

REVIEWED  
FOR  
CODE  
COMPLIANCE  
04/07/2022



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36255 County Rd 179  
Steamboat Springs, CO 80487

970.846.1700

Structural Engineer  
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Steamboat Springs, CO 80477  
970-879-3866

# 1863 RIVER QUEEN LLC

1863 RIVER QUEEN LN  
STEAMBOAT SPRINGS  
COLORADO

REVISIONS:		
REV. DATE:	REV. NAME:	REV. NO.:
9/17/21	EXCAVATION REVISIONS	1
10/15/21	OWNER CHANGES	2

NOTES:  
WHOLE SHEET

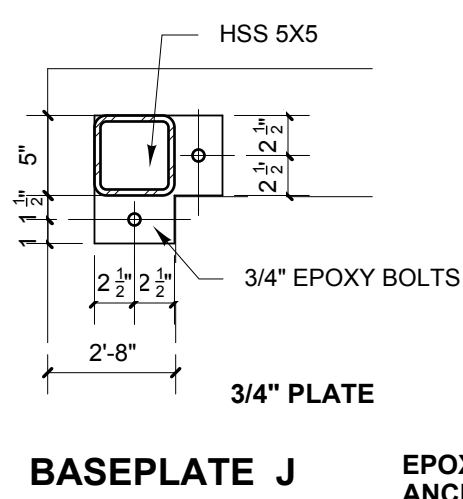
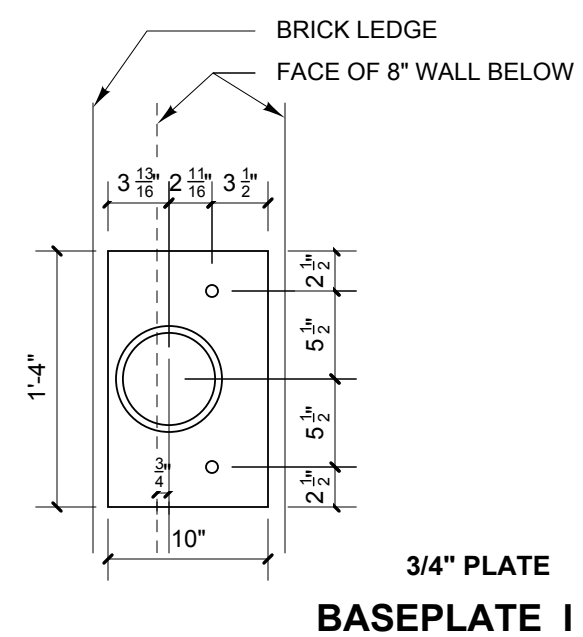
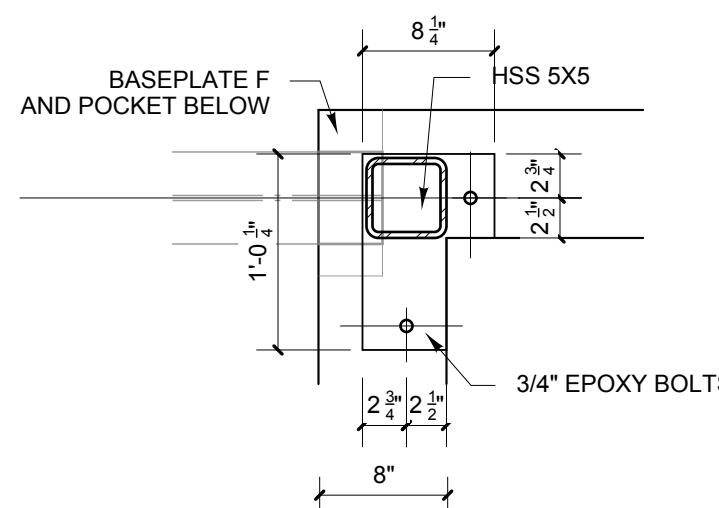
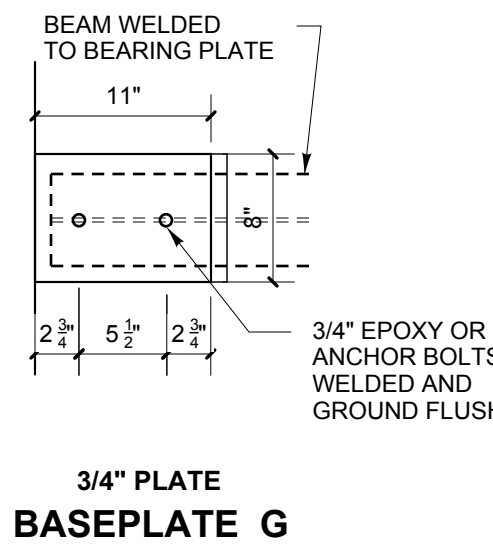
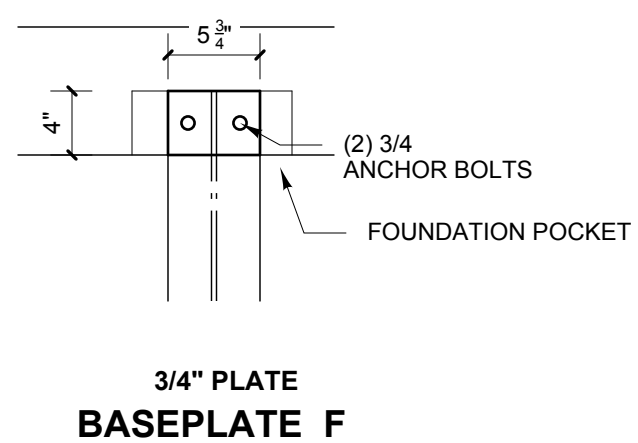
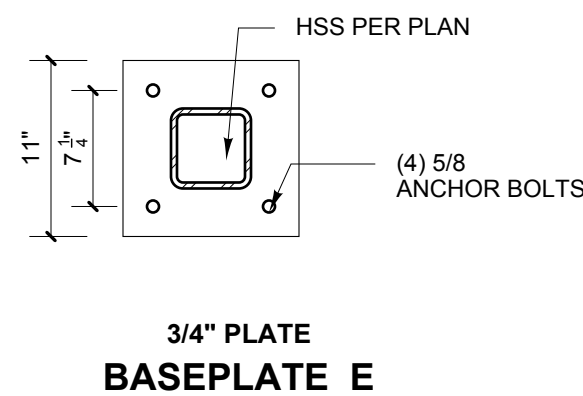
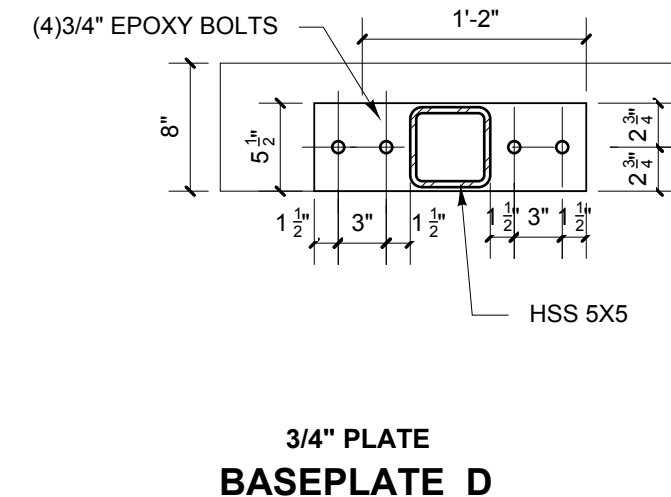
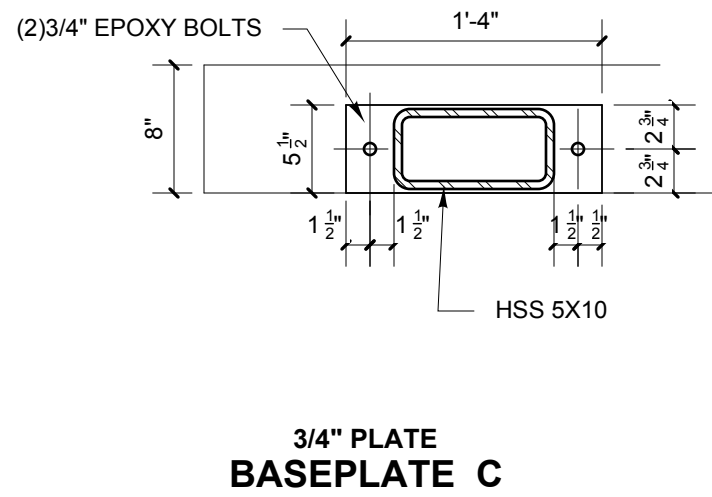
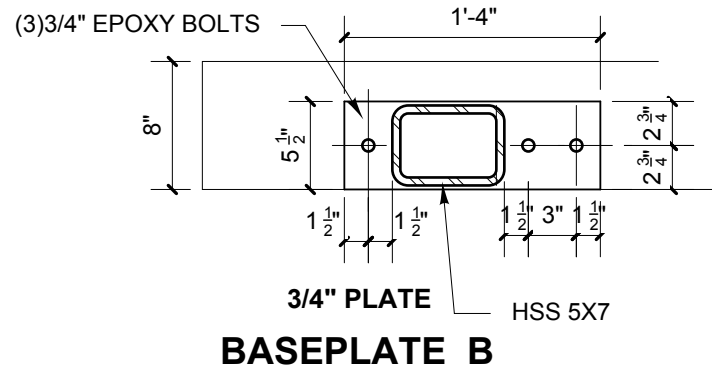
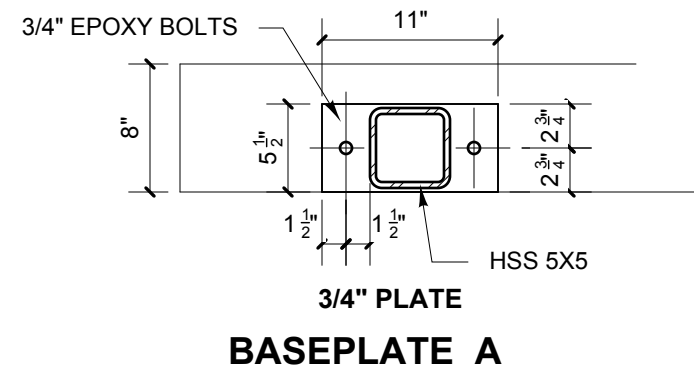
## FOUNDATION PLAN

