

HEADER SCREWS TABLE

| Option | Uplift | Top Connection | Bottom Connection |
|--------|--------|--|--|
| #1 | < 510 | Attach king stud to top plate w/ (1) Simpson SDWC15600 | Attach king stud to bottom plate w/ (2) Simpson SDWC15450 |
| #2 | < 895 | Attach king stud to top plate w/ (2) Simpson SDWC15600 OR SHEATHING NAILED TO HEADER w/ (2) ROWS OF 8d @ 6" OC | Attach king stud to bottom plate w/ (3) Simpson SDWC15450 OR 1/2" x 10" Anchor bolt w/ 3" x 3" x 1/4" washer must be located within 6" of king stud @ all door locations |

HEADER STRAP TABLE

| Option | Uplift | Top Connection | Bottom Connection |
|--------|--------|------------------------------------|---|
| #3 | < 1235 | LSTA24, 14-10d wrap over plate | LSTA24, 14-10d wrap under plate |
| #4 | < 1455 | MSTA24, 18-10d header to jacks | 1/2" x 10" Anchor bolt w/ 3" x 3" x 1/4" washer must be located within 6" of king stud @ all door locations |
| #5 | < 1800 | (2) MSTA24, 18-10d header to jacks | DTT22 |
| #6 | < 2910 | (2) MSTA24, 18-10d header to jacks | HTT4 |

SILL PLATE SPANS FOR 10'-0" WALL HEIGHT

| DESIGN WIND SPEED | MAX. SPANS FOR SPF #2 | BASED ON WFCM TABLE A-3.9B |
|-------------------|---------------------------------|---|
| 130 MPH EXP. C | (1) 2x4 (2) 2x4 (1) 2x6 (2) 2x6 | FOR OTHER WALL HEIGHTS (H) SILL SPAN SHALL BE DIVIDED BY (H/10) |

EXTERIOR WALL STUD TABLE FOR SPF #2 STUDS:

THIS STUD HEIGHT TABLE IS PER 2012 WFCM, TABLE 3.20B5, EXTERIOR LOAD BEARING & NON LOAD BEARING STUD LENGTHS FOR WALLS WITH OSB EXTERIOR AND 1/2" GYP INTERIOR. RESISTING INTERIOR ZONE WINDLOADS, 130 MPH, EXPOSURE C, STUD DEFLECTION LIMIT H/240 (NOT OK FOR BRITTLE FINISH). STUD SPACINGS SHALL BE MULTIPLIED BY 0.8 FOR FRAMING LOCATED WITHIN 4 FEET OF CORNERS FOR END ZONE LOADING. END ZONE EXAMPLE 16" O.C. x 0.8 = 12.8" O.C.

| STUD HEIGHT | STUD WIDTH | STUD SPACING |
|------------------------|----------------------|--------------|
| 11'-2 1/2" STUD HEIGHT | 1 1/2" x 2 1/2" STUD | 16" OC |
| 11'-2 1/2" STUD HEIGHT | 2" x 2" STUD | 16" OC |
| 11'-2 1/2" STUD HEIGHT | 2 1/2" x 2 1/2" STUD | 16" OC |
| 11'-2 1/2" STUD HEIGHT | 3" x 3" STUD | 16" OC |

GRADE & SPECIES TABLE

| Grade | Species | Fb | E |
|-------|-------------------|------|-----|
| 2x8 | SP #2 | 925 | 1.4 |
| 2x10 | SP #2 | 800 | 1.4 |
| 2x12 | SP #2 | 750 | 1.4 |
| GLB | 24F-V3 SP | 2600 | 1.9 |
| LVL | TIMBERSTRAND 1700 | 1.7 | |
| LVL | MICROLAM | 2950 | 2.0 |
| PSL | PARALAM | 2900 | 2.0 |

DESIGN CRITERIA & LOADS:

BUILDING CODE: 2018 EDITION FLORIDA BUILDING CODE RESIDENTIAL (2023)

