

Alpine, an ITW Company
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 Glenview, IL 60025
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 www.alpineitw.com

10/28/2024
 ABCD Engineering, PLLC NC COA 0838

Site Information:	Page 1:
Customer: Structural Building Solutions LLC	Job Number: Q2410-325
Job Description: The Farm at Neills Creek	
Address:	

Job Engineering Criteria:	
Design Code: IRC 2021	IntelliVIEW Version: 23.02.04A JRef #: 1Y4e98360003
Wind Standard: ASCE 7-16 Wind Speed (mph): 120	Design Loading (psf): 40.00
Building Type: Closed	

This package contains general notes pages, 23 truss drawing(s) and 7 detail(s).

Item	Drawing Number	Truss
1	299.24.1509.24772	A1
3	299.24.1509.24488	A1P
5	299.24.1509.24537	A1G
7	299.24.1509.25251	B1
9	299.24.1509.25241	B1GR
11	299.24.1509.24756	G1
13	299.24.1613.25973	C1
15	299.24.1509.24865	V2
17	299.24.1509.24614	P2
19	299.24.1509.25008	P1G
21	299.24.1509.24819	D1
23	299.24.1509.24567	P2G
25	A12030ENC160118	
27	CNNAILSP1014	
29	GBLLETIN0118	

Item	Drawing Number	Truss
2	299.24.1509.24535	A2
4	299.24.1509.24818	A2P
6	299.24.1509.25007	A2G
8	299.24.1509.25100	B1G
10	299.24.1509.25068	V3
12	299.24.1509.24615	G1G
14	299.24.1509.25022	C1G
16	299.24.1509.25038	V1
18	299.24.1509.25256	P1
20	299.24.1509.24849	D1G
22	299.24.1509.25225	VD1
24	A12015ENC160118	
26	BRCLBSUB0119	
28	GABRST160118	
30	VALTN160118	

General Notes

Truss Design Engineer Scope of Work, Design Assumptions and Design Responsibilities:

The design responsibilities assumed in the preparation of these design drawings are those specified in ANSI/TPI 1, Chapter 2; and the National Design Standard for Metal Plate Connected Wood Truss Construction, by the Truss Plate Institute. The truss component designs conform to the applicable provisions of ANSI/TPI 1 and NDS, the National Design Specification for Wood Construction by AWC. The truss component designs are based on the specified loading and dimension information furnished by others to the Truss Design Engineer. The Truss Design Engineer has no duty to independently verify the accuracy or completeness of the information provided by others and may rely on that information without liability. The responsibility for verification of that information remains with others neither employed nor controlled by the Truss Design Engineer. The Truss Design Engineer's seal and signature on the attached drawings, or cover page listing these drawings, indicates acceptance of professional engineering responsibility solely for the truss component designs and not for the technical information furnished by others which technical information and consequences thereof remain their sole responsibility.

The suitability and use of these drawings for any particular structure is the responsibility of the Building Designer in accordance with ANSI/TPI 1 Chapter 2. The Building Designer is responsible for determining that the dimensions and loads for each truss component match those required by the plans and by the actual use of the individual component, and for ascertaining that the loads shown on the drawings meet or exceed applicable building code requirements and any additional factors required in the particular application. Truss components using metal connector plates with integral teeth shall not be placed in environments that will cause the moisture content of the wood in which plates are embedded to exceed 19% and/or cause corrosion of connector plates and other metal fasteners.

The Truss Design Engineer shall not be responsible for items beyond the specific scope of the agreed contracted work set forth herein, including but not limited to: verifying the dimensions of the truss component, calculation of any of the truss component design loads, inspection of the truss components before or after installation, the design of temporary or permanent bracing and their attachment required in the roof and/or floor systems, the design of diaphragms or shear walls, the design of load transfer connections to and from diaphragms and shear walls, the design of load transfer to the foundation, the design of connections for truss components to their bearing supports, the design of the bearing supports, installation of the truss components, observation of the truss component installation process, review of truss assembly procedures, sequencing of the truss component installation, construction means and methods, site and/or worker safety in the installation of the truss components and/or its connections.

This document may be a high-quality facsimile of the original engineering document which is a digitally signed electronic file with third party authentication. A wet or embossed seal copy of this engineering document is available upon request.

Temporary Lateral Restraint and Bracing:

Temporary lateral restraint and diagonal bracing shall be installed according to the provisions of BCSI chapters B1, B2, B7 and/or B10 (Building Component Safety Information, by TPI and SBCA), or as specified by the Building Designer or other Registered Design Professional. The required locations for lateral restraint and/or bracing depicted on these drawings are only for the permanent lateral support of the truss members to reduce buckling lengths, and do not apply to and may not be relied upon for the temporary stability of the truss components during their installation.

Permanent Lateral Restraint and Bracing:

The required locations for lateral restraint or bracing depicted on these drawings are for the permanent lateral support of the truss members to reduce buckling lengths. Permanent lateral support shall be installed according to the provisions of BCSI chapters B3, B7 and/or B10, or as specified by the Building Designer or other Registered Design Professional. These drawings do not depict or specify installation/erection bracing, wind bracing, portal bracing or similar building stability bracing which are parts of the overall building design to be specified, designed, and detailed by the Building Designer.

Connector Plate Information:

Alpine connector plates are made of ASTM A653 or ASTM A1063 galvanized steel with the following designations, gauges and grades: W=Wave, 20ga, grade 40; H=High Strength, 20ga, grade 60; S=Super Strength, 18ga, grade 60. Information on model code compliance is contained in the ICC Evaluation Service report ESR-1118, available on-line at www.icc-es.org.

Bearing Information:

The bearing area factor, C_b , is considered for the allowable capacity of solid sawn wood bearings supporting trusses that are located a minimum of 3" from the end of the lumber piece.

General Notes (continued)

Coated Lumber:

Coated lumber must be properly re-dried and maintained below 19% or less moisture level through all stages of construction and usage. Coated lumber has no adjustments to lumber properties. Coated lumber may be more brittle than uncoated lumber. Special handling care must be taken to prevent breakage during all handling activities. Refer to manufacturer literature, specifications, and code evaluation reports for restrictions, details, and requirements.

Fire Retardant Treated Lumber:

Fire retardant treated lumber must be properly re-dried and maintained below 19% or less moisture level through all stages of construction and usage. Fire retardant treated lumber may be more brittle than untreated lumber. Special handling care must be taken to prevent breakage during all handling activities.

Key to Terms:

Information provided on drawings reflects a summary of the pertinent information required for the truss design. Detailed information on load cases, reactions, member lengths, forces and members requiring permanent lateral support may be found in calculation sheets available upon written request.

BCDL = Bottom Chord standard design Dead Load in pounds per square foot.

BCLL = Bottom Chord standard design Live Load in pounds per square foot.

C = Coated lumber.

C-AT = AtTEK coated lumber.

C-FX = FX Lumber Guard coated lumber.

C -TE = TechWood 4400 coated lumber.

CL = Certified lumber.

Des Ld = total of TCLL, TCDL, BCLL and BCDL Design Load in pounds per square foot.

FRT = Fire Retardant Treated lumber.

FRT-BF = Borafire Fire Retardant Treated lumber

FRT-DB = D-Blaze Fire Retardant Treated lumber.

FRT-DC = Dricon Fire Retardant Treated lumber.

FRT-FP = FirePRO Fire Retardant Treated lumber.

FRT-FL = FlamePRO Fire Retardant Treated lumber.

FRT-FT = FlameTech Fire Retardant Treated lumber.

FRT-ON = OnWood Fire Retardant Treated lumber.

FRT-PG = PYRO-GUARD Fire Retardant Treated lumber.

FRT-PR = ProWood Fire Retardant Treated lumber.

g = green lumber.

HORZ(LL) = maximum Horizontal panel point deflection due to Live Load, in inches.

HORZ(TL) = maximum Horizontal panel point long term deflection in inches, due to Total Load, including creep adjustment.

HPL = additional Horizontal Load added to a truss Piece in pounds per linear foot or pounds.

Ic = Incised lumber.

FJ = Finger Jointed lumber.

L/# = user specified divisor for limiting span/deflection ratio for evaluation of actual L/defl value.

L/defl = ratio of Length between bearings, in inches, divided by the vertical Deflection due to creep, in inches, at the referenced panel point. Reported as 999 if greater than or equal to 999.

Loc = Location, starting location of left end of bearing or panel point (joint) location of deflection.

Max BC CSI = Maximum bending and axial Combined Stress Index for Bottom Chords for all load cases.

Max TC CSI = Maximum bending and axial Combined Stress Index for Top Chords for all load cases.

Max Web CSI = Maximum bending and axial Combined Stress Index for Webs for all load cases.

NCBCLL = Non-Concurrent Bottom Chord design Live Load in pounds per square foot.

PL = additional Load applied at a user specified angle on a truss Piece in pounds per linear foot or pounds.

PLB = additional vertical load added to a Bottom chord Piece of a truss in pounds per linear foot or pounds

PLT = additional vertical load added to a Top chord Piece of a truss in pounds per linear foot or pounds.

PP = Panel Point.

R = maximum downward design Reaction, in pounds, from all specified gravity load cases, at the indicated location (Loc).

-R = maximum upward design Reaction, in pounds, from all specified gravity load cases, at the identified location (Loc).

Rh = maximum horizontal design Reaction in either direction, in pounds, from all specified gravity load cases, at the indicated location (Loc).

RL = maximum horizontal design Reaction in either direction, in pounds, from all specified non-gravity (wind or seismic) load cases, at the indicated location (Loc).

General Notes (continued)

Key to Terms (continued):

Rw = maximum downward design Reaction, in pounds, from all specified non-gravity (wind or seismic) load cases, at the identified location (Loc).

TCDL = Top Chord standard design Dead Load in pounds per square foot.

TCLL = Top Chord standard design Live Load in pounds per square foot.

U = maximum Upward design reaction, in pounds, from all specified non-gravity (wind or seismic) load cases, at the indicated location (Loc).

VERT(CL) = maximum Vertical panel point deflection in inches due to Live Load and Creep Component of Dead Load in inches.

VERT(CTL) = maximum Vertical panel point deflection ratios due to Live Load and Creep Component of Dead Load, and maximum long term Vertical panel point deflection in inches due to Total load, including creep adjustment.

VERT(LL) = maximum Vertical panel point deflection in inches due to Live Load.

VERT(TL) = maximum Vertical panel point long term deflection in inches due to Total load, including creep adjustment.

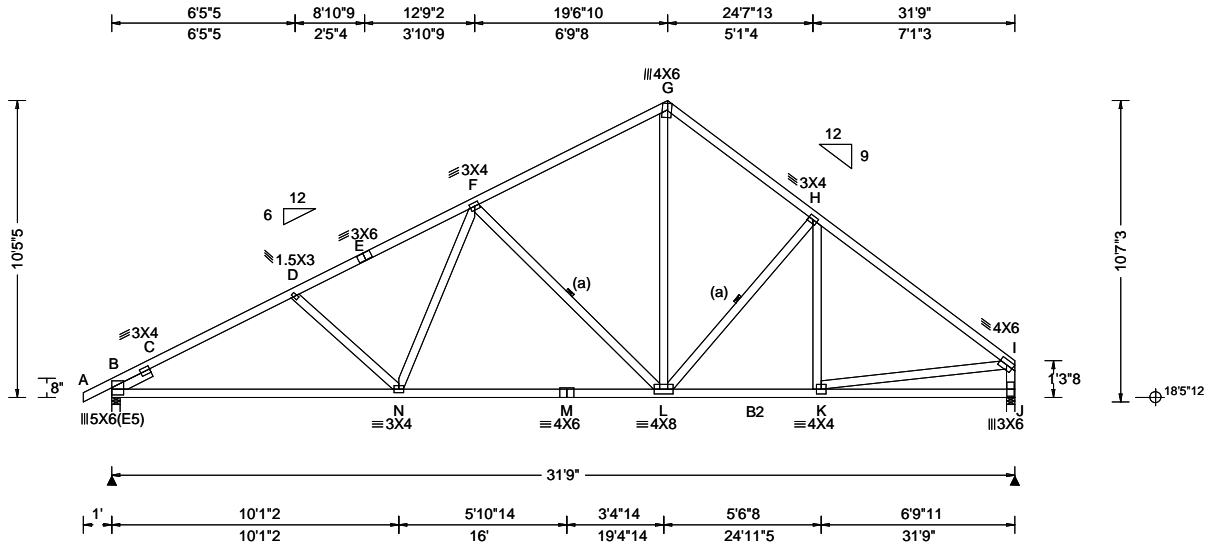
W = Width of non-hanger bearing, in inches.

Refer to ASCE-7 for Wind and Seismic abbreviations.

Uppercase Acronyms not explained above are as defined in TPI 1.

References:

1. AWC: American Wood Council; 222 Catoclin Circle SE, Suite 201; Leesburg, VA 20175; www.awc.org.
2. ICC: International Code Council; www.iccsafe.org.
3. Alpine, a division of ITW Building Components Group Inc.: 155 Harlem Ave, North Building, 4th Floor, Glenview, IL 60025; www.alpineitw.com.
4. TPI: Truss Plate Institute, 2670 Crain Highway, Suite 203, Waldorf, MD 20601; www.tpinst.org.
5. SBCA: Wood Truss Council of America, 6300 Enterprise Lane, Madison, WI 53719; www.sbcacomponents.com



Loading Criteria (psf) TCLL: 20.00 TC DL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 24.0 "	Wind Criteria Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 23.78 ft TC DL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.17 ft Loc. from endwall: Any GCp: 0.18 Wind Duration: 1.60	Snow Criteria (Pg,Pf in PSF) Pg: 20.0 Ct: 1.1 CAT: II Pf: 15.4 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15 Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT: 20(0)/10(0)/2(0) Plate Type(s): WAVE	Defl/CSI Criteria PP Deflection in loc L/def L/# VERT(LL): 0.071 F 999 240 VERT(CL): 0.146 F 999 180 HORZ(LL): 0.026 J - - HORZ(TL): 0.055 J - - Creep Factor: 2.0 Max TC CSI: 0.464 Max BC CSI: 0.591 Max Web CSI: 0.474 VIEW Ver: 23.02.04A.0207.13	▲ Maximum Reactions (lbs) <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Loc</th> <th colspan="3">Gravity</th> <th colspan="3">Non-Gravity</th> </tr> <tr> <th>R+</th> <th>/R-</th> <th>/Rh</th> <th>/Rw</th> <th>/U</th> <th>/RL</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>1382</td> <td>-</td> <td>-</td> <td>775</td> <td>107</td> <td>203</td> </tr> <tr> <td>J</td> <td>1332</td> <td>-</td> <td>-</td> <td>719</td> <td>84</td> <td>-</td> </tr> </tbody> </table> <p>Wind reactions based on MWFRS B Brg Wid = 3.5 Min Req = 1.6 (Truss) J Brg Wid = 3.5 Min Req = 1.6 (Truss) Bearings B & J are a rigid surface. Members not listed have forces less than 375#</p> Maximum Top Chord Forces Per Ply (lbs) <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Chords</th> <th>Tens.Comp.</th> <th>Chords</th> <th>Tens. Comp.</th> </tr> </thead> <tbody> <tr> <td>B - C</td> <td>522 -2540</td> <td>F - G</td> <td>273 -1233</td> </tr> <tr> <td>C - D</td> <td>349 -2241</td> <td>G - H</td> <td>308 -1365</td> </tr> <tr> <td>D - E</td> <td>302 -1981</td> <td>H - I</td> <td>232 -1638</td> </tr> <tr> <td>E - F</td> <td>321 -1911</td> <td></td> <td></td> </tr> </tbody> </table> Maximum Bot Chord Forces Per Ply (lbs) <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Chords</th> <th>Tens.Comp.</th> <th>Chords</th> <th>Tens. Comp.</th> </tr> </thead> <tbody> <tr> <td>B - N</td> <td>1945 -333</td> <td>M - L</td> <td>1528 -194</td> </tr> <tr> <td>N - M</td> <td>1528 -194</td> <td>L - K</td> <td>1216 -118</td> </tr> </tbody> </table> Maximum Web Forces Per Ply (lbs) <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Webs</th> <th>Tens.Comp.</th> <th>Webs</th> <th>Tens. Comp.</th> </tr> </thead> <tbody> <tr> <td>N - F</td> <td>537 -19</td> <td>K - I</td> <td>1145 -87</td> </tr> <tr> <td>F - L</td> <td>217 -727</td> <td>I - J</td> <td>177 -1271</td> </tr> <tr> <td>L - G</td> <td>907 -179</td> <td></td> <td></td> </tr> </tbody> </table>	Loc	Gravity			Non-Gravity			R+	/R-	/Rh	/Rw	/U	/RL	B	1382	-	-	775	107	203	J	1332	-	-	719	84	-	Chords	Tens.Comp.	Chords	Tens. Comp.	B - C	522 -2540	F - G	273 -1233	C - D	349 -2241	G - H	308 -1365	D - E	302 -1981	H - I	232 -1638	E - F	321 -1911			Chords	Tens.Comp.	Chords	Tens. Comp.	B - N	1945 -333	M - L	1528 -194	N - M	1528 -194	L - K	1216 -118	Webs	Tens.Comp.	Webs	Tens. Comp.	N - F	537 -19	K - I	1145 -87	F - L	217 -727	I - J	177 -1271	L - G	907 -179		
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Lumber

Top chord: 2x4 SP SS;
 Bot chord: 2x4 SP SS; B2 2x4 SP #2;
 Webs: 2x4 SP #3;
 Lt Slider: 2x4 SP #3; block length = 1.500'

Bracing

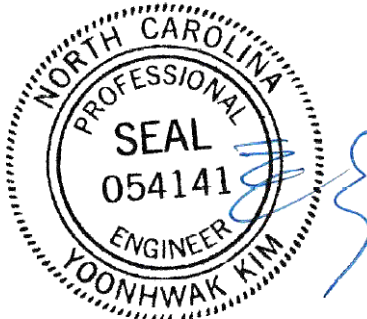
(a) Continuous lateral restraint equally spaced on member.

Loading

Bottom chord checked for 10.00 psf non-concurrent live load.
 Truss designed for unbalanced snow loads.

