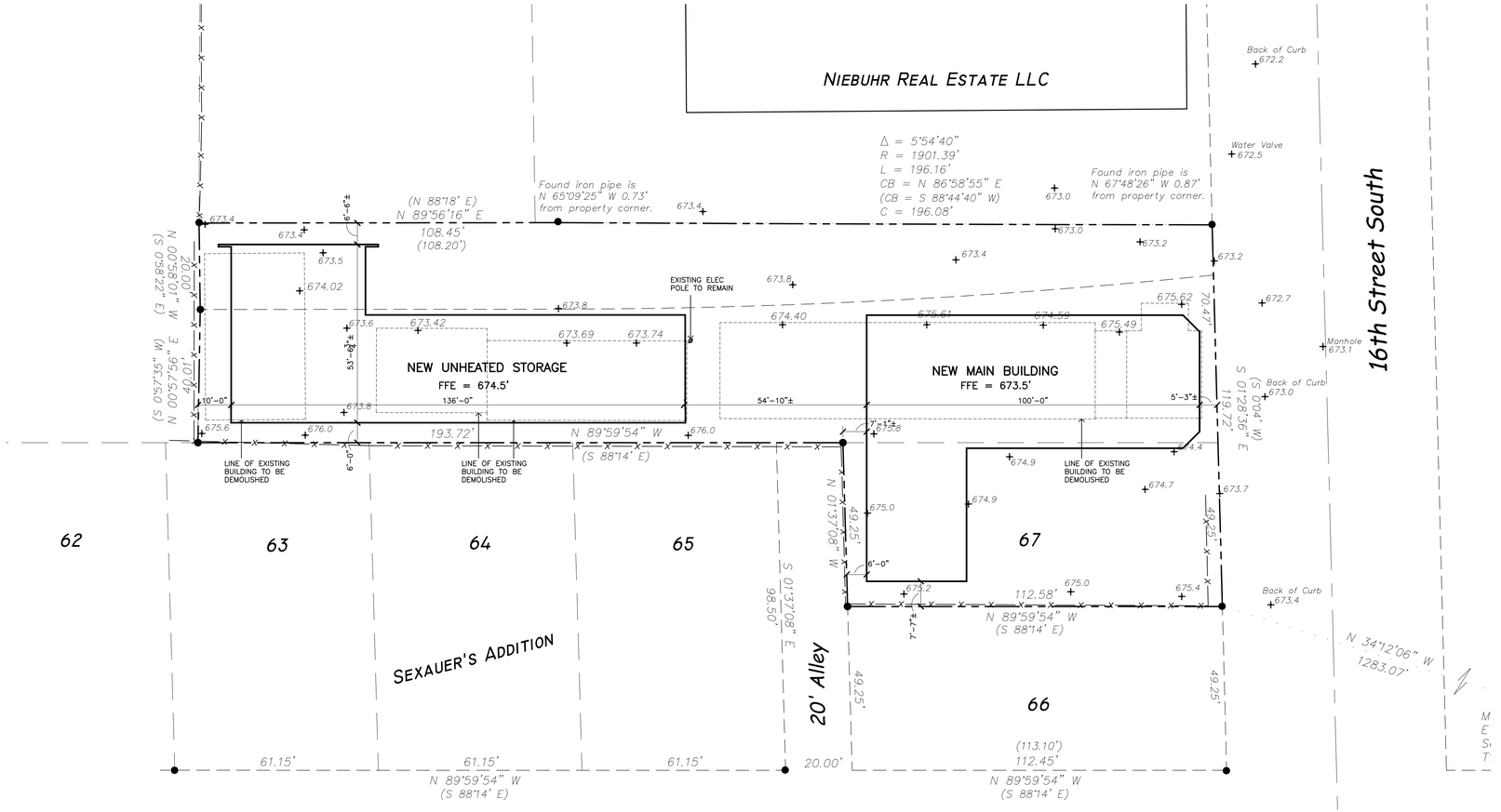


1 PROPOSED SITE PLAN

1" = 20'-0"

NORTH

SITE PLAN NOTES

1. LOCATION OF UTILITIES, PAVED SURFACES, STORM DRAINAGE, ETC., ARE APPROXIMATE BASED ON PREVIOUS PLANS FOR CONSTRUCTION IN THIS AREA. FIELD VERIFY ALL ITEMS AND REPORT DISCREPANCIES TO ENGINEER AND/OR OWNER IMMEDIATELY UPON DISCOVERY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THESE PLANS OR NOT, BEFORE COMMENCING WORK, AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES. CALL DIGGERS HOTLINE (800) 242-8511
2. NO WORK SHALL PROCEED UNTIL ALL UNDERGROUND UTILITIES HAVE BEEN VERIFIED WITH THE UTILITY COMPANIES.
3. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ARRANGE FOR ANY NECESSARY INSPECTIONS BY LOCAL GOVERNMENT THAT MAY BE REQUIRED.
4. PROVIDE A MINIMUM SLOPE AWAY FROM BUILDING OF 1/2" PER FOOT UNLESS NOTED OTHERWISE.
5. SOIL BEARING CAPACITY HAS BEEN ASSUMED. REPORT ANY AND ALL DISCREPANCIES TO SUCH ASSUMPTIONS AS DISCOVERED DURING EXCAVATION TO ENGINEER AND/OR OWNER.
6. THE OWNER SHALL PROVIDE DESIGNATED SPACE ADJACENT TO THE BUILDING FOR THE COLLECTION OF RECYCLABLE WASTE MATERIALS AS PER SPS 362.0400(2)

DRAWING INDEX

CODE INFORMATION

ADDRESS & LEGAL DESCRIPTION

1714 S. 16TH STREET
CITY OF LA CROSSE
LA CROSSE COUNTY TAX PARCEL #17-50266-30

APPLICABLE CODES

CITY OF LA CROSSE MUNICIPAL CODE CHAPTER 115 (ZONING) & CHAPTER 103 (BUILDINGS & BUILDING REGULATIONS)
WISCONSIN COMMERCIAL BUILDING CODE (2015 IBC W/AMENDMENTS)

ZONING DISTRICT

LIGHT INDUSTRIAL DISTRICT

SCOPE OF WORK

UNHEATED STORAGE
CONSTRUCT 5,239 SF BUILDING MATERIALS UNHEATED, UNATTENDED STORAGE BUILDING

OCCUPANCY

UNHEATED STORAGE
STORAGE GROUP, S-1 MODERATE HAZARD STORAGE

SIZE

UNHEATED STORAGE = 5,239 SF

TYPE OF CONSTRUCTION

TYPE VB, UNPROTECTED WOOD FRAMING

FIRE PROTECTION

NO AUTOMATIC FIRE SPRINKLER SYSTEM

EXIT DISTANCE

200 FEET

SEISMIC CATEGORY

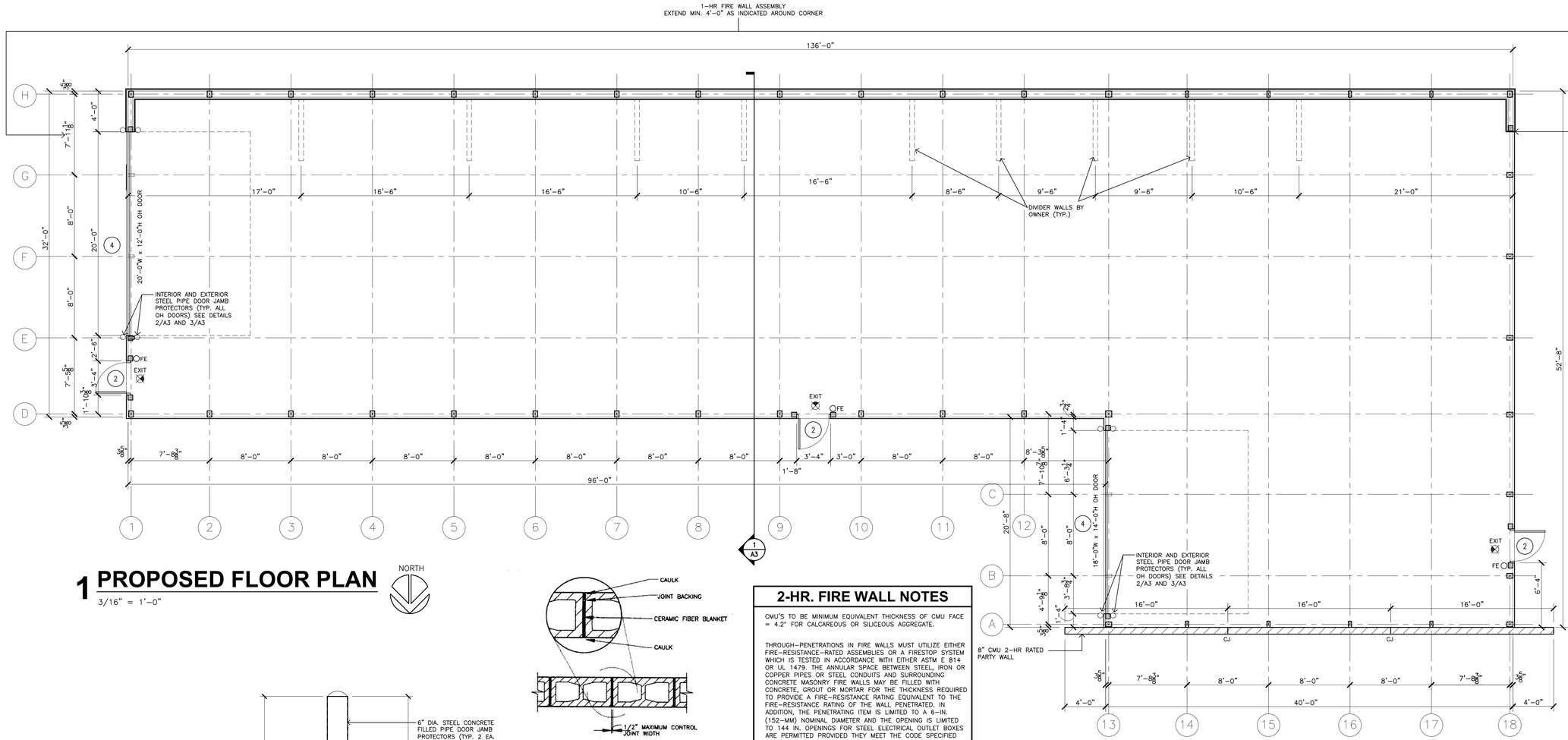
CODE "A"