date: 17 JULY 2021  
scale: VARIES

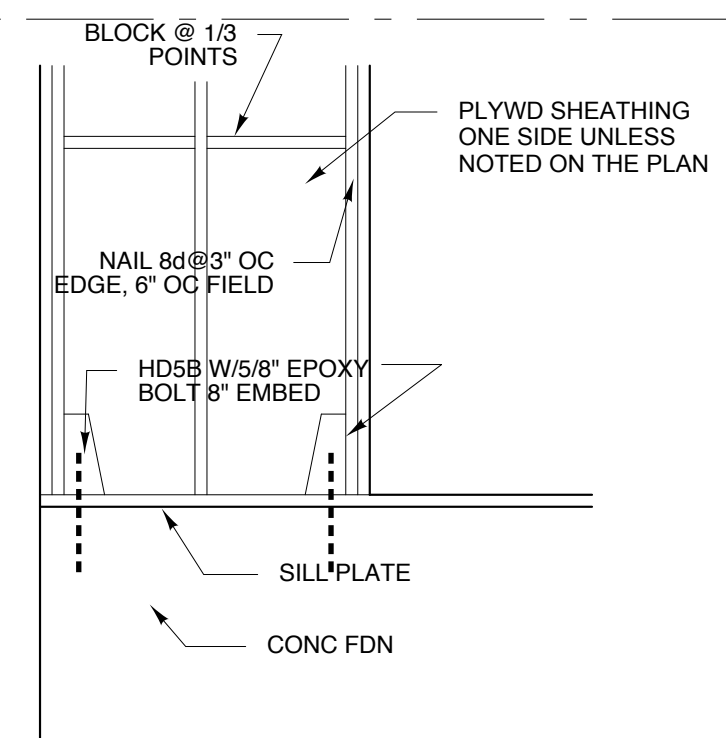
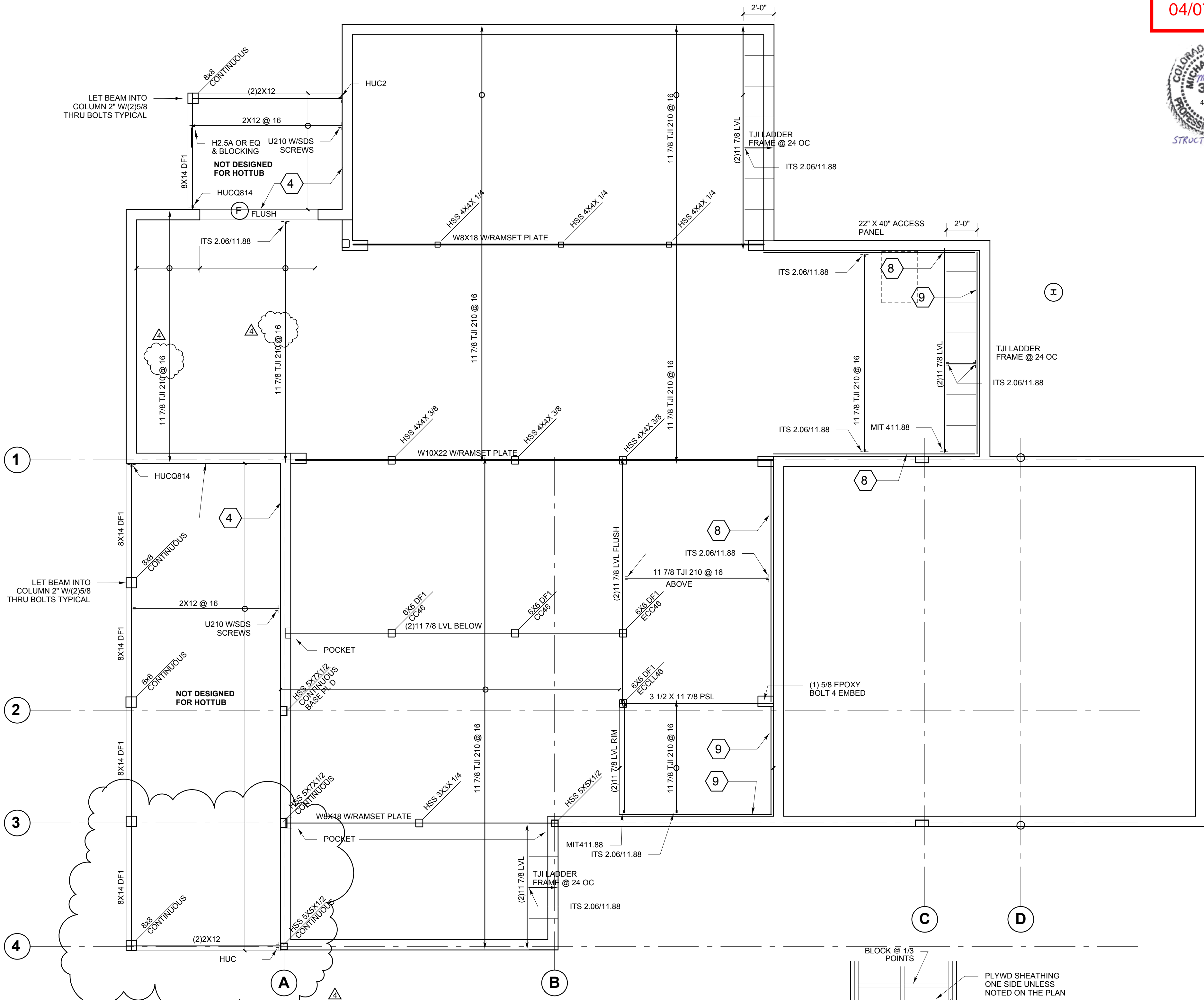
S1