Wind

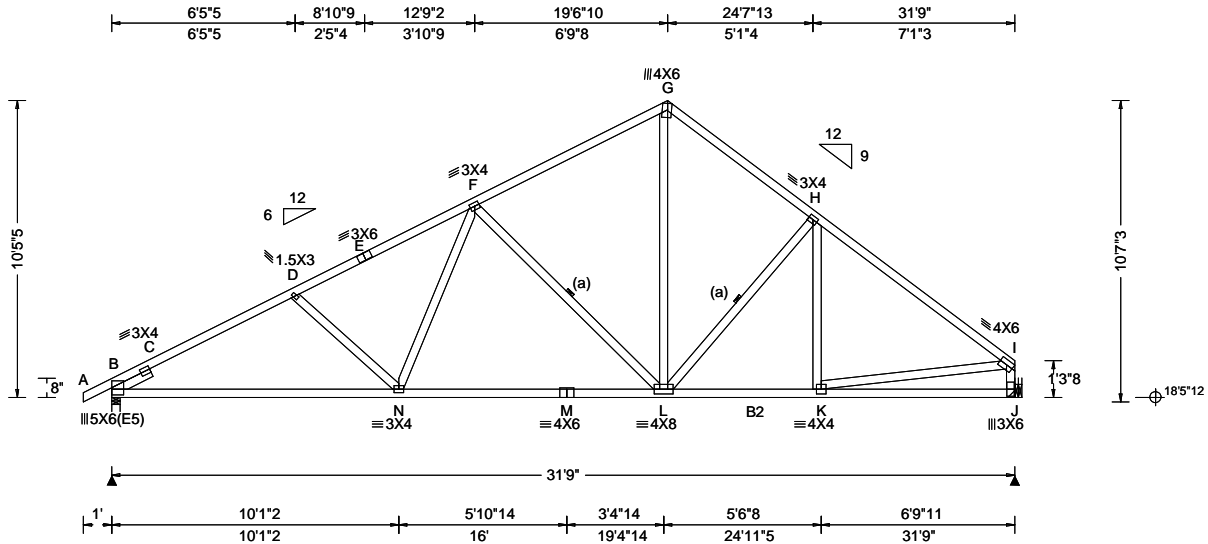
Wind loads based on MWFRS with additional C&C member design.
 Right end vertical exposed to wind pressure.
 Deflection meets L/180.
 Wind loading based on both gable and hip roof types.



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****WARNING** READ AND FOLLOW ALL NOTES ON THIS DRAWING!**
****IMPORTANT** FURNISH THIS DRAWING TO ALL CONTRACTORS INCLUDING THE INSTALLERS**
 Trusses require extreme care in fabricating, handling, shipping, installing and bracing. Refer to and follow the latest edition of BCSI (Building Component Safety Information, by TPI and SBCA) for safety practices prior to performing these functions. Installers shall provide temporary bracing per BCSI. Unless noted otherwise, top chord shall have properly attached structural sheathing and bottom chord shall have a properly attached rigid ceiling. Locations shown for permanent lateral restraint of webs shall have continuous lateral restraint (CLR), installed with diagonal bracing installed on the CLR per BCSI sections B3, B7, or B10, as applicable. Apply plates to each face of truss and position as shown above and on the Joint Details, unless noted otherwise. Refer to drawings 160A-Z for standard plate positions. Refer to job's General Notes page for additional information.
 Alpine, a division of ITW Building Components Group Inc. shall not be responsible for any deviation from this drawing, any failure to build the truss in conformance with ANSI/TPI 1, or for handling, shipping, installation and bracing of trusses. A seal on this drawing or cover page listing this drawing, indicates acceptance of professional engineering responsibility solely for the design shown. The suitability and use of this drawing for any structure is the responsibility of the Building Designer per ANSI/TPI 1 Sec.2.
 For more information see these web sites: Alpine: alpineitw.com; TPI: tpinst.org; SBCA: sbccomponents.com; ICC: iccsafe.org; AWC: awc.org





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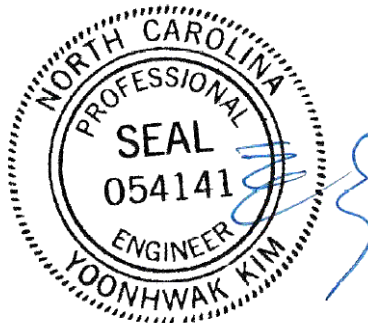
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 Webs: 2x4 SP #3;
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Bracing
 (a) Continuous lateral restraint equally spaced on member.

Hangers / Ties
 (J) Hanger Support Required, by others

Loading
 Bottom chord checked for 10.00 psf non-concurrent live load.
 Truss designed for unbalanced snow loads.

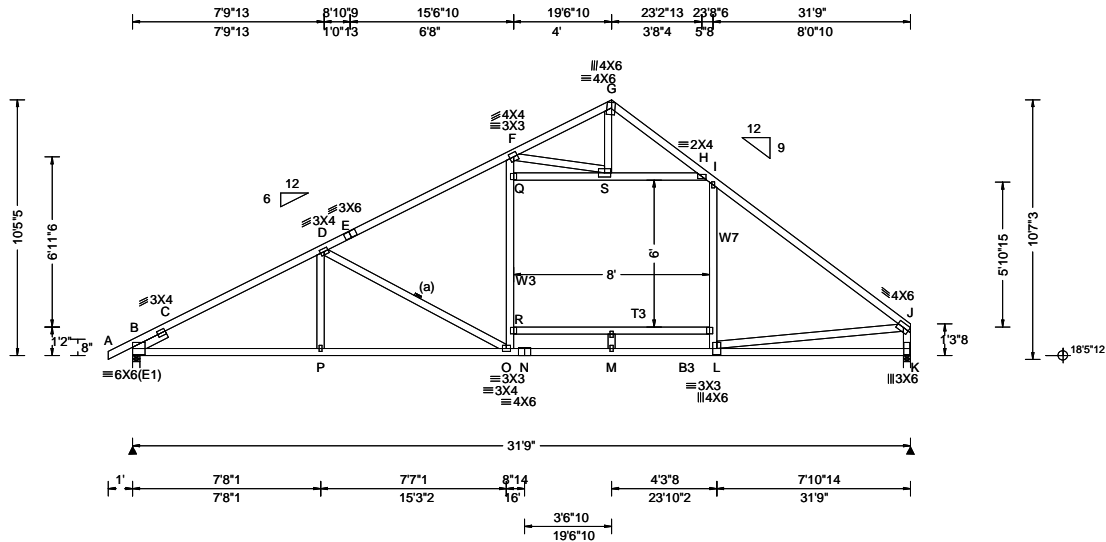
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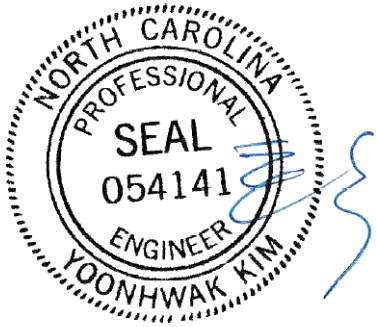
Lumber
 Top chord: 2x4 SP SS; T3 2x4 SP #2;
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 Lt Slider: 2x4 SP #3; block length = 1.500'

Bracing
 (a) Continuous lateral restraint equally spaced on member.

Plating Notes
 All plates are 1.5X3 except as noted.

Loading
 Bottom chord checked for 10.00 psf non-concurrent live load.
 Truss designed for unbalanced snow loads.
 Truss supports 250# mech unit; unit centered at 19-8-6; supported by TC; unit width 4-0-0; supported by 7 trusses.

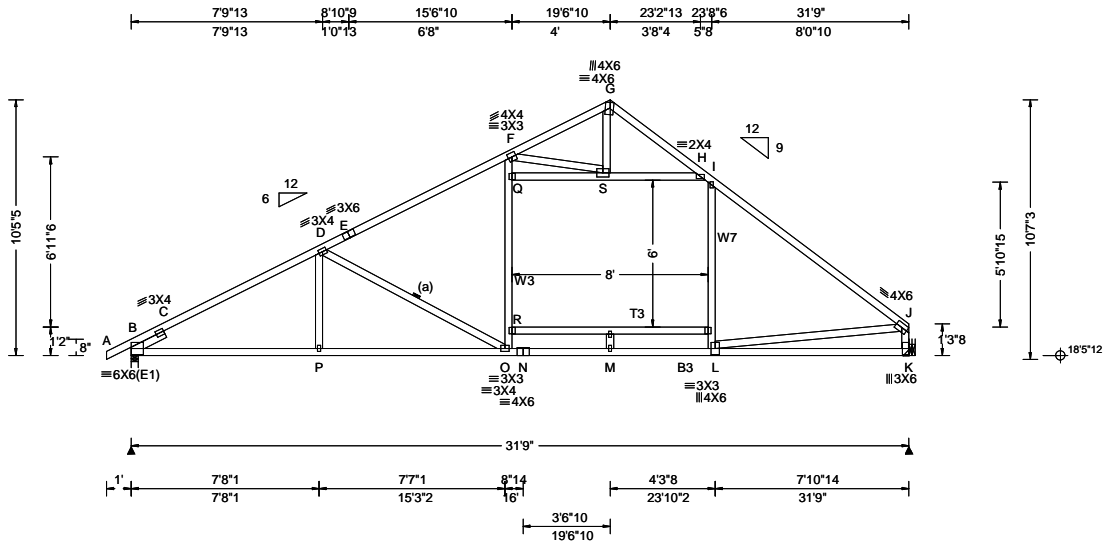
Wind
 Wind loads based on MWFRS with additional C&C member design.
 Right end vertical exposed to wind pressure.
 Deflection meets L/180.
 Wind loading based on both gable and hip roof types.



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Lumber
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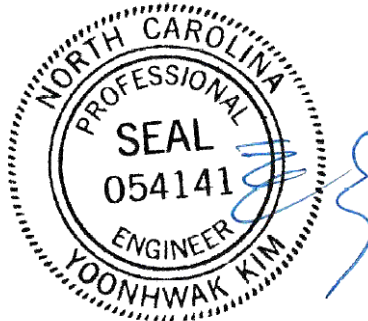
Bracing
(a) Continuous lateral restraint equally spaced on member.

Plating Notes
All plates are 1.5X3 except as noted.

Hangers / Ties
(J) Hanger Support Required, by others

Loading
Bottom chord checked for 10.00 psf non-concurrent live load.
Truss designed for unbalanced snow loads.
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Wind
Wind loads based on MWFRS with additional C&C member design.
Right end vertical not exposed to wind pressure.
Wind loading based on both gable and hip roof types.

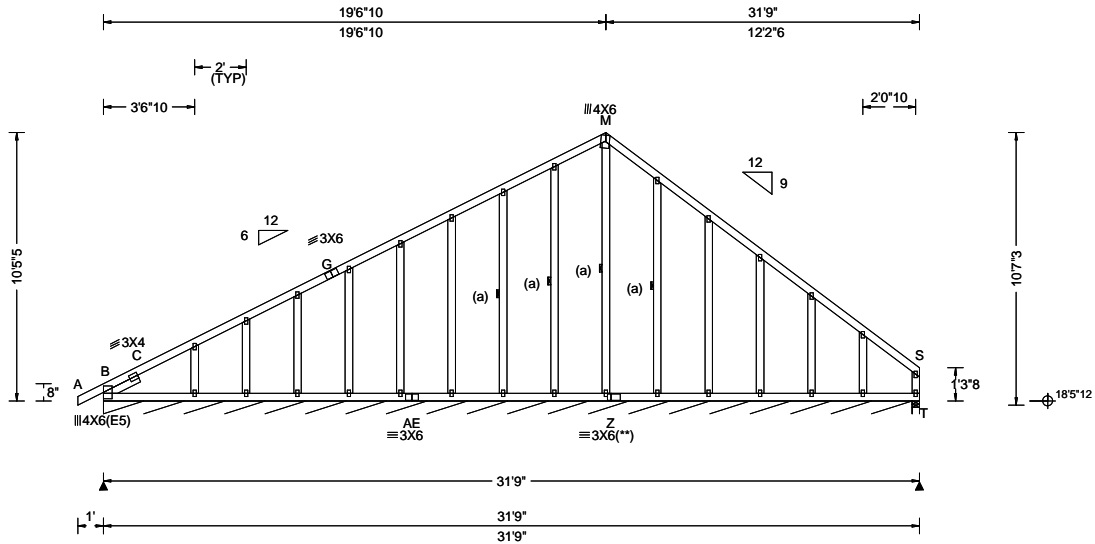


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SEQN: 2158 / FROM:	GABL Ply: 1 Qty: 1	Job Number: Q2410-325 The Farm at Neills Creek	Cust: R 9836 JRef: 1Y4e98360003 T16 / DrwNo: 299.24.1509.24537 / YK 10/25/2024	Truss Label: A1G
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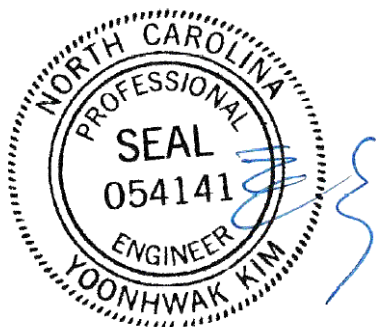
Bracing
(a) Continuous lateral restraint equally spaced on member.

Plating Notes
All plates are 1.5X3 except as noted.
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Loading
Bottom chord checked for 10.00 psf non-concurrent live load.
Truss designed for unbalanced snow loads.

Wind
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Right end vertical exposed to wind pressure.
Deflection meets L/180.
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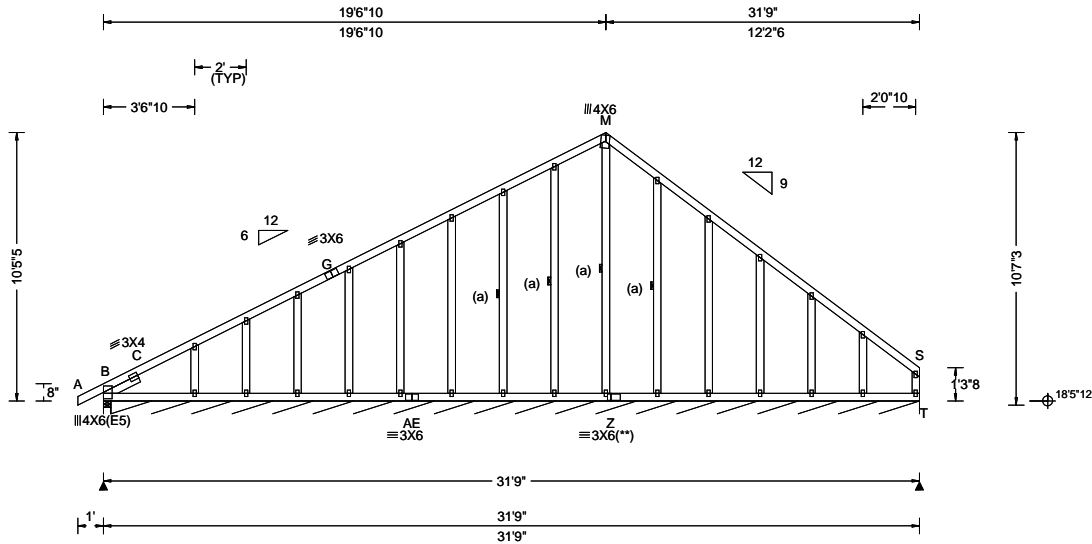
Additional Notes
See DWGS A12030ENC160118, GBLLETIN0118, & GABRST160118 for gable wind bracing and other requirements.



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Lumber

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Bracing

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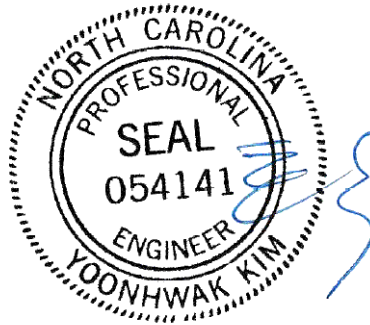
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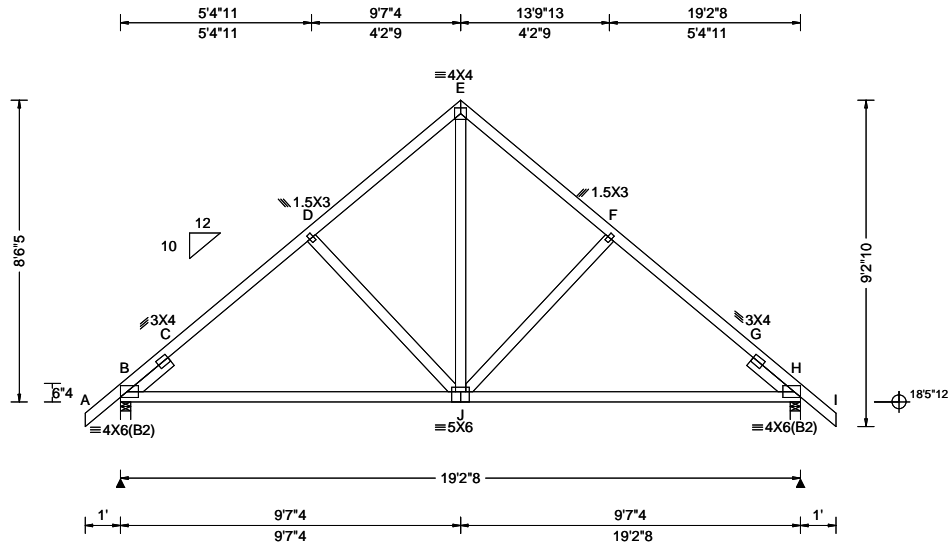
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Loading Criteria (psf) TCCL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 24.0 "	Wind Criteria Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 22.59 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	Snow Criteria (Pg,Pf in PSF) Pg: 20.0 Ct: 1.1 CAT: II Pf: 15.4 Ce: 1.0 Lu: - Cs: 0.93 Snow Duration: 1.15 Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:20(0)/10(0)/2(0) Plate Type(s): WAVE	Defl/CSI Criteria PP Deflection in loc L/def L/# VERT(LL): 0.022 G 999 240 VERT(CL): 0.042 G 999 180 HORZ(LL): 0.020 C - - HORZ(TL): 0.042 C - - Creep Factor: 2.0 Max TC CSI: 0.157 Max BC CSI: 0.807 Max Web CSI: 0.237 VIEW Ver: 23.02.04A.0207.13	▲ Maximum Reactions (lbs) <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Loc</th> <th colspan="3">Gravity</th> <th colspan="3">Non-Gravity</th> </tr> <tr> <th>R+</th> <th>/R-</th> <th>/Rh</th> <th>/Rw</th> <th>/U</th> <th>/RL</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>898</td> <td>-</td> <td>-</td> <td>/516</td> <td>/47</td> <td>/176</td> </tr> <tr> <td>H</td> <td>898</td> <td>-</td> <td>-</td> <td>/516</td> <td>/47</td> <td>-</td> </tr> </tbody> </table> Wind reactions based on MWFRS B Brg Wid = 3.5 Min Req = 1.5 (Truss) H Brg Wid = 3.5 Min Req = 1.5 (Truss) Bearings B & H are a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Chords</th> <th>Tens.Comp.</th> <th>Chords</th> <th>Tens. Comp.</th> </tr> </thead> <tbody> <tr> <td>B - C</td> <td>440 -1377</td> <td>E - F</td> <td>183 -745</td> </tr> <tr> <td>C - D</td> <td>156 -931</td> <td>F - G</td> <td>156 -931</td> </tr> <tr> <td>D - E</td> <td>183 -745</td> <td>G - H</td> <td>440 -1377</td> </tr> </tbody> </table>	Loc	Gravity			Non-Gravity			R+	/R-	/Rh	/Rw	/U	/RL	B	898	-	-	/516	/47	/176	H	898	-	-	/516	/47	-	Chords	Tens.Comp.	Chords	Tens. Comp.	B - C	440 -1377	E - F	183 -745	C - D	156 -931	F - G	156 -931	D - E	183 -745	G - H	440 -1377
Loc	Gravity			Non-Gravity																																											
	R+	/R-	/Rh	/Rw	/U	/RL																																									
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D - E	183 -745	G - H	440 -1377																																												

Lumber
 Top chord: 2x4 SP SS;
 Bot chord: 2x4 SP #2;
 Webs: 2x4 SP #3;
 Lt Slider: 2x4 SP #3; block length = 1.500'
 Rt Slider: 2x4 SP #3; block length = 1.500'

Loading
 Bottom chord checked for 10.00 psf non-concurrent live load.

