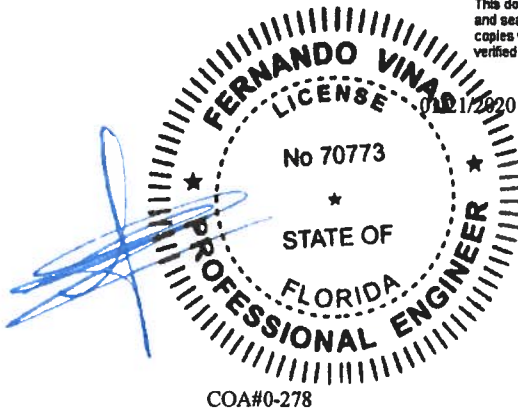


#38875

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ALPINE
AN ITW COMPANY

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www.alpineitw.com



Site Information:	Page 1:
Customer: W. B. Howland Company, Inc.	Job Number: 19 3610 REPAIR
Job Description: 19 3610 REPAIR	
Address:	

Job Engineering Criteria:			
Design Code: FBC 2017 RES		IntelliVIEW Version: 18.02.01B	
		JRef #: 1WS22150001	
Wind Standard: ASCE 7-10	Wind Speed (mph): 130	Roof Load (psf): 20.00-10.00- 0.00-10.00	
Building Type: Closed		Floor Load (psf): None	

This package contains general notes pages, 1 truss drawing(s) and 1 detail(s).

Item	Drawing Number	Truss
1	020.20.1847.18343	D01

Item	Drawing Number	Truss
2	160TL	

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 AF&PA. 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.

General Notes (continued)

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.

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

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.

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 immediate vertical Deflection, 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 of all load cases.

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

Max Web CSI = Maximum bending and axial Combined Stress Index for Webs for of 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).

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.

TCCL = 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(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. AF&PA: American Forest & Paper Association, 1111 19th Street, NW, Suite 800, Washington, DC 20036;

www.afandpa.org.

2. ICC: International Code Council; www.iccsafe.org.

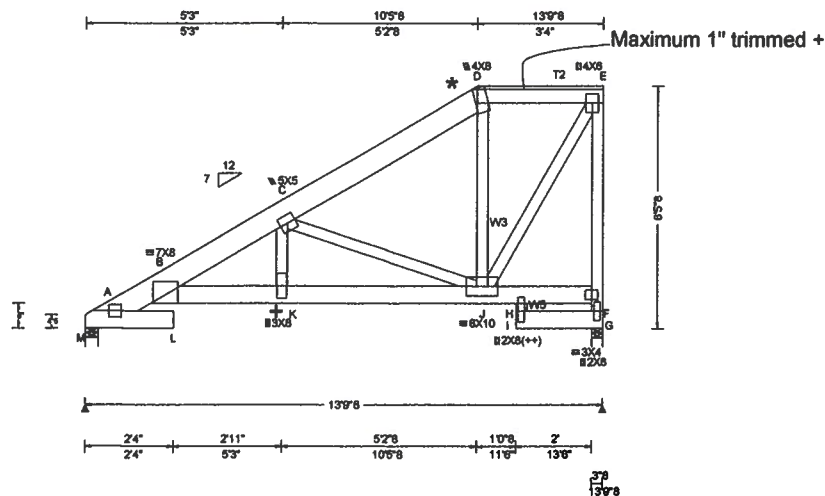
3. Alpine, a division of ITW Building Components Group Inc.: 13723 Riverport Drive, Suite 200, Maryland Heights, MO 63043; www.alpineitw.com.

