



Loseke Technologies, Inc.

p r e s e n t s

A Tour of PrecisionPlus[©]

Building Software for the Future

Introduction

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Loseke Technologies, Inc. would like to take this opportunity to thank you for your interest

in PrecisionPlus[®], the leading metal building design, estimating and detailing software.

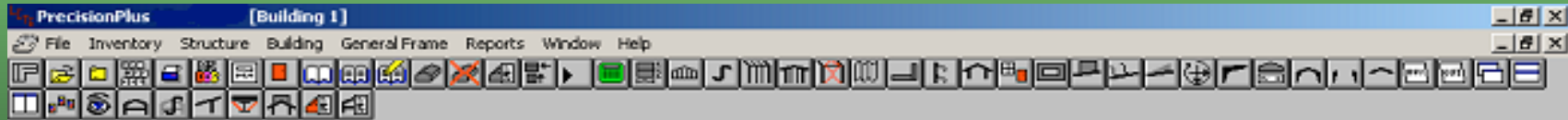
This tour will help you understand the power of PrecisionPlus[®] and the difference it can

make to your company. Enjoy the tour and contact us for a personal demonstration to

learn more about PrecisionPlus[®]!

Main Screen Menus And Icons

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PrecisionPlus[®] provides easy movement between screens. These menus and icons assist you in specifying requirements for the building. During the tour we will show you what some of these selections do. You will quickly learn to access the screens and input data. PrecisionPlus[®] supports for both imperial and metric input and output. This tour shows an imperial example.

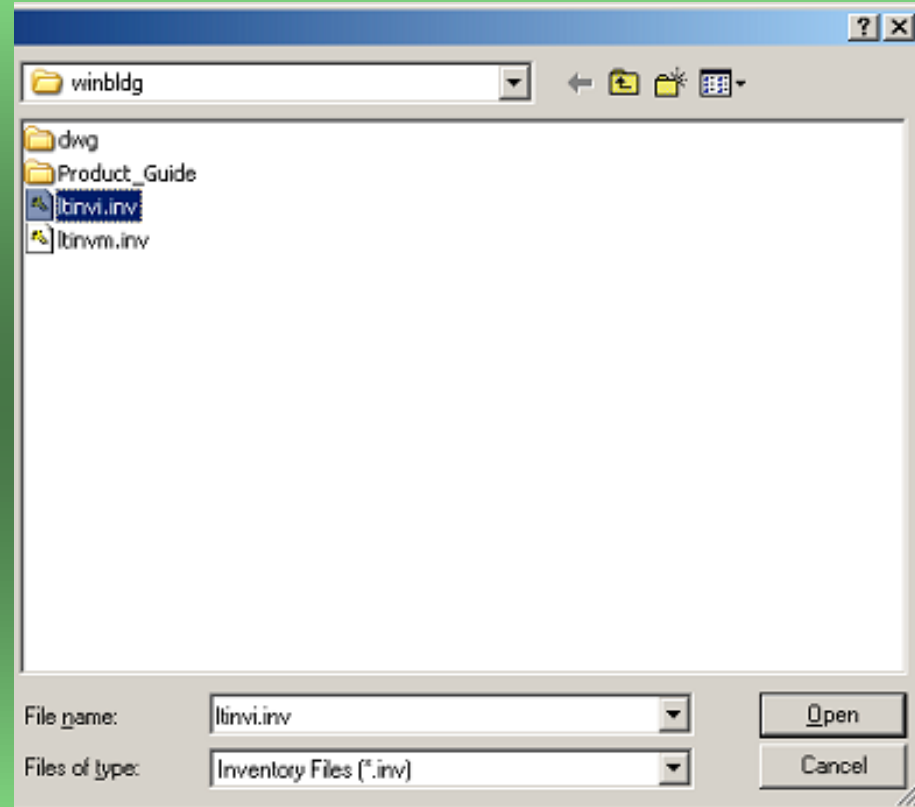
Inventory Selection

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Choose the inventory. The inventory holds information about your product line such as available materials and their costs.

The inventory is only one of many user-controlled databases that impact design, costing, detailing and plotting. By modifying these files, you can customize the system for your product line.



New Structure



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New Structure

Template:

NOBLDGI.STT

NOBLDGI.STT
NOBLDGM.STT

OK

Cancel

Description

Imperial structure with no buildings

On the screen at the left you will choose a structure template. The structure templates hold information such as code information and units preference. PrecisionPlus[®] allows you to create and save numerous structure templates.

New Building



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Here you will choose a building template. The building templates hold information such as general building shape and dimensions, panel preferences, etc. PrecisionPlus[®] allows you to create and save numerous building templates.

