Front Elevation

Scale: 1/4"= 1'0"

NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.

APPROVED
Limited building only review
Permit holder responsible for full compliance with the code

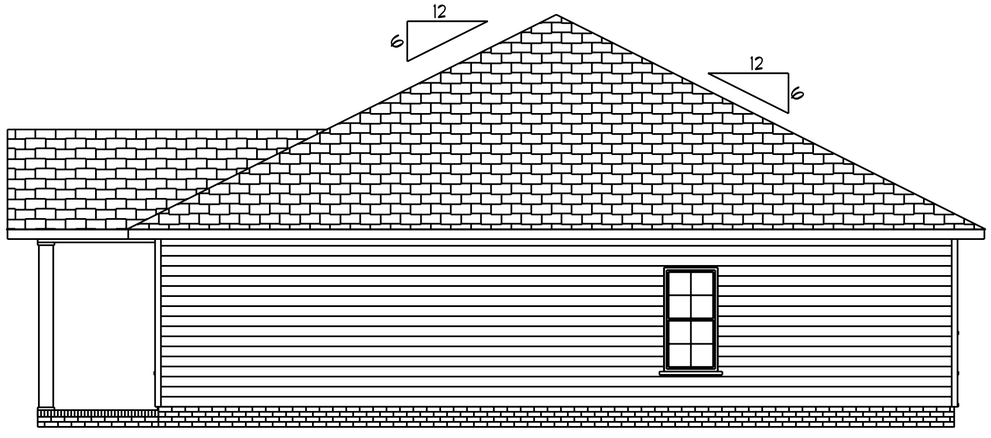
11/01/2024

Harnett COUNTY NORTH CAROLINA

SEE NOTE ON FOUNDATION

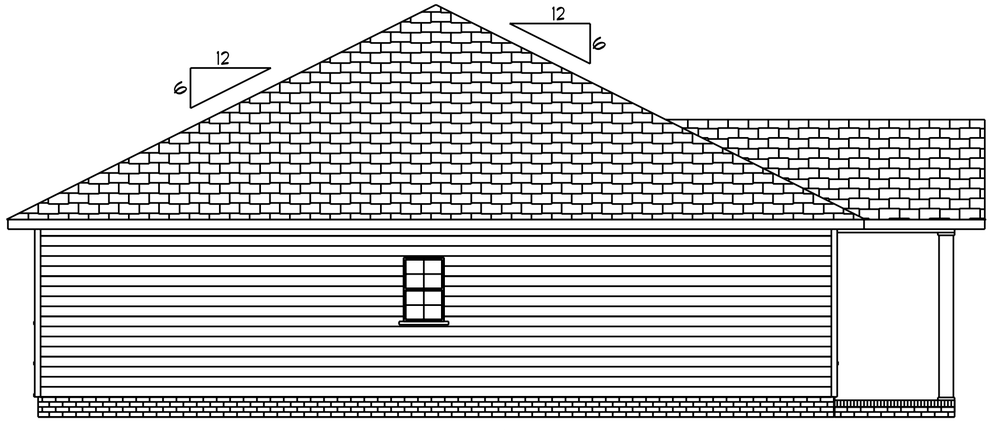
Rear Elevation

Scale: 3/16"= 1'0"



Right Elevation

Scale: 3/16"= 1'0"



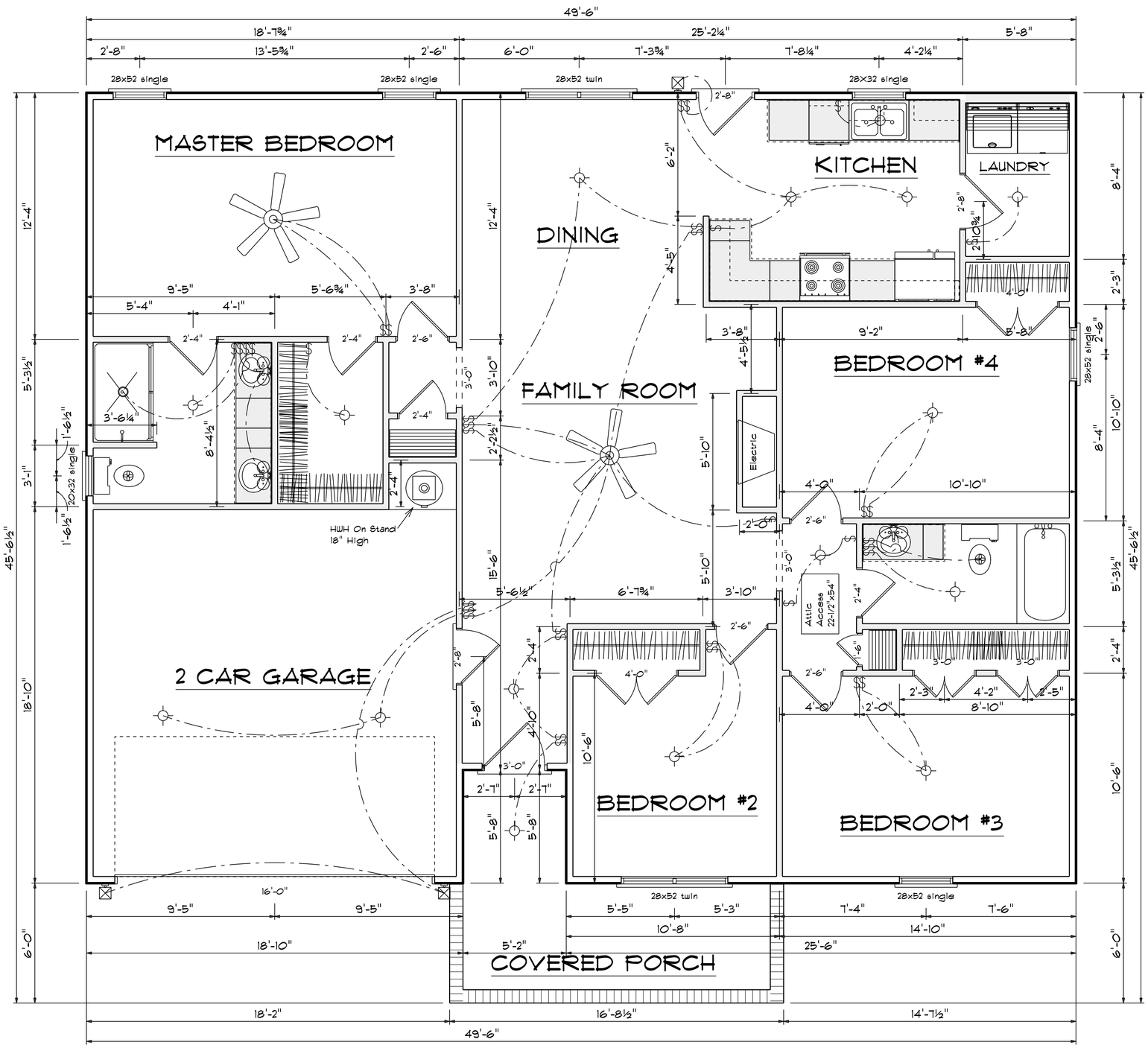
Left Elevation

Scale: 3/16"= 1'0"