CODE FOR DESIGN LOADS: ASCE 7-22

WINDLOADS: 130 MPH

BASIC WIND SPEED (ASCE 7-22, 3S GUST): 130 MPH

WIND EXPOSURE (BUILDER MUST FIELD VERIFY): C

TOPOGRAPHIC FACTOR (BUILDER MUST FIELD VERIFY): 1

RISK CATEGORY: II

ENCLOSURE CLASSIFICATION: ENCLOSED

INTERNAL PRESSURE COEFFICIENT: 0.18

ROOF ANGLE: 7-45 DEGREES

MEAN ROOF HEIGHT: 30 FT

C&D DESIGN PRESSURES: SEE TABLE

FLOOR LOADING: ROOMS OTHER THAN SLEEPING ROOM: 40 PSF LIVE LOAD; SLEEPING ROOM: 30 PSF LIVE LOAD

ROOF LOADING: FLAT OR < 4:12: 20 PSF LIVE LOAD; 4:12 TO < 12:12: 16 PSF LIVE LOAD; 12:12 & GREATER: 12 PSF LIVE LOAD

SOIL BEARING CAPACITY: 1500 PSF

FLOOD ZONE: THIS BUILDING IS NOT IN THE FLOOD ZONE

COMPONENT & CLADDING DESIGN PRESSURES 130 MPH (EXP. C)

| EFFECTIVE WIND AREA (FT2) | ZONE 4 INTERIOR | ZONE 5 END & FROM ALL OUTSIDE CORNER |
|---------------------------|-------------------------|--------------------------------------|
| 0 - 20 | +25.6(Vasd) -27.8(Vasd) | +25.6(Vasd) -34.2(Vasd) |
| 20 - 25 | +22.6(Vasd) -24.8(Vasd) | +22.6(Vasd) -31.2(Vasd) |

GARAGE DOOR DESIGN PRESSURES 130 MPH (EXP. C)

| Garage Door | Pressure |
|------------------|-------------------------|
| 9x7 GARAGE DOOR | +22.6(Vasd) -25.6(Vasd) |
| 16x7 GARAGE DOOR | +21.7(Vasd) -24.1(Vasd) |

Bryan Zecher Construction

Logan Jack Garage

PROJECT ADDRESS: SEE NATURE OR LAKE CITY, FLORIDA

FL PE 53915

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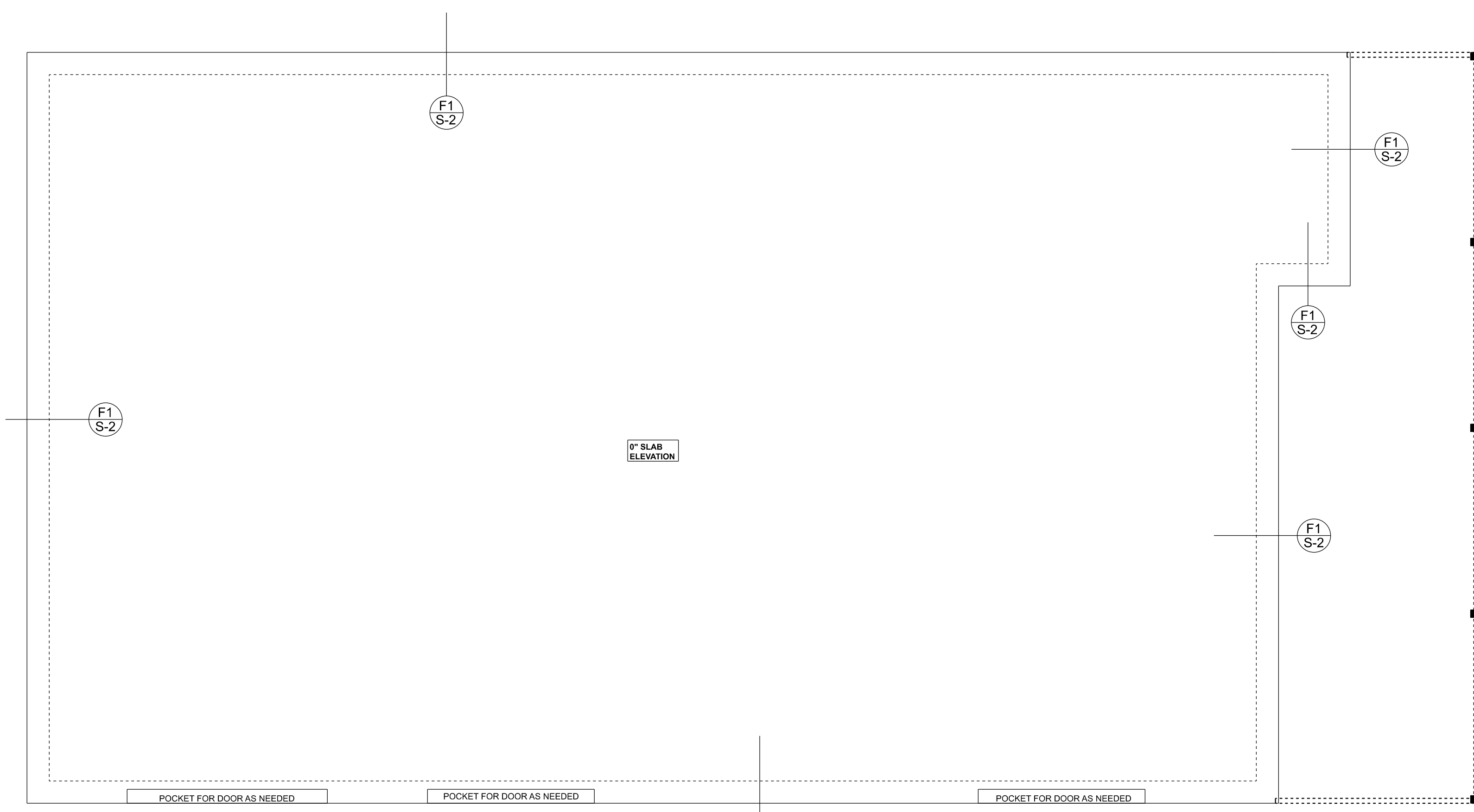
CERTIFICATION: I hereby certify that I have examined this plan, and that the applicable portions of the plan, relating to wind engineering comply with the 8th Edition Florida Building Code Residential (2023) to the best of my knowledge.

