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11/07/2024  
 ABCD Engineering, PLLC NC COA 0838

Site Information:	Page 1:
Customer: Structural Building Solutions LLC	Job Number: Q2410-341
Job Description: The Farm at Neills Creek	
Address: 593 Winding Creek Dr, Lillington, NC 27546	

Job Engineering Criteria:	
Design Code: IRC 2018	IntelliVIEW Version: 23.02.04A JRef #: 1Y4R98360003
Wind Standard: ASCE 7-16      Wind Speed (mph): 120 Building Type: Closed	Design Loading (psf): 50.00

This package contains general notes pages, 19 truss drawing(s) and 4 detail(s).

Item	Drawing Number	Truss
1	312.24.1428.04300	GE01
3	312.24.1428.10020	GE03
5	312.24.1428.14417	GE04
7	312.24.1426.25790	F03
9	312.24.1428.00120	FG04
11	312.24.1426.39487	F06
13	312.24.1427.27877	F11
15	312.24.1426.45583	F07
17	312.24.1426.12153	F02
19	312.24.1427.43790	FG02
21	STRBRIBR1014	
23	LSCSYX2A1014	

Item	Drawing Number	Truss
2	312.24.1427.50520	FG03
4	312.24.1427.01550	F10
6	312.24.1426.55683	F09
8	312.24.1427.37910	FG01
10	312.24.1428.06193	GE02
12	312.24.1426.34820	F05
14	312.24.1426.51093	F08
16	312.24.1426.30570	F04
18	312.24.1426.07260	F01
20	DEFLCAMB1014	
22	CNSY42PL0118	

## **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](http://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.

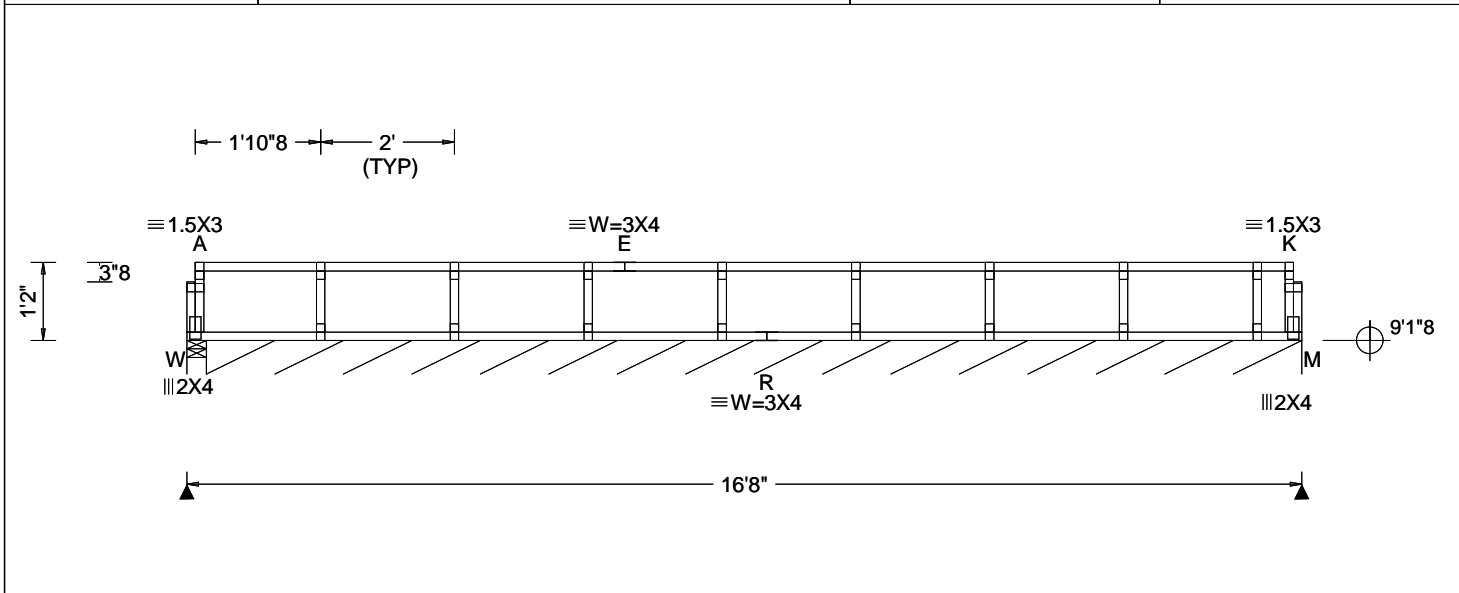
Refer to ASCE-7 for Wind and Seismic abbreviations.

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](http://www.awc.org).
2. ICC: International Code Council; [www.iccsafe.org](http://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](http://www.alpineitw.com).
4. TPI: Truss Plate Institute, 2670 Crain Highway, Suite 203, Waldorf, MD 20601; [www.tpinst.org](http://www.tpinst.org).
5. SBCA: Wood Truss Council of America, 6300 Enterprise Lane, Madison, WI 53719; [www.sbcacomponents.com](http://www.sbcacomponents.com)

SEQN: 8030 FROM:	SY42 Ply: 1 Qty: 1	Job Number: Q2410-341 The Farm at Neills Creek	Cust: R 9836 JRef: 1Y4R98360003 T1 DrwNo: 312.24.1428.04300 / YK 11/07/2024	Truss Label: <b>GE01</b>
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<b>Loading Criteria (psf)</b> TCLL: 30.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 50.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 16.0 "	<b>Wind Criteria</b> Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h/2 to h C&C Dist a: NA Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: 40.0 Ct: 1.1 CAT: II Pf: 30.8 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15  Building Code: IRC 2018 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:20(0)/10(0)/2(0) Plate Type(s): WAVE	<b>Defl/CSI Criteria</b> PP Deflection in loc L/def L/# VERT(LL): 0.000 B 999 480 VERT(CL): 0.000 B 999 360 HORZ(LL): 0.003 B - - HORZ(TL): 0.005 B - - Creep Factor: 2.0 Max TC CSI: 0.107 Max BC CSI: 0.039 Max Web CSI: 0.022  VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs), or *=PLF</b> Gravity Non-Gravity Loc R+ / R- / Rh / Rw / U / RL W 54 /- /- /25 /6 /19 M* 65 /- /- /26 /7 /- Wind reactions based on MWFRS W Brg Wid = 3.5 Min Req = 1.5 (Truss) M Brg Wid = 196 Min Req = - Bearings W & W are a rigid surface. Members not listed have forces less than 375#
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**Lumber**

Top chord: 4x2 SP #2;  
Bot chord: 4x2 SP #2;  
Webs: 4x2 SP #2;

**Bracing**

Sheathing is required for any longitudinal(drag) forces. All connections to be designed by the building designer.

Fasten rated sheathing to one face of this frame.

**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.

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

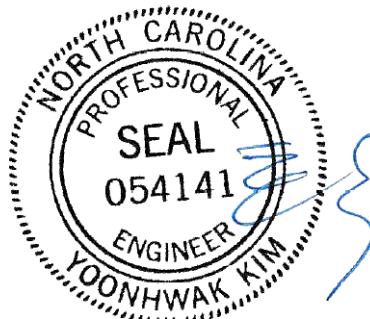
Right end vertical not exposed to wind pressure.

**Additional Notes**

See detail STRBRIBR1014 for bracing and bridging recommendations.

Snow loading based on an unobstructed roof.  
Complete drainage required.

Truss must be installed as shown with top chord up.



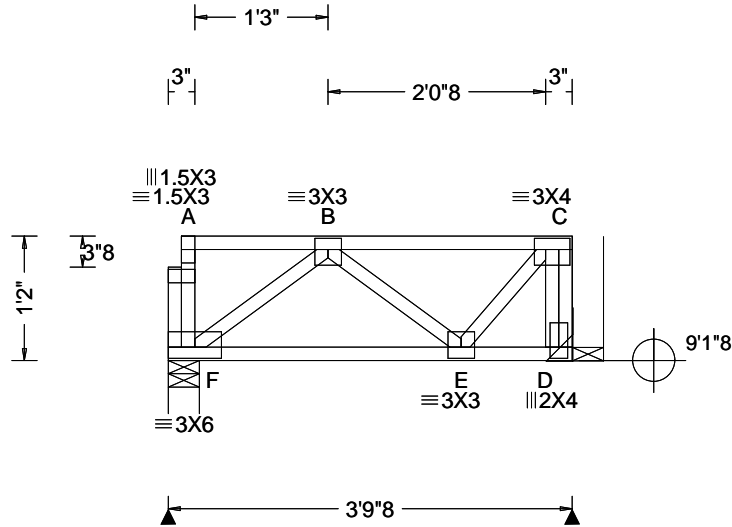
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Alpine, a division of ITW Building Components Group Inc. shall not be responsible for any deviation from this drawing, any failure to build the truss in conformance with ANSI/TPI 1, or for handling, shipping, installation and bracing of trusses. A 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](http://alpineitw.com); TPI: [tpinst.org](http://tpinst.org); SBCA: [sbcacomponents.com](http://sbcacomponents.com); ICC: [iccsafe.org](http://iccsafe.org); AWC: [awc.org](http://awc.org)



SEQN: 2176 FROM:	SY42 Ply: 1 Qty: 1	Job Number: Q2410-341 The Farm at Neills Creek	Cust: R 9836 JRef: 1Y4R98360003 T10 DrwNo: 312.24.1427.50520 / YK 11/07/2024	Truss Label: <b>FG03</b>
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<b>Loading Criteria (psf)</b> TCLL: 30.00 TCCL: 10.00 BCCL: 0.00 BCDL: 10.00 Des Ld: 50.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 16.0 "	<b>Wind Criteria</b> Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: C 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: NA Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: 40.0 Ct: 1.1 CAT: II Pf: 30.8 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15 Building Code: IRC 2018 TPI Std: 2014 Rep Fac: Yes FT/RT/PT: 10(0)/10(0)/2(0) Plate Type(s): WAVE	<b>Defl/CSI Criteria</b> PP Deflection in loc L/def L/# VERT(LL): 0.004 B 999 480 VERT(CL): 0.006 B 999 360 HORZ(LL): 0.001 B - - HORZ(TL): 0.001 B - - Creep Factor: 2.0 Max TC CSI: 0.369 Max BC CSI: 0.087 Max Web CSI: 0.036 VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs)</b> <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>F</td> <td>177</td> <td>-</td> <td>-</td> <td>-</td> <td>/15</td> <td>/17</td> </tr> <tr> <td>D</td> <td>230</td> <td>-</td> <td>-</td> <td>-</td> <td>/27</td> <td>-</td> </tr> </tbody> </table>	Loc	Gravity			Non-Gravity			R+	/R-	/Rh	/Rw	/U	/RL	F	177	-	-	-	/15	/17	D	230	-	-	-	/27	-
				Loc		Gravity			Non-Gravity																						
R+	/R-	/Rh	/Rw		/U	/RL																									
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D	230	-	-	-	/27	-																									
				Wind reactions based on MWFRS F Brg Wid = 3.5 Min Req = 1.5 (Truss) D Brg Wid = - Min Req = - Bearing F is a rigid surface. Members not listed have forces less than 375#																											

**Lumber**

Top chord: 4x2 SP #2;  
 Bot chord: 4x2 SP #2;  
 Webs: 4x2 SP #2;

**Special Loads**

----(Lumber Dur.Fac.=1.15 / Plate Dur.Fac.=1.15)  
 TC: From 27 plf at 0.12 to 27 plf at 3.79  
 BC: From 7 plf at 0.00 to 7 plf at 3.79  
 TC: 142 lb Conc. Load at 1.48, 2.81

**Hangers / Ties**

(J) Hanger Support Required, by others

**Loading**

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

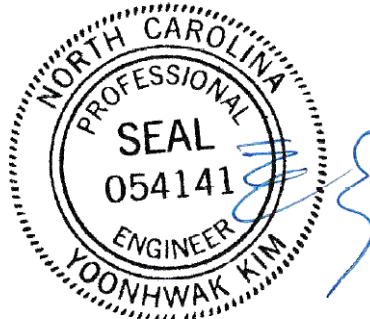
**Wind**

Wind loads and reactions based on MWFRS.  
 Left end vertical exposed to wind pressure. Deflection meets L/180.  
 Right end vertical not exposed to wind pressure.

**Additional Notes**

Truss must be installed as shown with top chord up.

Note: This truss is not designed to carry floor live loadings and load duration.

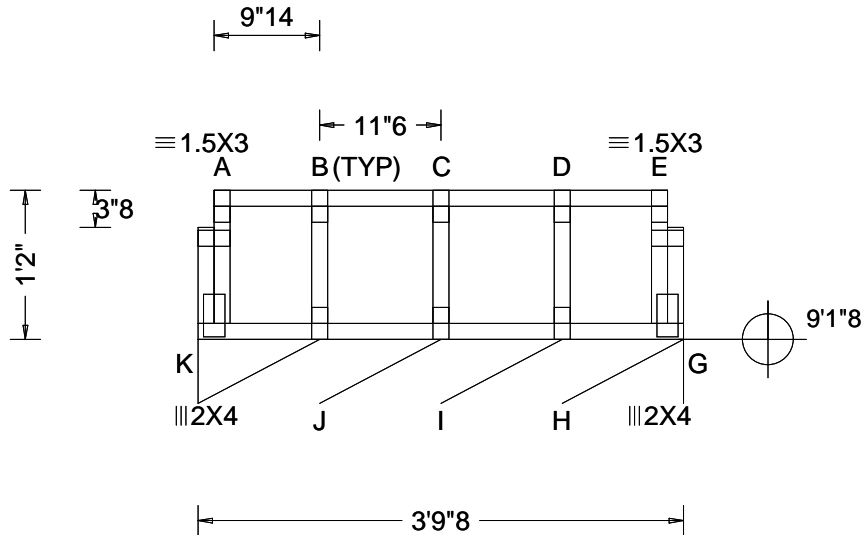


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SEQN: 2177 FROM:	SY42 Ply: 1 Qty: 1	Job Number: Q2410-341 The Farm at Neills Creek	Cust: R 9836 JRef: 1Y4R98360003 T11 DrwNo: 312.24.1428.10020 / YK 11/07/2024	Truss Label: <b>GE03</b>
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<b>Loading Criteria (psf)</b> TCLL: 30.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 50.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 16.0 "	<b>Wind Criteria</b> Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h/2 to h C&C Dist a: NA Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: 40.0 Ct: 1.1 CAT: II Pf: 30.8 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15  Building Code: IRC 2018 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:20(0)/10(0)/2(0) Plate Type(s): WAVE	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.000 C 999 480 VERT(CL): 0.000 C 999 360 HORZ(LL): -0.003 B - - HORZ(TL): 0.004 B - - Creep Factor: 2.0 Max TC CSI: 0.019 Max BC CSI: 0.033 Max Web CSI: 0.024  VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs), or *=PLF</b> Gravity Non-Gravity Loc R+ /R- /Rh /Rw /U /RL G* 64 -/- /- /26 /6 /5 Wind reactions based on MWFRS G Brg Wid = 45.5 Min Req = - Bearing K is a rigid surface. Members not listed have forces less than 375#
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**Lumber**

Top chord: 4x2 SP #2;  
Bot chord: 4x2 SP #2;  
Webs: 4x2 SP #2;

**Bracing**

Sheathing is required for any longitudinal(drag) forces. All connections to be designed by the building designer.  
Fasten rated sheathing to one face of this frame.

**Plating Notes**

All plates are 1.5X3 except as noted.

**Loading**

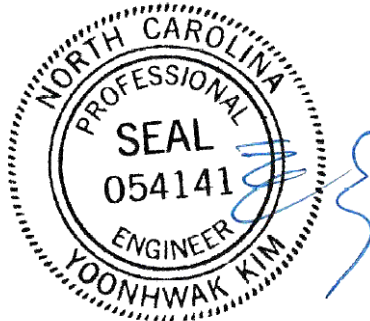
Bottom chord checked for 10.00 psf non-concurrent live load.

