMIT	4" +/- 1"
...AIR CONTENT	NO
STAIR LANDINGS AND TREADS	
...MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS F _c = 4,000 PSI	
...MAXIMUM WATER-CEMENTITIOUS RATIO	0.48
...MAXIMUM AGGREGATE SIZE	3/4"
...SLUMP LIMIT	4" +/- 1"
...AIR CONTENT	NO
EXTERIOR SLABS ON GRADE	
...MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS F _c = 4,000 PSI	
...MAXIMUM WATER-CEMENTITIOUS RATIO	0.48
...MAXIMUM AGGREGATE SIZE	3/4"
...SLUMP LIMIT	4" +/- 1"
...AIR CONTENT	YES 4% to 6%
SURFACES	
...MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS F _c = 1,000 PSI	
...MAXIMUM WATER-CEMENTITIOUS RATIO	0.55
...MAXIMUM AGGREGATE SIZE	1 1/2"
...SLUMP LIMIT	6" +/- 1"
...AIR CONTENT	NO

STEEL/METAL:

REINFORCING STEEL:	
...ALL ASTM A615, GRADE 60, DEFORMED	Fy = 40,000 PSI
...STEEL WELDED WIRE REINFORCEMENT, FLAT SHEETS	Fy = 60,000 PSI

STRUCTURAL STEEL:	
...ROLLED WIDE FLANGE SHAPES, ASTM A992 GRADE 50	Fy = 50,000 PSI
...CHANNELS, ANGLES, AND S SHAPES, ASTM A36	Fy = 36,000 PSI
...PLATE AND BAR, ASTM A36	Fy = 36,000 PSI
...TUBE SHAPES, ASTM A500 GRADE B	Fy = 46,000 PSI
...PIPE ASTM A53, TYPE E or S, GRADE B	Fy = 46,000 PSI
...ALL OTHER ROLLED SHAPES, ASTM A36	Fy = 36,000 PSI

STRUCTURAL BOLTS:	
...HIGH STRENGTH BOLTS, NUTS, & WASHERS	ASTM A325
...ZINC-COATED HIGH STRENGTH BOLTS, NUTS, & WASHERS	ASTM A325
...STAINLESS STEEL BOLTS, NUTS, & WASHERS	ASTM F593
...SHEAR CONNECTORS (GRADES 1015 THRU 1020)	ASTM A108
...THREADED RODS	ASTM A36
...CLEVIS & TURNBUCKLES (GRADE 1035)	ASTM A108
...EYE BOLTS & NUTS (GRADE 1030)	ASTM A108
...ANCHOR BOLTS (GRADE 36)	ASTM F1554

WELDED CONNECTIONS:	
...WELDING ELECTRODES	E70XX
	E60XX FOR WELDING REINF.

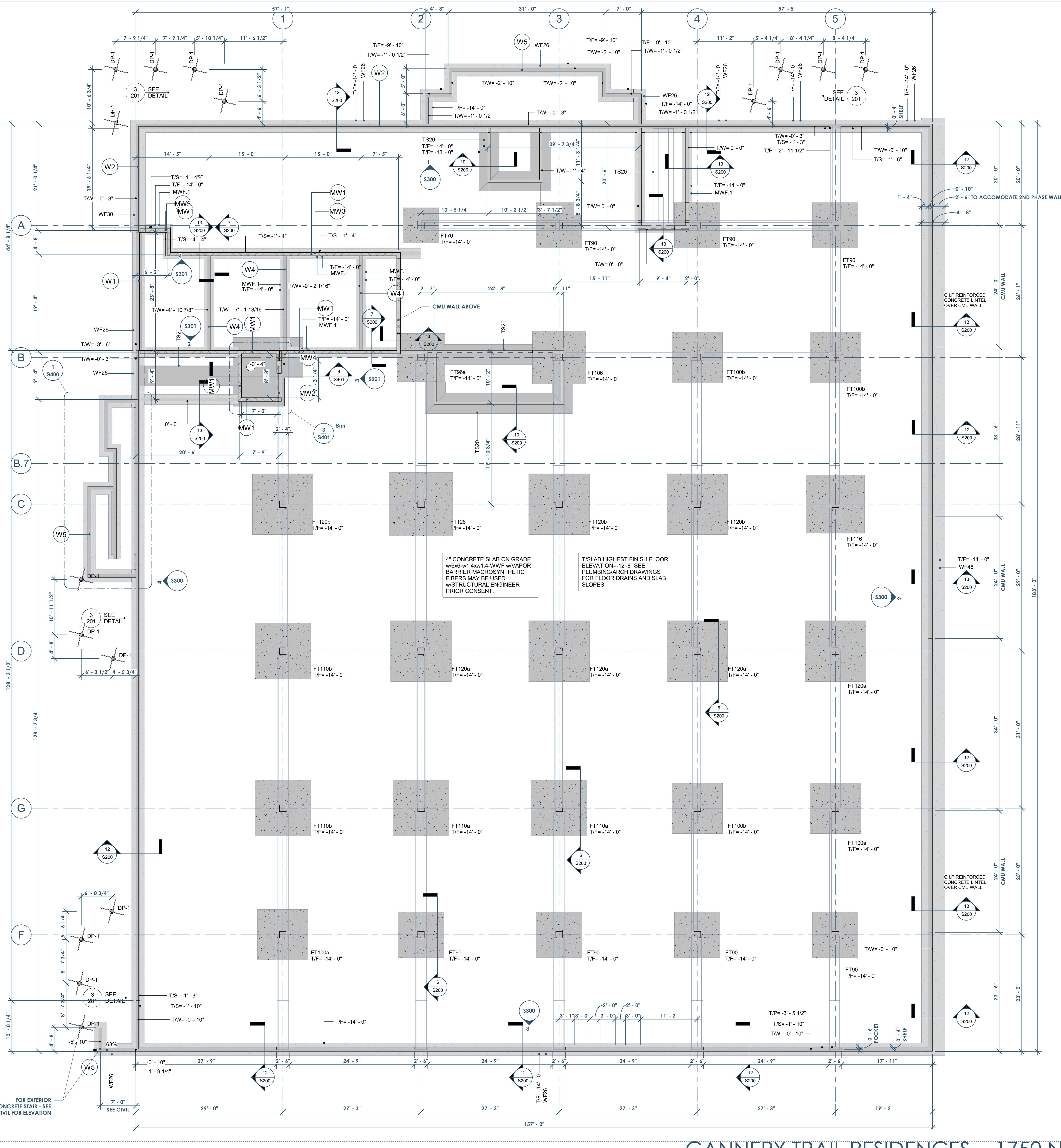
MASONRY:	F'm = 2,000 PSI

MASONRY MORTAR:	
...TYPE "M" MORTAR BELOW GRADE	
...TYPE "M" or "S" ABOVE GRADE	

GROUT BELOW BASE PLATES & BEARING PLATES:	
...NONMETALLIC, SHRINKAGE-RESISTANT	ASTM C1107

SOIL DESIGN VALUES:	

