

**DOCUMENT 00 90 00**

**ADDENDUM**

**ADDENDUM NO. [1]**

**Date: May 7, 2018**

**RE: WESTERN TECHNICAL COLLEGE  
INDOOR SHOOTING RANGE  
11177 COUNTY RD A  
SPARTA, WI 54656**

**FROM: HSR Associates, Inc  
100 Milwaukee Street  
La Crosse, WI 54603  
(608) 784-1830**

**To: Prospective Bidders**

This addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated May 2018. Acknowledge receipt of this Addendum in the space provided on the bid form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of [1] page and [3] 24 x 36 drawings.

**CHANGES TO DRAWINGS**

1. Add Sheets S001, S100 and S101, attached hereto, as part of Contract Documents.
2. Sheet A001 COVER SHEET
  - a. At Electrical Index change "E600" to "E500"

**END OF DOCUMENT 00 90 00**

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- BUILDING CODES

DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE 2015 WISCONSIN COMMERCIAL BUILDING CODE AS CONTAINED IN CHAPTERS SPS 361 TO 366 OF THE WISCONSIN ADMINISTRATIVE CODE.

RISK CATEGORYII

DESIGN LOADS AND DATA

ROOF LOADS

DEAD

LIVE (SEE SNOW LOAD ALSO)

SEE METAL PLATE CONNECTED WOOD TRUSS NOTES

20 PSF

ROOF LOADS

GROUND SNOW (g<sub>s</sub>)

SNOW DENSITY

ROOF EXPOSURE

SNOW IMPORTANCE FACTOR (I<sub>w</sub>)

SNOW EXPOSURE FACTOR (C<sub>e</sub>)

THERMAL FACTOR- BUILDING (C<sub>t</sub>)

THERMAL FACTOR- CANOPY, MANSARDS (C<sub>t</sub>)

SLOPED ROOF SNOW LOAD (p<sub>s</sub>)

DRIFT LOAD

40 PSF

14.2 PCF

FULLY EXPOSED

1.0

1.0

1.1

1.2

26.5 PSF

AS NOTED ON DRAWINGS

WIND DATA

BASIC WIND SPEED (3 SECOND GUST)

BUILDING ENCLOSURE

EXPOSURE

WIND IMPORTANCE FACTOR (I<sub>w</sub>)

WIND DIRECTIONALITY FACTOR (K<sub>d</sub>)

TOPOGRAPHIC FACTOR (K<sub>z</sub>)

GUST FACTOR (BUILDING RIGID) G<sub>r</sub>

INTERNAL PRESSURE COEFFICIENT (GC)<sub>i</sub>

ANALYSIS PROCEDURE

EDGE ZONE WIDTH (2a)

MEAN ROOF HEIGHT (h)

ROOF PLANE SLOPE (θ)

COMPONENTS AND CLADDING

MINIMUM NET UPLIFT

INTERIOR SPACES

EXTERIOR CANOPIES/SOFFITS

115 MPH

ENCLOSED

C

1.0

0.85

1.0

1.0

± 0.18

CHAPTER 26

12 FT

20 FT

18.40 DEGREES

SEE ADJACENT TABLE

10 PSF

30 PSF

SEISMIC DATA

SEISMIC IMPORTANCE FACTOR

MAPPED SPECTRAL RESPONSE ACCELERATION FOR SHORT PERIODS (S<sub>s</sub>)

MAPPED SPECTRAL RESPONSE ACCELERATION FOR 1 SECOND PERIOD (S<sub>1</sub>)

SITE CLASS PER ASCE CHAPTER 20.1

DESIGN SPECTRAL RESPONSE ACCELERATION FOR SHORT PERIODS (S<sub>DS</sub>)

DESIGN SPECTRAL RESPONSE ACCELERATION FOR 1 SECOND PERIOD (S<sub>1D</sub>)

SEISMIC DESIGN CATEGORY

BASIC SEISMIC FORCE RESISTING SYSTEM AND PARAMETERS

LIGHT FRAME WALLS WITH SHEAR PANELS - ALL OTHER MATERIALS

R = 2.5    R<sub>o</sub> = 2.5    C<sub>d</sub> = 2.5

SEISMIC RESPONSE COEFFICIENT (C<sub>s</sub>)

DESIGN BASE SHEAR

1.00

0.054

0.036

D

0.058

0.058

A

0.023

1.0 KIIPS

EQUIVALENT LATERAL FORCE

MATERIAL STRENGTHS AND STANDARDS

THE MATERIAL STRENGTHS AND STANDARDS LISTED HERE REPRESENT A SELECTED SUMMARY OF THE REQUIREMENTS NOTED IN THE SPECIFICATION FOR ADDITIONAL INFORMATION. IN CASE OF DISCREPANCY BETWEEN THESE NOTES AND THE SPECIFICATIONS, THESE NOTES SHALL GOVERN.

SOILS

DESIGN SOIL BEARING CAPACITY FOR SPREAD/STRIP FOOTINGS

2000 PSF

CONCRETE (28 DAY STRENGTH)

FOOTINGS, DRILLED PIERS, STEEL PILE FILL

INTERIOR SLAB-ON-GRADE

EXTERIOR SLAB-ON-GRADE

F<sub>c</sub> = 3,000 PSI

F<sub>c</sub> = 4,000 PSI

F<sub>c</sub> = 4,500 PSI

REINFORCING STEEL

WELDED WIRE FABRIC, PROVIDED IN FLAT SHEETS ONLY (ASTM A185)

DEFORMED BARS (ASTM A615, GRADE 60)

F<sub>y</sub> = 65,000 PSI

F<sub>y</sub> = 60,000 PSI

MASONRY

CONCRETE MASONRY UNIT ASSEMBLY

CONCRETE MASONRY UNIT (ASTM C90 - LIGHTWEIGHT)

MORTAR (ASTM C270)

GROUT (ASTM C416)

ANCHOR RODS (ASTM F1554, GRADE 36)

F<sub>m</sub> = 2,250 PSI

3,275 PSI

F<sub>m</sub> = 3,000 PSI

F<sub>y</sub> = 36,000 PSI

STRUCTURAL STEEL (SHAPES)

MF, WT SECTIONS (ASTM A992)

M, S, HP SECTIONS, CHANNELS, ANGLES, PLATES (ASTM A36)

HSS SHAPES - RECTANGULAR (ASTM A500, GRADE C)

HSS SHAPES - ROUND (ASTM A500, GRADE C)

STEEL PIPE (ASTM A53, GRADE B)

PLATES (ASTM A36)

F<sub>y</sub> = 50,000 PSI; F<sub>u</sub> = 65,000 PSI

F<sub>y</sub> = 36,000 PSI; F<sub>u</sub> = 58,000 PSI

F<sub>y</sub> = 50,000 PSI; F<sub>u</sub> = 62,000 PSI

F<sub>y</sub> = 46,000 PSI; F<sub>u</sub> = 62,000 PSI

F<sub>y</sub> = 35,000 PSI; F<sub>u</sub> = 60,000 PSI

F<sub>y</sub> = 36,000 PSI; F<sub>u</sub> = 58,000 PSI

WOOD

JOISTS/HEADERS (SPF, NO. 2 OR BETTER)

