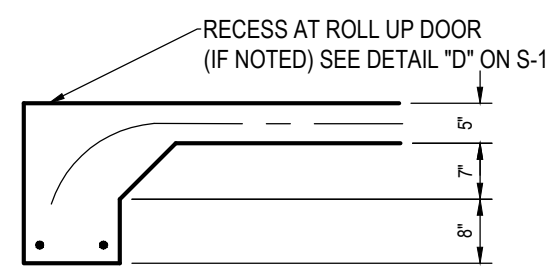


**FOUNDATION**  
(DESIGN BASED ON NUCOR BUILDING SYSTEMS QUOTE No. S0M-20156)

- GENERAL:**
- Foundation design conforms to the 7th Edition (2020) Florida Building Code, Building.
  - Foundation design based on reactions listed in the NUCOR BUILDING SYSTEMS INC. Preliminary calculations titled "RVROOF.COM" - QUOTE No. S0M-20156 dated DECEMBER 14, 2020.
  - Building design considerations shall be by others.
  - It is the intent of the Engineer of Record (Engineer) that this work be performed in conformance with all requirements of the authorities having jurisdiction over this type of construction and occupancy.
  - The contractor is responsible for the means and methods of construction and shall work in conformance with all applicable codes and regulations. It is the contractor's sole responsibility to determine erection procedure and sequence to insure the safety of the building and its component parts during erection.
  - The contractor shall verify all conditions and dimensions at the job site prior to commencing work.
  - The design of the project structure assumes an allowable soil bearing capacity of 2000 psf. It is the owner's and/or contractor's responsibility to obtain a soils exploration report. All site preparation and soil compaction requirements specified in soil report shall be followed unless more stringent requirements are specified. The Engineer shall be notified if soil conditions encountered differ from the noted assumptions.

- CONCRETE:**
- All concrete work shall be in accordance with "Building Code Requirements for Structural Concrete," ACI 318-14, and "Specification for Structural Concrete," ACI 301.
  - All concrete shall have the following minimum compressive strength at 28 days:  
Slabs on grade, footings, and misc. concrete:  $f_c=2500$ psi  
Structural slabs, walls, beams and columns:  $f_c=3000$ psi  
Designated radon zones only - all concrete:  $f_c=3000$ psi
  - Cement shall conform to "Specification for Portland Cement" (ASTM C150)
  - Aggregate shall conform to "Specification for Concrete Aggregates" (ASTM C33)
  - Water shall be clean and free of injurious amounts of oil, acids, alkalis, salts, organic material or other substances that are deleterious to concrete or steel reinforcement.
  - Reinforcing steel shall be ASTM A615 Grade 40 unless otherwise noted on the structural drawings. All reinforcing details shall conform to "Details and Detailing of Concrete Reinforcement," ACI 315, unless detailed otherwise on the structural drawings.
  - Tolerances for foundation and slab alignment as well as placement of reinforcement shall be in accordance with "Standard Tolerances for Concrete Construction and Materials," ACI 117. Footing or slab edges may be up to 1/2" inside of the sill plate.
  - All concrete slabs on grade shall be the thickness as indicated on the drawings over minimum 6 mil. polyethylene (visqueen) vapor barrier. Slabs shall be reinforced with 6x6 W1 x 4 L WWF lapped 6" at edges and ends in conformance with ASTM-A 185, or fibermesh reinforcement shall be used with a minimum fiber length of 3" to 2' complying with ASTM C 1116. The dosage amount shall be 0.75 to 3.0 pounds per cubic yard in accordance with manufacturer's recommendations.
  - Slabs on grade shall bear on structural fill which shall be clean sand free of debris and other deleterious material. Structural fill shall be compacted to a density of at least 95% of the Modified Proctor Maximum Dry Density (ASTM D1557). Terminate protection shall be provided in accordance with applicable code requirements. If soil treatment is used, the treatment shall be done after all excavation, backfilling, and compaction is completed.
  - Footings may bear upon undisturbed soil or upon structural fill. Structural fill shall be compacted to a density of at least 95% of the Modified Proctor Maximum Dry Density (ASTM D1557) for a depth of at least two feet (2'-0") below the bottom of the footing.
  - The following minimum concrete cover shall be provided for reinforcement:  
3" Concrete cast against and permanently exposed to earth  
2" Concrete exposed to earth or weather  
1 1/2" Concrete not exposed to earth or weather
  - All continuous reinforcing steel in concrete shall be lap-spliced with the following minimum lengths:  
#4 bars: Top steel 23" minimum, Bottom steel 17" minimum.  
#5 bars: Top steel 28" minimum, Bottom steel 22" minimum.  
#6 bars: Top steel 34" minimum, Bottom steel 26" minimum.
  - Reinforcement in footings shall be bent around corners or corner bars shall be used.
  - The contractor shall provide spacers, chairs, bolsters, etc., necessary to support reinforcing steel. Support items which bear on exposed concrete surfaces shall have ends which are plastic tipped or stainless steel.