The screenshot shows a dialog box titled "New Building". It contains the following elements:

- Template:** A text input field at the top.
- Template List:** A list box containing the following templates:
 - leantoi.bl
 - mod1i.bl
 - mod2i.bl
 - SCCLEARI.BLT
 - sslopei.bl
 - SSMOD1I.BLT
 - tcclari.bl
 - tcssi.bl
- Buttons:** "OK" and "Cancel" buttons on the right side.
- Recalculate Load Combinations:** A checked checkbox.
- Building Name:** A text input field.
- Description:** A larger text input field at the bottom.

Main Screen Quick Reference Box

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The design of PrecisionPlus[®] makes it easy to access information and input screens. A glance at this quick reference box will give you basic geometric information about your building. If this were a non-symmetrical building, right roof slope and the peak location would be added to the box.

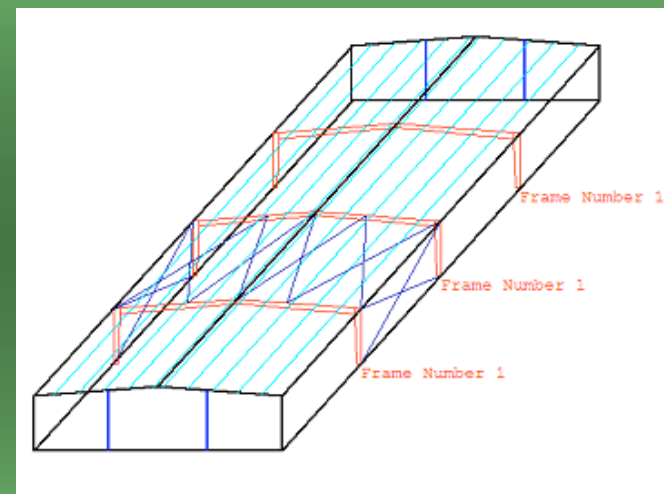
Width	50.000
Length	100.000
LSW Height	12.000
RSW Height	12.000
Left Slope	1.000

Main Screen Building Sketch

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This building sketch gives even more information about your building. Here you see the general shape of the building, the number of mainframes, interior columns, endwall columns, general shape of the frames and much more.



Structure Loading

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Loads to the structure are specified on this screen.
Wind load can be input as velocity or as pressure.
(Collateral loads, roof snow load and additional loads
such as point loads can be input on other screens.)

Loads

Live Load to Frames: PSF

Live Load to Purlins: PSF

Ground Snow Load: PSF

Wind Load: MPH

Include Snow Load in Building Weight in Seismic Calculations

Roof Snow Load usage factor

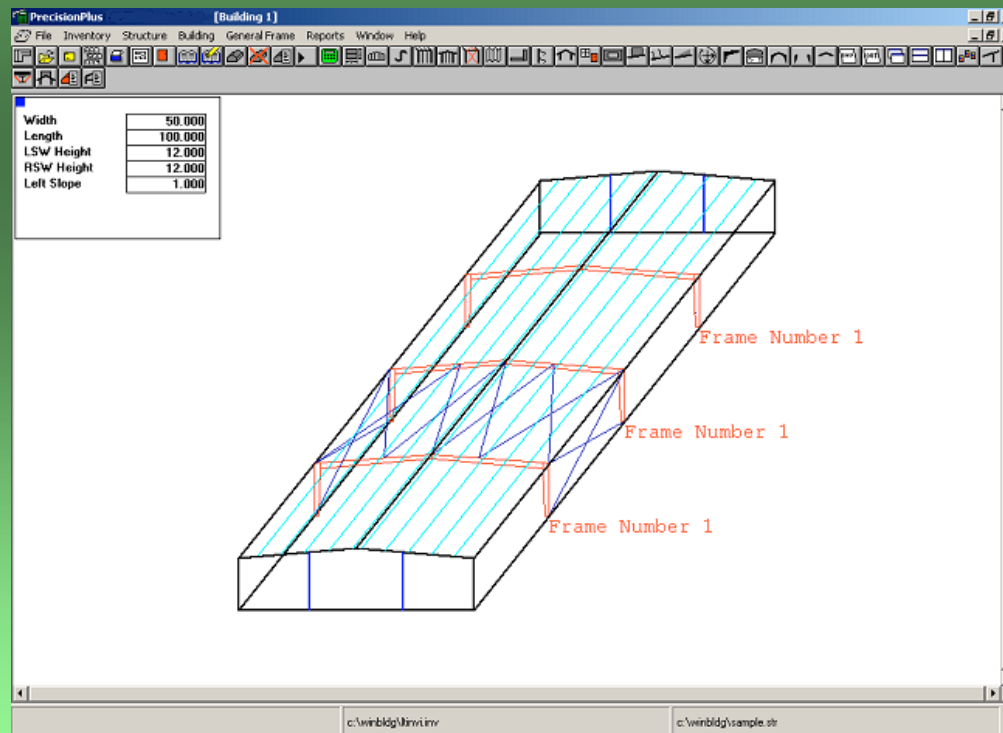
Floor Live Load usage factor

PrecisionPlus[®] Main Screen

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Here is a full view of the PrecisionPlus[®] main screen, including icons for each of the input options. The user's guide and other documentation can be viewed at any time by selecting Help.