POSTS (SOUTHERN PINE, NO. 2 DENSE OR BETTER)

BOLTS AND LAG SCREWS (ASTM A307, GRADE A)

F<sub>b</sub> = 875 PSI

F<sub>b</sub> = 1,700 PSI

F<sub>v</sub> = 135 PSI

E = 1,400,000 PSI

E = 1,700,000 PSI

F<sub>y</sub> = 36,000 PSI

GENERAL NOTES

EXISTING CONDITIONS

INFORMATION PERTAINING TO EXISTING CONDITIONS GIVEN ON THE STRUCTURAL DRAWINGS REPRESENTS THE ACTUAL EXISTING FIELD CONDITION TO THE BEST OF OUR KNOWLEDGE. R.A. SMITH, INC. MAKES NO WARRANTY AS TO THEIR ACCURACY. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS, DIMENSIONS AND BUILDING CONDITIONS AFFECTING THE WORK BY DIRECT SURVEY AND MEASUREMENT PRIOR TO THE FABRICATION, ERECTION OR CONSTRUCTION OF ANY ITEM IMPACTED BY EXISTING CONDITIONS. REPORT DISCREPANCIES BETWEEN THE CONTRACT DOCUMENTS AND FIELD CONDITIONS FOR REVIEW. ANY WORK PERFORMED PRIOR TO THE RESOLUTION OF THE DISCREPANCIES IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTORS EXPENSE.

EXISTING STRUCTURE TO REMAIN

IS SHOWN WITH LIGHT GRAY LINES. EXISTING STRUCTURE TO BE REMOVED IS NOT GENERALLY SHOWN ON STRUCTURAL DRAWINGS - SEE ARCHITECTURAL DRAWINGS FOR DEMOLITION DRAWINGS.

ALL EXISTING STRUCTURE TO REMAIN TO BE SUPPORTED BY NEW CONSTRUCTION SHALL BE SHORED UNTIL NEW CONSTRUCTION IS IN PLACE, COMPLETED, AND CAPABLE OF SUPPORTING THE EXISTING STRUCTURE. EXISTING STRUCTURE TO REMAIN TO BE REJECTED, BUT NOT SUPPORTED, BY NEW CONSTRUCTION SHALL BE SHORED UNTIL IT IS NO LONGER AFFECTED BY CONSTRUCTION ACTIVITIES.

CONSTRUCTION

UNLESS SPECIFICALLY NOTED OTHERWISE, BUILDING STRUCTURE HAS BEEN DESIGNED FOR THE FINAL COMPLETED CONDITION ONLY, AND HAS NOT BEEN ANALYZED, INVESTIGATED OR DESIGNED FOR OVERALL STRUCTURE, OR INDIVIDUAL MEMBER, STABILITY DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY BRACING AND SUPPORTS FOR ALL STRUCTURAL ELEMENTS, BOTH INDIVIDUALLY AND COLLECTIVELY, AS REQUIRED AT EVERY STAGE OF CONSTRUCTION UNTIL THE FINAL COMPLETION OF THE STRUCTURE. NO PORTION OF THE BUILDING STRUCTURE, WHILE UNDER CONSTRUCTION IS INTENDED TO BE STABLE IN THE ABSENCE OF THE CONTRACTORS TEMPORARY BRACES AND SUPPORTS, WHICH SHALL ADDITIONALLY PROVIDE SUPPORT FOR ALL CONSTRUCTION LOADING. MATERIALS AND EQUIPMENT SHALL BE STORED, TRANSPORTED AND INSTALLED IN A MANNER THAT WILL NOT EXCEED THE DESIGN FLOOR LOADING.

CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, TEMPORARY BRACING, SUPPORTS, SHORING, FORMING TO SUPPORT IMPOSED CONSTRUCTION LOADS, AND OTHER SIMILAR ITEMS.

STRUCTURAL DOCUMENTS MAY REFER TO OSHA REQUIREMENTS. SUCH REFERENCES ARE INCIDENTAL, AND ARE NOT INTENDED TO IDENTIFY ALL APPLICABLE OSHA REQUIREMENTS.

COMPLETENESS

INFORMATION CONTAINED IN THE GENERAL NOTES IS ONLY A PARTIAL SUMMARY OF PROJECT REQUIREMENTS. SEE SPECIFICATIONS, PLANS AND DETAILS FOR ADDITIONAL REQUIREMENTS.

USE ONLY DIMENSIONS INDICATED ON THE DRAWINGS. DO NOT MANUALLY SCALE THE DRAWINGS OR USE ANY DIMENSIONS MEASURED FROM ELECTRONIC DRAWING FILES.

UNLESS NOTED OTHERWISE, CENTERLINE OF FLOOR FRAMING ELEMENTS COINCIDES WITH COLUMN CENTERLINES, AND FRAMING ELEMENTS ARE EQUALLY SPACED BETWEEN ADJACENT COLUMN CENTERLINES.

MAJOR OPENING LOCATIONS AND SIZES ARE INDICATED ON THE STRUCTURAL DRAWINGS - SMALLER OPENINGS AND SLEEVES REQUIRED TO ACCOMMODATE VARIOUS BUILDING SERVICES MAY NOT BE NOTED. CONTRACTOR TO VERIFY THE SIZE AND LOCATION OF ALL ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING OPENINGS, INCLUDING CLEARANCE REQUIREMENTS CONTAINED IN THE RESPECTIVE DISCIPLINE DOCUMENTS FOR INSTALLATION AND IN-PLACE OPERATION OF THE RESPECTIVE EQUIPMENT OR ITEMS. UNDER NO CIRCUMSTANCES MAY PENETRATIONS BE MADE IN ANY STRUCTURAL ELEMENT AFTER FINAL PLACEMENT IN THE BUILDING STRUCTURE, WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.

CONSULT ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS AND MANUFACTURERS SPEC SHEETS FOR LOCATIONS AND DIMENSIONS OF PADS, CURBS, EQUIPMENT SUPPORTS, DEPRESSIONS, INSERTS, DRIPS, REGLETS, REVEALS, FINISHES AND OTHER MISCELLANEOUS PROJECT REQUIREMENTS THAT NECESSITATE INCIDENTAL ACCOMMODATION BY THE BUILDING STRUCTURE BUT ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS.

GENERAL NOTES CONT

GENERAL

THE STRUCTURE HAS BEEN DESIGNED AS UNRESTRAINED FOR THE PURPOSE OF FIRE RATING AND FIREPROOFING ASSEMBLY EVALUATIONS.

STRUCTURAL COMPONENTS HAVE NOT BEEN DESIGNED FOR VIBRATORY EQUIPMENT UNLESS NOTED OTHERWISE. PLACE VIBRATORY EQUIPMENT AND EQUIPMENT SENSITIVE TO VIBRATIONS ON VIBRATION ISOLATORS SPECIFICALLY DESIGNED FOR THE EQUIPMENT.