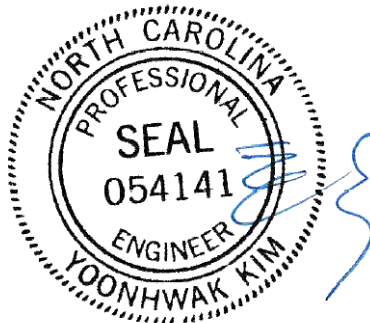
Wind
 Wind loads based on MWFRS with additional C&C member design.
 Wind loading based on both gable and hip roof types.

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.Comp.	Chords	Tens. Comp.
B - J	670 -14	J - H	670 -5

Maximum Web Forces Per Ply (lbs)

Webs	Tens.Comp.
E - J	589 -138

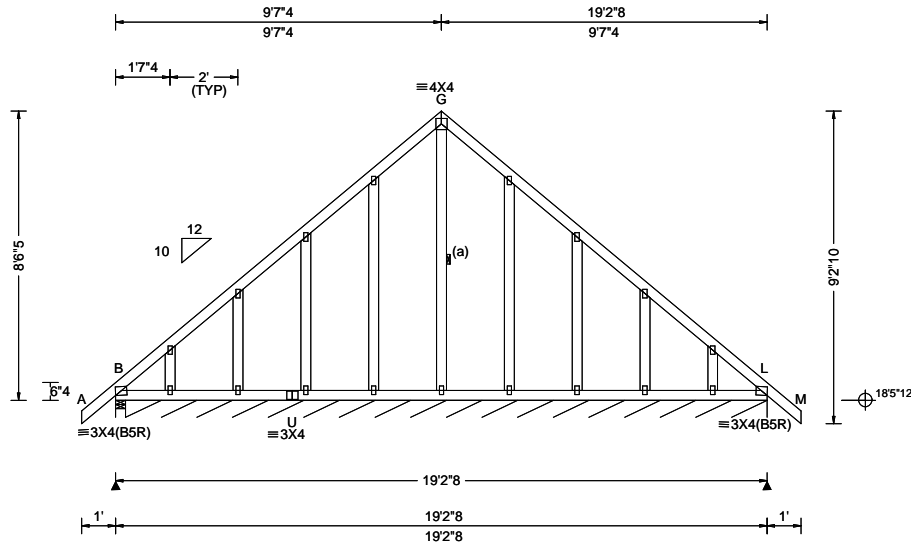


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SEQN: 2164 / FROM:	GABL Ply: 1 Qty: 1	Job Number: Q2410-325 The Farm at Neills Creek	Cust: R 9836 JRef: 1Y4e98360003 T6 / DrwNo: 299.24.1509.25100 / YK 10/25/2024	Truss Label: B1G
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Loading Criteria (psf) TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 24.0 "	Wind Criteria Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 22.59 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	Snow Criteria (Pg,Pf in PSF) Pg: 20.0 Ct: 1.1 CAT: II Pf: 15.4 Ce: 1.0 Lu: - Cs: 0.93 Snow Duration: 1.15 Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:20(0)/10(0)/2(0) Plate Type(s): WAVE	Defl/CSI Criteria PP Deflection in loc L/def L/# VERT(LL): 0.001 G 999 240 VERT(CL): 0.002 F 999 180 HORZ(LL): 0.003 I - - HORZ(TL): 0.004 I - - Creep Factor: 2.0 Max TC CSI: 0.084 Max BC CSI: 0.032 Max Web CSI: 0.128 VIEW Ver: 23.02.04A.0207.13	▲ Maximum Reactions (lbs), or *=PLF Gravity Non-Gravity Loc R+ /R- /Rh /Rw /U /RL B 173 /- /- /143 /23 /176 L* 86 /- /- /50 /8 /- Wind reactions based on MWFRS B Brg Wid = 3.5 Min Req = 1.5 (Truss) L Brg Wid = 227 Min Req = - Bearings B & B are a rigid surface. Members not listed have forces less than 375#
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Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Bracing

(a) Continuous lateral restraint equally spaced on member.

Plating Notes

All plates are 1.5X3 except as noted.

Loading

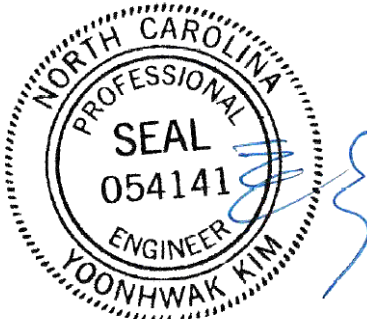
Bottom chord checked for 10.00 psf non-concurrent live load.

Wind

Wind loads based on MWFRS with additional C&C member design.
Wind loading based on both gable and hip roof types.

Additional Notes

See DWGS A12030ENC160118, GBLLETIN0118, & GABRST160118 for gable wind bracing and other requirements.



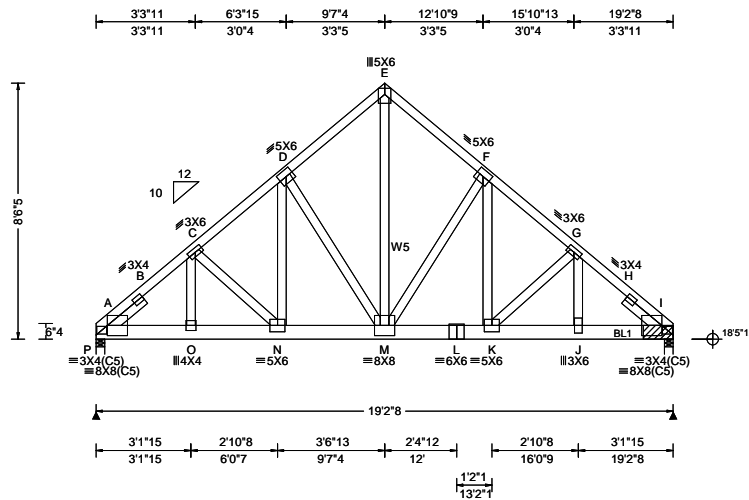
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2 Complete Trusses Required



Loading Criteria (psf) TCCL: 20.00 TCCL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 0.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 24.0 "	Wind Criteria Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 23.00 ft TCCL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCp: 0.18 Wind Duration: 1.60	Snow Criteria (Pg,Pf in PSF) Pg: 20.0 Ct: 1.1 CAT: II Pf: 15.4 Ce: 1.0 Lu: - Cs: 0.93 Snow Duration: 1.15 Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Varies by Ld Case FT/RT/PT: 20(0)/10(0)/2(0) Plate Type(s): WAVE	Defl/CSI Criteria PP Deflection in loc L/defl L/# VERT(LL): 0.080 M 999 240 VERT(CL): 0.159 M 999 180 HORZ(LL): 0.031 D - - HORZ(TL): 0.062 D - - Creep Factor: 2.0 Max TC CSI: 0.376 Max BC CSI: 0.395 Max Web CSI: 0.800 VIEW Ver: 23.02.04A.0207.13	▲ Maximum Reactions (lbs) <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Loc</th> <th colspan="3">Gravity</th> <th colspan="3">Non-Gravity</th> </tr> <tr> <th>R+</th> <th>/R-</th> <th>/Rh</th> <th>/Rw</th> <th>/U</th> <th>/RL</th> </tr> </thead> <tbody> <tr> <td>P</td> <td>6431</td> <td>-</td> <td>-</td> <td>-</td> <td>454</td> <td>-</td> </tr> <tr> <td>I</td> <td>7021</td> <td>-</td> <td>-</td> <td>-</td> <td>491</td> <td>-</td> </tr> </tbody> </table> Wind reactions based on MWFRS P Brg Wid = 3.5 Min Req = 3.2 (Truss) I Brg Wid = 3.5 Min Req = - Bearings P & I are a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Chords</th> <th>Tens.Comp.</th> <th>Chords</th> <th>Tens. Comp.</th> </tr> </thead> <tbody> <tr> <td>A - B</td> <td>295 -4143</td> <td>E - F</td> <td>193 -2685</td> </tr> <tr> <td>B - C</td> <td>289 -4110</td> <td>F - G</td> <td>253 -3554</td> </tr> <tr> <td>C - D</td> <td>252 -3549</td> <td>G - H</td> <td>292 -4160</td> </tr> <tr> <td>D - E</td> <td>193 -2685</td> <td>H - I</td> <td>298 -4191</td> </tr> </tbody> </table>	Loc	Gravity			Non-Gravity			R+	/R-	/Rh	/Rw	/U	/RL	P	6431	-	-	-	454	-	I	7021	-	-	-	491	-	Chords	Tens.Comp.	Chords	Tens. Comp.	A - B	295 -4143	E - F	193 -2685	B - C	289 -4110	F - G	253 -3554	C - D	252 -3549	G - H	292 -4160	D - E	193 -2685	H - I	298 -4191
Loc	Gravity			Non-Gravity																																															
	R+	/R-	/Rh	/Rw	/U	/RL																																													
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Lumber

Top chord: 2x4 SP #2;
 Bot chord: 2x6 SP SS Dense;
 Webs: 2x4 SP #3; W5 2x4 SP #2;
 Lt Slider: 2x4 SP #3; block length = 1.500'
 Rt Slider: 2x4 SP #3; block length = 1.500'

Nailnote

Nail Schedule: 0.128"x3", min. nails
 Top Chord: 1 Row @ 12.00" o.c.
 Bot Chord: 2 Rows @ 4.50" o.c. (Each Row)
 Webs : 1 Row @ 4" o.c.
 Use equal spacing between rows and stagger nails in each row to avoid splitting.

Special Loads

----- (Lumber Dur.Fac.=1.15 / Plate Dur.Fac.=1.15)
 TC: From 66 plf at 0.00 to 66 plf at 19.21
 BC: From 10 plf at 0.00 to 10 plf at 19.21
 BC: 1332 lb Conc. Load at 2.06, 4.06, 6.06, 8.06, 10.06, 12.06, 14.06, 16.06, 18.06

Wind

Wind loads and reactions based on MWFRS.
 Wind loading based on both gable and hip roof types.

Bearing Block(s)

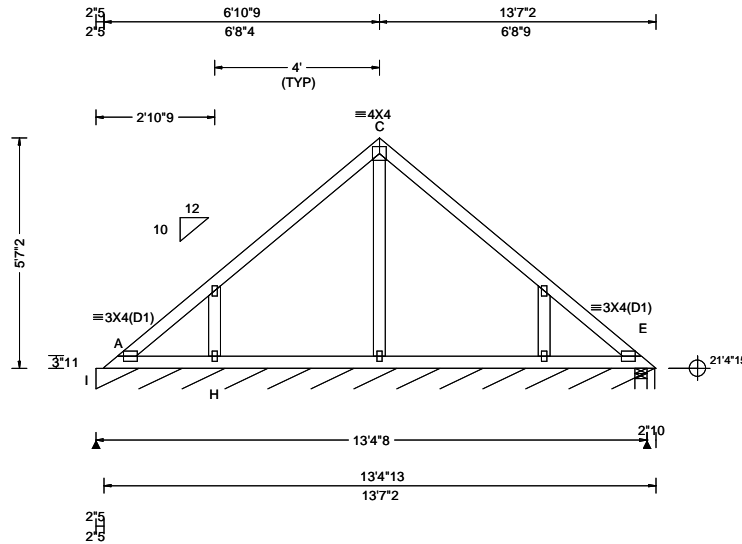
Brg blocks: 0.128"x3", min. nails
 brg x-loc #blocks length/blk #nails/blk wall plate
 2 18.917' 1 12" 4 Rigid Surface
 Brg block to be same size and species as chord.
 Refer to drawing C>NNAILSP1014 for more information.



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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg, Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs), or *=PLF
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 24.0 "	Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 24.36 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	Pg: 20.0 Ct: 1.1 CAT: II Pf: 15.4 Ce: 1.0 Lu: - Cs: 0.93 Snow Duration: 1.15 Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT: 20(0)/10(0)/2(0) Plate Type(s): WAVE	PP Deflection in loc L/def L/# VERT(LL): 0.001 C 999 240 VERT(CL): 0.002 C 999 180 HORZ(LL): 0.001 D - - - HORZ(TL): 0.002 D - - - Creep Factor: 2.0 Max TC CSI: 0.239 Max BC CSI: 0.113 Max Web CSI: 0.100 VIEW Ver: 23.02.04A.0207.13	Gravity Loc R+ / R- / Rh / Rw / U / RL Non-Gravity I* 82 /- /- /44 /5 /7 E 33 /- /- /27 /- /- Wind reactions based on MWFRS I Brg Wid = 162 Min Req = - E Brg Wid = 3.5 Min Req = 1.5 (Truss) Bearings I & E Fcperp = 565psi. Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Plating Notes

All plates are 1.5X3 except as noted.

Loading

Bottom chord checked for 10.00 psf non-concurrent live load.

Wind

Wind loads based on MWFRS with additional C&C member design.

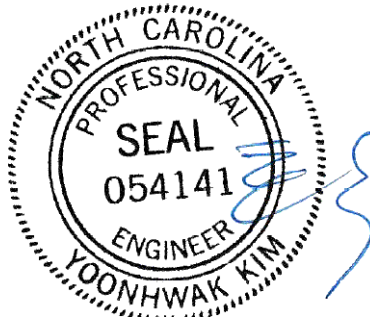
Wind loading based on both gable and hip roof types.

Blocking

Blocking reinforcement required to prevent buckling of members over the bearings:
Bearing 2 located at 12.9' (blocking >= 43.61" if used)

Additional Notes

See DWGS A12030ENC160118, GBLLETIN0118, & GABRST160118 for gable wind bracing and other requirements.

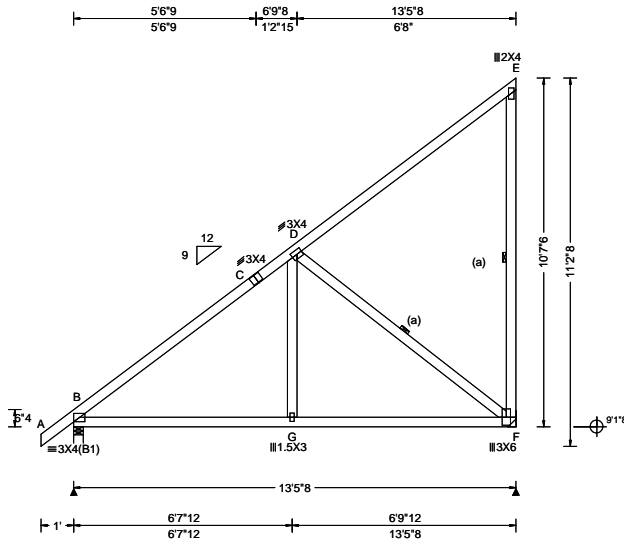


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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg, Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 24.0 "	Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCp: 0.18 Wind Duration: 1.60	Pg: 20.0 Ct: 1.1 CAT: II Pf: 15.4 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15 Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT: 20(0)/10(0)/2(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.008 G 999 240 VERT(CL): 0.017 G 999 180 HORZ(LL): -0.004 E - - HORZ(TL): 0.008 F - - Creep Factor: 2.0 Max TC CSI: 0.914 Max BC CSI: 0.578 Max Web CSI: 0.219 VIEW Ver: 23.02.04A.0207.13	Gravity Non-Gravity Loc R+ / R- / Rh / Rw / U / RL B 649 /- /- /380 /- /217 F 565 /- /- /402 /65 /- Wind reactions based on MWFRS B Brg Wid = 3.5 Min Req = 1.5 (Truss) F Brg Wid = - Min Req = - Bearing B is a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) Chords Tens.Comp. Chords Tens. Comp. B - C 0 -664 C - D 0 -451

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Bracing

(a) Continuous lateral restraint equally spaced on member.

Hangers / Ties

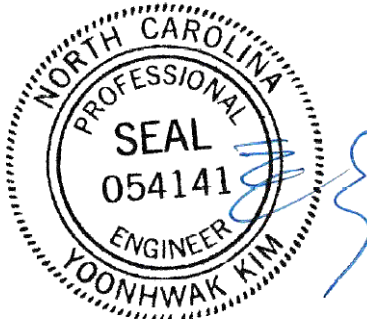
(J) Hanger Support Required, by others

Loading

Bottom chord checked for 10.00 psf non-concurrent live load.

Wind

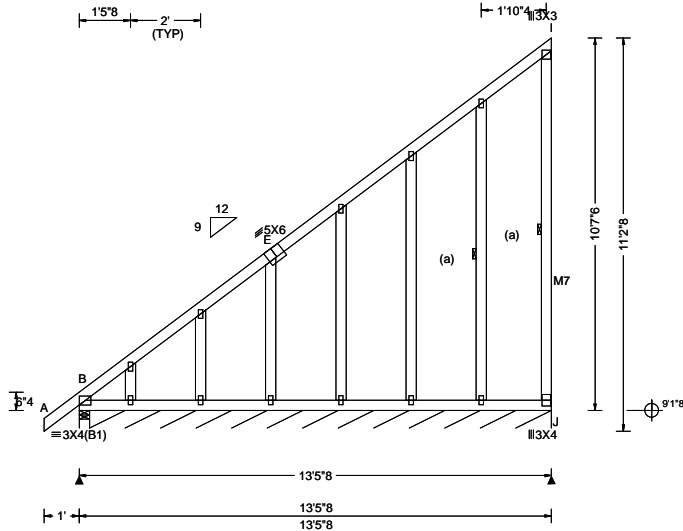
Wind loads based on MWFRS with additional C&C member design.
Right end vertical not exposed to wind pressure.
Wind loading based on both gable and hip roof types.