LIMITATION: This design is valid for one building, at specified location.

163 SW Midtown P.E. Lake City, Florida 32025 386.754.5419 disowaydesign@gmail.com

JOB NUMBER: 250546

S-1 OF 2 SHEETS



FOUNDATION PLAN
SCALE: 3/16" = 1'-0"

FOUNDATION NOTES

FN-1: DIMENSIONS ON FOUNDATION & STRUCTURAL SHEETS ARE NOT EXACT. REFER TO ARCHITECTURAL PLANS FOR ACTUAL DIMENSIONS. REVISIONS IN SLAB, STEP DOWNS, ETC. DISCOVERY DESIGN GROUP OR MARK DISOSWAY P.E. IS NOT RESPONSIBLE FOR DIMENSION ERRORS ON THIS PLAN.

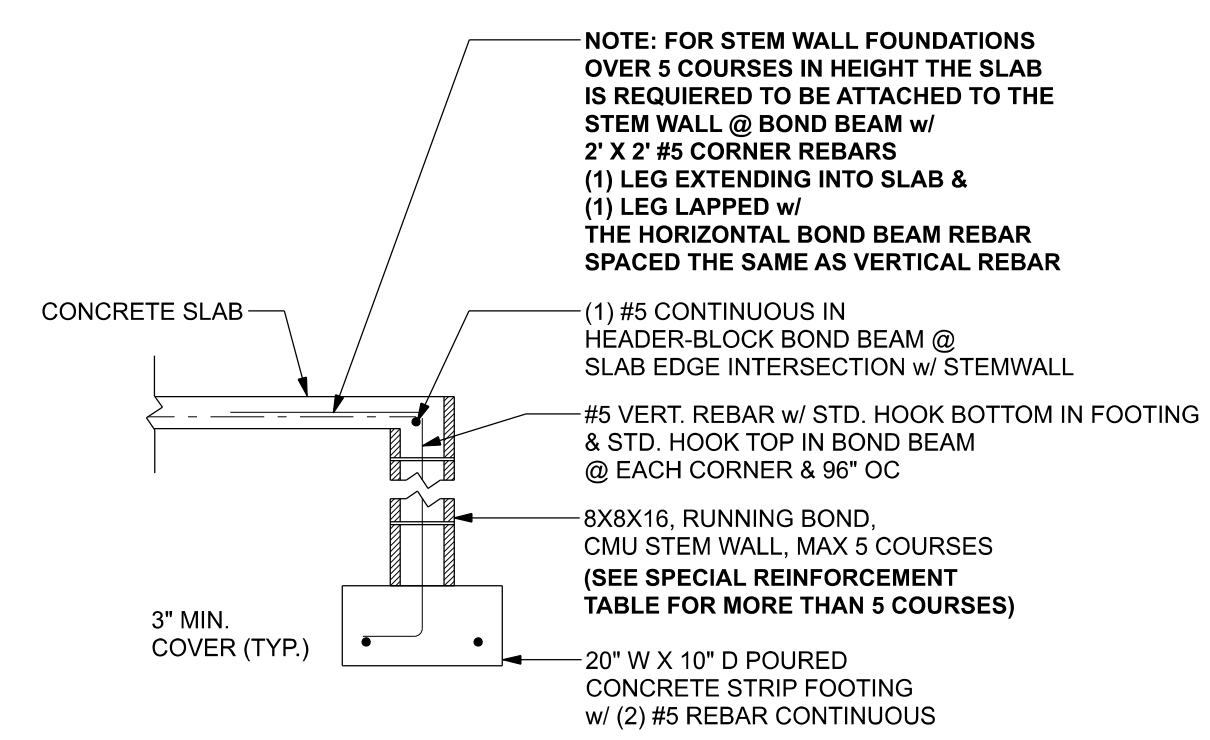
FN-2: CONTRACTOR SHALL VERIFY NEED FOR INTERIOR BEARING IN ALL AREAS BY REVIEWING THE ROOF TRUSS PLAN BY THE SUPPLIER BEFORE FINALIZING FOUNDATION PLAN.