FOOTING PADS					
PAD	SIZE	THICKNESS	REBAR	BASE PLATE	CONNECTOR
A	55" X 55"	20"	#4 @ 8" EA WAY DOUBLE MAT	E	NA
B	55" X 55"	20"	#4 @ 8" EA WAY DOUBLE MAT	E	NA
C	55" X 55"	20"	#4 @ 8" EA WAY DOUBLE MAT	E	NA
D	NOT USED				
E	60" X 60"	24"	#4 @ 8" OC EA WAY DOUBLE MAT	E	NA
F	63" X 63"	24"	#4 @ 8" OC EA WAY DOUBLE MAT	E	NA
G	65" X 65"	24"	#4 @ 8" OC EA WAY DOUBLE MAT	E	NA
H	26" X 26"	12"	(4) #4 EA WAY	NA	CB66
I	27" X 27"	12"	(4) #4 EA WAY	NA	CB66
J	13.5" X 13.5"	12"	(3) #4 EA WAY	NA	CB66
K	15" X 15"	12"	(3) #4 EA WAY	NA	CB66
L	27.5" X 27.5"	12"	(4) #4 EA WAY	E	NA



EPOXY BOLTS MAY BE SUBSTITUTED FOR ANCHOR BOLTS W/ 4" EMBED FOR 5/8" BLTS AND 5" EMBED FOR 3/4" BOLTS. ANCHOR BOLTS MAY BE SUBSTITUTED WITH FOR EPOXY WITH THE SAME DIAMETER AND EMBED



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WHOLE SHEET

LOWER FLOOR  
FRAMING PLAN

date: 17 JULY 2021  
scale: VARIES

## 2 STEEL BASEPLATES

S2 NON-SHRINK GROUT AND LEVELING NUTS AS REQUIRED

1" = 1'-0"

## 3 LATERAL RESTRAINT PANEL

S2

1/2" = 1'-0"

S2



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UPPER FLOOR  
FRAMING PLAN

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scale: VARIES

S3

## GENERAL STRUCTURAL NOTES

### DESIGN LIVE & SNOW LOADS

- ROOF, UNCOVERED DECK.....95 psf roof snow
- FLOORS.....40 psf Live
- GARAGE.....50 psf Live / 2000 lb point load
- WIND.....110 mph Exp B
- SEISMIC.....Ss=0.26g S1=0.068g Group I Category II

### GOVERNING SPECIFICATION

International Residential Code (IRC) 2018 Edition

### FOUNDATION DESIGN

- Design of pads and footings is based on an allowable soil bearing pressure of 3000 psf with 500 psf minimum as per NWCC soils report # 20-11997 dated 10/13/2020. Retaining wall design based on an equivalent fluid pressure of 45 pcf for imported free draining backfill as per the soils report. Soils engineer to verify all concrete is placed on adequate bearing material.
- Footings shall be placed on sandstone bedrock or properly compacted fill after clays have been removed as per the soils report.
- See soils report for additional information including excavation, removal of clay and topsoil, underslab prep, perimeter drain & surface drainage, grading, backfill, and discussions or disclaimers on expansive soils, slab movement, slope stability or site suitability. The owner should consult the soils engineer for limitations and risks.
- All soils issues should be addressed to the soils engineer. The owner or his representative are responsible for following the soils report, contacting the soils engineer, and following their recommendations. The soils report is part of the design documents and should be followed in its entirety.
- The structural design drawings are for the house and permanent foundation only. Detached retaining walls including rock retaining walls are by others.
- Design & construction considerations must be addressed to avoid slope instability. The soils engineer should review the plans to ensure their recommendations are being followed.
- Excavation, slope stability, and grading are by others. A qualified engineer experienced in site grading & drainage should prepare site grading & drainage plans. This is by others and is not part of the engineered structural design. It is the responsibility of the owner or his representative to have this done.
- The contractor must provide a construction sequencing plan for excavation, wall construction, bracing, and backfilling to the soils engineer prior to starting excavation. This is by others and is not part of the engineered structural design. It is the responsibility of the owner or his representative to have this done.
- The structural engineer is not responsible for insulation, frost protection, drainage, excavation, slope stability & sliding soils, soils issues, or construction methods. The structural engineer is responsible for structural design only and does not include non-structural work such as water or weather proofing, insulation, drainage, frost, snow or ice buildup, plumbing, soils issues, or construction methods. The structural engineer's duties are limited to design only and is not a project engineer.

