Professional tools, trends, and insights for North American Construction

# GOOD CONNECTIONS®

ALPINE® AN ITW COMPANY

SPRING 2025




13

## Stay Connected & Analyze Data with Ease

IntelliSheets & Dashboards

CALENDAR OF EVENTS

## 2025 UPCOMING HOLIDAY OFFICE CLOSURES

### U.S.

**Memorial Day**
Monday, May 26

**Independence Day**
Friday, July 4

**Labor Day**
Monday, September 1

### CANADA

**Good Friday**
Friday, April 18

**Victoria Day**
Monday, May 19

**Canada Day**
Tuesday, July 1

**Civic Holiday**
Monday, August 4

**Labour Day**
Monday, September 1

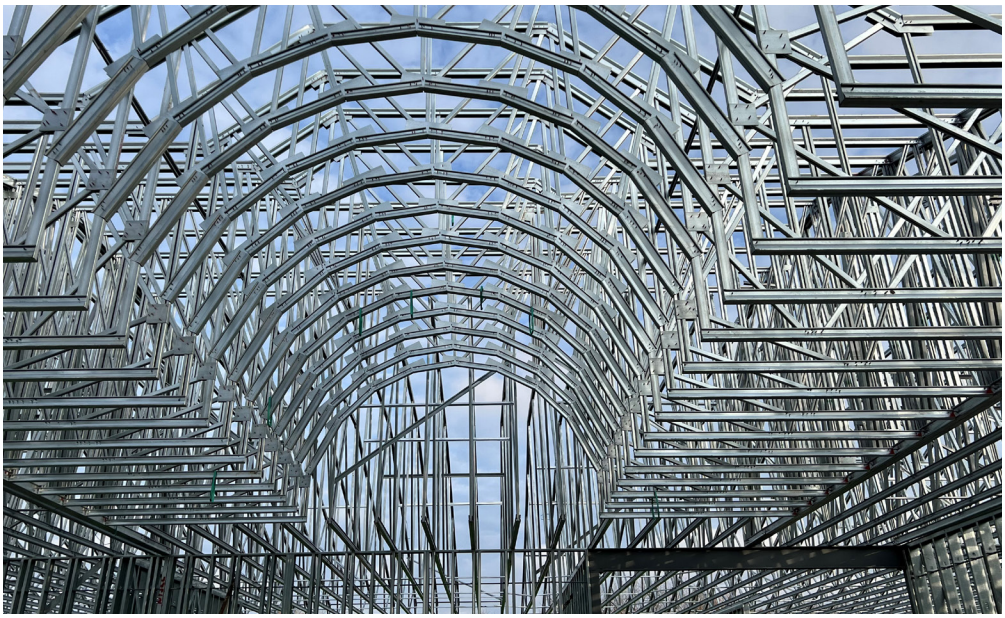
## 2025 REGIONAL CLASS SCHEDULE

ALPINE academy

- Intermediate Designer Training | April 7-10 – Grand Prairie, TX
- New Designer Training | May 12-15 – Glenview, IL
- Advanced Designer Training | June 9-12 – Earth City, MO
- New Designer Training | July 14-17 – Orlando, FL
- Advanced Designer Training | August 18-21 – Grand Prairie, TX

SIGN UP HERE

For additional information please contact
**training@alpineitw.com**



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**Publishers Note:**

Good Connections® is published by Alpine® for its customers, associates, builders, architects, building officials, and other professionals interested in the building components industry.

At Alpine, "Good Connections" refers to the quality products and services we offer as well as the connections we have with our customers and the components they provide to the building industry.

We appreciate story ideas, project photos, and other suggestions that you have to make this an even better publication. For more information, contact marketing@alpineitw.com.

**Matt Davis**
Vice President &
General Manager

Matt Davis is the Vice President and General Manager responsible for overseeing the Alpine® business. Since his tenure at ITW in 2000, Matt has held various operational and commercial roles across multiple divisions. He has previously served as the Vice President and General Manager for Commercial Construction of North America as well as ITW Medical.

With the new year, there's uncertainty. The question we are all asking in 2025 is if the glass is half full or half empty – or are you perhaps filling it with something stronger? All jokes aside, the housing market is challenging to forecast especially in the current environment.

On one hand, job growth and the economy remain strong as the Fed appears to have executed a "soft landing." On the other hand, relative to recent years mortgage rates remain high and growing inventory in some markets is dampening builder sentiment. Factor in the uncertainty around government policy, including tariffs, and the picture remains unclear. As a result, many industry analysts have shifted to more conservative forecasts for new Housing Starts in 2025.

As an eternal optimist, I can't help but see the glass as half full and focus on the opportunities in front of us.