DRAWN JAW
CHECKED
DATE JANUARY 24, 2022
SCALE AS NOTED
SHEET A1

JIM WEBB, PE
Engineering & Construction, LLC
1224 King Street
La Crosse, WI 54601
(608) 780-4672

NEW BUILDING FOR:
KRATT LUMBER
1714 S. 16TH STREET
LA CROSSE, WISCONSIN

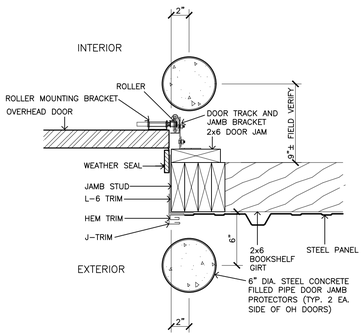
UNHEATED STORAGE: PROPOSED SITE PLAN AND CODE INFORMATION



1 PROPOSED FLOOR PLAN

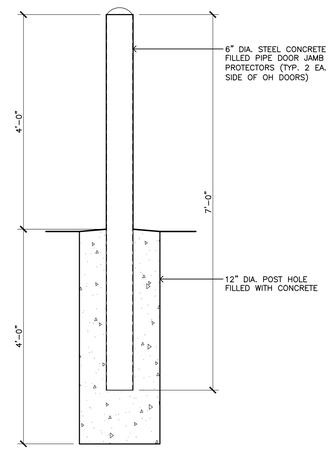
3/16" = 1'-0"

NORTH



2 OH DOOR JAMB

1 1/2" = 1'-0"



3 DOOR PROTECTOR DETAIL

3/4" = 1'-0"

FOR RATINGS UP TO AND INCLUDING 4 HOURS

4 VERT. WALL JOINT

3/4" = 1'-0"

2-HR. FIRE WALL NOTES

CMU'S TO BE MINIMUM EQUIVALENT THICKNESS OF CMU FACE = 4.2" FOR CALCAREOUS OR SILICEOUS AGGREGATE.

THROUGH-PENETRATIONS IN FIRE WALLS MUST UTILIZE EITHER FIRE-RESISTANCE-RATED ASSEMBLIES OR A FIRESTOP SYSTEM WHICH IS TESTED IN ACCORDANCE WITH EITHER ASTM E 814 OR UL 1479. THE ANNULAR SPACE BETWEEN STEEL, IRON OR COPPER PIPES OR STEEL CONDUITS AND SURROUNDING CONCRETE MASONRY FIRE WALLS MAY BE FILLED WITH CONCRETE, GROUT OR MORTAR FOR THE THICKNESS REQUIRED TO PROVIDE A FIRE-RESISTANCE RATING EQUIVALENT TO THE FIRE-RESISTANCE RATING OF THE WALL PENETRATED. IN ADDITION, THE PENETRATING ITEM IS LIMITED TO A 6-IN. (152-MM) NOMINAL DIAMETER AND THE OPENING IS LIMITED TO 144 IN. OPENINGS FOR STEEL ELECTRICAL OUTLET BOXES ARE PERMITTED PROVIDED THEY MEET THE CODE SPECIFIED REQUIREMENTS.

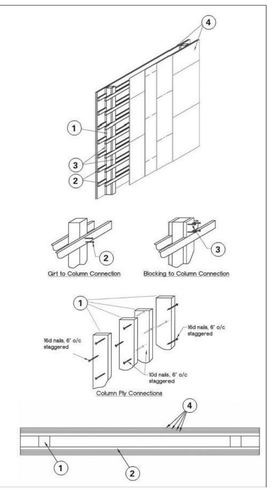
(1) **Wood Columns -** Min. 5-1/2 by 6 in. wood columns are constructed from min. four 2x6 in. wood studs. The column is constructed by nailing two 2x6 studs together with 10d nails spaced 6 in. OC. Staggered on opposite sides; then finished by attaching 2x6 studs to each face with 16d nails spaced 6 in. OC. staggered on opposite sides. The columns are spaced a max 96 in. OC. The columns are orientated so that the 2 in. side of each member is perpendicular to the horizontal girts.

(2) **Wood Girts -** Nominal 2 in. by 4 in. girts are applied horizontally to the face of the columns at 16 in. on center. The girts are applied with two 16d nails per column. The joints are aligned on the vertical center of the columns.

(3) **Wood Blocking -** 2 in. by 6 in. blocking is vertically applied to the column face between each girt. The intermediate blocking is applied with four 16d, equally spaced nails per location.

(4) **Gypsum Board* - ~~For 3 Hr Rating~~** ~~Four layers of nom. 48 in. wide by 5/8 in. thick gypsum board applied horizontally. Joints in adjacent layers are staggered a min. 16 in. Gypsum board secured to the wood girts as follows: First layer fastened with 2 in. long Type W coarse threaded screws spaced max 24 in. OC. along the horizontal edge and max 8 in. OC. along the vertical edge to the columns. Second layer fastened with 2-1/2 in. long Type W coarse threaded screws spaced max 24 in. OC. Third layer fastened with 3 in. Type W coarse threaded screws spaced max 24 in. OC. The fourth layer fastened with 4 in. long Type W coarse threaded screws spaced max 12 in. OC. All screws are offset min. 6 in. from adjacent layers.~~ **For 2 Hr Rating -** ~~Three layers of nom. 48 in. wide by 5/8 in. thick gypsum board applied horizontally. First layer fastened with 2 in. long Type W coarse threaded screws spaced max 24 in. OC. along the horizontal edge and max 8 in. OC. along the vertical edge to the columns. Second layer fastened with 2-1/2 in. long Type W coarse threaded screws spaced max 24 in. OC. Third layer fastened with 3 in. Type W coarse threaded screws spaced max 24 in. OC. All screws are offset min. 6 in. from adjacent layers.~~ **For 1 Hr Rating -** Two layers of nom. 48 in. wide by 5/8 in. thick gypsum board applied horizontally. First layer fastened with 2 in. long Type W coarse threaded screws spaced max 12 in. OC. along the horizontal edge and max 8 in. OC along the vertical edge to the columns. Second layer fastened with 2-1/2 in. long Type W coarse threaded screws spaced max 12. OC. All screws are offset min. 6 in. from adjacent layers.

** Bearing the UL Classification Mark*



5 1-HR. FIRE WALL ASSEMBLY - UL #V304

NO SCALE

FLOOR PLAN NOTES

1. ILLUMINATED EXIT LIGHTS COMPLY WITH IBC 1003.2.10. INCLUDE EMERGENCY LIGHT HEADS TO PROVIDE FOR ILLUMINATION OF EXIT PATH.
2. PROVIDE FIRE EXTINGUISHERS TO COMPLY WITH 2015 IFC 906 AND MAINTAIN FE'S AS PER NFPA 10. VERIFY LOCATIONS WITH LOCAL FIRE DEPARTMENT REPRESENTATIVES. (FE)
3. MAXIMUM ALLOWABLE QUANTITY OF FLAMMABLE AND HAZARDOUS MATERIALS THROUGHOUT BUILDING TO COMPLY WITH 2015 IBC TABLES 307.1(1), 307.1(2), 414.2.5(1), 414.2.5(2) AND 414.5.1.

DOOR AND FRAME NOTES

(2) EXTERIOR HOLLOW METAL DOORS AND FRAMES
3'-0" x 7'-0" INSULATED FLUSH PANEL, COMPOSITE HOLLOW METAL ENTRY DOOR IN HOLLOW METAL FRAME

(4) OVERHEAD DOORS
SEE PLAN FOR SIZE. OVERHEAD DOORS TO BE INSULATED STEEL SECTIONAL DOORS COMPLETE WITH FULLY ENCAPSULATED FOAMED-IN-PLACE PANELS, PVC THERMAL BREAK BETWEEN SKINS, AND PVC JOINT SEAL. PROVIDE HIGH LIFT TRACK AND EMERGENCY OPERATION.

FINISH HARDWARE
DOOR HARDWARE THROUGHOUT TO COMPLY WITH ICC/ANSI A 117.1, CHAPTER 3, SECTION 309 (LEVER HANDLES, PUSH-TYPE MECHANISMS/U-SHAPED HANDLES). ALL HARDWARE REQUIRED FOR DOOR PASSAGE SHALL BE NO HIGHER THAN 48" ABOVE FINISHED FLOOR. EXTERIOR DOOR THRESHOLDS MAY NOT EXCEED 1/2" ON EITHER SIDE OF DOOR.