### STRUCTURAL WOOD FRAMING

- Except where noted otherwise all lumber shall be Douglas Fir-Larch No. 2 or better.
- Except as noted otherwise minimum nailing shall be provided as specified in Table R602.3(1) Fastener Schedule of the IRC 2018 edition.
- Floor and roof sheathing shall be APA rated with exterior glue and graded in accordance with APA Standards.  
FLAT ROOF: 3/4" 48/24 8d@6 edge nail 8d@12 field nail  
SLOPED ROOF: 5/8" 40/20 8d@6 edge nail 8d@12 field nail  
FLOOR: 3/4" T&G 48/24 8d@6 edge nail 8d@12 field nail  
SHEAR WALL: 1/2" 24/16 8d@4 edge nail 8d@12 field nail
- Where light gage framing anchors are shown or required they shall be Simpson "Strong Tie" or equal ICBO approved connectors and shall be installed with the number and type of nails recommended by the manufacturer to develop the rated capacity.
- Glue laminated timber shall be of such stress grade to provide glue laminated beams with combination symbol 24F-V4. Beams in cantilevered or reverse bending shall be 24F-V8.
- Floor joists shall be plant fabricated I series with LVL wood flanges and plywood or OSB webs and carry ICBO approval for the composite section. Joists shall be designed to carry the full dead load and live loads of the floor and any other superimposed loads. Bridging and blocking shall be installed according to the fabricator's requirements.
- All microlam to be LVL 1.9E WS or equal, allowable bending stress 2600 psi and an allowable shear stress 285 psi. Nail 2 or 3 LVL's with 3 rows 16d @ 12, thru bolt 4 or more LVL's with 2 rows 1/2" thru bolts @24, UNO.
- All rim board to be Timber Strand LSL 1 1/4" x 11 7/8" Grade 1.3 with allowable bending stress of 1700 psi and allowable shear stress of 400 psi parallel to grain. All Timber Strand LSL beams & rafters to be Grade 1.55 with allowable bending stress of 2325 psi and allowable shear stress of 310 psi parallel to grain.
- All unlisted headers to be 2-2x8.

### CONCRETE

- Concrete to have a minimum compressive strength of 3000 psi and be reinforced with Grade 60 bar except as noted on drawing.
- All bars continuous unless noted. Additional lap splices permitted with written approval only. All splices to be a minimum of 38 bar diameters.

### MASONRY

- All blocks shall be semi-lightweight with a minimum compressive strength of 2900 psi over net area.
- Mortar shall be Type S with a minimum compressive strength of 2610 psi at 28 days.
- Minimum compressive strength of grout to be 2900 psi.
- Reinforcing bar to be grade 60 ksi.
- All grout shall be used within 1 1/2 hours of mixing and before initial set.
- Running bond shall be used unless noted otherwise.

### BACKFILLING

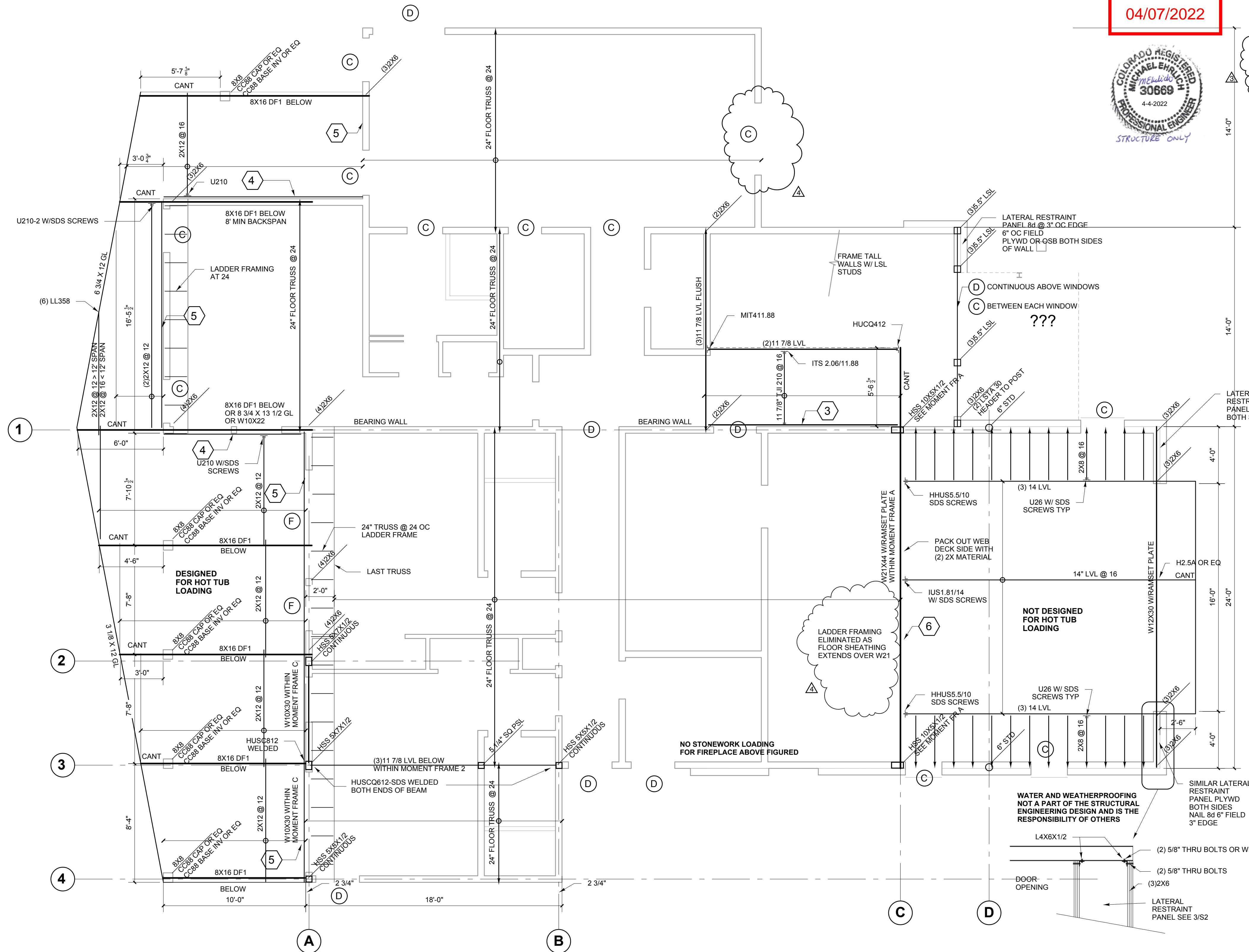
- Do not backfill against basement or retaining walls until supporting slabs and floor framing are in place and securely anchored.

### STRUCTURAL STEEL

- All bolts, including anchor bolts, shall conform to ASTM Specification A307.
- Structural steel rolled shapes, including plates and angles shall be ASTM A36. Tube shapes shall conform to ASTM A500 Grade B, 46 ksi yield. Pipe shapes shall conform to ASTM A53 Grade B.
- Except as noted, expansion bolts shall be "WEG-IT", "RED HEAD", or approved wedge type with the following minimum embedments: 5/8" dia. 2", 1/2" dia. 1-1/2". Epoxy bolts to have 6" min embed UNO.
- Except as noted, all Type "HD" tie-downs to concrete shall be secured with 5/8" epoxy bolt to foundation wall with a minimum 4" embed.
- Ramset plates attached to be steel with powder actuated 1/8" diameter drivetraps @ 16" oc staggered. Refer to manufacturer's instructions for installation.

### GENERAL

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 loads due to excavation, sliding soil, or construction equipment. Observation visits to the site by the design professionals shall not include inspection of the above items, nor will the design professionals be responsible for the contractor's means, methods, techniques, sequences for procedure of construction, or the safety precautions and the programs incident thereto.