**Wind**

Wind loads based on MWFRS with additional C&C member design.  
Left end vertical exposed to wind pressure. Deflection meets L/180.  
Right end vertical not exposed to wind pressure.

**Additional Notes**

Snow loading based on an unobstructed roof.  
Complete drainage required.  
Truss must be installed as shown with top chord up.

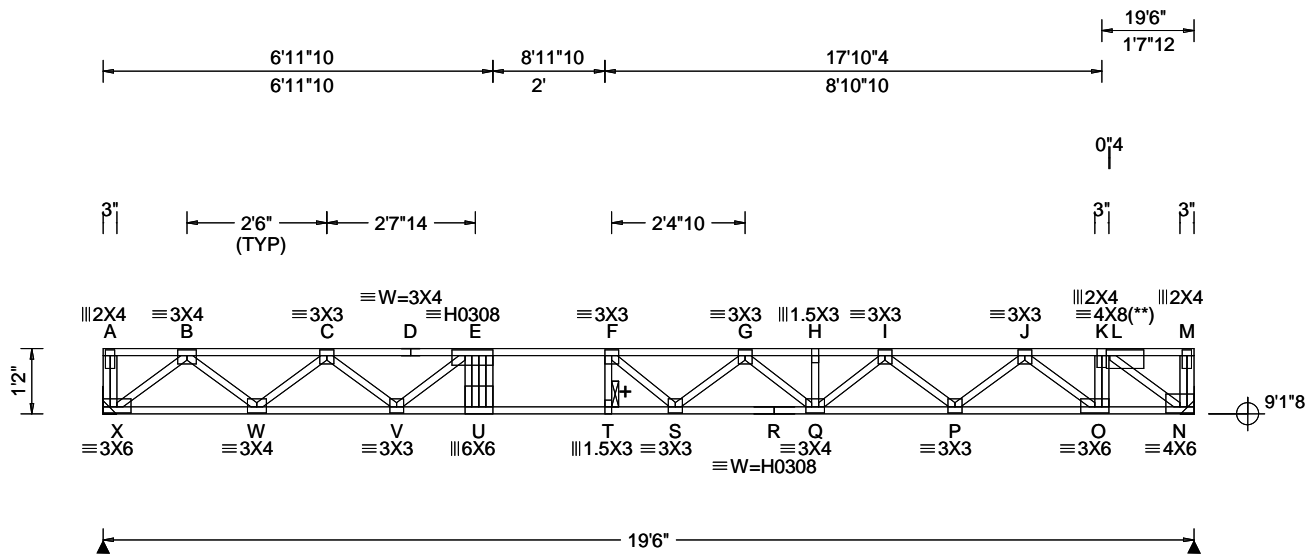


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SEQN: 8034 FROM:	SY42 Ply: 1 Qty: 2	Job Number: Q2410-341 The Farm at Neills Creek	Cust: R 9836 JRef: 1Y4R98360003 T12 DrwNo: 312.24.1427.01550 / YK 11/07/2024	Truss Label: <b>F10</b>
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<b>Loading Criteria (psf)</b> TCLL: 30.00 TCCL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 50.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 16.0 "	<b>Wind Criteria</b> Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCCL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h/2 to h C&C Dist a: NA Loc. from endwall: Any GCp: 0.18 Wind Duration: 1.60	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: 40.0 Ct: 1.1 CAT: II Pf: 30.8 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15 Building Code: IRC 2018 TPI Std: 2014 Rep Fac: Varies by Ld Case FT/RT/PT: 10(0)/10(0)/2(0) Plate Type(s): WAVE, HS	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.336 F 678 480 VERT(CL): 0.505 F 451 360 HORZ(LL): 0.038 N - - HORZ(TL): 0.059 N - - Creep Factor: 2.0 Max TC CSI: 0.502 Max BC CSI: 0.713 Max Web CSI: 0.255 VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs)</b> Gravity Non-Gravity Loc R+ / R- / Rh / Rw / U / RL X 701 /- /- /266 /66 /19 N 1299 /- /- /266 /67 /- Wind reactions based on MWFRS X Brg Wid = - Min Req = - N Brg Wid = - Min Req = - Members not listed have forces less than 375# <b>Maximum Top Chord Forces Per Ply (lbs)</b> Chords Tens.Comp. Chords Tens. Comp.					
				B - C 593 -1423 G - H 1193 -3199 C - D 1019 -2468 H - I 1193 -3199 D - E 1019 -2468 I - J 885 -2648 E - F 1246 -3111 J - K 368 -1574 F - G 1279 -3327 K - L 353 -1542					

**Lumber**  
 Top chord: 4x2 SP SS;  
 Bot chord: 4x2 SP SS;  
 Webs: 4x2 SP #2;

**Special Loads**  
 ----(Lumber Dur.Fac.=1.15 / Plate Dur.Fac.=1.15)  
 TC: From 53 plf at 0.00 to 53 plf at 19.50  
 BC: From 13 plf at 0.00 to 13 plf at 19.50  
 TC: 700 lb Conc. Load at 17.85

**Additional Notes**  
 + 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations.  
 Truss must be installed as shown with top chord up.  
 Note: This truss is not designed to carry floor live loadings and load duration.

**Maximum Bot Chord Forces Per Ply (lbs)**

Chords	Tens.Comp.	Chords	Tens. Comp.
X - W	786 -344	S - R	3370 -1299
W - V	2002 -864	R - Q	3370 -1299
V - U	3098 -1244	Q - P	2989 -1092
U - T	3111 -1246	P - O	2250 -696
T - S	3123 -1250	O - N	1542 -353

**Plating Notes**  
 (\*\*) 1 plate(s) require special positioning. Refer to scaled plate plot details for special positioning requirements.

**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.  
 Left end vertical exposed to wind pressure. Deflection meets L/180.  
 Right end vertical not exposed to wind pressure.

**Deflection**  
 Max JT VERT DEFL: LL: 0.34" DL: 0.22". See detail DEFLCAMB1014 for camber recommendations.



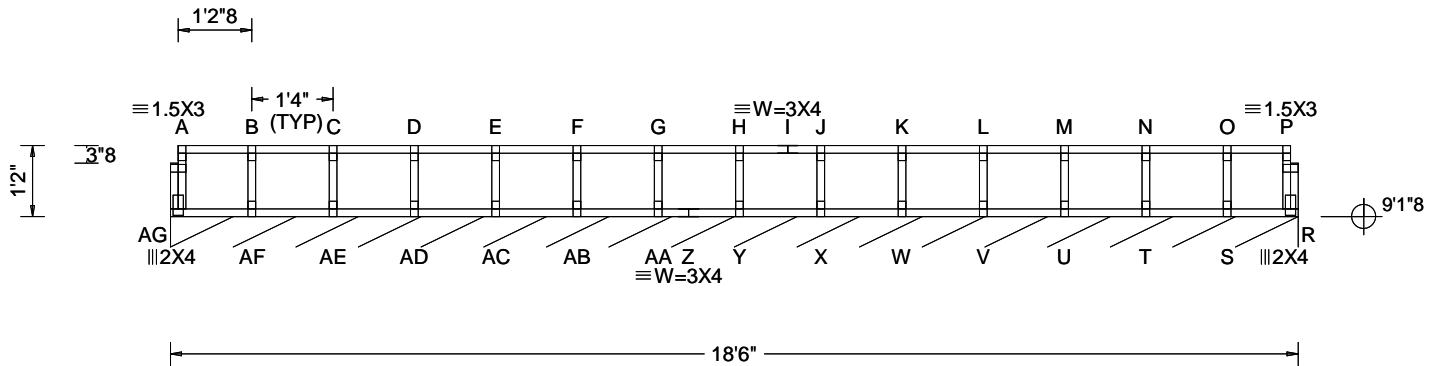
11/07/2024  
 ABCD Engineering, PLLC NC COA 0838

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SEQN: 2215 FROM:	SY42 Ply: 1 Qty: 1	Job Number: Q2410-341 The Farm at Neills Creek	Cust: R 9836 JRef: 1Y4R98360003 T13 DrwNo: 312.24.1428.14417 / YK 11/07/2024	Truss Label: <b>GE04</b>
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<b>Loading Criteria (psf)</b> TCLL: 30.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 50.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 16.0 "	<b>Wind Criteria</b> Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h/2 to h C&C Dist a: NA Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: 40.0 Ct: 1.1 CAT: II Pf: 30.8 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15  Building Code: IRC 2018 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:20(0)/10(0)/2(0) Plate Type(s): WAVE	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.000 B 999 480 VERT(CL): 0.001 B 999 360 HORZ(LL): -0.003 B - - HORZ(TL): 0.004 B - - Creep Factor: 2.0 Max TC CSI: 0.039 Max BC CSI: 0.033 Max Web CSI: 0.024  VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs), or *=PLF</b> Gravity Non-Gravity Loc R+ / R- / Rh / Rw / U / RL R* 67 /- /- /27 /7 /1 Wind reactions based on MWFRS R Brg Wid = 222 Min Req = - Bearing AG is a rigid surface. Members not listed have forces less than 375#
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**Lumber**

Top chord: 4x2 SP #2;  
Bot chord: 4x2 SP #2;  
Webs: 4x2 SP #2;

**Bracing**

Sheathing is required for any longitudinal(drag) forces. All connections to be designed by the building designer.  
Fasten rated sheathing to one face of this frame.

**Plating Notes**

All plates are 1.5X3 except as noted.

**Loading**

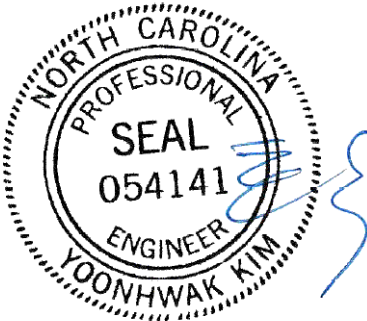
Bottom chord checked for 10.00 psf non-concurrent live load.

**Wind**

Wind loads based on MWFRS with additional C&C member design.  
Left end vertical exposed to wind pressure. Deflection meets L/180.  
Right end vertical not exposed to wind pressure.

**Additional Notes**

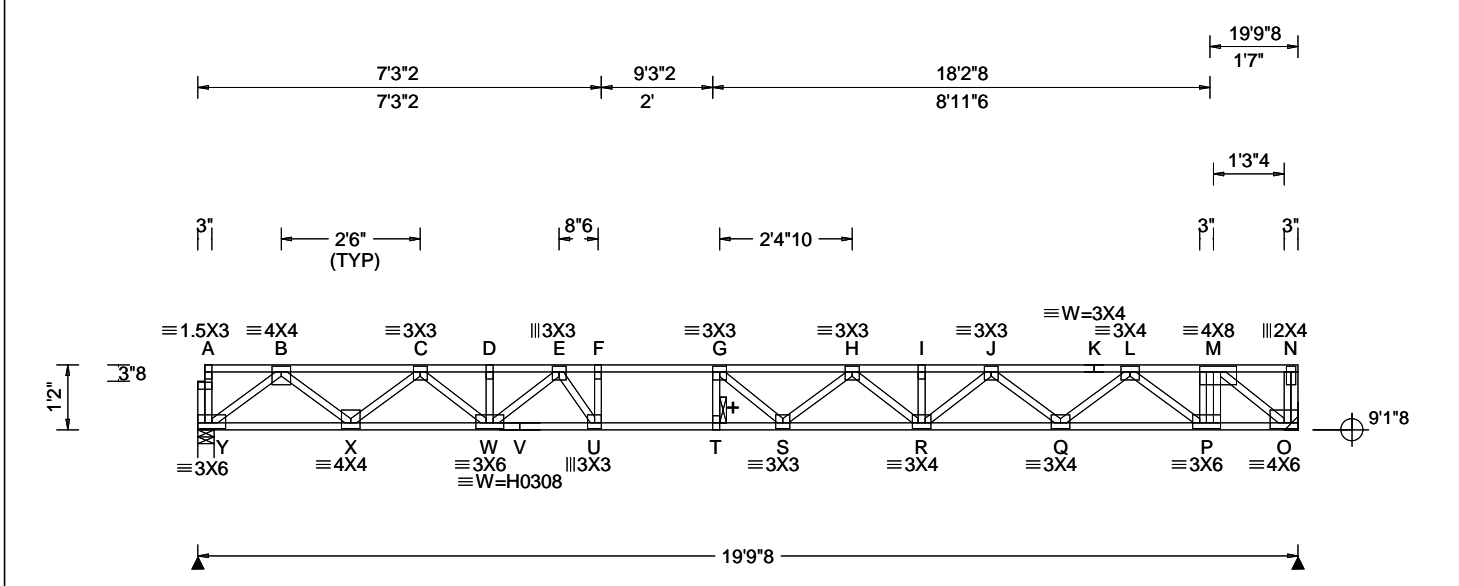
Snow loading based on an unobstructed roof.  
Complete drainage required.  
Truss must be installed as shown with top chord up.