<tbl_r cells="2" ix="2" max



MASONRY WALL REINFORCING SCHEDULE				
MARK	WALL THICKNESS	VERTICAL REINFORCEMENT & SPACING	REINFORCEMENT LOCATION IN CELL CENTER	REINFORCEMENT LOCATION IN CELL INSIDE FACE
MW.1	8"	#5 AT 48" o/c MAX		
MW.2	8"	#6 AT 16" o/c MAX		

MASONRY WALL REINFORCING SCHEDULE NOTES:
1. GROUT CONCRETE MASONRY UNITS SOLID FULL HEIGHT OF BUILDING AT REINFORCEMENT LOCATIONS.
2. UNLESS NOTED, USE #5 REINFORCEMENT FOR ALL VERTICAL REINFORCEMENT.
3. PROVIDE CONCRETE MASONRY UNIT WALL REINFORCING ABOVE AND BELOW ALL MASONRY OPENINGS: EXTEND THE LENGTH OF THE REBARS BY 23" OR 10 BAR DIAMETERS PAST THE EDGE OF THE OPENING.
4. REINFORCEMENT TO BE HOT-DIPPED GALVANIZED.
5. PROVIDE STANDARD (W1) HORIZONTAL JOINT REINFORCING AT 10' ON CENTER VERTICALLY (8' ON CENTER IN PARAPET WALLS) UNO.
6. MASONRY FIREWALL CONSTRUCTION ASSUMES MASONRY BLOCKS COMPRISED OF LIMESTONE.

MASONRY WALL FOOTING SCHEDULE			
MARK	WIDTH	THICKNESS	LONGITUDINAL
MWF.1	2'-0"	1'-0"	(2) #5
MWF.2	3'-0"	1'-2"	(3) #5

MASONRY WALL FOOTING SCHEDULE:
1. REFER TO STRUCTURAL NOTES SHEET FOR LAPs IN STEEL REINFORCEMENT.
2. REFER TO FOUNDATION PLAN FOR TOP OF FOOTING ELEVATIONS.
3. ALL FOOTING EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.

THICKENED SLAB SCHEDULE			
MARK	DIMENSIONS	REINFORCEMENT	REMARKS
TS20	2'-0" x (CONT.)	THICKENED SLAB, REFER TO 11/	

THICKENED SLAB SCHEDULE NOTES:
1. REFER TO STRUCTURAL NOTES SHEET FOR LAPs IN STEEL REINFORCEMENT.
2. REFER TO FOUNDATION PLAN FOR TOP OF FOOTING ELEVATIONS.
3. ALL FOOTING EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.

WALL FOOTING SCHEDULE			
MARK	DIMENSIONS	REINFORCEMENT	
	WIDTH	THICKNESS	LONGITUDINAL
WF26	2'-6"	1'-2"	(3) #5
WF30	3'-0"	1'-2"	(3) #5
WF48	4'-0"	1'-2"	(5) #5

COLUMN FOOTING SCHEDULE NOTES:
1. REFER TO STRUCTURAL NOTES SHEET FOR MINIMUM COVER REQUIREMENTS.
2. REFER TO FOUNDATION PLAN FOR TOP OF FOOTING ELEVATIONS.
3. ALL FOOTING EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.
4. ALL LAPs IN STEEL REINFORCING SHALL BE CLASS "B" LAP SPLICES UNLESS NOTED OTHERWISE.