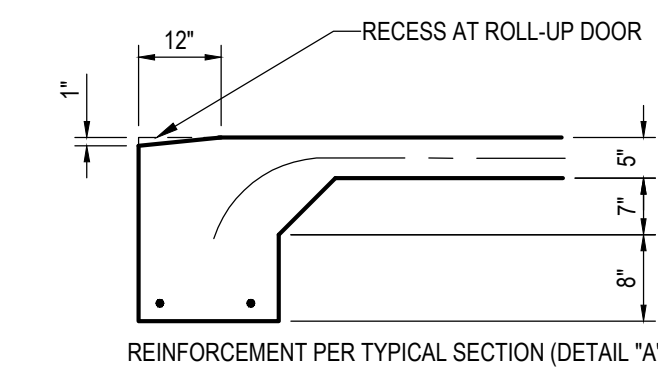
- WOOD FRAMING:**
- All wood framing has been designed in accordance with "National Design Specification (NDS) for Wood Construction," 2018 edition.
  - All wood members exposed to weather or in contact with masonry, concrete or soil shall be treated with an appropriate preservative suitable for the exposure conditions.
  - If ACO treatment is used on any wood member, then all nailing shall require hot-dipped galvanized nails meeting ASTM A153, Class C, or ASTM B695, Class 50. If borate treatment is used then galvanizing is not required.
  - Guardrails, handrails, and guard in-fill components (Balusters and Panel Fillers) shall be provided by others.
  - Engineered lumber (LVL, Parallam or LSL) shall meet the following minimum material specifications:  
LVL or Parallam LSL  
E=2,000,000 psi E=1,550,000 psi  
Fb=2,600 psi Fb=2,325 psi  
Fc=750 psi Fc=900 psi  
Fv=285 psi Fv=310 psi
  - Fasten piles of 1 1/2" wide engineered lumber as follows:  
2-ply beams with (3) rows of 0.131"x3 1/2" nails @ 12" c.  
3-ply beams with (3) rows of 0.131"x3 1/2" nails @ 8" o.c. (each side)  
4-ply beams with (2) rows of Simpson 6 1/2" long SDW screws @ 12" o.c.



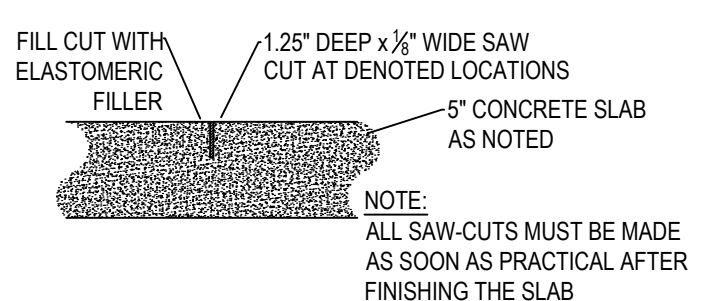
**A**  
SECTION - TYPICAL CONTINUOUS PERIMETER FOOTING