DRAWN JAW
CHECKED
DATE JANUARY 24, 2022
SCALE AS NOTED
SHEET A2

JIM WEBB, PE
Engineering & Construction, LLC
1224 King Street
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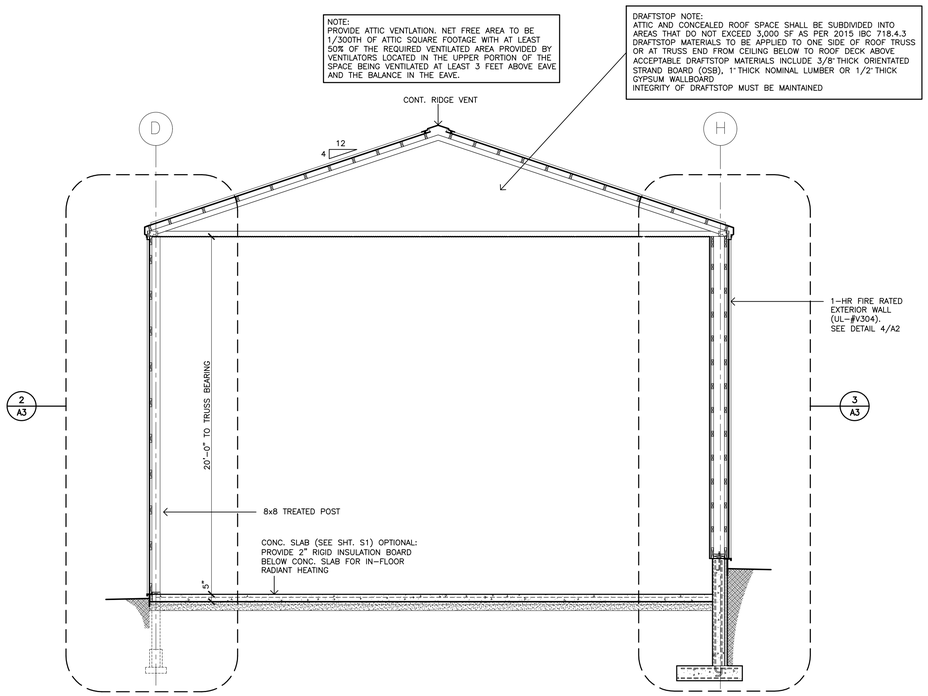
(608) 780-4672

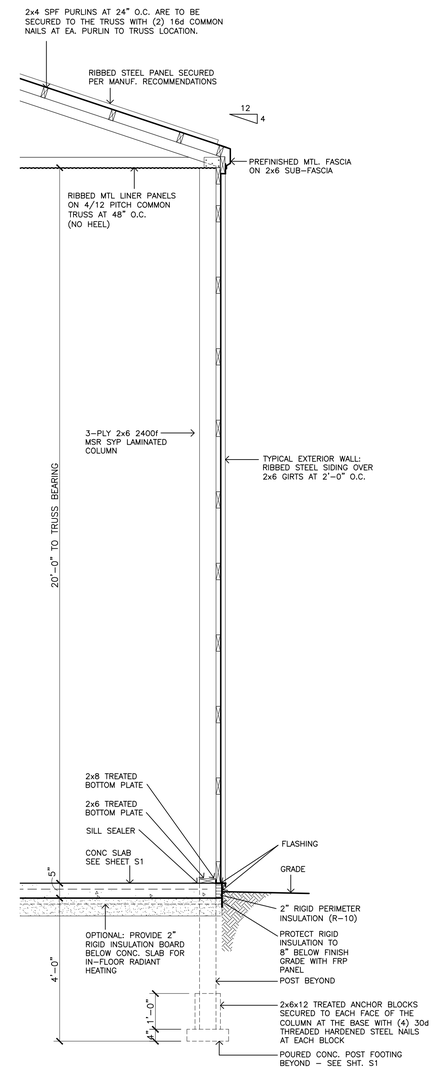
NEW BUILDING FOR:
KRATT LUMBER
1714 S. 16TH STREET
LA CROSSE, WISCONSIN

UNHEATED STORAGE: PROPOSED FLOOR PLAN



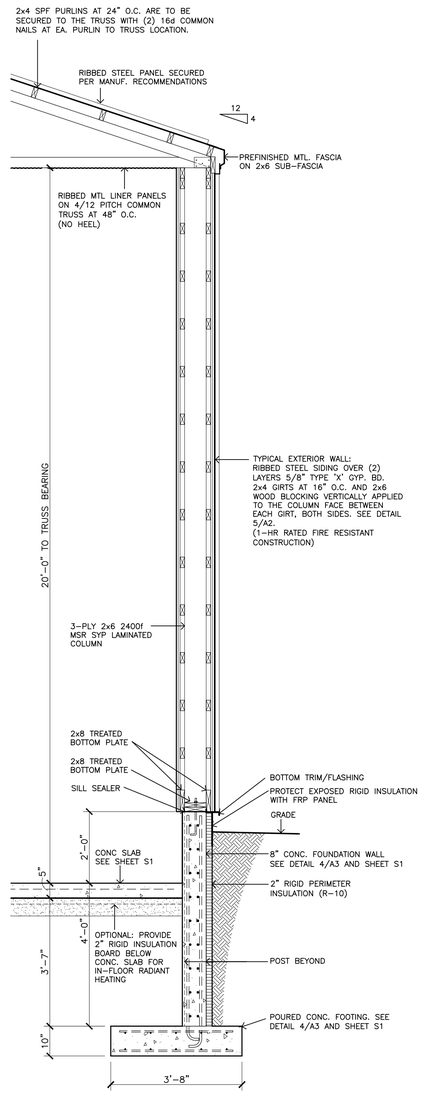
1 BUILDING SECTION

1/4" = 1'-0"



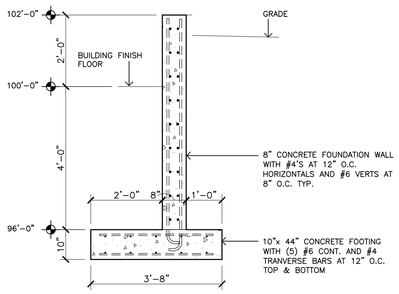
2 WALL SECTION

1/2" = 1'-0"



3 WALL SECTION

1/2" = 1'-0"



4 RETAINING WALL SECTION

1/2" = 1'-0"

DRAWN	JAW
CHECKED	
DATE	JANUARY 24, 2022
SCALE	AS NOTED
SHEET	A3

JIM WEBB, PE
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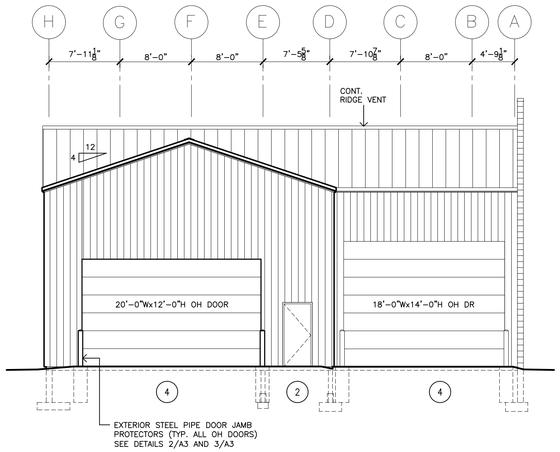
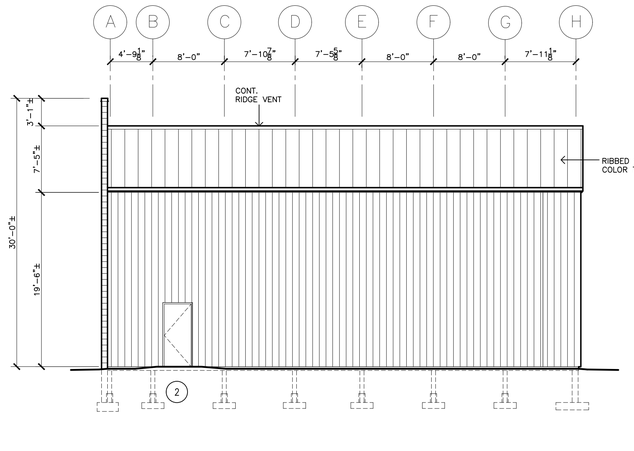
NEW BUILDING FOR:
KRATT LUMBER
1714 S. 16TH STREET
LA CROSSE, WISCONSIN

UNHEATED STORAGE: BUILDING AND WALL SECTIONS



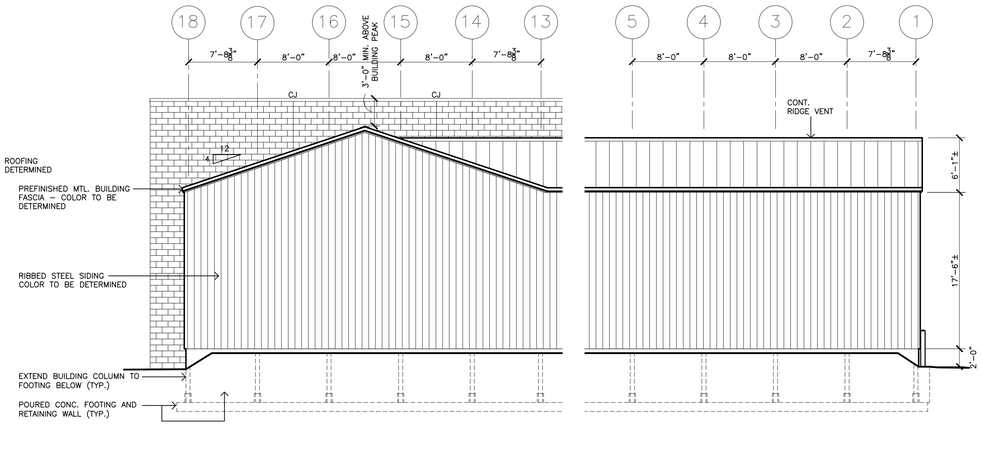
1 FRONT EXT. ELEVATION

1/8" = 1'-0"