Regardless of the different variables in the economy, the unmet demand for housing remains strong, whether it ultimately translates into single family, multifamily, or Build for Rent construction. It's not a question of if, but when we see a ramp up in building.

We have the ability to focus our energy and time on the things within our control. There are numerous opportunities to enhance efficiency within our businesses.

Building stronger partnerships, enhancing multidisciplinary collaboration throughout the industry and leveraging AI technology in our workflows will help enable future growth and success of component manufacturing.

At Alpine®, we are committed to customer back innovation and continuous improvement. We are investing in technology to address the pain points of today as well as the opportunities of tomorrow, ensuring our products and services both maximize design and manufacturing efficiencies to enhance your business.

Thank you for your continued partnership. I look forward to how we can build more together!

INDUSTRY NEWS

## 2025 Housing Forecast

Originally published by HBSDealer in December 2024, experts are revising the housing forecast for a large growth of 13-14% in single-family housing while the multifamily market will steadily rise due to an increase in supply. **LEARN MORE**

## January Housing Starts

According to EyeOnHousing, overall housing starts decreased 9.8% in January to a seasonally adjusted annual rate of 1.366 million units. Single-family housing starts dropped 8.4%, and multi-family starts fell 13.5%. **LEARN MORE**

## Dick Bowman Award | Michael Schwitter

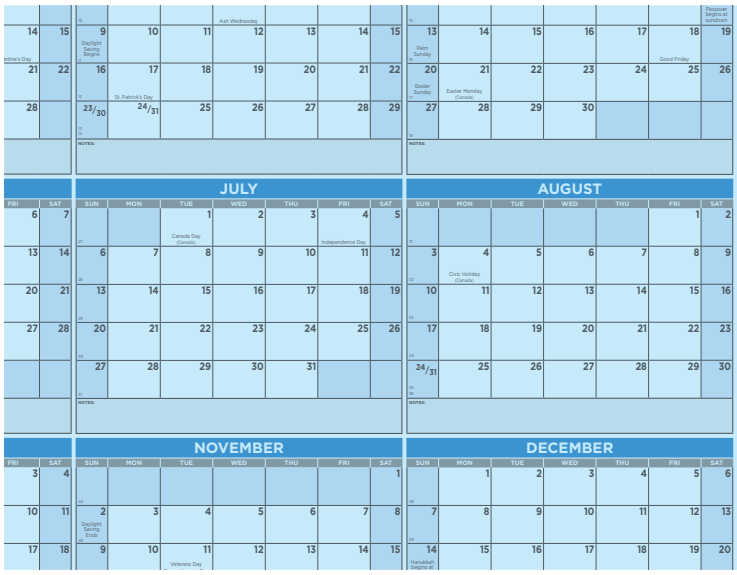
Michael Schwitter, Alpine's Director of Sales, won Structural Building Components Association's (SBCA) Dick Bowman Industry Enthusiast Award! This award honors an individual from an SBCA supplier member company that has supported BCMC and the structural building components industry with enthusiasm and integrity in an unselfish and positive manner.

## NAHB IBS

NAHB International Builders' Show (IBS) was held February 25-27, 2025 in Las Vegas, Nevada, attracting the largest attendance in 17 years with more than 81,000 builders, remodelers, developers, and other home-building professionals. **LEARN MORE**

## BCMC 2025

The Building Component Manufacturers Conference (BCMC) 2025 will be held from Monday, September 29 through Friday, October 3 in Omaha, Nebraska. The annual show includes live machinery demonstrations, networking opportunities, peer-led educational sessions, and much more. Attendee registration begins May 1. Visit Alpine to learn more about our latest innovations designed to help component manufacturers become more profitable and efficient. **LEARN MORE**



## NEW ORGANIZATIONAL APPOINTMENTS

### Jenai Alexis
### Solutions Delivery Director

Jenai Alexis has joined Alpine® as the Director of Solutions Delivery. Based out of Glenview, IL, he is a key member of the Alpine Leadership Team. He will be driving strategic growth and managing the onsite technical support and training for software.

### John Paul Ruesewald
### Equipment Support Manager

John Paul Ruesewald has joined Alpine as the Equipment Support Manager. In this role he is responsible for providing customers with equipment support and leading our service team.

## RETIREMENTS

### CONGRATULATIONS

#### Leonard Chiasson

With over 40 years of experience in the truss industry, Leonard Chiasson is retiring from his role as Technical Sales Representative with Alpine. His motivation, experience, and connections with customers have made a huge impact. He will be greatly missed by our team and customers alike. We wish Leonard all the best in his retirement!

### CONGRATULATIONS

#### Garold Heal

After over 40 years of dedicated service, Gary Heal is retiring from his role as Engineering Manager at Alpine. His leadership, knowledge, and guidance have made a significant impact on the Alpine team. He will be greatly missed. We wish Gary all the best in his retirement!