FOOTING	A	B	C	REINFORCEMENT REQ'D	D= BOLT EMBEDMENT	ANCHOR BOLT
F1	4'-0"	4'-0"	2'-0"	5 - #5s E.W. (TOP AND BOTTOM)	TBD	TBD
F2	5'-0"	5'-0"	2'-6"	6 - #5s E.W. (TOP AND BOTTOM)	TBD	TBD
F3	3'-0"	3'-0"	2'-0"	4 - #5s E.W. (TOP AND BOTTOM)	TBD	TBD

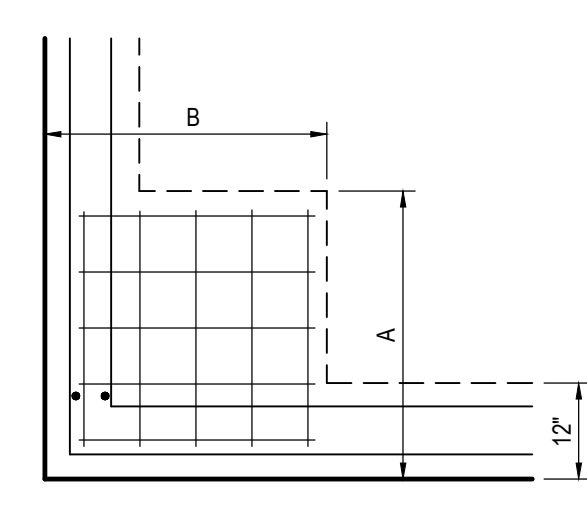
ANCHOR BOLTS SHALL BE HEAVY HEX BOLTS, F1554 GRADE 36 OR BETTER



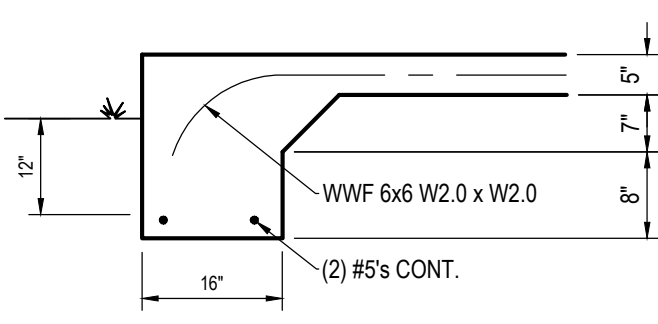
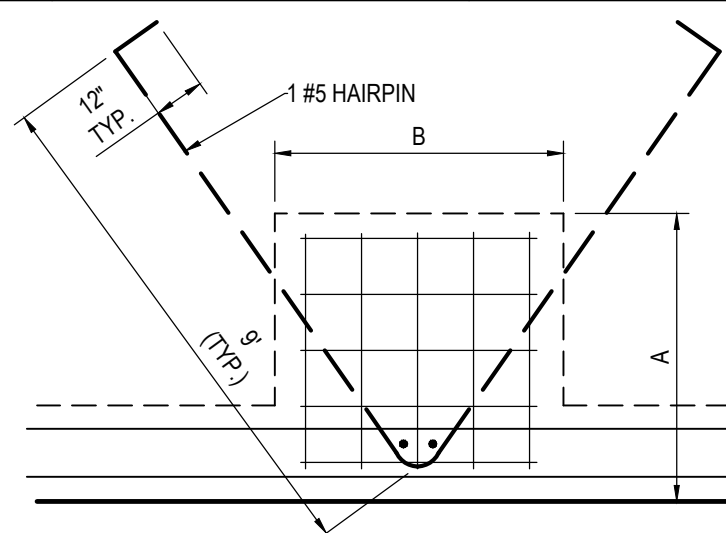
**D**  
SECTION - TYPICAL ROLL-UP DOOR RECESS