2 REAR EXT. ELEVATION

1/8" = 1'-0"



3 LEFT SIDE EXTERIOR ELEVATION

1/8" = 1'-0"

4 RIGHT SIDE EXTERIOR ELEVATION

1/8" = 1'-0"

DRAWN JAW
CHECKED
DATE JANUARY 24, 2022
SCALE AS NOTED
SHEET A4

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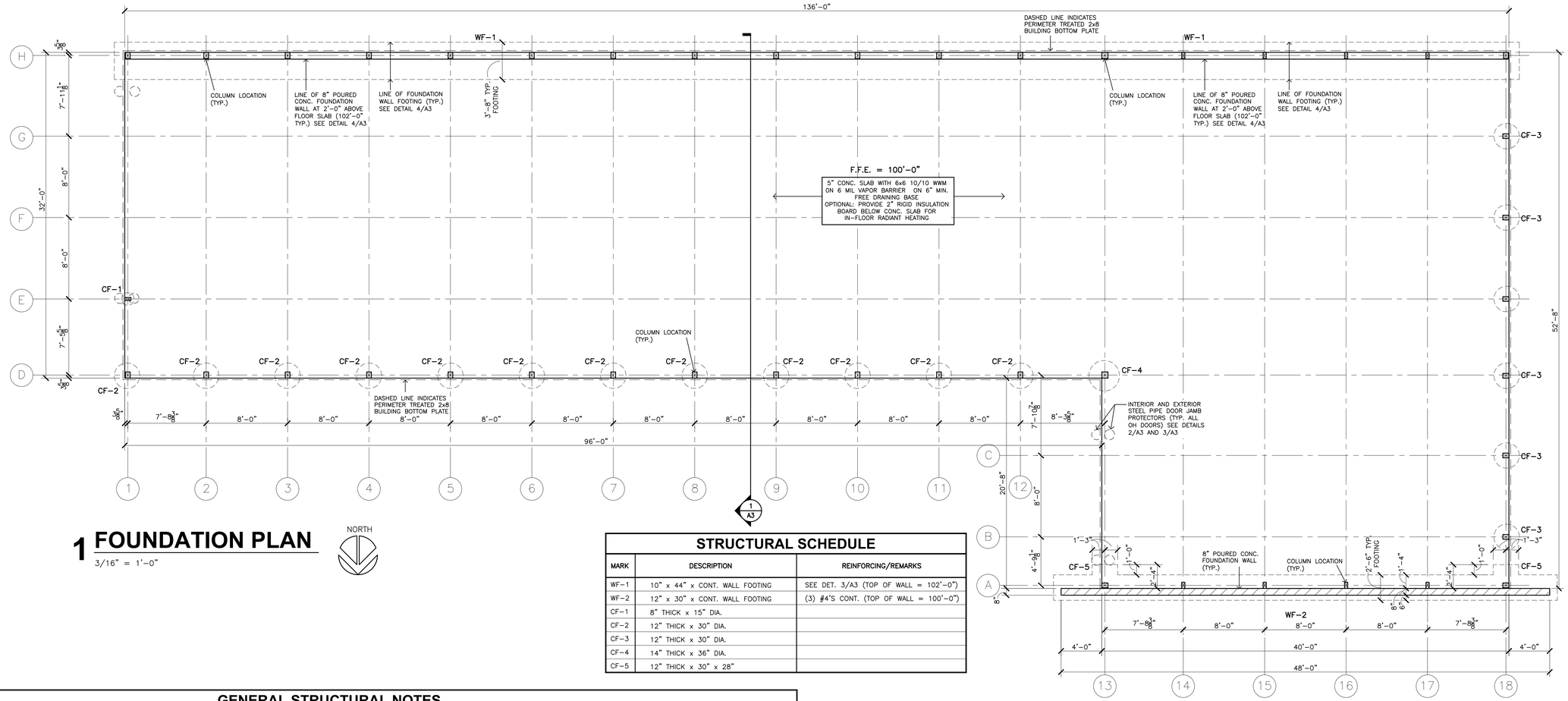
NEW BUILDING FOR:
KRATT LUMBER
1714 S. 16TH STREET
LA CROSSE, WISCONSIN

UNHEATED STORAGE: EXTERIOR ELEVATIONS



1 FOUNDATION PLAN

3/16" = 1'-0"

NORTH

STRUCTURAL SCHEDULE

MARK	DESCRIPTION	REINFORCING/REMARKS
WF-1	10" x 44" x CONT. WALL FOOTING	SEE DET. 3/A3 (TOP OF WALL = 102'-0")
WF-2	12" x 30" x CONT. WALL FOOTING	(3) #4'S CONT. (TOP OF WALL = 100'-0")
CF-1	8" THICK x 15" DIA.	
CF-2	12" THICK x 30" DIA.	
CF-3	12" THICK x 30" DIA.	
CF-4	14" THICK x 36" DIA.	
CF-5	12" THICK x 30" x 28"	

GENERAL STRUCTURAL NOTES

DESIGN LOADS

FLOOR LOADS
- LIVE LOAD 100 PSF
- DEAD LOAD 15 PSF

ROOF LOADS
- GROUND SNOW LOAD 40 PSF
- DEAD LOAD, TOP CHORD 10 PSF
- DEAD LOAD, BOTTOM CHORD 5 PSF

WIND LOADS
- BASIC WIND SPEED = 115 MPH EXPOSURE C
- RISK CATEGORY = II

SEISMIC & THERMAL PERFORMANCE
- SEISMIC HAZARD: RISK CATEGORY: GROUP II – SEISMIC DESIGN CATEGORY: A SITE CLASSIFICATION:C UNHEATED, INSULATED STRUCTURE

CONSTRUCTION AND SAFETY

1. ENGINEER SHALL NOT BE RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION SELECTED BY CONTRACTOR.
2. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. WHEN ON SITE, THE ENGINEER IS RESPONSIBLE FOR HIS OWN SAFETY BUT HAS NO RESPONSIBILITY FOR THE SAFETY OF OTHER PERSONNEL OR SAFETY CONDITIONS AT THE SITE.
3. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. SHOULD ANY DISCREPANCY BE FOUND, CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF THE CONDITION.
4. CONTRACTOR SHALL BRACE ENTIRE STRUCTURE AS REQUIRED DURING DEMOLITION AND CONSTRUCTION TO MAINTAIN STABILITY UNTIL THE STRUCTURE IS COMPLETE AND FUNCTIONING AS THE DESIGNED UNIT.

FOUNDATIONS

5. FOUNDATION ELEVATIONS ARE SHOWN FOR BIDDING PURPOSES AND MAY VARY TO TO SUIT SUB-SURFACE SOIL CONDITION. ELEVATION AND BEARING STRATA SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.
6. FOOTINGS MAY BE PLACED WITHOUT SIDE FORMS IF EXCAVATED WALLS STAND APPROXIMATELY VERTICAL.
7. ALL FOOTINGS SHALL BEAR ON LEVEL (WITHIN 1 IN 12) UNDISTURBED SOIL OR APPROVED ENGINEERED FILL. FOUNDATIONS HAVE BEEN DESIGNED FOR A MAXIMUM SOIL BEARING PRESSURE OF 2000 PSF (1,850 PSF EFFECTIVE ALLOWABLE) BELOW STRIP FOOTINGS AND ISOLATED COLUMN FOOTINGS.
8. CONTRACTOR SHALL CONTACT UTILITY COMPANIES FOR LOCATING UNDERGROUND SERVICES AND IS RESPONSIBLE FOR THEIR PROTECTION AND SUPPORT.
9. COMPACTION:
   - A. ALL FILL MATERIALS SHALL BE APPROVED BY A GEOTECHNICAL CONSULTANT.
   - B. FILL BELOW FOOTINGS: ENGINEERED FILL BELOW FOOTINGS: MINIMUM COMPACTION 98% STANDARD PROCTOR DENSITY AT THE OPTIMUM MOISTURE CONTENT.