## 1 UPPER LEVEL FLOOR FRAMING PLAN

S3

1/4" = 1'- 0"

### HEADER SCHEDULE

(A)	(2) 2X10	SINGLE 2X6 TRIMMER
(B)	(3) 2X10	SINGLE 2X6 TRIMMER
(C)	(2) 9 1/2 LVL	SINGLE 2X6 TRIMMER
(D)	(3) 9 1/2 LVL	DOUBLE 2X6 TRIMMER
(E)	(2) 11 7/8 LVL	DOUBLE 2X6 TRIMMER
(F)	(3) 11 7/8 LVL	DOUBLE 2X6 TRIMMER
(G)	(3) 14" LVL	TRIPLE 2X6 TRIMMER & DOUBLE 2X6 KINGS



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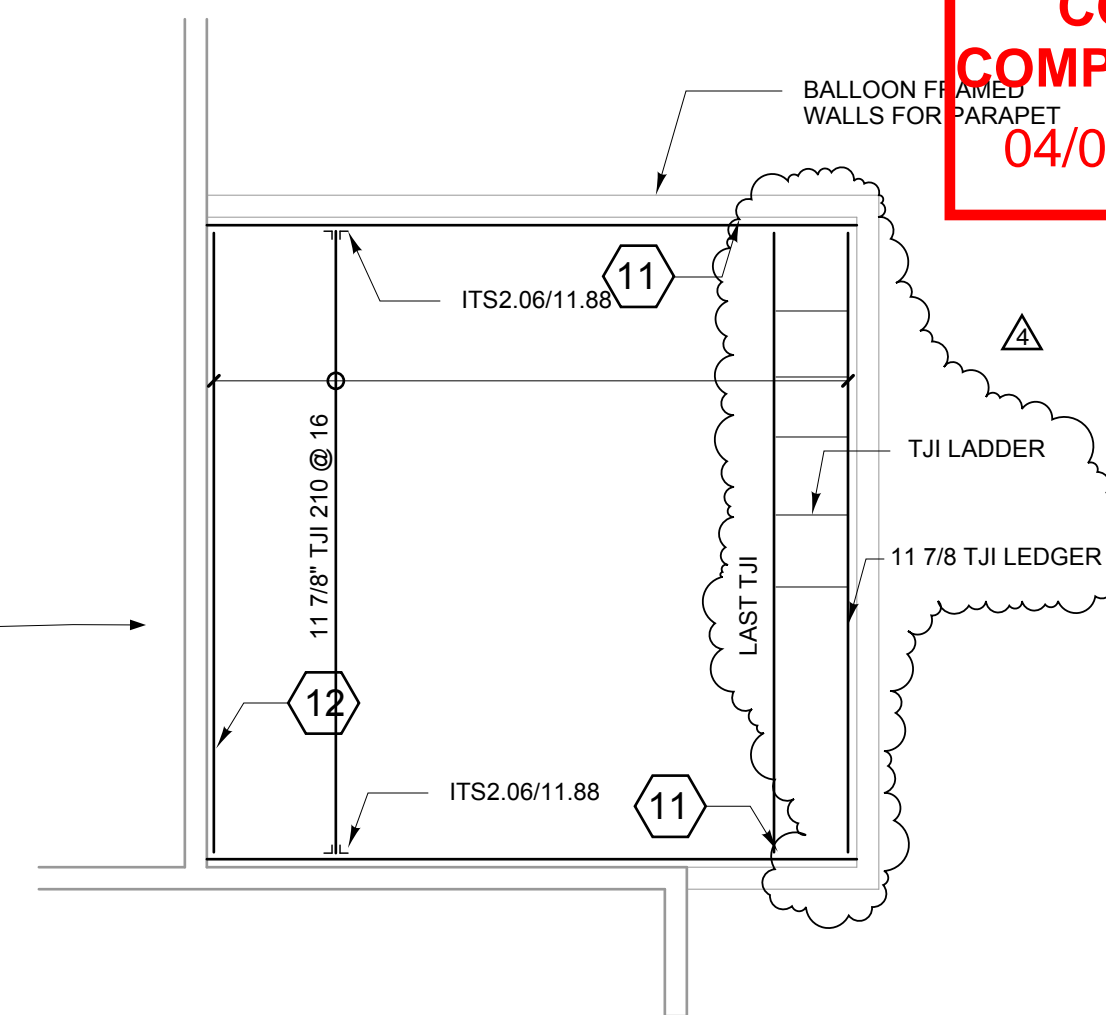
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1787 SUNLIGHT DR  
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[illegible]

# ROOF FRAMING PLAN

S4



**S4** **1/4" = 1'-0"**

S4 1/4" = 1' - 0"