FN-3: THE SLAB SHALL BE 4" CONCRETE SLAB REINFORCED W/ 8" W/ 14" SPACING OR REINFORCED W/ 1" W/ 12" SPACING OR REINFORCED W/ 1" W/ 12" SPACING OR REINFORCED W/ 1" W/ 12" SPACING. POLY VAPOR BARRIER W/ 6" LAPS SHALL BE 1/2" MIN OVER TERRACE TO GROUND CONTACT. ALSO, ANY OTHER CODE APPROVED THERMITE-TREATMENT METHOD CAN BE USED INSTEAD.



F1 S-2 MONOLITHIC FOOTING
SCALE: 1/2" = 1'-0"

F2 S-2 PORCH PAD FOOTING
SCALE: 1/2" = 1'-0"



F1 S-2 OPTIONAL STEM WALL FOOTING
SCALE: 1/2" = 1'-0"

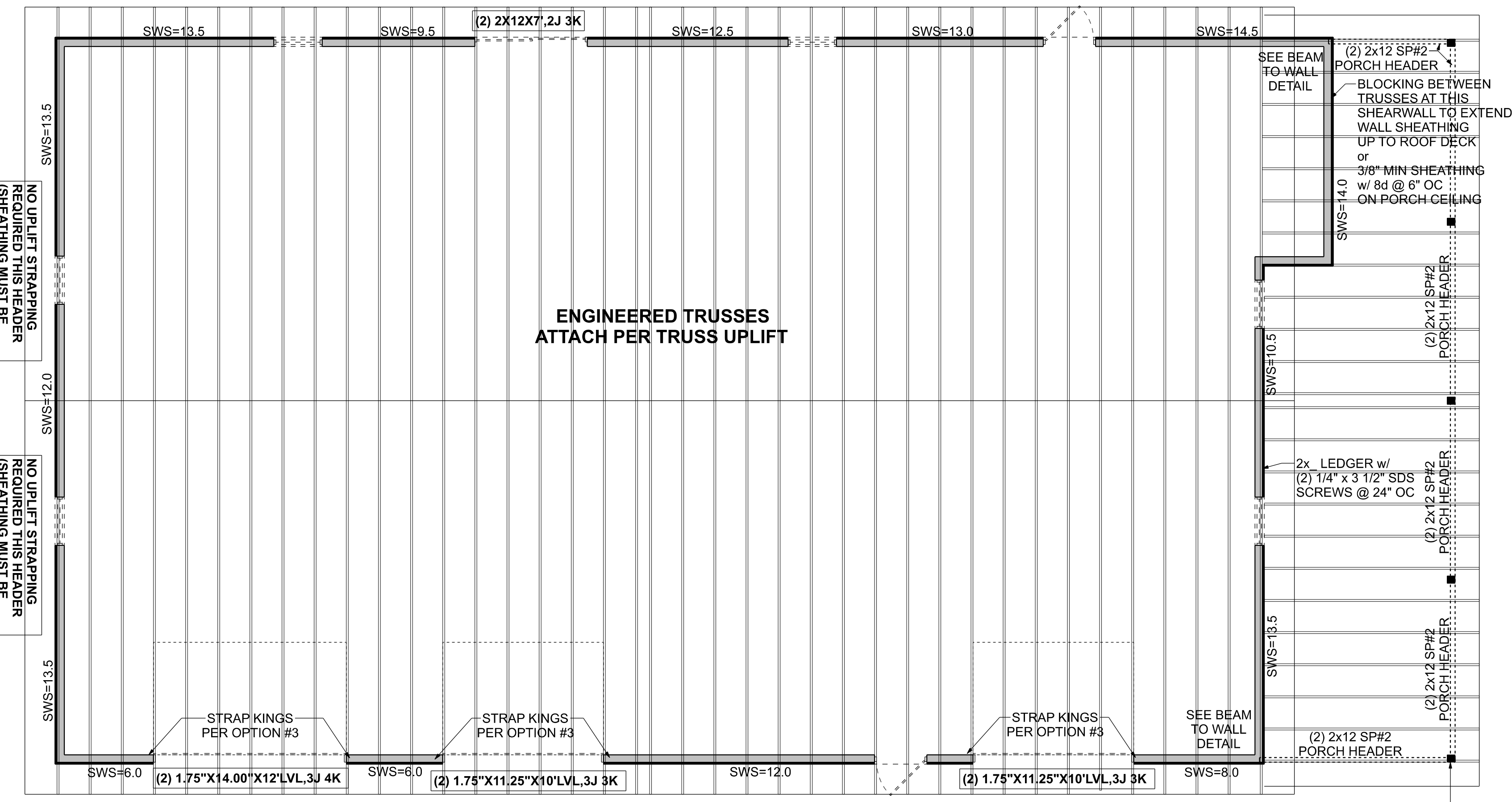
MASONRY NOTE:
MASONRY CONSTRUCTION AND MATERIALS FOR THIS PROJECT SHALL CONFORM TO ALL REQUIREMENTS OF "SPECIFICATION FOR MASONRY STRUCTURES" (ACI 530.1/ASCE 6/TMS 602). THE CONTRACTOR AND MASON MUST IMMEDIATELY, BEFORE PROCEEDING, NOTIFY THE ENGINEER OF ANY CONFLICTS BETWEEN ACI 530.1-02 AND THESE DESIGN DRAWINGS. ANY EXCEPTIONS TO ACI 530.1-02 MUST BE APPROVED BY THE ENGINEER IN WRITING.