CONCRETE

10. CONCRETE WORK AND TESTING SHALL CONFORM TO ALL REQUIREMENTS OF ACI 318.
11. CONCRETE WORK IN COLD WEATHER SHALL CONFORM TO ALL REQUIREMENTS OF ACI 306.1-90 "STANDARD SPECIFICATION FOR COLD WEATHER CONCRETING" AND ACI 306.1-90 "COLD WEATHER CONCRETING".
12. CONCRETE WORK IN HOT WEATHER SHALL CONFORM TO ALL REQUIREMENTS OF ACI 305R-91 "HOT WEATHER CONCRETING". THE AIR TEMPERATURE, RELATIVE HUMIDITY, CONCRETE TEMPERATURE, AND WIND VELOCITY SHALL BE ENTERED INTO NOMOGRAPH FIGURE 2.1.5 TO DETERMINE IF PRECAUTIONS AGAINST PLASTIC SHRINKAGE ARE REQUIRED.
13. CONCRETE MIX DESIGNS SHALL BE SUBMITTED FOR EACH TYPE OF CONCRETE TO THE STRUCTURAL ENGINEER FOR APPROVAL IN ACCORDANCE WITH ACI 318 SECTION 3.9 OR 3.10. 14. MATERIALS: (f'c BASED ON 28 DAYS UNLESS NOTED)
   - A. CONCRETE UNLESS NOTED: f'c = 4000 PSI, NORMAL AGGREGATE.
   - B. CONCRETE FOR INDUSTRIAL OR WAREHOUSE INTERIOR FLOOR SLABS: f'c = 4000 PSI AT 28 DAYS, 1800 PSI AT 3 DAYS, NORMAL WEIGHT AGGREGATE, MINIMUM PORTLAND CEMENT CONTENT PER ACI 318-14 TABLE 3.14.2(b), FLY ASH NOT PERMITTED, WATER NOT PERMITTED TO BE ADDED AT THE SITE, HRWR ADMIXTURE REQUIRED, MAXIMUM WATER / CEMENT RATIO = 0.50.
   - C. CONCRETE FOR OTHER INTERIOR FLOOR SLABS, f'c = 4000 PSI AT 28 DAYS, 1800 PSI AT 3 DAYS, NORMAL WEIGHT AGGREGATE, MINIMUM PORTLAND CEMENT CONTENT PER ACI 318-99 TABLE 3.14.2(b), WATER NOT PERMITTED TO BE ADDED AT THE SITE, HRWR ADMIXTURE REQUIRED, MAXIMUM WATER / CEMENT RATIO = 0.50.
   - D. CONCRETE FOR EXTERIOR FLAT WORK, WALKS, ETC., f'c = 4500 PSI, (4.5% TO 7.5% ENTRAINED AIR), MINIMUM PORTLAND CEMENT CONTENT = 520 #/CY, MAXIMUM WATER CEMENTITOUS RATIO = 0.50.
   - E. CONCRETE FOR FOUNDATION WALLS WITH EXTERIOR EXPOSURE, f'c = 4000 PSI, (4.5% TO 7.5% ENTRAINED AIR), MAXIMUM WATER CEMENTITOUS RATIO = 0.50.
   - F. CONCRETE FOR FOOTINGS: f'c = 3000 PSI
   - G. REINFORCING STEEL: ASTM A615 60 KSI YIELD DEFORMED BARS AND ASTM A185 MESH, FLAT SHEETS ONLY.
   - H. FLY ASH: ASTM C618, TYPE F OR C. TOTAL FLY ASH-TO-PORTLAND CEMENT RATIO SHALL NOT EXCEED 20% MAXIMUM.
   - J. HIGH RANGE WATER REDUCER (HRWR) ADMIXTURE: ASTM C494. K. CHLORIDE CONTENT OF CONCRETE: LIMIT TOTAL CHLORIDE ION CONTENT TO AMOUNT INDICATED IN TABLE 4.4.1 OF ACI 318. ADMIXTURES CONTAINING CHLORIDE ARE NOT PERMITTED IN REINFORCED CONCRETE OR CONCRETE CONTAINING METALS.
15. SLUMP SHALL BE MEASURED PRIOR TO ADDITION OF HRWR.
16. LAP SPLICE REINFORCING BARS AS FOLLOWS UNLESS NOTED OTHERWISE.
   - A. BARS WITH MORE THAN 12" OF CONCRETE BELOW – 48 BAR DIAMETERS, #4 BAR = 24" LAP, #5 BAR = 30" LAP, #6 BAR = 36" LAP.
   - B. BARS WITH LESS THAN 12" OF CONCRETE BELOW – 40 BAR DIAMETERS, #4 BAR = 20" LAP, #5 BAR = 25" LAP, #6 BAR = 30" LAP.
17. MACHINE TROWEL FINISH FLOOR SLAB AND CURE USING "CURE AND SEAL" TYPE CURING COMPOUND MEETING FEDERAL SPECIFICATION TT-C-00800, VOC COMPLIANT, 30% MINIMUM SOLIDS CONTENT. FOR APPLICATION EXPOSED TO SUNLIGHT USE LIGHT BROOM FINISH AND ACRYLIC BASED CURING COMPOUND.
18. FLOOR SLAB-ON-GRADE SHALL CONFORM TO THE FOLLOWING SURFACE PROFILE TOLERANCES PER ASTM E-1155 AND ACI 117:

	FF (FLATNESS)	FL (LEVELNESS)
SPECIFIED OVERALL VALUE	25	20
MINIMUM LOCAL VALUE	18	13

MAXIMUM GAP UNDER 10 FT. UNLEVELED STRAIGHT EDGE = 1/4"

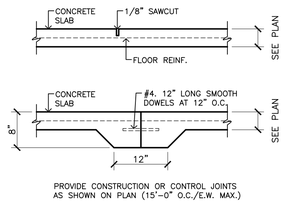
19. AT SLAB AND WALL OPENING CORNERS AND REENTRANT CORNERS, PROVIDE (1) #5 BAR I IN EACH FACE PARALLEL TO EACH EDGE EXTENDING A MINIMUM OF 2'-0" PAST EDGE OF OPENING. THIS STEEL MAY BE OMITTED IF TYPICAL WALL STEEL EXCEEDS THIS MINIMUM REQUIREMENT.
20. CONTROL JOINTS ON SLABS ON GRADE SHALL BE LOCATED AT 12'-6" MAXIMUM SPACING AND SHALL CREATE SECTIONS OF SLAB WITH A MAXIMUM ASPECT RATIO OF 1.5 : 1. CONTROL JOINTS SHALL BE SAWN AND SHALL BE A MINIMUM OF 1/4 OF THE SLAB THICKNESS DEEP. THE CONTROL JOINT SHALL BE SAWN AS SOON AS THE SAW BLADE CAN CUT THE CONCRETE WITHOUT DISPLACING THE AGGREGATE. CUT EVERY OTHER MESH WIRE AT THE CONTROL JOINT PRIOR TO PLACING THE CONCRETE.

WOOD

21. STORE ALL MATERIALS IN SUCH A MANNER AS TO ENSURE PROPER VENTILATION AND DRAINAGE, AND TO PROTECT AGAINST DAMAGE AND WEATHER.
22. ALL ROUGH CARPENTRY SHALL PRODUCE JOINTS TRUE TIGHT AND WELL NAILED, WITH ALL MEMBERS ASSEMBLED IN ACCORDANCE WITH THE DRAWINGS AND WITH ALL PERTINENT CODES AND REGULATIONS.
23. USE TREATED LUMBER FOR ALL WOOD BUCKS, NAILING GROUNDS, PLATES, ETC.., IN CONTACT WITH CONCRETE, MASONRY WORK AND STRUCTURAL STEEL.
24. SET ALL HORIZONTAL OR SLOPED MEMBERS WITH THE CROWN UP.
25. DO NOT NOTCH, BORE OR CUT MEMBERS FOR PIPES. DUCTS, CONDUITS OR OTHER REASON, EXCEPT AS SHOWN ON THE DRAWINGS OR AS SPECIFICALLY APPROVED IN ADVANCED BY THE BUILDING DESIGNER.
26. AIR INFILTRATION BARRIER TO BE TYVEK COMMERCIAL WRAP OR EQUAL COMPLYING WITH ASTM E 2357 WITH FLAME-SPREAD AND SMOKE DEVELOPED INDEXES OF LESS THAN 25 AND 450 AS TESTED IN ACCORDANCE WITH ASTM E 84 AND UV STABILIZED FOR 9 MONTH EXPOSURE. INCLUDE FLASHING AND SEALING OF ALL PENETRATIONS
27. FRAME ALL CORNERS AND INTERSECTIONS WITH THREE OR MORE STUDS AND ALL REQUIRING BEARING FOR WALL FINISH.
28. PLACE ALL PLYWOOD AND OSB SHEATHING WITH FACE GRAIN PERPENDICULAR TO SUPPORTS, AND CONTINUOUSLY OVER AT LEAST TWO SUPPORTS. CENTER JOINTS ACCURATELY OVER SUPPORTS.
29. PREFABRICATED FLOOR AND ROOF TRUSSES FURNISHED TO COMPLY WITH WISCONSIN COMMERCIAL BUILDING CODE REQUIREMENTS INCLUDING PREPARATION AND SEALING OF PLANS AND CALCULATIONS FOR SUBMITTAL AS COMPONENT PRIOR TO DELIVERY AND INSTALLATION.
30. LVL'S (LAMINATED VENEER LUMBER) TO BE ENGINEERED WOOD PRODUCT WITH A MINIMUM Fb = 2,600 PSI AND MODULUS OF ELASTICITY = 1,900,00 PSI (GRADE 1.9E) USE ONLY COMMON WIRE NAILS OR SPIKES OF THE DIMENSION SHOWN ON THE NAILING SCHEDULE.
31. FOR CONDITIONS NOT COVERED IN THE NAILING SCHEDULE, PROVIDE PENETRATION INTO THE PIECE RECEIVING THE POINT OF NOT LESS THAN 1/2 THE LENGTH OF THE NAIL OR SPIKE (NOTE: 16d NAILS MAY BE USED TO CONNECT PIECES OF 2" NOMINAL THICKNESS).
32. FRAMING LUMBER TO BE SPUCE-PINE-FIR (SPF) SPECIES, #2 GRADE WHEN VISUALLY-GRADED ACCORDING TO ASTM 1990-16.
33. PLYWOOD TO BE APA GRADED COMPLETE WITH MARKINGS IDENTIFYING THICKNESS AND ALLOWABLE SPANS. ORIENTED STRAND BOARD TO COMPLY WITH APA GRADING REQUIREMENTS AND MUST BE MARKED IDENTIFYING THICKNESS, ALLOWABLE SPANS AND EXPOSURE.