Design Your Building

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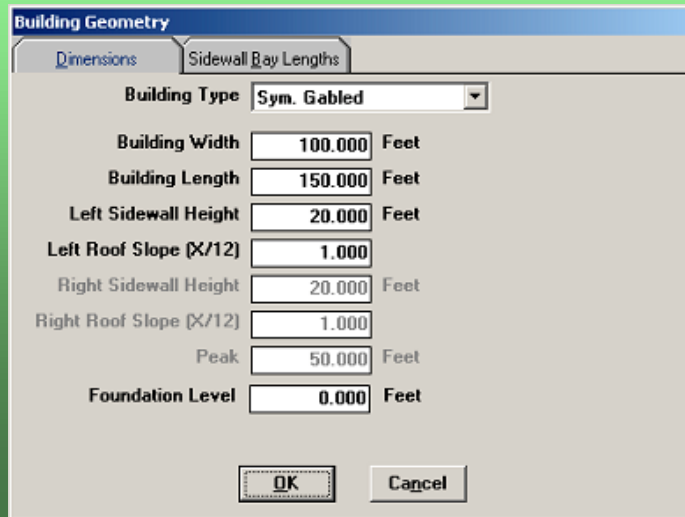
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Now we will begin modifying our building. We will make this 50 X 100 foot tapered column clear span into a 100 X 150 foot building with an off-set interior column, a opening for an overhead door, a window and an overhang.

Building Geometry

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Building Geometry

Dimensions

Building Type: Sym. Gabled

Building Width: 100.000 Feet

Building Length: 150.000 Feet

Left Sidewall Height: 20.000 Feet

Left Roof Slope (X/12): 1.000

Right Sidewall Height: 20.000 Feet

Right Roof Slope (X/12): 1.000

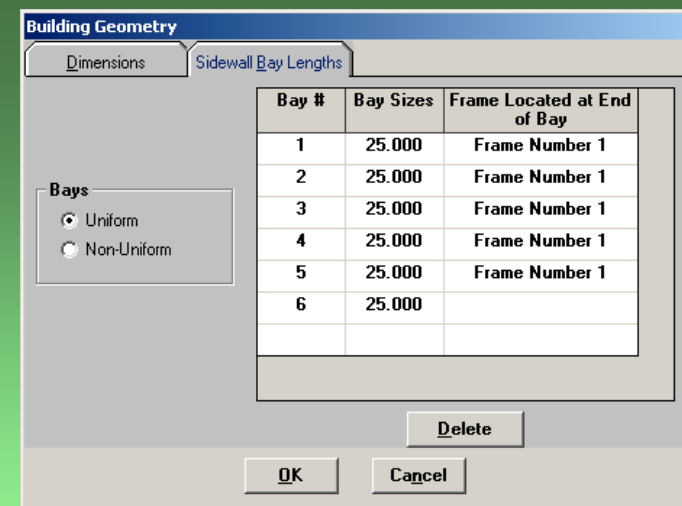
Peak: 50.000 Feet

Foundation Level: 0.000 Feet

OK Cancel

The building dimensions are specified on the Dimensions tab. We have specified a 100 foot width, 150 foot length, and 20 foot height.

Bay spacing is input on the Sidewall Bay Lengths tab. The program has suggested uniform bay spacing, but you have the option to change to Non-Uniform if desired.



Building Geometry

Sidewall Bay Lengths

Bays

Uniform

Non-Uniform

Bay #	Bay Sizes	Frame Located at End of Bay
1	25.000	Frame Number 1
2	25.000	Frame Number 1
3	25.000	Frame Number 1
4	25.000	Frame Number 1
5	25.000	Frame Number 1
6	25.000	