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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs), or *=PLF
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 24.0 "	Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCp: 0.18 Wind Duration: 1.60	Pg: 20.0 Ct: 1.1 CAT: II Pf: 15.4 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15 Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:20(0)/10(0)/2(0) Plate Type(s): WAVE	PP Deflection in loc L/def L/# VERT(LL): 0.001 H 999 240 VERT(CL): 0.002 H 999 180 HORZ(LL): -0.004 I - - HORZ(TL): 0.006 I - - Creep Factor: 2.0 Max TC CSI: 0.142 Max BC CSI: 0.142 Max Web CSI: 0.845 VIEW Ver: 23.02.04A.0207.13	Gravity Non-Gravity Loc R+ / R- / Rh / Rw / U / RL B 169 /- /- /181 /31 /280 J* 79 /- /- /59 /6 /- Wind reactions based on MWFRS B Brg Wid = 3.5 Min Req = 1.5 (Truss) J Brg Wid = 158 Min Req = - Bearings B & B are a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) Chords Tens.Comp. Chords Tens. Comp. B - E 146 -563 E - I 148 -376

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3; M7 2x4 SP #2;

Bracing

(a) Continuous lateral restraint equally spaced on member.

Plating Notes

All plates are 1.5X3 except as noted.

Loading

Bottom chord checked for 10.00 psf non-concurrent live load.

Wind

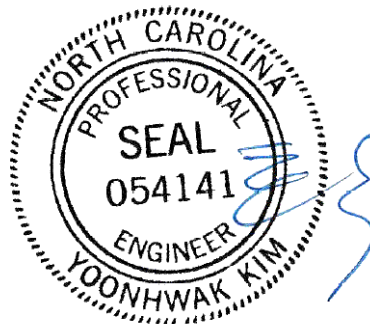
Wind loads based on MWFRS with additional C&C member design.

Right end vertical exposed to wind pressure.
Deflection meets L/180.

Wind loading based on both gable and hip roof types.

Additional Notes

See DWGS A12015ENC160118, GBLLETIN0118, & GABRST160118 for gable wind bracing and other requirements.

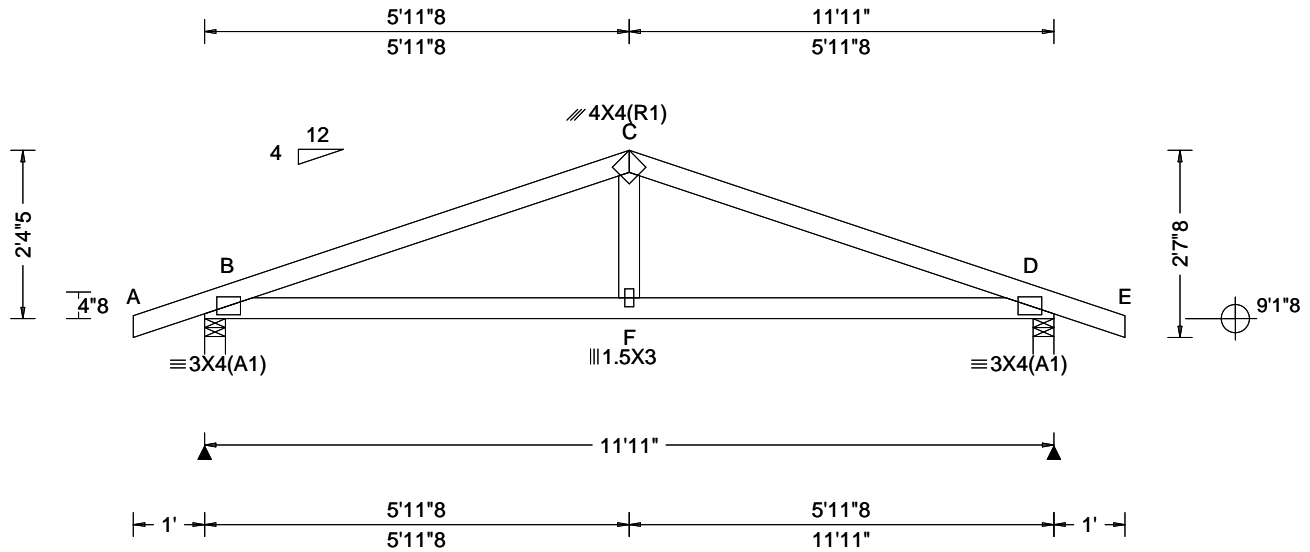


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Loading Criteria (psf) TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 24.0 "	Wind Criteria Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCp: 0.18 Wind Duration: 1.60	Snow Criteria (Pg,Pf in PSF) Pg: 20.0 Ct: 1.1 CAT: II Pf: 15.4 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15 Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:20(0)/10(0)/2(0) Plate Type(s): WAVE	Defl/CSI Criteria PP Deflection in loc L/def L/# VERT(LL): 0.018 F 999 240 VERT(CL): 0.036 F 999 180 HORZ(LL): 0.006 D - - HORZ(TL): 0.012 D - - Creep Factor: 2.0 Max TC CSI: 0.472 Max BC CSI: 0.393 Max Web CSI: 0.096 VIEW Ver: 23.02.04A.0207.13	▲ Maximum Reactions (lbs) <table border="1"> <thead> <tr> <th rowspan="2">Loc</th> <th colspan="3">Gravity</th> <th colspan="3">Non-Gravity</th> </tr> <tr> <th>R+</th> <th>/R-</th> <th>/Rh</th> <th>/Rw</th> <th>/U</th> <th>/RL</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>554</td> <td>-</td> <td>-</td> <td>/282</td> <td>/4</td> <td>/27</td> </tr> <tr> <td>D</td> <td>554</td> <td>-</td> <td>-</td> <td>/282</td> <td>/4</td> <td>-</td> </tr> </tbody> </table>						Loc	Gravity			Non-Gravity			R+	/R-	/Rh	/Rw	/U	/RL	B	554	-	-	/282	/4	/27	D	554	-	-	/282	/4	-
				Loc	Gravity			Non-Gravity																												
R+	/R-	/Rh	/Rw		/U	/RL																														
B	554	-	-	/282	/4	/27																														
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Maximum Top Chord Forces Per Ply (lbs) <table border="1"> <thead> <tr> <th>Chords</th> <th>Tens.Comp.</th> <th>Chords</th> <th>Tens. Comp.</th> </tr> </thead> <tbody> <tr> <td>B - C</td> <td>311</td> <td>C - D</td> <td>311</td> </tr> </tbody> </table>				Chords	Tens.Comp.	Chords	Tens. Comp.	B - C	311	C - D	311	Maximum Bot Chord Forces Per Ply (lbs) <table border="1"> <thead> <tr> <th>Chords</th> <th>Tens.Comp.</th> <th>Chords</th> <th>Tens. Comp.</th> </tr> </thead> <tbody> <tr> <td>B - F</td> <td>751</td> <td>F - D</td> <td>751</td> </tr> </tbody> </table>		Chords	Tens.Comp.	Chords	Tens. Comp.	B - F	751	F - D	751															
Chords	Tens.Comp.	Chords	Tens. Comp.																																	
B - C	311	C - D	311																																	
Chords	Tens.Comp.	Chords	Tens. Comp.																																	
B - F	751	F - D	751																																	

Lumber

Top chord: 2x4 SP #2;
 Bot chord: 2x4 SP #2;
 Webs: 2x4 SP #3;

Loading

Bottom chord checked for 10.00 psf non-concurrent live load.

Truss designed for unbalanced snow loads.

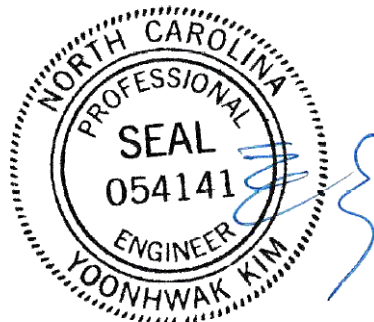
Wind

Wind loads based on MWFRS with additional C&C member design.

Wind loading based on both gable and hip roof types.

Additional Notes

Lanai/Porch Loading : 14.7 PLF wind pressure applied to the bottom chord of the truss from 0.00 ft to 11.92 ft,



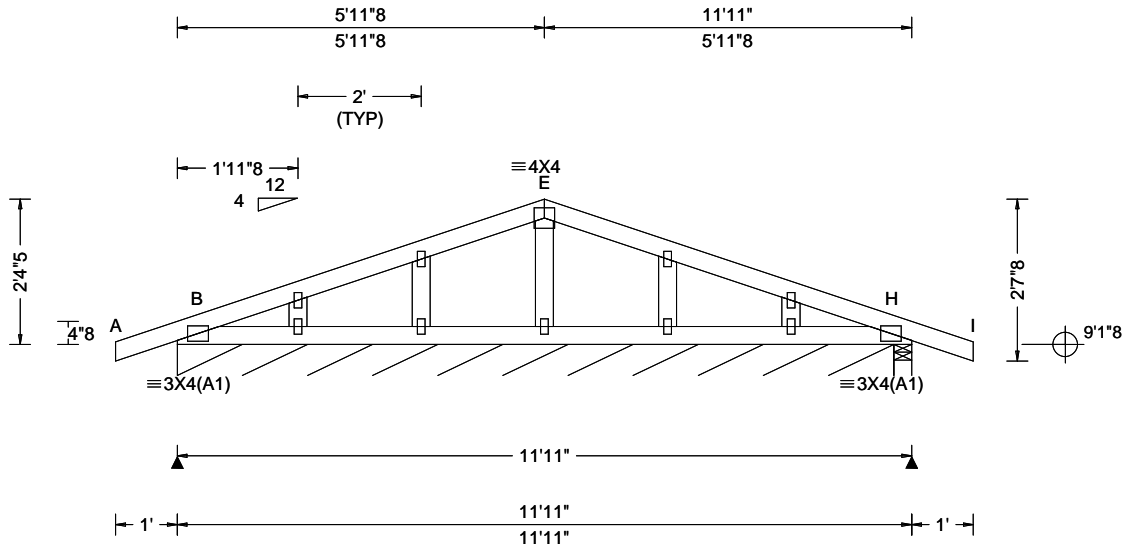
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SEQN: 2167 / FROM:	GABL Ply: 1 Qty: 1	Job Number: Q2410-325 The Farm at Neills Creek	Cust: R 9836 JRef: 1Y4e98360003 T2 / DrwNo: 299.24.1509.25022 / YK 10/25/2024	Truss Label: C1G
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Loading Criteria (psf) TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 24.0 "	Wind Criteria Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	Snow Criteria (Pg,Pf in PSF) Pg: 20.0 Ct: 1.1 CAT: II Pf: 15.4 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15 Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:20(0)/10(0)/2(0) Plate Type(s): WAVE	Defl/CSI Criteria PP Deflection in loc L/def L/# VERT(LL): 0.000 E 999 240 VERT(CL): 0.000 H 999 180 HORZ(LL): 0.000 G - - HORZ(TL): 0.000 G - - Creep Factor: 2.0 Max TC CSI: 0.079 Max BC CSI: 0.027 Max Web CSI: 0.035 VIEW Ver: 23.02.04A.0207.13	▲ Maximum Reactions (lbs), or *=PLF Gravity Non-Gravity Loc R+ /R- /Rh /Rw /U /RL B* 80 /- /- /40 /0 /2 H 165 /- /- /88 /10 /- Wind reactions based on MWFRS B Brg Wid = 139 Min Req = - H Brg Wid = 3.5 Min Req = 1.5 (Truss) Bearings B & H are a rigid surface. Members not listed have forces less than 375#
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Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Plating Notes

All plates are 1.5X3 except as noted.

Loading

Bottom chord checked for 10.00 psf non-concurrent live load.

Truss designed for unbalanced snow loads.

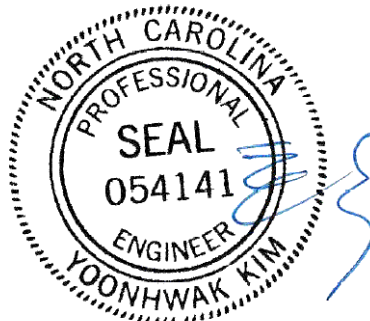
Wind

Wind loads based on MWFRS with additional C&C member design.

Wind loading based on both gable and hip roof types.

Additional Notes

See DWGS A12015ENC160118, GBLLETIN0118, & GABRST160118 for gable wind bracing and other requirements.

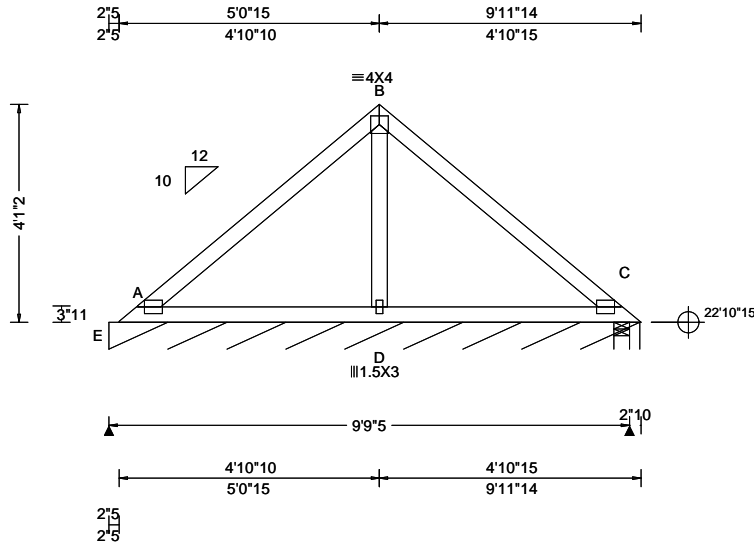


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Loading Criteria (psf) TCLL: 20.00 TCCL: 10.00 BCCL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 24.0 "	Wind Criteria Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 25.11 ft TCCL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCp: 0.18 Wind Duration: 1.60	Snow Criteria (Pg,Pf in PSF) Pg: 20.0 Ct: 1.1 CAT: II Pf: 15.4 Ce: 1.0 Lu: - Cs: 0.93 Snow Duration: 1.15 Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:20(0)/10(0)/2(0) Plate Type(s): WAVE	Defl/CSI Criteria PP Deflection in loc L/def L/# VERT(LL): 0.011 A 999 240 VERT(CL): 0.023 A 999 180 HORZ(LL): 0.006 A - - HORZ(TL): 0.014 A - - Creep Factor: 2.0 Max TC CSI: 0.377 Max BC CSI: 0.275 Max Web CSI: 0.160 VIEW Ver: 23.02.04A.0207.13	▲ Maximum Reactions (lbs), or *=PLF <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Loc</th> <th colspan="3">Gravity</th> <th colspan="3">Non-Gravity</th> </tr> <tr> <th>R+</th> <th>/R-</th> <th>/Rh</th> <th>/Rw</th> <th>/U</th> <th>/RL</th> </tr> </thead> <tbody> <tr> <td>E*</td> <td>57</td> <td>-</td> <td>-</td> <td>/37</td> <td>-</td> <td>/7</td> </tr> <tr> <td>C</td> <td>270</td> <td>-</td> <td>-</td> <td>/194</td> <td>/91</td> <td>-</td> </tr> </tbody> </table> Wind reactions based on MWFRS E Brg Wid = 119 Min Req = - C Brg Wid = 3.5 Min Req = 1.5 (Truss) Bearings E & C Fcperp = 565psi. Members not listed have forces less than 375# Maximum Gable Forces Per Ply (lbs) <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Gables</th> <th>Tens.Comp.</th> </tr> </thead> <tbody> <tr> <td>B - D</td> <td>268 -510</td> </tr> </tbody> </table>	Loc	Gravity			Non-Gravity			R+	/R-	/Rh	/Rw	/U	/RL	E*	57	-	-	/37	-	/7	C	270	-	-	/194	/91	-	Gables	Tens.Comp.	B - D	268 -510
Loc	Gravity			Non-Gravity																															
	R+	/R-	/Rh	/Rw	/U	/RL																													
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C	270	-	-	/194	/91	-																													
Gables	Tens.Comp.																																		
B - D	268 -510																																		

Lumber

Top chord: 2x4 SP #2;
 Bot chord: 2x4 SP #2;
 Webs: 2x4 SP #3;

Plating Notes

All plates are 3X4(D1) except as noted.

Loading

Bottom chord checked for 10.00 psf non-concurrent live load.

Wind

Wind loads based on MWFRS with additional C&C member design.

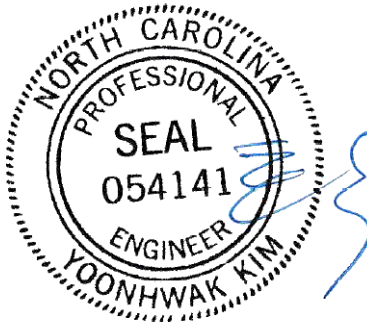
Wind loading based on both gable and hip roof types.

Blocking

Blocking reinforcement required to prevent buckling of members over the bearings:
 Bearing 2 located at 9.3' (blocking >= 64.28" if used)

Additional Notes

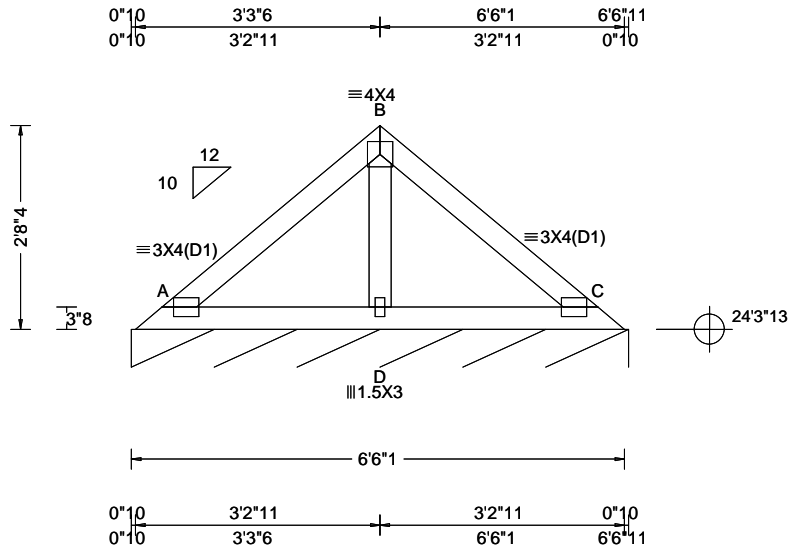
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs), or *=PLF
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 24.0 "	Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 25.81 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	Pg: 20.0 Ct: 1.1 CAT: II Pf: 15.4 Ce: 1.0 Lu: - Cs: 0.93 Snow Duration: 1.15 Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:20(0)/10(0)/2(0) Plate Type(s): WAVE	PP Deflection in loc L/def L/# VERT(LL): 0.003 C 999 240 VERT(CL): 0.006 C 999 180 HORZ(LL): -0.002 C - - HORZ(TL): 0.004 C - - Creep Factor: 2.0 Max TC CSI: 0.141 Max BC CSI: 0.111 Max Web CSI: 0.062 VIEW Ver: 23.02.04A.0207.13	Gravity Loc R+ / R- / Rh / Rw / U / RL Non-Gravity C* 84 /- /- /43 /4 /7 Wind reactions based on MWFRS C Brg Wid = 78.7 Min Req = - Bearing A is a rigid surface. Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Loading

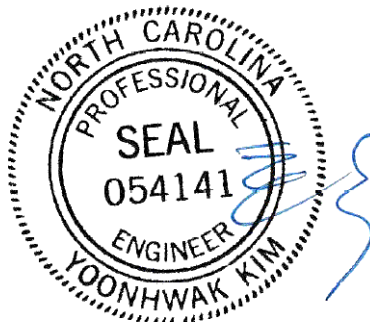
Bottom chord checked for 10.00 psf non-concurrent live load.