### CONGRATULATIONS

#### Scott Hudson

After over 40 years of dedication to the truss industry, Scott Hudson is retiring from his role as District Sales Manager with Alpine. His commitment, expertise, and leadership have made a lasting impact, and he will be greatly missed by colleagues and clients alike. We wish Scott all the best in his well-deserved retirement!

**Discover your potential with Alpine®!** We're proud to promote a collaborative, inclusive, and creative work culture. Learn how you can join our team: *https://alpineitw.com/about-us/careers/*

# ALPINE FIRST AWARD

We are proud to honor Laura Wiechert with the 5th annual Alpine® First Award. We appreciate her unwavering support and dedication while demonstrating an Alpine-first mentality by prioritizing the needs of the business over individual or functional goals.

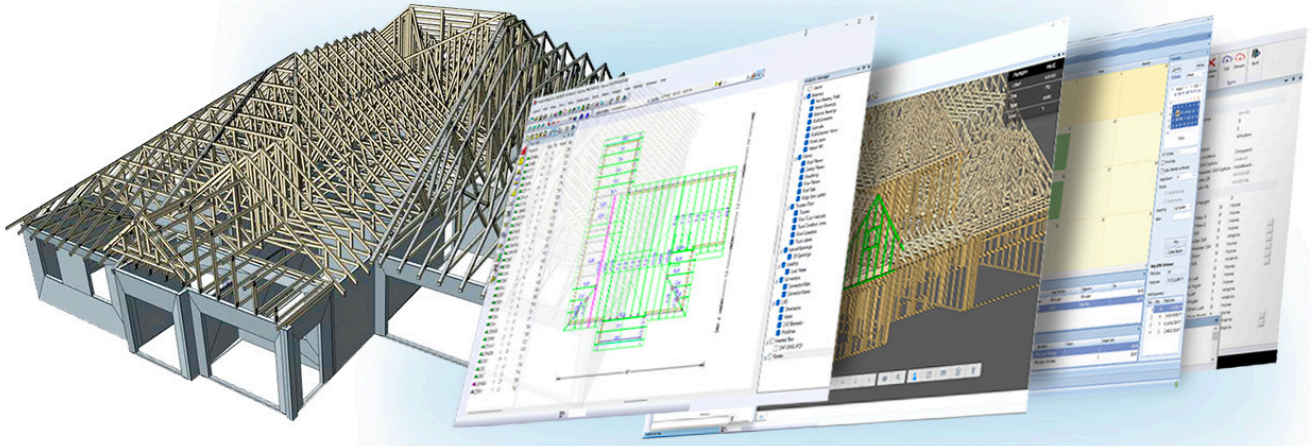
Congratulations, Laura!

## IntelliVIEW® SOFTWARE 25 SERIES, SPRING

**STITCHER® Reimagined**
A new user experience for a better, faster workflow to take designers from drawing review to 3D model like never before.

**IntelliVIEW® Paperspace Tool**
Improvements to create custom spreadsheets and job lists from anywhere, anytime.

**Load Areas Tool**
A single, dynamic tool designed to apply truss loads within a region accurately and simultaneously.



**New IFC Export Capabilities**
Seamless data exchange between platforms for better collaboration and enhanced visualization.

**DWG Performance**
Optimized performance through smaller file (.lay) sizes.

**Engineering Performance**
Enhancements to support ASCE 7-22 & TPI 1-2022 requirements for more resilient, efficient designs.