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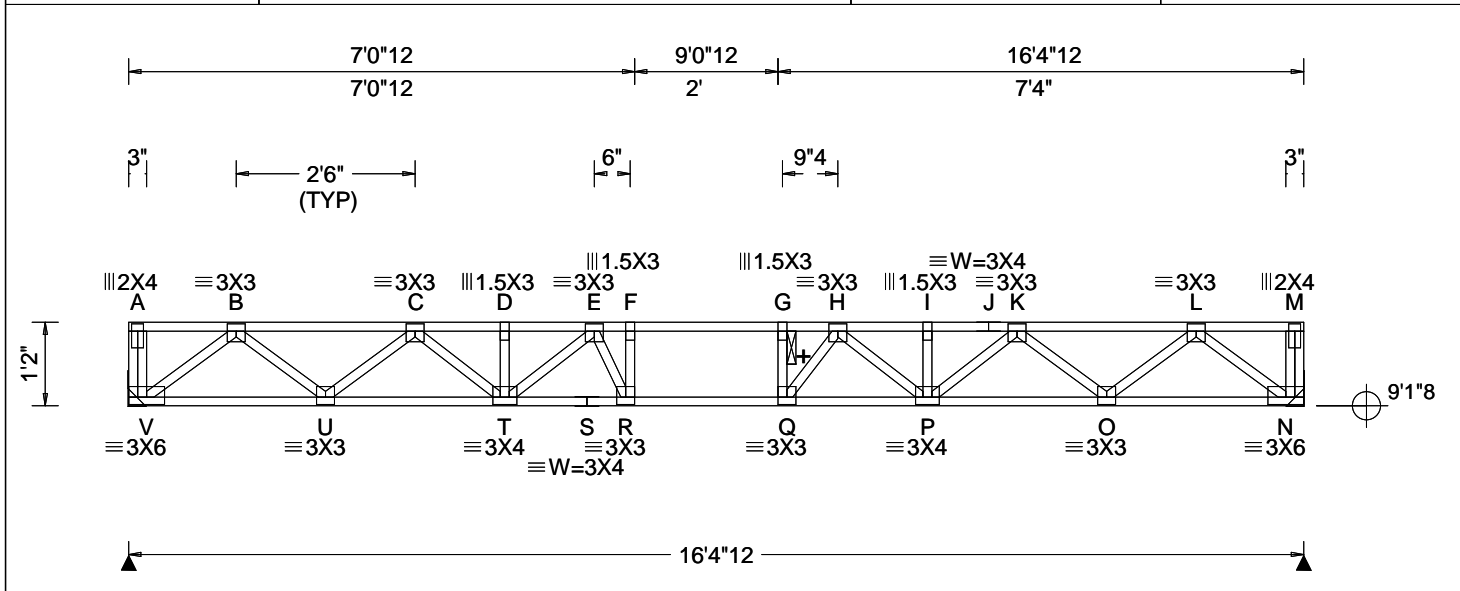
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<b>Lumber</b> Top chord: 4x2 SP SS; Bot chord: 4x2 SP SS; Webs: 4x2 SP #2; <b>Special Loads</b> ----(Lumber Dur.Fac.=1.15 / Plate Dur.Fac.=1.15) TC: From 53 plf at 0.12 to 53 plf at 19.79 BC: From 13 plf at 0.00 to 13 plf at 19.79 TC: 700 lb Conc. Load at 18.15 <b>Plating Notes</b> All plates are 1.5X3 except as noted. <b>Hangers / Ties</b> (J) Hanger Support Required, by others <b>Loading</b> Bottom chord checked for 10.00 psf non-concurrent live load. <b>Wind</b> Wind loads based on MWFRS with additional C&C member design. Left end vertical exposed to wind pressure. Deflection meets L/180. Right end vertical not exposed to wind pressure. <b>Deflection</b> Max JT VERT DEFL: LL: 0.32" DL: 0.19". See detail DEFLCAMB1014 for camber recommendations.	<b>Additional Notes</b> + 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations. Truss must be installed as shown with top chord up. Note: This truss is not designed to carry floor live loadings and load duration.	<b>Maximum Bot Chord Forces Per Ply (lbs)</b> <table style="width:100%; border-collapse: collapse;"> <tr> <th>Chords</th> <th>Tens.Comp.</th> <th>Chords</th> <th>Tens. Comp.</th> </tr> <tr> <td>Y - X</td> <td>833 - 365</td> <td>T - S</td> <td>3286 - 1303</td> </tr> <tr> <td>X - W</td> <td>2080 - 887</td> <td>S - R</td> <td>3462 - 1325</td> </tr> <tr> <td>W - V</td> <td>2969 - 1210</td> <td>R - Q</td> <td>3055 - 1110</td> </tr> <tr> <td>V - U</td> <td>2969 - 1210</td> <td>Q - P</td> <td>2284 - 702</td> </tr> <tr> <td>U - T</td> <td>3277 - 1300</td> <td>P - O</td> <td>1539 - 346</td> </tr> </table> <b>Maximum Web Forces Per Ply (lbs)</b> <table style="width:100%; border-collapse: collapse;"> <tr> <th>Webs</th> <th>Tens.Comp.</th> <th>Webs</th> <th>Tens. Comp.</th> </tr> <tr> <td>Y - B</td> <td>478 - 1063</td> <td>R - J</td> <td>377 - 153</td> </tr> <tr> <td>B - X</td> <td>849 - 325</td> <td>J - Q</td> <td>279 - 569</td> </tr> <tr> <td>X - C</td> <td>353 - 774</td> <td>Q - L</td> <td>625 - 252</td> </tr> <tr> <td>C - W</td> <td>598 - 219</td> <td>L - P</td> <td>411 - 857</td> </tr> <tr> <td>W - E</td> <td>215 - 572</td> <td>P - M</td> <td>550 - 234</td> </tr> <tr> <td>E - U</td> <td>680 - 198</td> <td>M - O</td> <td>449 - 1992</td> </tr> <tr> <td>U - F</td> <td>135 - 380</td> <td></td> <td></td> </tr> </table>	Chords	Tens.Comp.	Chords	Tens. Comp.	Y - X	833 - 365	T - S	3286 - 1303	X - W	2080 - 887	S - R	3462 - 1325	W - V	2969 - 1210	R - Q	3055 - 1110	V - U	2969 - 1210	Q - P	2284 - 702	U - T	3277 - 1300	P - O	1539 - 346	Webs	Tens.Comp.	Webs	Tens. Comp.	Y - B	478 - 1063	R - J	377 - 153	B - X	849 - 325	J - Q	279 - 569	X - C	353 - 774	Q - L	625 - 252	C - W	598 - 219	L - P	411 - 857	W - E	215 - 572	P - M	550 - 234	E - U	680 - 198	M - O	449 - 1992	U - F	135 - 380		
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 North Building, 4th Floor  
 Glenview, IL 60025



<b>Loading Criteria (psf)</b> TCCL: 30.00 TCCL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 50.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 16.0 "	<b>Wind Criteria</b> Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCCL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h/2 to h C&C Dist a: NA Loc. from endwall: Any GCp: 0.18 Wind Duration: 1.60	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: 40.0 Ct: 1.1 CAT: II Pf: 30.8 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15  <b>Building Code:</b> IRC 2018 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:10(0)/10(0)/2(0) Plate Type(s): WAVE	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.131 G 999 480 VERT(CL): 0.200 G 952 360 HORZ(LL): 0.022 N - - HORZ(TL): 0.036 N - - Creep Factor: 2.0 Max TC CSI: 0.380 Max BC CSI: 0.511 Max Web CSI: 0.148  VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs)</b> <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>V</td> <td>555</td> <td>-</td> <td>-</td> <td>/224</td> <td>/56</td> <td>/19</td> </tr> <tr> <td>N</td> <td>555</td> <td>-</td> <td>-</td> <td>/224</td> <td>/56</td> <td>-</td> </tr> </tbody> </table> <p>Wind reactions based on MWFRS          V Brg Wid = - Min Req = -          N Brg Wid = - Min Req = -          Members not listed have forces less than 375#</p> <b>Maximum Top Chord Forces Per Ply (lbs)</b> <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>532 -1070</td> <td>G - H</td> <td>1010 -2017</td> </tr> <tr> <td>C - D</td> <td>894 -1765</td> <td>H - I</td> <td>906 -1767</td> </tr> <tr> <td>D - E</td> <td>894 -1765</td> <td>I - J</td> <td>906 -1767</td> </tr> <tr> <td>E - F</td> <td>1007 -2015</td> <td>J - K</td> <td>906 -1767</td> </tr> <tr> <td>F - G</td> <td>1013 -2022</td> <td>K - L</td> <td>543 -1069</td> </tr> </tbody> </table> <b>Maximum Bot Chord Forces Per Ply (lbs)</b> <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>V - U</td> <td>606 -319</td> <td>R - Q</td> <td>2022 -1013</td> </tr> <tr> <td>U - T</td> <td>1488 -770</td> <td>Q - P</td> <td>1949 -995</td> </tr> <tr> <td>T - S</td> <td>1957 -983</td> <td>P - O</td> <td>1489 -781</td> </tr> <tr> <td>S - R</td> <td>1957 -983</td> <td>O - N</td> <td>605 -329</td> </tr> </tbody> </table> <b>Maximum Web Forces Per Ply (lbs)</b> <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>V - B</td> <td>429 -791</td> <td>K - O</td> <td>310 -546</td> </tr> <tr> <td>B - U</td> <td>604 -278</td> <td>O - L</td> <td>604 -278</td> </tr> <tr> <td>U - C</td> <td>309 -544</td> <td>L - N</td> <td>429 -791</td> </tr> </tbody> </table>	Loc	Gravity			Non-Gravity			R+	/R-	/Rh	/Rw	/U	/RL	V	555	-	-	/224	/56	/19	N	555	-	-	/224	/56	-	Chords	Tens.Comp.	Chords	Tens. Comp.	B - C	532 -1070	G - H	1010 -2017	C - D	894 -1765	H - I	906 -1767	D - E	894 -1765	I - J	906 -1767	E - F	1007 -2015	J - K	906 -1767	F - G	1013 -2022	K - L	543 -1069	Chords	Tens.Comp.	Chords	Tens. Comp.	V - U	606 -319	R - Q	2022 -1013	U - T	1488 -770	Q - P	1949 -995	T - S	1957 -983	P - O	1489 -781	S - R	1957 -983	O - N	605 -329	Webs	Tens.Comp.	Webs	Tens. Comp.	V - B	429 -791	K - O	310 -546	B - U	604 -278	O - L	604 -278	U - C	309 -544	L - N	429 -791
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**Lumber**  
 Top chord: 4x2 SP #2;  
 Bot chord: 4x2 SP #2;  
 Webs: 4x2 SP #2;

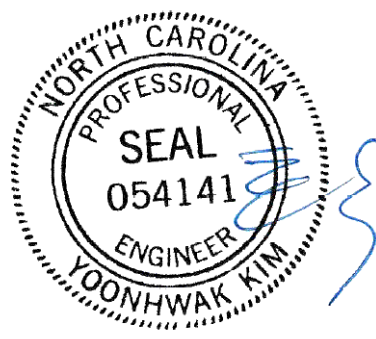
**Hangers / Ties**  
 Simpson Construction Hardware is specified based on the most current information provided by Simpson Strong-Tie. Please refer to the most recent Simpson Strong-Tie catalog for additional information.  
 Recommended hanger connections are based on manufacturer tested capacities and calculations. Conditions may exist that require different connections than indicated. Refer to manufacturer publication for additional information.  
 Hanger specified assumes connection to supporting chord is located a minimum of five times the depth of the supporting chord from any unsupported end, unless unsupported chord end has 85% plating coverage.  
 Bearing at location x=0' uses the following support conditions: 0'  
 Bearing V (0', 9'1"8) HHUS410  
 Supporting Member: (2)1.75x14 2.0E PWLVL (30) 0.148"x3" nails into supporting member,  
 (10) 0.148"x3" nails into supported member.  
 (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.  
 Left end vertical exposed to wind pressure. Deflection meets L/180.  
 Right end vertical not exposed to wind pressure.

**Additional Notes**  
 + 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations.  
 Provide for complete drainage of roof.  
 Truss must be installed as shown with top chord up.

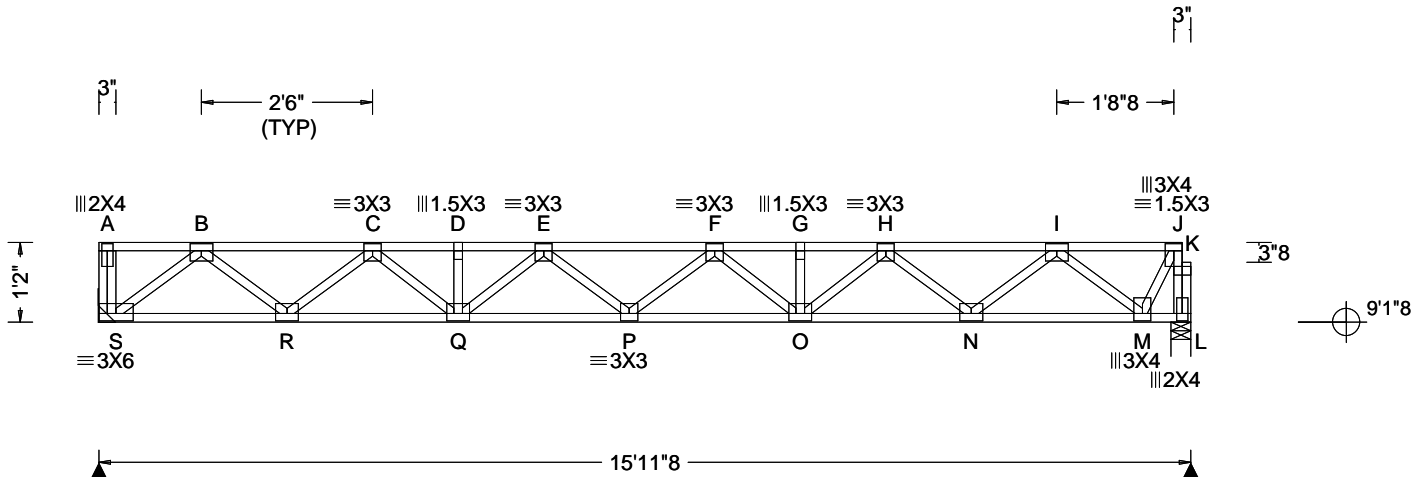
11/07/2024  
 ABCD Engineering, PLLC NC COA 0838



Note: This truss is not designed to carry floor live loadings and load duration.

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



<b>Loading Criteria</b> (psf) TCLL: 30.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 50.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 16.0 "	<b>Wind Criteria</b> Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: C 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: NA Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	<b>Snow Criteria</b> (Pg,Pf in PSF) Pg: 40.0 Ct: 1.1 CAT: II Pf: 30.8 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15  Building Code: IRC 2018 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:10(0)/10(0)/2(0) Plate Type(s): WAVE	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.143 F 999 480 VERT(CL): 0.239 F 779 360 HORZ(LL): 0.025 M - - HORZ(TL): 0.041 M - - Creep Factor: 2.0 Max TC CSI: 0.474 Max BC CSI: 0.591 Max Web CSI: 0.182  VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs)</b> Gravity Loc R+ / R- / Rh / Rw / U / RL S 589 /- /- /- /60 /17 L 698 /- /- /- /73 /- Non-Gravity Wind reactions based on MWFRS S Brg Wid = - Min Req = - L Brg Wid = 3.5 Min Req = 1.5 (Truss) Bearing L is a rigid surface. Members not listed have forces less than 375# <b>Maximum Top Chord Forces Per Ply (lbs)</b> Chords Tens.Comp. Chords Tens. Comp. B - C 119 -1155 F - G 238 -2281 C - D 203 -1942 G - H 238 -2281 D - E 203 -1942 H - I 171 -1668 E - F 237 -2299
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**Lumber**  
Top chord: 4x2 SP #2;  
Bot chord: 4x2 SP #2;  
Webs: 4x2 SP #2;

**Special Loads**  
----(Lumber Dur.Fac.=1.15 / Plate Dur.Fac.=1.15)  
TC: From 53 plf at 0.00 to 53 plf at 15.83  
BC: From 13 plf at 0.00 to 13 plf at 15.96  
TC: 230 lb Conc. Load at 12.04

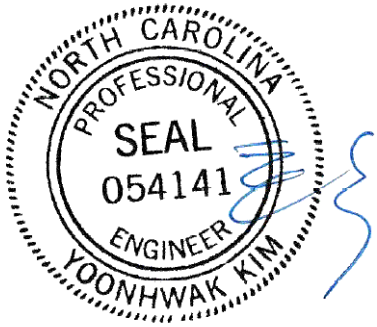
**Plating Notes**  
All plates are 3X4 except as noted.

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

**Wind**  
Wind loads and reactions based on MWFRS.  
Left end vertical exposed to wind pressure. Deflection meets L/180.  
Right end vertical not exposed to wind pressure.

**Deflection**  
Max JT VERT DEFL: LL: 0.14" DL: 0.10". See detail DEFLCAMB1014 for camber recommendations.  
Provide for adequate drainage of roof.  
Note: This truss is not designed to carry floor live loadings and load duration.

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**Maximum Bot Chord Forces Per Ply (lbs)**

Chords	Tens.Comp.	Chords	Tens. Comp.
S - R	647 -81	P - O	2366 -256
R - Q	1620 -179	O - N	2186 -239
Q - P	2191 -238	N - M	1107 -124

**Maximum Web Forces Per Ply (lbs)**

Webs	Tens.Comp.	Webs	Tens. Comp.
S - B	95 -845	N - I	731 -61
B - R	662 -49	I - M	121 -1010
R - C	78 -604	M - J	740 -69
C - Q	420 -32	J - K	69 -685
H - N	88 -674	K - L	69 -688

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

SEQN: 2182	SY42	Job Number: Q2410-341	Cust: R 9836 JRef: 1Y4R98360003 T16	Truss Label: <b>FG01</b>
FROM:	Ply: 1	The Farm at Neills Creek	DrwNo: 312.24.1427.37910	
Page 2 of 2	Qty: 1		/ YK 11/07/2024	

**Hangers / Ties**

Simpson Construction Hardware is specified based on the most current information provided by Simpson Strong-Tie. Please refer to the most recent Simpson Strong-Tie catalog for additional information.

Recommended hanger connections are based on manufacturer tested capacities and calculations. Conditions may exist that require different connections than indicated. Refer to manufacturer publication for additional information.

Hanger specified assumes connection to supporting chord is located a minimum of five times the depth of the supporting chord from any unsupported end, unless unsupported chord end has 85% plating coverage.