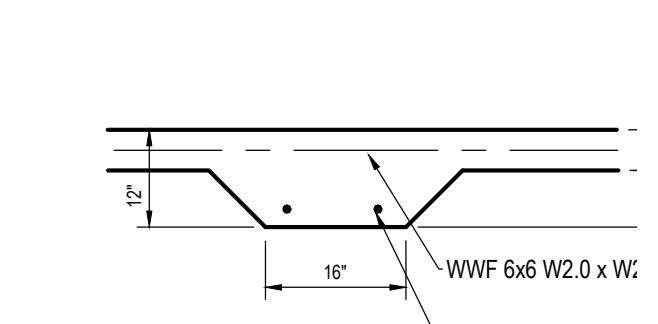
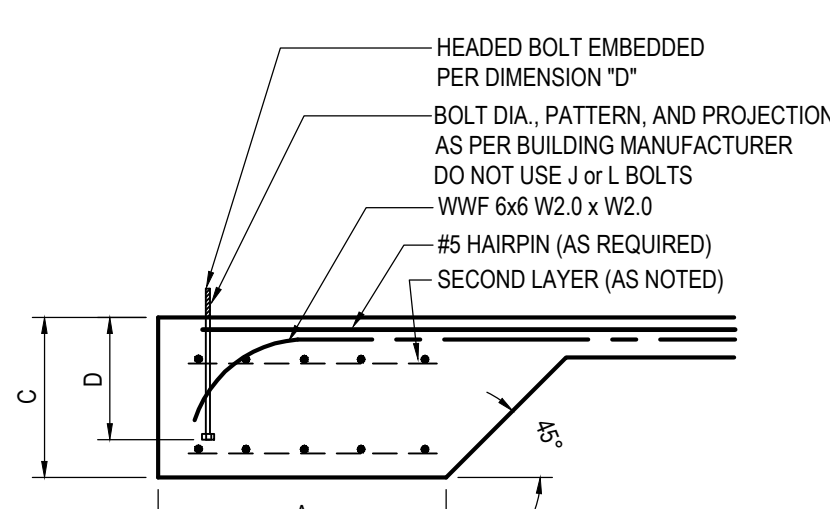
**B**  
SECTION - TYPICAL SAW-CUT CONTROL JOINT