# HAND CALCULATIONS FOR MAXIMUM GRAVITY REACTION ON TRUSS DESIGN DRAWINGS

AUTHOR

**Yoonhwak Kim, P.E.**

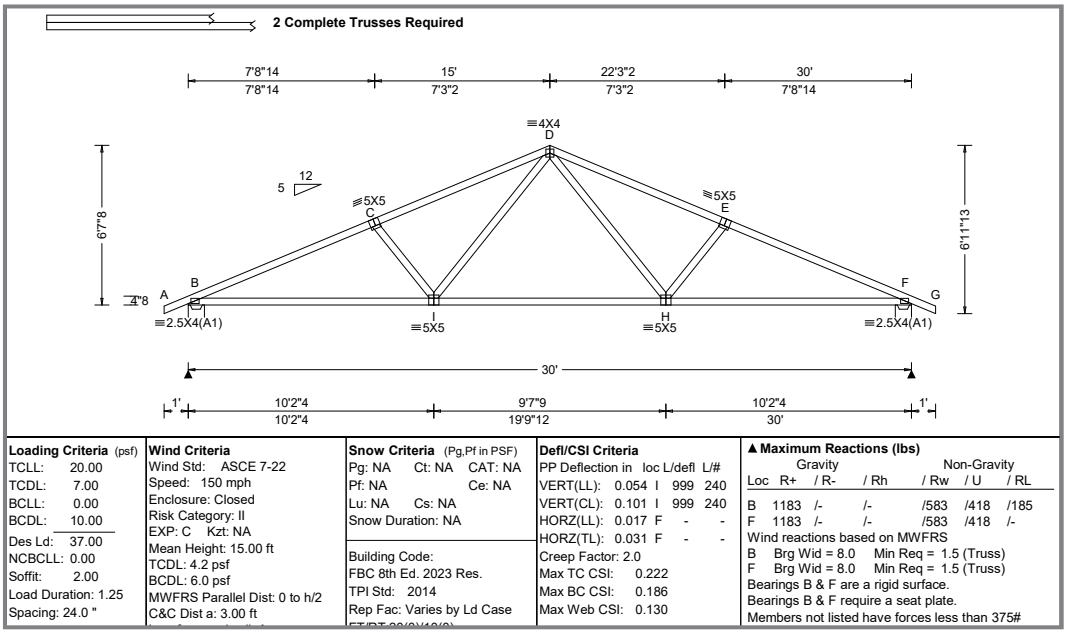



Figure 1. TDD of a Standard Roof Truss

Building engineers rely on maximum gravity reactions (R+) from Truss Design Drawings (TDD) to design structural components. These maximum reactions are calculated based on load combinations specified by building codes, representing the highest downward forces which allow engineers to determine the stability requirements for the structure. The 'R+' values are essential in determining the size and capacity of columns, lintels, dowels, foundations, as well as other structural elements.

## STANDARD TRUSSES

The standard loading of a 32-foot roof truss, as illustrated in Figure 1, is 20-7-0-10 with 24" spacing (see the Loading Criteria section). The IntelliVIEW® Software calculates and displays the maximum reactions of each bearing as 1,183 pounds (lbs) with a total of 2,366 lbs.

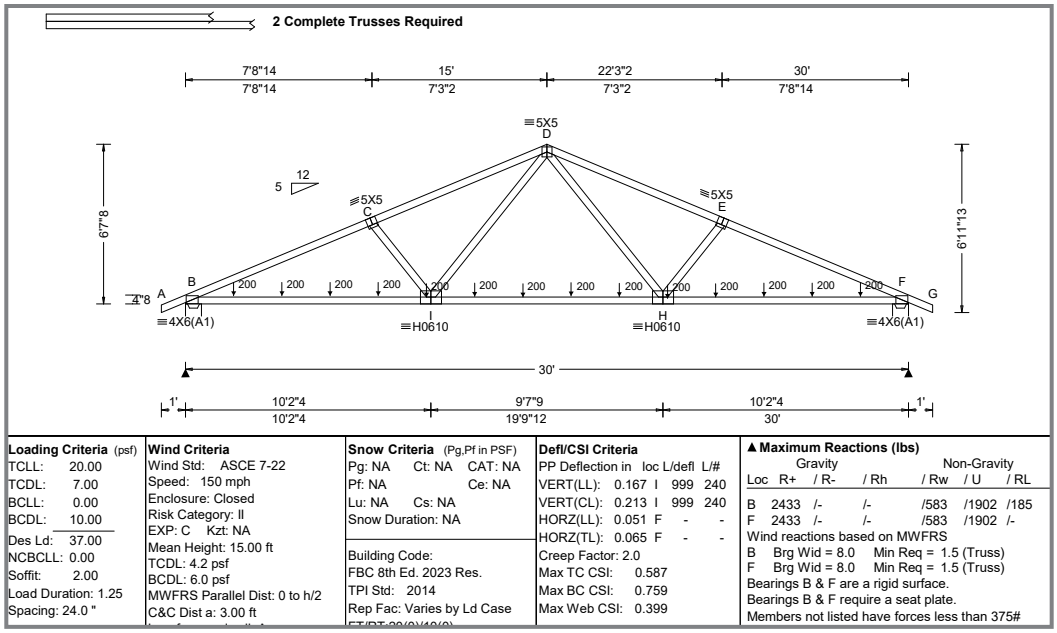
This result can be manually verified using the following formula:

$$Reactions = (TCLL + TCDL + BCLL + BCDL) \times truss\ span \times truss\ spacing$$

Equation with values:

$$(20 + 7 + 0 + 10)\ psf \times 32\ ft \times 2\ ft = 2{,}368\ lbs$$

This result is within 1% of the value displayed on the TDD, demonstrating consistency between hand calculations and the software results.