LATERAL BRACING FOR NON-STRUCTURAL ELEMENTS DESIGNED AND DETAILED BY COMPONENT SUPPLIERS SHALL BE DESIGNED TO APPLY LOADS DIRECTLY TO FLOOR OR ROOF DIAPHRAGMS. BRACES SHALL NOT ATTACH DIRECTLY TO BOTTOM FLANGES OF BEAMS OR BOTTOM CHORDS OF JOISTS UNLESS THE COMPONENT SUPPLIER PROVIDES ADDITIONAL BRACING FROM THOSE ELEMENTS TO THE FLOOR OR ROOF DIAPHRAGM AT EACH ATTACHMENT POINT.

HOLES, NOTCHES, BLOCK-OUTS AND OTHER SIMILAR FIELD MODIFICATIONS TO STRUCTURAL MEMBERS NOT SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED SHOP DRAWINGS ARE NOT PERMITTED.

EXCEPT AS NOTED BELOW, ALL FUTURE EXPANSION IS ASSUMED TO BE COMPLETELY SELF SUPPORTING FOR BOTH GRAVITY AND LATERAL LOADS.

SYSTEM NOTES

FOUNDATIONS AND EARTHWORK

REMOVE EXISTING SURFICIAL TOP SOIL AND VEGETATION FROM WITHIN THE BUILDING AREA AND A MINIMUM OF TEN FEET BEYOND. EXCAVATE MATERIAL TO PROPOSED SLAB-ON-GRADE SUBGRADE. PROOFROLL WITH A HEAVY RUBBER TIRED VEHICLE. SOILS WHICH HEAVE, PUMP, OR DO NOT READILY COMPACT SHALL BE EXCAVATED AND REPLACED WITH ENGINEERED FILL.

SUBGRADE PREPARATION FOR FOOTINGS SHALL CONSIST OF EXCAVATION TO REQUIRED ALLOWABLE BEARING CAPACITY SOILS AT OR NEAR DESIGN FOOTING ELEVATIONS. WHERE UNSUITABLE SOIL IS ENCOUNTERED AT NOMINAL BEARING DEPTH, SEE OVER EXCAVATION DETAIL.

ALL COMPACTION REQUIREMENTS REFER TO 3% OF MAXIMUM DRY DENSITY PER ASTM D-1557 MODIFIED PROCTOR. GRANULAR STRUCTURAL FILL BENEATH FOOTINGS SHALL BE PLACED IN LAYERS NO MORE THAN 8" THICK, AND EACH LAYER SHALL BE COMPACTED TO 95% COHESIVE FILL APPROVED BY THE GEOTECHNICAL CONSULTANT SHALL BE PLACED IN LAYERS NO THICKER THAN 8", AND EACH LAYER SHALL BE COMPACTED TO 95%. MOISTURE CONDITION FILL MATERIALS AS REQUIRED TO OBTAIN PROPER COMPACTION. COHESIVE SOILS OR GRANULAR SOILS WITH A SIGNIFICANT PERCENT OF COHESIVE FINES SHALL BE CONDITIONED TO WITHIN 3% OF OPTIMUM MOISTURE CONTENT AT COMPACTION.

ALL ACTIVITIES CONCERNING PREPARATION AND VERIFICATION OF BEARING SOILS FOR SLAB-ON-GRADE AND FOOTINGS SHALL BE SUPERVISED AND APPROVED BY A QUALIFIED GEOTECHNICAL ENGINEER.

COLUMNS, PIERS, AND SPREAD FOOTINGS ARE CENTERED ON GRIDLINES UNLESS NOTED OTHERWISE. CONTINUOUS FOOTINGS ARE CENTERED ON WALLS ABOVE UNLESS NOTED OTHERWISE.

BACKFILL UNIFORMLY ON EACH SIDE OF FOUNDATION WALLS, GRADE BEAMS AND OTHER SIMILAR ELEMENTS. DO NOT BACKFILL AGAINST ANY STRUCTURAL ELEMENT UNTIL THAT ELEMENT HAS ATTAINED FULL DESIGN STRENGTH. DO NOT BACKFILL AGAINST BASEMENT WALLS UNTIL TOP AND BOTTOM OF WALL IS BRACED BY FLOOR FRAMING AND SLAB-ON-GRADE.

TOP OF FOOTING ELEVATION NOTED ON DRAWINGS REPRESENT CONSIDERED ENGINEERING JUDGMENTS ABOUT PROTECTION FROM FROST AND MINIMUM DEPTH TO SOILS CAPABLE OF PROVIDING DESIGN SOIL BEARING CAPACITY. UNCERTAINTIES INHERENT IN DETERMINING THE ELEVATION OF SOILS ADEQUATE TO PROVIDE DESIGN BEARING CAPACITY MAY REQUIRE CONDITIONS TO BE LOWERED - IN NO CASE SHALL TOP OF FOOTING BE HIGHER THAN NOTED. A GEOTECHNICAL ENGINEER SHALL VERIFY THAT SOIL AT THE FOOTING BASE IS ADEQUATE TO PROVIDE THE REQUIRED DESIGN SOIL BEARING CAPACITY.

CONCRETE MASONRY

DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF ACI 530 - II AND ACI 530.1 - II EXCEPT WHERE MORE RESTRICTIVE REQUIREMENTS ARE NOTED.

ALL CMU SHALL BE PLACED IN RUNNING BOND. UNLESS NOTED OTHERWISE PROVIDE CONTINUOUS LADDER TYPE REINFORCEMENT WITH #4 GAUGE SIZE AND CROSS RODS AT 16" OC VERTICALLY IN ALL WALLS AND PIERS, AND AT 8" OC VERTICALLY AT PARAPETS. WHERE VERTICAL BARS ARE REQUIRED, CONSTRUCT CMU WALL TO PROVIDE A CONTINUOUS UNOBSTRUCTED CELL FROM BOTTOM TO TOP OF BAR. CELL CONTAINING A SINGLE BAR SHALL NOT BE LESS THAN 3" X 4" IN PLAN AREA.

PORTIONS OF CMU CONSTRUCTION REQUIRING STRUCTURAL FILL SHALL USE GROUT ONLY. USE OF CONCRETE FILL IN CMU CONSTRUCTION IS NOT PERMITTED. WHERE CLEARANCES AND CONGESTION PERMIT, USE COARSE GROUT WITH FEA GRAVEL AGGREGATE; OTHERWISE USE FINE GROUT.

REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF ALL VERTICAL CONTROL JOINTS IN EXTERIOR RYTHES OF PERIMETER WALLS AND FOR EXTERIOR WALLS.

PROVIDE STEEL PIPE SLEEVES AT ALL LOCATIONS WHERE PIPING PASSES THROUGH CMU WALL.

WHERE BOND BEAMS INTERSECT AT WALL CORNERS AT DIFFERENT ELEVATIONS, RUN EACH BOND BEAM BEAM AROUND THE CORNER FOR A MINIMUM OF TWO FULL BLOCK LENGTHS BEFORE TERMINATING. WHERE BOND BEAMS ADJOIN ON THE SAME WALL AT DIFFERENT ELEVATIONS, RUN BOND BEAMS PAST ONE ANOTHER A MINIMUM OF FOUR FULL BLOCK LENGTHS BEFORE TERMINATING

CASIT-IN-PLACE CONCRETE

DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF ACI 318 - 05 EXCEPT WHERE MORE RESTRICTIVE REQUIREMENTS ARE NOTED.

