SHOP DRAWING SUBMITTAL

200 E. Mallard Drive Boise, Idaho 83706, www.RedBuilt.com

Project Number: 142840

Project Name: Chick-fil-A #5248

Project Address: 1025 SW Jefferson Street
LEE'S SUMMIT, MO 64081

Project Description: Roof Package

Date: 10/8/2025
10:36:43 AM

PROJECT INFORMATION:

Current Submittal: APPROVED FOR PRODUCTION

REFERENCE DOCUMENTS:

DISCIPLINE	BY	DATE	REV#	TYPE	SHEET SET
Architectural	Chipman Design Architecture Inc.	7/18/25	1	Construction	Full Set
Structural	Britt, Peters & Associates	7/18/25	1	Construction	Full Set
Mechanical	Kurzynske & Associates	7/18/25	1	Construction	Full Set

PROJECT CONTACTS:

Your primary contact:

Project Manager:
Phil Hoover
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Your secondary contact:

Sales Representative:
Nick Wolff
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nwolff@RedBuilt.com

Digitally signed by Aaron J Waltman

Material List and Calculation Pages: **1-27**

Shop Drawing Pages: **R001-R500**

Our responsibility is limited to the design of RedBuilt products in accordance with the above referenced documents based on design loads specified by the Engineer Of Record.

IMPORTANT (Please Read)

- Provide this RedBuilt Submittal Package to the contractor/installer and Design Professional(s) of Record.
- Ensure the RedBuilt Submittal Package is verified and/or corrected for accuracy, including all clouded items.
- Materials furnished by RedBuilt are limited to those included in the material list provided herein.
- Installation of the materials is the sole responsibility of the installer.

Please return reviewed drawings to your Project Manager with Engineer Of Record stamped instructions.

Material List

RedBUILT™ Engineered Wood Products

RB Number	142840
Project Name	Chick-fil-A #5248
Location	Lee's Summit, MO
Delivery	D1: Roof
Plant	Delaware
Operator	Adam Stritenberger
Office	Delaware
Comment	
Status	**Approved For Production**
Report Type	Customer

AFP

RedBuilt™ Open-Web Products — ***Trusses***

Quantity	Type	Series	Depth(s)	Appl.	Profile	Clear Span	Pr. Length	Pr. Load	Fastnrs. Left	Fastnrs. Right		Footage	Notes
16	S1	Red-S	28	115%	Parallel	39'-2.50"	40.0	149.8	8-SDS1/4x3	8-SDS1/4x3		640.0	
7	S1S	Red-S	28	115%	Parallel	39'-2.50"	40.0	149.8	8-SDS1/4x3	8-SDS1/4x3		280.0	
4	S1W	Red-S	28	115%	Parallel	39'-2.50"	40.0	149.8	8-SDS1/4x3	8-SDS1/4x3		160.0	
6	S2	Red-S	28	115%	Parallel	39'-8.50"	41.0	162.8	8-SDS1/4x3	8-SDS1/4x3		246.0	
5	S2S	Red-S	28	115%	Parallel	39'-8.50"	41.0	162.8	8-SDS1/4x3	8-SDS1/4x3		205.0	
14	S3	Red-S	28	115%	Parallel	42'-10.00"	44.0	167.2	8-SDS1/4x3	8-SDS1/4x3		616.0	
4	S3S	Red-S	28	115%	Parallel	42'-10.00"	44.0	167.2	8-SDS1/4x3	8-SDS1/4x3		176.0	
56	• • • •	Red-S	• • • • • • • •	• • • • • • •	• • • • • • • • •	• • • • • • •	• • • • •	• • • • • • •	• • • • • • •	• • • • • • •	*Total*	2323.0	

RedBuilt™ Open-Web Products — ***Bottom Chord Nailer***

Lineal Ft	Type	Size	Grade										Notes
384		2x4											

RedBuilt™ Open-Web Products — ***Strut Bracing***

Quantity	Type	Style	Spacing	Series									Notes
8		W5	16	Red-S									
4		W5	19.2	Red-S									
4		W5	24	Red-S									
40		W5	32	Red-S									

RedBuilt™ Open-Web Products — ***Cross Bracing***

Quantity	Type	Style	Length		Bend Profile	Uplift Application	Depth	Spacing				Notes
58		B2	39.000			Wind Uplift <30"	28					
144		B3R	41.000				28					

RedBuilt™ Open-Web Products — ***Load Transfer Blocks***

Quantity	Type	Series	Size	Depth		Material	Net Length				Notes
60		Red-S	Single	28		SS	23.40				

RedLam™ LVL Products — ***LVL Beams***

Quantity	Type	Size	Length	Grade	P.E.T.	Multi-Ply Substitution				Footage	Notes
1	RB01	5.25x20	20'-0.00"	2.0E	No	Allowed				20.0	
4	RB02	1.75x7.25	24'-0.00"	2.0E	No	N/A				96.0	
16	RB03	1.75x11.88	16'-0.00"	2.0E	No	N/A				256.0	
2	RB06	1.75x18	41'-0.00"	2.0E	No	N/A				82.0	
1	• • • •	5.25x20	• • • • • • • •	• • • • • • • • • • • • • • • •	• • • • • • •	• • • • •	• • • • • • • • • • • • • • • • • • • •		*Total*	20.0	
4	• • • •	1.75x7.25	• • • • • • • •	• • • • • • • • • • • • • • • •	• • • • • • •	• • • • •	• • • • • • • • • • • • • • • • • • • •		*Total*	96.0	
16	• • • •	1.75x11.88	• • • • • • • •	• • • • • • • • • • • • • • • •	• • • • • • •	• • • • •	• • • • • • • • • • • • • • • • • • • •		*Total*	256.0	
2	• • • •	1.75x18	• • • • • • • •	• • • • • • • • • • • • • • • •	• • • • • • •	• • • • •	• • • • • • • • • • • • • • • • • • • •		*Total*	82.0	

RedBuilt™ Products				*Plywood Edge Blocking*						
Quantity	**Type**	**Size**	**Length**	**Z-Clips**	**Grade**	**Spacing**	**Series**			**Notes**
50		2x4	12.438	One End		16	Red-S			
20		2x4	12.438	Both Ends		16	Red-S			
30		2x4	15.625	One End		19.2	Red-S			
20		2x4	20.438	One End		24	Red-S			
30		2x4	28.438	One End		32	Red-S			
20		2x4	28.438	Both Ends		32	Red-S			
50		2x4	44.438	One End		48	Red-S			

		Hardware		
Quantity	**Type**	**Description**		**Notes**
1.0 lb		8dx1.5" Nails (0.131"x1.5")		
25.0 lb		10dx1.5" Nails (0.148"x1.5")		
896		SDS1/4x3 Screw		
180		PEB Z-Clip (1.5")		
60		A34 Angle		
16		A35 Framing Anchor		

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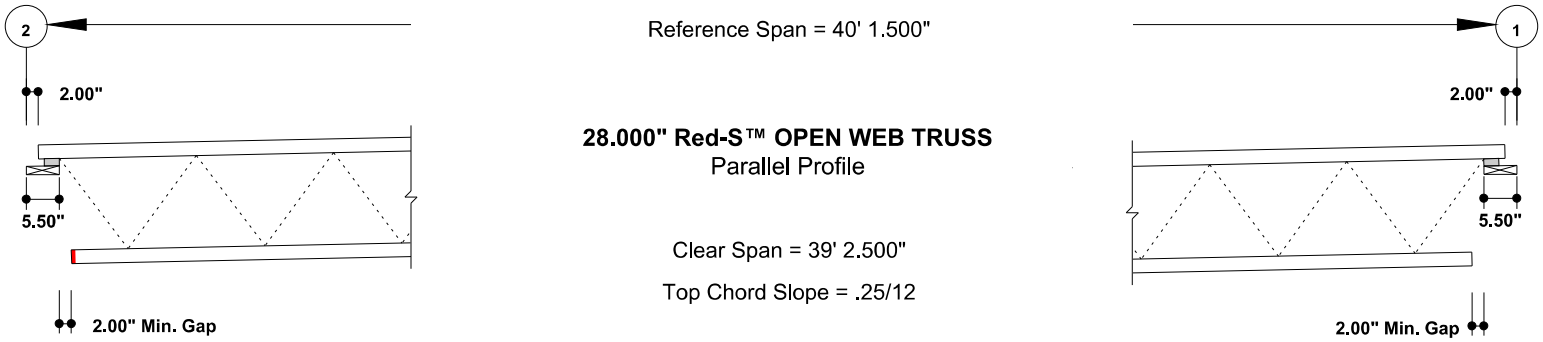
Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S1
Qty: 16
Project Number: 142840

THIS PRODUCT MEETS OR EXCEEDS THE SET DESIGN CONTROLS FOR THE APPLICATION AND LOADS LISTED



28.000" Red-S™ OPEN WEB TRUSS
Parallel Profile

Clear Span = 39' 2.500"

Top Chord Slope = .25/12

All dimensions are horizontal.

Product diagram is conceptual.

LOADS

Analysis for Open-web Member Supporting SNOW Structural Classification.
Loads (psf): 20 Snow at 115% duration, 8 Dead (top chord), 12 Dead (bottom chord), @ 32.000" O.C. and:

LOAD GROUP #1 @ 32.500" O.C.-Wind Uplift

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	-43.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Uplift ULT
Strap(lbs)	W(1.60)	1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	-672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(plf)	W(1.60)	-584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)

LOAD GROUP #2 @ 23.375" O.C.-2nd from LEFT - Parallel Drift

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	6' 8.000" to 18' 6.000"	Adds to	BC	Soffit
Uniform(psf)	S(1.15)	34.4	0	5.500" to 39' 5.500"	Adds to	TC	Parallel Drift

LOAD GROUP #3 @ 25.375" O.C.-10th from LEFT - AC#3

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	6' 8.000" to 18' 6.000"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	241	17' 10.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)
Point(lbs)	S(1.15)	0	241	24' 8.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S1
Qty: 16
Project Number: 142840

LOAD GROUP #4 @ 19.500" O.C.-12th from Right - Condensers

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	170	6' 7.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	170	10' 2.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(plf)	W(1.60)	584	0	3' 10.000"	Adds to	TC, on chord(s)	Parapet Brace - KN6

LOAD GROUP #5 @ 32.500" O.C.-10th from Right - AC#4 & Condensers

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	184	6' 7.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	170	10' 2.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	250	27' 5.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)
Point(lbs)	S(1.15)	0	250	34' 11.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)

LOAD GROUP #6 @ 24.125" O.C.-S1W - single of double truss

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	250	27' 5.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)
Point(lbs)	S(1.15)	0	250	34' 11.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)
Point(lbs)	S(1.15)	0	100	22' 8.500"	Adds to	TC, on chord(s)	Roof Hatch (200#/2)

LOAD GROUP #7 @ 31.125" O.C.-21 from LEFT - AC#2

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	19' 1.000" to 23' 5.500"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	319	11' 2.000"	Adds to	TC, on chord(s)	AC-2 (2552#/8)
Point(lbs)	S(1.15)	0	319	16' 5.500"	Adds to	TC, on chord(s)	AC-2 (2552#/8)

LOAD GROUP #8 @ 26.750" O.C.-7th-8th from LEFT - Soffit & Parallel Drift

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	6' 8.000" to 18' 6.000"	Adds to	BC	Soffit
Uniform(psf)	S(1.15)	2.9	0	5.500" to 39' 5.500"	Adds to	TC	Parallel Drift

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S1
Qty: 16
Project Number: 142840

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Tapered(psf)	S(1.15)	24.1 to 0	0 to 0	5.500" to 6' 3.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 24.1	0 to 0	33' 8.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)

(1) Location is specified from left reference point unless noted otherwise.
(3) All wind (W) loads are Strength based.