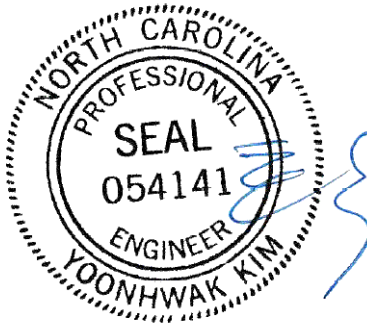
Bearing at location x=0' uses the following support conditions: 0'

Bearing S (0', 9'1"8) HUC410

Supporting Member: (2)1.75x14 2.0E PWLVL

(14) 0.148"x3" nails into supporting member,

(6) 0.148"x3" nails into supported member.



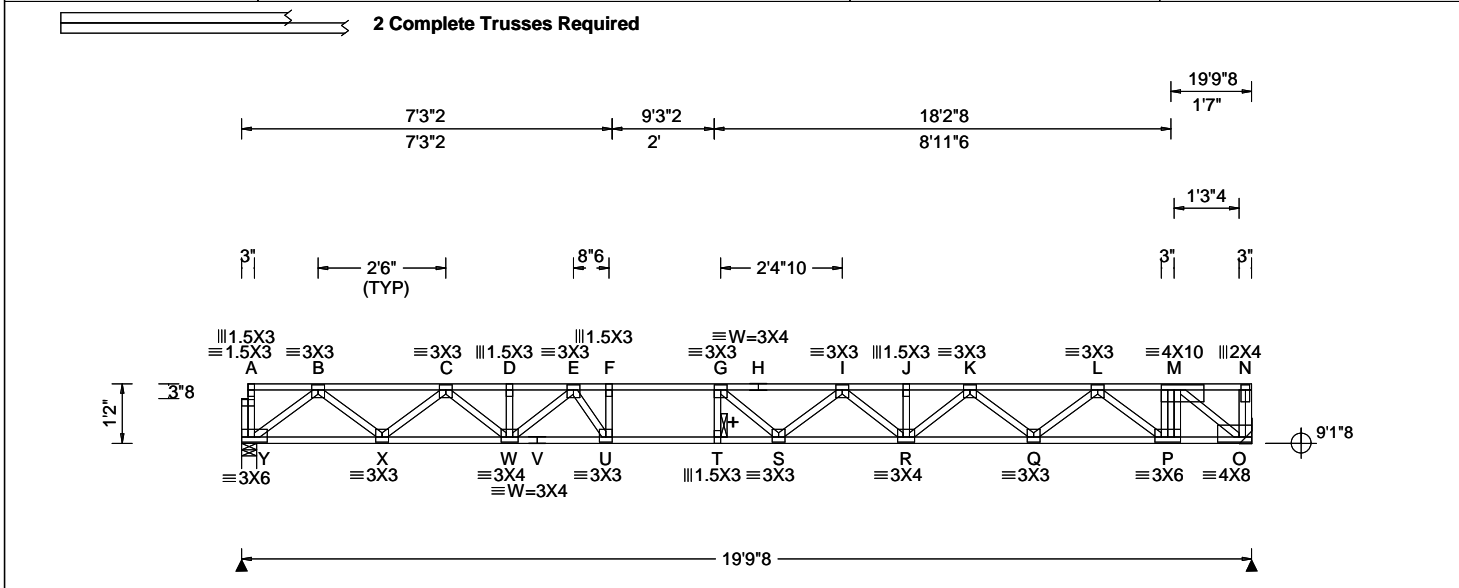
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SEQN: 8040 FROM:	SY42 Ply: 2 Qty: 1	<b>Job Number:</b> Q2410-341 The Farm at Neills Creek	Cust: R 9836 JRef: 1Y4R98360003 T19 DrwNo: 312.24.1428.00120 / YK 11/07/2024	<b>Truss Label:</b> <b>FG04</b>
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<b>Loading Criteria (psf)</b> TCLL: 30.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 50.00 NCBCLL: 0.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 16.0 "	<b>Wind Criteria</b> Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h/2 to h C&C Dist a: NA Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: 40.0 Ct: 1.1 CAT: II Pf: 30.8 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15  Building Code: IRC 2018 TPI Std: 2014 Rep Fac: Varies by Ld Case FT/RT/PT:10(0)/10(0)/2(0) Plate Type(s): WAVE	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.297 G 783 480 VERT(CL): 0.428 G 542 360 HORZ(LL): 0.037 O - - HORZ(TL): 0.053 O - - Creep Factor: 2.0 Max TC CSI: 0.504 Max BC CSI: 0.526 Max Web CSI: 0.383  VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs)</b> Gravity Non-Gravity Loc R+ / R- / Rh / Rw / U / RL Y 903 - / - / - / 267 / 65 / 19 O 3909 - / - / - / 271 / 68 / - Wind reactions based on MWFRS Y Brg Wid = 3.5 Min Req = 1.5 (Truss) O Brg Wid = - Min Req = - Bearing Y is a rigid surface. Members not listed have forces less than 375# <b>Maximum Top Chord Forces Per Ply (lbs)</b> Chords Tens.Comp. Chords Tens. Comp.
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**Lumber**  
Top chord: 4x2 SP SS;  
Bot chord: 4x2 SP SS;  
Webs: 4x2 SP #2;

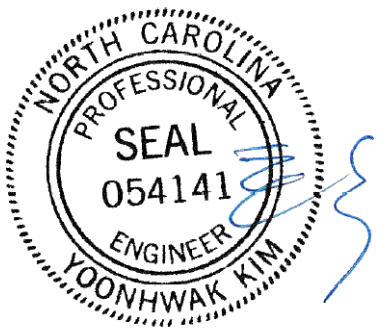
**Special Loads**  
----(Lumber Dur.Fac.=1.15 / Plate Dur.Fac.=1.15)  
TC: From 53 plf at 0.12 to 53 plf at 19.79  
BC: From 13 plf at 0.00 to 13 plf at 19.79  
TC: 3500 lb Conc. Load at 18.15

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

**Wind**  
Wind loads based on MWFRS.  
Left end vertical exposed to wind pressure. Deflection meets L/180.  
Right end vertical not exposed to wind pressure.

**Additional Notes**  
See DWG CNSY42PL0118 for connection details of 2 ply trusses.  
+ 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations.  
Truss must be installed as shown with top chord up.  
Note: This truss is not designed to carry floor live loadings and load duration.

<b>Maximum Bot Chord Forces Per Ply (lbs)</b>			
Chords	Tens.Comp.	Chords	Tens. Comp.
Y - X	544 -183	T - S	2432 -651
X - W	1404 -443	S - R	2864 -663
W - V	2119 -605	R - Q	2880 -555
V - U	2119 -605	Q - P	2758 -351
U - T	2421 -650	P - O	2370 -173
<b>Maximum Web Forces Per Ply (lbs)</b>			
Webs	Tens.Comp.	Webs	Tens. Comp.
Y - B	239 -695	E - U	608 -99
B - X	583 -163	G - S	439 -78
X - C	177 -536	L - P	206 -449
C - W	451 -110	M - O	224 -3066
W - E	108 -487		

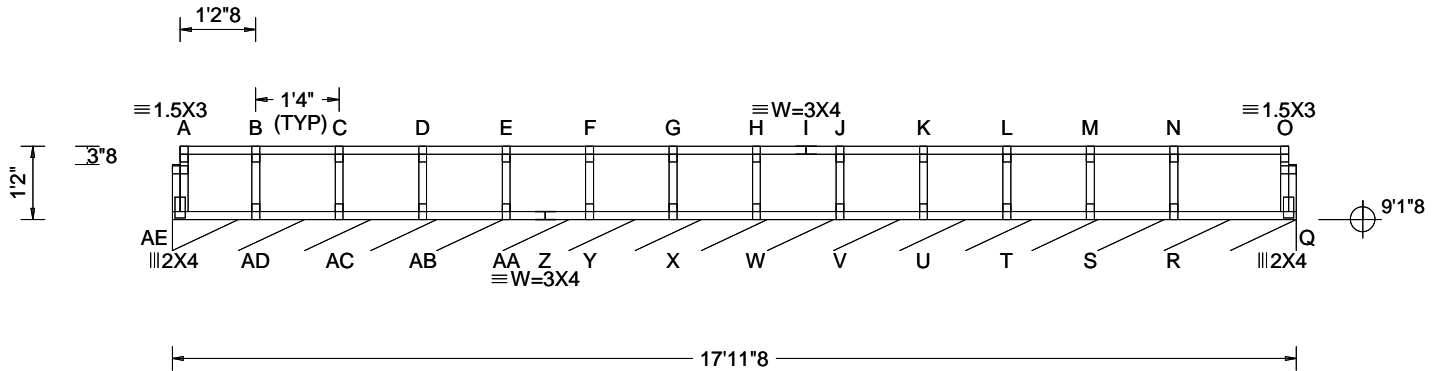


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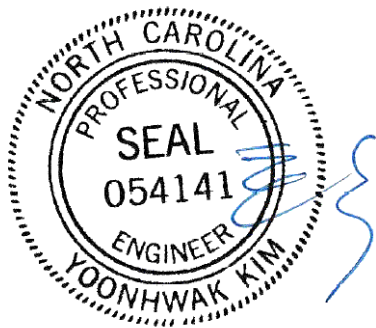
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SEQN: 2213 FROM:	SY42 Ply: 1 Qty: 1	Job Number: Q2410-341 The Farm at Neills Creek	Cust: R 9836 JRef: 1Y4R98360003 T2 DrwNo: 312.24.1428.06193 / YK 11/07/2024	Truss Label: <b>GE02</b>
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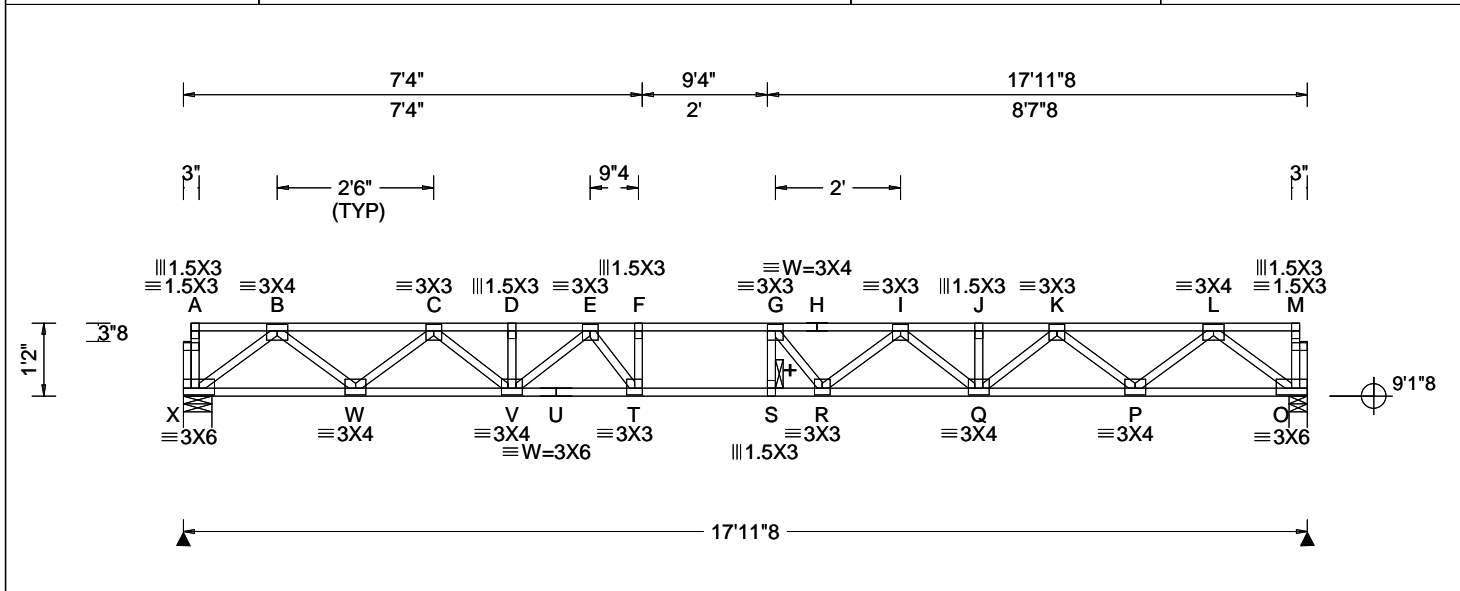
<b>Loading Criteria (psf)</b> TCCL: 30.00 TCCL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 50.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 16.0 "	<b>Wind Criteria</b> Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCCL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h/2 to h C&C Dist a: NA Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: 40.0 Ct: 1.1 CAT: II Pf: 30.8 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15 Building Code: IRC 2018 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:20(0)/10(0)/2(0) Plate Type(s): WAVE	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.000 N 999 480 VERT(CL): 0.001 N 999 360 HORZ(LL): -0.004 B - - HORZ(TL): 0.005 B - - Creep Factor: 2.0 Max TC CSI: 0.081 Max BC CSI: 0.036 Max Web CSI: 0.026 VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs), or *=PLF</b> <table border="1"> <thead> <tr> <th colspan="3">Gravity</th> <th colspan="3">Non-Gravity</th> </tr> <tr> <th>Loc</th> <th>R+</th> <th>/R-</th> <th>/Rh</th> <th>/Rw</th> <th>/U</th> <th>/RL</th> </tr> </thead> <tbody> <tr> <td>Q*</td> <td>67</td> <td>/-</td> <td>/-</td> <td>/27</td> <td>/7</td> <td>/1</td> </tr> </tbody> </table> Wind reactions based on MWFRS Q Brg Wid = 215 Min Req = - Bearing AE is a rigid surface. Members not listed have forces less than 375#	Gravity			Non-Gravity			Loc	R+	/R-	/Rh	/Rw	/U	/RL	Q*	67	/-	/-	/27	/7	/1
				Gravity			Non-Gravity																	
Loc	R+	/R-	/Rh	/Rw	/U	/RL																		
Q*	67	/-	/-	/27	/7	/1																		
<b>Lumber</b> Top chord: 4x2 SP #2; Bot chord: 4x2 SP #2; Webs: 4x2 SP #2; <b>Bracing</b> Sheathing is required for any longitudinal(drag) forces. All connections to be designed by the building designer. Fasten rated sheathing to one face of this frame. <b>Plating Notes</b> All plates are 1.5X3 except as noted. <b>Loading</b> Bottom chord checked for 10.00 psf non-concurrent live load. <b>Wind</b> Wind loads based on MWFRS with additional C&C member design. Left end vertical exposed to wind pressure. Deflection meets L/180. Right end vertical not exposed to wind pressure. <b>Additional Notes</b> Snow loading based on an unobstructed roof. Complete drainage required. Truss must be installed as shown with top chord up.																								