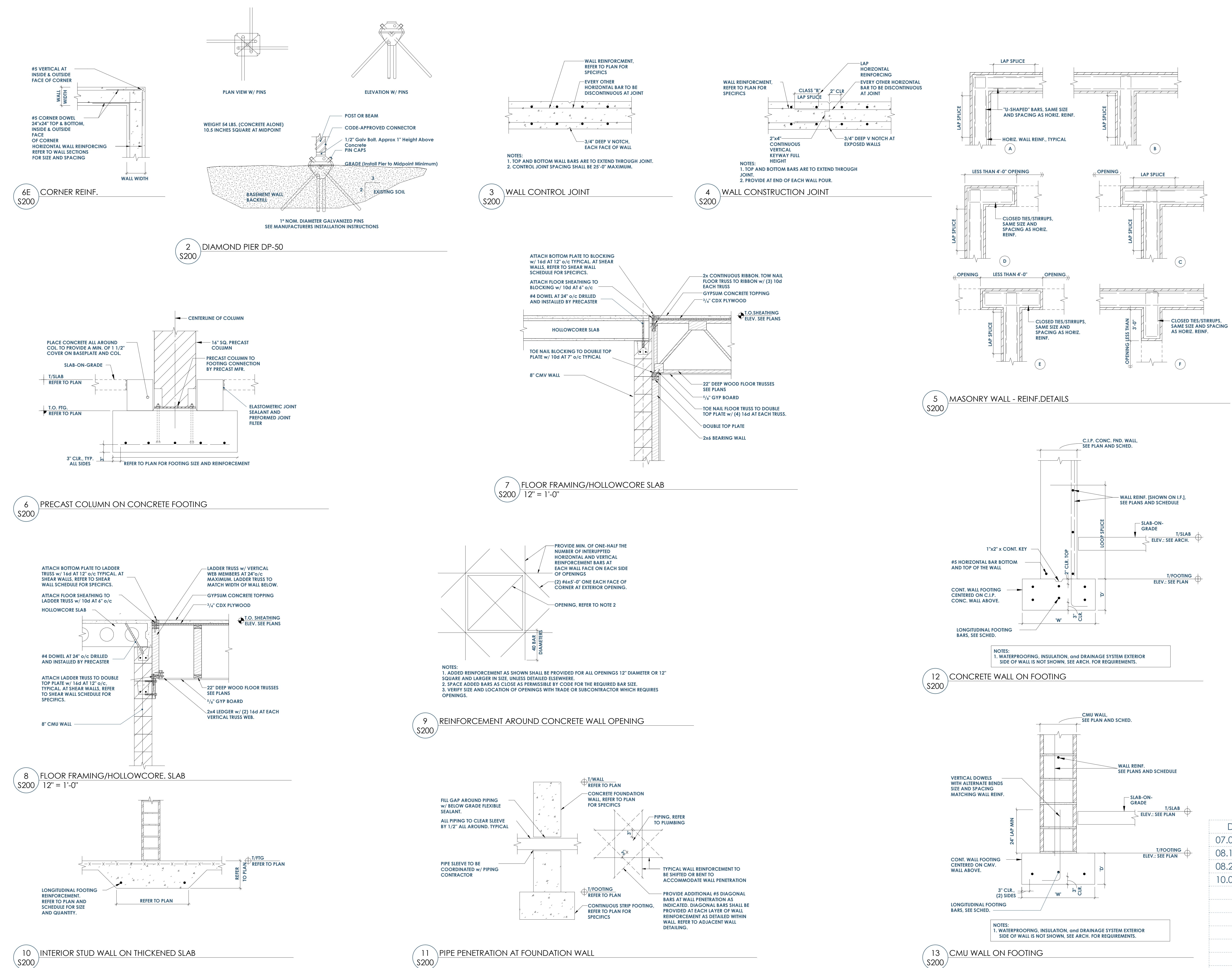
COLUMN FOOTING SCHEDULE							
Type Mark	Type	No.	El @ Top	Dimensions	Bottom Reinforcing	Type	Comments
				Width	Length	Volume	
FT70	FT70 - 7-0x7-0x1-8	1	-14'-0"	7'-0"	7'-0"	81.67 CF	(10) #7 (10) #7
FT90	FT90 - 9-0x9-0x2-1	7	-14'-0"	9'-0"	2'-1"	168.75 CF	(10) #8
FT96a	FT96a - 9-0x9-6x2-6	1	-14'-0"	9'-6"	2'-6"	225.63 CF	(10) #7
FT100a	FT100a - 10-0x10-0x2-2	1	-14'-0"	10'-0"	2'-1"	208.33 CF	(11) #8
FT100b	FT100b - 10-0x10-0x2-3	3	-14'-0"	10'-0"	2'-3"	225.00 CF	(11) #8
FT106	FT106 - 10-6x10-6x2-6	10	-14'-0"	10'-6"	2'-6"	275.63 CF	(11) #8
FT110b	FT110b - 11-0x11-0x2-3	2	-14'-0"	11'-0"	2'-3"	272.25 CF	(12) #8
FT110c	FT110c - 11-0x11-0x2-4	2	-14'-0"	11'-0"	2'-4"	302.50 CF	(12) #8
FT110d	FT110d - 11-0x11-0x2-6	2	-14'-0"	11'-0"	2'-6"	330.63 CF	(12) #8
FT116	FT116 - 11-6x11-6x2-6	1	-14'-0"	11'-6"	2'-6"	432.00 CF	(13) #8
FT120a	FT120a - 12-0x12-0x3-0	4	-14'-0"	12'-0"	3'-0"	504.00 CF	(13) #8
FT120b	FT120b - 12-0x12-0x3-0	3	-14'-0"	12'-0"	3'-6"	546.88 CF	(13) #8
FT126	FT126 - 12-0x12-0x3-6	3	-14'-0"	12'-6"	3'-6"		

COLUMN FOOTING SCHEDULE:
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2. REFER TO FOUNDATION PLAN FOR TOP OF FOOTING ELEVATIONS.
3. ALL FOOTING EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.

CONCRETE WALL REINFORCING SCHEDULE				
MARK	TYPE	THICKNESS	REINFORCEMENT	REMARKS
W1	CONCRETE	14"	5#s AT 18" o.c. 5#s AT 12" o.c.	inside face
W2	CONCRETE	10"	5#s AT 12" o.c.	inside face
W4	CONCRETE	8"	4#s AT 12" o.c. 3#s AT 12" o.c.	centered in wall thickness
W5	CONCRETE	8"	4#s AT 12" o.c.	inside face

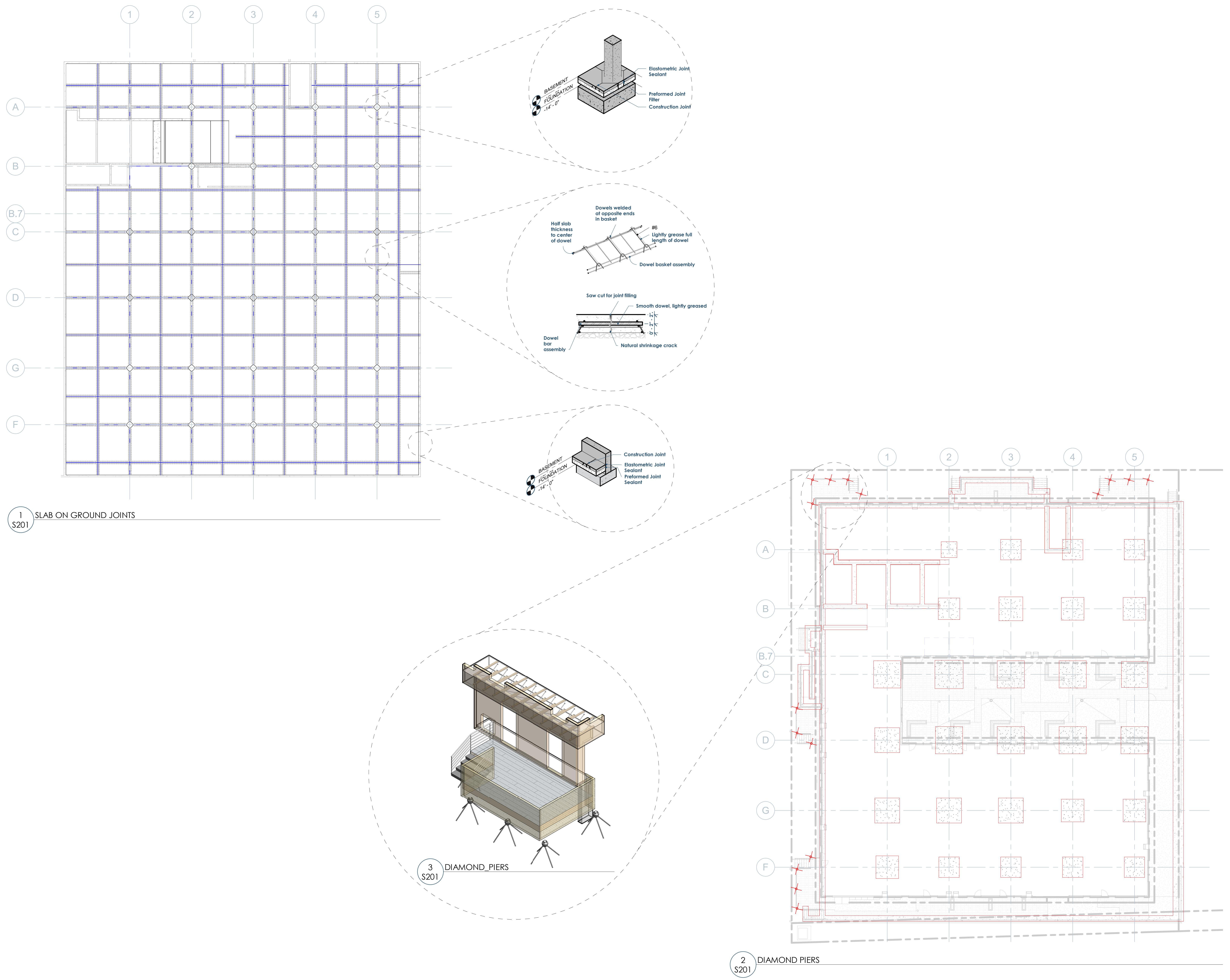
CONCRETE WALL REINFORCING SCHEDULE NOTES:
1. REFER TO STRUCTURAL NOTES SHEET FOR LAPs IN STEEL REINFORCEMENT.
2. COORDINATE AND VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS AND EXIST. CONDITIONS