SUPPORTS

LEFT SUPPORT	(Angle: 0°)	RIGHT SUPPORT	(Angle: 0°)
Material:	Plate(s)	Material:	Plate(s)
Bearing Clip:	Heavy S-Clip Lateral	Bearing Clip:	Heavy S-Clip Lateral
Reinforcement:	Chord(s) only	Reinforcement:	Chord(s) only

DESIGN CONTROLS

Truss Member's Critical Design Component Value: 97.2% (Design / Allowable)
Truss design includes consideration for partial span application live load.

REACTIONS

	LEFT MAXIMUM	LEFT MINIMUM	RIGHT MAXIMUM	RIGHT MINIMUM
Total Load (lbs)	2951 S (1.15)	-1637 W (1.60)	3016 W (1.60)	-847 W (1.60)
Live Load (lbs)	2088	-2277	1484	-1488

DEFLECTIONS & CAMBER

Deflection (Total Load) Span: 1.889" (L/249)
Deflection (Live Load) Span: 1.335" (L/352)

Center Span Camber: 1.186", Matched to S2

ADDITIONAL NOTES

- IMPORTANT! The analysis presented is output from software developed by RedBuilt LLC. Allowable product values shown are in accordance with current RedBuilt™ materials and code accepted design values. RedBuilt™ Engineering has verified the analysis. The input loads and dimensions have been provided by others and must be verified and approved for the specific application by the design professional for the project. Truss design values have been accepted by the following agencies: ICC ES Report No. ESR-1774 and LABC/LARC Supplement, DSA.
- Allowable Stress Design methodology was used for Code 2012-2021 IBC analyzing the RedBuilt™ custom products listed above with chords analyzed using RedBuilt™ analysis.
- Pricing Load = 149.8 plf

OPERATOR INFORMATION

Adam Stritenberger, (740) 368-4227

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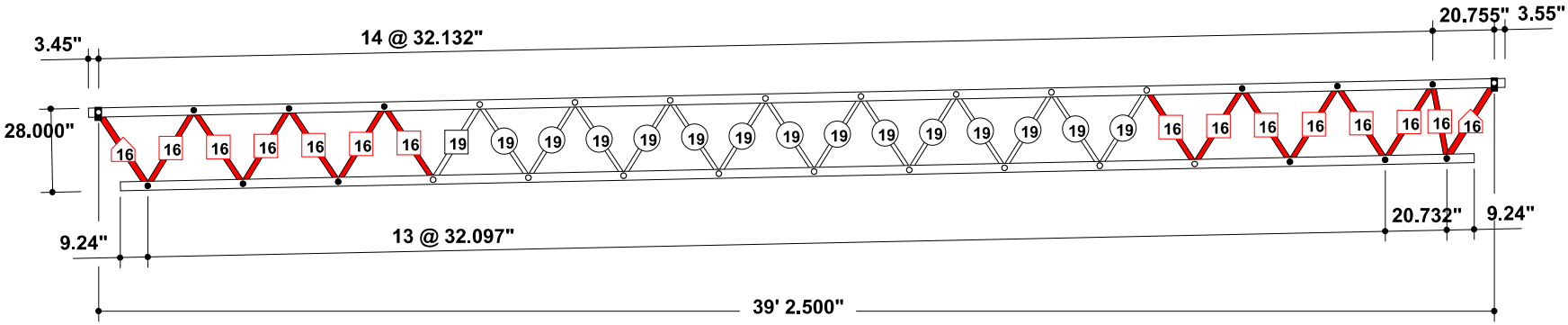
DO NOT SCALE THIS TRUSS PROFILE



Left First Web Distance:	16.066"
Top Chord Material:	2- 1.50X 2.3" RedLam™ LVL
Bottom Chord Material:	2- 1.50X 2.3" RedLam™ LVL
Camber:	1.186"
Bottom Chord Slope:	0.250/12

Red-S™ SERIES LEGEND

Heavy S-Clip Lateral @ LEFT TOP PIN# 1.
Heavy S-Clip Lateral @ RIGHT TOP PIN# 16.

3/4" DIA. PIN
1/2" DIA. PIN
WEB, 1" DIA. & WEB GAUGE
1 1/4" DIA.
1 1/2" DIA.

Project: Chick-fil-A #5248	Truss ID: S1
Location: Lee's Summit, MO	Quantity: 16
Delivery: R1	Project Number: 142840

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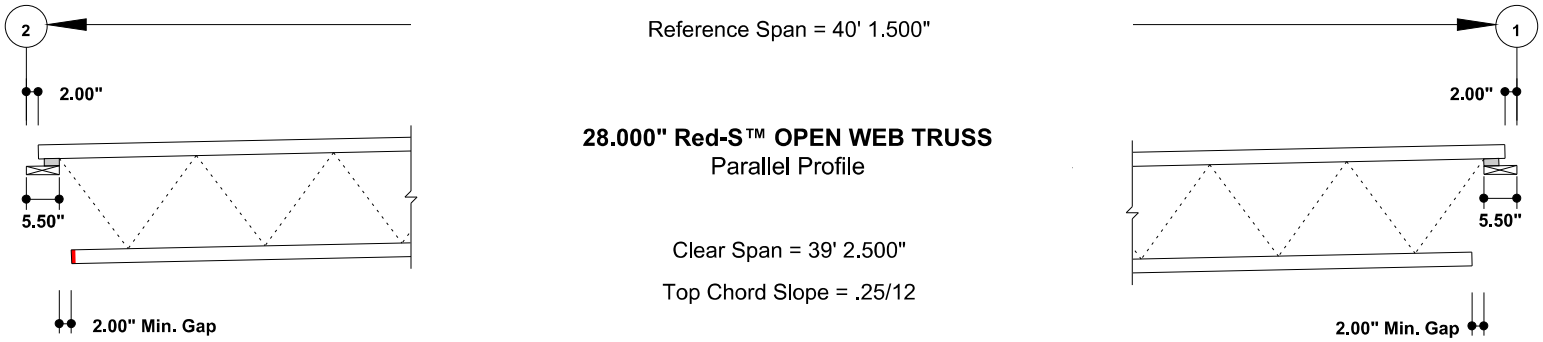
Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S1S
Qty: 7
Project Number: 142840

THIS PRODUCT MEETS OR EXCEEDS THE SET DESIGN CONTROLS FOR THE APPLICATION AND LOADS LISTED



28.000" Red-S™ OPEN WEB TRUSS
Parallel Profile

Clear Span = 39' 2.500"

Top Chord Slope = .25/12

All dimensions are horizontal.

Product diagram is conceptual.

LOADS

Analysis for Open-web Member Supporting SNOW Structural Classification.
Loads (psf): 20 Snow at 115% duration, 8 Dead (top chord), 12 Dead (bottom chord), @ 32.000" O.C. and:

LOAD GROUP #1 @ 32.500" O.C.-Wind Uplift

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	-43.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Uplift ULT
Strap(lbs)	W(1.60)	1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	-672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(plf)	W(1.60)	-584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)

LOAD GROUP #2 @ 23.375" O.C.-2nd from LEFT - Parallel Drift

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	6' 8.000" to 18' 6.000"	Adds to	BC	Soffit
Uniform(psf)	S(1.15)	34.4	0	5.500" to 39' 5.500"	Adds to	TC	Parallel Drift

LOAD GROUP #3 @ 25.375" O.C.-10th from LEFT - AC#3

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	6' 8.000" to 18' 6.000"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	241	17' 10.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)
Point(lbs)	S(1.15)	0	241	24' 8.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S1S
Qty: 7
Project Number: 142840

LOAD GROUP #4 @ 19.500" O.C.-12th from Right - Condensers

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	170	6' 7.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	170	10' 2.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(plf)	W(1.60)	584	0	3' 10.000"	Adds to	TC, on chord(s)	Parapet Brace - KN6

LOAD GROUP #5 @ 32.500" O.C.-10th from Right - AC#4 & Condensers

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	184	6' 7.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	170	10' 2.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	250	27' 5.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)
Point(lbs)	S(1.15)	0	250	34' 11.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)

LOAD GROUP #6 @ 24.125" O.C.-S1W - single of double truss

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	250	27' 5.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)
Point(lbs)	S(1.15)	0	250	34' 11.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)
Point(lbs)	S(1.15)	0	100	22' 8.500"	Adds to	TC, on chord(s)	Roof Hatch (200#/2)

LOAD GROUP #7 @ 31.125" O.C.-21 from LEFT - AC#2

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	19' 1.000" to 23' 5.500"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	319	11' 2.000"	Adds to	TC, on chord(s)	AC-2 (2552#/8)
Point(lbs)	S(1.15)	0	319	16' 5.500"	Adds to	TC, on chord(s)	AC-2 (2552#/8)

LOAD GROUP #8 @ 26.750" O.C.-7th-8th from LEFT - Soffit & Parallel Drift

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	6' 8.000" to 18' 6.000"	Adds to	BC	Soffit
Uniform(psf)	S(1.15)	2.9	0	5.500" to 39' 5.500"	Adds to	TC	Parallel Drift

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S1S
Qty: 7
Project Number: 142840

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Tapered(psf)	S(1.15)	24.1 to 0	0 to 0	5.500" to 6' 3.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 24.1	0 to 0	33' 8.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)

(1) Location is specified from left reference point unless noted otherwise.
(3) All wind (W) loads are Strength based.

SUPPORTS

	LEFT SUPPORT	(Angle: 0°)	RIGHT SUPPORT	(Angle: 0°)
	Material:	Plate(s)	Material:	Plate(s)
	Bearing Clip:	Heavy S-Clip Lateral	Bearing Clip:	Heavy S-Clip Lateral
	Reinforcement:	Chord(s) only	Reinforcement:	Chord(s) only

DESIGN CONTROLS

Truss Member's Critical Design Component Value: 97.2% (Design / Allowable)
Truss design includes consideration for partial span application live load.