4. TPI: Truss Plate Institute, 218 North Lee Street, Suite 312, Alexandria, VA 22314; www.tpinst.org.

5. SBICA: Wood Truss Council of America, 6300 Enterprise Lane, Madison, WI 53719; www.sbcindustry.co



3 Complete Trusses Required



Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)						
TCLL: 20.00	Wind Std: ASCE 7-10	Pg: NA Ct: NA CAT: NA	PP Deflection in loc L/def L/#	Gravity			Non-Gravity			
TCDL: 10.00	Speed: 130 mph	Pf: NA Ce: NA	VERT(LL): 0.140 L 999 240	Loc	R+	/R-	/Rh	/Rw	/U	/RL
BCLL: 0.00	Enclosure: Closed	Lu: NA Cs: NA	VERT(CL): 0.281 L 583 180	M	4482	/-	/-	/-	/697	/-
BCDL: 10.00	Risk Category: II	Snow Duration: NA	HORZ(LL): 0.078 l - -	F	6358	/-	/-	/-	/935	/-
Des Ld: 40.00	EXP: C Kzt: NA	Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Yes FT/RT:20(0)/10(0) Plate Type(s): WAVE	HORZ(TL): 0.156 l - -	Wind reactions based on MWFRS						
NCBCLL: 0.00	Mean Height: 15.00 ft		Creep Factor: 2.0	M	Brg Width = 4.0		Min Req = 1.5			
Soffit: 2.00	TCDL: 5.0 psf		Max TC CSI: 0.554	F	Brg Width = 3.5		Min Req = 1.8			
Load Duration: 1.25	BCDL: 5.0 psf		Max BC CSI: 0.451	Bearings M & F are a rigid surface.						
Spacing: 24.0 "	MWFRS Parallel Dist: 0 to h/2		Max Web CSI: 0.832	Members not listed have forces less than 375#						
	C&C Dist a: 3.00 ft			Maximum Top Chord Forces Per Ply (lbs)						
	Loc. from endwall: not in 9.00 ft			Chords	Tens.Comp.		Chords	Tens. Comp.		
	GCpl: 0.18			A - B	116	-732	C - D	185	-1213	
	Wind Duration: 1.60		VIEW Ver: 18.02.01B.0321.08							

Lumber

Top chord 2x8 SP 2400f-2.0E
T2 2x6 SP 2400f-2.0E
Bot chord 2x6 SP 2400f-2.0E
Webs 2x4 SP #3
W3 2x4 SP #2:
W5 2x4 SP M-31:

Special Loads

(Lumber Dur.Fac.=1.25 / Plate Dur.Fac.=1.25)
TC: From 63 plf at 0.00 to 63 plf at 5.25
TC: From 32 plf at 5.25 to 32 plf at 11.19
TC: From 63 plf at 11.19 to 63 plf at 13.79
BC: From 20 plf at 0.00 to 20 plf at 5.25
BC: From 10 plf at 5.25 to 10 plf at 13.79
BC: 3797 lb Conc. Load at 5.25
BC: 1543 lb Conc. Load at 7.19, 9.19, 13.19
BC: 1541 lb Conc. Load at 11.19

Plating Notes

All plates are 4X4(D1) except as noted.

(++) - This plate works for both joints covered.

TRUSS has maximum 1" trimmed from the TC as shown.

Refer to drawing 303.19.1200.25198 for plates and other data not given here.

NO REPAIR DETAIL NECESSARY, PROVIDED THAT ALL REMAINING LUMBER AND PLATES ON THIS TRUSS MUST REMAIN FULLY INTACT AND UNDISTURBED.

Purlins

In lieu of structural panels use purlins to brace all flat TC @ 24" oc.

Additional Notes

Refer to General Notes for additional information

The overall height of this truss excluding overhang is 6-5-8.

+2-(0.128"x3.0") nails attached opposite to hanger face and within 1 foot on each side of the hanger after third ply is attached.

* REMAINING SECTION OF PLATE MUST BE INTACT AND FULLY EMBEDDED.

Maximum Bot Chord Forces Per Ply (lbs)

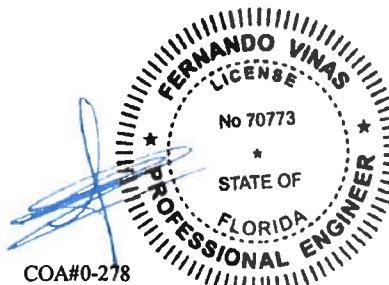
Chords	Tens.Comp.	Chords	Tens. Comp.
B - K	3388 -518	K - J	3389 -518

Maximum Web Forces Per Ply (lbs)

Webs	Tens.Comp.	Webs	Tens. Comp.
C - K	1513 -215	J - E	2040 -303
C - J	392 -2539	G - E	269 -1782
D - J	525 -56	G - F	267 -1736

COA#0-278

01/21/2020



****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.

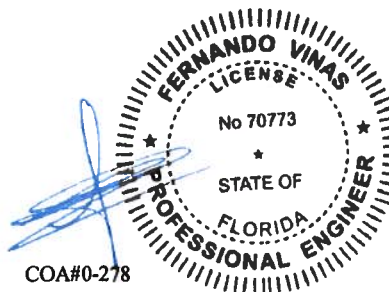
Alpine, a division of ITW Building Components Group Inc. shall not be responsible for any deviation from this drawing any failure to build the truss in conformance with ANSI/TPI 1, or for handling, shipping, installation and bracing of trusses. A seal on this drawing or cover page listing this drawing, 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 this job's general notes page and these web sites: ALPINE: www.alpineitw.com; TPI: www.tpinet.org; SBCA: www.sbcdindustry.com; ICC: www.iccsafe.org