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 For more information see these web sites: Alpine: alpineitw.com; TPI: tpinst.org; SBCA: sbccomponents.com; ICC: iccsafe.org; AWC: awc.org





<b>Loading Criteria (psf)</b> TCLL: 30.00 TCCL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 50.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 16.0 "	<b>Wind Criteria</b> Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCCL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h/2 to h C&C Dist a: NA Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: 40.0 Ct: 1.1 CAT: II Pf: 30.8 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15  <b>Building Code:</b> IRC 2018 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:10(0)/10(0)/2(0) Plate Type(s): WAVE	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.202 S 999 480 VERT(CL): 0.335 S 630 360 HORZ(LL): 0.030 O - - HORZ(TL): 0.049 O - - Creep Factor: 2.0 Max TC CSI: 0.491 Max BC CSI: 0.728 Max Web CSI: 0.169  VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs)</b> <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>X</td> <td>601</td> <td>-</td> <td>-</td> <td>/243</td> <td>/59</td> <td>/19</td> </tr> <tr> <td>O</td> <td>601</td> <td>-</td> <td>-</td> <td>/243</td> <td>/60</td> <td>-</td> </tr> </tbody> </table> <p>Wind reactions based on MWFRS          X Brg Wid = 5.5 Min Req = 1.5 (Truss)          O Brg Wid = 3.5 Min Req = 1.5 (Truss)          Bearings X &amp; O are a rigid surface.          Members not listed have forces less than 375#  <b>Maximum Top Chord Forces Per Ply (lbs)</b></p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Chords</th> <th>Tens.</th> <th>Comp.</th> <th>Chords</th> <th>Tens.</th> <th>Comp.</th> </tr> </thead> <tbody> <tr> <td>B - C</td> <td>583</td> <td>-1234</td> <td>G - H</td> <td>1155</td> <td>-2439</td> </tr> <tr> <td>C - D</td> <td>985</td> <td>-2053</td> <td>H - I</td> <td>1155</td> <td>-2439</td> </tr> <tr> <td>D - E</td> <td>985</td> <td>-2053</td> <td>I - J</td> <td>994</td> <td>-2055</td> </tr> <tr> <td>E - F</td> <td>1154</td> <td>-2459</td> <td>J - K</td> <td>994</td> <td>-2055</td> </tr> <tr> <td>F - G</td> <td>1159</td> <td>-2468</td> <td>K - L</td> <td>594</td> <td>-1233</td> </tr> </tbody> </table>	Loc	Gravity			Non-Gravity			R+	/R-	/Rh	/Rw	/U	/RL	X	601	-	-	/243	/59	/19	O	601	-	-	/243	/60	-	Chords	Tens.	Comp.	Chords	Tens.	Comp.	B - C	583	-1234	G - H	1155	-2439	C - D	985	-2053	H - I	1155	-2439	D - E	985	-2053	I - J	994	-2055	E - F	1154	-2459	J - K	994	-2055	F - G	1159	-2468	K - L	594	-1233
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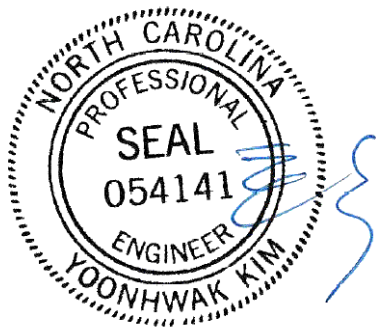
**Lumber**  
 Top chord: 4x2 SP #2;  
 Bot chord: 4x2 SP #2;  
 Webs: 4x2 SP #2;

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

**Wind**  
 Wind loads based on MWFRS with additional C&C member design.  
 Left end vertical exposed to wind pressure. Deflection meets L/180.  
 Right end vertical not exposed to wind pressure.

**Additional Notes**  
 + 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations.  
 Provide for complete drainage of roof.  
 Truss must be installed as shown with top chord up.

Note: This truss is not designed to carry floor live loadings and load duration.



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**Maximum Bot Chord Forces Per Ply (lbs)**

Chords	Tens.	Comp.	Chords	Tens.	Comp.
X - W	706	-352	S - R	2471	-1160
W - V	1713	-838	R - Q	2315	-1127
V - U	2313	-1104	Q - P	1716	-849
U - T	2313	-1104	P - O	705	-361
T - S	2468	-1159			

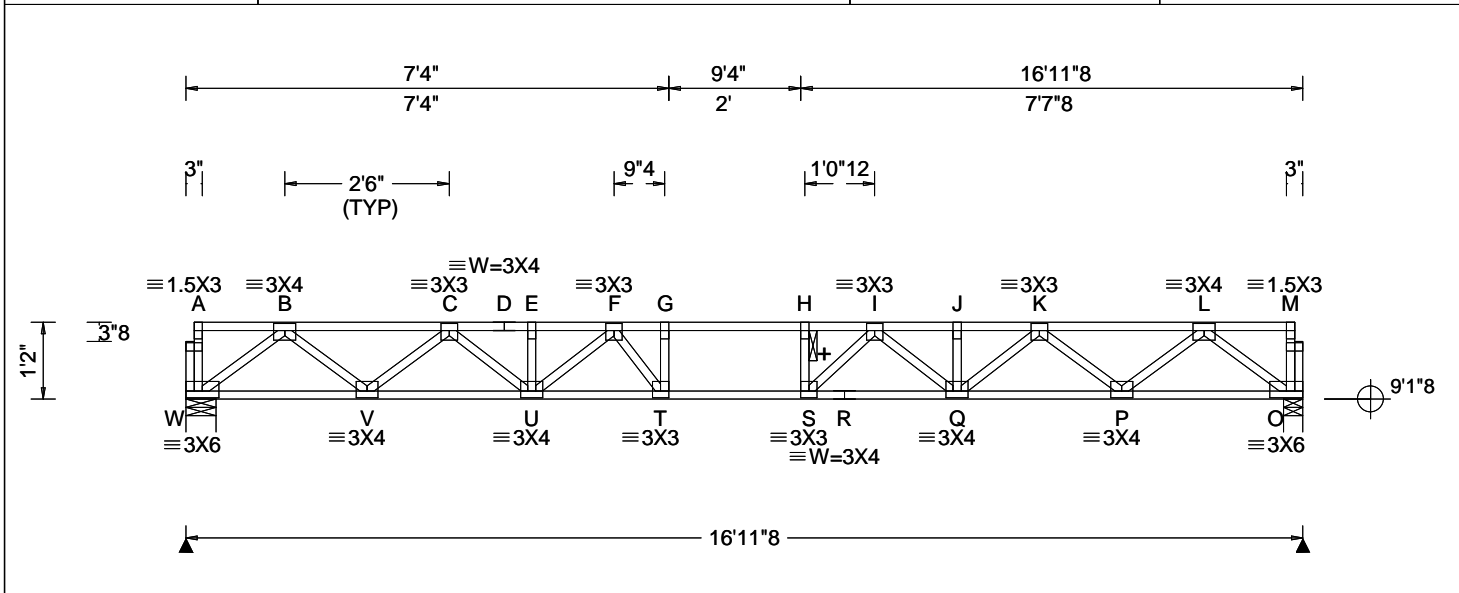
**Maximum Web Forces Per Ply (lbs)**

Webs	Tens.	Comp.	Webs	Tens.	Comp.
X - B	461	-902	Q - K	441	-192
B - W	688	-301	K - P	332	-629
W - C	332	-624	P - L	687	-302
C - V	442	-191	L - O	461	-901
E - T	399	-143			

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<b>Loading Criteria (psf)</b>	<b>Wind Criteria</b>	<b>Snow Criteria (Pg,Pf in PSF)</b>	<b>Defl/CSI Criteria</b>	<b>▲ Maximum Reactions (lbs)</b>
TCLL: 30.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 50.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 16.0 "	Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h/2 to h C&C Dist a: NA Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	Pg: 40.0 Ct: 1.1 CAT: II Pf: 30.8 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15  Building Code: IRC 2018 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:10(0)/10(0)/2(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.153 H 999 480 VERT(CL): 0.232 H 856 360 HORZ(LL): 0.025 O - - HORZ(TL): 0.041 O - - Creep Factor: 2.0 Max TC CSI: 0.402 Max BC CSI: 0.552 Max Web CSI: 0.156  VIEW Ver: 23.02.04A.0207.13	Gravity Loc R+ / R- / Rh / Rw / U / RL W 568 - / - / 230 / 56 / 19 O 568 - / - / 230 / 56 - / - Non-Gravity Wind reactions based on MWFRS W Brg Wid = 5.5 Min Req = 1.5 (Truss) O Brg Wid = 3.5 Min Req = 1.5 (Truss) Bearings W & O are a rigid surface. Members not listed have forces less than 375# <b>Maximum Top Chord Forces Per Ply (lbs)</b> Chords Tens.Comp. Chords Tens. Comp.

**Lumber**  
Top chord: 4x2 SP #2;  
Bot chord: 4x2 SP #2;  
Webs: 4x2 SP #2;

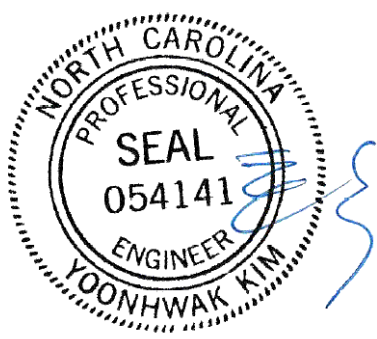
**Plating Notes**  
All plates are 1.5X3 except as noted.

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

**Wind**  
Wind loads based on MWFRS with additional C&C member design.  
Left end vertical exposed to wind pressure. Deflection meets L/180.  
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**Additional Notes**  
+ 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations.  
Provide for complete drainage of roof.  
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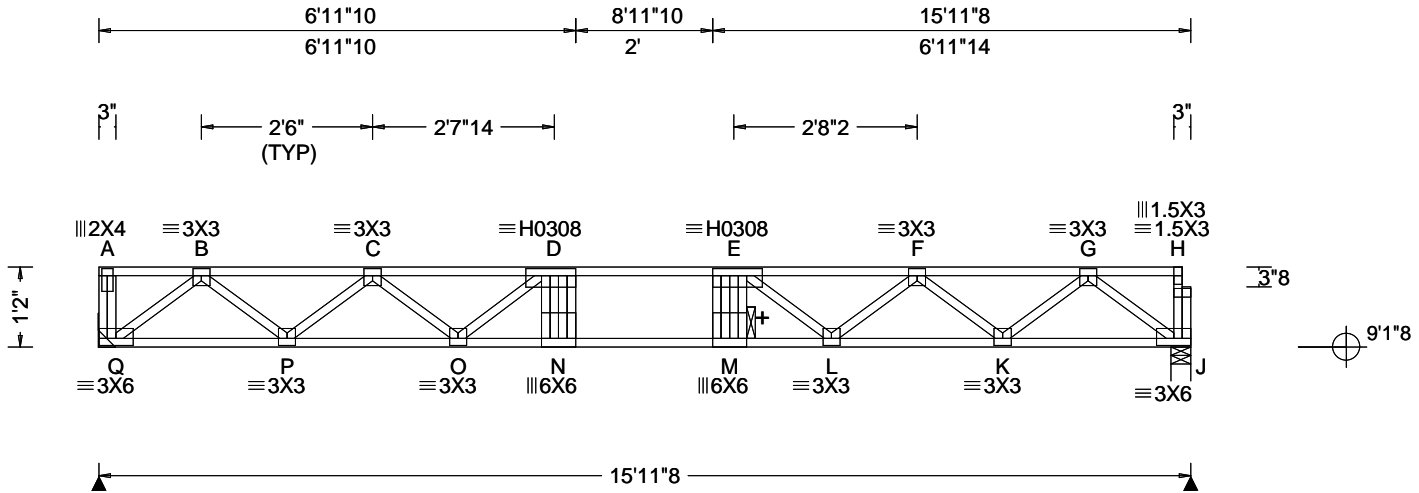
<b>Maximum Bot Chord Forces Per Ply (lbs)</b>			
Chords	Tens.Comp.	Chords	Tens. Comp.
W - V	663 -343	S - R	2098 -1053
V - U	1592 -807	R - Q	2098 -1053
U - T	2101 -1040	Q - P	1593 -819
T - S	2205 -1081	P - O	663 -352
<b>Maximum Web Forces Per Ply (lbs)</b>			
Webs	Tens.Comp.	Webs	Tens. Comp.
W - B	449 -847	Q - K	392 -178
B - V	634 -286	K - P	320 -576
V - C	318 -574	P - L	634 -287
C - U	391 -177	L - O	450 -847



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<b>Loading Criteria (psf)</b> TCCL: 30.00 TCCL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 50.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 16.0 "	<b>Wind Criteria</b> Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCCL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h/2 to h C&C Dist a: NA Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: 40.0 Ct: 1.1 CAT: II Pf: 30.8 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15  <b>Building Code:</b> IRC 2018 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:10(0)/10(0)/2(0) Plate Type(s): WAVE, HS	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.118 M 999 480 VERT(CL): 0.211 M 880 360 HORZ(LL): 0.021 J - - HORZ(TL): 0.035 B - - Creep Factor: 2.0 Max TC CSI: 0.325 Max BC CSI: 0.612 Max Web CSI: 0.145  VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs)</b> <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>Q</td> <td>543</td> <td>-</td> <td>-</td> <td>/219</td> <td>/55</td> <td>/19</td> </tr> <tr> <td>J</td> <td>531</td> <td>-</td> <td>-</td> <td>/215</td> <td>/53</td> <td>-</td> </tr> </tbody> </table> <p>Wind reactions based on MWFRS          Q Brg Wid = - Min Req = -          J Brg Wid = 3.5 Min Req = 1.5 (Truss)          Bearing J is a rigid surface.          Members not listed have forces less than 375#</p> <b>Maximum Top Chord Forces Per Ply (lbs)</b> <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>528 - 1042</td> <td>E - F</td> <td>883 - 1699</td> </tr> <tr> <td>C - D</td> <td>862 - 1688</td> <td>F - G</td> <td>552 - 1065</td> </tr> <tr> <td>D - E</td> <td>989 - 1925</td> <td></td> <td></td> </tr> </tbody> </table> <b>Maximum Bot Chord Forces Per Ply (lbs)</b> <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>Q - P</td> <td>588 - 314</td> <td>M - L</td> <td>1924 - 991</td> </tr> <tr> <td>P - O</td> <td>1451 - 768</td> <td>L - K</td> <td>1470 - 791</td> </tr> <tr> <td>O - N</td> <td>1923 - 989</td> <td>K - J</td> <td>615 - 339</td> </tr> <tr> <td>N - M</td> <td>1925 - 989</td> <td></td> <td></td> </tr> </tbody> </table> <b>Maximum Web Forces Per Ply (lbs)</b> <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>Q - B</td> <td>421 - 768</td> <td>F - K</td> <td>311 - 527</td> </tr> <tr> <td>B - P</td> <td>591 - 279</td> <td>K - G</td> <td>586 - 277</td> </tr> <tr> <td>P - C</td> <td>312 - 532</td> <td>G - J</td> <td>433 - 785</td> </tr> <tr> <td>O - D</td> <td>192 - 380</td> <td></td> <td></td> </tr> </tbody> </table>	Loc	Gravity			Non-Gravity			R+	/R-	/Rh	/Rw	/U	/RL	Q	543	-	-	/219	/55	/19	J	531	-	-	/215	/53	-	Chords	Tens.Comp.	Chords	Tens. Comp.	B - C	528 - 1042	E - F	883 - 1699	C - D	862 - 1688	F - G	552 - 1065	D - E	989 - 1925			Chords	Tens.Comp.	Chords	Tens. Comp.	Q - P	588 - 314	M - L	1924 - 991	P - O	1451 - 768	L - K	1470 - 791	O - N	1923 - 989	K - J	615 - 339	N - M	1925 - 989			Webs	Tens.Comp.	Webs	Tens. Comp.	Q - B	421 - 768	F - K	311 - 527	B - P	591 - 279	K - G	586 - 277	P - C	312 - 532	G - J	433 - 785	O - D	192 - 380		
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**Lumber**  
 Top chord: 4x2 SP #2;  
 Bot chord: 4x2 SP #2;  
 Webs: 4x2 SP #2;

**Hangers / Ties**  
 Simpson Construction Hardware is specified based on the most current information provided by Simpson Strong-Tie. Please refer to the most recent Simpson Strong-Tie catalog for additional information.  
 Recommended hanger connections are based on manufacturer tested capacities and calculations. Conditions may exist that require different connections than indicated. Refer to manufacturer publication for additional information.  
 Hanger specified assumes connection to supporting chord is located a minimum of five times the depth of the supporting chord from any unsupported end, unless unsupported chord end has 85% plating coverage.  
 Bearing at location x=0"4 uses the following support conditions: 0"4  
 Bearing Q (0"4, 9'1"8) HHUS410  
 Supporting Member: (2)1.75x14 2.0E PWLVL (30) 0.148"x3" nails into supporting member,  
 (10) 0.148"x3" nails into supported member.

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

**Wind**  
 Wind loads based on MWFRS with additional C&C member design.  
 Left end vertical exposed to wind pressure. Deflection meets L/180.  
 Right end vertical not exposed to wind pressure.