Wind

Wind loads based on MWFRS with additional C&C member design.
Wind loading based on both gable and hip roof types.

Additional Notes

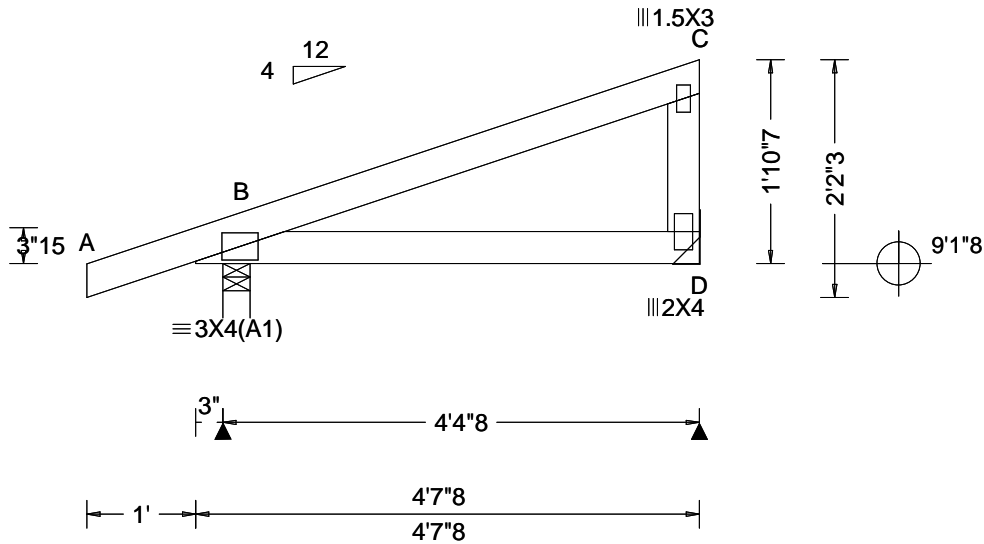
See DWG VALTN160118 for valley details.



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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 24.0 "	Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	Pg: 20.0 Ct: 1.1 CAT: II Pf: 15.4 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15 Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:20(0)/10(0)/2(0) Plate Type(s): WAVE	PP Deflection in loc L/def L/# VERT(LL): NA VERT(CL): NA HORZ(LL): 0.003 B - - HORZ(TL): 0.006 B - - Creep Factor: 2.0 Max TC CSI: 0.245 Max BC CSI: 0.171 Max Web CSI: 0.075 VIEW Ver: 23.02.04A.0207.13	Gravity Non-Gravity Loc R+ / R- / Rh / Rw / U / RL B 275 /- /- /147 /0 /37 D 166 /- /- /91 /4 /- Wind reactions based on MWFRS B Brg Wid = 3.0 Min Req = 1.5 (Truss) D Brg Wid = - Min Req = - Bearing B is a rigid surface. Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Hangers / Ties

(J) Hanger Support Required, by others

Loading

Bottom chord checked for 10.00 psf non-concurrent live load.

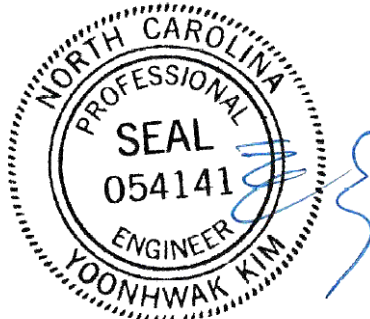
Wind

Wind loads based on MWFRS with additional C&C member design.

Right end vertical not exposed to wind pressure.

Left cantilever is exposed to wind

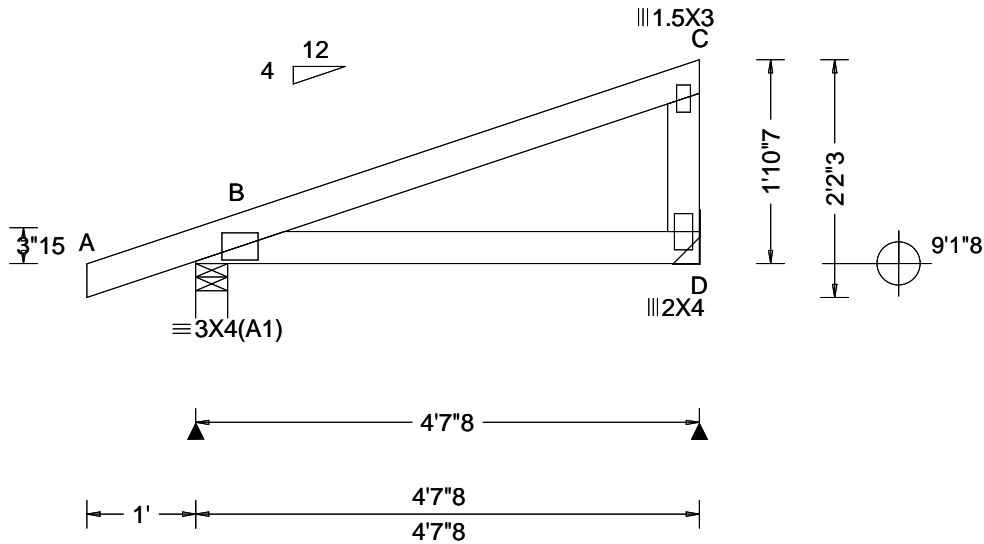
Wind loading based on both gable and hip roof types.



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Loading Criteria (psf) TCCL: 20.00 TCCL: 10.00 BCCL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 24.0 "	Wind Criteria Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 15.00 ft TCCL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	Snow Criteria (Pg,Pf in PSF) Pg: 20.0 Ct: 1.1 CAT: II Pf: 15.4 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15 Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:20(0)/10(0)/2(0) Plate Type(s): WAVE	Defl/CSI Criteria PP Deflection in loc L/def L/# VERT(LL): NA VERT(CL): NA HORZ(LL): 0.004 B - - HORZ(TL): 0.007 B - - Creep Factor: 2.0 Max TC CSI: 0.261 Max BC CSI: 0.190 Max Web CSI: 0.078 VIEW Ver: 23.02.04A.0207.13	▲ Maximum Reactions (lbs) <table border="1"> <thead> <tr> <th rowspan="2">Loc</th> <th colspan="3">Gravity</th> <th colspan="3">Non-Gravity</th> </tr> <tr> <th>R+</th> <th>/R-</th> <th>/Rh</th> <th>/Rw</th> <th>/U</th> <th>/RL</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>268</td> <td>-</td> <td>-</td> <td>/144</td> <td>/0</td> <td>/37</td> </tr> <tr> <td>D</td> <td>172</td> <td>-</td> <td>-</td> <td>/94</td> <td>/4</td> <td>-</td> </tr> </tbody> </table>	Loc	Gravity			Non-Gravity			R+	/R-	/Rh	/Rw	/U	/RL	B	268	-	-	/144	/0	/37	D	172	-	-	/94	/4	-
				Loc		Gravity			Non-Gravity																						
R+	/R-	/Rh	/Rw		/U	/RL																									
B	268	-	-	/144	/0	/37																									
D	172	-	-	/94	/4	-																									
				Wind reactions based on MWFRS B Brg Wid = 3.5 Min Req = 1.5 (Truss) D Brg Wid = - Min Req = - Bearing B is a rigid surface. Members not listed have forces less than 375#																											

Lumber

Top chord: 2x4 SP #2;
 Bot chord: 2x4 SP #2;
 Webs: 2x4 SP #3;

Hangers / Ties

(J) Hanger Support Required, by others

Loading

Bottom chord checked for 10.00 psf non-concurrent live load.

Wind

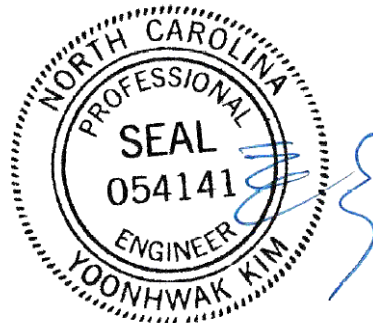
Wind loads based on MWFRS with additional C&C member design.

Right end vertical not exposed to wind pressure.

Wind loading based on both gable and hip roof types.

Additional Notes

Lanai/Porch Loading : 14.7 PLF wind pressure applied to the bottom chord of the truss from 0.00 ft to 4.62 ft,



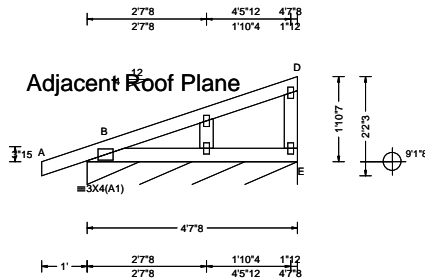
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SEQN: 2173 / FROM:	GABL Ply: 1 Qty: 1	Job Number: Q2410-325 The Farm at Neills Creek	Cust: R 9836 JRef: 1Y4e98360003 T7 / DrwNo: 299.24.1509.25008 / YK 10/25/2024	Truss Label: P1G
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Loading Criteria (psf) TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 24.0 "	Wind Criteria Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	Snow Criteria (Pg,Pf in PSF) Pg: 20.0 Ct: 1.1 CAT: II Pf: 15.4 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15 Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:20(0)/10(0)/2(0) Plate Type(s): WAVE	Defl/CSI Criteria PP Deflection in loc L/def L/# VERT(LL): 0.001 B 999 240 VERT(CL): 0.002 B 999 180 HORZ(LL): -0.000 D - - HORZ(TL): 0.001 B - - Creep Factor: 2.0 Max TC CSI: 0.079 Max BC CSI: 0.046 Max Web CSI: 0.043 VIEW Ver: 23.02.04A.0207.13	▲ Maximum Reactions (lbs), or *=PLF Gravity Non-Gravity Loc R+ /R- /Rh /Rw /U /RL E* 95 /- /- /51 /1 /10 Wind reactions based on MWFRS E Brg Wid = 55.5 Min Req = - Bearing B is a rigid surface. Members not listed have forces less than 375#
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Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Plating Notes

All plates are 1.5X3 except as noted.

Loading

Bottom chord checked for 10.00 psf non-concurrent live load.

Wind

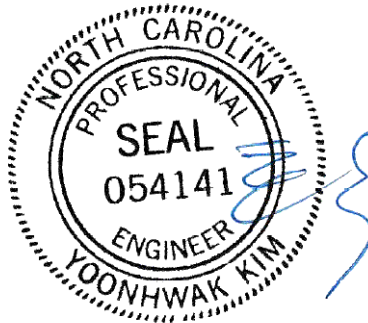
Wind loads based on MWFRS with additional C&C member design.

Right end vertical exposed to wind pressure.
Deflection meets L/180.

Wind loading based on both gable and hip roof types.

Additional Notes

See DWGS A12015ENC160118, GBLLETIN0118, & GABRST160118 for gable wind bracing and other requirements.

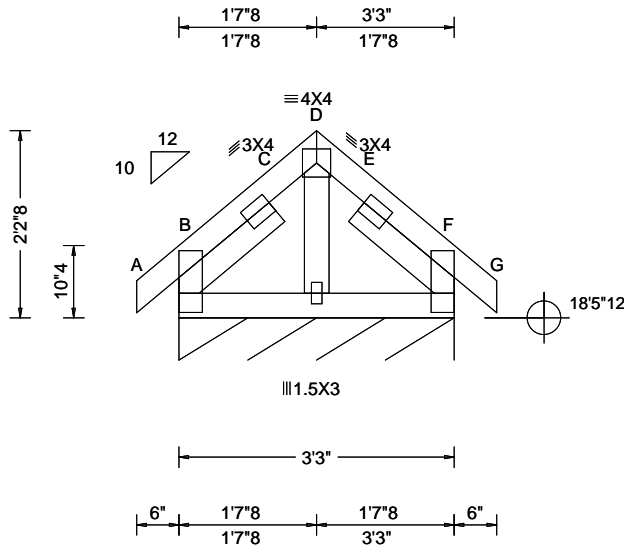


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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg, Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs), or *=PLF																		
TCCL: 20.00 TCCL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 24.0 "	Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 19.80 ft TCCL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCp: 0.18 Wind Duration: 1.60	Pg: 20.0 Ct: 1.1 CAT: II Pf: 15.4 Ce: 1.0 Lu: - Cs: 0.93 Snow Duration: 1.15 Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT: 20(0)/10(0)/2(0) Plate Type(s): HS, WAVE	PP Deflection in loc L/def L/# VERT(LL): 0.001 E 999 240 VERT(CL): 0.002 E 999 180 HORZ(LL): -0.001 E - - HORZ(TL): 0.002 E - - Creep Factor: 2.0 Max TC CSI: 0.053 Max BC CSI: 0.023 Max Web CSI: 0.024 VIEW Ver: 23.02.04A.0207.13	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Gravity</th> <th colspan="4">Non-Gravity</th> </tr> <tr> <th>Loc</th> <th>R+ / R-</th> <th>/ Rh</th> <th>/ Rw</th> <th>/ U</th> <th>/ RL</th> </tr> </thead> <tbody> <tr> <td>F*</td> <td>108</td> <td>- / -</td> <td>- / 57</td> <td>- / 3</td> <td>- / 12</td> </tr> </tbody> </table> Wind reactions based on MWFRS F Brg Wid = 39.0 Min Req = - Bearing B is a rigid surface. Members not listed have forces less than 375#	Gravity		Non-Gravity				Loc	R+ / R-	/ Rh	/ Rw	/ U	/ RL	F*	108	- / -	- / 57	- / 3	- / 12
Gravity		Non-Gravity																				
Loc	R+ / R-	/ Rh	/ Rw	/ U	/ RL																	
F*	108	- / -	- / 57	- / 3	- / 12																	

Lumber

Top chord: 2x4 SP #2;
 Bot chord: 2x4 SP #2;
 Webs: 2x4 SP #3;
 Lt Slider: 2x4 SP #3; block length = 1.500'
 Rt Slider: 2x4 SP #3; block length = 1.500'

Plating Notes

All plates are H0308(E5) except as noted.

Loading

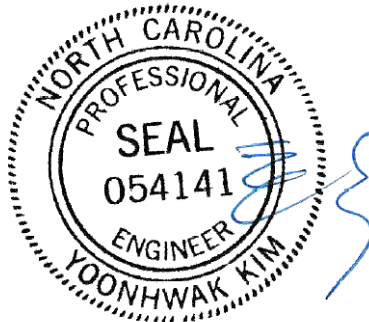
Bottom chord checked for 10.00 psf non-concurrent live load.

Wind

Wind loads based on MWFRS with additional C&C member design.
 Wind loading based on both gable and hip roof types.

Additional Notes

See DWGS A12030ENC160118, GBLLETIN0118, & GABRST160118 for gable wind bracing and other requirements.

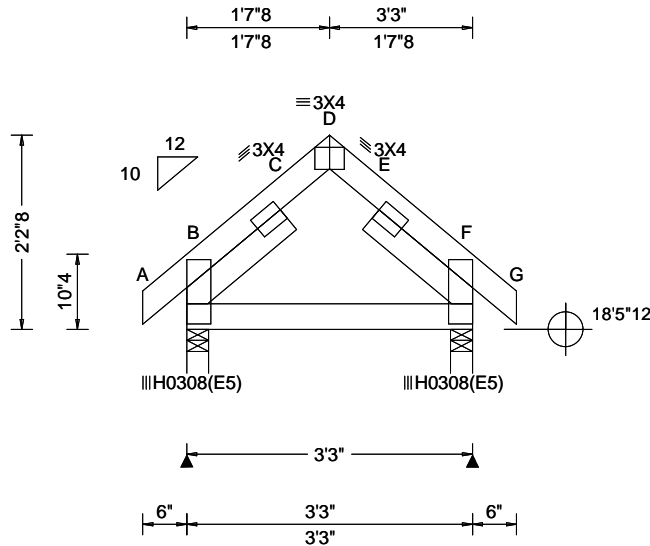


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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 24.0 "	Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 19.80 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	Pg: 20.0 Ct: 1.1 CAT: II Pf: 15.4 Ce: 1.0 Lu: - Cs: 0.93 Snow Duration: 1.15 Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:20(0)/10(0)/2(0) Plate Type(s): HS, WAVE	PP Deflection in loc L/def L/# VERT(LL): 0.001 C 999 240 VERT(CL): 0.002 C 999 180 HORZ(LL): 0.001 C - - HORZ(TL): 0.001 C - - Creep Factor: 2.0 Max TC CSI: 0.039 Max BC CSI: 0.087 Max Web CSI: 0.037 VIEW Ver: 23.02.04A.0207.13	Gravity Loc R+ / R- / Rh / Rw / U / RL Non-Gravity B 175 /- /- /100 /4 /37 F 175 /- /- /100 /4 /- Wind reactions based on MWFRS B Brg Wid = 3.0 Min Req = 1.5 (Truss) F Brg Wid = 3.0 Min Req = 1.5 (Truss) Bearings B & F are a rigid surface. Members not listed have forces less than 375#

Lumber

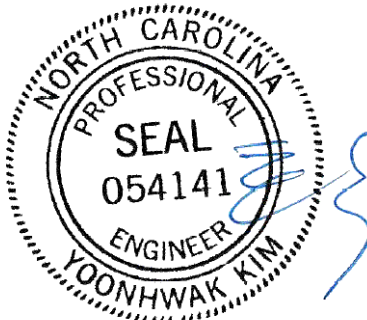
Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Lt Slider: 2x4 SP #3; block length = 1.500'
Rt Slider: 2x4 SP #3; block length = 1.500'

Loading

Bottom chord checked for 10.00 psf non-concurrent live load.