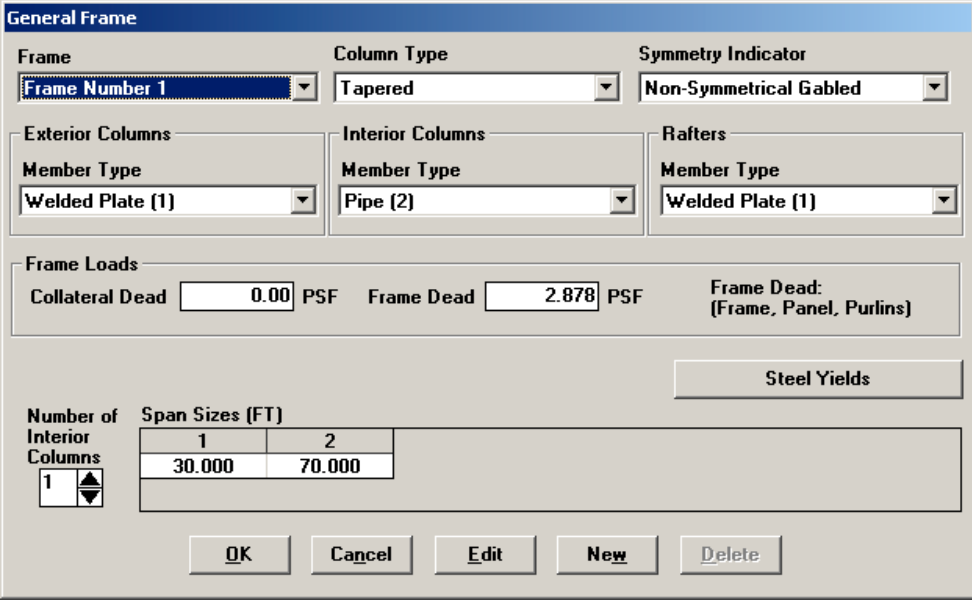
Delete

OK Cancel

General Frame



We may specify as many as 9 interior columns on the General Frame screen. On this screen you may also specify Steel Yields and Frame Loads. We have specified the frame to be non-symmetrical, with one interior column 30 feet from the left sidewall. For more complex buildings, we could define and locate different frames at different locations.



The screenshot shows the 'General Frame' dialog box with the following settings:

- Frame:** Frame Number 1
- Column Type:** Tapered
- Symmetry Indicator:** Non-Symmetrical Gabled
- Exterior Columns Member Type:** Welded Plate (1)
- Interior Columns Member Type:** Pipe (2)
- Rafters Member Type:** Welded Plate (1)
- Frame Loads:** Collateral Dead: 0.00 PSF, Frame Dead: 2.878 PSF, Frame Dead: (Frame, Panel, Purlins)
- Steel Yields:** Button
- Number of Interior Columns:** 1
- Span Sizes (FT):**

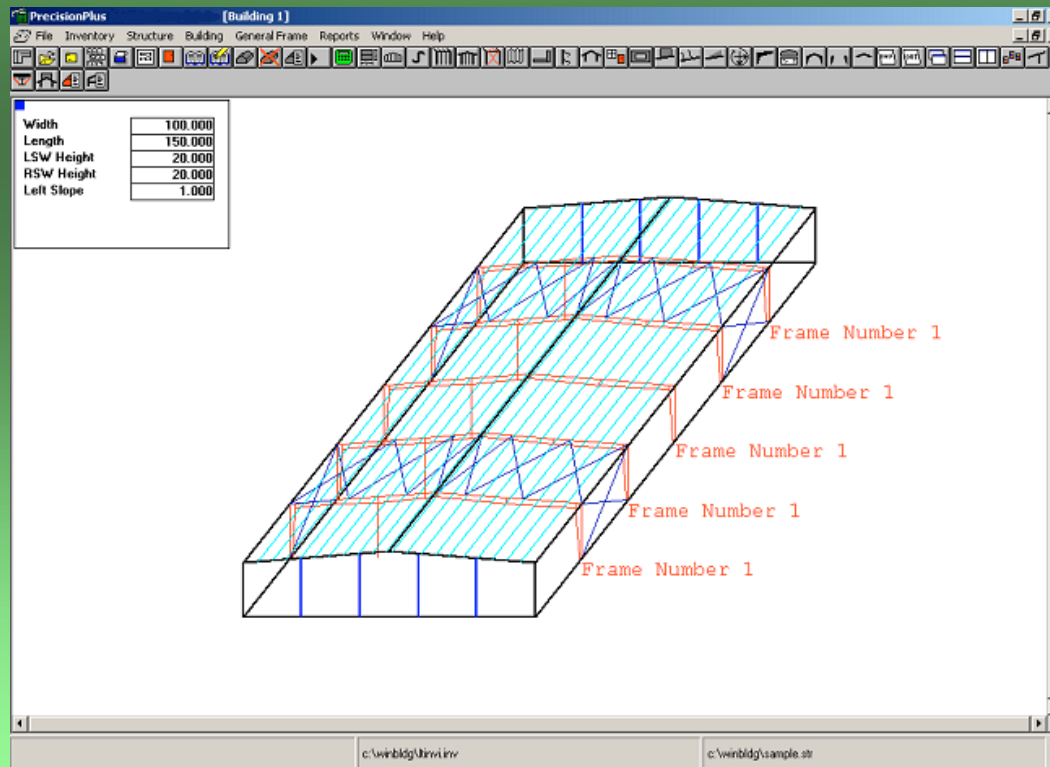
	1	2
	30.000	70.000

Buttons: OK, Cancel, Edit, New, Delete

Main Screen



PrecisionPlus[©] has created a sketch according to the data we input.