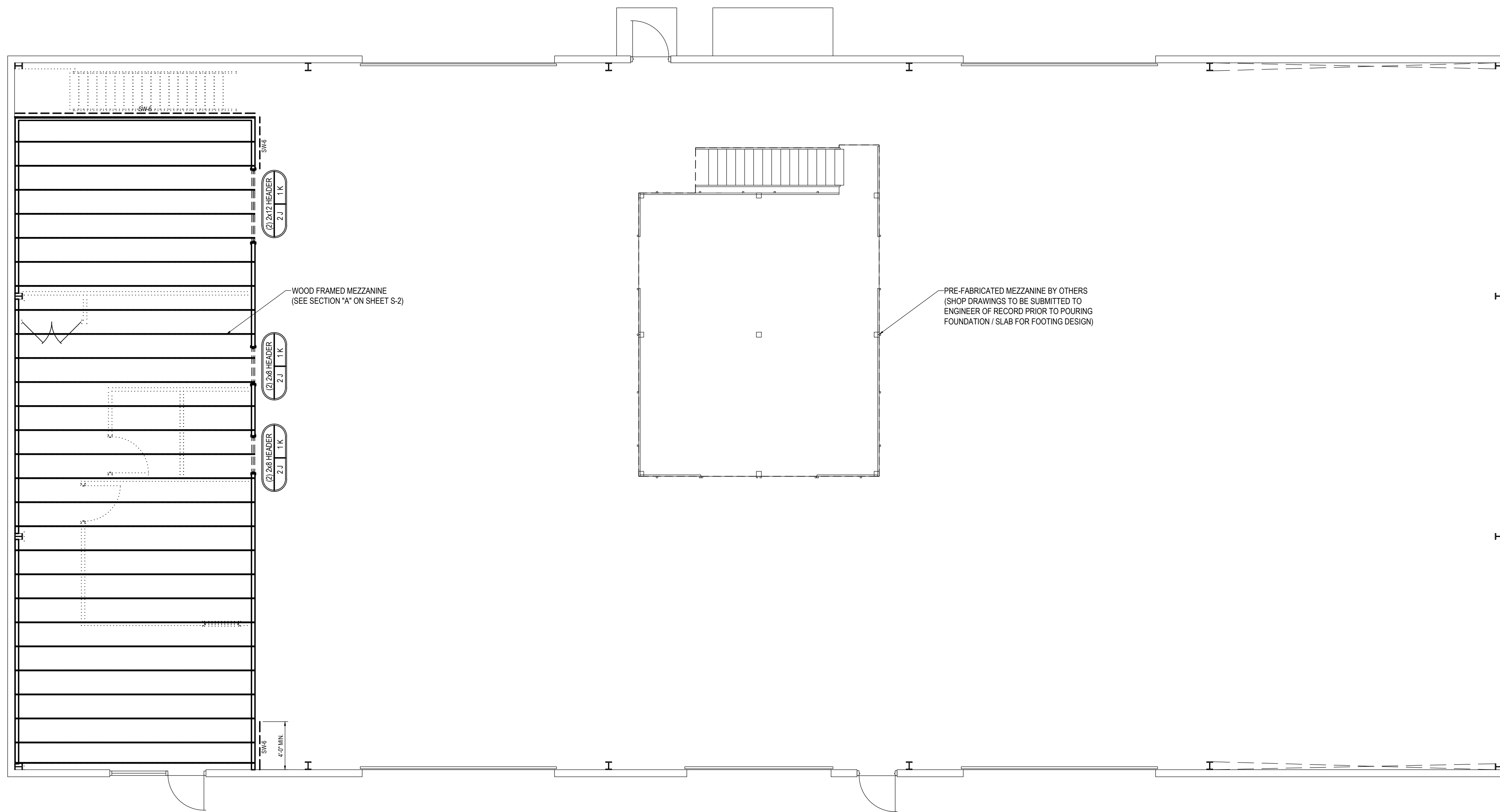
**C**  
TYPICAL FOOTINGS AT STEEL COLUMNS



**E**  
SECTION - TYPICAL EXTERIOR FOOTING AT MEZZANINE



**F**  
SECTION - TYPICAL INTERIOR FOOTING AT MEZZANINE



MEZZANINE FRAMING LAYOUT

**SHEARWALL LEGEND:**

- NON-BEARING WALL
- BEARING WALL
- SHEARWALLS MINIMUM 7" RATED O.S.B. SHEATHING FASTENED WITH 86 COM @ 13" x 2 1/2" WALLS @ 4" O.C. ON EDGES AND 12" O.C. ON INTERMEDIATE SUPPORTS.
- SHEATH BOTH SIDES OF WALL AT INDICATED SHEARWALL