**Additional Notes**  
 + 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations.  
 Provide for complete drainage of roof.  
 Truss must be installed as shown with top chord up.



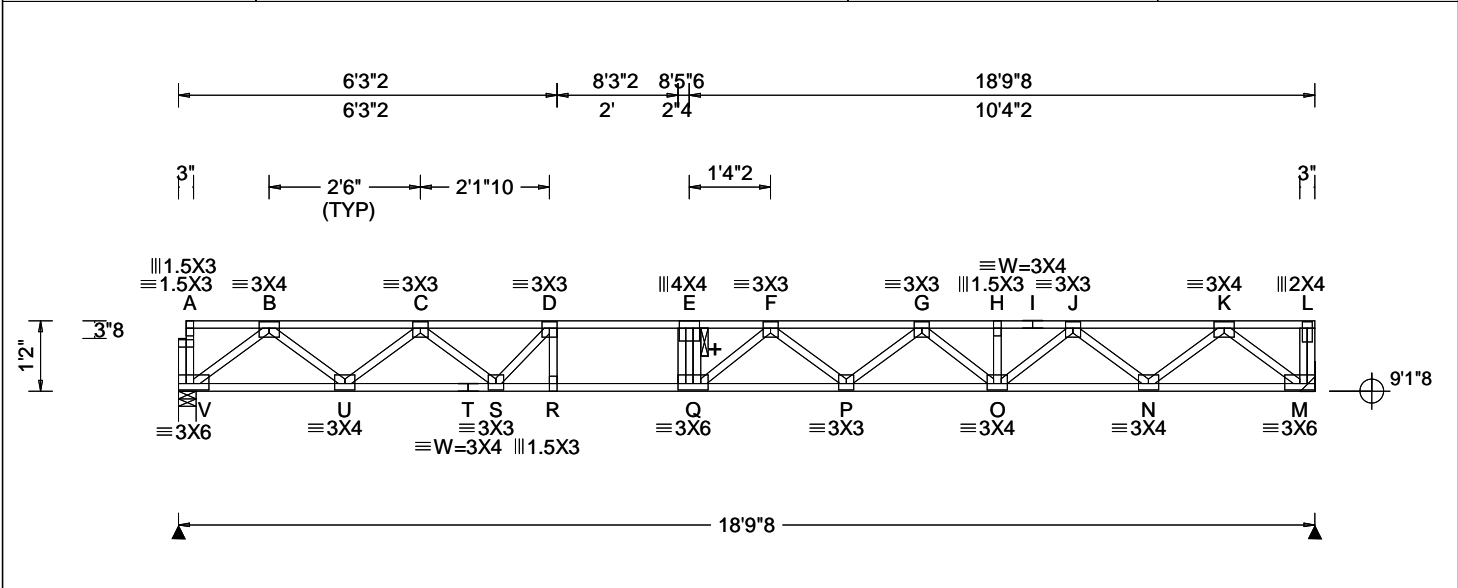
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Note: This truss is not designed to carry floor live loadings and load duration.

It is the responsibility of the Building Designer and Truss Fabricator to review this drawing prior to cutting lumber to verify that all data, including dimensions and loads, conform to the architectural plans/specifications and fabricators truss layout.

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<b>Loading Criteria (psf)</b> TCCL: 30.00 TCCL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 50.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 16.0 "	<b>Wind Criteria</b> Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCCL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h/2 to h C&C Dist a: NA Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: 40.0 Ct: 1.1 CAT: II Pf: 30.8 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15 Building Code: IRC 2018 TPI Std: 2014 Rep Fac: Yes FT/RT/PT:10(0)/10(0)/2(0) Plate Type(s): WAVE	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.233 E 945 480 VERT(CL): 0.371 E 593 360 HORZ(LL): 0.026 M - - HORZ(TL): 0.043 M - - Creep Factor: 2.0 Max TC CSI: 0.281 Max BC CSI: 0.450 Max Web CSI: 0.180 VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs)</b> <table border="1" 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>V</td> <td>627</td> <td>-</td> <td>-</td> <td>/254</td> <td>/62</td> <td>/19</td> </tr> <tr> <td>M</td> <td>639</td> <td>-</td> <td>-</td> <td>/257</td> <td>/64</td> <td>-</td> </tr> </tbody> </table> Wind reactions based on MWFRS V Brg Wid = 3.5 Min Req = 1.5 (Truss) M Brg Wid = - Min Req = - Bearing V is a rigid surface. Members not listed have forces less than 375# <b>Maximum Top Chord Forces Per Ply (lbs)</b> <table border="1" 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>595 -1293</td> <td>G - H</td> <td>1012 -2159</td> </tr> <tr> <td>C - D</td> <td>1021 -2199</td> <td>H - I</td> <td>1012 -2159</td> </tr> <tr> <td>D - E</td> <td>1185 -2572</td> <td>I - J</td> <td>1012 -2159</td> </tr> <tr> <td>E - F</td> <td>1184 -2574</td> <td>J - K</td> <td>592 -1269</td> </tr> <tr> <td>F - G</td> <td>1210 -2639</td> <td></td> <td></td> </tr> </tbody> </table>	Loc	Gravity			Non-Gravity			R+	/R-	/Rh	/Rw	/U	/RL	V	627	-	-	/254	/62	/19	M	639	-	-	/257	/64	-	Chords	Tens.Comp.	Chords	Tens. Comp.	B - C	595 -1293	G - H	1012 -2159	C - D	1021 -2199	H - I	1012 -2159	D - E	1185 -2572	I - J	1012 -2159	E - F	1184 -2574	J - K	592 -1269	F - G	1210 -2639		
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**Lumber**  
 Top chord: 4x2 SP SS;  
 Bot chord: 4x2 SP SS;  
 Webs: 4x2 SP #2;

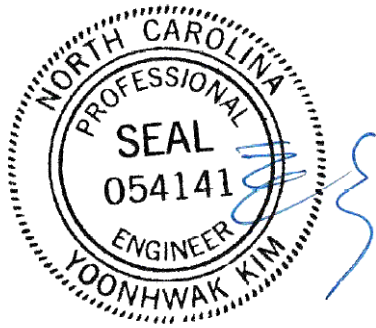
**Hangers / Ties**  
 (J) Hanger Support Required, by others

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

**Wind**  
 Wind loads based on MWFRS with additional C&C member design.  
 Left end vertical exposed to wind pressure. Deflection meets L/180.  
 Right end vertical not exposed to wind pressure.

**Deflection**  
 Max JT VERT DEFL: LL: 0.23" DL: 0.18". See detail DEFLCAMB1014 for camber recommendations.

**Additional Notes**  
 + 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations.  
 Provide for complete drainage of roof.  
 Truss must be installed as shown with top chord up.  
 Note: This truss is not designed to carry floor live loadings and load duration.

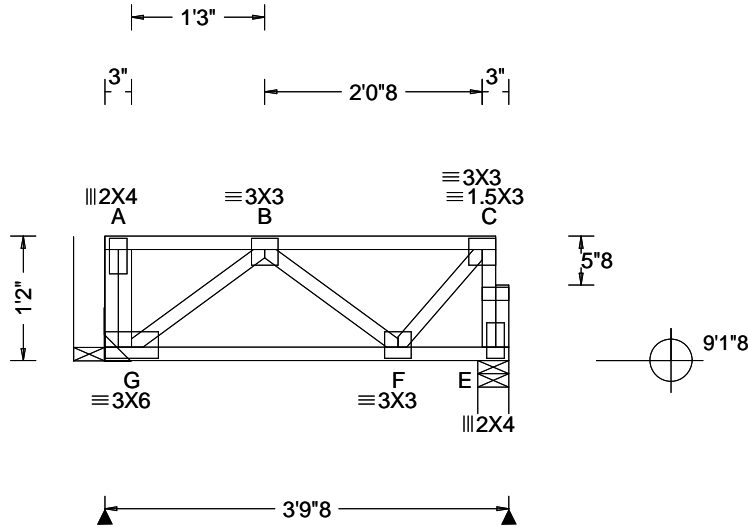


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SEQN: 2193 FROM:	SY42 Ply: 1 Qty: 2	Job Number: Q2410-341 The Farm at Neills Creek	Cust: R 9836 JRef: 1Y4R98360003 T5 DrwNo: 312.24.1426.45583 / YK 11/07/2024	Truss Label: <b>F07</b>
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<b>Loading Criteria (psf)</b> TCLL: 30.00 TCCL: 10.00 BCCL: 0.00 BCDL: 10.00 Des Ld: 50.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 16.0 "	<b>Wind Criteria</b> Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCCL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h/2 to h C&C Dist a: NA Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: 40.0 Ct: 1.1 CAT: II Pf: 30.8 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15 Building Code: IRC 2018 TPI Std: 2014 Rep Fac: Yes FT/RT/PT: 10(0)/10(0)/2(0) Plate Type(s): WAVE	<b>Defl/CSI Criteria</b> PP Deflection in loc L/def L/# VERT(LL): 0.002 B 999 480 VERT(CL): 0.003 B 999 360 HORZ(LL): 0.000 B - - HORZ(TL): 0.000 B - - Creep Factor: 2.0 Max TC CSI: 0.114 Max BC CSI: 0.084 Max Web CSI: 0.024 VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs)</b> <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>G</td> <td>131</td> <td>/-</td> <td>/-</td> <td>/54</td> <td>/15</td> <td>/19</td> </tr> <tr> <td>E</td> <td>119</td> <td>/-</td> <td>/-</td> <td>/52</td> <td>/14</td> <td>/-</td> </tr> </tbody> </table>	Loc	Gravity			Non-Gravity			R+	/R-	/Rh	/Rw	/U	/RL	G	131	/-	/-	/54	/15	/19	E	119	/-	/-	/52	/14	/-
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**Lumber**

Top chord: 4x2 SP #2;  
 Bot chord: 4x2 SP #2;  
 Webs: 4x2 SP #2;

**Hangers / Ties**

(J) Hanger Support Required, by others

**Loading**

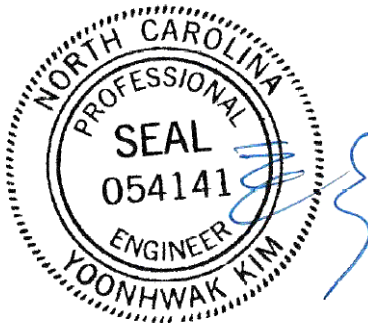
Bottom chord checked for 10.00 psf non-concurrent live load.

**Wind**

Wind loads based on MWFRS with additional C&C member design.  
 Left end vertical exposed to wind pressure. Deflection meets L/180.  
 Right end vertical not exposed to wind pressure.

**Additional Notes**

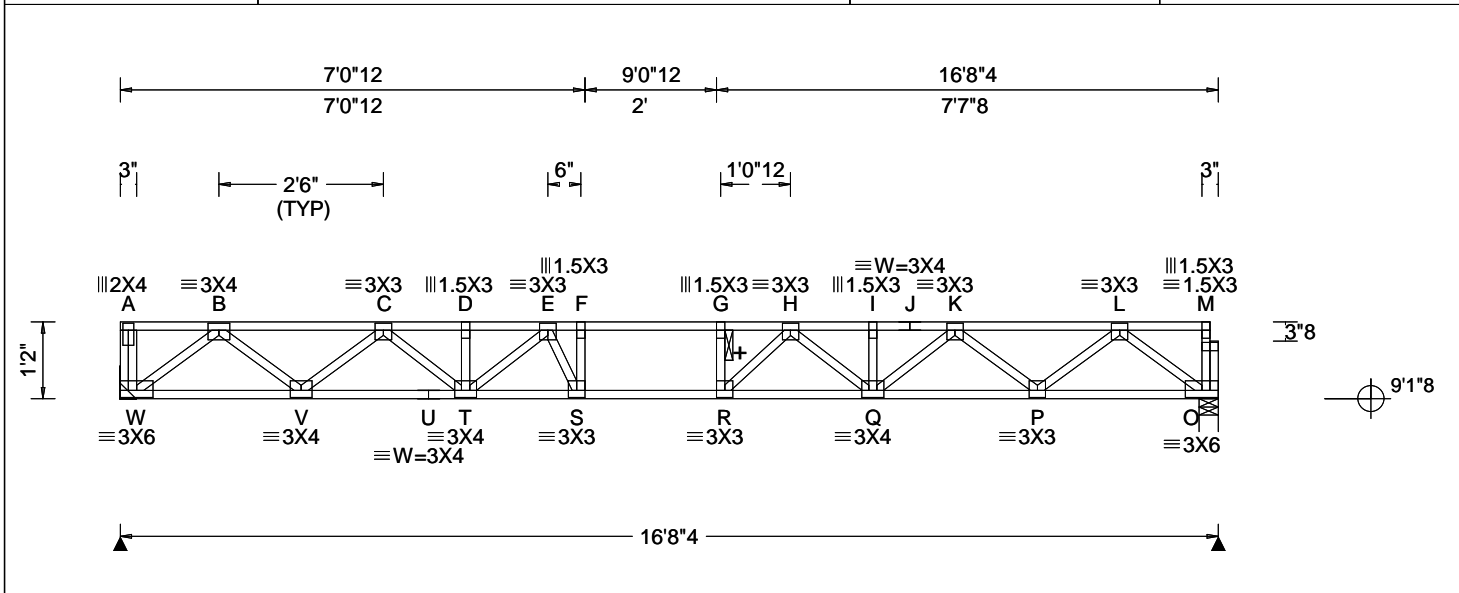
Snow loading based on an unobstructed roof.  
 Complete drainage required.  
 Truss must be installed as shown with top chord up.  
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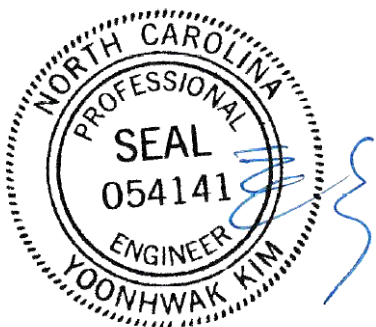
**Lumber**  
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 Webs: 4x2 SP #2;

**Hangers / Ties**  
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**Loading**  
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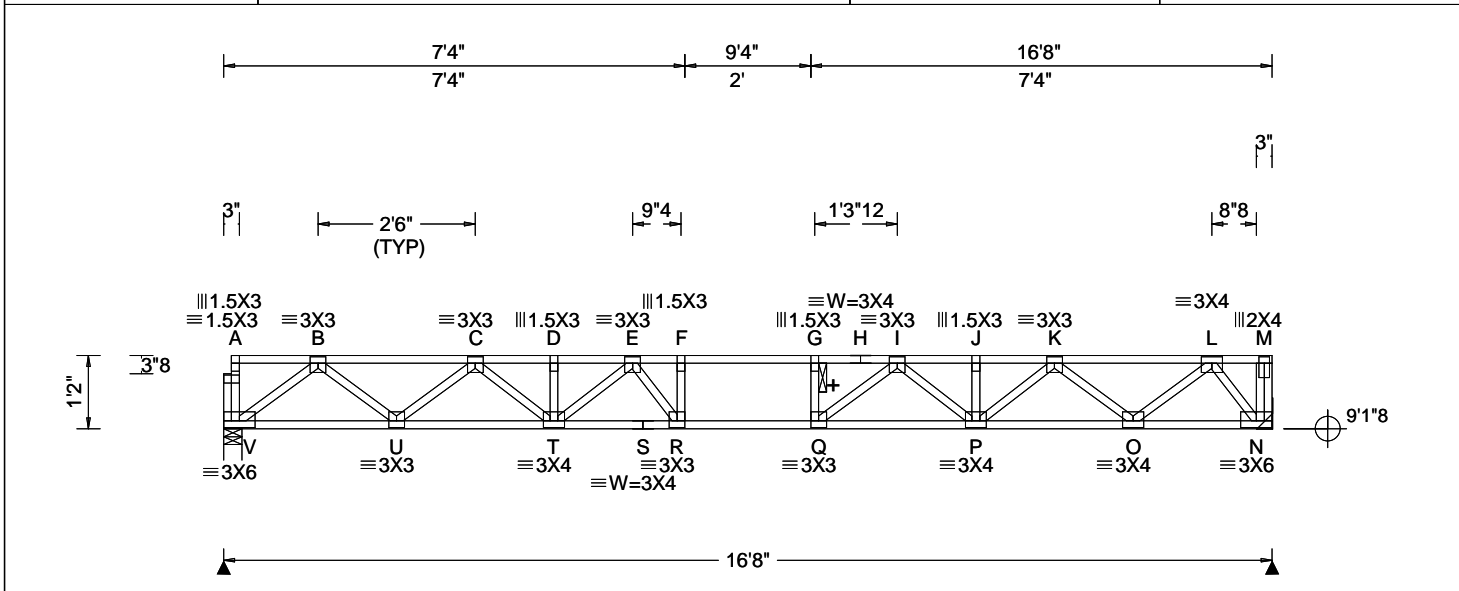
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Loc	Gravity			Non-Gravity																																																			
	R+	/R-	/Rh	/Rw	/U	/RL																																																	
V	555	-	-	/225	/55	/19																																																	
N	567	-	-	/229	/57	-																																																	
Chords	Tens.Comp.	Chords	Tens. Comp.																																																				
B - C	554 -1121	G - H	1042 -2104																																																				
C - D	922 -1834	H - I	1042 -2104																																																				
D - E	922 -1834	I - J	865 -1704																																																				
E - F	1041 -2105	J - K	865 -1704																																																				
F - G	1046 -2111	K - L	447 -889																																																				