DATE: 10/26/2024
REVISED
DRAWING#

SCALE: 1/4"
DRAWN BY
APPROVED

Plan #15



Floor Plan

Scale: 1/4"= 1'-0"

OPENING SCHEDULE				
PRODUCT CODE	SIZE	HINGE	REVERSED	COUNT
1-6 Door Unit	1'-6"	L	NO	1
2-4 Door Unit	2'-4"	R	NO	2
2-4 Door Unit	2'-4"	L	NO	2
2-6 Door Unit	2'-6"	R	NO	2
2-6 Door Unit	2'-6"	L	NO	2
2-8 Door Unit	2'-8"	L	NO	1
3-0 Doublehung Door Unit	3'-0"	LR	NO	2
4-0 Doublehung Door Unit	4'-0"	LR	NO	1
4-0 Doublehung Door Unit	4'-0"	LR	NO	1
20x32 single	2'-0" x 3'-2"	N	NA	1
28X32 single	2'-8" x 3'-2"	N	NA	1
28x52 single	2'-8" x 5'-2"	N	NA	4
28x52 twin	5'-4" x 5'-2"	NN	NA	2
32X80 COLONIAL A 1	2'-8"	R	NO	1
32X80 FRENCH A 1	2'-8"	L	NO	1
36X80 COLONIAL A 1	3'-0"	L	NO	1
192X84 - 8 PANEL - GARAGE DOOR	16'-0"	U	NO	1

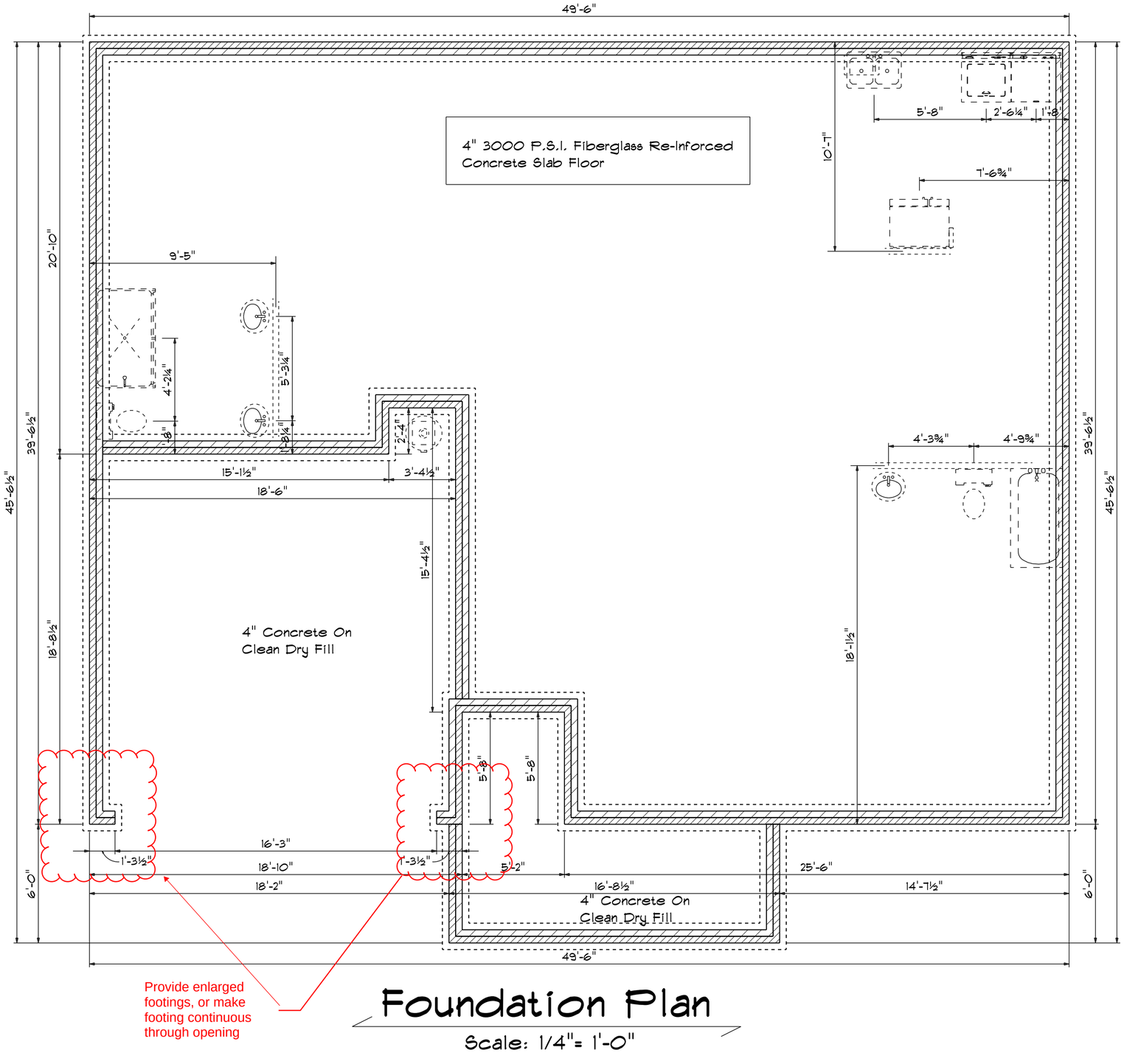
Areas

Heated Sq.Ft.	1597
Garage	356
Front Porch	128

DATE: 10/26/2024
REVISED
DRAWING#

SCALE: 1/4"
DRAWN BY
APPROVED

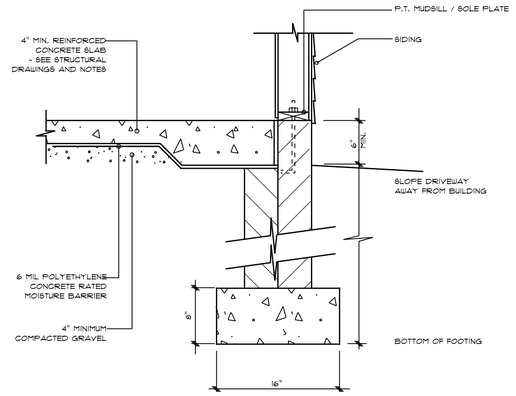
Plan# 15



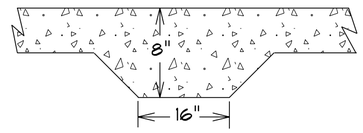
Provide enlarged footings, or make footing continuous through opening

Foundation Plan

Scale: 1/4"= 1'-0"