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6750 Forum Drive
Suite 305
Orlando FL, 32821

SEQN: 290606	COMN	Ply: 3	Job Number: 19 3610 REPAIR	Cust: R215 JRef: 1WS22150001 T22
FROM: CDM		Qty: 1	19 3610 REPAIR	DrwNo: 020.20.1647.18343
Page 2 of 2			Truss Label: D01	GA / FV 01/21/2020

+ USE A SHARP METAL CUTTING SAW BLADE TO CAREFULLY REMOVE MATERIAL FROM THE TRUSS AS SHOWN. REMAINING PORTIONS OF TRUSS AND ALPINE PLATES MUST BE FREE FROM DAMAGE. OTHERWISE ENGINEERED REPAIR WILL BE REQUIRED.



COA#0-278

01/21/2020

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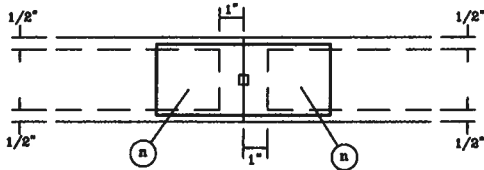
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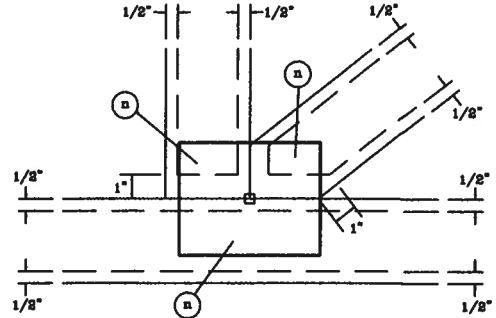
TRULOX INFORMATION DETAIL

TYPICAL OFF PANEL SPLICE

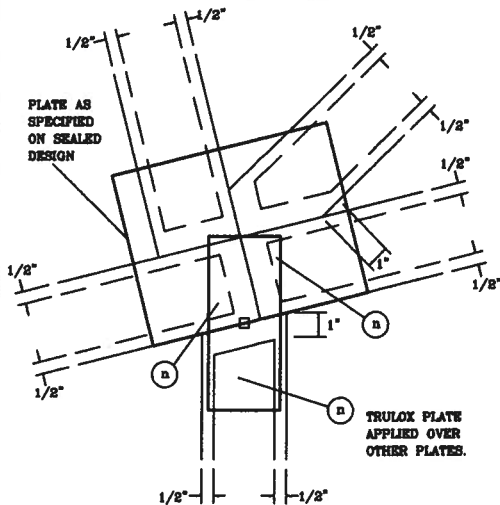


DO NOT APPLY NAILS WITHIN 1/2" OF LUMBER EDGES OR 1" OF LUMBER ENDS ON EACH FACE, AS SHOWN BY DASHED LINES.
NAILS MUST NOT SPLIT LUMBER.

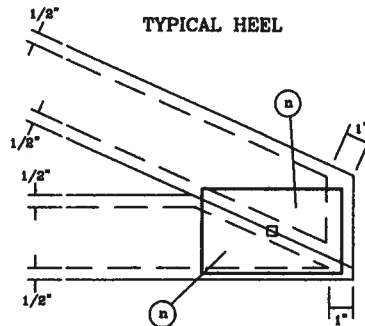
TYPICAL PANEL POINT WITHOUT SPLICE



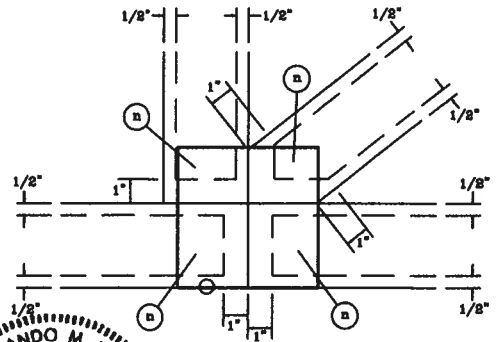
TYPICAL FILLER



TYPICAL HEEL



TYPICAL PANEL POINT SPLICE



NOTES:

- (n) IS THE REQUIRED NUMBER OF 0.120" X 1.375" NAILS, OR EQUAL, PER FACE PER PLY AS SPECIFIED ON THE SEALED DESIGN REFERENCING THIS DETAIL.
- LOCATES PLATE CORNER OR FLUSH EDGE.
- LOCATES PLATE CENTER.



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TRULOX PLATING

**160
TL**

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DATE 10/01/14

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