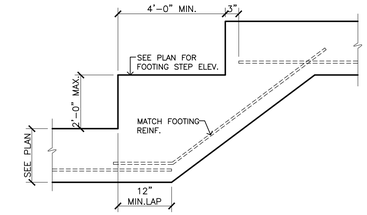
NAILING SCHEDULE :

BLOCKING TO JOIST BEARING	TWO, 10d TOENAILED, EACH SIDE
BLOCKING TO JOIST	TWO, 8d TOENAILED
STUDS ENDNAILED TO PLATE	TWO, 16d
STUDS TOENAILED TO PLATE	TWO, 16d, EACH SIDE
STUDS NAILED TOGETHER	16d @ 12" ON CENTER, STAGGERED
PLATES :	
UPPER TO LOWER	16d @ 12" ON CENTER, STAGGERED
AT SPLICES	TWO, 16d FACE NAILED
PLATE LAP AT CORNERS	TWO, 16d FACE NAILED
JOISTS & RAFTERS :	
TO SUPPORT	TWO, 8d TOENAILED, EACH SIDE
AT LAPS	FOUR, 16d NAILED
ROOF SHEATHING TO SUPPORTS	8d @ 12" ON CENTER, AT PERIMETER 8d @ 16" ON CENTER AT FIELD
WALL SHEATHING TO SUPPORTS	8d @ 6" ON CENTER, AT PERIMETER 8d @ 12" ON CENTER AT FIELD
GYPSUM WALLBOARD TO EXT. STUDS	7" SPACING OF FASTENERS @ PERIMETER 12" SPACING @ FIELD



2 FLOOR JOINT

3/4" = 1'-0"



3 FOOTING STEP

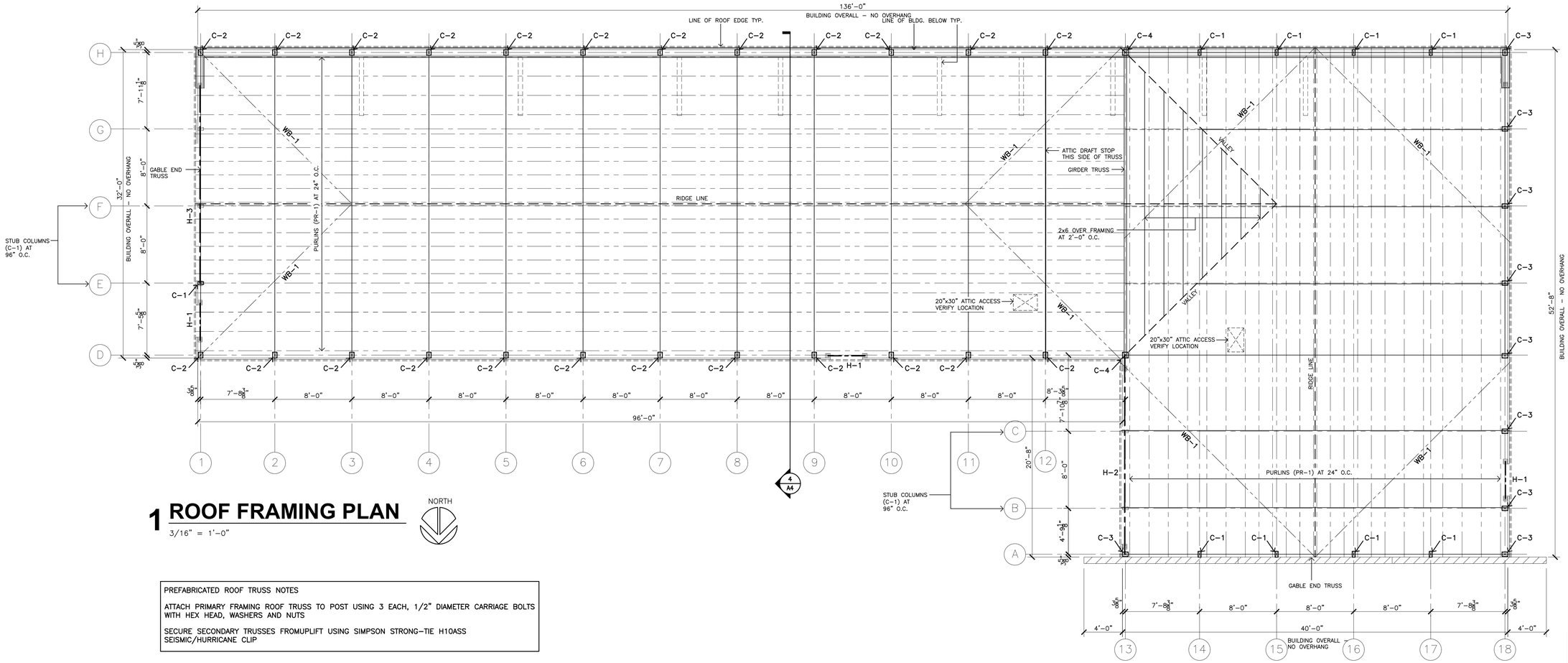
N.T.S.

DRAWN JAW
CHECKED
DATE JANUARY 24, 2022
SCALE AS NOTED
SHEET S1

JIM WEBB, PE
Engineering & Construction, LLC
1224 King Street
La Crosse, WI 54601
(608) 780-4672

NEW BUILDING FOR:
KRATT LUMBER
1714 S. 16TH STREET
LA CROSSE, WISCONSIN

UNHEATED STORAGE: FOUNDATION PLAN
DETAILS AND STRUCTURAL NOTES



1 ROOF FRAMING PLAN

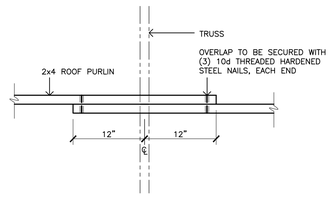
3/16" = 1'-0"

NORTH

PREFABRICATED ROOF TRUSS NOTES

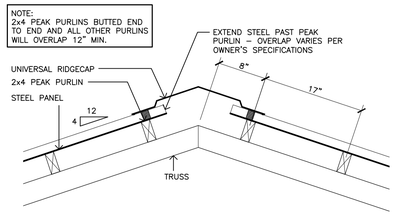
ATTACH PRIMARY FRAMING ROOF TRUSS TO POST USING 3 EACH, 1/2" DIAMETER CARRIAGE BOLTS WITH HEX HEAD, WASHERS AND NUTS

SECURE SECONDARY TRUSSES FROMUPLIFT USING SIMPSON STRONG-TIE H10ASS SEISMIC/HURRICANE CLIP



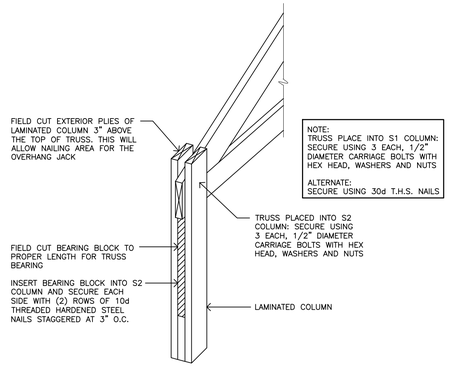
2 PURLIN OVERLAP DETAIL

1" = 1'-0"



3 PEAK PURLIN DETAIL

1" = 1'-0"



4 TRUSS INSTALLTION DETAIL

NO SCALE

ATTIC ACCESS PANEL NOTE:

ATTIC ACCESS PANELS TO BE NOT LESS THAN 20" BY 30". LOCATE SUCH THAT A HEADROOM OF NOT LESS THAN 30" SHALL BE PROVIDED IN THE ATTIC SPACE AT OR ABOVE THE ACCESS OPENING. A MINIMUM OF 30" CLEAR HEADROOM REQUIRED AT OR ABOVE THE ACCESS OPENING

STRUCTURAL SCHEDULE

MARK	DESCRIPTION	REINFORCING/REMARKS
C-1	4 x 8 WD. COLUMN	
C-2	5.5 x 7.25 LVL'S COLUMN	
C-3	5.5 x 7.25 LVL'S COLUMN	
C-4	7.25 x 7.25 LVL'S COLUMN	
H-1	(2) 2x6'S	DOOR HEADER
H-2	(2) 1.75 x 16 LVL'S	OH DOOR HEADER
H-3	(3) 2x12'S	OH DOOR HEADER
PR-1	2x4 #2 SPF PURLIN (ON-EDGE) SEE WALL SECTION	SPAN UP TO (5) BAYS. THE FIRST (6) ROWS OF PURLINS AFTER PEAK SHALL BE AT 17" O.C. WITH THE BALANCE AT 24" O.C. SECURE TO TRUSSES WITH (1) 60d THREADED HARDENED STEEL NAIL AT EA. PURLIN TO TRUSS LOCATION. FOR PURLIN OVERLAP SEE DETAIL 1/S2
WB-1	2x4 #2 SPF AT UNDERSIDE OF PURLINS	SECURE WITH (2) 30d THREADED HARDENED STEEL NAILS AT EA. END AND WITH (1) 10d THREADED HARDENED STEEL NAIL AT EACH BRACE TO PURLIN LOCATION

NOTE:
LATERAL BRACING MIGHT NOT BE REQUIRED. REFER TO TRUSS SPECIFICATION SHEET(S) FOR LATERAL BRACING.