| Loading Criteria (psf) | | Wind Criteria | Snow Criteria (Pg,Pf in PSF) | Defl/CSI Criteria | ▲Maximum Reactions (lbs) |
|---|---|---|---|---|---|
| TCLL: | 20.00 | Wind Std: ASCE 7-22 | Pg: NA Ct: NA CAT: NA | PP Deflection in loc L/defl L/# | Gravity / Non-Gravity |
| TCDL: | 7.00 | Speed: 150 mph | Pf: NA Ce: NA | VERT(LL): 0.167 I 999 240 | Loc R+ / R- / Rh / Rw / U / RL |
| BCLL: | 0.00 | Enclosure: Closed | Lu: NA Cs: NA | VERT(CL): 0.213 I 999 240 | B 2433 /- /- /583 /1902 /185 |
| BCDL: | 10.00 | Risk Category: II | Snow Duration: NA | HORZ(LL): 0.051 F - - | F 2433 /- /- /583 /1902 /- |
| Des Ld: | 37.00 | EXP: C Kzt: NA | | HORZ(TL): 0.065 F - - | Wind reactions based on MWFRS |
| NCBCLL: | 0.00 | Mean Height: 15.00 ft | Building Code: | Creep Factor: 2.0 | B Brg Wid = 8.0 Min Req = 1.5 (Truss) |
| Soffit: | 2.00 | TCDL: 4.2 psf | FBC 8th Ed. 2023 Res. | Max TC CSI: 0.587 | F Brg Wid = 8.0 Min Req = 1.5 (Truss) |
| Load Duration: | 1.25 | BCDL: 6.0 psf | TPI Std: 2014 | Max BC CSI: 0.759 | Bearings B & F are a rigid surface. |
| Spacing: | 24.0 " | MWFRS Parallel Dist: 0 to h/2 | Rep Fac: Varies by Ld Case | Max Web CSI: 0.399 | Bearings B & F require a seat plate. |
| | | C&C Dist a: 3.00 ft | | | Members not listed have forces less than 375# |

Figure 2. TDD of Girder Truss with Point Loads on One Face

## GIRDER TRUSSES

Unlike standard trusses, a girder truss supports concentrated loads from other trusses or structural framing, making it an essential element in a building's design. These require stronger structural components to meet the higher load-carrying demands.

The hand calculation for a girder truss follows the same basic formula as standard trusses but includes concentrated loads. For instance, in Figure 2, the girder truss carries fourteen 200 lbs point loads at the bottom chord. The reaction can be calculated as follows:

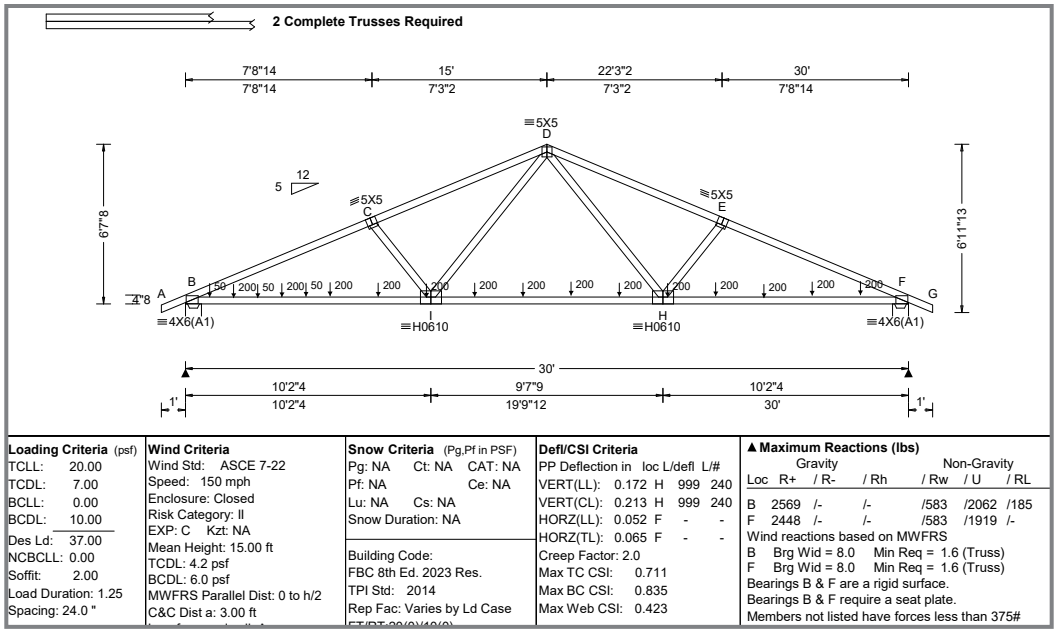
$$(20 + 7)\ psf \times 32\ ft \times 2\ ft + (0 + 10)\ psf \times 32\ ft \times 1\ ft + 14 \times 200\ lbs = 4{,}848\ lbs$$

The blue font is the top chord calculation, while the green font is the bottom chord calculation. The result is close to the TDD value of 4,866 lbs confirming the accuracy of the calculations.