REINFORCING CLEAR COVER SHALL BE AS NOTED BELOW UNLESS SPECIFICALLY NOTED OTHERWISE ON STRUCTURAL DRAWINGS.

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH

CONCRETE EXPOSED TO EARTH OR WEATHER

#3 - #5 BARS

#6 - #10 BARS

3"

1 1/2"

2"

CONCRETE NOT EXPOSED TO EARTH OR WEATHER

WALLS - #3 THRU #11 BARS

WALLS - #14 THRU #18 BARS

STRUCTURAL SLAB - TOP, BOTTOM

JOIST TIES AND MAIN REINFORCING - TOP, BOTTOM, SIDES

BEAM TIES - TOP, BOTTOM, SIDES

BEAM MAIN REINFORCING - TOP, BOTTOM, SIDES

COLUMN TIES

COLUMN MAIN REINFORCING

1 1/2"

1 1/2"

2"

1 1/2"

2"

1 1/2"

2"

PROVIDE (2) #5 BARS AROUND ALL OPENINGS AND (2) #5 DIAGONAL BARS AT ALL OPENING AND RE-ENTRANT CORNERS. BARS SHALL EXTEND A MINIMUM OF 24" PAST OPENING.

ALL BAR SPLICES SHALL BE CONTACT LAP SPLICED USING CLASS B TENSION LAP LENGTHS, WITH ADJACENT LAPS STAGGERED A MINIMUM OF 3'-0" UNLESS DETAILED OTHERWISE.

FIELD BENDING OF ASTM A615 REINFORCING STEEL IS NOT PERMITTED. FIELD BENDING OF REINFORCING STEEL IS NOT PERMITTED EXCEPT WHERE SPECIFICALLY DETAILED ON STRUCTURAL DRAWINGS.

CORING OF COLUMNS, WALLS, BEAMS, JOISTS AND SLABS IS NOT PERMITTED. PROVIDE STEEL SLEEVES FOR ALL PENETRATIONS AT ALL LOCATIONS APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO PLACING CONCRETE.

WOOD FRAMING

DESIGN AND CONSTRUCTION OF WOOD FRAMED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE 2012 EDITION OF THE NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION, INCLUDING THE 2012 EDITION OF THE NATIONAL DESIGN SPECIFICATION VALUES FOR WOOD CONSTRUCTION AND THE 2008 EDITION OF THE SPECIAL DESIGN PROVISIONS FOR WIND AND SEISMIC STANDARD, EXCEPT WHERE MORE RESTRICTIVE REQUIREMENTS ARE NOTED.

USE STEEL WASHERS BETWEEN HEAD AND NUT OF BOLT AND WOOD, AND BETWEEN HEAD OF LAG SCREW AND WOOD.

WOOD SILL PLATES AND OTHER WOOD MEMBERS, INCLUDING PLYWOOD, DIRECTLY EXPOSED TO MOISTURE OR IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESURE TREATED.

METAL PLATED WOOD TRUSSES

WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE CURRENT EDITIONS OF "DESIGN SPECIFICATIONS FOR METAL PLATE CONNECTED WOOD TRUSSES" BY TRUSS PLATE INSTITUTE (TPI) AND "NATIONAL DESIGN SPECIFICATIONS FOR STRESS GRADE LUMBER AND ITS FASTENINGS" BY NATIONAL FOREST PRODUCTS ASSOCIATION.

ROOF TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING LOADS:

TOP CHORD LIVE LOAD

21 PSF (PLUS DRIFT)

TOP CHORD DEAD LOAD

10 PSF TYP

BOTTOM CHORD LIVE LOAD

0 PSF (NOT CONCURRENT WITH TOP CHORD)

BOTTOM CHORD DEAD LOAD

20 PSF

IN ADDITION TO THE LOADS STATED ABOVE THE TRUSSES SHALL BE DESIGNED FOR ANY SNOW DRIFTING, MECHANICAL, AND/OR ANY SPECIAL LOAD CONDITIONS AS SHOWN ON STRUCTURAL PLANS AND AS REQUIRED BY THE INTERNATIONAL BUILDING CODE 2009.

ROOF TRUSSES SHALL HAVE A MAXIMUM LIVE LOAD DEFLECTION OF L/360. TOTAL LOAD DEF. L/240 (1" MAX)

METAL PLATED WOOD TRUSSES (CONTINUED)

FABRICATION, HANDLING, STORAGE AND ERECTION SHALL BE IN ACCORDANCE WITH "TRUSS PLATE INSTITUTE" RECOMMENDED PRACTICES AND SHALL BE DONE IN A WORKMAN LIKE MANNER SO AS TO NOT DAMAGE THE TRUSSES. TRUSSES SHALL NOT BE CUT, ADDED ONTO, OR ALTERED IN ANY WAY WITHOUT THE WRITTEN CONSENT OF THE TRUSS DESIGNER, ENGINEER, AND ARCHITECT.

WOOD TRUSS DESIGNER/SUPPLIER SHALL SUBMIT FORMAL STAMPED CALCULATIONS BY A REGISTERED ENGINEER IN THE STATE OF WISCONSIN FOR REVIEW BEFORE FABRICATION.

CONTRACTOR SHALL SUBMIT TRUSS SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION. CONTRACTOR SHALL REVIEW AND STAMP ALL SHOP DRAWINGS BEFORE SUBMITTING TO THE ARCHITECT.

SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING INFORMATION:

NAME, ADDRESS, PHONE NUMBER OF THE TRUSS SUPPLIER

SLOPE OR DEPTH, SPAN, AND SPACINGS

LOCATION OF ALL JOINTS

ALL DESIGN LOADS

ADJUSTMENTS TO LUMBER AND METAL CONNECTOR PLATE VALUES FOR CONDITIONS OF USE

EACH REACTION FORCE AND DIRECTION

METAL CONNECTOR PLATE TYPE, SIZE, GAUGE AND DIMENSIONAL LOCATION OF EACH PLATE

LUMBER SIZE, SPECIES, AND GRADE FOR EACH TRUSS MEMBER

CONNECTION REQUIREMENTS FOR TRUSS TO TRUSS GIRDER, TRUSS PLY TO PLY, AND FIELD SPLICES

CALCULATED DEFLECTION RATIO AND/OR MAXIMUM DEFLECTION FOR LIVE AND TOTAL LOADS

SPECIFY ALL TRUSS TO TRUSS CONNECTIONS AND HANGERS

SPECIFY AND SHOW ALL PERMANENT TRUSS BRACING REQUIRED BY DESIGN

CONTRACTOR IS RESPONSIBLE FOR ALL ERECTION PROCEDURES AND TEMPORARY TRUSS BRACE REQUIREMENTS DURING ERECTION IN ACCORDANCE WITH TPI'S COMMENTARY AND RECOMMENDATIONS FOR HANDLING, INSTALL, AND BRACING METAL PLATE CONNECTED WOOD TRUSSES (HIP-91 BOOKLET) AND THE CURRENT EDITION OF ANSI/TPI-1.