Openings and Overhangs

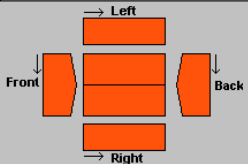
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On the Openings screen you may specify parameters for the door and the window. The Overhangs input is similar. Here you define the parameters for your overhang. In both cases, just click on a wall and type in the dimensions. Next you will see the changes to the sketch.

Wall	Qty	Location	Length	Header	Sill	Indicator	Cover	Jamb Top
Right Sidewall	1	55.000	14.000	14.000	0.000	Factory Located	Standard	Full Length
Right Sidewall	1	82.500	10.000	11.000	4.000	Factory Located	Standard	Full Length

→ Left



→ Right

Delete

Indicator

Field Located

Factory Located

Omit Near Jamb

Omit Far Jamb

Omit Both Jamb

Cover Type

Standard

Special

Jamb Top

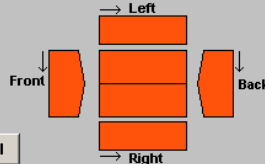
Full Length

Stop at Girt

OK
Cancel

Wall	Location (FT)	Length (FT)	Width (FT)	Dead Load (PSF)	Soffit	Overhang ID
Front Endwall	0.000	100.000	6.000	2.000	<input type="checkbox"/>	1

→ Left



→ Right

Delete

Number of overhang braced locations

Front Endwall:

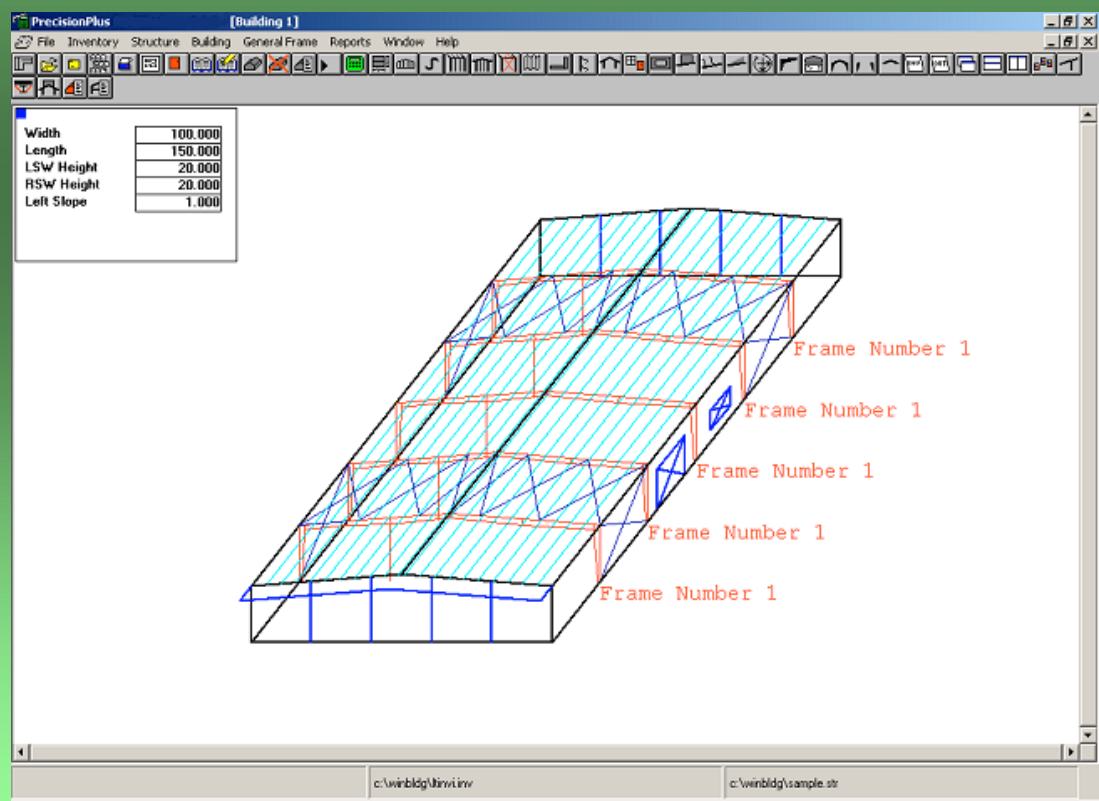
Back Endwall:

OK
Cancel

Main Screen



On the main screen the sketch has now been adjusted to show our overhang and openings.