| ACI 530.1-02 Section | Specific Requirements |
|----------------------|---|
| 1.4A | Compressive strength 8" block bearing walls Fm = 1500 psi |
| 2.1 | Mortar ASTM C 270, Type N, UNO |
| 2.2 | Grout ASTM C 476, admixtures require approval |
| 2.3 | CMU standard ASTM C 90-02, Normal weight, Hollow, medium surface finish, 8"x8"x16" running bond and 12"x12" or 16"x16" column block |
| 2.3 | Clay brick standard ASTM C 216-02, Grade SW, Type FBS, 5.5"x2.75"x11.5" |
| 2.4 | Reinforcing bars, #3 - #11 ASTM A618, Grade 40, Fy = 40 ksi, Lap splices min 40 bar dia. (25" for #5) |
| 2.4F | Coating for corrosion protection Anchors, sheet metal ties completely embedded in mortar or grout, ASTM A325, Class 600, 0.60 oz/lb or 304SS |
| 2.4F | Coating for corrosion protection Joint reinforcement in walls exposed to moisture or wet ties, anchors, sheet metal ties not completely embedded in mortar or grout, ASTM A153, Class B2, 1.50 oz/lb or 304SS |
| 3.3.E.2 | Pipes, conduits, and accessories Any not shown on the project drawings require engineering approval. |
| 3.3.E.7 | Movement joints Contractor assumes responsibility for type and location of movement joints if not detailed on project drawings. |

TALL STEM WALL TABLE:
The table assumes 40 ksi for #5 rebar and 60 ksi for #7 & #8 rebar with 6" hook in the footing and bent 24" into the reinforced slab at the top. The vertical steel is to be placed toward the tension side of the CMU wall (away from the soil pressure, within 2" of the exterior side of the wall). If the wall is over 8' high, add Durowall ladder reinforcement at 16" OC vertically or a horizontal bond beam with 1#5 continuous at mid height. For higher parts of the wall 12" CMU may be used with reinforcement as shown in the table below.