STEM WALL FOOTING DETAIL

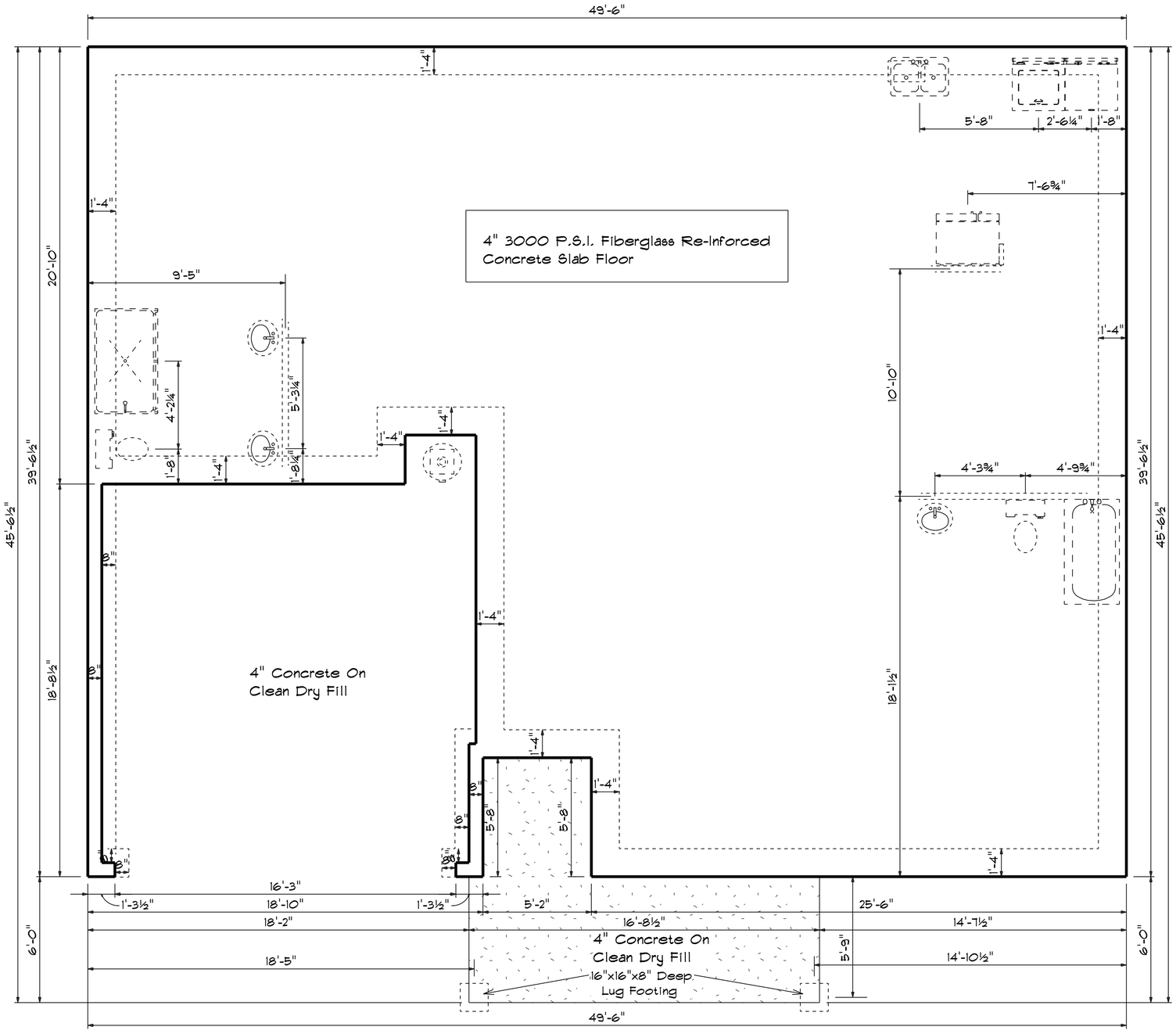


LUG FOOTING DETAIL

DATE: 10/26/2024
REVISED
DRAWING#

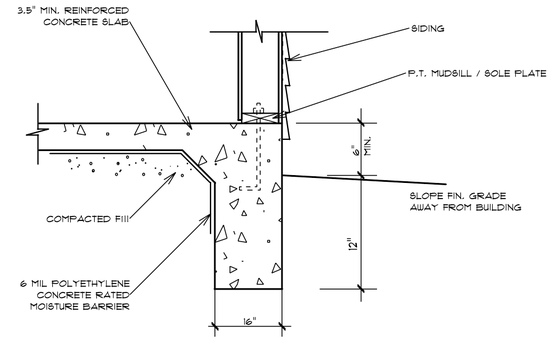
SCALE: 1/4"
DRAWN BY
APPROVED

Plan# 15

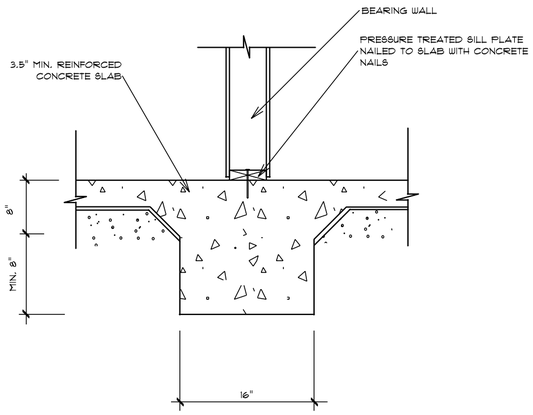


Foundation Plan

Scale: 1/4"= 1'-0"



TURN-DOWN
FOOTING DETAIL



INTEGRAL SLAB FOOTING
DETAIL AT BEARING WALL

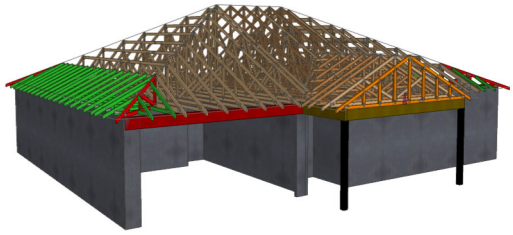
DATE: 10/26/2024
REVISED
DRAWING#

SCALE: 1/4"
DRAWN BY
APPROVED

Plan# 15

Carter Sanford Component Plant
298 Harvey Faulk Rd
Sanford, NC 27332

Phone #:919-775-1450



Builder: Wellco Contractors
Model: Plan 15

THE PLACEMENT PLAN NOTES:

1. The Placement Plan is a diagram for truss installation. It is not an engineered drawing and has not been reviewed by an engineer. The Owner/Building Designer is responsible for obtaining an engineer's review if one is required by the local jurisdiction.
2. The responsibilities of the Owner, Contractor, Building Designer, Component Designer and Component Manufacturer shall be as set forth in ANSI/TPI 1. Capitalized terms shall be as defined in ANSI/TP 1 unless otherwise indicated.
3. Each Component is designed as an individual component utilizing information provided by others. The Owner/Building Designer is responsible for reviewing all Component Submittal Packages and individual Component Design Drawings for compliance with the Construction Documents and compatibility with the overall Building design.
4. Contractor will not proceed with component installation until the Owner/Building Designer has reviewed the Component Submittal Package. Questions on the suitability of any Component will be resolved by the Building Designer.
5. The Building Designer and Contractor are responsible for all temporary and permanent bracing.
6. The Placement Plan assumes the building is dimensionally correct, structurally sound, and in a suitable condition to support each Component during installation and thereafter, including but not limited to installation of all bearing points. Proper design and construction of all structural components, including foundations, headers, beams, walls and columns are the responsibility of the Owner, Building Designer and Contractor.
7. Do not cut, drill, or modify any Component without first consulting the Component Manufacturer or Building Designer. Damaged Components shall not be installed unless directed by the Building Designer or approved by the Component Manufacturer.
8. Components must be handled and installed following all applicable safety standards and best practices, including but not limited to BCSI, OSHA, TPI and local codes. Failure to properly handle, brace or otherwise install Component can result in serious injury or death.

Apprved by: _____ **Date:** _____

General Notes:

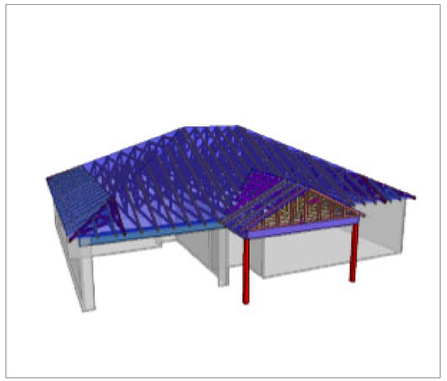
** CUTTING OR DRILLING OF COMPONENTS SHOULD NOT BE DONE WITHOUT CONTACTING COMPONENT SUPPLIER FIRST. CUSTOMER TAKES FULL RESPONSIBILITY FOR COMPONENTS IF CUT BEFORE AUTHORIZATION.

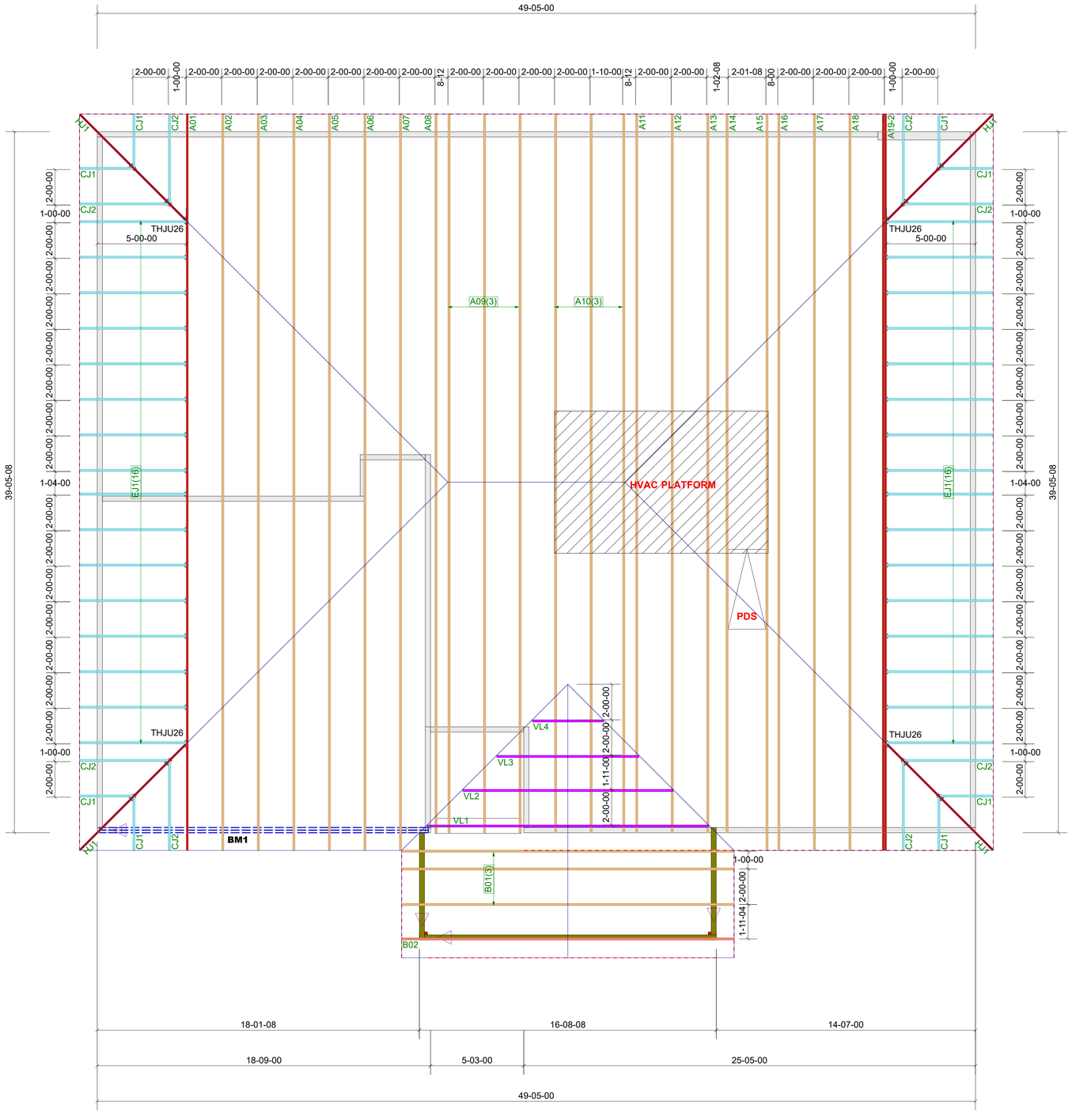
** ALL BEARING POINTS MUST BE INSTALLED PRIOR TO SETTING ANY COMPONENTS.

** TRUSS TO TRUSS CONNECTIONS ARE TOE-NAILED, UNLESS NOTED OTHERWISE.

** DAMAGED COMPONENTS SHOULD NOT BE INSTALLED UNLESS TOLD TO BY THE COMPONENT PLANT.

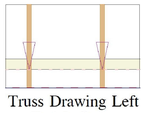
** FRAMER MUST REFER TO PLANS WHILE SETTING COMPONENTS.