Accessories Screen

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Here we choose the desired accessories.
Click on a surface, select the accessory
category and specific accessory. Then
type in the related quantity.
Now we are ready to run the building to
generate the reports and plots.

Accessories

Surface	Accessory	Qty
Right Sidewall	Overhead Door 14X14	1

☒ SkyLights
☒ Windows
☒ Doors
☒ Vents
☒ Louvers
☒ Sealants

Delete

→ Left
Front ↓
Left Roof
Ridge
Right Roof
↓ Back
→ Right

OK Cancel

Run Building Screen

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Design Frame

Design Frames from Input
 Input Frame Weights
 Design Frame Only

Frame
Frame Number 1

Output Option
Complete Building

Run plotting when finished

General FrameWeight Girt/Purlin Depth

OK Cancel

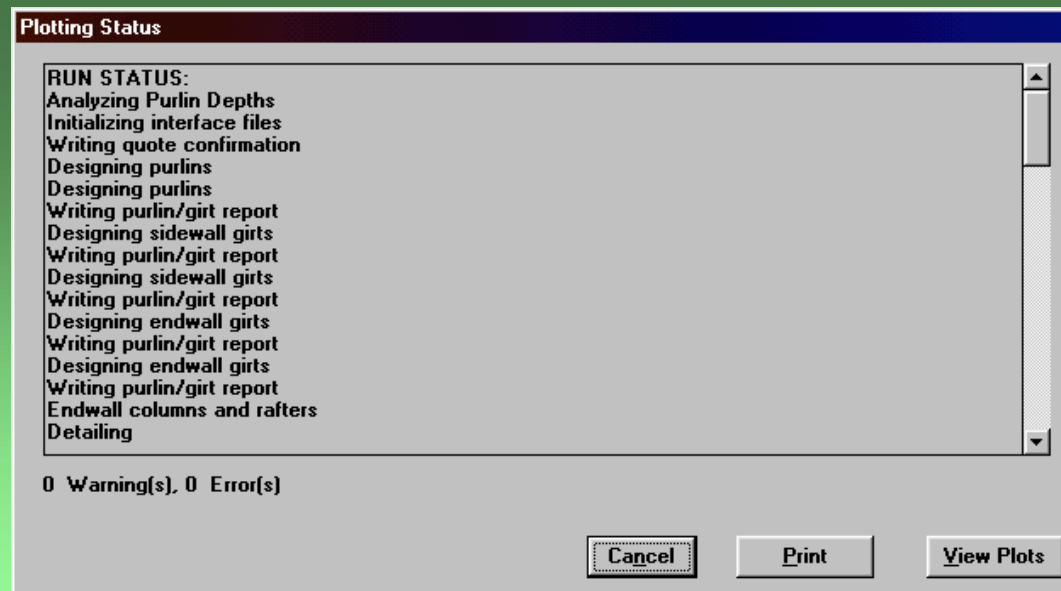
This screen allows you to tell the program how you want the building processed. You can choose to run the entire building using the data you input on the previous screens, design the building using a specified frame weight, or design only the mainframes. After running and plotting the building you will be shown a status box for the building.

Building Status Screen

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You will use this screen to review the processing of your building.
If the program was unable to complete the run with your input and inventory, it will report warning or error messages.
Your plots and reports are now ready for viewing and printing.



Output Reports

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This list is a sampling of the costing, design and hole locations reports generated by the program for a basic building. Contact us if you would like to receive sample output reports.

- Quote Confirmation
- Management Report
- Sales Report
- Shipper
- Frame Design
- Frame Geometry
- Connection Design
- Section Sizes (Secondary Framing)
- General Geometry (Endwall Columns and Rafters)
- Purlin / Roof Strut Design
- Eave Strut Design
- Sidewall Girt Design
- Endwall Girt Design
- Hole Locations (for Cold-formed Sections)



This list is a sampling of the plots generated by the program for a basic building. These are output in DWG file format. Contact us if you would like to receive sample output plots.

- Framing Plans for Roof and Walls
- Framing Details
- Anchor Bolt Setting Plan and Reactions
- Roof Panel Layout
- Wall Panel and Trim Layout
- Endwall Column and Rafter Manufacturing (Shop) Drawings
- Mainframe Manufacturing (Shop) Drawings
- Mainframe Cross Section

Powered by
RealDWG™

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Conclusion

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This concludes our short tour of Loseke Technologies, Inc.'s integrated system, PrecisionPlus[®].