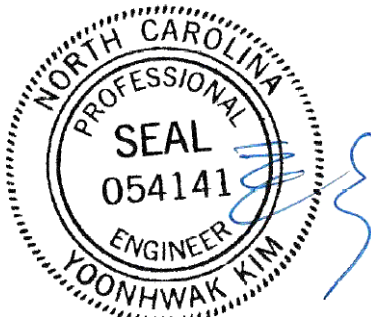
**Lumber**  
 Top chord: 4x2 SP #2;  
 Bot chord: 4x2 SP #2;  
 Webs: 4x2 SP #2;

**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.  
 Left end vertical exposed to wind pressure. Deflection meets L/180.  
 Right end vertical not exposed to wind pressure.

**Additional Notes**  
 + 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations.  
 Provide for complete drainage of roof.  
 Truss must be installed as shown with top chord up.  
 Note: This truss is not designed to carry floor live loadings and load duration.

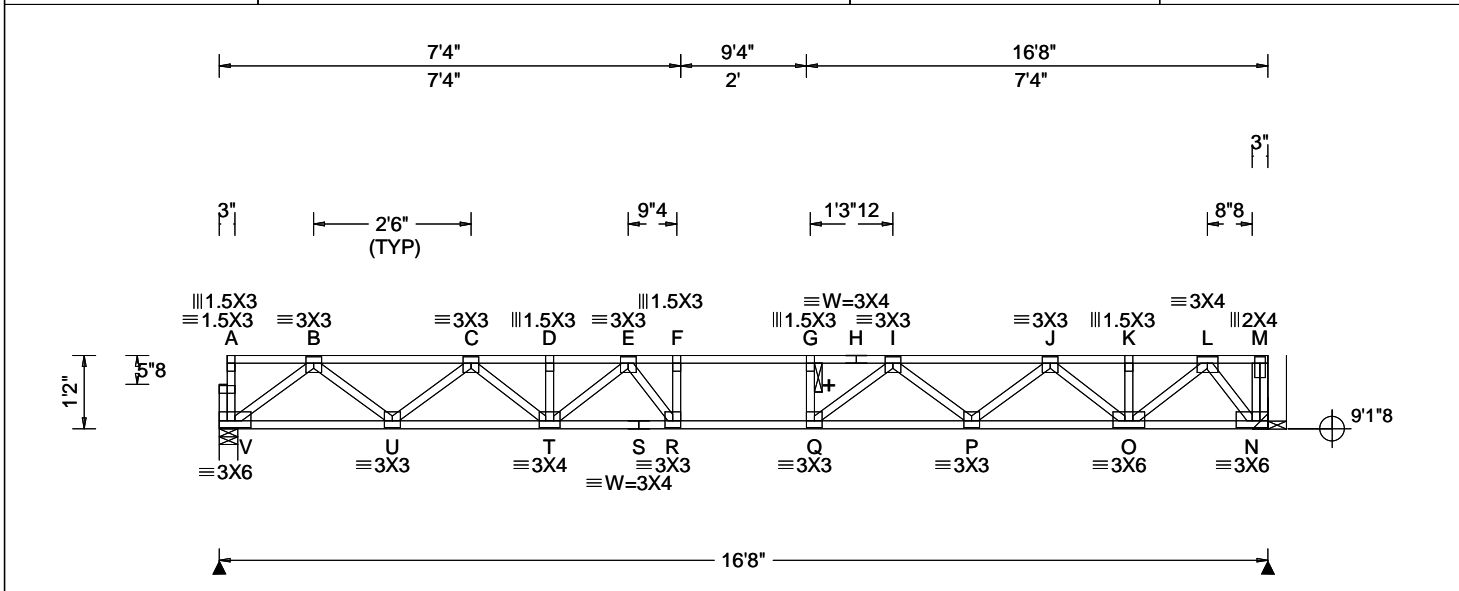


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SEQN: 2226 FROM:	SY42 Ply: 1 Qty: 3	Job Number: Q2410-341 The Farm at Neills Creek	Cust: R 9836 JRef: 1Y4R98360003 T21 DrwNo: 312.24.1426.07260 / YK 11/07/2024	Truss Label: <b>F01</b>
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<b>Loading Criteria (psf)</b> TCCL: 30.00 TCCL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 50.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 16.0 "	<b>Wind Criteria</b> Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCCL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h/2 to h C&C Dist a: NA Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: 40.0 Ct: 1.1 CAT: II Pf: 30.8 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15 Building Code: IRC 2018 TPI Std: 2014 Rep Fac: Yes FT/RT/PT: 10(0)/10(0)/2(0) Plate Type(s): WAVE	<b>Defl/CSI Criteria</b> PP Deflection in loc L/defl L/# VERT(LL): 0.138 F 999 480 VERT(CL): 0.213 F 915 360 HORZ(LL): 0.023 N - - HORZ(TL): 0.038 N - - Creep Factor: 2.0 Max TC CSI: 0.337 Max BC CSI: 0.526 Max Web CSI: 0.176 VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs)</b> Gravity Non-Gravity Loc R+ / R- / Rh / Rw / U / RL V 555 - / - / - / 225 / 55 / 19 N 567 - / - / - / 229 / 57 / - Wind reactions based on MWFRS V Brg Wid = 3.5 Min Req = 1.5 (Truss) N Brg Wid = - Min Req = - Bearing V is a rigid surface. Members not listed have forces less than 375# <b>Maximum Top Chord Forces Per Ply (lbs)</b> Chords Tens.Comp. Chords Tens. Comp.					
				B - C 554 -1121 G - H 1042 -2104 C - D 922 -1834 H - I 1042 -2104 D - E 922 -1834 I - J 848 -1682 E - F 1040 -2104 J - K 464 -909 F - G 1045 -2110 K - L 464 -909					

**Lumber**  
 Top chord: 4x2 SP #2;  
 Bot chord: 4x2 SP #2;  
 Webs: 4x2 SP #2;

**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.  
 Left end vertical exposed to wind pressure. Deflection meets L/180.  
 Right end vertical not exposed to wind pressure.

**Deflection**  
 Max JT VERT DEFL: LL: 0.14" DL: 0.11". See detail DEFLCMB1014 for camber recommendations.  
 Provide for adequate drainage of roof.

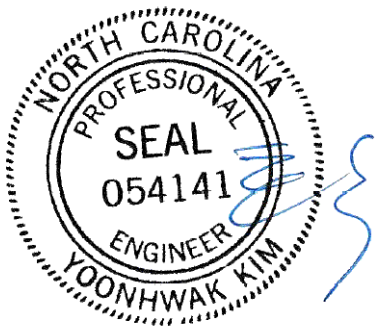
**Additional Notes**  
 + 2x6 continuous strongback. See detail STRBRIBR1014 for bracing and bridging recommendations.  
 Provide for complete drainage of roof.  
 Truss must be installed as shown with top chord up.

Note: This truss is not designed to carry floor live loadings and load duration.

Maximum Bot Chord Forces Per Ply (lbs)			
Chords	Tens.Comp.	Chords	Tens. Comp.
V - U	648 -339	R - Q	2110 -1045
U - T	1548 -794	Q - P	1957 -1000
T - S	2026 -1014	P - O	1367 -712
S - R	2026 -1014		

Maximum Web Forces Per Ply (lbs)			
Webs	Tens.Comp.	Webs	Tens. Comp.
V - B	444 -827	J - O	323 -597
B - U	615 -280	O - L	717 -356
U - C	313 -556	L - N	340 -640
P - J	410 -176		

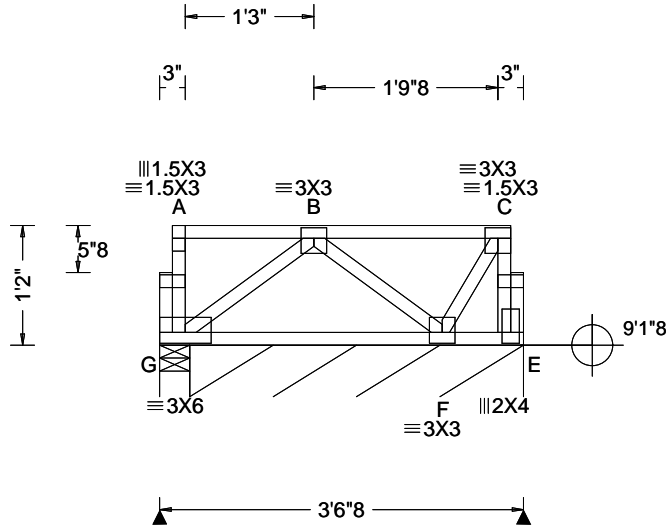


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SEQN: 2228 FROM:	SY42 Ply: 1 Qty: 1	Job Number: Q2410-341 The Farm at Neills Creek	Cust: R 9836 JRef: 1Y4R98360003 T6 DrwNo: 312.24.1427.43790 / YK 11/07/2024	Truss Label: <b>FG02</b>
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<b>Loading Criteria (psf)</b> TCCL: 30.00 TCCL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 50.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.15 Spacing: 16.0 "	<b>Wind Criteria</b> Wind Std: ASCE 7-16 Speed: 120 mph Enclosure: Closed Risk Category: II EXP: C 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: NA Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	<b>Snow Criteria (Pg,Pf in PSF)</b> Pg: 40.0 Ct: 1.1 CAT: II Pf: 30.8 Ce: 1.0 Lu: - Cs: 1.00 Snow Duration: 1.15 Building Code: IRC 2018 TPI Std: 2014 Rep Fac: Yes FT/RT/PT: 10(0)/10(0)/2(0) Plate Type(s): WAVE	<b>Defl/CSI Criteria</b> PP Deflection in loc L/def L/# VERT(LL): 0.008 B 999 480 VERT(CL): 0.013 B 999 360 HORZ(LL): 0.001 F - - HORZ(TL): 0.002 F - - Creep Factor: 2.0 Max TC CSI: 0.520 Max BC CSI: 0.134 Max Web CSI: 0.095 VIEW Ver: 23.02.04A.0207.13	<b>▲ Maximum Reactions (lbs), or *=PLF</b> <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>G</td> <td>363</td> <td>-</td> <td>-</td> <td>-</td> <td>/34</td> <td>/17</td> </tr> <tr> <td>E*</td> <td>271</td> <td>-</td> <td>-</td> <td>-</td> <td>/28</td> <td>-</td> </tr> </tbody> </table>	Loc	Gravity			Non-Gravity			R+	/R-	/Rh	/Rw	/U	/RL	G	363	-	-	-	/34	/17	E*	271	-	-	-	/28	-
				Loc		Gravity			Non-Gravity																						
R+	/R-	/Rh	/Rw		/U	/RL																									
G	363	-	-	-	/34	/17																									
E*	271	-	-	-	/28	-																									
<b>▲ Maximum Bot Chord Forces Per Ply (lbs)</b> <table border="1"> <thead> <tr> <th>Chords</th> <th>Tens.Comp.</th> </tr> </thead> <tbody> <tr> <td>G - F</td> <td>486 -58</td> </tr> </tbody> </table>				Chords	Tens.Comp.	G - F	486 -58																								
Chords	Tens.Comp.																														
G - F	486 -58																														

**Lumber**

Top chord: 4x2 SP SS;  
 Bot chord: 4x2 SP #2;  
 Webs: 4x2 SP #2;

**Special Loads**

----(Lumber Dur.Fac.=1.15 / Plate Dur.Fac.=1.15)  
 TC: From 27 plf at 0.12 to 27 plf at 3.42  
 BC: From 7 plf at 0.00 to 7 plf at 3.54  
 TC: 567 lb Conc. Load at 1.48, 2.81

**Loading**

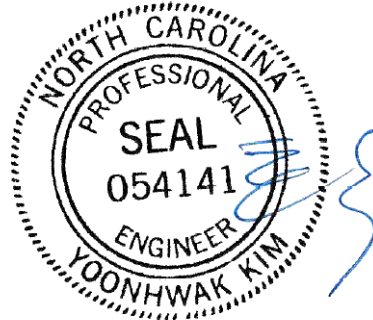
Bottom chord checked for 10.00 psf non-concurrent live load.

**Wind**

Wind loads and reactions based on MWFRS.  
 Left end vertical exposed to wind pressure. Deflection meets L/180.  
 Right end vertical not exposed to wind pressure.

**Additional Notes**

Truss must be installed as shown with top chord up.  
 Note: This truss is not designed to carry floor live loadings and load duration.



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## Commentary: Deflection and Camber

Camber may be built into trusses to compensate for the vertical deflection that results from the application of loads. Providing camber has the following advantages:

- Helps to ensure level ceilings and floors after dead loads are applied.
- Facilitates drainage to avoid ponding on flat or low slope roofs.
- Compensates for different deflection characteristics between adjacent trusses.
- Improves appearance of garage door headers and other long spans that can appear to "sag."
- Avoids "dips" in roof ridgelines at the transition from the gable to adjacent clear span trusses.

In accordance with ANSI/TPI 1 the Building Designer, through the Construction Documents, shall provide the location, direction, and magnitude of all loads attributable to ponding that may occur due to the design of the roof drainage system. The Building Designer shall also specify any dead load, live load, and in-service creep deflection criteria for flat or low-slope roofs subject to ponding loads.

The amount of camber is dependent on the truss type, span, loading, application, etceteras.

More restrictive limits for allowable deflection and slenderness ratio (L/D) may be required to help control vibration.

The following tables are provided as guidelines for limiting deflection and estimating camber. Conditions or codes may exist that require exceeding these recommendations, or past experience may warrant using more stringent limitations.