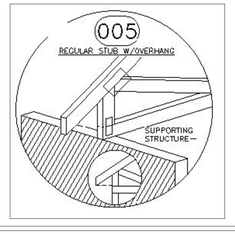


Products					
PlotID	Length	Product	Plies	Net Qty	Fab Type
BM1	20-00-00	2.1 RigidLam SP LVL 1-3/4 x 14	2	2	FF

Truss Connector Total List		
Manuf	Product	Qty
Simpson	H2.5A	114
Simpson	THJU26	4



Truss Drawing Left End Indicator



** TRIANGULAR SYMBOL NEAR END OF TRUSS INDICATES LEFT END OF TRUSS AS SHOWN ON INDIVIDUAL TRUSS DRAWINGS.

** PLUMBING DROPS NOTED ARE IN THE APPROXIMATE LOCATIONS PER PLAN. BUILDER TO VERIFY LOCATIONS BEFORE SETTING TRUSSES.

** REFER TO FINAL TRUSS ENGINEERING SHEETS FOR PLY TO PLY CONNECTIONS.

** All uplift connectors shown within these documents are recommendations only. Per ANSI/TPI 1, all uplift connectors are the responsibility of the bldg designer and or contractor.

** DIMENSIONS ARE READ AS: FOOT-INCH-SIXTEENTH.

** GIRDERS MUST BE FULLY CONNECTED TOGETHER PRIOR TO ADDING ANY LOADS.

Revisions	
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor systems and for the overall structure. The design of the truss supporting structure including headers, beams, walls, columns and foundations is the responsibility of the building designer. For general guidance regarding the bracing, consult "Bracing of Wood Trusses" available from the Truss Plate Institute, 583 D'Onofrio Drive: Madison, WI 53179

CARTER Lumber

Wellco Contractors

Plan 15

ROOF PLACEMENT PLAN

Scale: ***NTS***

Date: 10/29/2024

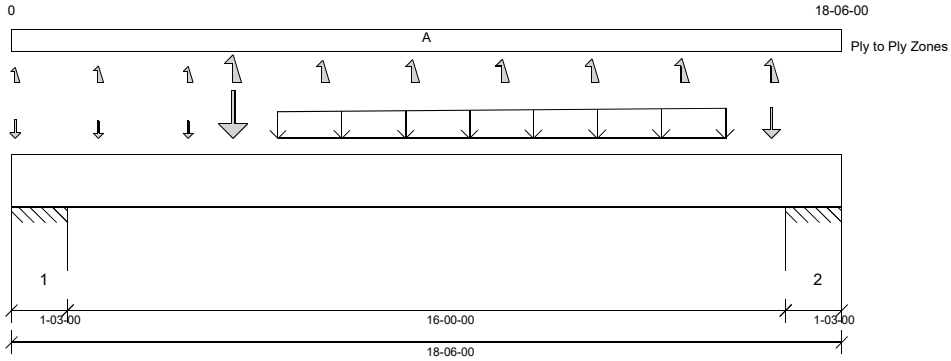
Designer: Nathan Clarke

Project Number: **24070033**

Sheet Number: **1/1**

MiTek	Customer: Job Name: City: Customer Ph...	Job Name: **B** Level: **Roof** Label: **BM1 - i34** Type: **Beam**	**2 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 14**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12 | Designed by Single Member Design Engine in MiTek® Structure Version 8.7.3.303.Update13.26 | Report Version: 2023.09.18 10/29/2024 12:15



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Spacing:	-
LL Deflection Limit:	L/360, 0.75" (absolute)
TL Deflection Limit:	L/240, 1.00" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 1'- 10 1/2" Bottom: 18'

Bearing Stress of Support Material:

- 875 psi Wall @ 1'- 2"
- 875 psi Wall @ 17'- 4"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	8'- 11 1/4"	D + Lr	1.15	10867 lb ft	32936 lb ft	Passed - 33%
Max Neg. Moment:	10'- 11 1/4"	0.6D + 0.6W	1.60	2630 lb ft	25171 lb ft	Passed - 10%
Max Shear:	2'- 5"	D + Lr	1.15	2400 lb	10894 lb	Passed - 22%
Live Load (LL) Pos. Defl.:	9'- 2 5/8"	Lr		0.180"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	9'- 2 5/16"	D + Lr		0.328"	L/240	Passed - L/585

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	1-03-00	D + Lr	1.15	2719 lb		39375 lb	45938 lb	Passed - 7%
1	1-03-00	0.6D + 0.6W	1.60		-546 lb	-	-	
2	1-03-00	D + Lr	1.15	2804 lb		39375 lb	45938 lb	Passed - 7%
2	1-03-00	0.6D + 0.6W	1.60		-776 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	18'- 6"	Self Weight	Top	13 lb/ft	-	-	-	-
Tapered	5'- 11 1/4"	15'- 11 1/4"	Smoothed Load	Top	136 lb/ft	-	63 To 78 lb/ft	128 To 189 lb/ft	42 To 52 lb/ft
Point	0'- 1"	0'- 1"	HJ1(Cond05)	Top	117 lb	-	50 lb	108/-11 lb	33/-139 lb
Point	1'- 11 1/4"	1'- 11 1/4"	CJ1(Cond10)	Top	63 lb	-	45 lb	89 lb	30/-212 lb
Point	3'- 11 1/4"	3'- 11 1/4"	CJ2(Cond05)	Top	83 lb	-	46 lb	92 lb	31/-189 lb
Point	4'- 11 1/4"	4'- 11 1/4"	A01(Cond01)	Top	591 lb	-	255 lb	609/-47 lb	177/-672 lb
Point	6'- 11 1/4"	6'- 11 1/4"	A02(Cond01)	Top	-	-	-	-	-468 lb
Point	8'- 11 1/4"	8'- 11 1/4"	A03(Cond01)	Top	-	-	-	-	-497 lb
Point	10'- 11 1/4"	10'- 11 1/4"	A04(Cond01)	Top	-	-	-	-	-516 lb
Point	12'- 11 1/4"	12'- 11 1/4"	A05(Cond01)	Top	-	-	-	-4 lb	-526 lb
Point	14'- 11 1/4"	14'- 11 1/4"	A06(Cond01)	Top	-	-	-	-16 lb	-538 lb
Point	16'- 11 1/4"	16'- 11 1/4"	A07(Cond01)	Top	184 lb	-	126 lb	392/-101 lb	139/-451 lb

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	1'- 3"	W8(i22)	4854/-3476 lb	-	2164/-1559 lb	4985/-3776 lb	60 lb/ -2249 lb
==>	0'- 1 1/2"	0'- 1 1/2"	W8(i22)	-3476 lb	-	-1559 lb	122/-3625 lb	-
==>	1'- 1 1/2"	1'- 1 1/2"	W8(i22)	4854 lb	-	2164 lb	4863/-151 lb	-
2	17'- 3"	18'- 6"	-	4583/-3320 lb	-	2192/-1569 lb	5231/-3828 lb	-
++>	17'- 4 1/2"	17'- 4 1/2"	W7(i15)	4583 lb	-	2192 lb	5124/-233 lb	-
++>	18'- 4 1/2"	18'- 4 1/2"	W6(i11)	-3320 lb	-	-1569 lb	107/-3595 lb	-