DRAWN JAW
CHECKED
DATE JANUARY 24, 2022
SCALE AS NOTED
SHEET S2

JIM WEBB, PE
Engineering & Construction, LLC
1224 King Street
La Crosse, WI 54601
(608) 780-4672

NEW BUILDING FOR:
KRATT LUMBER
1714 S. 16TH STREET
LA CROSSE, WISCONSIN

UNHEATED STORAGE: ROOF FRAMING PLAN

Wind Load Report - KRATT LUMBER UNHEATED STORAGE

1. Site & Building Data

Roof Type:	Gable
Wind Speed (ult):	115 mph
Exposure Category:	C
Enclosure Class:	Enclosed
Building Width (W):	32 ft.
Building Length (L):	98 ft.
Eave Height (he):	20 ft.
Foundation Height (hf):	0 ft.
Roof Pitch:	4 /12
Eave Overhang (OHe):	0 ft.
Gable Overhang (OHg):	0 ft.

2. Parameters & Coefficients

Topographic Factor (Kzt):	1.0
Directionality Factor (Kd):	.85
Roof Angle (θ):	18.43 deg.
Mean Roof Height (h):	22.67 ft.
Ridge Height (hr):	25.33 ft.
Pos. Internal Pressure (+GCpi):	+0.18
Neg. Internal Pressure (-GCpi):	-0.18
Velocity Pressure Exp. Coeff. (Kh):	0.93 @ z=h
Velocity Pressure (qh):	26.65 psf
End Zone Width (a):	3.00 ft.
Zone 2/2E Dist.:	16.00 ft.

3. Design Assumptions and Notes

Code Standard:	ASCE 7-10
Geometry:	Regular-Shaped Bldg.
Height Class:	Low-Rise Building

Notes:

4. Design Loads

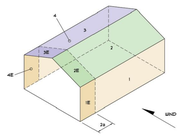
Top Chord Dead Load:	7 psf
Bottom Chord Dead Load:	10 psf
Truss/Rafter Spacing:	96 in. o/c

4. Design Wind Pressures: MWFRS Envelope Procedure

Load Case A: Transverse Direction

Surface	GCpf	Design Pressure (psf) (w/ +GCpi)	(w/ -GCpi)
1	0.52	8.97	18.56
2	-0.69	-23.18	-13.59
3	-0.47	-17.28	-7.69
4	-0.42	-15.87	-6.27
1E	0.78	15.99	25.59
2E	-1.07	-33.31	-23.72
3E	-0.67	-22.74	-13.15
4E	-0.62	-21.27	-11.67

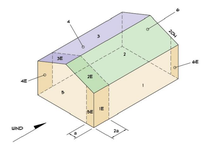
a) (+) and (-) signs signify wind pressures acting toward & away from surfaces.
b) External Pressure Coefficients linearly interpolated from Fig. 28.4-1 ASCE 7-10.
c) Design building for all wind directions, 4 load patterns per load case.
d) Total horizontal shear shall not be less than that by neglecting roof wind forces.
e) Min. wind load for enclosed or partially enclosed bldg.: 16 psf wall, 8 psf roof.
f) Design pressures are for strength design, multiply by 0.6 for ASD.



Load Case B: Longitudinal Direction

Surface	GCpf	Design Pressure (psf) (w/ +GCpi)	(w/ -GCpi)
1	-0.45	-16.79	-7.19
2	-0.69	-23.18	-13.59
3	-0.37	-14.66	-5.06
4	-0.45	-16.79	-7.19
5	0.40	5.86	15.46
6	-0.29	-12.52	-2.93
1E	-0.48	-17.59	-7.99
2E	-1.07	-33.31	-23.72
3E	-0.53	-18.92	-9.33
4E	-0.48	-17.59	-7.99
5E	0.61	11.46	21.05
6E	-0.43	-16.25	-6.66

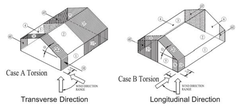
a) (+) and (-) signs signify wind pressures acting toward & away from surfaces.
b) External Pressure Coefficients linearly interpolated from Fig. 28.4-1 ASCE 7-10.
c) Design building for all wind directions, 4 load patterns per load case.
d) Total horizontal shear shall not be less than that by neglecting roof wind forces.
e) Min. wind load for enclosed or partially enclosed bldg.: 16 psf wall, 8 psf roof.
f) Design pressures are for strength design, multiply by 0.6 for ASD.



Torsional Load Cases

Surface Load Case		GCpf	Design Pressure (psf) (w/ +GCpi)	(w/ -GCpi)
1T	A	-	2.24	4.64
2T	A	-	-5.80	-3.40
3T	A	-	-4.32	-1.92
4T	A	-	-3.97	-1.57
5T	B	-	1.47	3.86
6T	B	-	-3.13	-0.73

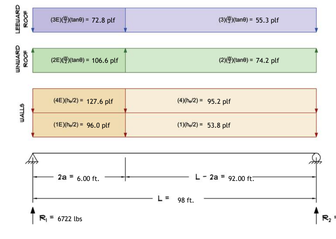
a) (+) and (-) signs signify wind pressures acting toward & away from surfaces.
b) Pressures designated with a "T" are 25% of full design wind pressures.
c) Torsional loading shall apply to all 8 load patterns using the figures shown.
d) Design pressures are for strength design, multiply by 0.6 for ASD.
e) Torsional Design Exceptions: One story bldg. with h ≤ 30 ft.
Two stories or less framed with light frame construction,
Two stories or less with flexible diaphragms.



5. Wind Load Calculations

1.) Lateral Loads - Transverse Direction:

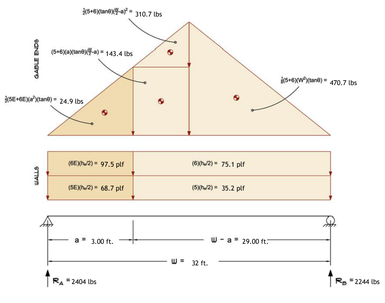
Lateral Loads on Roof Diaphragm with Positive Internal Pressure



a) (-) signs signify wind lateral forces acting opposite to the direction of the arrows shown.
b) Strength design values multiplied by 0.6 to obtain ASD values.

2.) Lateral Loads - Longitudinal Direction:

Lateral Loads on Roof Diaphragm with Positive Internal Pressure



a) (-) signs signify wind lateral forces acting opposite to the direction of the arrows shown.
b) Strength design values multiplied by 0.6 to obtain ASD values.
c) Where the length of building (L) exceeds 4X the mean roof height (h), wind drag forces should additionally be considered.

Wind Base Shear (ASD)

Load Case A: Transverse Direction

Load Case	Walls (lbs)	Roof (lbs)	Roof Overhangs (lbs)	Total Lateral Load (lbs)	R1 (lbs)	R2 (lbs)
Positive Internal Pressure	15048	-1940	0	13107	6722	6386
Negative Internal Pressure	15048	-1940	0	13107	6722	6386
Roof Pressure = 0	15048	0	0	15048	7734	7314
Min. Pressures (8 psf, 16 psf)	9408	2509	0	11917	5958	5958

a) Bottom half of wall neglected in tributary area calculations.
b) Strength design values multiplied by 0.6 to obtain ASD values.

Wind Base Shear (ASD)

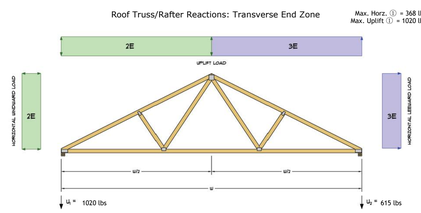
Load Case B: Longitudinal Direction

Load Case	Walls (lbs)	Gable Ends (lbs)	Roof (lbs)	Total Lateral Load (lbs)	RA (lbs)	RB (lbs)
Positive Internal Pressure	3698	950	0	4648	2404	2244
Negative Internal Pressure	3698	950	0	4648	2404	2244
Roof Pressure = 0	3698	950	0	4648	2404	2244
Min. Pressures (8 psf, 16 psf)	3072	819	0	3891	1946	1946

a) Bottom half of wall neglected in tributary area calculations.
b) Strength design values multiplied by 0.6 to obtain ASD values.

3.) Roof Truss Reactions:

Roof Truss/Rafter Reactions: Transverse End Zone



a) Strength design values multiplied by 0.6 to obtain ASD values.
b) Windward loads may be positive or negative depending on pitch of roof.

Roof Truss/Rafter Reactions (ASD)

w/ Positive Internal Pressure

Load Case	Horizontal Load (lbs)	Gross Uplift (lbs)	Net Uplift (lbs)	U1 (lbs)	U2 (lbs)
Transverse Int. Zone	151	3108	438	332	106
Transverse End Zone	271	4304	1635	1020	615
Longitudinal Int. Zone	218	2906	237	282	-45
Longitudinal End Zone	368	4011	1342	947	395

a) Gross Uplift calculations do not include any counteracting roof dead loads.
b) Net Uplift calculations include counteracting roof dead loads multiplied by 0.6 per load case (7) ASCE 7-10.
c) Strength design values multiplied by 0.6 to obtain ASD values for wind loads.
d) Loads based on truss spacing calculated at 96" o/c.
e) Negative values for horizontal load indicate load acting in windward direction (transverse load cases).
f) Negative values for uplift indicate net downward force (zero uplift).