REACTIONS

	LEFT MAXIMUM	LEFT MINIMUM	RIGHT MAXIMUM	RIGHT MINIMUM
Total Load (lbs)	2951 S (1.15)	-1637 W (1.60)	3016 W (1.60)	-847 W (1.60)
Live Load (lbs)	2088	-2277	1484	-1488

DEFLECTIONS & CAMBER

Deflection (Total Load) Span: 1.889" (L/249)
Deflection (Live Load) Span: 1.335" (L/352)

Center Span Camber: 1.186", Matched to S1

ADDITIONAL NOTES

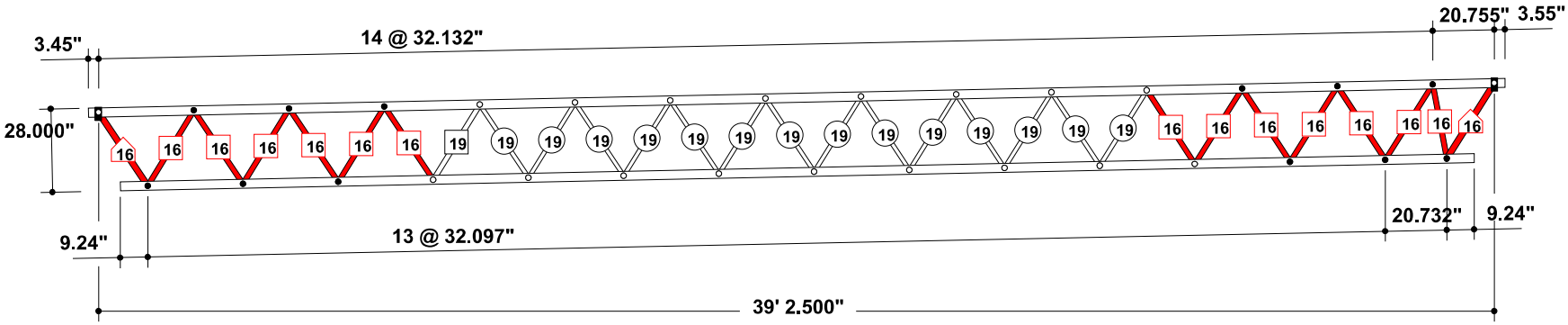
- IMPORTANT! The analysis presented is output from software developed by RedBuilt LLC. Allowable product values shown are in accordance with current RedBuilt™ materials and code accepted design values. RedBuilt™ Engineering has verified the analysis. The input loads and dimensions have been provided by others and must be verified and approved for the specific application by the design professional for the project. Truss design values have been accepted by the following agencies: ICC ES Report No. ESR-1774 and LABC/LARC Supplement, DSA.
- Allowable Stress Design methodology was used for Code 2012-2021 IBC analyzing the RedBuilt™ custom products listed above with chords analyzed using RedBuilt™ analysis.
- Pricing Load = 149.8 plf

OPERATOR INFORMATION

<Program User's Name>, <Program User's Phone Number>

RedOpenWeb™ v5.0.35
10/8/2025 9:56:18 AM

DO NOT SCALE THIS TRUSS PROFILE



Left First Web Distance:	16.066"
Top Chord Material:	2- 1.50X 2.3" RedLam™ LVL
Bottom Chord Material:	2- 1.50X 2.3" RedLam™ LVL
Camber:	1.186"
Bottom Chord Slope:	0.250/12

Red-S™ SERIES LEGEND

Heavy S-Clip Lateral @ LEFT TOP PIN# 1.
Heavy S-Clip Lateral @ RIGHT TOP PIN# 16.

3/4" DIA. PIN

1/2" DIA. PIN

WEB, 1" DIA. & WEB GAUGE

1 1/4" DIA.

1 1/2" DIA.

Project: Chick-fil-A #5248	Truss ID: S1S
Location: Lee's Summit, MO	Quantity: 7
Delivery: R1	Project Number: 142840

RedOpenWeb™ v5.0.35
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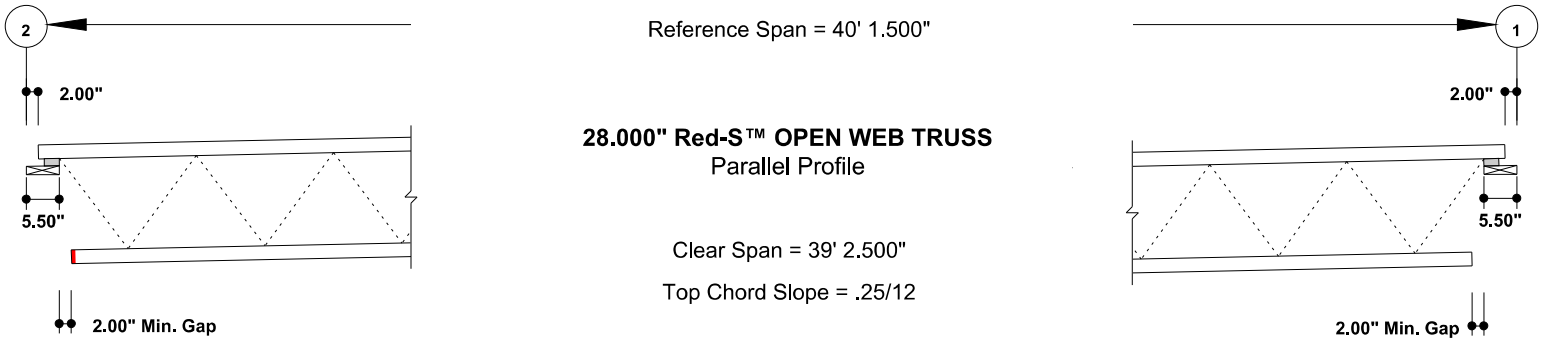
Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S1W
Qty: 4
Project Number: 142840

THIS PRODUCT MEETS OR EXCEEDS THE SET DESIGN CONTROLS FOR THE APPLICATION AND LOADS LISTED



28.000" Red-S™ OPEN WEB TRUSS
Parallel Profile

Clear Span = 39' 2.500"

Top Chord Slope = .25/12

All dimensions are horizontal.

Product diagram is conceptual.

LOADS

Analysis for Open-web Member Supporting SNOW Structural Classification.
Loads (psf): 20 Snow at 115% duration, 8 Dead (top chord), 12 Dead (bottom chord), @ 32.000" O.C. and:

LOAD GROUP #1 @ 32.500" O.C.-Wind Uplift

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	-43.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Uplift ULT
Strap(lbs)	W(1.60)	1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	-672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(plf)	W(1.60)	-584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)

LOAD GROUP #2 @ 23.375" O.C.-2nd from LEFT - Parallel Drift

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	6' 8.000" to 18' 6.000"	Adds to	BC	Soffit
Uniform(psf)	S(1.15)	34.4	0	5.500" to 39' 5.500"	Adds to	TC	Parallel Drift

LOAD GROUP #3 @ 25.375" O.C.-10th from LEFT - AC#3

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	6' 8.000" to 18' 6.000"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	241	17' 10.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)
Point(lbs)	S(1.15)	0	241	24' 8.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S1W
Qty: 4
Project Number: 142840

LOAD GROUP #4 @ 19.500" O.C.-12th from Right - Condensers

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	170	6' 7.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	170	10' 2.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(plf)	W(1.60)	584	0	3' 10.000"	Adds to	TC, on chord(s)	Parapet Brace - KN6

LOAD GROUP #5 @ 32.500" O.C.-10th from Right - AC#4 & Condensers

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	184	6' 7.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	170	10' 2.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	250	27' 5.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)
Point(lbs)	S(1.15)	0	250	34' 11.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)

LOAD GROUP #6 @ 24.125" O.C.-S1W - single of double truss

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	250	27' 5.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)
Point(lbs)	S(1.15)	0	250	34' 11.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)
Point(lbs)	S(1.15)	0	100	22' 8.500"	Adds to	TC, on chord(s)	Roof Hatch (200#/2)

LOAD GROUP #7 @ 31.125" O.C.-21 from LEFT - AC#2

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	19' 1.000" to 23' 5.500"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	319	11' 2.000"	Adds to	TC, on chord(s)	AC-2 (2552#/8)
Point(lbs)	S(1.15)	0	319	16' 5.500"	Adds to	TC, on chord(s)	AC-2 (2552#/8)

LOAD GROUP #8 @ 26.750" O.C.-7th-8th from LEFT - Soffit & Parallel Drift

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	6' 8.000" to 18' 6.000"	Adds to	BC	Soffit
Uniform(psf)	S(1.15)	2.9	0	5.500" to 39' 5.500"	Adds to	TC	Parallel Drift

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S1W
Qty: 4
Project Number: 142840

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Tapered(psf)	S(1.15)	24.1 to 0	0 to 0	5.500" to 6' 3.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 24.1	0 to 0	33' 8.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)

(1) Location is specified from left reference point unless noted otherwise.
(3) All wind (W) loads are Strength based.

SUPPORTS

LEFT SUPPORT	(Angle: 0°)	RIGHT SUPPORT	(Angle: 0°)
Material:	Plate(s)	Material:	Plate(s)
Bearing Clip:	Heavy S-Clip Lateral	Bearing Clip:	Heavy S-Clip Lateral
Reinforcement:	Chord(s) only	Reinforcement:	Chord(s) only

DESIGN CONTROLS

Truss Member's Critical Design Component Value: 97.2% (Design / Allowable)
Truss design includes consideration for partial span application live load.