Figure 3 examines a situation where point loads are applied to both faces of a truss. Specifically, three 50 lbs point loads are placed on one face, while fourteen 200 lbs point loads are attached to the other face. The reaction is calculated as:

$$(20 + 7)\ psf \times 32\ ft \times 2\ ft + 14 \times 200\ lbs + 3 \times 50\ lbs + 10\ psf \times (32 - 6)\ ft \times 1\ ft = 4{,}938\ lbs$$

While the top chord loading **(blue)** remains unchanged, the bottom chord loading **(green)** must account for the distribution on both faces.




**Loading Criteria** (psf)
TCLL: 20.00
TCDL: 7.00
BCLL: 0.00
BCDL: 10.00
Des Ld: 37.00
NCBCLL: 0.00
Soffit: 2.00
Load Duration: 1.25
Spacing: 24.0 "

**Wind Criteria**
Wind Std: ASCE 7-22
Speed: 150 mph
Enclosure: Closed
Risk Category: II
EXP: C Kzt: NA
Mean Height: 15.00 ft
TCDL: 4.2 psf
BCDL: 6.0 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 3.00 ft

**Snow Criteria** (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Building Code:
FBC 8th Ed. 2023 Res.
TPI Std: 2014
Rep Fac: Varies by Ld Case

**Defl/CSI Criteria**
PP Deflection in loc L/defl L/#
VERT(LL): 0.172 H 999 240
VERT(CL): 0.213 H 999 240
HORZ(LL): 0.052 F - -
HORZ(TL): 0.065 F - -
Creep Factor: 2.0
Max TC CSI: 0.711
Max BC CSI: 0.835
Max Web CSI: 0.423

**▲Maximum Reactions (lbs)**

| | Gravity | | | Non-Gravity | | |
|---|---|---|---|---|---|---|
| Loc | R+ | / R- | / Rh | / Rw | / U | / RL |
| B | 2569 | /- | /- | /583 | /2062 | /185 |
| F | 2448 | /- | /- | /583 | /1919 | /- |

Wind reactions based on MWFRS
B Brg Wid = 8.0 Min Req = 1.6 (Truss)
F Brg Wid = 8.0 Min Req = 1.6 (Truss)
Bearings B & F are a rigid surface.
Bearings B & F require a seat plate.
Members not listed have forces less than 375#

Figure 3. TDD of Girder Truss with Point Loads on Both Faces

For the face with fourteen 200 lbs point loads, the calculation remains as before. For the opposite face with three 50 lbs point loads, the remaining tributary area is calculated as: *10 psf × (32 – 6) ft × 1 ft*

Here, the 32 ft is the total truss span, while the unoccupied area accounts for the spacing of the point loads: *32 ft – (3 trusses × 2 ft)* . The calculated result of 4,938 lbs closely aligns with the TDD reaction value as well.

Typically, the maximum reactions shown on the TDD surpass the hand calculated values because IntelliVIEW Software considers all loading cases per code, displaying the highest reactions. If the TDD maximum reactions are lower than the hand calculations by more than 15 percent, truss designers should review the loadings on the truss. This discrepancy is often due to missing or underestimated loads on the girder truss. By understanding and verifying maximum gravity reactions (R+), engineers can help ensure accurate, safe, and efficient structural components.

## REFERENCE


1. Important check points for a truss design drawing. Good Connections®, Yoonhwak Kim, PE, Winter 2021
2. ASCE7-22 Minimum Design Loads and Associated Criteria for Buildings and other Structures
3. IntelliVIEW® Suite: The software solution for Component Manufacturers (alpineitw.com)

PROJECT
SPOTLIGHT

# ALPINE® TRUSSTEEL PROJECT

Project: Kendall County
Location: Kendall County, Illinois
Trusses Design & Manufactured: Cascade Mfg Co. (Cascade, Iowa)

Alpine TrusSteel Project featuring a custom barrel truss design.

## OVERVIEW

To bring this unique architectural feature to life and meet the requirements of this facility, custom barrel trusses were designed to provide a vaulted aesthetic by attaching the ceiling members directly to the bottom chord. The Alpine® TrusSteel cold-formed steel trusses, manufactured by Cascade Mfg Co., provided the perfect solution for all parties – the architect, structural engineer, and general contractor.