Next we will show you some of the input screens for the stand-alone design programs.

Then you will see our contact information. We would be pleased to meet with you to discuss

your company's specific needs and how our products and services can assist you.

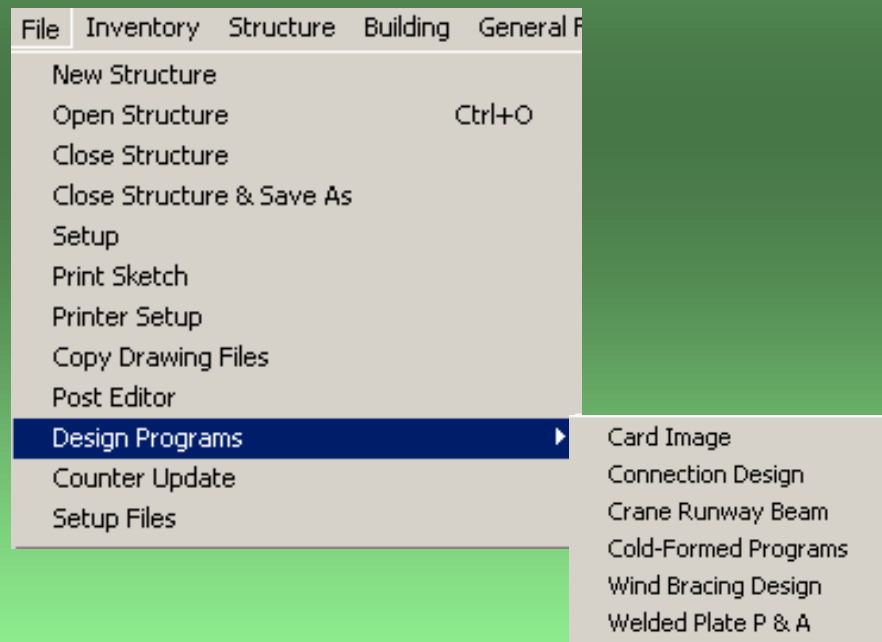
Stand-alone Design Tools

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The stand-alone design tools are accessed under “File, Design Programs” inside PrecisionPlus[®]. We will look at Connection Design (for moment connections), Crane Runway Beam, Cold-Formed Programs and Welded Plate P & A (Properties and Allowables).



Connection Design

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Connection Design Input
Save Options Run Connection Option

Connection Description TEST CONNECTION

Connection Location
 Column - Rafter
 Rafter - Rafter

Connection Orientation
 Moment Perpendicular
 Moment Vertical
 Moment Horizontal

Yield Stress Values
 Flange Yield 50.00 ksi
 Web Yield 50.00 ksi
 Weld Yield 70.00 ksi

Column Details		Rafter Details	
Web Depth	12.0000 in	Web Depth	12.0000 in
Web Thickness	0.1250 in	Web Thickness	0.1345 in
Outside Flange Width	8.0000 in	Outside Flange Width	6.0000 in
Outside Flange Thickness	0.2500 in	Outside Flange Thickness	0.2500 in
Inside Flange Width	8.0000 in	Inside Flange Width	6.0000 in
Inside Flange Thickness	0.2500 in	Inside Flange Thickness	0.2500 in

Load set OK Cancel

Load Set

Load Set Description

Set#	Moment (kips-ft)	Axial (kips)
1	200.0000	5.0000
2	-300.0000	-7.0000
3		

Punch Drill Option
 Punch Drill

Design Details
 Maximum Connection Plate Thickness for 4-bolt Design 1.00 in
 Maximum Bolt Diameter for 4-bolt Design 1.00 in
 Allowable Overstress Factor for Design 1.05

Design Options
 Use 8 bolt for both flanges if 4 bolt limits are exceeded
 Use 8 bolt for outside flange only if 4 bolt limits are exceeded
 Use 4 bolt connection only

OK Cancel

Crane Runway Beam Design

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Default imp - Crane Runway Beam Design

File Inventory Reports View Help

Bridge

Span	50	ft
Lift Capacity	40	kips
Bridge Wt	34.8	kips
Trolley Wt	7.4	kips
Wheel Ld	29.6	kips
Wheel Base	10	ft
Separation Dist		ft

Material Yield Strength

Flange	50	ksi
Web	50	ksi
Channel	50	ksi
M or W	50	ksi

Impact Factors

Lateral	0.2
Vert Design	0.1
Vert React	0
Long React	0.1

Runway Beam

Beam Span	25	ft
Min Depth	26	in
Max Depth	60	in
Shear Stif Spacing	0	in
Section Type	Channel - Mill	