REACTIONS

	LEFT MAXIMUM	LEFT MINIMUM	RIGHT MAXIMUM	RIGHT MINIMUM
Total Load (lbs)	2951 S (1.15)	-1637 W (1.60)	3016 W (1.60)	-847 W (1.60)
Live Load (lbs)	2088	-2277	1484	-1488

DEFLECTIONS & CAMBER

Deflection (Total Load) Span: 1.889" (L/249)
Deflection (Live Load) Span: 1.335" (L/352)

Center Span Camber: 1.186", Matched to S1

ADDITIONAL NOTES

- IMPORTANT! The analysis presented is output from software developed by RedBuilt LLC. Allowable product values shown are in accordance with current RedBuilt™ materials and code accepted design values. RedBuilt™ Engineering has verified the analysis. The input loads and dimensions have been provided by others and must be verified and approved for the specific application by the design professional for the project. Truss design values have been accepted by the following agencies: ICC ES Report No. ESR-1774 and LABC/LARC Supplement, DSA.
- Allowable Stress Design methodology was used for Code 2012-2021 IBC analyzing the RedBuilt™ custom products listed above with chords analyzed using RedBuilt™ analysis.
- Pricing Load = 149.8 plf

OPERATOR INFORMATION

<Program User's Name>, <Program User's Phone Number>

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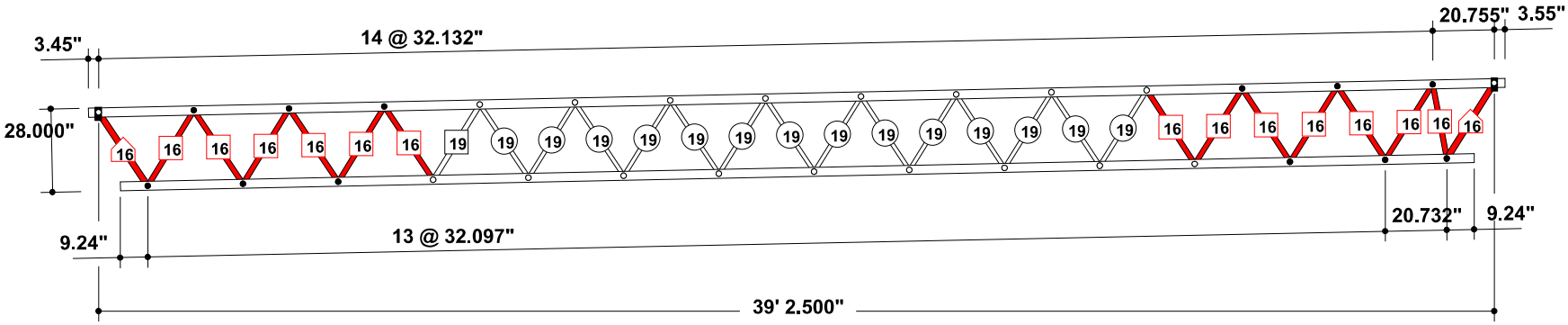
DO NOT SCALE THIS TRUSS PROFILE



Left First Web Distance:	16.066"
Top Chord Material:	2- 1.50X 2.3" RedLam™ LVL
Bottom Chord Material:	2- 1.50X 2.3" RedLam™ LVL
Camber:	1.186"
Bottom Chord Slope:	0.250/12

Red-S™ SERIES LEGEND

Heavy S-Clip Lateral @ LEFT TOP PIN# 1.
Heavy S-Clip Lateral @ RIGHT TOP PIN# 16.

3/4" DIA. PIN

1/2" DIA. PIN

WEB, 1" DIA. & WEB GAUGE

1 1/4" DIA.

1 1/2" DIA.

Project: Chick-fil-A #5248	Truss ID: S1W
Location: Lee's Summit, MO	Quantity: 4
Delivery: R1	Project Number: 142840

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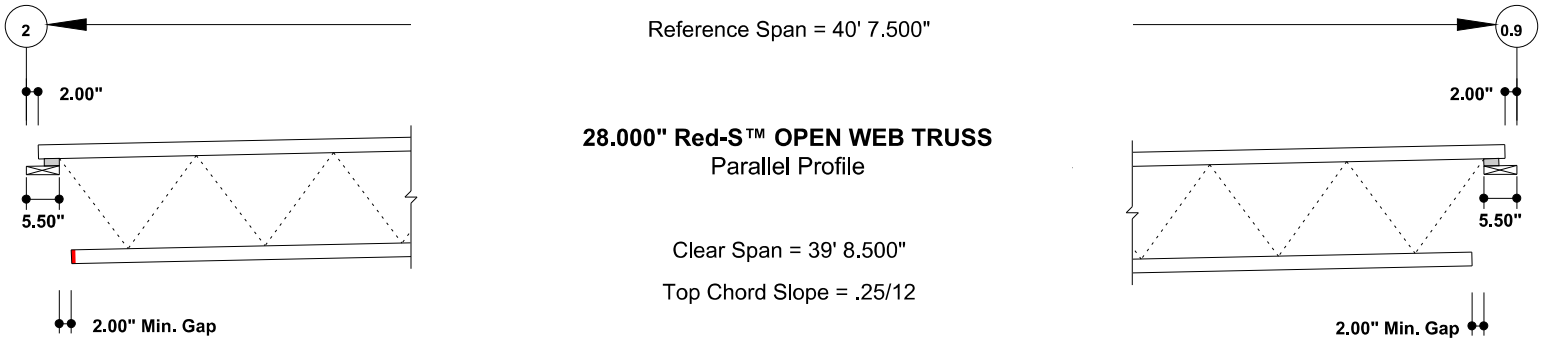
Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S2
Qty: 6
Project Number: 142840

THIS PRODUCT MEETS OR EXCEEDS THE SET DESIGN CONTROLS FOR THE APPLICATION AND LOADS LISTED



All dimensions are horizontal.

Product diagram is conceptual.

LOADS

Analysis for Open-web Member Supporting SNOW Structural Classification.
Loads (psf): 20 Snow at 115% duration, 8 Dead (top chord), 12 Dead (bottom chord), @ 32.000" O.C. and:

LOAD GROUP #1 @ 36.625" O.C.-Wind Uplift

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	-43.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Uplift ULT
Strap(lbs)	W(1.60)	1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	-672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(plf)	W(1.60)	-584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)

LOAD GROUP #2 @ 36.625" O.C.-15/16th from Left - Condensers, Soffit

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	7.500" to 23' 6.000"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	170	5' 9.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	170	10' 9.000"	Adds to	TC, on chord(s)	Condenser (340#/2)

LOAD GROUP #3 @ 35.250" O.C.-10th from LEFT - AC#3

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	6' 8.500" to 23' 6.000"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	241	17' 10.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)
Point(lbs)	S(1.15)	0	241	24' 8.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S2
Qty: 6
Project Number: 142840

LOAD GROUP #4 @ 32.000" O.C.-19th from LEFT - AC#2

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	19' 1.000" to 23' 5.500"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	319	11' 2.000"	Adds to	TC, on chord(s)	AC-2 (2552#/8)
Point(lbs)	S(1.15)	0	319	16' 5.500"	Adds to	TC, on chord(s)	AC-2 (2552#/8)

LOAD GROUP #5 @ 30.375" O.C.-12th from LEFT - AC#3

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	7.500" to 23' 6.000"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	241	17' 10.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)
Point(lbs)	S(1.15)	0	241	24' 8.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)

(1) Location is specified from left reference point unless noted otherwise.
(3) All wind (W) loads are Strength based.

SUPPORTS

	LEFT SUPPORT	(Angle: 0°)	RIGHT SUPPORT	(Angle: 0°)
	Material:	Plate(s)	Material:	Plate(s)
	Bearing Clip:	Heavy S-Clip Lateral	Bearing Clip:	Heavy S-Clip Lateral
	Reinforcement:	Chord(s) only	Reinforcement:	Chord(s) only

DESIGN CONTROLS

Truss Member's Critical Design Component Value: 99% (Design / Allowable)
Truss design includes consideration for partial span application live load.

REACTIONS

	LEFT MAXIMUM	LEFT MINIMUM	RIGHT MAXIMUM	RIGHT MINIMUM
Total Load (lbs)	3471 W (1.60)	-1858 W (1.60)	3152 W (1.60)	-922 W (1.60)
Live Load (lbs)	1696	-2587	1612	-1657

DEFLECTIONS & CAMBER

Deflection (Total Load) Span: 2.189" (L/218)
Deflection (Live Load) Span: 1.063" (L/448)

Center Span Camber: 1.216", Matched to S3

ADDITIONAL NOTES

- IMPORTANT! The analysis presented is output from software developed by RedBuilt LLC. Allowable product values shown are in accordance with current RedBuilt™ materials and code accepted design values. RedBuilt™ Engineering has verified the analysis. The input loads and dimensions have been provided by others and must be verified and approved for the specific application by the design professional for the project. Truss design values have been accepted by the following agencies: ICC ES Report No. ESR-1774 and LABC/LARC Supplement, DSA.
- Allowable Stress Design methodology was used for Code 2012-2021 IBC analyzing the RedBuilt™ custom products listed above with chords analyzed using RedBuilt™ analysis.
- Pricing Load = 162.8 plf

OPERATOR INFORMATION

Adam Stritenberger, (740) 368-4227

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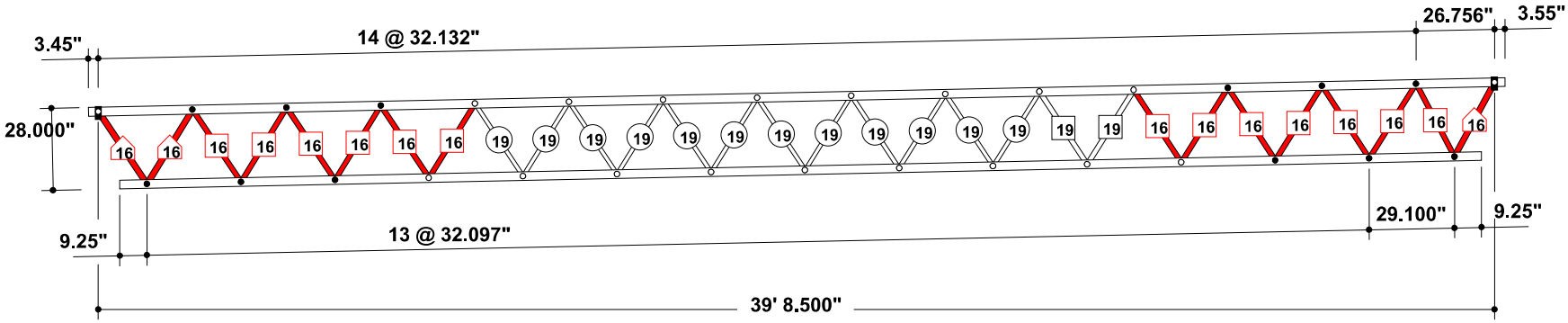
DO NOT SCALE THIS TRUSS PROFILE



Left First Web Distance:	**16.066"**
Top Chord Material:	**2- 1.50X 2.3" RedLam™ LVL**
Bottom Chord Material:	**2- 1.50X 2.3" RedLam™ LVL**
Camber:	**1.216"**
Bottom Chord Slope:	**0.250/12**

Red-S™ SERIES LEGEND

- Heavy S-Clip Lateral @ LEFT TOP PIN# 1.
  Heavy S-Clip Lateral @ RIGHT TOP PIN# 16.
- 3/4" DIA. PIN
- WEB, 1" DIA. & WEB GAUGE
- 1 1/2" DIA.
- 1/2" DIA. PIN
- 1 1/4" DIA.