Date	Description
07.08.2019	Footing/Foundation Permit
08.15.2019	75% CD Set
08.21.2019	Permit
10.09.2019	IFC - Foundation



STRUCTURAL DETAILS
CANNERY TRAIL RESIDENCES - 1750 N OXFORD AVE. - EAU CLAIRE, WI

Date	Description
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CANNERY TRAIL RESIDENCES - 1750 N OXFORD AVE. - EAU CLAIRE, WI

STRUCTURAL DETAILS

S201

Description

Building/Foundation Permit

Permit

IFC - Foundation



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Architect: OpeningDesign
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General Contractor: ROYAL CONSTRUCTION
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jim@royalbuilt.com | 715-225-6377



Civil Engineer: CEDAR CORPORATION
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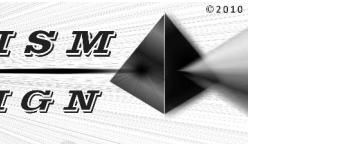
Structural Engineer: XC Structural Engineering
Calle Apolonio Morales, 628036 Madrid,
eztato@xcengineering.xyz | +34 610 56 26 37



Structural Engineer of Record: Ennovation
129 Dale-Curtain Dr, McFarland, WI 53558
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Mechanical Engineer: HOVLAND'S HVAC
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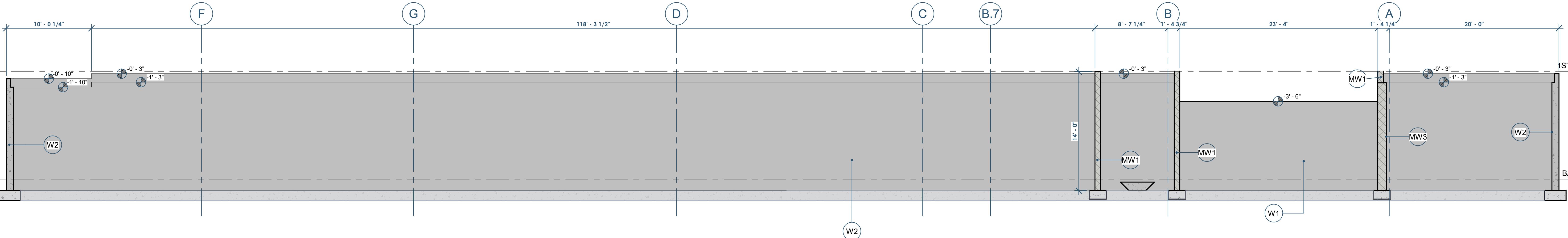
**ELECTRICAL
CONSULTANTS INC.**



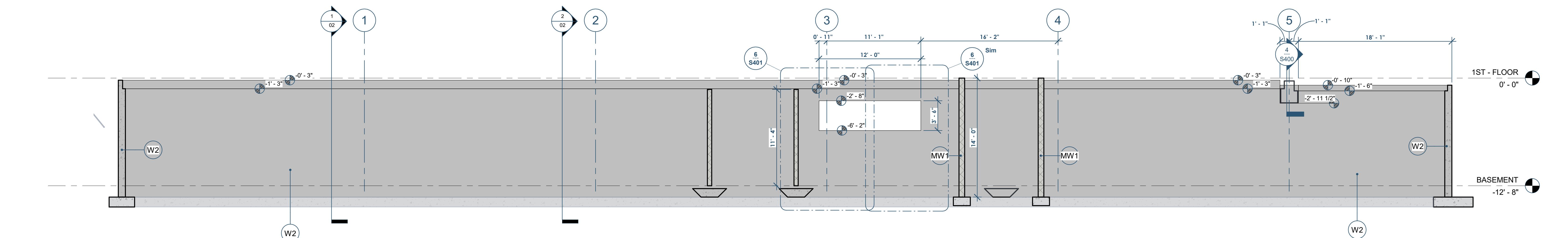
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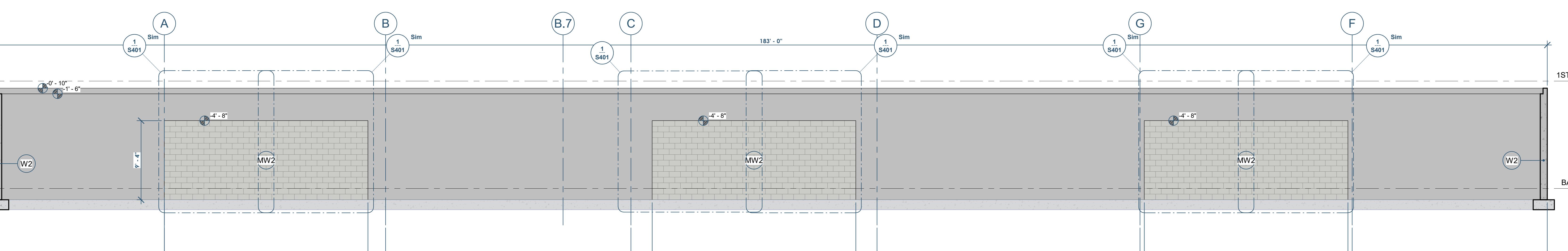
ELEVATIONS - FOUNDATION CANNERY TRAIL RESIDENCES - 1750 N OXFORD AVE. - EAU CLAIRE, WI