Wind

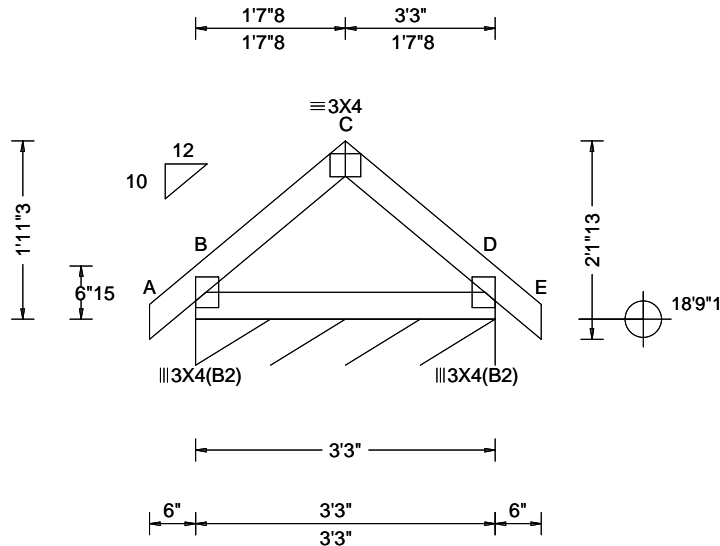
Wind loads based on MWFRS with additional C&C member design.
Wind loading based on both gable and hip roof types.



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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs), or *=PLF
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 24.0 "	Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 19.80 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	Pg: 20.0 Ct: 1.1 CAT: II Pf: 15.4 Ce: 1.0 Lu: - Cs: 0.93 Snow Duration: 1.15 Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:20(0)/10(0)/2(0) Plate Type(s): WAVE	PP Deflection in loc L/def L/# VERT(LL): 0.000 C 999 240 VERT(CL): 0.001 C 999 180 HORZ(LL): 0.000 B - - HORZ(TL): 0.001 B - - Creep Factor: 2.0 Max TC CSI: 0.034 Max BC CSI: 0.083 Max Web CSI: 0.000 VIEW Ver: 23.02.04A.0207.13	Gravity Loc R+ / R- / Rh / Rw / U / RL D* 108 /- /- /57 /3 /12 Non-Gravity Wind reactions based on MWFRS D Brg Wid = 39.0 Min Req = - Bearing B is a rigid surface. Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;

Loading

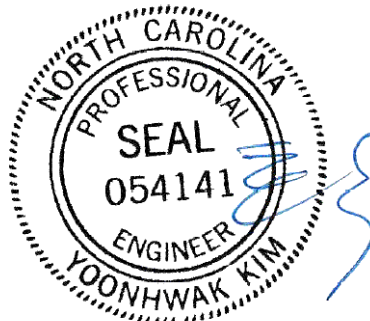
Bottom chord checked for 10.00 psf non-concurrent live load.

Wind

Wind loads based on MWFRS with additional C&C member design.
Wind loading based on both gable and hip roof types.

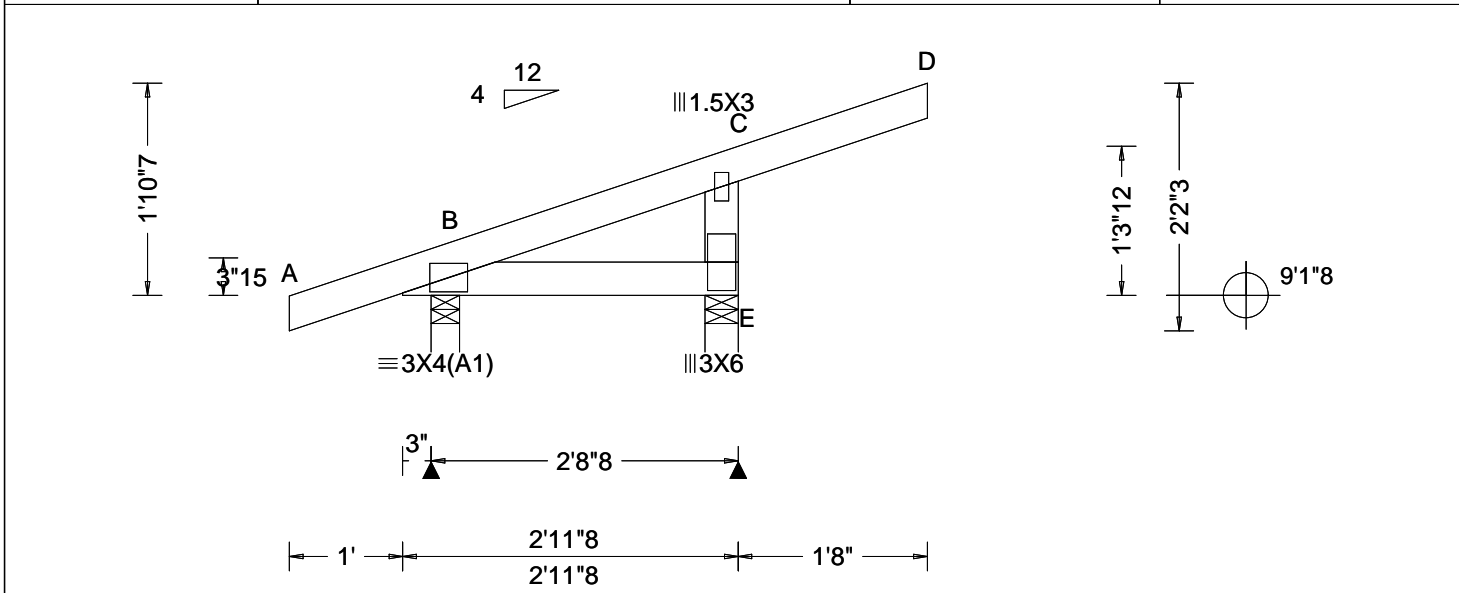
Additional Notes

See DWG VALTN160118 for valley details.



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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 24.0 "	Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: B Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	Pg: 20.0 Ct: 1.1 CAT: II Pf: 15.4 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15 Building Code: IRC 2021 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:20(0)/10(0)/2(0) Plate Type(s): WAVE	PP Deflection in loc L/def L/# VERT(LL): NA VERT(CL): NA HORZ(LL): 0.000 B - - HORZ(TL): 0.001 B - - Creep Factor: 2.0 Max TC CSI: 0.198 Max BC CSI: 0.047 Max Web CSI: 0.102 VIEW Ver: 23.02.04A.0207.13	Gravity Loc R+ / R- / Rh / Rw / U / RL Non-Gravity B 181 /- /- /101 /- /36 E 233 /- /- /103 /27 /- Wind reactions based on MWFRS B Brg Wid = 3.0 Min Req = 1.5 (Truss) E Brg Wid = 3.5 Min Req = 1.5 (Truss) Bearings B & E are a rigid surface. Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Loading

Bottom chord checked for 10.00 psf non-concurrent live load.

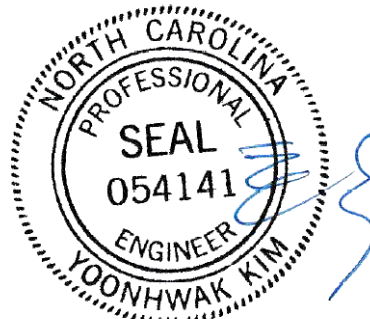
Wind

Wind loads based on MWFRS with additional C&C member design.

Right end vertical exposed to wind pressure.
Deflection meets L/180.

Left cantilever is exposed to wind

Wind loading based on both gable and hip roof types.



10/28/2024

ABCD Engineering, PLLC NC COA 0838

****WARNING** READ AND FOLLOW ALL NOTES ON THIS DRAWING!**
****IMPORTANT** FURNISH THIS DRAWING TO ALL CONTRACTORS INCLUDING THE INSTALLERS**
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Alpine, a division of ITW Building Components Group Inc. shall not be responsible for any deviation from this drawing, any failure to build the truss in conformance with ANSI/TPI 1, or for handling, shipping, installation and bracing of trusses. A seal on this drawing or cover page listing this drawing, indicates acceptance of professional engineering responsibility solely for the design shown. The suitability and use of this drawing for any structure is the responsibility of the Building Designer per ANSI/TPI 1 Sec.2.
For more information see these web sites: Alpine: alpineitw.com; TPI: tpinst.org; SBCA: sbcacomponents.com; ICC: iccsafe.org; AWC: awc.org



Gable Stud Reinforcement Detail

ASCE 7-16: 120 mph Wind Speed, 15' Mean Height, Enclosed, Exposure C, Kzt = 1.00

Or: 100 mph Wind Speed, 15' Mean Height, Partially Enclosed, Exposure C, Kzt = 1.00
Or: 100 mph Wind Speed, 15' Mean Height, Enclosed, Exposure D, Kzt = 1.00

Max Gable Vertical Length	2x4 Gable Vertical		Brace Grade	No Braces	(1) 1x4 'L' Brace *		(1) 2x4 'L' Brace *		(2) 2x4 'L' Brace **		(1) 2x6 'L' Brace *		(2) 2x6 'L' Brace **		
	Spacing	Species			Group A	Group B	Group A	Group B	Group A	Group B	Group A	Group B	Group A	Group B	
	24" o.c.	SPF	#1 / #2	#1 / #2	4' 10"	8' 2"	8' 6"	9' 8"	10' 1"	11' 6"	12' 0"	14' 0"	14' 0"	14' 0"	14' 0"
#3				4' 7"	7' 9"	8' 3"	9' 7"	9' 11"	11' 5"	11' 10"	14' 0"	14' 0"	14' 0"	14' 0"	
Stud				4' 7"	7' 8"	8' 2"	9' 7"	9' 11"	11' 5"	11' 10"	14' 0"	14' 0"	14' 0"	14' 0"	
HF			#1	4' 7"	6' 7"	7' 0"	8' 10"	9' 5"	11' 5"	11' 10"	13' 10"	14' 0"	14' 0"	14' 0"	14' 0"
			#2	5' 0"	8' 4"	8' 7"	9' 10"	10' 2"	11' 8"	12' 1"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"
			Standard	4' 7"	6' 7"	7' 0"	8' 10"	9' 5"	11' 5"	11' 10"	13' 10"	14' 0"	14' 0"	14' 0"	14' 0"
SP		#1	#1	4' 10"	8' 2"	8' 6"	9' 8"	10' 1"	11' 6"	12' 0"	14' 0"	14' 0"	14' 0"	14' 0"	
			#2	4' 10"	8' 2"	8' 6"	9' 8"	10' 1"	11' 6"	12' 0"	14' 0"	14' 0"	14' 0"	14' 0"	
			Standard	4' 8"	7' 0"	7' 5"	9' 3"	9' 11"	11' 5"	11' 11"	14' 0"	14' 0"	14' 0"	14' 0"	
		DFL	#1	4' 8"	7' 0"	7' 5"	9' 3"	9' 11"	11' 5"	11' 11"	14' 0"	14' 0"	14' 0"	14' 0"	
			#2	4' 7"	6' 2"	6' 7"	8' 2"	8' 9"	11' 1"	11' 10"	12' 10"	13' 9"	14' 0"	14' 0"	14' 0"
			Standard	4' 7"	6' 2"	6' 7"	8' 2"	8' 9"	11' 1"	11' 10"	12' 10"	13' 9"	14' 0"	14' 0"	14' 0"
16" o.c.	SPF	#1 / #2	#1 / #2	5' 6"	9' 5"	9' 9"	11' 1"	11' 6"	13' 2"	13' 9"	14' 0"	14' 0"	14' 0"	14' 0"	
			#3	5' 3"	9' 3"	9' 9"	10' 11"	11' 4"	13' 0"	13' 7"	14' 0"	14' 0"	14' 0"	14' 0"	
			Stud	5' 3"	9' 3"	9' 7"	10' 11"	11' 4"	13' 0"	13' 7"	14' 0"	14' 0"	14' 0"	14' 0"	
		HF	#1	5' 3"	9' 3"	9' 7"	10' 11"	11' 4"	13' 0"	13' 7"	14' 0"	14' 0"	14' 0"	14' 0"	
			#2	5' 3"	8' 1"	8' 7"	10' 10"	11' 4"	13' 0"	13' 7"	14' 0"	14' 0"	14' 0"	14' 0"	
			Standard	5' 3"	8' 1"	8' 7"	10' 10"	11' 4"	13' 0"	13' 7"	14' 0"	14' 0"	14' 0"	14' 0"	
	SP	#1	#1	5' 9"	9' 6"	9' 10"	11' 3"	11' 8"	13' 4"	13' 10"	14' 0"	14' 0"	14' 0"	14' 0"	
			#2	5' 6"	9' 5"	9' 9"	11' 1"	11' 6"	13' 2"	13' 9"	14' 0"	14' 0"	14' 0"	14' 0"	
			Standard	5' 5"	8' 6"	9' 1"	11' 0"	11' 5"	13' 1"	13' 8"	14' 0"	14' 0"	14' 0"	14' 0"	
		DFL	#1	5' 9"	9' 6"	9' 10"	11' 3"	11' 8"	13' 4"	13' 10"	14' 0"	14' 0"	14' 0"	14' 0"	
			#2	5' 6"	9' 5"	9' 9"	11' 1"	11' 6"	13' 2"	13' 9"	14' 0"	14' 0"	14' 0"	14' 0"	
			Standard	5' 5"	8' 6"	9' 1"	11' 0"	11' 5"	13' 1"	13' 8"	14' 0"	14' 0"	14' 0"	14' 0"	
12" o.c.	SPF	#1 / #2	#1 / #2	6' 1"	10' 4"	10' 8"	12' 2"	12' 8"	13' 2"	14' 0"	14' 0"	14' 0"	14' 0"		
			#3	5' 9"	10' 2"	10' 7"	12' 0"	12' 6"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"		
			Stud	5' 9"	10' 2"	10' 7"	12' 0"	12' 6"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"		
		HF	#1	5' 9"	9' 4"	9' 11"	12' 0"	12' 6"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	
			#2	6' 4"	10' 6"	10' 10"	12' 4"	12' 10"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	
			Standard	5' 9"	9' 4"	9' 11"	12' 0"	12' 6"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	
	SP	#1	#1	6' 4"	10' 6"	10' 10"	12' 4"	12' 10"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	
			#2	6' 1"	10' 4"	10' 8"	12' 2"	12' 8"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	
			Standard	5' 11"	9' 10"	10' 6"	12' 1"	12' 7"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	
		DFL	#1	5' 11"	9' 10"	10' 6"	12' 1"	12' 7"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	
			#2	5' 11"	9' 10"	10' 6"	12' 1"	12' 7"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	
			Standard	5' 9"	8' 8"	9' 3"	11' 7"	12' 5"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	

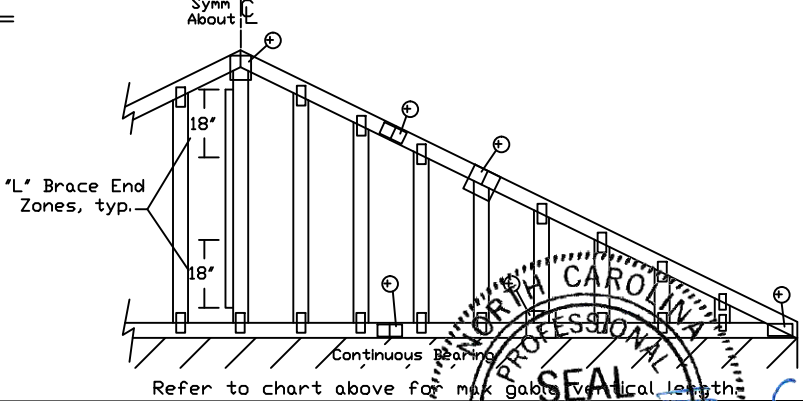
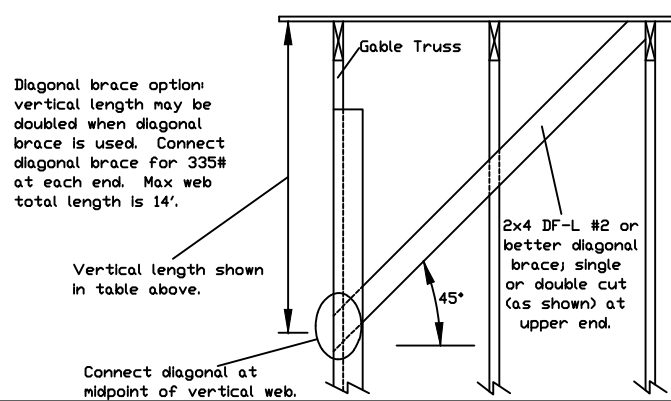
Bracing Group Species and Grades:

Group A:			
Spruce-Pine-Fir		Hem-Fir	
#1 / #2	Standard	#2	Stud
#3	Stud	#3	Standard
Douglas Fir-Larch		Southern Pine***	
#3		#3	
Stud		Stud	
Standard		Standard	

Group B:	
Hem-Fir	
#1 & Btr	
#1	
Douglas Fir-Larch	
#1	
#2	
Southern Pine***	
#1	
#2	

1x4 Braces shall be SRB (Stress-Rated Board).
 ***For 1x4 So. Pine use only Industrial 55 or Industrial 45 Stress-Rated Boards. Group B values may be used with these grades.

Gable Truss Detail Notes:
 Wind Load deflection criterion is L/240.
 Provide uplift connections for 35 plf over continuous bearing (5 psf TC Dead Load).
 Gable end supports load from 4' 0" outlookers with 2' 0" overhang, or 12' plywood overhang.



Attach 'L' braces with 10d (0.128"x3.0" min) nails.
 * For (1) 'L' brace: space nails at 2' o.c. in 18' end zones and 4' o.c. between zones.
 ** For (2) 'L' braces: space nails at 3' o.c. in 18' end zones and 6' o.c. between zones.
 'L' bracing must be a minimum of 80% of web member length.

Gable Vertical Plate Sizes	
Vertical Length	No Splice
Less than 4' 0"	1X4 or 2X3
Greater than 4' 0", but less than 11' 6"	2X4
Greater than 11' 6"	3X4

+ Refer to common truss design for peak, splice, and heel plates.

Refer to the Building Designer for conditions not addressed by this detail.