Project: Chick-fil-A #5248	**Truss ID: S2**
Location: Lee's Summit, MO	**Quantity: 6**
Delivery: R1	**Project Number: 142840**

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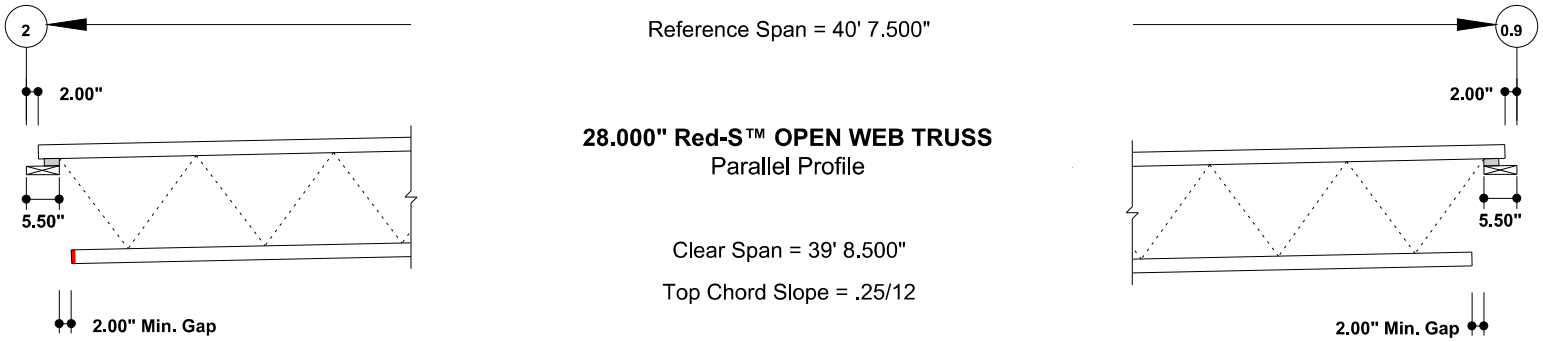
10/8/2025 9:59:59 AM PAGE 1

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S2S
Qty: 5
Project Number: 142840

THIS PRODUCT MEETS OR EXCEEDS THE SET DESIGN CONTROLS FOR THE APPLICATION AND LOADS LISTED



All dimensions are horizontal.

Product diagram is conceptual.

LOADS

Analysis for Open-web Member Supporting SNOW Structural Classification.
Loads (psf): 20 Snow at 115% duration, 8 Dead (top chord), 12 Dead (bottom chord), @ 32.000" O.C. and:

LOAD GROUP #1 @ 36.625" O.C.-Wind Uplift

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	-43.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Uplift ULT
Strap(lbs)	W(1.60)	1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	-672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(plf)	W(1.60)	-584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)

LOAD GROUP #2 @ 36.625" O.C.-15/16th from Left - Condensers, Soffit

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	7.500" to 23' 6.000"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	170	5' 9.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	170	10' 9.000"	Adds to	TC, on chord(s)	Condenser (340#/2)

LOAD GROUP #3 @ 35.250" O.C.-10th from LEFT - AC#3

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	6' 8.500" to 23' 6.000"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	241	17' 10.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)
Point(lbs)	S(1.15)	0	241	24' 8.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S2S
Qty: 5
Project Number: 142840

LOAD GROUP #4 @ 32.000" O.C.-19th from LEFT - AC#2

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	19' 1.000" to 23' 5.500"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	319	11' 2.000"	Adds to	TC, on chord(s)	AC-2 (2552#/8)
Point(lbs)	S(1.15)	0	319	16' 5.500"	Adds to	TC, on chord(s)	AC-2 (2552#/8)

LOAD GROUP #5 @ 30.375" O.C.-12th from LEFT - AC#3

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	7.500" to 23' 6.000"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	241	17' 10.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)
Point(lbs)	S(1.15)	0	241	24' 8.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)

(1) Location is specified from left reference point unless noted otherwise.
(3) All wind (W) loads are Strength based.

SUPPORTS

	LEFT SUPPORT	(Angle: 0°)	RIGHT SUPPORT	(Angle: 0°)
	Material:	Plate(s)	Material:	Plate(s)
	Bearing Clip:	Heavy S-Clip Lateral	Bearing Clip:	Heavy S-Clip Lateral
	Reinforcement:	Chord(s) only	Reinforcement:	Chord(s) only

DESIGN CONTROLS

Truss Member's Critical Design Component Value: 99% (Design / Allowable)
Truss design includes consideration for partial span application live load.

REACTIONS

	LEFT MAXIMUM	LEFT MINIMUM	RIGHT MAXIMUM	RIGHT MINIMUM
Total Load (lbs)	3471 W (1.60)	-1858 W (1.60)	3152 W (1.60)	-922 W (1.60)
Live Load (lbs)	1696	-2587	1612	-1657

DEFLECTIONS & CAMBER

Deflection (Total Load) Span: 2.189" (L/218)
Deflection (Live Load) Span: 1.063" (L/448)

Center Span Camber: 1.216", Matched to S2

ADDITIONAL NOTES

- IMPORTANT! The analysis presented is output from software developed by RedBuilt LLC. Allowable product values shown are in accordance with current RedBuilt™ materials and code accepted design values. RedBuilt™ Engineering has verified the analysis. The input loads and dimensions have been provided by others and must be verified and approved for the specific application by the design professional for the project. Truss design values have been accepted by the following agencies: ICC ES Report No. ESR-1774 and LABC/LARC Supplement, DSA.
- Allowable Stress Design methodology was used for Code 2012-2021 IBC analyzing the RedBuilt™ custom products listed above with chords analyzed using RedBuilt™ analysis.
- Pricing Load = 162.8 plf

OPERATOR INFORMATION

<Program User's Name>, <Program User's Phone Number>

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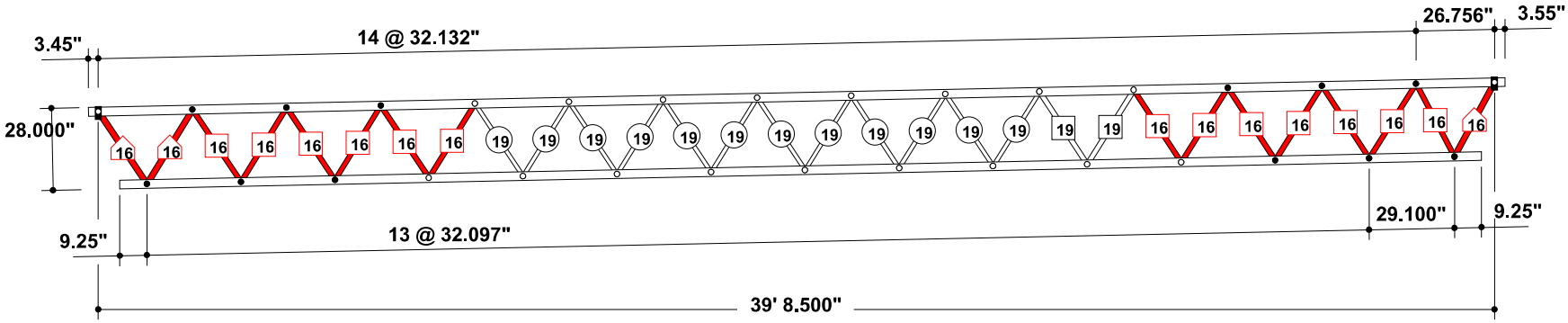
DO NOT SCALE THIS TRUSS PROFILE



Left First Web Distance:	**16.066"**
Top Chord Material:	**2- 1.50X 2.3" RedLam™ LVL**
Bottom Chord Material:	**2- 1.50X 2.3" RedLam™ LVL**
Camber:	**1.216"**
Bottom Chord Slope:	**0.250/12**

Red-S™ SERIES LEGEND

- Heavy S-Clip Lateral @ LEFT TOP PIN# 1.
  Heavy S-Clip Lateral @ RIGHT TOP PIN# 16.
- 3/4" DIA. PIN
- WEB, 1" DIA. & WEB GAUGE
- 1 1/2" DIA.
- 1/2" DIA. PIN
- 1 1/4" DIA.

Project: Chick-fil-A #5248	**Truss ID: S2S**
Location: Lee's Summit, MO	**Quantity: 5**
Delivery: R1	**Project Number: 142840**

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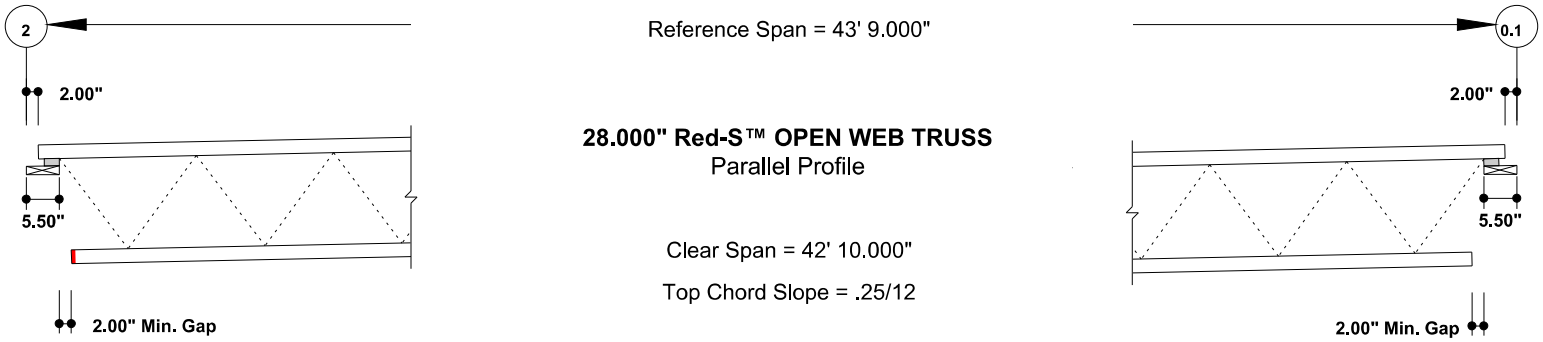
10/8/2025 9:57:47 AM PAGE 1

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S3
Qty: 14
Project Number: 142840

THIS PRODUCT MEETS OR EXCEEDS THE SET DESIGN CONTROLS FOR THE APPLICATION AND LOADS LISTED



All dimensions are horizontal.

Product diagram is conceptual.