DESIGN NOTES

- CAUTION: The maximum net analysis reaction exceeds the user-defined maximum uplift value at one or more supports.
- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 0.99

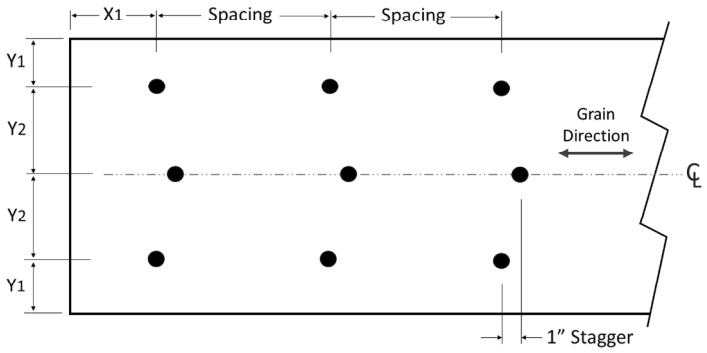
PLY TO PLY CONNECTION

MiTek	Customer: Job Name: City: Customer Ph...	Job Name: **B** Level: **Roof** Label: **BM1 - i34** Type: **Beam**	**2 Ply Member** **2.1 RigidLam SP LVL 1-3/4 x 14**	Status: **Design Passed**

PLY TO PLY CONNECTION

- Zone A: Factored load = 0 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 57. Row = 3, Spacing = 12"
  12d (0.148"x3.25") nails properties: D = 0.148" , L = 3.25". Fastener capacity = 128 lbs. X1 = 2.25" , Y1 = 0.75", Y2 = 1.5"
  Install fasteners from one face.
  X1 = Minimum end distance, X2 = Minimum edge distance, Y2 = Minimum row spacing.

FASTENER INSTALLATION – 3 ROWS (FROM ONE FACE)



ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 24070033-B
15 Overhills Creek-Roof-Plan 15 gable porch

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carter Components (Sanford, NC)).

Pages or sheets covered by this seal: I69186933 thru I69186960

My license renewal date for the state of North Carolina is December 31, 2024.

North Carolina COA: C-0844

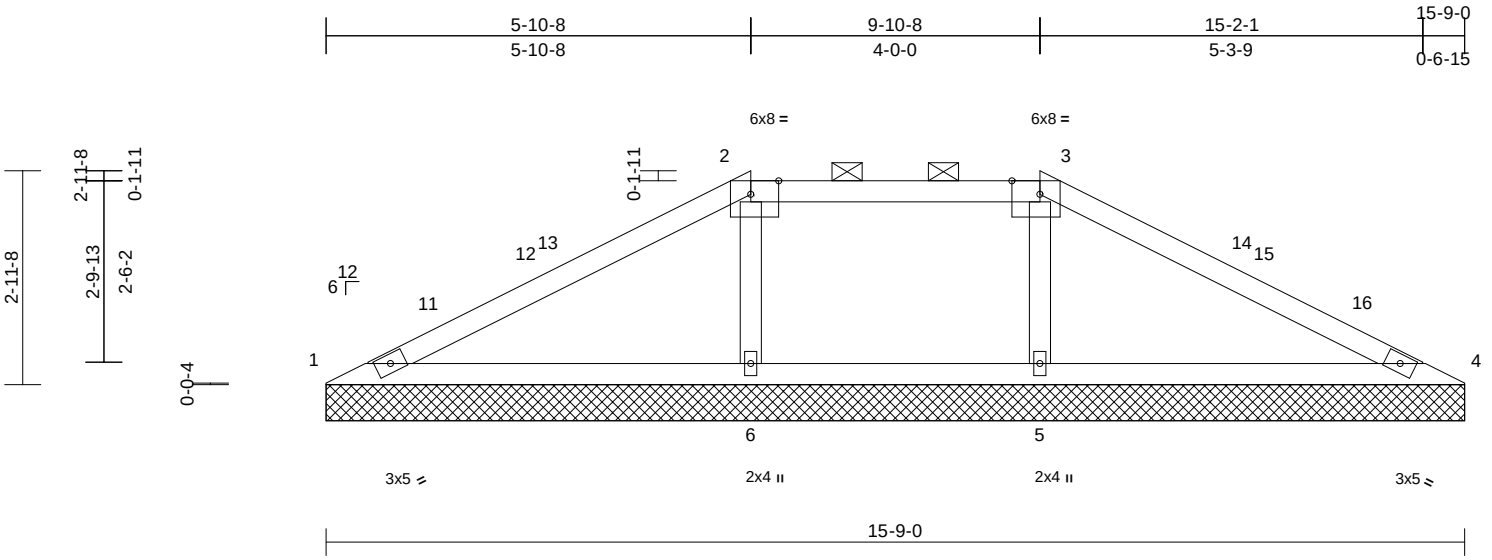
October 29,2024

Gilbert, Eric

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	VL1	Valley	1	1	I69186933 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:26 ID:MMJ?wRUgNGS?1O3iP6vpfZyzaWn-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f Page: 1



Scale = 1:31.9

Plate Offsets (X, Y): [2:0-4-10,Edge], [3:0-4-10,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.45	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 54 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 10-0-0 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 2-3.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=15-9-0, 4=15-9-0, 5=15-9-0, 6=15-9-0
Max Horiz 1=-28 (LC 13)
Max Uplift 1=-17 (LC 47), 4=-17 (LC 45), 6=-2 (LC 15)
Max Grav 1=85 (LC 62), 4=85 (LC 63), 5=662 (LC 43), 6=662 (LC 43)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-119/670, 2-3=-47/520, 3-4=-114/670
BOT CHORD 1-6=-520/152, 5-6=-520/152, 4-5=-520/152
WEBS 2-6=-520/184, 3-5=-520/182

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-8 to 3-0-8, Interior (1) 3-0-8 to 5-11-0, Exterior(2E) 5-11-0 to 9-11-0, Exterior(2R) 9-11-0 to 14-1-15, Interior (1) 14-1-15 to 15-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
5) Unbalanced snow loads have been considered for this design.
6) Provide adequate drainage to prevent water ponding.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 4-0-0 oc.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) All bearings are assumed to be SP No.2 .
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 17 lb uplift at joint 1, 17 lb uplift at joint 4 and 2 lb uplift at joint 6.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