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For more information see this Job's general notes page and these web sites:
 ALPINE: www.alpineitw.com; TPI: www.tpinst.org; SBCA: www.sbcacomponents.com; ICC: www.iccsafe.org

ABCD Engineering, PLLC NC COA 0838
 10/28/2024

REF	ASCE7-16-GAB12015
DATE	01/26/2018
DRWG	A12015ENC160118
	MAX. TOT. LD. 60 PSF
	MAX. SPACING 24.0"

Gable Stud Reinforcement Detail

ASCE 7-16: 120 mph Wind Speed, 30' Mean Height, Enclosed, Exposure C, Kzt = 1.00

Or: 100 mph Wind Speed, 30' Mean Height, Partially Enclosed, Exposure C, Kzt = 1.00
Or: 100 mph Wind Speed, 30' Mean Height, Enclosed, Exposure D, Kzt = 1.00

Max Gable Vertical Length	2x4 Gable Vertical Spacing		Brace Grade	No Braces	(1) 1x4 'L' Brace *		(1) 2x4 'L' Brace *		(2) 2x4 'L' Brace **		(1) 2x6 'L' Brace *		(2) 2x6 'L' Brace **		
	Species	Grade			Group A	Group B	Group A	Group B	Group A	Group B	Group A	Group B	Group A	Group B	
	24" o.c.	SPF	#1 / #2	HF	4' 7"	7' 10"	8' 1"	9' 3"	9' 7"	11' 0"	11' 5"	14' 0"	14' 0"	14' 0"	14' 0"
4' 4"					7' 2"	7' 8"	9' 1"	9' 5"	10' 10"	11' 4"	14' 0"	14' 0"	14' 0"	14' 0"	
Stud					4' 4"	7' 2"	7' 7"	9' 1"	9' 5"	10' 10"	11' 4"	14' 0"	14' 0"	14' 0"	14' 0"
Standard			DFL	4' 4"	6' 2"	6' 7"	8' 2"	8' 9"	10' 10"	11' 4"	12' 10"	13' 9"	14' 0"	14' 0"	
				#1	4' 10"	7' 11"	8' 2"	9' 4"	9' 8"	11' 1"	11' 6"	14' 0"	14' 0"	14' 0"	14' 0"
				#2	4' 7"	7' 10"	8' 1"	9' 3"	9' 7"	11' 0"	11' 5"	14' 0"	14' 0"	14' 0"	14' 0"
SP		#2	DFL	4' 6"	6' 6"	6' 11"	8' 7"	9' 2"	10' 11"	11' 4"	13' 6"	14' 0"	14' 0"	14' 0"	
				Stud	4' 6"	6' 6"	6' 11"	8' 7"	9' 2"	10' 11"	11' 4"	13' 6"	14' 0"	14' 0"	14' 0"
				Standard	4' 4"	5' 9"	6' 1"	7' 7"	8' 2"	10' 4"	11' 1"	11' 11"	12' 10"	14' 0"	14' 0"
		#3	DFL	5' 3"	8' 11"	9' 3"	10' 7"	11' 0"	12' 7"	13' 1"	14' 0"	14' 0"	14' 0"	14' 0"	
				Stud	5' 0"	8' 10"	9' 3"	10' 5"	10' 10"	12' 5"	12' 11"	14' 0"	14' 0"	14' 0"	14' 0"
				Standard	5' 0"	7' 6"	8' 0"	10' 1"	10' 9"	12' 5"	12' 11"	14' 0"	14' 0"	14' 0"	14' 0"
16" o.c.	SPF	#1 / #2	HF	5' 6"	9' 10"	10' 2"	11' 7"	12' 1"	12' 7"	14' 0"	14' 0"	14' 0"	14' 0"		
				Stud	5' 6"	9' 8"	10' 1"	11' 6"	11' 11"	13' 8"	14' 0"	14' 0"	14' 0"	14' 0"	
				Standard	5' 6"	8' 8"	9' 3"	11' 6"	11' 11"	13' 8"	14' 0"	14' 0"	14' 0"	14' 0"	
		#1	DFL	6' 0"	10' 0"	10' 4"	11' 9"	12' 2"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"	
				Stud	5' 9"	9' 10"	10' 2"	11' 7"	12' 1"	13' 10"	14' 0"	14' 0"	14' 0"	14' 0"	
				Standard	5' 9"	9' 10"	10' 2"	11' 7"	12' 1"	13' 10"	14' 0"	14' 0"	14' 0"	14' 0"	
	SP	#2	DFL	5' 8"	9' 2"	9' 9"	11' 6"	12' 0"	13' 9"	14' 0"	14' 0"	14' 0"	14' 0"		
				Stud	5' 8"	9' 2"	9' 9"	11' 6"	12' 0"	13' 9"	14' 0"	14' 0"	14' 0"	14' 0"	
				Standard	5' 6"	8' 1"	8' 7"	10' 9"	11' 6"	13' 8"	14' 0"	14' 0"	14' 0"	14' 0"	
		#3	DFL	5' 9"	9' 10"	10' 2"	11' 7"	12' 1"	12' 7"	14' 0"	14' 0"	14' 0"	14' 0"		
				Stud	5' 9"	9' 10"	10' 2"	11' 7"	12' 1"	12' 7"	14' 0"	14' 0"	14' 0"	14' 0"	
				Standard	5' 9"	9' 10"	10' 2"	11' 7"	12' 1"	12' 7"	14' 0"	14' 0"	14' 0"	14' 0"	
12" o.c.	SPF	#1 / #2	HF	5' 9"	9' 10"	10' 2"	11' 7"	12' 1"	12' 7"	14' 0"	14' 0"	14' 0"	14' 0"		
				Stud	5' 6"	9' 8"	10' 1"	11' 6"	11' 11"	13' 8"	14' 0"	14' 0"	14' 0"	14' 0"	
				Standard	5' 6"	8' 8"	9' 3"	11' 6"	11' 11"	13' 8"	14' 0"	14' 0"	14' 0"	14' 0"	
		#1	DFL	6' 0"	10' 0"	10' 4"	11' 9"	12' 2"	14' 0"	14' 0"	14' 0"	14' 0"	14' 0"		
				Stud	5' 9"	9' 10"	10' 2"	11' 7"	12' 1"	13' 10"	14' 0"	14' 0"	14' 0"	14' 0"	
				Standard	5' 9"	9' 10"	10' 2"	11' 7"	12' 1"	13' 10"	14' 0"	14' 0"	14' 0"	14' 0"	
	SP	#2	DFL	5' 8"	9' 2"	9' 9"	11' 6"	12' 0"	13' 9"	14' 0"	14' 0"	14' 0"	14' 0"		
				Stud	5' 8"	9' 2"	9' 9"	11' 6"	12' 0"	13' 9"	14' 0"	14' 0"	14' 0"	14' 0"	
				Standard	5' 6"	8' 1"	8' 7"	10' 9"	11' 6"	13' 8"	14' 0"	14' 0"	14' 0"	14' 0"	
		#3	DFL	5' 9"	9' 10"	10' 2"	11' 7"	12' 1"	12' 7"	14' 0"	14' 0"	14' 0"	14' 0"		
				Stud	5' 9"	9' 10"	10' 2"	11' 7"	12' 1"	12' 7"	14' 0"	14' 0"	14' 0"	14' 0"	
				Standard	5' 9"	9' 10"	10' 2"	11' 7"	12' 1"	12' 7"	14' 0"	14' 0"	14' 0"	14' 0"	

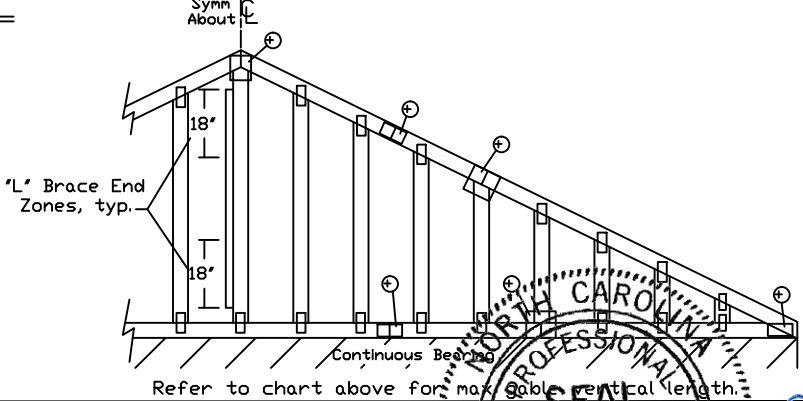
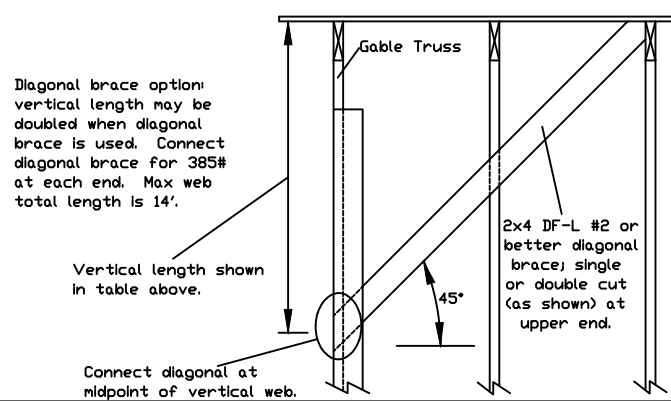
Bracing Group Species and Grades:

Group A:			
Spruce-Pine-Fir		Hem-Fir	
#1 / #2	Standard	#2	Stud
#3	Stud	#3	Standard
Douglas Fir-Larch		Southern Pine***	
#3	Stud	#3	Stud
#3	Standard	#3	Standard

Group B:			
Hem-Fir			
#1 & Btr		#1	
#1			
Douglas Fir-Larch		Southern Pine***	
#1	Stud	#1	Stud
#2	Standard	#2	Standard

1x4 Braces shall be SRB (Stress-Rated Board).
***For 1x4 So. Pine use only Industrial 55 or Industrial 45 Stress-Rated Boards. Group B values may be used with these grades.

Gable Truss Detail Notes:
Wind Load deflection criterion is L/240.
Provide uplift connections for 70 plf over continuous bearing (5 psf TC Dead Load).
Gable end supports load from 4' 0" outlookers with 2' 0" overhang, or 12' plywood overhang.



Attach 'L' braces with 10d (0.128"x3.0" min) nails.
* For (1) 'L' brace: space nails at 2' o.c. in 18' end zones and 4' o.c. between zones.
** For (2) 'L' braces: space nails at 3' o.c. in 18' end zones and 6' o.c. between zones.
'L' bracing must be a minimum of 80% of web member length.

Gable Vertical Plate Sizes	
Vertical Length	No Splice
Less than 4' 0"	1X4 or 2X3
Greater than 4' 0", but less than 11' 6"	2X4
Greater than 11' 6"	3X4

+ Refer to common truss design for peak, splice, and heel plates.

Refer to the Building Designer for conditions not addressed by this detail.

155 Harlem Ave
North Building, 4th Floor
Glenview, IL 60025

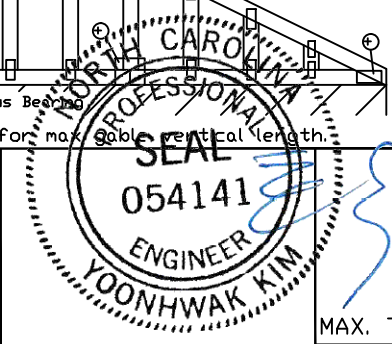
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ABCD Engineering, PLLC NC COA 0838
MAX. SPACING 24'0"

REF	ASCE7-16-GAB12030
DATE	01/26/2018
DRWG	A12030ENC160118
MAX. TOT. LD. 60 PSF	

CLR Reinforcing Member Substitution

This detail is to be used when a Continuous Lateral Restraint (CLR) is specified on a truss design but an alternative web reinforcement method is desired.

Notes:

This detail is only applicable for changing the specified CLR shown on single ply sealed designs to T-reinforcement or L-reinforcement or scab reinforcement.

Alternative reinforcement specified in chart below may be conservative. For minimum alternative reinforcement, re-run design with appropriate reinforcement type.

Use scabs instead of L- or T- reinforcement on webs with intersecting truss joints, such as K-web joints, that may interfere with proper application along the narrow face of the web.

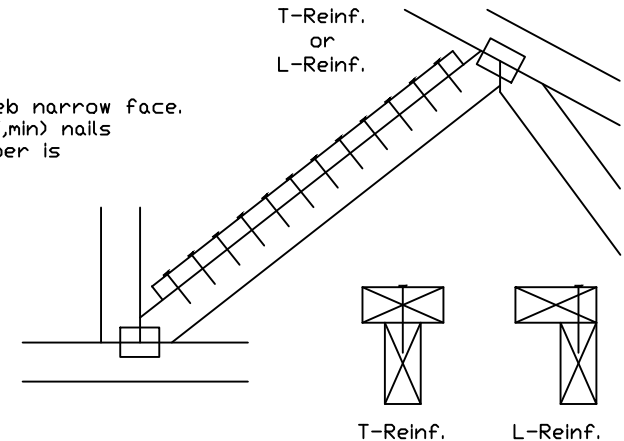
Web Member Size	Specified CLR Restraint	Alternative Reinforcement T- or L- Reinf.	Scab Reinf.
2x3 or 2x4	1 row	2x4	1-2x4
2x3 or 2x4	2 rows	2x6	2-2x4
2x6	1 row	2x4	1-2x6
2x6	2 rows	2x6	2-2x4(*)
2x8	1 row	2x6	1-2x8
2x8	2 rows	2x6	2-2x6(*)

T-reinforcement, L-reinforcement, or scab reinforcement to be same species and grade or better than web member unless specified otherwise on Engineer's sealed design.

(*) Center scab on wide face of web. Apply (1) scab to each face of web.

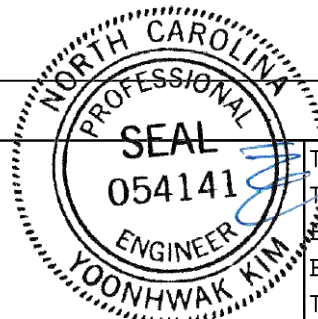
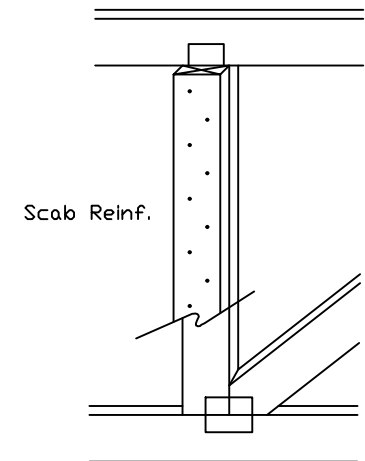
T-Reinforcement or L-Reinforcement:

Apply to either side of web narrow face. Attach with 10d (0.128"x3.0",min) nails at 6" o.c. Reinforcing member is a minimum 80% of web member length.



Scab Reinforcement:

Apply scab(s) to wide face of web. No more than (1) scab per face. Attach with 10d (0.128"x3.0",min) nails at 6" o.c. Reinforcing member is a minimum 80% of web member length.



155 Harlem Ave
North Building, 4th Floor
Glenview, IL 60025

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TE LL	PSF	REF CLR Subst.
TC DL	PSF	DATE 01/02/19
BC DL	PSF	DRWG BRCLBSUB0119
BC LL	PSF	
TOT. LD.	PSF	
DUR. FAC.		
SPACING		

ABCD Engineering, PLLC NC COA 0838

10/28/2024

NAIL SPACING DETAIL

MINIMUM SPACING FOR SINGLE BLOCK IS SHOWN. DOUBLE NAIL SPACINGS AND STAGGER NAILING FOR TWO BLOCKS. GREATER SPACING MAY BE REQUIRED TO AVOID SPLITTING.

BLOCK LOCATION, SIZE, LENGTH, GRADE AND TOTAL NUMBER AND TYPE OF NAILS ARE TO BE SPECIFIED ON SEALED DESIGN REFERENCING THIS DETAIL.

LOAD PERPENDICULAR TO GRAIN

- A - EDGE DISTANCE AND SPACING BETWEEN STAGGERED ROWS OF NAILS (6 NAIL DIAMETERS)
- B - SPACING OF NAILS IN A ROW (12 NAIL DIAMETERS)
- C - END DISTANCE (15 NAIL DIAMETERS)

LOAD PARALLEL TO GRAIN

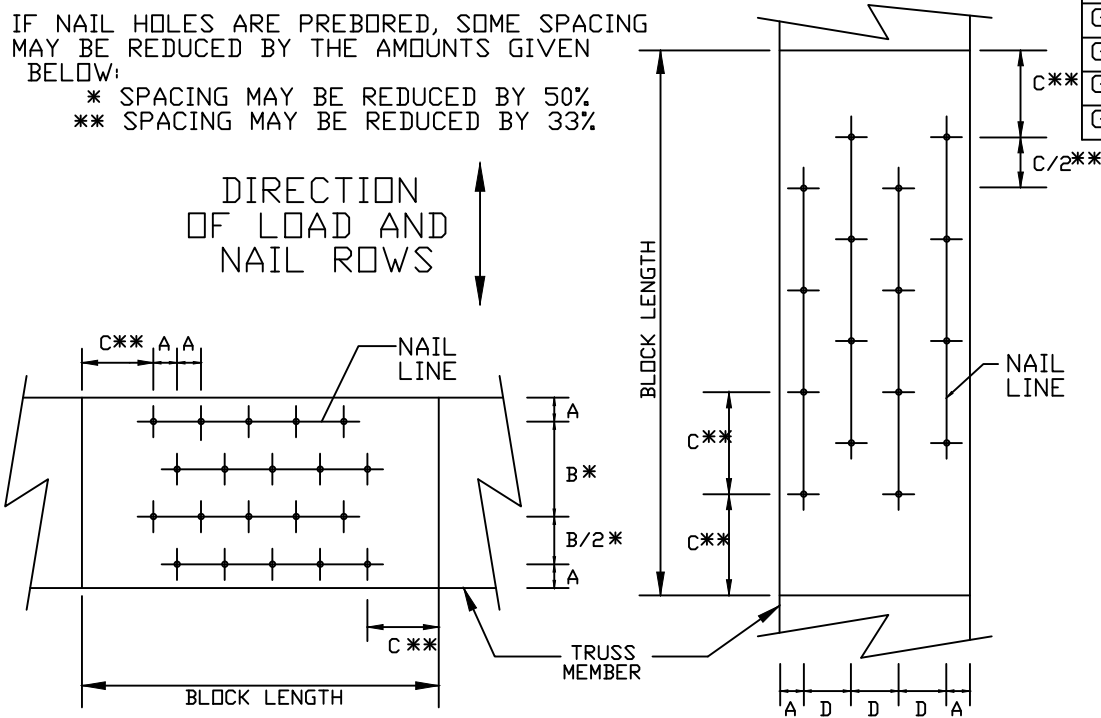
- A - EDGE DISTANCE (6 NAIL DIAMETERS)
- C - SPACING OF NAILS IN A ROW AND END DISTANCE (15 NAIL DIAMETERS)
- D - SPACING BETWEEN STAGGERED ROWS OF NAILS (7 1/2 NAIL DIAMETERS)

IF NAIL HOLES ARE PREBORED, SOME SPACING MAY BE REDUCED BY THE AMOUNTS GIVEN BELOW:

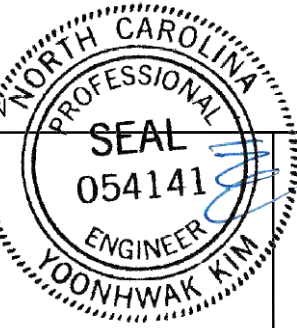
- * SPACING MAY BE REDUCED BY 50%
- ** SPACING MAY BE REDUCED BY 33%

MINIMUM NAIL SPACING DISTANCES

NAIL TYPE	DISTANCES			
	A	B*	C**	D
8d BOX (0.113"X 2.5",MIN)	3/4"	1 3/8"	1 3/4"	7/8"
10d BOX (0.128"X 3",MIN)	7/8"	1 5/8"	2"	1"
12d BOX (0.128"X 3.25",MIN)	7/8"	1 5/8"	2"	1"
16d BOX (0.135"X 3.5",MIN)	7/8"	1 5/8"	2 1/8"	1 1/8"
20d BOX (0.148"X 4",MIN)	1"	1 7/8"	2 1/4"	1 1/8"
8d COMMON (0.131"X 2.5",MIN)	7/8"	1 5/8"	2"	1"
10d COMMON (0.148"X 3",MIN)	1"	1 7/8"	2 1/4"	1 1/8"
12d COMMON (0.148"X 3.25",MIN)	1"	1 7/8"	2 1/4"	1 1/8"
16d COMMON (0.162"X 3.5",MIN)	1"	2"	2 1/2"	1 1/4"
GUN (0.120"X 2.5",MIN)	3/4"	1 1/2"	1 7/8"	1"
GUN (0.131"X 2.5",MIN)	7/8"	1 5/8"	2"	1"
GUN (0.120"X 3",MIN)	3/4"	1 1/2"	1 7/8"	1"
GUN (0.131"X 3",MIN)	7/8"	1 5/8"	2"	1"



LOAD APPLIED PERPENDICULAR TO GRAIN LOAD APPLIED PARALLEL TO GRAIN



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ABCD Engineering, PLLC NC COA 0838

10/28/2024

REF	NAIL SPACE
DATE	10/01/14
DRWG	CNNAILSP1014

ASCE 7-16: 120 mph, 30' Mean Height, Closed, Exposure C Common Residential Gable End Wind Bracing Requirements - Stiffeners

120 mph, 30ft. Mean Hgt, ASCE 7-16, Enclosed, Exp C, or
100 mph, 30ft. Mean Hgt, ASCE 7-16, Enclosed, Exp D, or
100 mph, 30ft. Mean Hgt, ASCE 7-16, Part. Enclosed, Exp C,
Kzt = 1.00, Wind TC DL=5.0 psf, Wind BC DL=5.0 psf.