LOADS

Analysis for Open-web Member Supporting SNOW Structural Classification.
Loads (psf): 20 Snow at 115% duration, 8 Dead (top chord), 12 Dead (bottom chord), @ 32.000" O.C. and:

LOAD GROUP #1 @ 34.125" O.C.-Wind Uplift (ULT)

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	-43.6	0	2.000" to 43' 6.500"	Adds to	TC	Wind Uplift ULT
Strap(lbs)	W(1.60)	1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	-672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	43' 4.000"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	42' 10.170"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(plf)	W(1.60)	-584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)

LOAD GROUP #2 @ 30.125" O.C.-26th from LEFT - Hood#2&#3, EF, Condenser

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 43' 6.500"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	43' 4.000"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	42' 10.170"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	S(1.15)	0	38	13' 9.000"	Adds to	BC, on chord(s)	Hood#3 (150#/4)
Point(lbs)	S(1.15)	0	38	17' 4.000"	Adds to	BC, on chord(s)	Hood#3 (150#/4)
Point(lbs)	S(1.15)	0	66	7.625"	Adds to	BC, on chord(s)	Hood#2 (262#/4)
Point(lbs)	S(1.15)	0	66	3' 10.000"	Adds to	BC, on chord(s)	Hood#2 (262#/4)
Point(plf)	W(1.60)	584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	36' 7.500" to 43' 1.500"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	255	11' 5.000"	Adds to	TC, on chord(s)	EF (510#/2)
Uniform(plf)	S(1.15)	0	6	19' 1.000" to 21' 1.000"	Adds to	BC	Soffit

LOAD GROUP #3 @ 32.000" O.C.-15th-20th from Right - AC-1, Hoods

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 43' 6.500"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	43' 4.000"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	42' 10.170"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	S(1.15)	0	282	7.625"	Adds to	BC, on chord(s)	Hood#1R/L (996#/6+462#/4)
Point(lbs)	S(1.15)	0	282	3' 2.000"	Adds to	BC, on chord(s)	Hood#1R/L (996#/6+462#/4)
Point(plf)	W(1.60)	584	0	4' 0.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	36' 7.500" to 43' 1.500"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	256	13' 8.000"	Adds to	TC, on chord(s)	AC-1 (2552#/10)
Point(lbs)	S(1.15)	0	256	20' 9.000"	Adds to	TC, on chord(s)	AC-1 (2552#/10)
Point(lbs)	S(1.15)	0	28	29' 8.000"	Adds to	TC, on chord(s)	EF-1 (56#/2)

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S3
Qty: 14
Project Number: 142840

LOAD GROUP #4 @ 34.125" O.C.-29th from LEFT - Overspace & Mech

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 43' 6.500"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	43' 4.000"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	42' 10.170"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(plf)	W(1.60)	584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	36' 7.500" to 43' 1.500"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	170	20' 6.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	255	11' 5.000"	Adds to	TC, on chord(s)	EF (510#/2)

LOAD GROUP #5 @ 34.000" O.C.-31st from LEFT - Overspace & Mech

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 43' 6.500"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	43' 4.000"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	42' 10.170"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(plf)	W(1.60)	584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	36' 7.500" to 43' 1.500"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	170	20' 6.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	252	11' 5.000"	Adds to	TC, on chord(s)	EF (503#/2)

(1) Location is specified from left reference point unless noted otherwise.
(3) All wind (W) loads are Strength based.

SUPPORTS

	LEFT SUPPORT	(Angle: 0°)	RIGHT SUPPORT	(Angle: 0°)
	Material:	Plate(s)	Material:	Plate(s)
	Bearing Clip:	Heavy S-Clip Lateral	Bearing Clip:	Heavy S-Clip Lateral
	Reinforcement:	Chord(s) only	Reinforcement:	Chord(s) only

DESIGN CONTROLS

Truss Member's Critical Design Component Value: 99.9% (Design / Allowable)
Truss design includes consideration for partial span application live load.

REACTIONS

	LEFT MAXIMUM	LEFT MINIMUM	RIGHT MAXIMUM	RIGHT MINIMUM
Total Load (lbs)	4236 W (1.60)	-1799 W (1.60)	3114 W (1.60)	-955 W (1.60)
Live Load (lbs)	2224	-2533	1743	-1690

DEFLECTIONS & CAMBER

Deflection (Total Load) Span: 2.666" (L/193)
Deflection (Live Load) Span: 1.420" (L/362)

Center Span Camber: 1.415", Recommended

ADDITIONAL NOTES

- IMPORTANT! The analysis presented is output from software developed by RedBuilt LLC. Allowable product values shown are in accordance with current RedBuilt™ materials and code accepted design values. RedBuilt™ Engineering has verified the analysis. The input loads and dimensions have been provided by others and must be verified and approved for the specific application by the design professional for the project. Truss design values have been accepted by the following agencies: ICC ES Report No. ESR-1774 and LABC/LARC Supplement, DSA.
- Allowable Stress Design methodology was used for Code 2012-2021 IBC analyzing the RedBuilt™ custom products listed above with chords analyzed using RedBuilt™ analysis.
- Pricing Load = 167.2 plf

OPERATOR INFORMATION

Adam Stritenberger, (740) 368-4227

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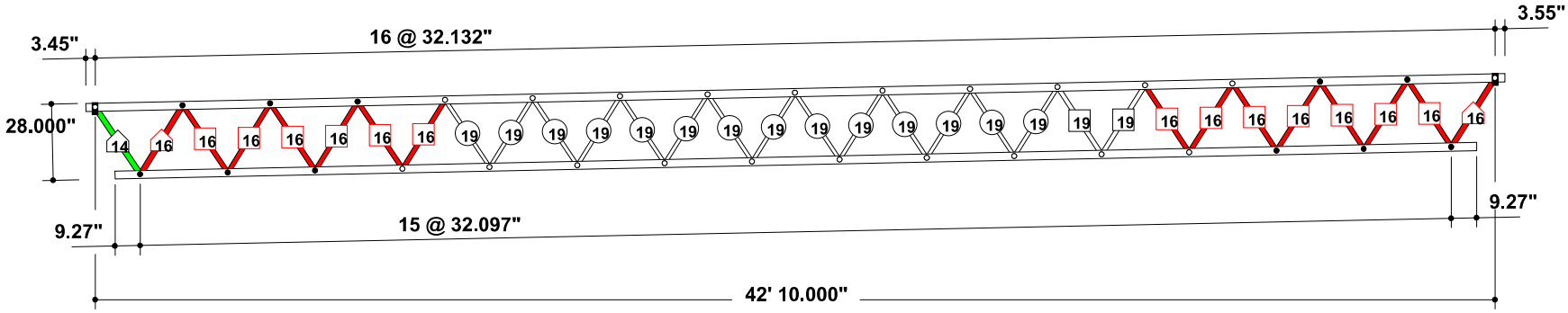
DO NOT SCALE THIS TRUSS PROFILE



Left First Web Distance:	16.066"
Top Chord Material:	2- 1.50X 2.3" RedLam™ LVL
Bottom Chord Material:	2- 1.50X 2.3" RedLam™ LVL
Camber:	1.415"
Bottom Chord Slope:	0.250/12

Red-S™ SERIES LEGEND

Heavy S-Clip Lateral @ LEFT TOP PIN# 1.
Heavy S-Clip Lateral @ RIGHT TOP PIN# 17.

3/4" DIA. PIN

1/2" DIA. PIN

WEB, 1" DIA. & WEB GAUGE

1 1/4" DIA.

1 1/2" DIA.

Project: Chick-fil-A #5248	Truss ID: S3
Location: Lee's Summit, MO	Quantity: 14
Delivery: R1	Project Number: 142840

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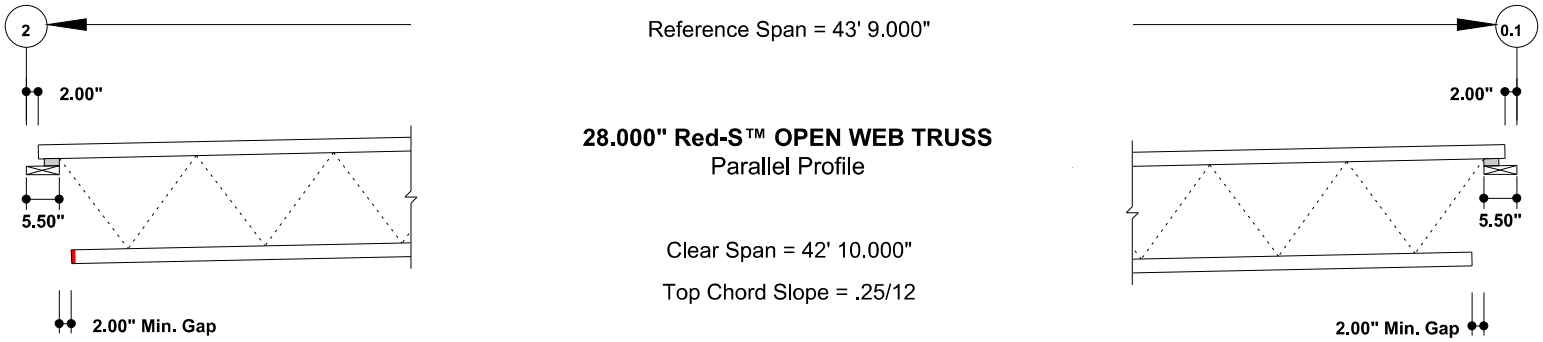
Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S3S
Qty: 4
Project Number: 142840

THIS PRODUCT MEETS OR EXCEEDS THE SET DESIGN CONTROLS FOR THE APPLICATION AND LOADS LISTED



All dimensions are horizontal.

Product diagram is conceptual.