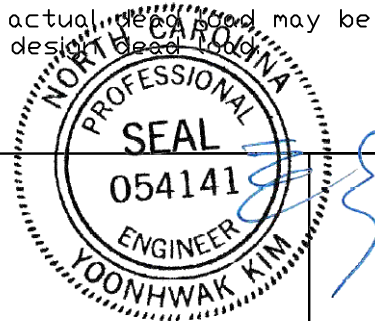
L = Span of Truss (inches)  
D = Depth of Truss at Deflection Point (inches)

### Recommended Truss Deflection Limits

Truss Type	L/D	Deflection Limits	
		Live Load	Total Load
Pitched Roof Trusses	24	L/240 (vertical)	L/180 (vertical)
Floor of Room-In-Attic Trusses	24	L/360 (vertical)	L/240 (vertical)
Flat or Shallow Pitched Roof Trusses	24	L/360 (vertical)	L/240 (vertical)
Residential Floor Trusses	24	L/360 (vertical)	L/240 (vertical)
Commercial Floor Trusses	20	L/480 (vertical)	L/240 (vertical)
Scissors Trusses	24	0.75" (horizontal)	1.25" (horizontal)

Truss Type	Recommended Camber
Pitched Trusses	1.00 x Deflection from Actual Dead Load
Sloping Parallel Chord Trusses	1.5 x Vertical Deflection from Actual Dead Load
Floor Trusses	(0.25 x Deflection from Live Load) + Actual Dead Load
Flat Roof Trusses	(0.25 x Deflection from Live Load) + (1.5 x Design Dead Load Deflection)

Note: The actual dead load may be considerably less than the design dead load.



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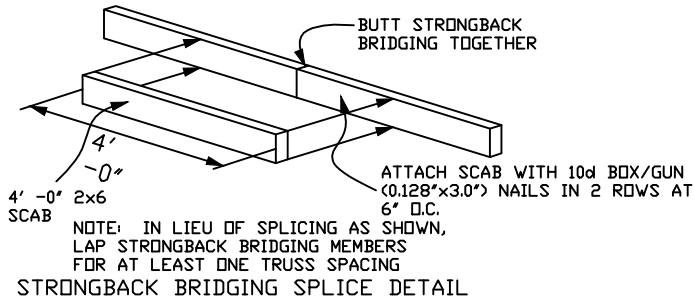
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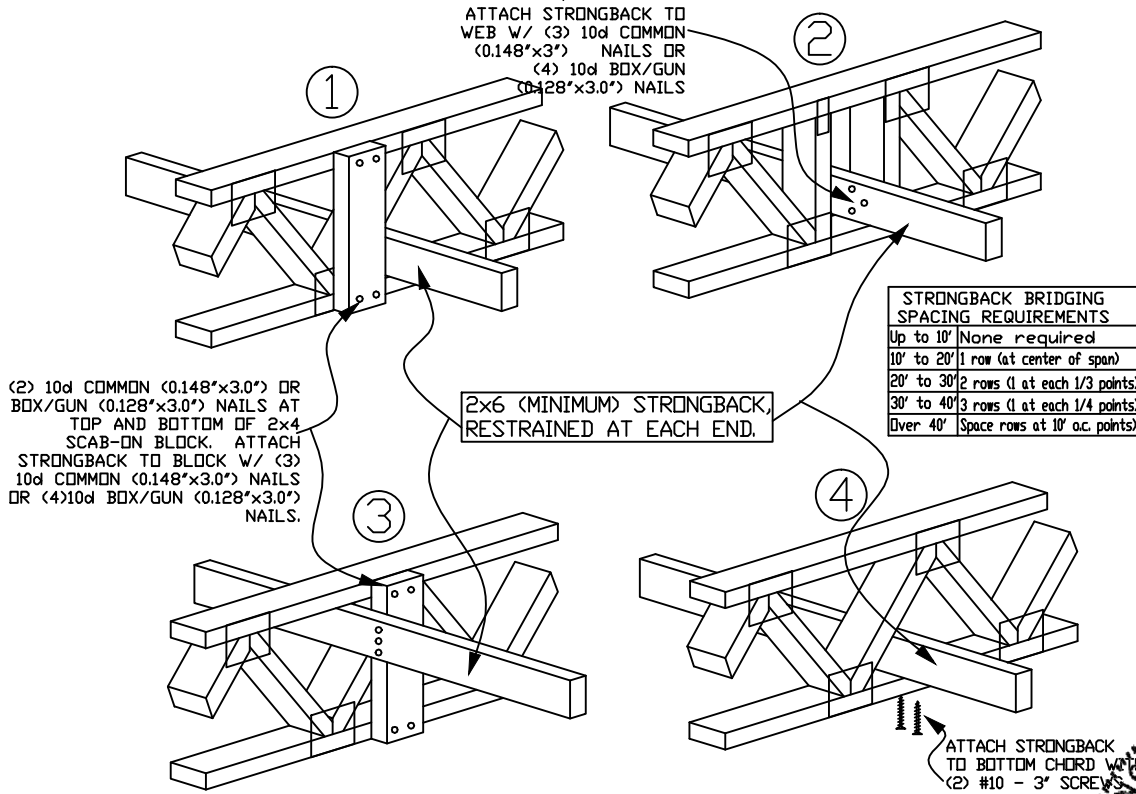
REF	DEFLEC/CAMB
DATE	10/01/14
DRWG	DEFLCAMB1014

# STRONGBACK BRIDGING RECOMMENDATIONS



- ▶ All scab-on blocks shall be a minimum 2x4 "stress graded lumber."
- ▶ All strongback bridging and bracing shall be a minimum 2x6 "stress graded lumber."
- ▶ The purpose of strongback bridging is to develop load sharing between individual trusses, resulting in an overall increase in the stiffness of the floor system. 2x6 strongback bridging, positioned as shown in details, is recommended at 10' -0" o.c. (max.)

NOTE: Details 1 and 2 are the preferred attachment methods



- ▶ The terms "bridging" and "bracing" are sometimes mistakenly used interchangeably. "Bracing" is an important structural requirement of any floor or roof system. Refer to the Truss Design Drawing (TDD) for the bracing requirements for each individual truss component. "Bridging," particularly "strongback bridging" is a recommendation for a truss system to help control vibration. In addition to aiding in the distribution of point loads between adjacent truss, strongback bridging serves to reduce "bounce" or residual vibration resulting from moving point loads, such as footsteps.

The performance of all floor systems are enhanced by the installation of strongback bridging and therefore is strongly recommended by Alpine.

For additional information regarding strongback bridging, refer to BCSI (Building Component Safety Information).



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

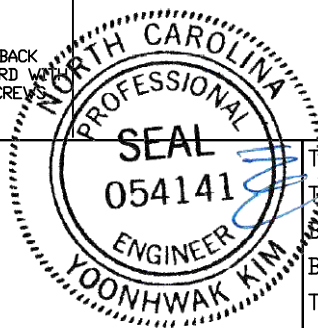
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TC LL	PSF	REF	STRONGBACK
TC DL	PSF	DATE	10/01/14
BC DL	PSF	DRWG	STRBRIBR1014
BC LL	PSF		
TOT. LD.	PSF		
DUR. FAC.	1.00		
SPACING			

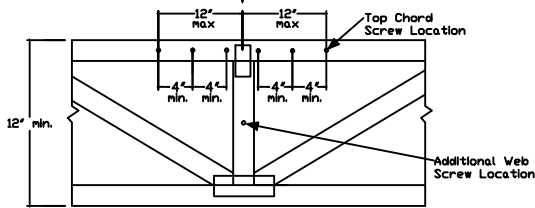
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11/07/2024

# System 42 Ply to Ply Connection Detail

Using GRK (RSS) JTS 1/4x6-3/4 or Simpson SDS25600 or SDW22634 Strong Drive Screws or Equal.

Max. Concentrated Load per Chart Below



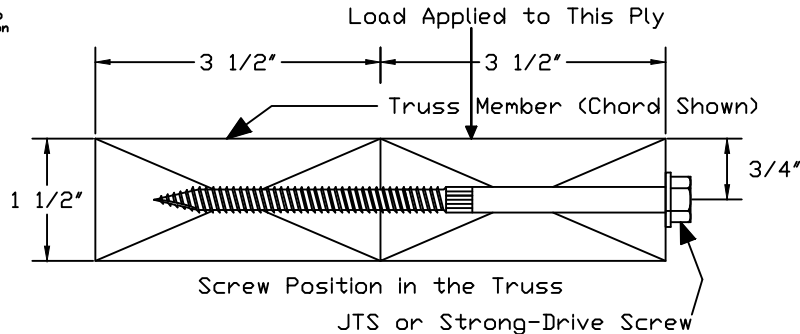
Apply screws to top chord within 12' of the concentrated load location @ 4' o.c., min, evenly distributing them to each side of the concentrated load. A maximum of 6 screws may be applied to the top chord for each concentrated load.

For double top chords, evenly distribute the screws over both top chords, using same spacing guidelines specified above. The max number of top chord screws is 6 per chord member for a total maximum of 12 screws.

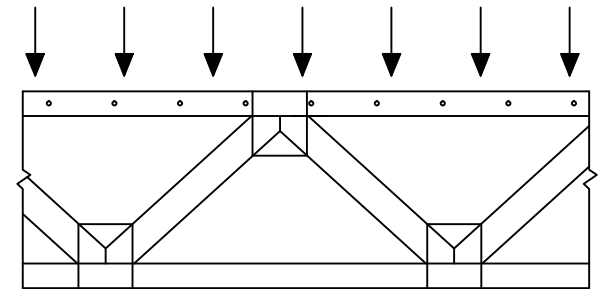
If the concentrated load connection requires more screws than 6 per top chord member and the load is located at a panel point where webs intersect the top chord, the remainder of required screws may be applied to those webs below the concentrated load location evenly spaced @ 4' o.c., min, keeping the 3' min end distances. Each additional screw is worth 474 lb for SP webs, 442 lb for DFL webs, and 400 lb for SPF webs.

# of Screws	Maximum Concentrated Load (lbs) (1.00 DF)		
	SP	DFL	SPF
1	474	442	400
2	984	884	800
3	1422	1326	1200
4	1896	1768	1600
5	2370	2210	2000
6	2844	2652	2400
7	3318	3094	2800
8	3792	3536	3200
9	4266	3978	3600
10	4740	4420	4000
11	5214	4862	4400
12	5688	5304	4800

Refer to Alpine sealed drawing for individual truss design.



Max. Uniform Load per Chart Below



For single top chord, see chart below for screw spacing. For double top chord the screw spacing may be doubled (but may not exceed 24' o.c. per chord). Screw spacing shall be offset by 1/2 the o.c. spacing in each chord.

Screws need only apply to the extents of that load.

For chord sections supporting less than 100 plf apply one screw at each top chord joint location.

### General Notes:

1. Screws centered along the 1.5" dimension of the 4x2 member.
2. Minimum end distance of 3'.
3. Screws installed with head in loaded member.
4. Gap between plies not to exceed 1/8".
5. Screw location may be adjusted up to 1" to avoid conflict with other hardware or to avoid lumber defects.
6. Do not install screws in areas where lumber wane exceeds 1/4".
7. Equal loads from both faces or loads that are evenly distributed to each ply do not require connections per this detail.
8. For 3x2 members use GRK (RSS) JTS 1/4x5 screws or Simpson SDS25412 or SDW22500 screws or equal.
9. Contact Alpine for special connections not covered by this detail.

Top Chord Screw o.c. Spacing (inch)	Maximum Uniform Load (plf) Along Top Chord (1.00 DF)		
	SP	DFL	SPF
4	1422	1326	1200
6	948	884	800
8	711	663	600
10	568	530	480
12	474	442	400
14	406	378	342
16	355	331	300
18	316	294	266
20	284	265	240
22	258	241	218
24	237	221	200



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North Building, 4th Floor  
Glenview, IL 60025

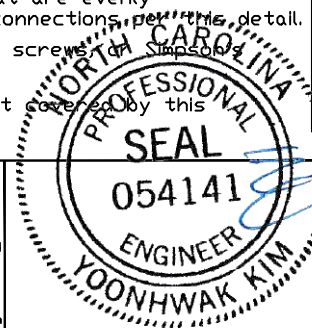
**WARNING: READ AND FOLLOW ALL NOTES ON THIS DRAWING. IMPORTANT: FURNISH THIS DRAWING TO ALL CONTRACTORS INCLUDING THE INSTALLERS.**

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 bracing installed 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.

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 & 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 this Job's general notes page and these web sites:  
ALPINE: [www.alpineitw.com](http://www.alpineitw.com); TPI: [www.tpinstr.org](http://www.tpinstr.org); SBCA: [www.sbcacomponents.com](http://www.sbcacomponents.com); ICC: [www.iccsafe.org](http://www.iccsafe.org)



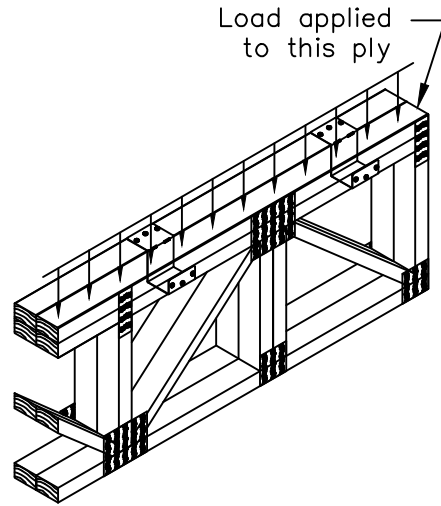
ABCD Engineering, PLLC

11/07/2024

ALL	PSF	REF SY42 Connection
DL	PSF	DATE 01/19/2018
DL	PSF	DRWG CNSY42PL0118
LL	PSF	
TOT. LD.	PSF	
FOR FAC	1.00	
SPACING		

# SY32/SY42 PLY TO PLY LSC CONNECTION DETAIL FOR DOWNWARD LOADS ONLY

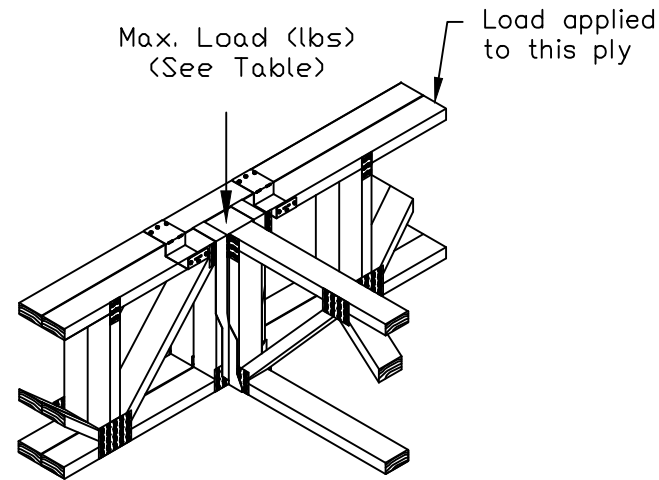
## Uniform Load Application



Max. T.C. Uniform Load (plf)			Clip Spacing Along Top Chord
SP	DF	SPF/HF	
935	810	585	12' o.c.
625	540	390	18' o.c.
470	405	295	24' o.c.
375	325	235	30' o.c.

Maximum LSC spacing is 30" o.c.

## Concentrated Load Application

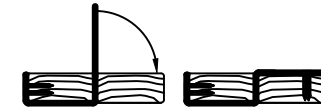


Max Load (lbs)		
SP	DF	SPF/HF
1870	1620	1170

Note:  
Install LSC adjacent, equidistant, and not more than 6" on each side of concentrated load.

## Installation Instructions:

1. Position and attach LSC to loaded ply with (3) 0.131"x1.5" nails into narrow face.
2. Bend clip over adjacent ply and attach with (3) 0.131"x1.5" nails into wide face.

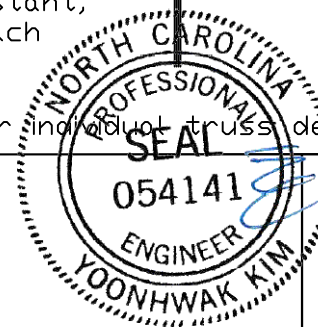


LSC42 for single 4x2 chords  
LSC32 for single 3x2 chords



LSC42-2 for stacked 4x2 chords  
LSC32-2 for stacked 3x2 chords

Refer to Alpine sealed drawing for individual truss design.



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ABCD Engineering, PLLC NC COA 0838

11/07/2024

DUR. FAC.

ALL

REF SY42 Connection  
DATE 10/01/14  
DRWG LSCSYX2A1014