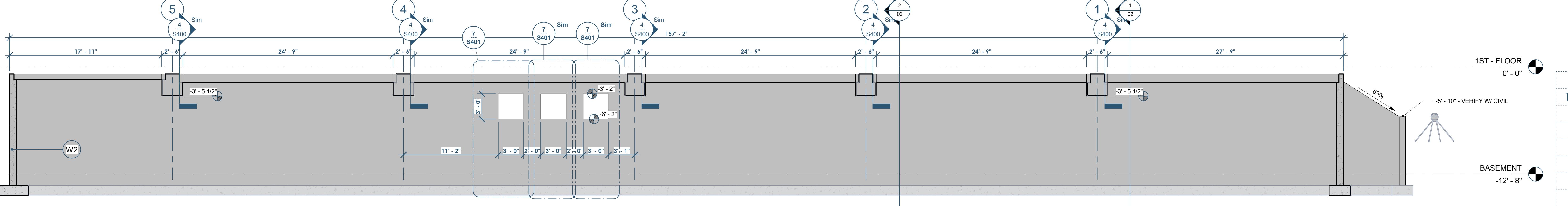
4 ELEVATION - NORTH FOUNDATION WALL
S300



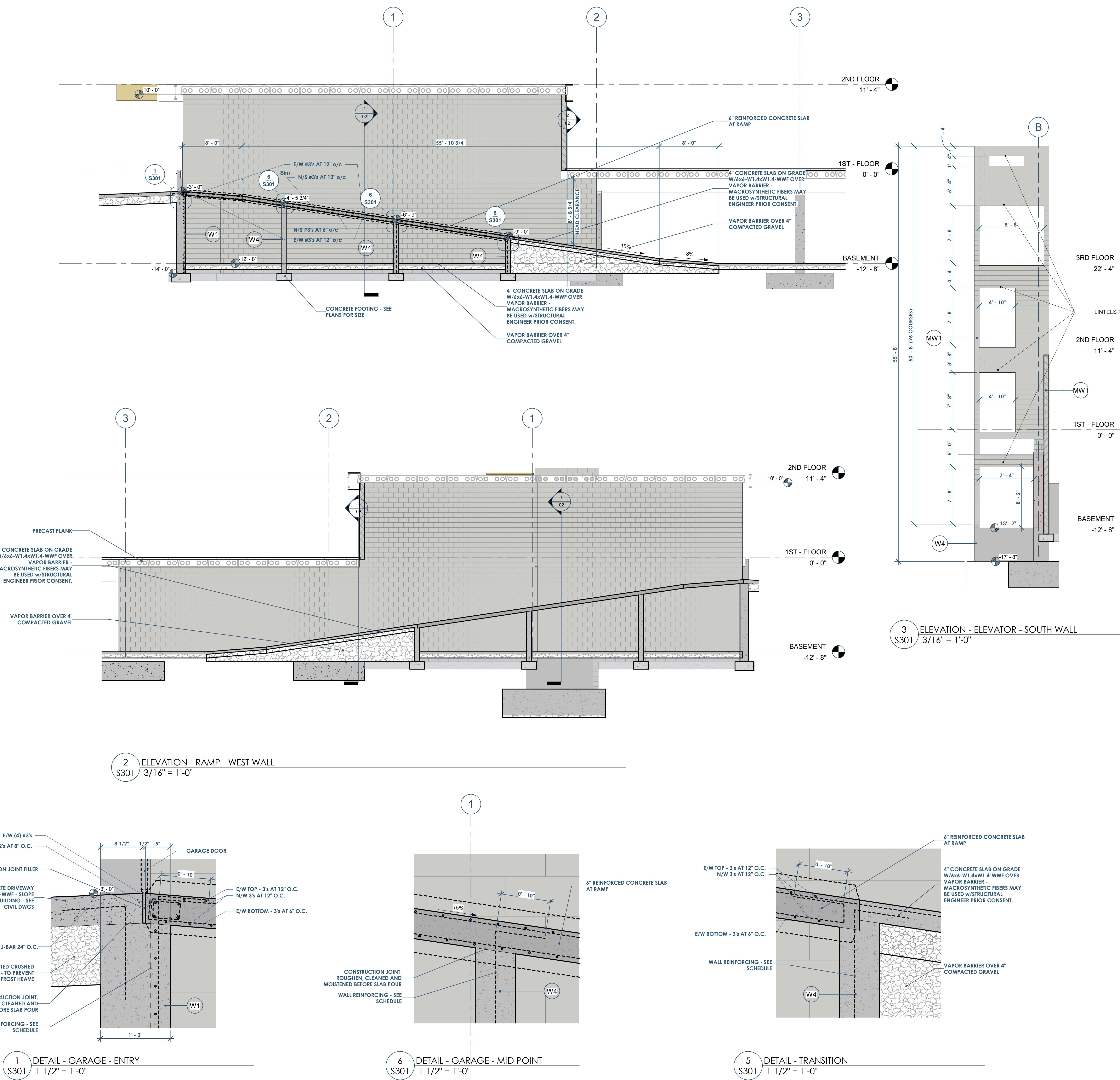
1 ELEVATION - EAST FOUNDATION WALL
S300 3/16" = 1'-0"