1 (2) 16" LVL LEDGER  
(7) TLOK 06 EA STUD

2 16" LSL NAILER  
(2) TLOK 06 EA STUD

3 11 7/8" LVL LEDGER  
(2) LL005 @ EA STUD

4 2X12 LEDGER  
(3) LL358 @ 16

5 2X12 LEDGER  
(2) LL358 @ 16

6 11 7/8" LVL LEDGER  
(5) LL358 @ 16

7 11 7/8" LVL LEDGER  
(2) LL358 @ 16" OC

8 11 7/8" LVL LEDGER  
(2) 5/8" EPOXY BOLTS @ 16" OC, 4" EMBED

9 11 7/8" LVL LEDGER  
(2) 5/8" EPOXY BOLTS @ 32" OC, STAGGERED, 4" EMBED

10 11 7/8" LVL LEDGER  
(3) LL005 @ EACH STUD

11 11 7/8" LVL LEDGER  
(4) LL005 @ EACH STUD

12 2X6 NAILER  
(2) LL005 @ 32" OC STAGGERED INTO STUD

13 (1) 16" LVL LEDGER  
(7) LL005 @ EA STUD

NOTE: 1 3/4" WIDE LSL 1.55E MAY BE USED IN LIEU OF LVL

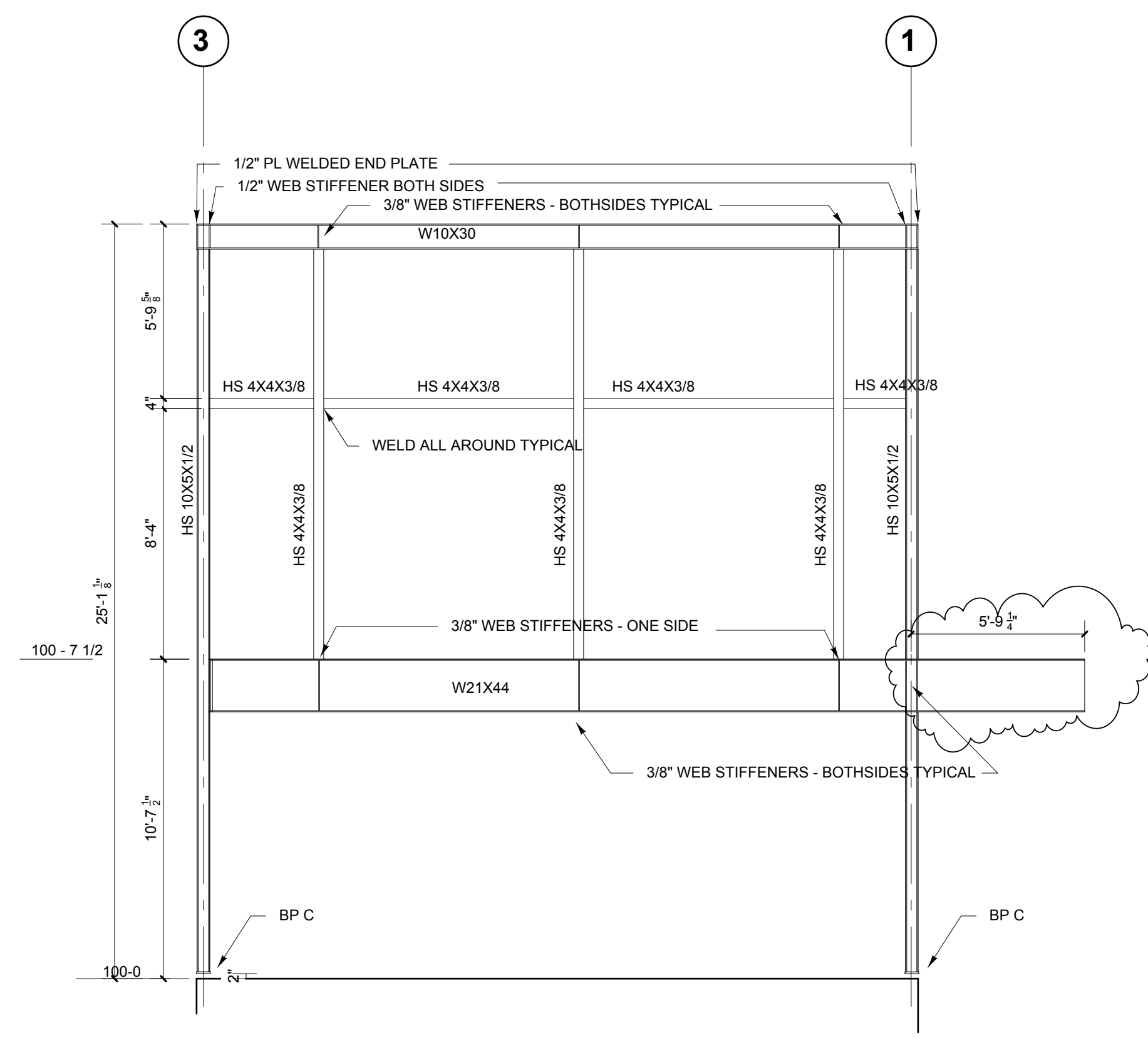
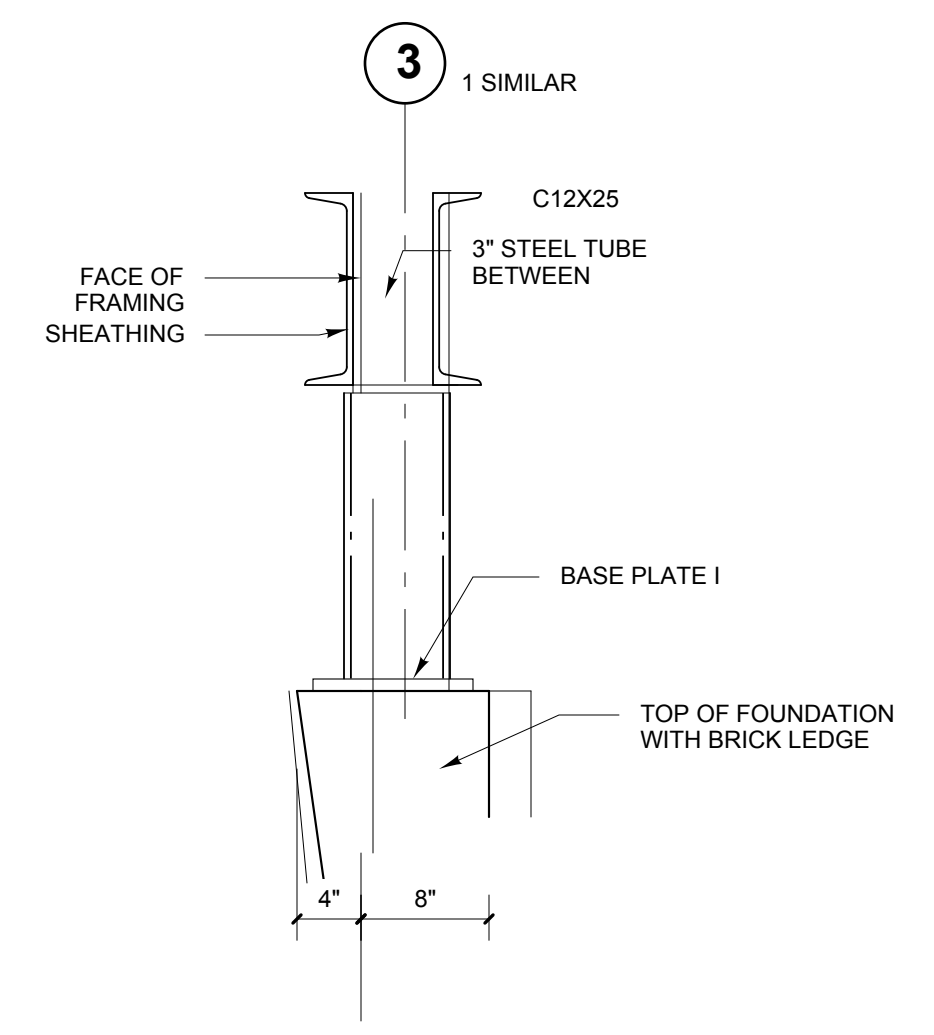
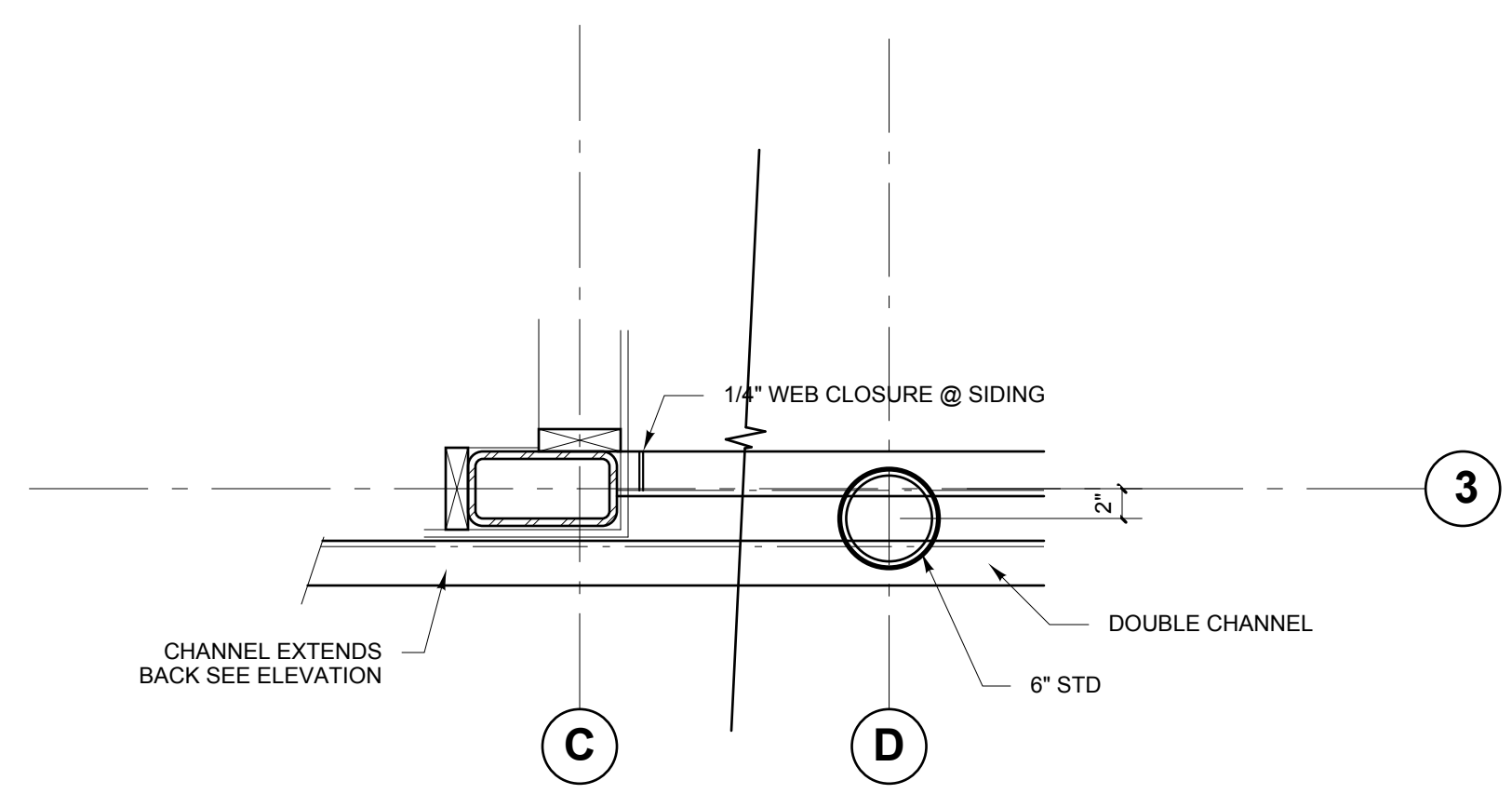