TRUSSES EXPOSED TO MOISTURE SHALL BE CONSTRUCTED OF PRESURE TREATED WOOD AND GALVANIZED METAL PLATES.

DESIGN ROOF TRUSSES TO RESIST ALL WIND LOADS INCLUDING UPLIFT AS REQUIRED BY THE INTERNATIONAL BUILDING CODE WITH WISCONSIN AMENDED I-CODE INSERTS. MINIMUM NET UPLIFT = 10 PSF. PROVIDE TIEDOWN CLIP AT EACH TRUSS AT EVERY POINT OF BRACING.

ALL TRUSS TO TRUSS CONNECTIONS ARE TO BE DESIGNED, DETAILED, AND SUPPLIED BY THE TRUSS SUPPLIER.

TRUSS FABRICATOR SHALL FIELD VERIFY ALL SPAN DIMENSIONS BEFORE FABRICATING.

COORDINATE OPEN WEB PLACEMENT WITH MECHANICAL DESIGN BUILD CONTRACTOR FOR COORDINATION OF MECHANICAL SERVICES, ETC.

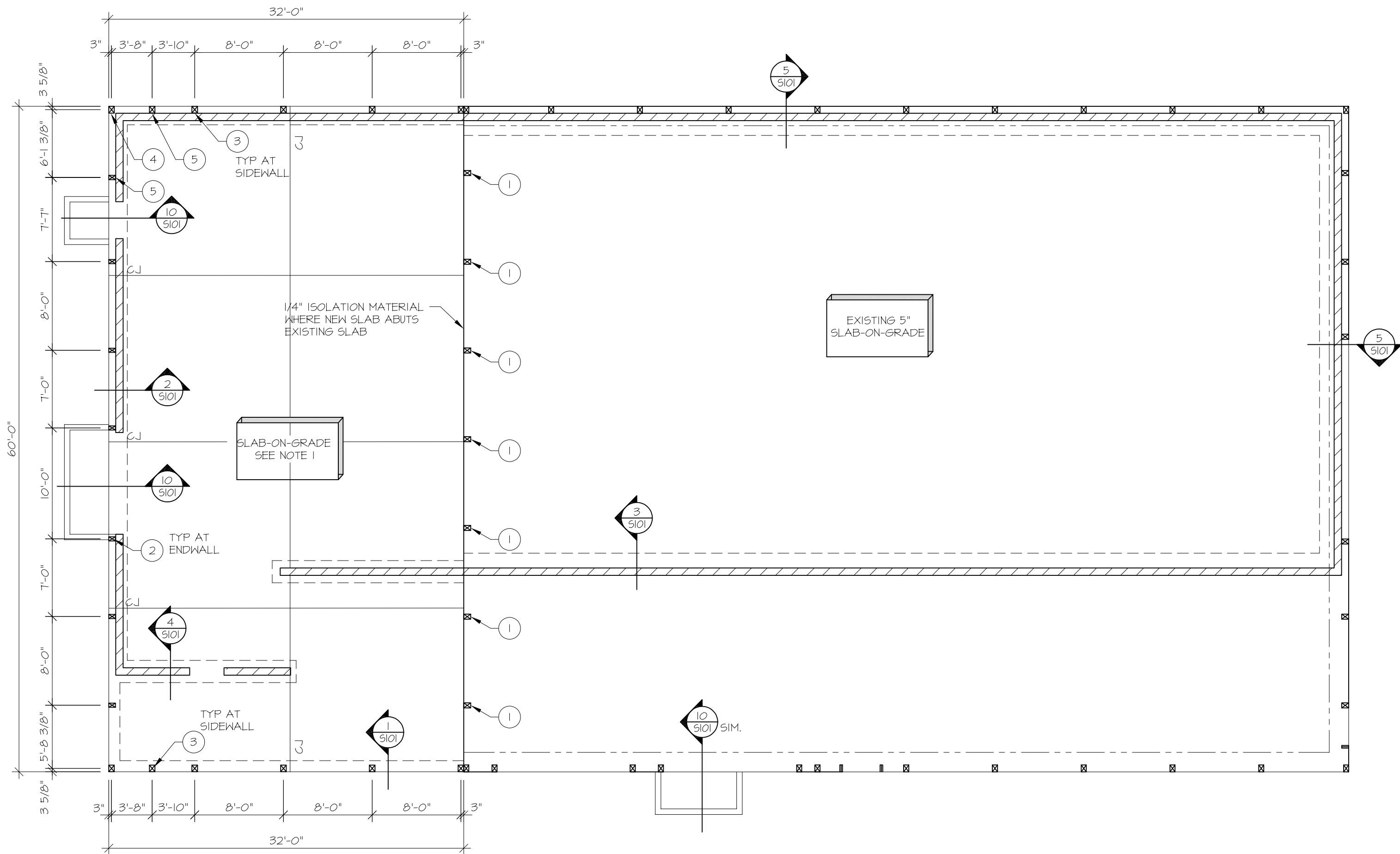
## COMPONENTS AND CLADDING WIND PRESSURES (PSF)

ZONE	WIND AREA (SF)	ROOF SLOPE						ZONE	WIND AREA (SF)				
		0° TO 7°		7° TO 27°		27° TO 45°							
		(+)	(-)	(+)	(-)	(+)	(-)						
1	10	10.5	25.9	14.9	23.7	23.7	25.9	4	10	25.9	28.1		
1	20	9.9	25.2	13.6	23.0	23.0	24.6	4	20	24.7	26.9		
1	50	9.0	24.4	11.9	22.2	22.2	22.8	4	50	23.2	25.4		
1	100	8.3	23.7	10.5	21.5	21.5	21.5	4	100	22.0	24.2		
2	10	10.5	43.5	14.9	41.3	23.7	30.3	5	10	25.9	34.7		
2	20	9.9	38.8	13.6	38.0	23.0	29.0	5	20	24.7	32.4		
2	50	9.0	32.7	11.9	33.6	22.2	27.2	5	50	23.2	29.3		
2	100	8.3	28.1	10.5	30.3	21.5	25.9	5	100	22.0	26.9		
3	10	10.5	65.4	14.9	61.0	23.7	30.3	ADJUSTMENT FACTOR					
3	20	9.9	54.2	13.6	57.1	23.0	29.0	MEAN ROOF HEIGHT (FT)	EXPOSURE				
3	50	9.0	39.3	11.9	51.8	22.2	27.2		B	C			
3	100	8.3	28.1	10.5	47.9	21.5	25.9	15	1.00	1.29			
(-) WIND PRESSURE ON ROOF OVERHANGS								20	1.00	1.29			
								25	1.00	1.35			
LOCATION	WIND AREA (SF)	ROOF SLOPE						30	1.00	1.40			
		0° TO 7°	7° TO 27°	7° TO 27°	27° TO 45°	27° TO 45°	27° TO 45°	35	1.05	1.45			
		ZONE 2	ZONE 3	ZONE 2	ZONE 3	ZONE 2	ZONE 3	40	1.09	1.49			
OVERHANG	10	37.2	61.4	48.2	80.9	43.7	43.7	45	1.12	1.53			
OVERHANG	20	36.6	48.1	48.2	73.0	42.4	42.4	50	1.16	1.56			
OVERHANG	50	35.7	30.7	48.2	62.6	40.7	40.7	55	1.19	1.59			
OVERHANG	100	35.1	17.4	48.2	54.7	39.4	39.4	60	1.22	1.62			