LOADS

Analysis for Open-web Member Supporting SNOW Structural Classification.
Loads (psf): 20 Snow at 115% duration, 8 Dead (top chord), 12 Dead (bottom chord), @ 32.000" O.C. and:

LOAD GROUP #1 @ 34.125" O.C.-Wind Uplift (ULT)

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	-43.6	0	2.000" to 43' 6.500"	Adds to	TC	Wind Uplift ULT
Strap(lbs)	W(1.60)	1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	-672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	43' 4.000"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	42' 10.170"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(plf)	W(1.60)	-584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)

LOAD GROUP #2 @ 30.125" O.C.-26th from LEFT - Hood#2&#3, EF, Condenser

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 43' 6.500"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	43' 4.000"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	42' 10.170"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	S(1.15)	0	38	13' 9.000"	Adds to	BC, on chord(s)	Hood#3 (150#/4)
Point(lbs)	S(1.15)	0	38	17' 4.000"	Adds to	BC, on chord(s)	Hood#3 (150#/4)
Point(lbs)	S(1.15)	0	66	7.625"	Adds to	BC, on chord(s)	Hood#2 (262#/4)
Point(lbs)	S(1.15)	0	66	3' 10.000"	Adds to	BC, on chord(s)	Hood#2 (262#/4)
Point(plf)	W(1.60)	584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	36' 7.500" to 43' 1.500"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	255	11' 5.000"	Adds to	TC, on chord(s)	EF (510#/2)
Uniform(plf)	S(1.15)	0	6	19' 1.000" to 21' 1.000"	Adds to	BC	Soffit

LOAD GROUP #3 @ 32.000" O.C.-15th-20th from Right - AC-1, Hoods

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 43' 6.500"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	43' 4.000"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	42' 10.170"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	S(1.15)	0	282	7.625"	Adds to	BC, on chord(s)	Hood#1R/L (996#/6+462#/4)
Point(lbs)	S(1.15)	0	282	3' 2.000"	Adds to	BC, on chord(s)	Hood#1R/L (996#/6+462#/4)
Point(plf)	W(1.60)	584	0	4' 0.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	36' 7.500" to 43' 1.500"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	256	13' 8.000"	Adds to	TC, on chord(s)	AC-1 (2552#/10)
Point(lbs)	S(1.15)	0	256	20' 9.000"	Adds to	TC, on chord(s)	AC-1 (2552#/10)
Point(lbs)	S(1.15)	0	28	29' 8.000"	Adds to	TC, on chord(s)	EF-1 (56#/2)

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S3S
Qty: 4
Project Number: 142840

LOAD GROUP #4 @ 34.125" O.C.-29th from LEFT - Overspace & Mech

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 43' 6.500"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	43' 4.000"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	42' 10.170"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(plf)	W(1.60)	584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	36' 7.500" to 43' 1.500"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	170	20' 6.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	255	11' 5.000"	Adds to	TC, on chord(s)	EF (510#/2)

LOAD GROUP #5 @ 34.000" O.C.-31st from LEFT - Overspace & Mech

TYPE	CLASS	LIVE	DEAD	LOCATION (1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 43' 6.500"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	43' 4.000"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	42' 10.170"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(plf)	W(1.60)	584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	36' 7.500" to 43' 1.500"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	170	20' 6.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	252	11' 5.000"	Adds to	TC, on chord(s)	EF (503#/2)

(1) Location is specified from left reference point unless noted otherwise.
(3) All wind (W) loads are Strength based.

SUPPORTS

	LEFT SUPPORT	(Angle: 0°)	RIGHT SUPPORT	(Angle: 0°)
	Material:	Plate(s)	Material:	Plate(s)
	Bearing Clip:	Heavy S-Clip Lateral	Bearing Clip:	Heavy S-Clip Lateral
	Reinforcement:	Chord(s) only	Reinforcement:	Chord(s) only

DESIGN CONTROLS

Truss Member's Critical Design Component Value: 99.9% (Design / Allowable)
Truss design includes consideration for partial span application live load.

REACTIONS

	LEFT MAXIMUM	LEFT MINIMUM	RIGHT MAXIMUM	RIGHT MINIMUM
Total Load (lbs)	4236 W (1.60)	-1799 W (1.60)	3114 W (1.60)	-955 W (1.60)
Live Load (lbs)	2224	-2533	1743	-1690

DEFLECTIONS & CAMBER

Deflection (Total Load) Span: 2.666" (L/193)
Deflection (Live Load) Span: 1.420" (L/362)

Center Span Camber: 1.415", Matched to S3

ADDITIONAL NOTES

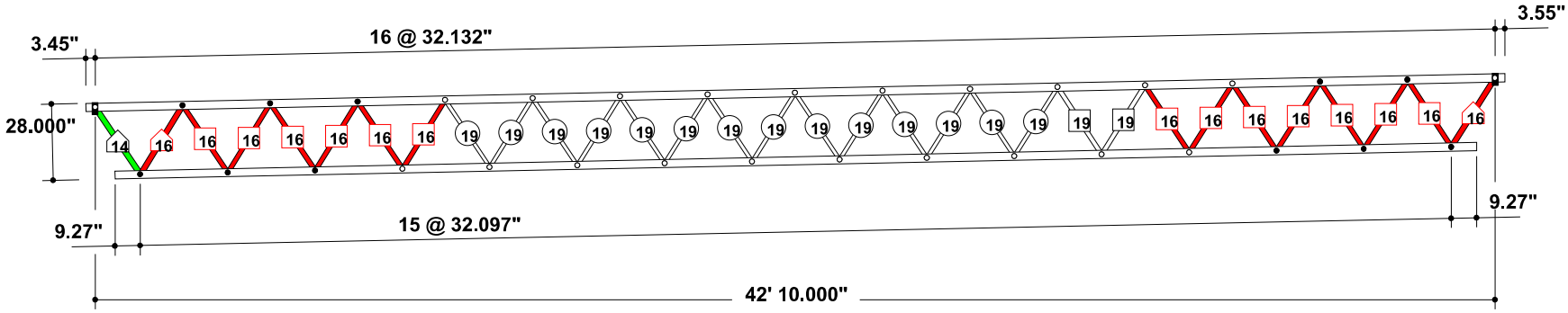
- IMPORTANT! The analysis presented is output from software developed by RedBuilt LLC. Allowable product values shown are in accordance with current RedBuilt™ materials and code accepted design values. RedBuilt™ Engineering has verified the analysis. The input loads and dimensions have been provided by others and must be verified and approved for the specific application by the design professional for the project. Truss design values have been accepted by the following agencies: ICC ES Report No. ESR-1774 and LABC/LARC Supplement, DSA.
- Allowable Stress Design methodology was used for Code 2012-2021 IBC analyzing the RedBuilt™ custom products listed above with chords analyzed using RedBuilt™ analysis.
- Pricing Load = 167.2 plf

OPERATOR INFORMATION

<Program User's Name>, <Program User's Phone Number>

RedOpenWeb™ v5.0.35
10/8/2025 10:00:28 AM

DO NOT SCALE THIS TRUSS PROFILE



Left First Web Distance:	16.066"
Top Chord Material:	2- 1.50X 2.3" RedLam™ LVL
Bottom Chord Material:	2- 1.50X 2.3" RedLam™ LVL
Camber:	1.415"
Bottom Chord Slope:	0.250/12

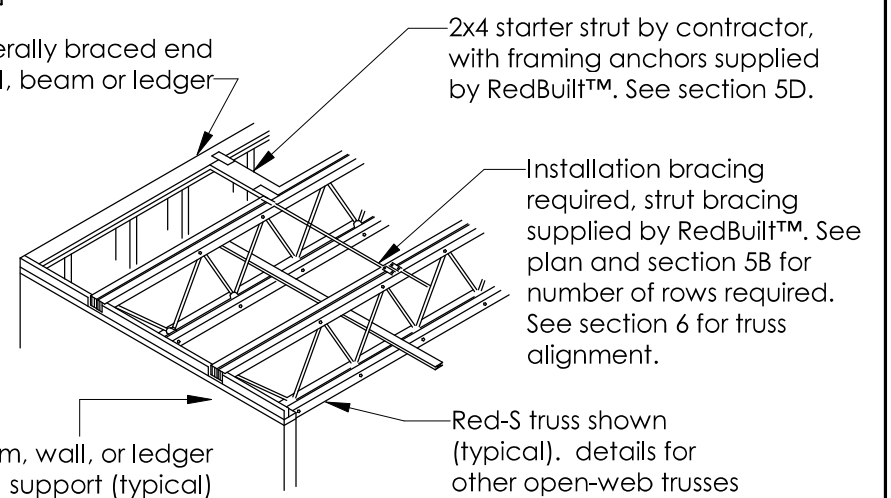
Red-S™ SERIES LEGEND

Heavy S-Clip Lateral @ LEFT TOP PIN# 1.
Heavy S-Clip Lateral @ RIGHT TOP PIN# 17.

3/4" DIA. PIN
1/2" DIA. PIN
WEB, 1" DIA. & WEB GAUGE
1 1/4" DIA.
1 1/2" DIA.

Project: Chick-fil-A #5248	Truss ID: S3S
Location: Lee's Summit, MO	Quantity: 4
Delivery: R1	Project Number: 142840

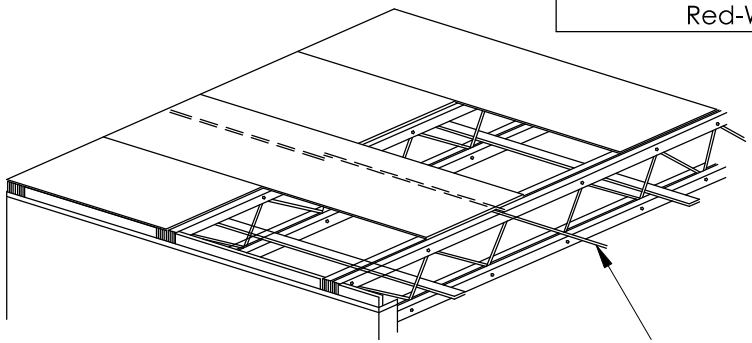
Starting Bracing: Laterally braced end wall or beam



5B Starting Bracing - No laterally braced end wall or beam

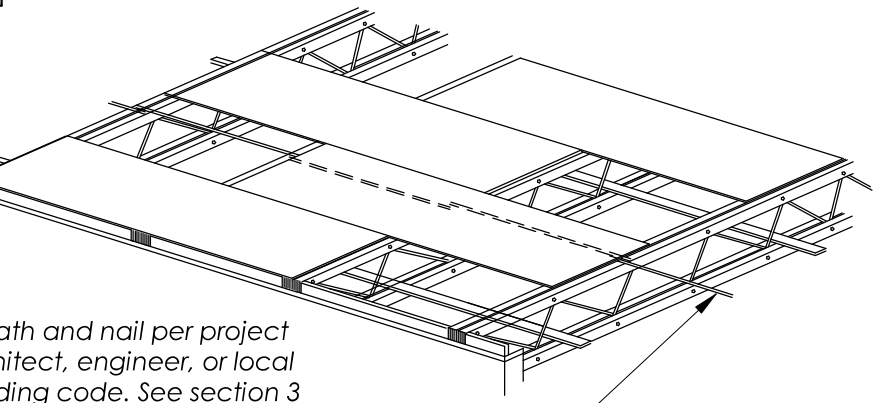
Sheath and nail per project architect, engineer, or local building code. See section 3 for allowable nailing.

Strut Bracing Row Spacing	
Red-S™	10' OC
Red-L™,Red-M™,Red-H™	12' OC
Red-W™	14' OC



Installation bracing required, strut bracing supplied by RedBuilt™. See plan and table above for number of rows required. See section 6 for truss alignment.