| STEM WALL HEIGHT (FEET) | UNBALANCED BACKFILL HEIGHT | VERTICAL REINFORCEMENT FOR 8" CMU STEM WALL (INCHES O.C.) | | | VERTICAL REINFORCEMENT FOR 12" CMU STEM WALL (INCHES O.C.) | | |
|-------------------------|----------------------------|---|----|----|--|----|----|
| | | #5 | #7 | #8 | #5 | #7 | #8 |
| 3.3 | 3.0 | 96 | 96 | 96 | 96 | 96 | 96 |
| 4.0 | 3.7 | 96 | 96 | 96 | 96 | 96 | 96 |
| 4.7 | 4.3 | 88 | 96 | 96 | 96 | 96 | 96 |
| 5.3 | 5.0 | 56 | 96 | 96 | 96 | 96 | 96 |
| 6.0 | 5.7 | 40 | 80 | 96 | 80 | 96 | 96 |
| 6.7 | 6.3 | 32 | 56 | 80 | 56 | 96 | 96 |
| 7.3 | 7.0 | 24 | 40 | 56 | 40 | 80 | 96 |
| 8.0 | 7.7 | 16 | 32 | 48 | 32 | 64 | 80 |
| 8.7 | 8.3 | 8 | 24 | 32 | 24 | 48 | 64 |
| 9.3 | 9.0 | 8 | 16 | 24 | 16 | 40 | 48 |

BOTTOM OF EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 12" BELOW UNDISTURBED SOIL OR ENGINEERED FILL



STRUCTURAL PLAN
SCALE: 3/16" = 1'-0"

STRUCTURAL PLAN NOTES

SN-1 DIMENSIONS ON STRUCTURAL SHEETS ARE NOT EXACT. REFER TO ARCHITECTURAL FLOOR PLAN FOR ACTUAL DIMENSIONS.

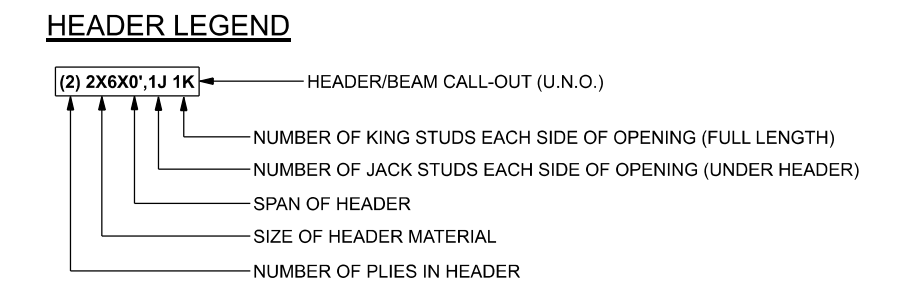
SN-2 PERMANENT TRUSS BRACING IS TO BE INSTALLED AT LOCATIONS AS SHOWN ON THE SEALED TRUSS DRAWINGS. LATERAL BRACING IS TO BE RESTRAINED PER BCS1-03, BCS1-81, BCS1-82, & BCS1-83. BCS1-81, BCS1-82, & BCS1-83 ARE FURNISHED BY THE TRUSS SUPPLIER, WITH THE SEALED TRUSS PACKAGE.

UNLESS NOTED OTHERWISE (MINIMUM REQUIREMENTS) *SEE STRUCTURAL PLAN FOR ANY SPECIFIC CALL OUTS*****

| BEAM / HEADERS (SIZE) | ALL LOAD BEARING FRAME WALL & PORCH HEADERS (SHALL BE A MINIMUM OF (2) 2X6 SP #2 (UNO)) |
|-------------------------------|--|
| HEADERS (JACK & KING STUDS) | ALL LOAD BEARING FRAME WALL HEADERS SHALL HAVE (1) JACK STUD & (1) KING STUD EACH SIDE (UNO) |
| HEADERS (STRAPPING) | ALL HEADERS W/ UPLIFT TO BE STRAPPED OR SCREENED DOWN W/ MIN. OPTION #1 OR OPTION #3 (SEE DETAIL ON SHEET S-1) (U.N.O.) 1/2" X 10" ANCHOR BOLT W/ 3" X 3" X 1/4" WASHER MUST BE LOCATED WITHIN 6" OF KING STUD @ ALL DOOR LOCATIONS (U.N.O.) |
| JACK STUDS UNDER GIRDER TRUSS | USE ONE JACK STUD GIRDER SUPPORT PER 2000 LB LOAD |

ACTUAL vs REQUIRED SHEARWALL

| | TRANSVERSE | LONGITUDINAL |
|----------|------------|--------------|
| ACTUAL | 30492 LBF | 37820 LBF |
| REQUIRED | 24279 LBF | 18124 LBF |



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JOB NUMBER:
250546
S-2
OF 2 SHEETS