NOTES:

  - BASED ON SIMPLIFIED PROVISIONS FOR ENCLOSED REGULAR-SHAPED BUILDINGS WITH MEAN ROOF HEIGHT LESS THAN OR EQUAL TO 60'-0" (ASCE 7-10) ASSUMING 120 MPH WIND. EXPOSURE B, R=1.0, Kz=1.0 AT MEAN ROOF HEIGHT = 30'-0". MULTIPLY TABLE VALUES BY THE TABLE VALUES ABOVE IMMEDIATE RIGHT AT OTHER MEAN ROOF HEIGHTS AND BY IMPORTANCE FACTOR IF OTHER THAN I = 1.0.
  - (+) = POSITIVE (INWARD) PRESSURE.  
(-) = NEGATIVE (OUTWARD) PRESSURE.  
SF = SQUARE FEET
  - FOR EFFECTIVE MEMBER AREAS NOT SPECIFICALLY LISTED, INTERPOLATE OR USE LARGEST VALUE OF WIND PRESSURE/ SUCTION NOTED. DO NOT USE 1/3 STRESS INCREASE FOR MEMBER DESIGN WITH VALUES NOTED IN THIS TABLE.
  - LENGTH NOTED "8" = 12.0 FEET

STANDARD ABBREVIATIONS:		
ANCHOR BOLT	(ROD)	
AHU	AIR HANDLING UNIT	
ALT	ALTERNATE	
APPROX	APPROXIMATELY	
ARCH	ARCHITECTURAL	
BF	BOTTOM OF FOOTING	
BS	BOTTOM OF STEEL	
BC	BOTTOM CHORD	
BLDG	BUILDING	
BRG	BEARING	
BTWN	BETWEEN	
CB	CATCH BASIN	
CLIP	CAST-IN-PLACE	
CJ	CONTROL JOINT	
CL	CENTER LINE	
CLR	CLEAR (DISTANCE)	
CMU	CONCRETE MASONRY UNIT	
COL	COLUMN	
CONC	CONCRETE	
CONT	CONTINUOUS	
CS	COLUMN STRIP	
DBA	DEFORMED BAR ANCHOR	
	OR DECK BEARING ANGLE	
DBE	DECK BEARING ELEVATION	
DEMO	DEMOLITION / DEMOLISH	
DIA	DIAMETER	
DIAL	DEAD LOAD	
DWG	DRAWING	
EOP	EDGE OF DECK	
EOS	EDGE OF SLAB	
EF	EACH FACE	
EJ	EXPANSION JOINT	
ELEV	ELEVATION	
ELEC	ELECTRICAL	
ENG	ENGINEER	
EQ	EQUAL	
ES	EDGE STRIP	
EW	EACH WAY	
EWEF	EACH WAY EACH FACE	
EXP	EXPANSION	
EXT	EXTERIOR	
EXTG or (e)	EXISTING	
FD	FLOOR DRAIN	
FLG	FLANGE	
FLR	FLOOR	
FND	FOUNDATION	
FTG	FOOTING	
FRMG	FRAMING	
FUT	FUTURE	
FV	FIELD VERIFY	
GA	GAUGE	
GALV	GALVANIZED	
GC	GENERAL CONTRACTOR	
GLULAM	GLUE-LAMINATED BEAM(S)	
GT	GIRDER TRUSS	
HK	HOOK	
HORIZ	HORIZONTAL	
HP	HIGH POINT	
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING	
HWS	HEADED WELDED STUD(S)	
IF	INSIDE DIAMETER	
IF	INSIDE FACE	
INT	INTERIOR	
JBE	JOIST BEARING ELEVATION	
K	KIP	
KO	KNOCKOUT PANEL	
KSI	KIPS PER SQUARE INCH	
L	ANGLE	
LB	POUNDS	
LL	LIVE LOAD	
LLBB	LONG LEG BACK TO BACK	
LLH	LONG LEG HORIZONTAL	
LLV	LONG LEG VERTICAL	
LVP	LOW POINT	
LSB	CLASS 'B' BAR LAP	
LSL	LAMINATED STRAND LUMBER	
LTNT	LIGHTWEIGHT	
LVL	LAMINATED VENEER LUMBER	
LWA	LONG WAY	
MAX	MAXIMUM	
MECH	MECHANICAL	
MFR	MANUFACTURER	
MIN	MINIMUM	
MIS	MISCELLANEOUS	
MOS	MASONRY OPENING	
MS	MIDDLE STRIP	
NA	NOT APPLICABLE	
NIC		



1 FOUNDATION PLAN

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

FOUNDATION PLAN NOTES

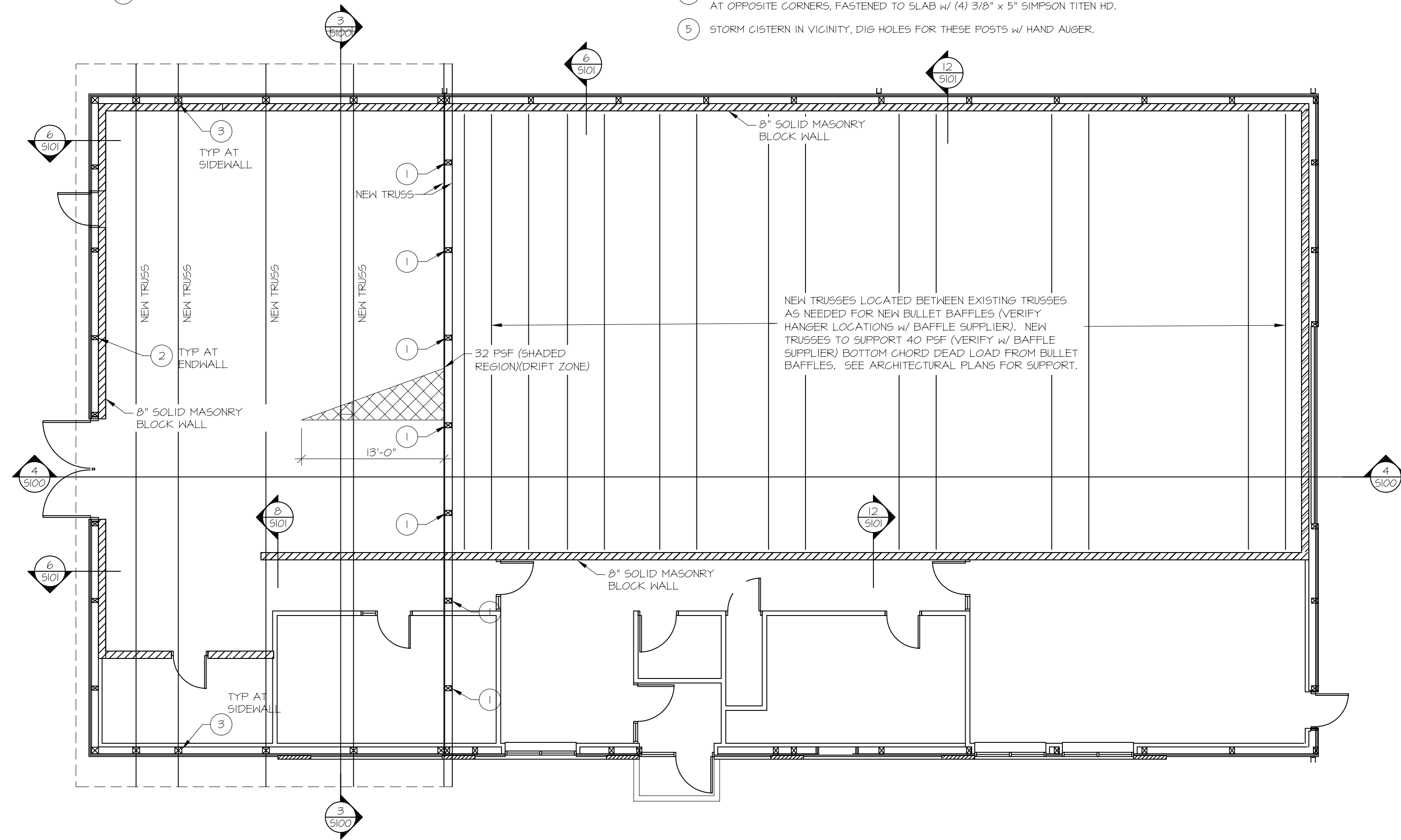
1. 5" 3500 PSI CONCRETE SLAB W/ WIRE MESH OVER VAPOR BARRIER, OVER 6" STONE BASE COURSE