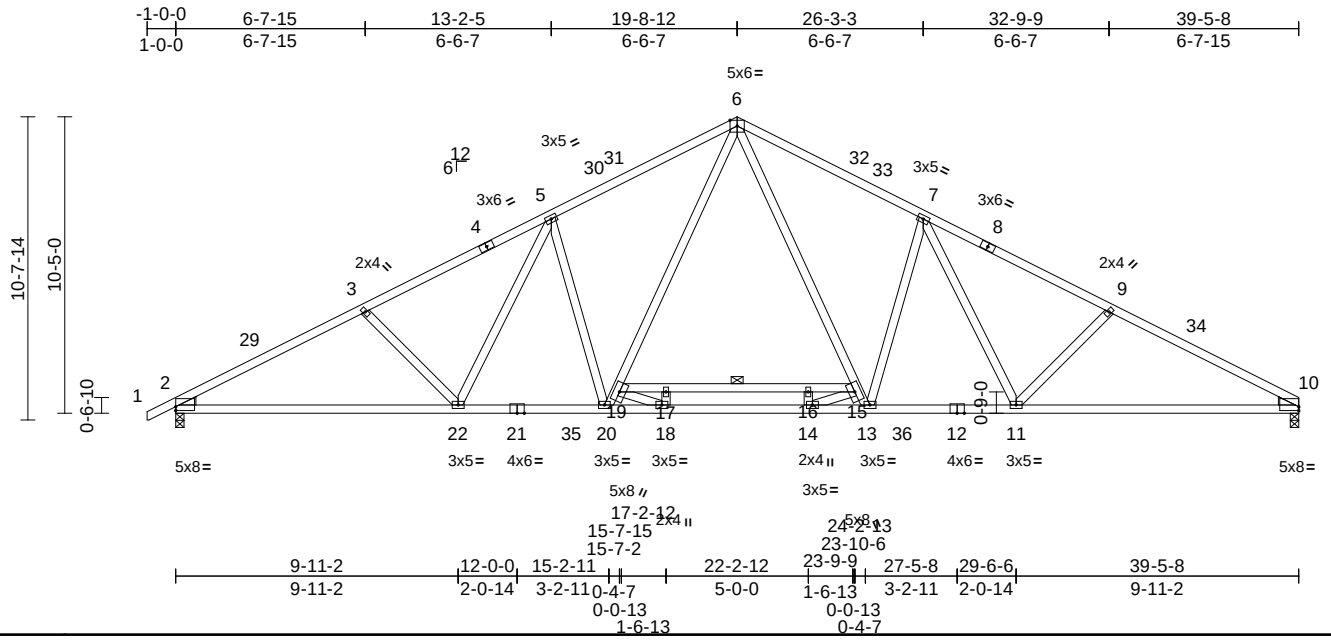
LOAD CASE(S) Standard

October 29,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	A10	Common	3	1	I69186934 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:21 ID:vt0uODXhaBl0oMUBp6RS0CyzaU8-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f Page: 1



Scale = 1:81

Plate Offsets (X, Y): [2:Edge,0-1-10], [10:Edge,0-1-10]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.99	Vert(LL)	-0.29	14-18	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.57	14-18	>838	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.15	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 235 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP 2400F 2.0E *Except* 19-15:2x4 SP No.2, 21-12:2x4 SP No.1
WEBS 2x4 SP No.3 *Except* 6-20,6-13:2x4 SP No.2
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
5-2-1 oc bracing: 17-19
4-8-11 oc bracing: 16-17
5-2-3 oc bracing: 15-16.

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=107 (LC 14)
Max Grav 2=2077 (LC 3), 10=2028 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/33, 2-3=-4086/0, 3-5=-3842/0, 5-6=-3409/16, 6-7=-3409/20, 7-9=-3845/0, 9-10=-4090/0
BOT CHORD 2-22=-176/3559, 20-22=0/3094, 18-20=0/2416, 14-18=0/3339, 13-14=0/2416, 11-13=0/3095, 10-11=-162/3563, 17-19=-1252/0, 16-17=-1252/0, 15-16=-1252/0
WEBS 7-11=-22/538, 9-11=-341/155, 5-22=-13/534, 3-22=-338/148, 19-20=-131/1020, 6-19=0/1436, 6-15=0/1437, 13-15=-131/1021, 5-20=-747/178, 7-13=-749/178, 17-18=-219/0, 18-19=0/1198, 14-16=-219/0, 14-15=0/1198

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-9 to 2-11-12, Interior (1) 2-11-12 to 19-8-12, Exterior(2R) 19-8-12 to 23-8-2, Interior (1) 23-8-2 to 39-5-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) 200.0lb AC unit load placed on the bottom chord, 19-8-12 from left end, supported at two points, 5-0-0 apart.
7) All plates are 3x5 MT20 unless otherwise indicated.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) All bearings are assumed to be SP 2400F 2.0E .
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

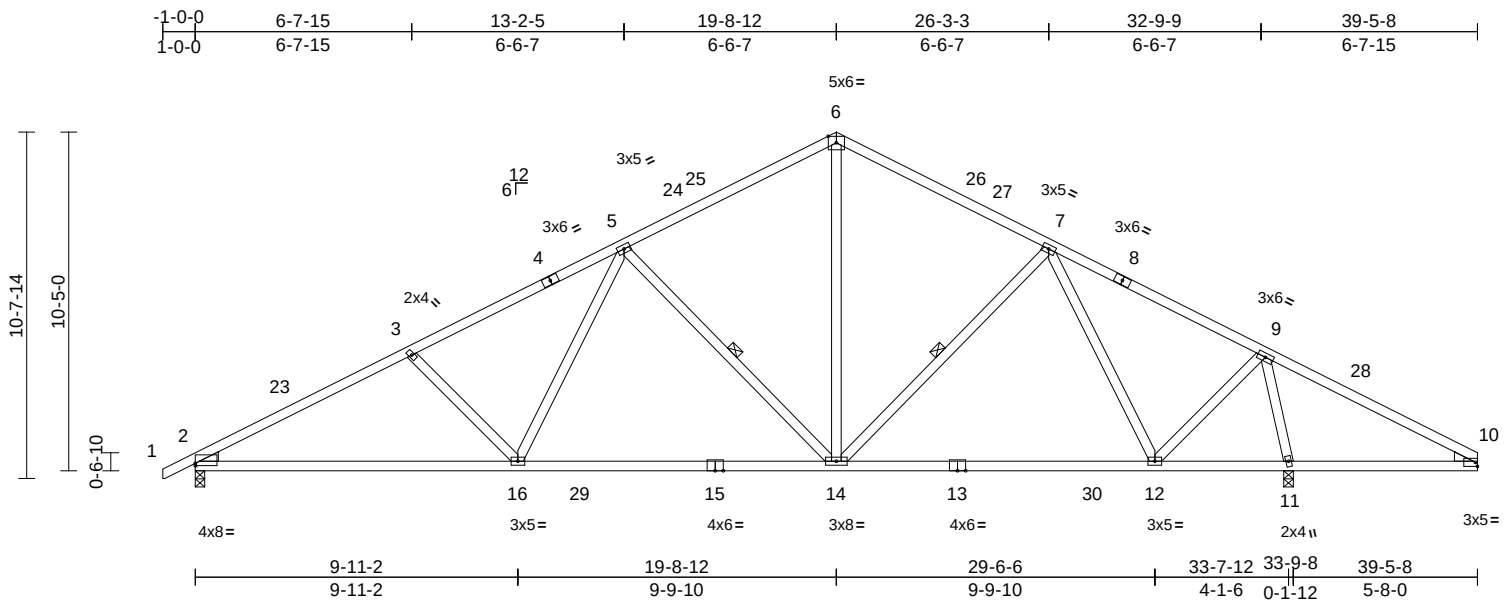
October 29,2024

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	A09	Common	3	1	I69186935 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:21 Page: 1
ID:YH3RxeEZnJGCTwpd270MAeyzaVp-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:70.9