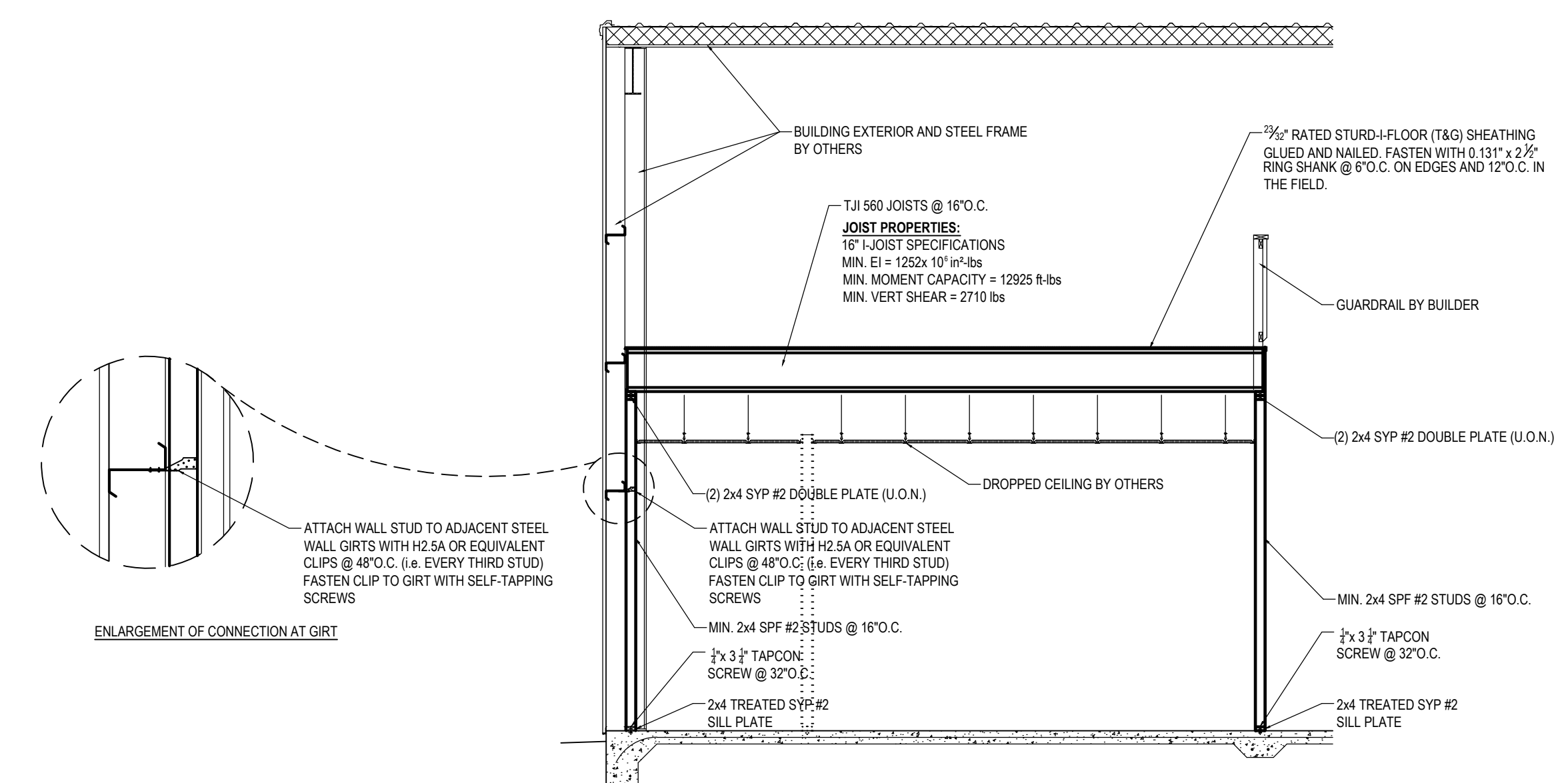
**WOOD FRAMED HEADER LEGEND:**

OF HEADER

QUANTITY OF JACKS

QUANTITY OF KING STUDS

**NOTE:**  
ALL WOOD FRAMED LOAD BEARING HEADERS SHALL BE MINIMUM (2) 2x6 No. 2 OR BETTER SYP. INSTALL MINIMUM (1) JACK AND (1) KING STUD AT EACH HEADER (U.O.N.)



SECTION - MEZZANINE

**HULSBERG ENGINEERING, INC.**  
12068 SAN JOSE BLVD. # 1001, JACKSONVILLE, FL 32223  
904.866.2401 www.HulsbergEngineering.com

FLORIDA REGISTRY # 25846

01-06-21  
JESSE J. JANNETTE, PE  
FL PE No. 78623

CLIENT: **BRIAN BOATRIGHT, ARCHITECT**

PROJECT: **RVROOF.COM**  
6969 North State Road 21, Keystone Heights

JOB NUMBER: **20-2977**

SCALE: **3/8" = 1'-0" (U.O.N.)**  
DO NOT SCALE THIS DRAWING

RELEASE DATE: **01-06-21**

REVISIONS:

DRAWN BY: **DJM**

CHECKED BY: **JJJ**

TITLE: **MEZZANINE FRAMING**

SHEET: **S-2**