FOUNDATION PLAN KEYED NOTES

- 1 EXISTING POST TO BE CUT

FOUNDATION PLAN KEYED NOTES

- 2 NEW (3) PLY 2x8 SOUTHERN PINE NO. 1 OR BETTER ENDWALL POST TREATED TO MIN. AHPA UC4A. PROVIDE 14"DIA X 4" THICK PRECAST CONCRETE ENDWALL POST PAD.
- 3 NEW (4) PLY 2x8 SOUTHERN PINE NO. 1 OR BETTER SIDEWALL POST TREATED TO MIN. AHPA UC4A. PROVIDE 26"DIA X 8" THICK (3,000PSI) POURED CONCRETE SIDEWALL POST PAD.
- 4 THIS CORNER POST IS NOT EMBEDDED IN GROUND. ATTACH TO SLAB W/ (2) SIMPSON RFBZ AT OPPOSITE CORNERS, FASTENED TO SLAB W/ (4) 3/8" x 5" SIMPSON TITEN HD.
- 5 STORM CISTERN IN VICINITY, DIG HOLES FOR THESE POSTS W/ HAND AUGER.



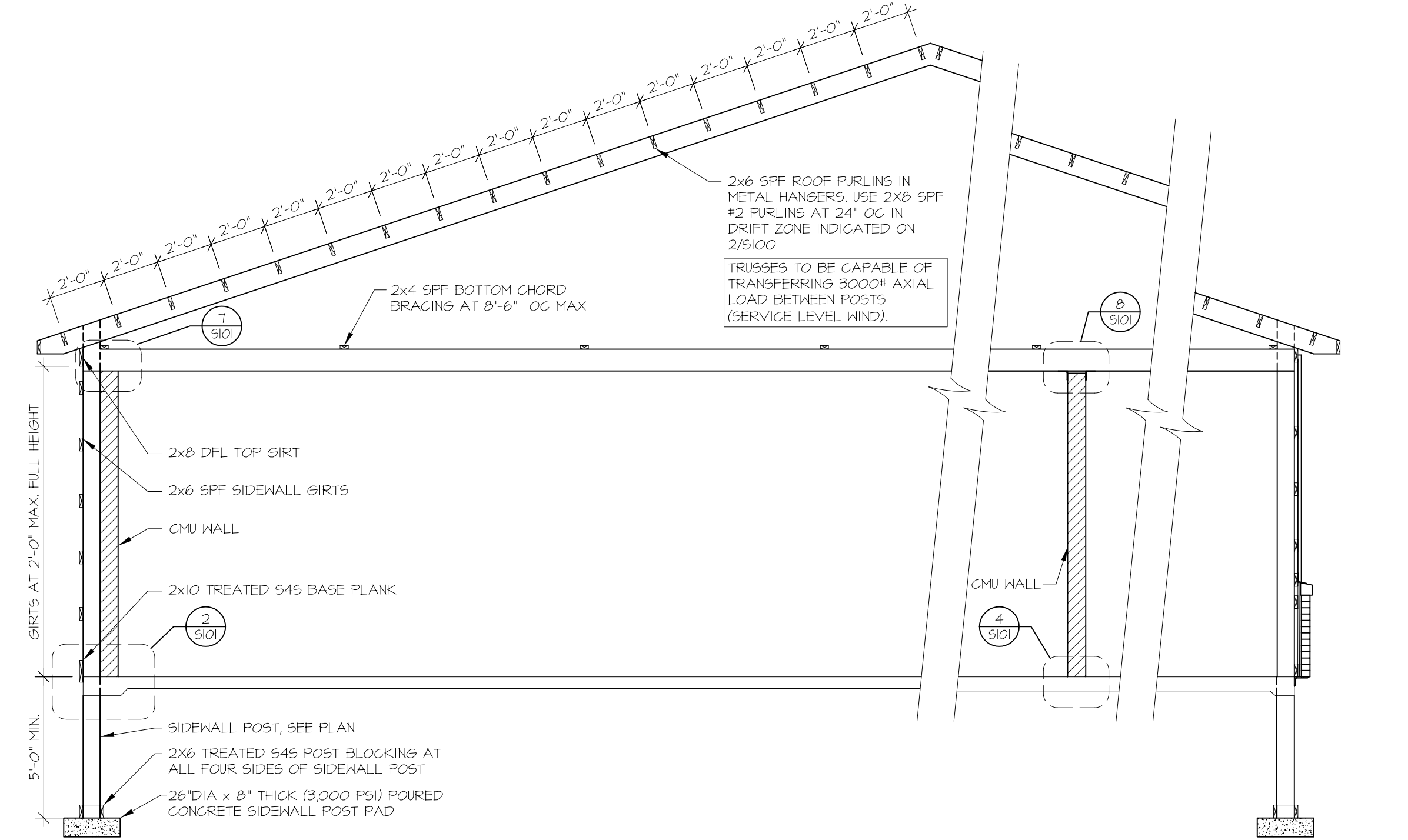
2 ROOF FRAMING PLAN

SCALE: 1/2"=1'-0"