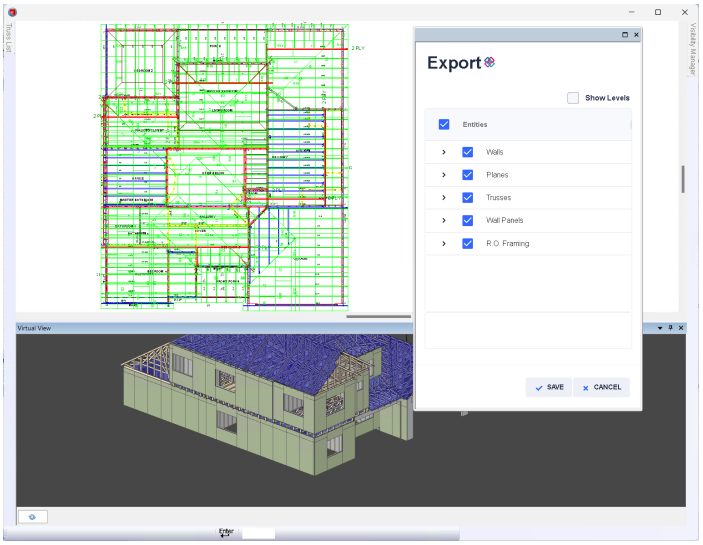
# NEW IFC EXPORT: BETTER COLLABORATION AND VISUALIZATION

The IFC (Industry Foundation Classes) export capability provides the foundation for a more connected, efficient approach to Building Information Modeling (BIM) workflows.

IFC export enables seamless data exchange across platforms, allowing multidisciplinary teams to collaborate and detect clashes early. The new IFC export capabilities with the IntelliVIEW® Suite (version 25.01) help builders and component manufacturers improve communication while ensuring models remain accurate. Identifying and resolving potential conflicts prior to construction reduces costs, prevents back charges, and minimizes disruptions to project timelines.

Collaboration using an IFC file offers numerous benefits, primarily interoperability, and data exchange. IFC is a standardized format designed to describe architecture, engineering and construction (AEC) industry data that helps enable teams to collaborate effectively across platforms. It ensures all stakeholders work from a unified model, reducing errors, enhancing decision-making, and improving project coordination.

With structured and precise IFC data, manufacturers can fabricate components with confidence. This level of accuracy streamlines the review process before production and enhances efficiency in construction workflows. The use of IFC export enables smooth data transfers while preserving the integrity of the building information model.




The IFC export functionality within the IntelliVIEW® Suite enables precise data exchange and interoperability.

As a standard format, IFC files can be opened in any IFC viewer for 3D visualization, allowing stakeholders to better understand the project and communicate effectively with trades onsite.

IFC export is a critical tool for improving collaboration, reducing errors, and ensuring that projects stay on track with minimal intervention. This new capability transforms how projects are executed while driving efficiency at every stage.


## Alpine® Linear Saw 5.0

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# STAY CONNECTED AND ANALYZE DATA WITH EASE

IntelliSheets and Dashboards provide teams access to real-time data and powerful visualization tools to boost efficiency and better insight.

Access IntelliSheets from any mobile device.

## WORK ANYWHERE WITH REAL-TIME JOB DATA

Users can now access IntelliSheets, including critical job information, job details, item information, and status history, all from a cloud-based application. The enhanced filter, sort, search, and export capabilities provide teams with on-the-go productivity and data flexibility. The recent enhancements (version 24.02) to IntelliSheets allow teams to upload and download essential files, such as delivery photos and component drawings, and mark up documents in real time—keeping everyone on the same page.

IntelliSheets eliminates bottlenecks and enhances collaboration to ensure teams have the information they need, wherever they need it. Sales teams gain instant access to job details, improving customer service and quoting accuracy. Drivers are able to

upload delivery documentation and retrieve job information on the road. Field teams can markup truss PDFs for repairs and send updates to the office instantly, reducing delays.

## MAKE CONFIDENT, DATA-DRIVEN DECISIONS FASTER

Dashboards is a centralized platform providing data visualization that integrates real-time critical business information from iCommand®, eShop, and iSource. Teams can create custom dashboards to monitor operations, analyze trends, to make confident, data-driven decisions faster.

Managers are able to configure dashboards with customized visual representations of data. Use grids, graphs, pie charts, maps, and calculated fields to uncover patterns for deeper insights into key metrics. Dashboards allow teams to track plant status, monitor employee performance, and identify areas for improvement – at a glance.