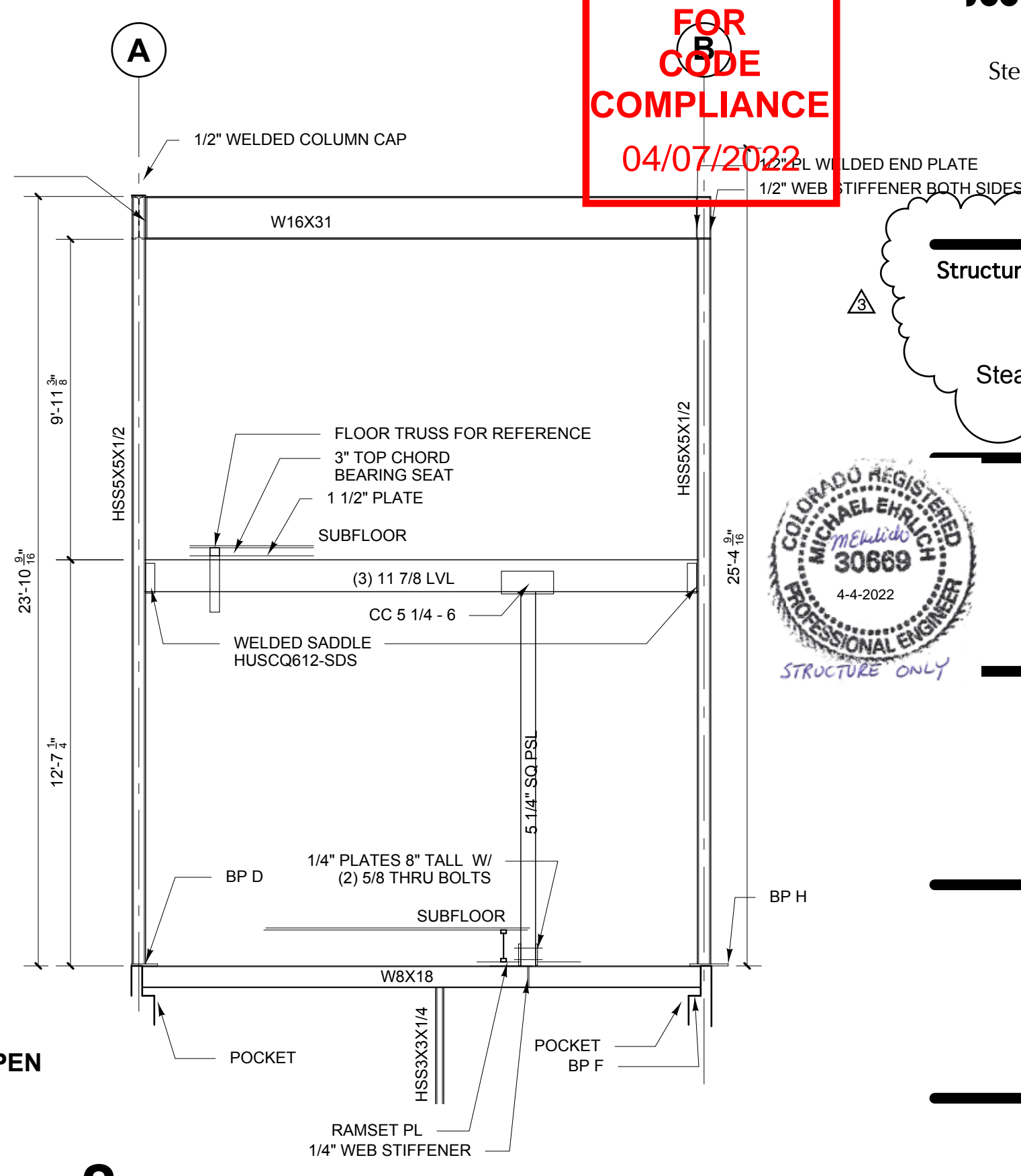
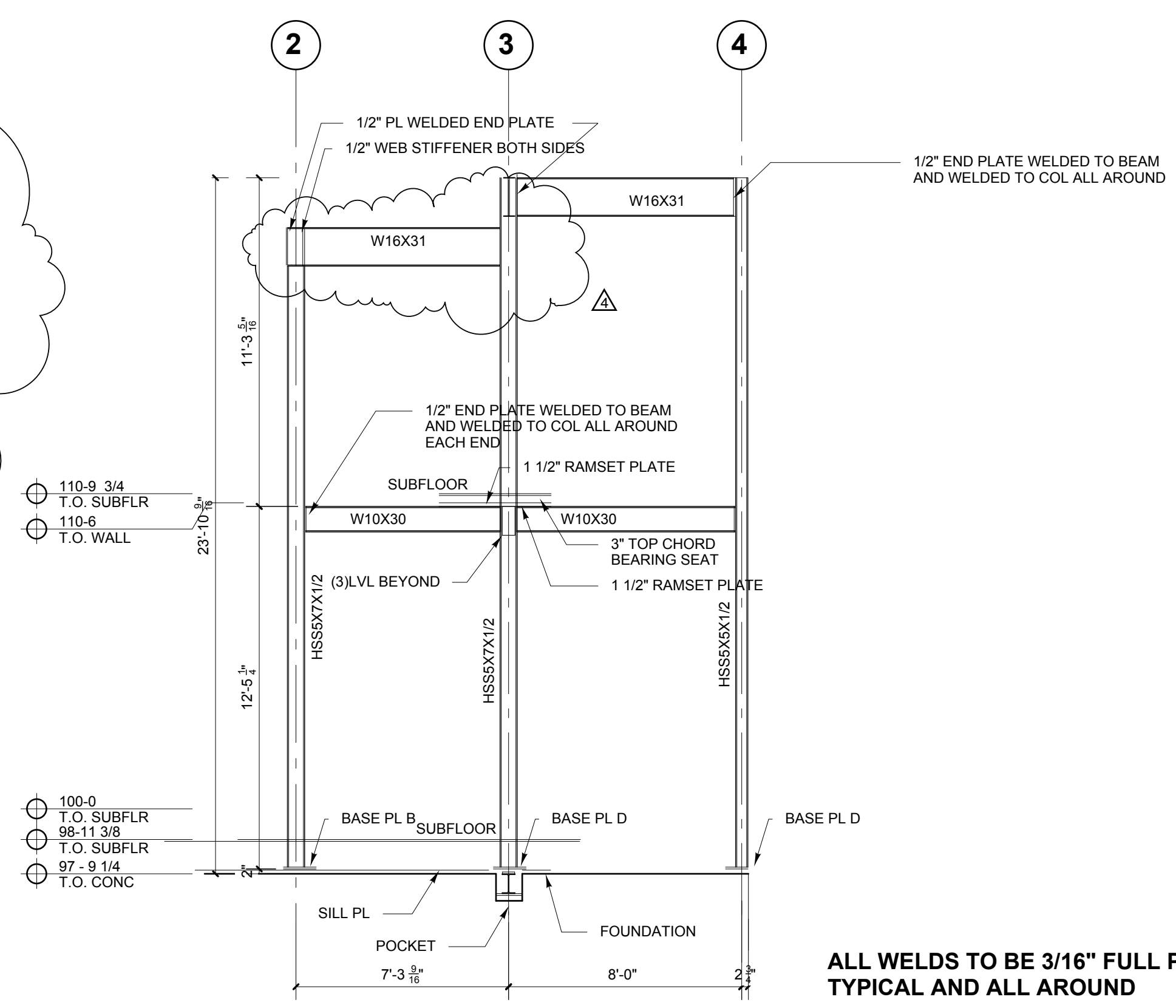
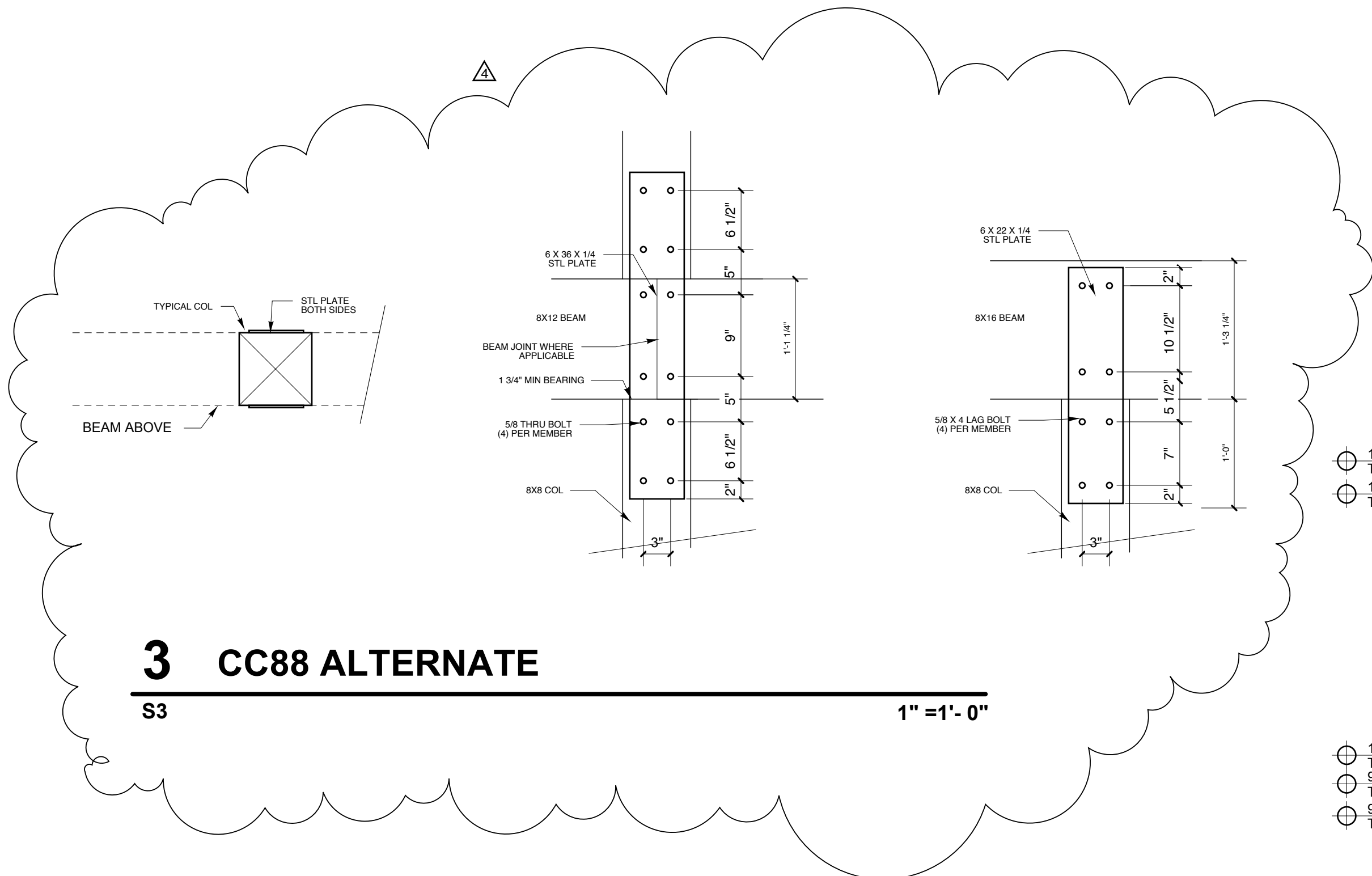
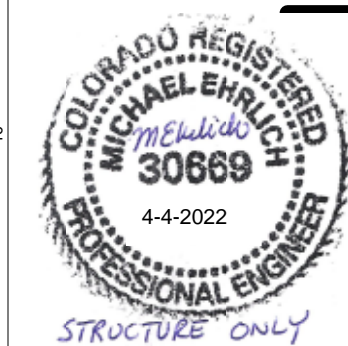
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ROOF FRAMING  
PLAN

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S5

4 STEEL DETAILS @ COLUMN AND BEAM D1 & D3  
S5 1" = 1'- 0"

3 MOMENT FRAME @ GRID D  
S5 1/4" = 1'- 0"