2 ELEVATION - SOUTH FOUNDATION WALL
S300 3/16" = 1'-0"



3 ELEVATION - WEST FOUNDATION WALL
S300 3/16" = 1'-0"



CANNERY TRAIL RESIDENCES - 1750 N OXFORD AVE. - EAU CLAIRE, WI



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Architect: OpeningDesign
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Structural Engineer: XC Structural Engineering
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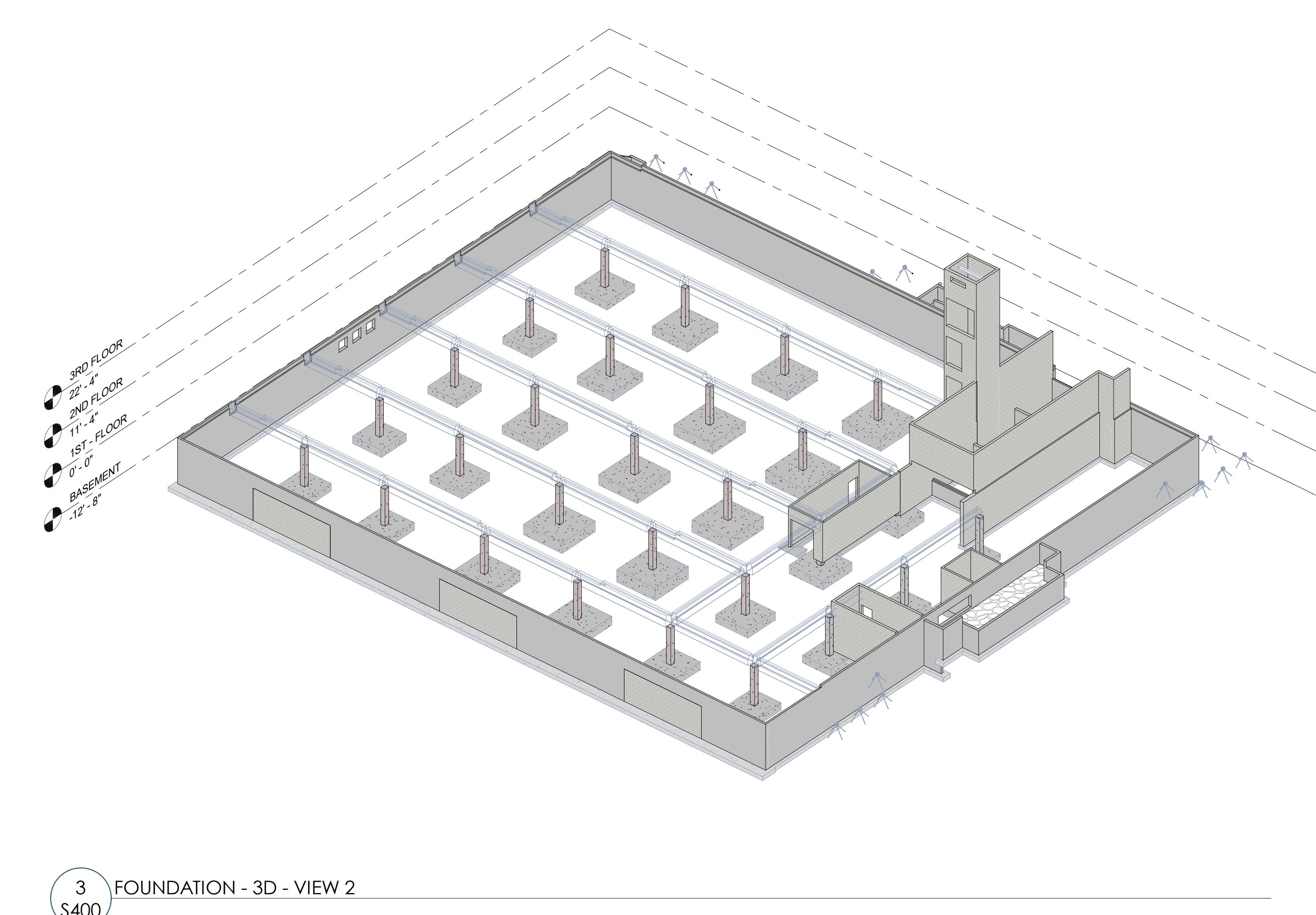
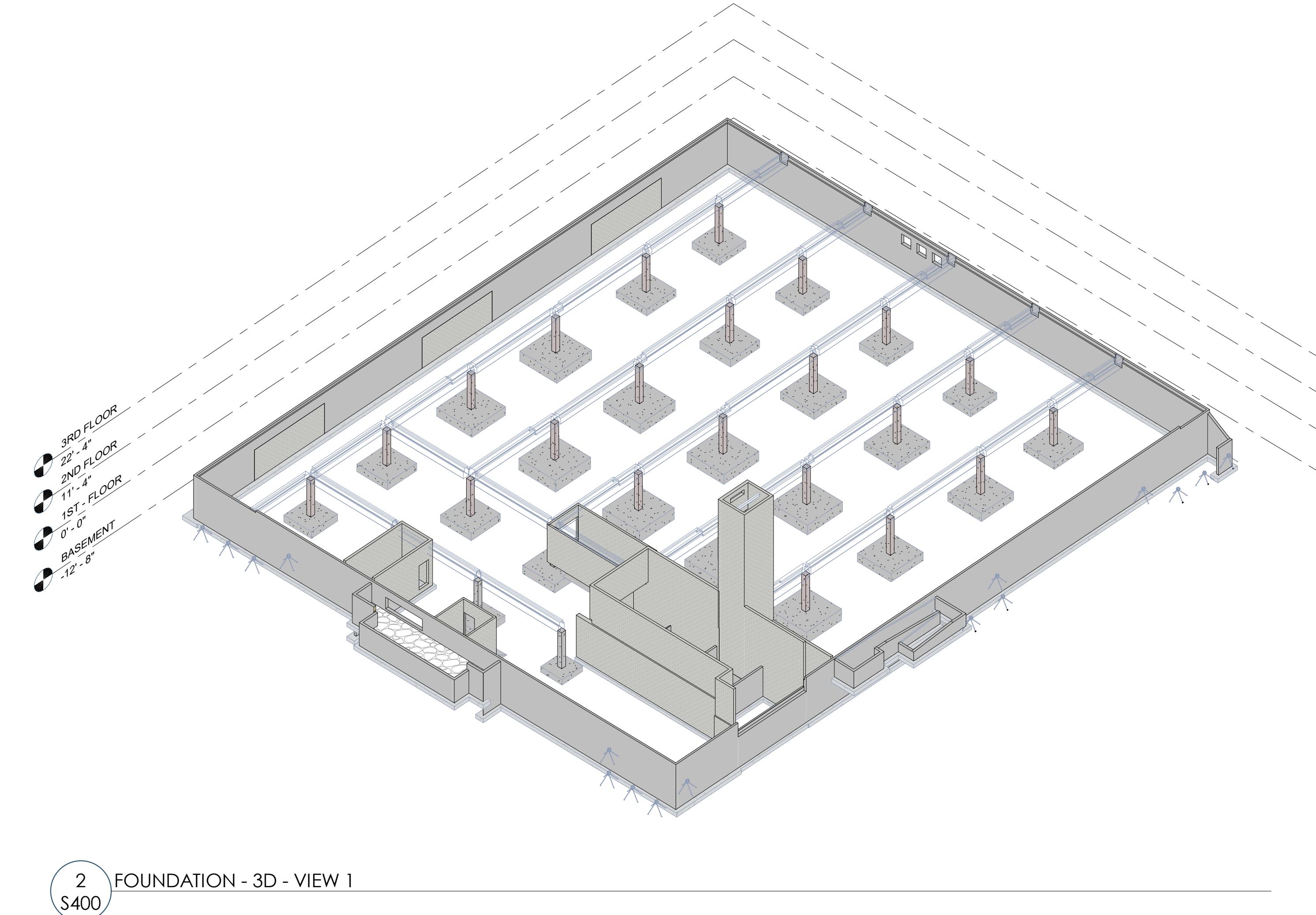
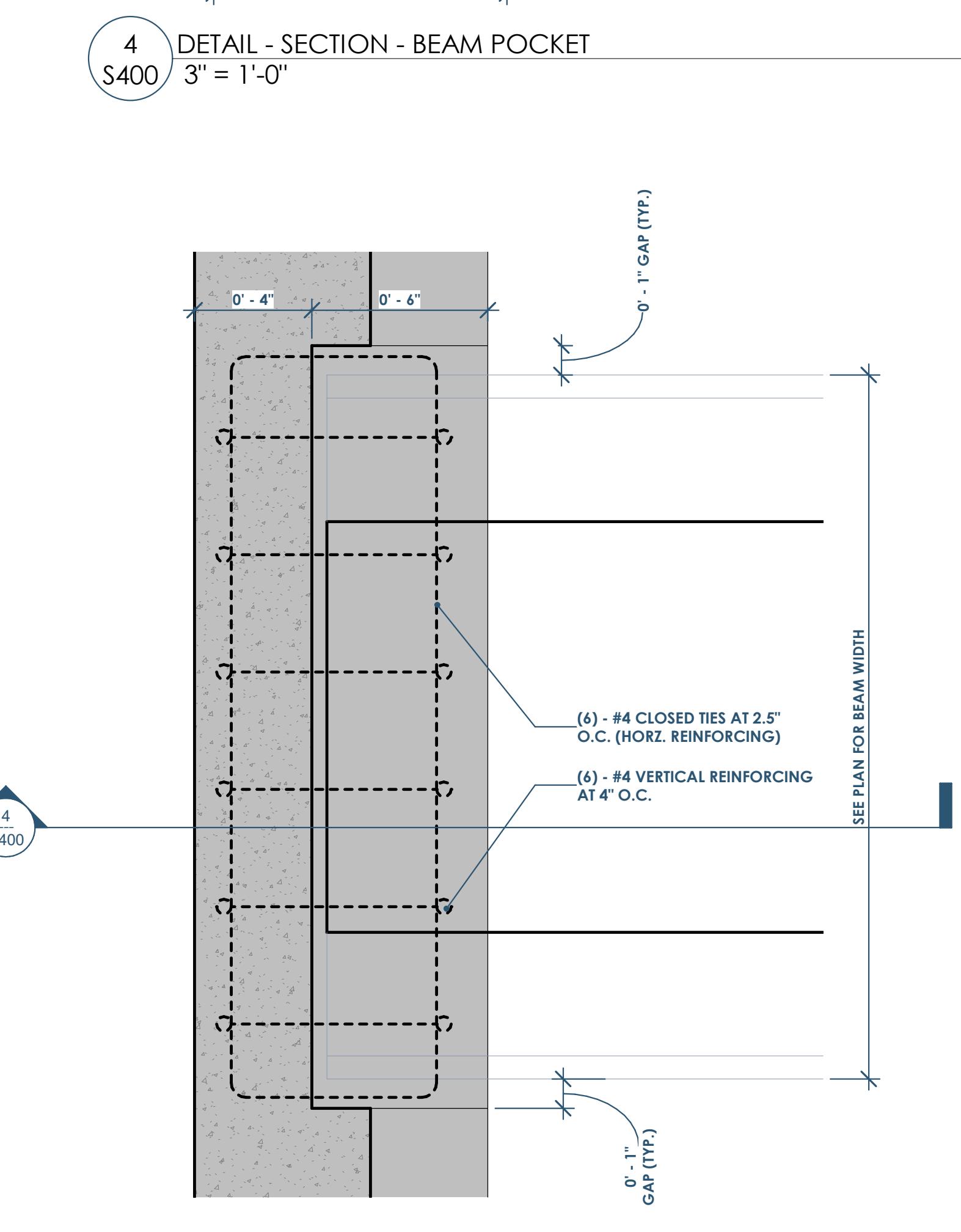
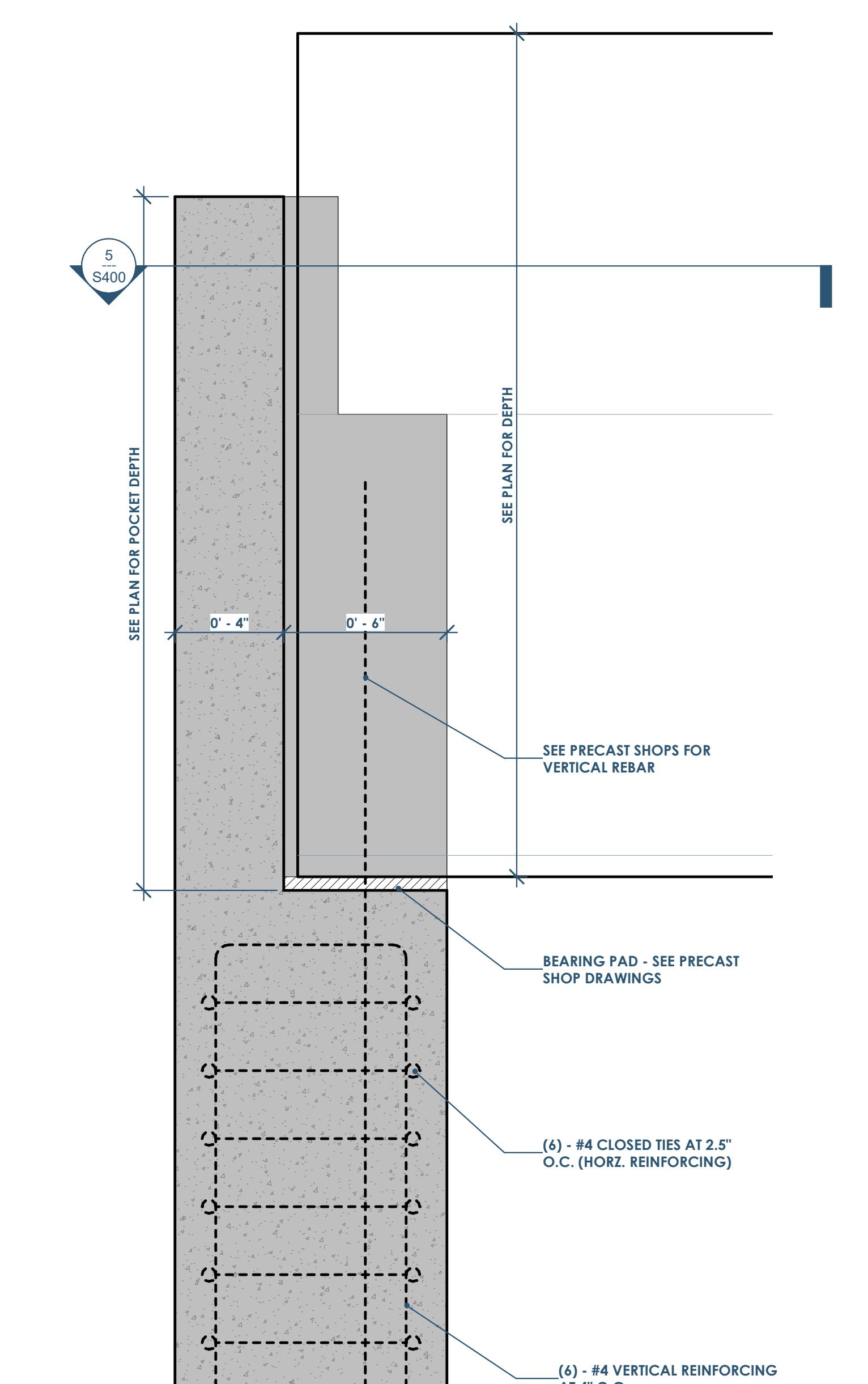
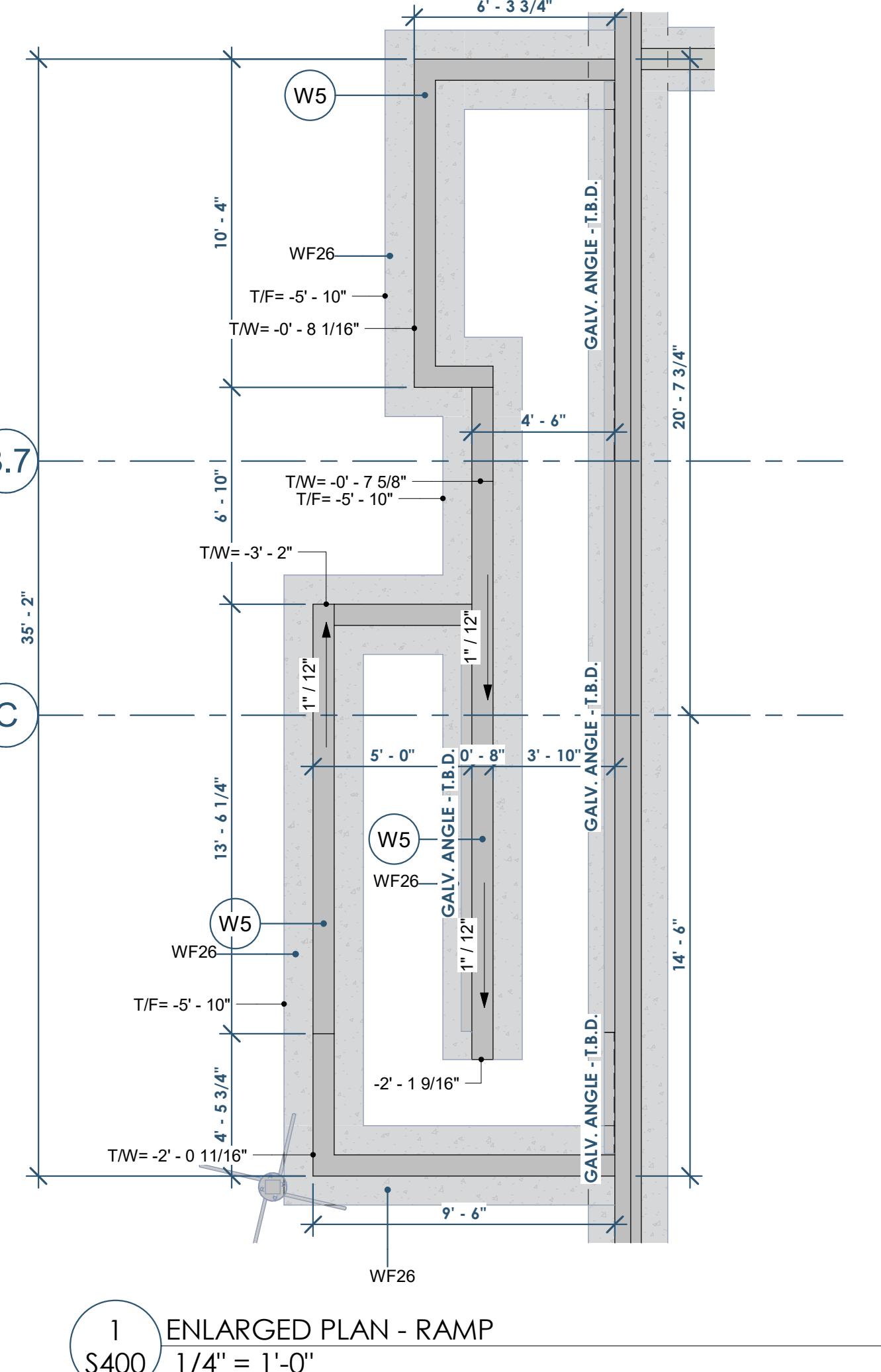
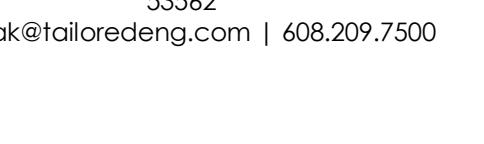
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**ELECTRICAL
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CAPITAL GROUP
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Architect: OpeningDesign
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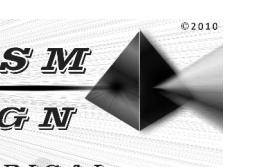
Structural Engineer: XC Structural Engineering
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Plumbing Engineer: TAILORED ENGINEERING
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