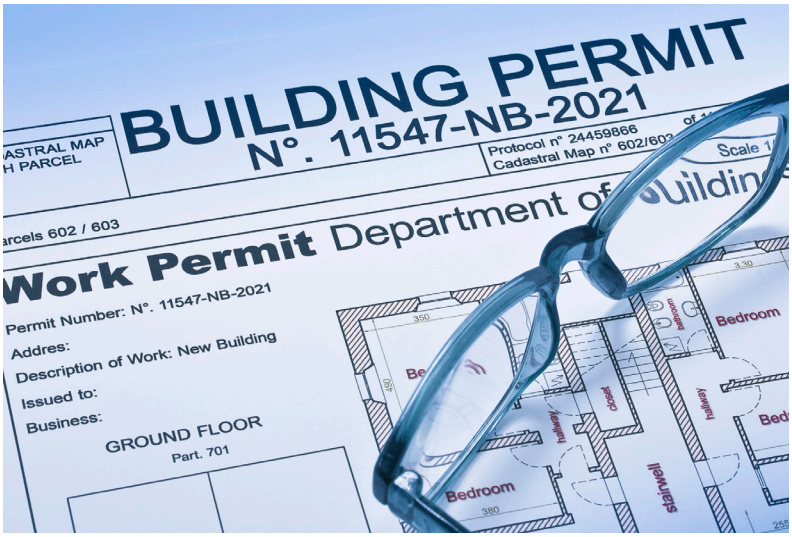
View Dashboards on mobile device in the field or on the plant floor.

With real-time access to job and production data, spot inefficiencies, optimize performance, and collaborate with ease.

## OPTIMIZE YOUR WORKFLOW

Empower your teams with real-time insights and seamless collaboration. Contact your Alpine® Sales Representative to see how IntelliSheets and Dashboards can optimize your workflow.






### New Building Code Highlights

Full Compliance with the New 2024 I-Codes:

- ASCE 7-22 Loading Standard for Wind, Snow & Tornado
- Out of Plane Wind Loading Analysis & Design
- New TPI 1-2022 Standard

Enhanced UI/UX for Wind and Snow Loading as well as TPI ply attachment, deflection, and reinforcement

ASCE ?

Check out the ASCE Hazard Tool

ASK ALPINE

# Q: WHAT IS THE DIFFERENCE BETWEEN ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING?

**A:** Artificial Intelligence (AI) is a range of various tools and algorithms designed to create systems capable of performing tasks that require human intelligence, such as learning, understanding, problem-solving, and decision-making. While AI opens a door to endless possibilities, understanding how it functions is key to leveraging its potential.

From a professional perspective, AI technology has the power to transform everyday workflows, allowing teams to focus on higher-value work. As Alpine® software continues to evolve, it introduces new opportunities and innovative tools to enhance designers' efficiency by removing tedious, time-consuming tasks.

Machine Learning (ML), on the other hand, is an essential subset of AI that focuses on training algorithms to recognize patterns and make predictions or decisions without explicit programming. It is a data-driven tool within the AI framework, continuously improving as it processes information over time. The more data, the better it performs.

Learn more about how AI can help support component manufacturing by boosting efficiency and automation in SBCA's latest article. **LEARN MORE**

# BOOSTING YOUR OFFSITE COMPONENT STRATEGY

**Article courtesy of SBCA – Structural Building Components Association**

## Foster a Culture that Promotes Design Creativity

Companies will have success providing value-added structural products when everyone on the team is looking for every opportunity on every project," says Tony Acampa, Design Team Lead at Shelter Systems Limited.

"It starts with that mindset and needs to be supported by a company culture that encourages it." Tony shares that companies shouldn't give that value away, and he encourages them to bid to the plans and then look for ways to add value once getting the contract.

To illustrate his point, Tony points to truss component headers. The idea is to design a parallel-chord truss to span rough openings in place of traditional solid-sawn lumber or engineered wood. "Trussed headers are easy to source and can provide additional benefits such as space for insulation in the exterior wall, or an opening to run vents or piping to the exterior of the building," says Tony. This approach can potentially reduce material costs or sourcing delays, as well as make small but incremental improvements to installation times in the field.

Another example is lay-on bracing forms for piggyback trusses. "Applying permanent bracing in the field on long span piggyback trusses can be time consuming and expose framers to fall hazards," says Zach Shepherd, Operations Manager at Engineered Building Design. "So, we developed manufactured bracing frames that lay between the long span trusses and the piggybacks." They use the same amount of lumber as would be required in the field,

but the benefit is that the bracing is already cut exactly to size and perfectly spaced. They can also be installed quickly to minimize exposure to fall hazards.

Dave Denoncourt, Truss Design & Sales Support Lead for LaValley Building Supply, points to a similar concept in lay- on gable framing. "You'd typically see an application for this either over step- down hip trusses from a roof peak down to a hip girder, or for framing out porch overhangs," he says. Again, the lay-on gable uses a similar amount of lumber as would be required in the field, but it's already pre-cut and pre-assembled to make the installer's job safer and easier. **CONTINUE READING**

Click here to read the full article "Boosting Your Offsite Component Strategy" in SBCA Magazine

# Need Help?

Solve a problem, read expert articles, watch online tutorials, and access top-notch support when you need it. At Alpine®, we provide our customers with the ultimate support experience. Our passionate Help Desk team is ready to assist every step of the way to ensure you always get the most out of our software.

Help Documentation

Solutions Network

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