ROOF FRAMING PLAN NOTES

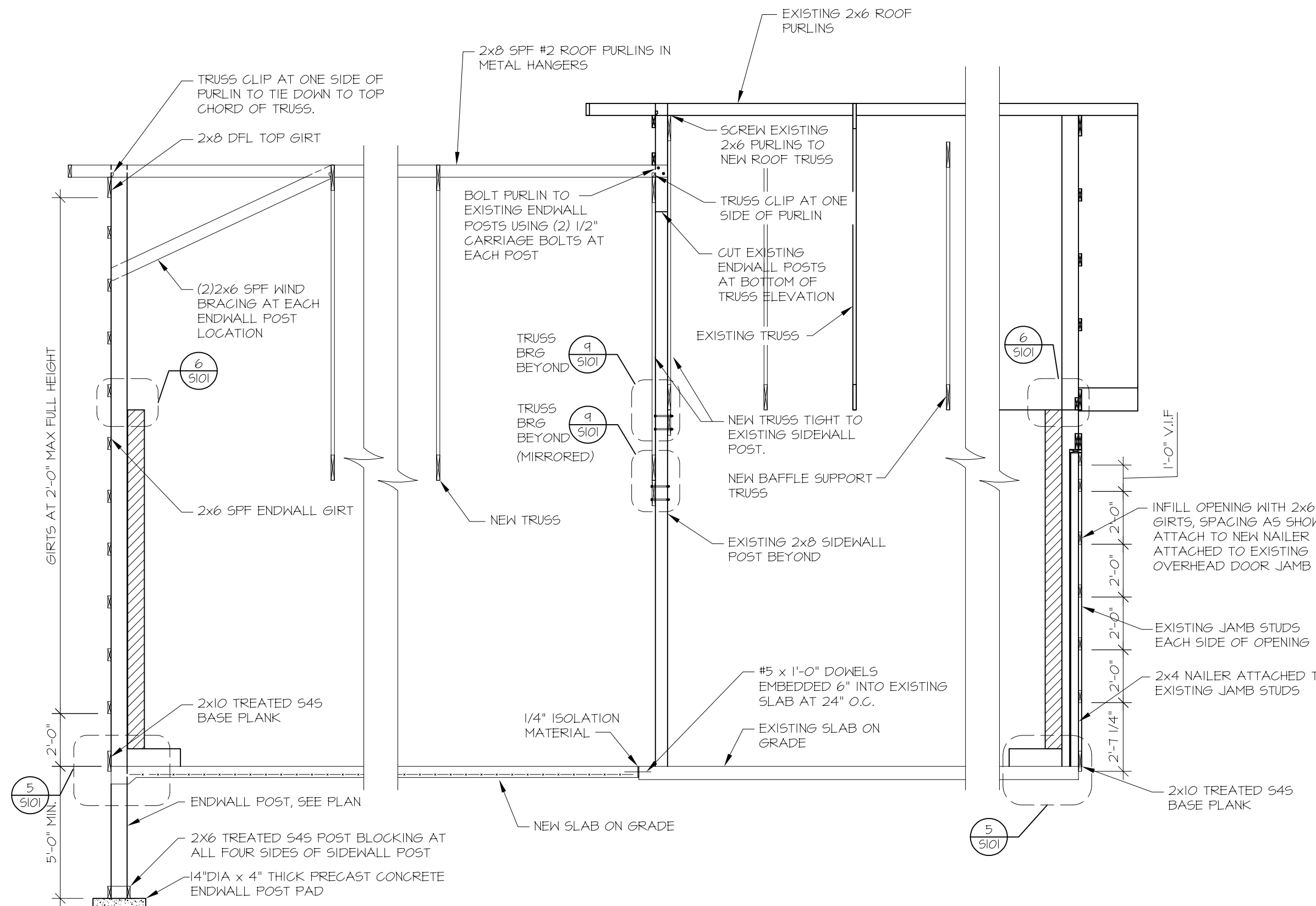
ROOF FRAMING PLAN KEYED NOTES

- 1 EXISTING POST TO BE CUT
- 2 NEW (3) PLY 2x8 SOUTHERN PINE NO. 2 DENSE OR BETTER ENDWALL POST TREATED TO MIN. AHPA UC4A. REFER TO PLAN FOR LENGTHS.
- 3 NEW (4) PLY 2x8 SOUTHERN PINE NO. 1 OR BETTER SIDEWALL POST TREATED TO MIN. AHPA UC4A.



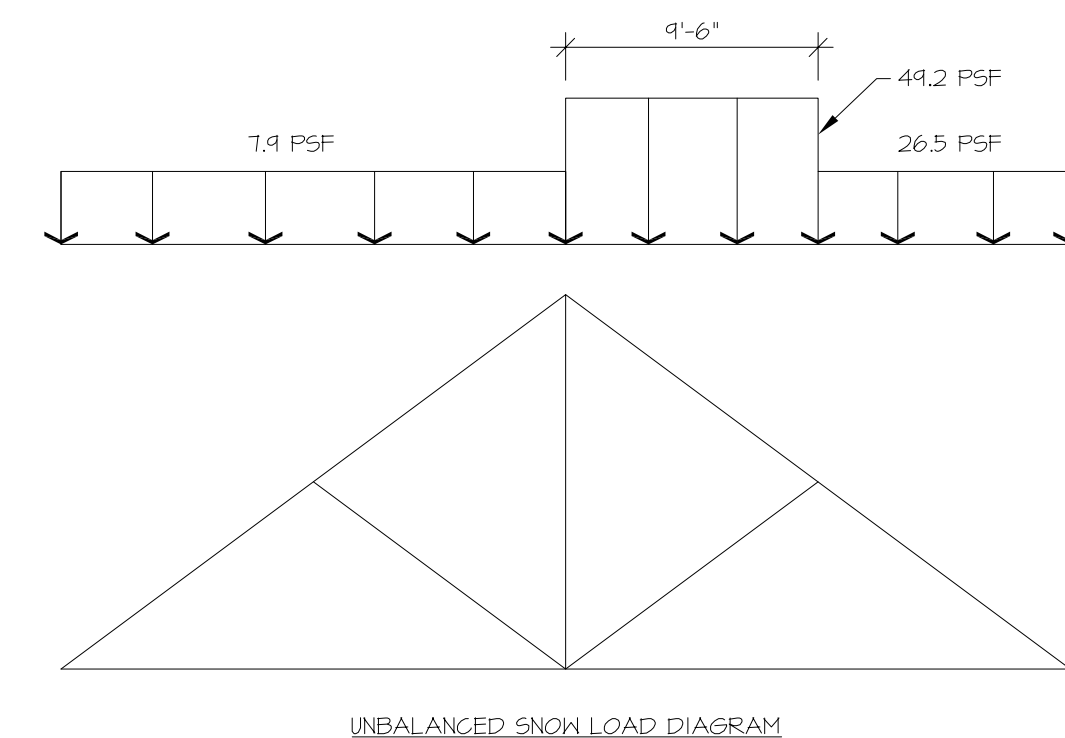
3 N-S SECTION VIEW

SCALE: 1/4"=1'-0"



4 E-W SECTION VIEW

SCALE: 1/4"=1'-0"



ARCHITECTURE  
ENGINEERING  
INTERIOR DESIGN



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WESTERN TECH. COLLEGE  
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STRUCTURAL PLANS AND SECTIONS

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