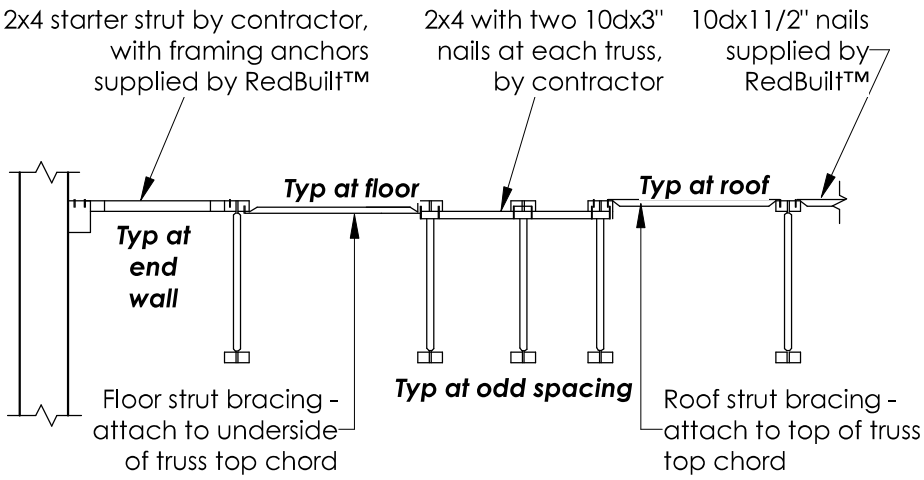
Intermediate Bracing - Middle of bay



ath and nail per project hitect, engineer, or local ding code. See section 3 llowable nailing.

Installation bracing required, strut bracing supplied by RedBuilt™. See plan and section 5B for number of rows required. See section 6 for truss alignment.

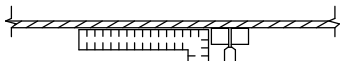
5D Typical strut brace conditions



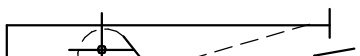
NSTALLATION TOLERANCES PERMITTED

Truss Chord Alignment Tolerance

Vertical Alignment Tolerance



Overhang Tolerance at Bearing
(Red-S™ bearing shown)



8D
8F
8H

ZONE 2 +20.6/-43.6 PSF
ZONE 3 +20.6/-43.6 PSF

ZONE WIDTH: A = 4.8 FT

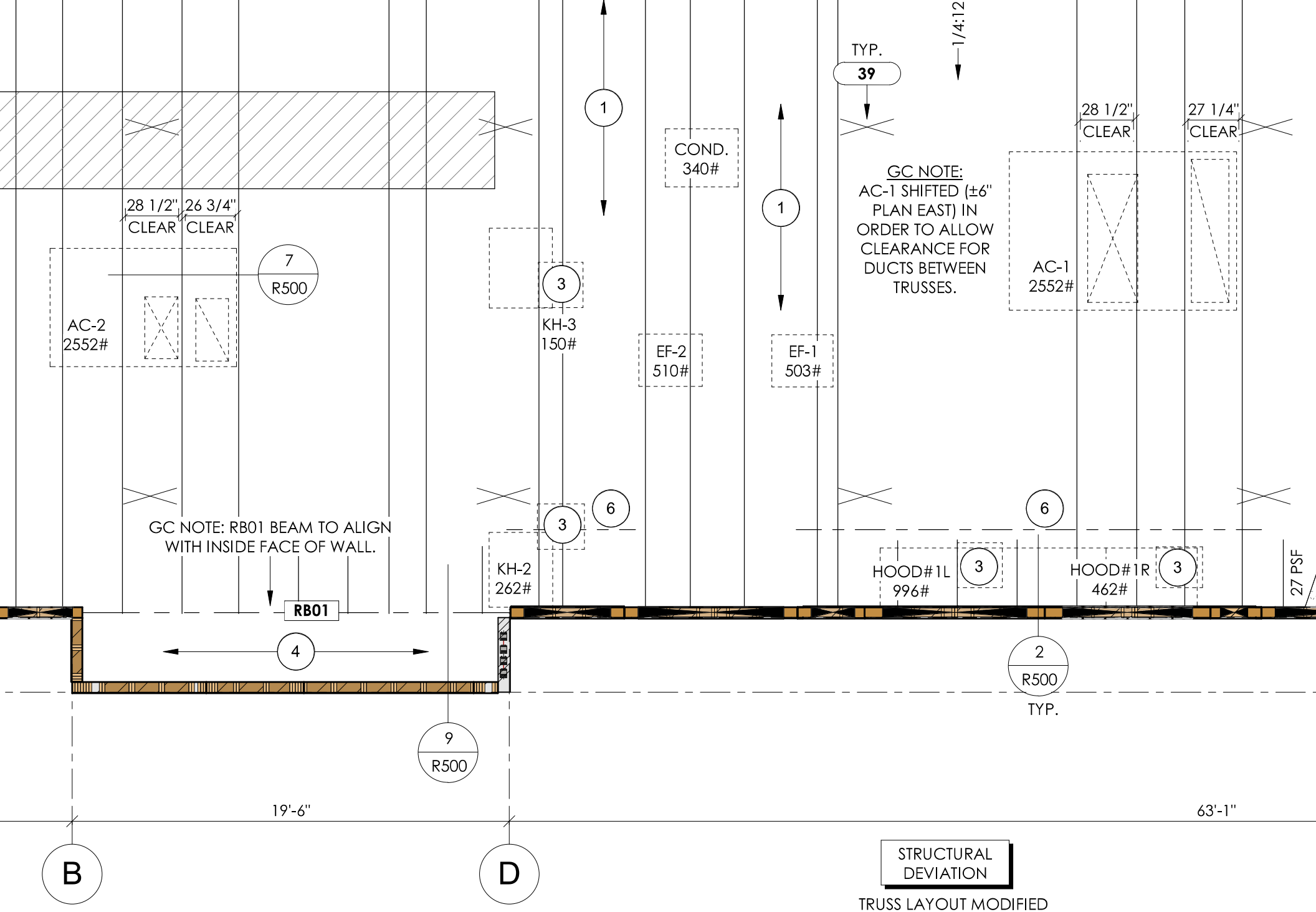
WIND LOADS BASED ON 109 MPH, EXP. C (ULT)

- SPRINKLER LINES ARE ASSUMED TO BE INCLUDED IN DESIGN DEAD LOAD UNLESS NOTED OTHERWISE.

ORE

Y REDBUILT IS
VE NOT BEEN

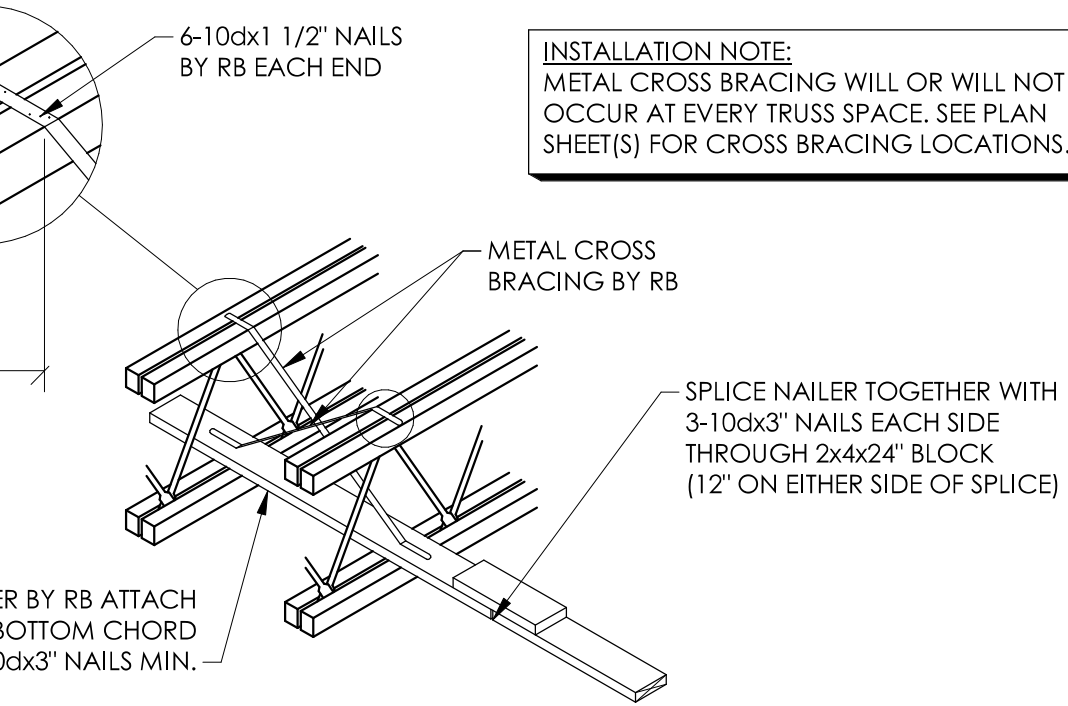
PROJECT 3D



STRUCTURAL DEVIATION

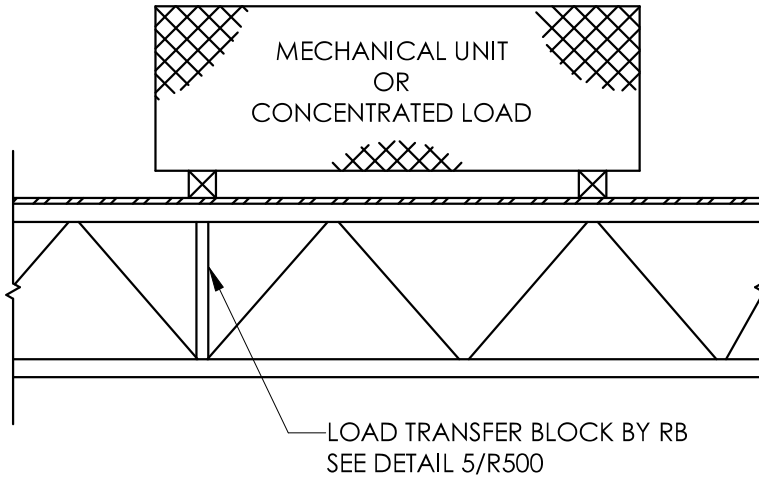
TRUSS LAYOUT MODIFIED AS SHOWN TO AVOID INTERFERENCE WITH FULL HEIGHT COLUMNS.

ng Detail



INSTALLATION NOTE:
METAL CROSS BRACING WILL OR WILL NOT OCCUR AT EVERY TRUSS SPACE. SEE PLAN SHEET(S) FOR CROSS BRACING LOCATIONS.

3 Red-S Perpendicular Truss Section



NOTE: WEIGHT OF MECH. UNIT TO BEAR DIRECTLY OVER PINS ON TOP
DIRECTLY OVER LOAD TRANSFER BLOCKS, AS SHOWN. (MAXIMUM LO
LOCATION SHALL BE IN ACCORDANCE WITH APPROVED TRUSS CALC

7 Mech Unit Red-S