Lateral chord bracing requirements
Top: Continuous roof sheathing
Bot: Continuous ceiling diaphragm

See Engineer's sealed design referencing this detail for lumber, plates, and other information not shown on this detail.

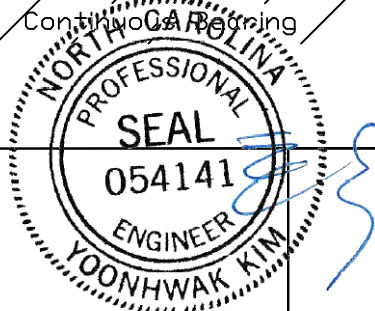
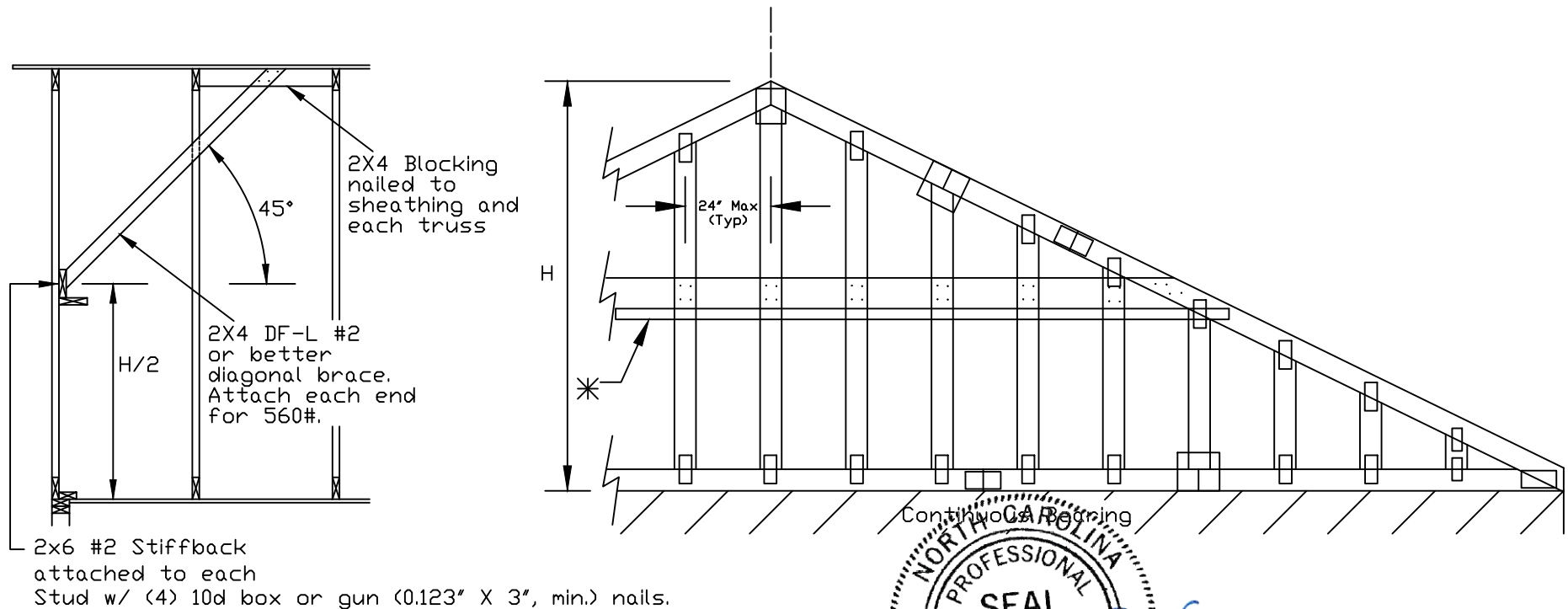
Nails: 10d box or gun (0.128"x3",min) nails.

H Less than 4'6" - no stud bracing required

H Greater than 4'6" to 7'6" in length
provide a 2x6 stiffback at mid-height and brace stiffback to roof diaphragm every 6'0" (see detail below or refer to DRWG A12030ENC160118).

H Greater than 7'6" to 12'0" max:
provide a 2x6 stiffback at mid-height and brace to roof diaphragm every 4'0" (see detail below or refer to DRWG A12030ENC160118).

* Optional 2x L-reinforcement attached to stiffback with 10d box or gun (0.128" x 3", min.) nails @ 6" o.c.



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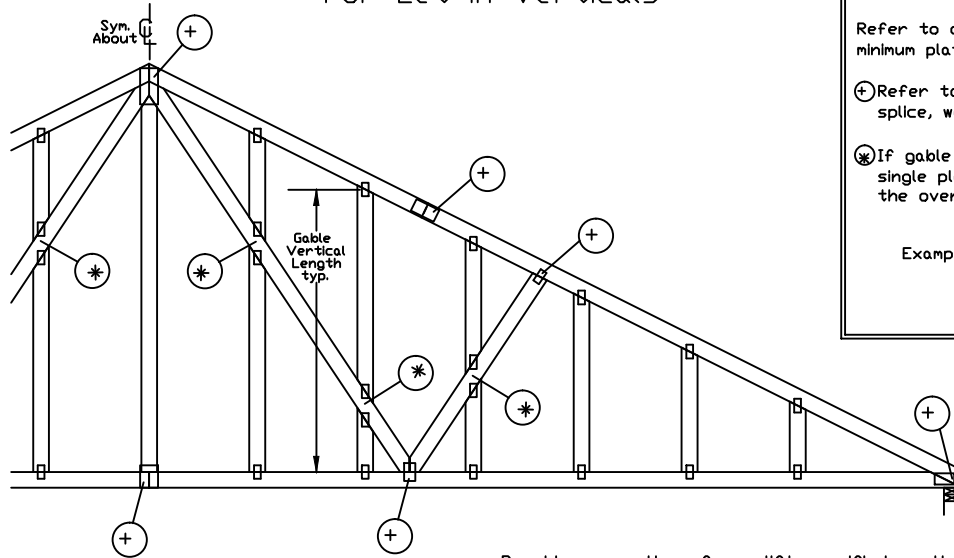
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ABCD Engineering, PLLC
10/28/2024

MAX. TOT. LD. 60 PSF
C NC COA 0838
MAX. SPACING

REF	GE WHALER
DATE	01/02/2018
DRWG	GABRST160118

Gable Detail For Let-in Verticals



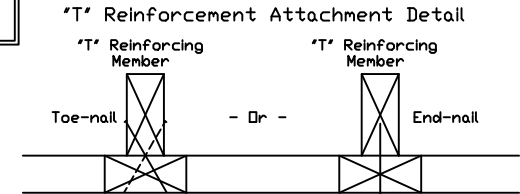
Gable Truss Plate Sizes

Refer to appropriate Alpine gable detail for minimum plate sizes for vertical studs.

⊕ Refer to Engineered truss design for peak, splice, web, and heel plates.

⊗ If gable vertical plates overlap, use a single plate that covers the total area of the overlapped plates to span the web.

Example:



Provide connections for uplift specified on the engineered truss design.

Attach each 'T' reinforcing member with
End Driven Nails:
10d Common (0.148"x3",min) Nails at 4' o.c. plus
(4) nails in the top and bottom chords.

Toenailed Nails:
10d Common (0.148"x3",min) Toenails at 4' o.c. plus
(4) toenails in the top and bottom chords.

This detail to be used with the appropriate Alpine gable detail for ASCE wind load.

- ASCE 7-05 Gable Detail Drawings
A13015051014, A12015051014, A11015051014, A10015051014, A14015051014,
A13030051014, A12030051014, A11030051014, A10030051014, A14030051014
- ASCE 7-10 & ASCE 7-16 Gable Detail Drawings
A11515ENC100118, A12015ENC100118, A14015ENC100118, A16015ENC100118,
A18015ENC100118, A20015ENC100118, A20015END100118, A20015PED100118,
A11530ENC100118, A12030ENC100118, A14030ENC100118, A16030ENC100118,
A18030ENC100118, A20030ENC100118, A20030END100118, A20030PED100118,
S11515ENC100118, S12015ENC100118, S14015ENC100118, S16015ENC100118,
S18015ENC100118, S20015ENC100118, S20015END100118, S20015PED100118,
S11530ENC100118, S12030ENC100118, S14030ENC100118, S16030ENC100118,
S18030ENC100118, S20030ENC100118, S20030END100118, S20030PED100118

See appropriate Alpine gable detail for maximum unreinforced gable vertical length.

To convert from 'L' to 'T' reinforcing members, multiply 'T' increase by length (based on appropriate Alpine gable detail).

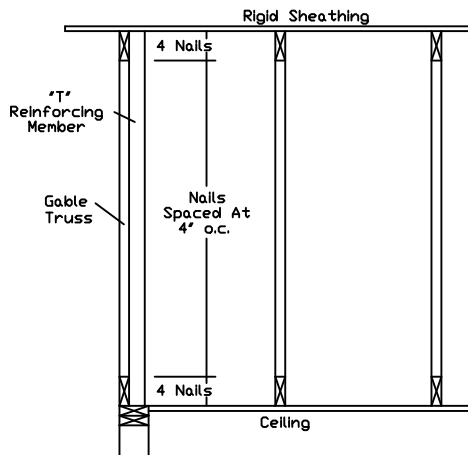
Maximum allowable 'T' reinforced gable vertical length is 14' from top to bottom chord.

'T' reinforcing member material must match size, specie, and grade of the 'L' reinforcing member.

Web Length Increase w/ 'T' Brace

'T' Reinf. Mbr. Size	'T' Increase
2x4	30 %
2x6	20 %

Example:
ASCE 7-10 Wind Speed = 120 mph
Mean Roof Height = 30 ft, Kzt = 1.00
Gable Vertical = 24' o.c. SP #3
'T' Reinforcing Member Size = 2x4
'T' Brace Increase (From Above) = 30% = 1.30
(1) 2x4 'L' Brace Length = 8' 7"
Maximum 'T' Reinforced Gable Vertical Length
1.30 x 8' 7" = 11' 2"



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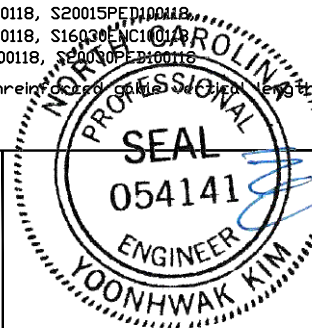
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155 Harlem Ave
North Building, 4th Floor
Glenview, IL 60025



ABCD Engineering, PLLC

10/28/2024

MAX. TOT. LD. 60 PSF
DUR. FAC. ANY
MAX. SPACING 24.0"

REF LET-IN VERT
DATE 01/02/2018
DRWG GBLLETIN0118

Valley Detail - ASCE 7-16: 30' Mean Height, Enclosed, Exp. C, Kzt=1.00

Top Chord 2x4 SP #2N, SPF #1/#2, DF-L #2 or better.
 Bot Chord 2x4 SP #2N or SPF #1/#2 or better.
 Webs 2x4 SP #3, SPF #1/#2, DF-L #2 or better.

** Attach each valley to every supporting truss with:
 (2) 16d box (0.135" x 3.5") nails toe-nailed for
 ASCE 7-16, 30' Mean Height, Enclosed Building, Exp. C,
 Wind TC DL=5 psf, Kzt = 1.00, Max. Wind Speed based on
 supporting truss material at connection location:
 170 mph for SP (G = 0.55, min.),
 155 mph for DF-L (G = 0.50, min.), or
 120 mph for HF & SPF (G = 0.42, min.).

Maximum top chord pitch is 10/12 for supporting trusses
 below valley trusses.

Bottom chord of valley trusses may be square or
 pitched cut as shown.

Valleys short enough to be cut as solid triangular
 members from a single 2x6, or larger as required,
 shall be permitted in lieu of fabricating from
 separate 2x4 members.

All plates shown are Alpine Wave Plates.

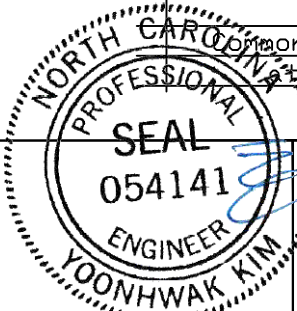
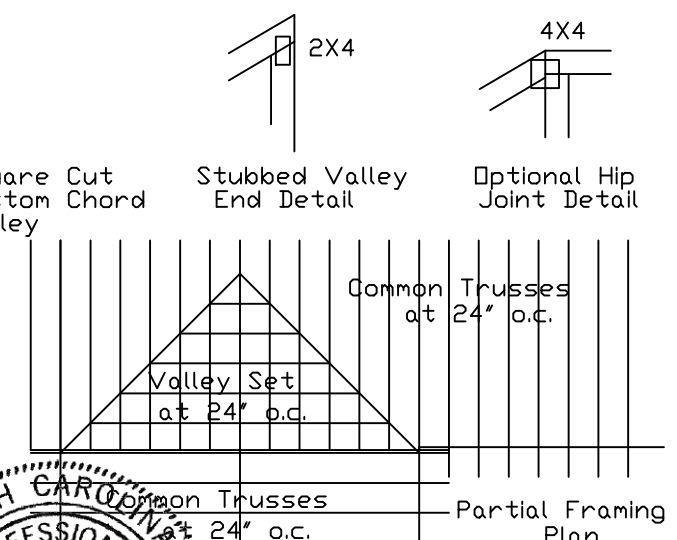
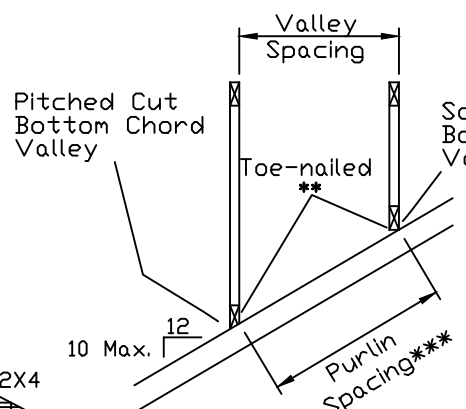
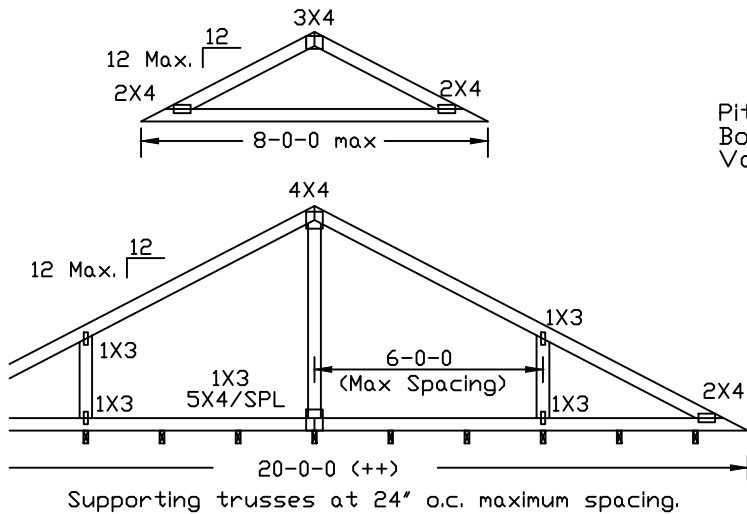
Unless specified otherwise on engineer's sealed design, for vertical
 valley webs taller than 7'-9" apply 2x4 "T" reinforcement, 80% length of
 web, same species and grade or better, attached with 10d box
 (0.128" x 3.0") nails at 6" o.c. In lieu of "T" reinforcement, 2x4 Continuous
 Lateral Restraint applied at mid-length of web is permitted with diagonal
 bracing as shown in DRWG BRCLBANC1014.

Top chord of truss beneath valley set must be braced with:
 properly attached, rated sheathing applied prior to valley truss
 installation.

- Or
- Purlins at 24" o.c. or as otherwise specified on engineer's sealed design
- Or
- By valley trusses used in lieu of purlin spacing as specified on
 Engineer's sealed design.

*** Note that the purlin spacing for bracing the top chord of the truss
 beneath the valley is measured along the slope of the top chord.

++ Larger spans may be built as long as the vertical height does
 not exceed 14'-0".



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ABCD Engineering, PLLC
 10/28/2024

TE LL	30	30	40PSF
TC DL	20	15	7 PSF
BC DL	10	10	10 PSF
BC LL	0	0	0 PSF
TOT. LD.	60	55	57PSF
DUR.FAC.	1.25/1.33	1.15	1.15
SPACING	24.0"		

REF	VALLEY DETAIL
DATE	01/26/2018
DRWG	VALTN160118