Design Constraints

Deflection	600	L/___
Reqd Lift Ht	20	ft
AOS	1.05	

Description (20 char max)

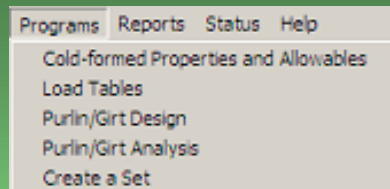
Default imp

Run Exit

Ready

Cold-formed Programs

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Properties and Allowables

Cold-Formed Properties and Allowables

Type of Section	Z-SECTION	1	CB
2.5	Flange Width (IN) Top	20	KLX (FT)
2.5	Flange Width (IN) Bottom	1	KLY (FT)
8	Depth (IN)	50	Lip Angle (0 = no lip)
14	Stretch Out or Lip Length (IN)	90	Web Angle
0.1875	Inside Radius (IN)	0	Slope Top Flange
57	FY (KSI)	0	Slope Bottom Flange

Gauge and Thickness

1	Gauge 1	16	Thickness 1 (IN)	0.06
	Gauge 2	0	Thickness 2 (IN)	0
	Gauge 3	0	Thickness 3 (IN)	0
	Gauge 4	0	Thickness 4 (IN)	0
	Gauge 5	0	Thickness 5 (IN)	0
	Gauge 6	0	Thickness 6 (IN)	0
	Gauge 7	0	Thickness 7 (IN)	0
	Gauge 8	0	Thickness 8 (IN)	0
	Gauge 9	0	Thickness 9 (IN)	0
	Gauge 10	0	Thickness 10 (IN)	0

Run Cancel



Purlin/Girt Design

Design

Geometry

Spacing (FT)

Number of Bays

Roof Slope 1/12

Building Width (FT)

Sidewall Height (FT)

Frame Type

Bearing Lengths

At Front Endwall (IN)

At Back Endwall (IN)

At Interior Frames (IN)

Lateral Bracing

Outside (Top) Flange

Inside (Bottom) Flange

At Support

Cantilever Lengths

At Front Endwall (FT)

At Back Endwall (FT)

Type of Run

Bays

Bay Number	Bay Length (FT)	Number of Brace Locations
1	25	4
2	25	4
3	25	4
4	25	4

Cantilever

Front

Back

Unif D L PSF

Front

Back

Number of Brace Locations

Front

Back



Purlin/Girt Analysis

Analysis

Geometry

Spacing (FT)

Number of Bays

Roof Slope 1/12

Building Width (FT)

Sidewall Height (FT)

Frame Type

Bearing Lengths

At Front Endwall (IN)

At Back Endwall (IN)

At Interior Frames (IN)

Lateral Bracing

Outside (Top) Flange

Inside (Bottom) Flange

At Support

Cantilever Lengths

At Front Endwall (FT)

At Back Endwall (FT)

Type of Run

Set Selection

Bays

Bay #	Section #	Bay Lgth (FT)	# Br Locs	Left Lap (FT)	Right Lap (FT)
1	2	25	4	0	2
2	1	25	4	2	1
3	1	25	4	1	2
4	2	25	4	2	0

Cantilever

Front

Back

Section

Unif D L PSF

Number of Brace Locations

Lap Left/Right (FT)

1 - 8Z2.5 6

2 - 8Z2.5 4

3 - 8Z2.5 2

Welded Plate P & A



Properties and Allowables (1 of 1)

File Reports Units

Flange Details			
Width	{in}	Left <input type="text" value="8"/>	Right <input type="text" value="10"/>
Thickness	{in}	<input type="text" value="0.25"/>	<input type="text" value="0.5"/>
Minor Axis Buckling Len.	{in}	<input type="text" value="30"/>	<input type="text" value="30"/>
Bending Coefficients		<input type="text" value="1"/>	<input type="text" value="1"/>

Web Details	
Height	{in} <input type="text" value="15"/>
Thickness	{in} <input type="text" value="0.275"/>

Material Properties	
Flange Yield	{KSI} <input type="text" value="50"/>
Web Yield	{KSI} <input type="text" value="50"/>

Other Details	
Major Axis Buckling Len. KLx	{in} <input type="text" value="127.2"/>
Spacing Between Stiffeners	{in} <input type="text" value="0"/>

Forces	
Axial	{Kips} <input type="text" value="8.76"/>
Shear	{Kips} <input type="text" value="4.43"/>
Moment	{Kips-Ft} <input type="text" value="43.6"/>

Thank you for your interest in Loseke Technologies, Inc.'s software products. If you are interested in systems with cold-formed c-section mainframes, ask us about the Cold-formed Mainframe program. We also offer services including custom programming. We look forward to the opportunity to serve you.

Loseke Technologies, Inc.

All you need to know!



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