Wind Load Report - KRATT LUMBER UNHEATED STORAGE

1. Site & Building Data

Roof Type:	Gable
Wind Speed (ult):	115 mph
Exposure Category:	C
Enclosure Class:	Enclosed
Building Width (W):	40 ft.
Building Length (L):	52 ft.
Eave Height (he):	20 ft.
Foundation Height (hf):	0 ft.
Roof Pitch:	4 /12
Eave Overhang (OHe):	0 ft.
Gable Overhang (OHg):	0 ft.

2. Parameters & Coefficients

Topographic Factor (Kzt):	1.0
Directionality Factor (Kd):	.85
Roof Angle (θ):	18.43 deg.
Mean Roof Height (h):	23.33 ft.
Ridge Height (hr):	26.67 ft.
Pos. Internal Pressure (+GCpi):	+0.18
Neg. Internal Pressure (-GCpi):	-0.18
Velocity Pressure Exp. Coeff. (Kh):	0.93 @ z=h
Velocity Pressure (qh):	26.81 psf
End Zone Width (a):	3.00 ft.
Zone 2/2E Dist.:	20.00 ft.

3. Design Assumptions and Notes

Code Standard:	ASCE 7-10
Geometry:	Regular-Shaped Bldg.
Height Class:	Low-Rise Building

Notes:

4. Design Loads

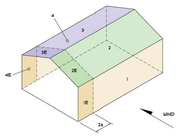
Top Chord Dead Load:	7 psf
Bottom Chord Dead Load:	10 psf
Truss/Rafter Spacing:	96 in. o/c

4. Design Wind Pressures: MWFRS Envelope Procedure

Load Case A: Transverse Direction

Surface	GCpf	Design Pressure (psf) (w/ +GCpi)	(w/ -GCpi)
1	0.52	9.02	18.67
2	-0.69	-23.32	-13.67
3	-0.47	-17.39	-7.74
4	-0.42	-15.96	-6.31
1E	0.78	16.09	25.74
2E	-1.07	-33.51	-23.86
3E	-0.67	-22.88	-13.23
4E	-0.62	-21.40	-11.75

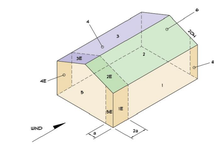
a) (+) and (-) signs signify wind pressures acting toward & away from surfaces.
b) External Pressure Coefficients linearly interpolated from Fig. 28.4-1 ASCE 7-10.
c) Design building for all wind directions, 4 load patterns per load case.
d) Total horizontal shear shall not be less than that by neglecting roof wind forces.
e) Min. wind load for enclosed or partially enclosed bldg.: 16 psf wall, 8 psf roof.
f) Design pressures are for strength design, multiply by 0.6 for ASD.



Load Case B: Longitudinal Direction

Surface	GCpf	Design Pressure (psf) (w/ +GCpi)	(w/ -GCpi)
1	-0.45	-16.89	-7.24
2	-0.69	-23.32	-13.67
3	-0.37	-14.75	-5.09
4	-0.45	-16.89	-7.24
5	0.40	5.90	15.55
6	-0.29	-12.60	-2.95
1E	-0.48	-17.69	-8.04
2E	-1.07	-33.51	-23.86
3E	-0.53	-19.04	-9.38
4E	-0.48	-17.69	-8.04
5E	0.61	11.53	21.18
6E	-0.43	-16.35	-6.70

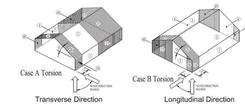
a) (+) and (-) signs signify wind pressures acting toward & away from surfaces.
b) External Pressure Coefficients linearly interpolated from Fig. 28.4-1 ASCE 7-10.
c) Design building for all wind directions, 4 load patterns per load case.
d) Total horizontal shear shall not be less than that by neglecting roof wind forces.
e) Min. wind load for enclosed or partially enclosed bldg.: 16 psf wall, 8 psf roof.
f) Design pressures are for strength design, multiply by 0.6 for ASD.



Torsional Load Cases

Surface Load Case		GCpf	Design Pressure (psf) (w/ +GCpi)	(w/ -GCpi)
1T	A	-	2.25	4.67
2T	A	-	-5.83	-3.42
3T	A	-	-4.35	-1.93
4T	A	-	-3.99	-1.58
5T	B	-	1.47	3.89
6T	B	-	-3.15	-0.74

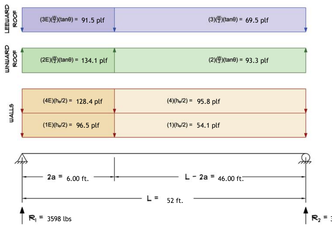
a) (+) and (-) signs signify wind pressures acting toward & away from surfaces.
b) Pressures designated with a "T" are 25% of full design wind pressures.
c) Torsional loading shall apply to all 8 load patterns using the figures shown.
d) Design pressures are for strength design, multiply by 0.6 for ASD.
e) Torsional Design Exceptions: One story bldg. with h ≤ 30 ft.
Two stories or less framed with light frame construction,
Two stories or less with flexible diaphragms.



5. Wind Load Calculations

1.) Lateral Loads - Transverse Direction:

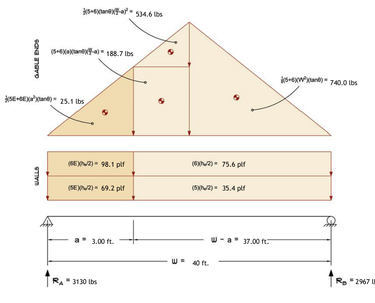
Lateral Loads on Roof Diaphragm with Positive Internal Pressure



a) (-) signs signify wind lateral forces acting opposite to the direction of the arrows shown.
b) Strength design values multiplied by 0.6 to obtain ASD values.

2.) Lateral Loads - Longitudinal Direction:

Lateral Loads on Roof Diaphragm with Positive Internal Pressure



a) (-) signs signify wind lateral forces acting opposite to the direction of the arrows shown.
b) Strength design values multiplied by 0.6 to obtain ASD values.
c) Where the length of building (L) exceeds 4X the mean roof height (h), wind drag forces should additionally be considered.

Wind Base Shear (ASD)

Load Case A: Transverse Direction

Load Case	Walls (lbs)	Roof (lbs)	Roof Overhangs (lbs)	Total Lateral Load (lbs)	R1 (lbs)	R2 (lbs)
Positive Internal Pressure	8245	-1348	0	6897	3598	3299
Negative Internal Pressure	8245	-1348	0	6897	3598	3299
Roof Pressure = 0	8245	0	0	8245	4321	3923
Min. Pressures (8 psf, 16 psf)	4992	1664	0	6656	3328	3328

a) Bottom half of wall neglected in tributary area calculations.
b) Strength design values multiplied by 0.6 to obtain ASD values.

Wind Base Shear (ASD)

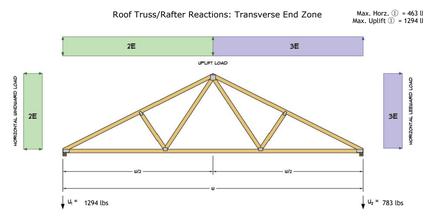
Load Case B: Longitudinal Direction

Load Case	Walls (lbs)	Gable Ends (lbs)	Roof (lbs)	Total Lateral Load (lbs)	RA (lbs)	RB (lbs)
Positive Internal Pressure	4609	1488	0	6097	3130	2967
Negative Internal Pressure	4609	1488	0	6097	3130	2967
Roof Pressure = 0	4609	1488	0	6097	3130	2967
Min. Pressures (8 psf, 16 psf)	3840	1280	0	5120	2560	2560

a) Bottom half of wall neglected in tributary area calculations.
b) Strength design values multiplied by 0.6 to obtain ASD values.

3.) Roof Truss Reactions:

Roof Truss/Rafter Reactions: Transverse End Zone



a) Strength design values multiplied by 0.6 to obtain ASD values.
b) Windward loads may be positive or negative depending on pitch of roof.

Roof Truss/Rafter Reactions (ASD)

w/ Positive Internal Pressure

Load Case	Horizontal Load (lbs)	Gross Uplift (lbs)	Net Uplift (lbs)	U1 (lbs)	U2 (lbs)
Transverse Int. Zone	190	3908	572	428	143
Transverse End Zone	340	5413	2077	1294	783
Longitudinal Int. Zone	275	3655	318	365	-47
Longitudinal End Zone	463	5045	1708	1201	506

a) Gross Uplift calculations do not include any counteracting roof dead loads.
b) Net Uplift calculations include counteracting roof dead loads multiplied by 0.6 per load case (7) ASCE 7-10.
c) Strength design values multiplied by 0.6 to obtain ASD values for wind loads.
d) Loads based on truss spacing calculated at 96" o/c.
e) Negative values for horizontal load indicate load acting in windward direction (transverse load cases).
f) Negative values for uplift indicate net downward force (zero uplift).

*Disclaimer: The calculations produced herein are for initial design and estimating purposes only. The calculations and drawings presented do not constitute a fully engineered design. All of the potential load cases required to fully design an actual structure may not be provided by this calculator. For the design of an actual structure, a registered and licensed professional should be consulted as per IRC 2012 Sec. R802.10.2 and designed according to the minimum requirements of ASCE 7-10. The wind load calculations provided by this online tool are for educational and illustrative purposes only. Medeek Design assumes no liability or loss for any designs presented and does not guarantee fitness for use.

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DATE JANUARY 24, 2022
SCALE AS NOTED
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