Plate Offsets (X, Y): [2:Edge,0-0-14]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.69	Vert(LL)	-0.27	14-16	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.46	12-14	>884	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.77	Horz(CT)	0.07	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 210 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-1-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 7-14, 5-14

REACTIONS (size) 2=0-3-8, 11=0-3-8
Max Horiz 2=107 (LC 14)
Max Grav 2=1490 (LC 3), 11=2037 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/33, 2-3=-2824/210, 3-5=-2573/203, 5-6=-1617/212, 6-7=-1616/203, 7-9=-1205/54, 9-10=-196/516
BOT CHORD 2-16=-214/2438, 14-16=-29/1886, 12-14=0/1255, 11-12=-36/157, 10-11=-383/213
WEBS 6-14=-35/1014, 7-14=-57/175, 7-12=-693/168, 9-12=-40/1277, 5-14=-869/163, 5-16=0/699, 3-16=-363/143, 9-11=-2089/262

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-9 to 2-11-12, Interior (1) 2-11-12 to 19-8-12, Exterior(2R) 19-8-12 to 23-8-2, Interior (1) 23-8-2 to 39-5-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be SP No.1 .
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

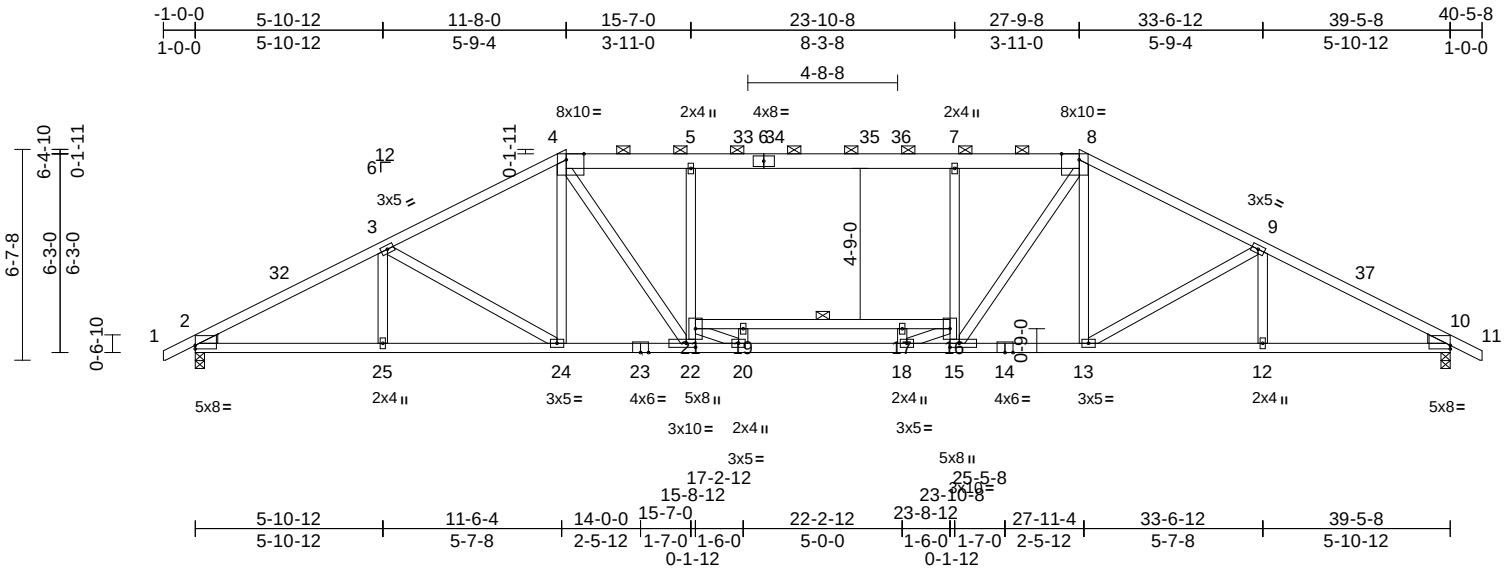
LOAD CASE(S) Standard

October 29,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	A15	Hip	1	1	I69186936 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:22 Page: 1
ID:dMlyITBI6tl0?lLWwdl2D_yzaGN-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:72.4

Plate Offsets (X, Y): [2:Edge,0-1-6], [4:0-6-10,Edge], [8:0-6-10,Edge], [10:Edge,0-1-6], [15:0-3-8,0-1-8], [22:0-3-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.96	Vert(LL)	-0.32	17-19	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.60	18-20	>785	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.17	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 238 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 4-6,6-8:2x6 SP No.2
BOT CHORD 2x4 SP 2400F 2.0E *Except* 21-16:2x4 SP No.2, 23-14:2x4 SP No.1
WEBS 2x4 SP No.3
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied, except
2-0-0 oc purlins (3-1-4 max.): 4-8.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=-64 (LC 13)
Max Grav 2=2107 (LC 50), 10=2107 (LC 50)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/33, 2-3=-4165/0, 3-4=-3792/0, 4-5=-4204/0, 5-7=-4210/0, 7-8=-4204/0, 8-9=-3792/0, 9-10=-4165/0, 10-11=0/33
BOT CHORD 2-25=-68/3633, 24-25=0/3633, 22-24=0/3313, 20-22=0/4025, 18-20=0/4957, 15-18=0/4025, 13-15=0/3313, 12-13=0/3635, 10-12=-58/3635, 19-21=-999/0, 17-19=-999/0, 16-17=-999/0
WEBS 3-25=0/138, 3-24=-519/124, 4-24=-4/459, 8-13=-4/459, 9-13=-519/124, 9-12=0/138, 21-22=-1130/0, 5-21=-702/133, 15-16=-1131/0, 7-16=-702/133, 4-22=0/1510, 8-15=0/1509, 19-20=-234/0, 20-21=0/1225, 17-18=-234/0, 16-18=0/1225

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-9 to 2-11-12, Interior (1) 2-11-12 to 11-8-0, Exterior(2R) 11-8-0 to 17-2-15, Interior (1) 17-2-15 to 27-9-8, Exterior(2R) 27-9-8 to 33-6-12, Interior (1) 33-6-12 to 40-5-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) 200.0lb AC unit load placed on the bottom chord, 19-8-12 from left end, supported at two points, 5-0-0 apart.
7) Provide adequate drainage to prevent water ponding.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) All bearings are assumed to be SP 2400F 2.0E .
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

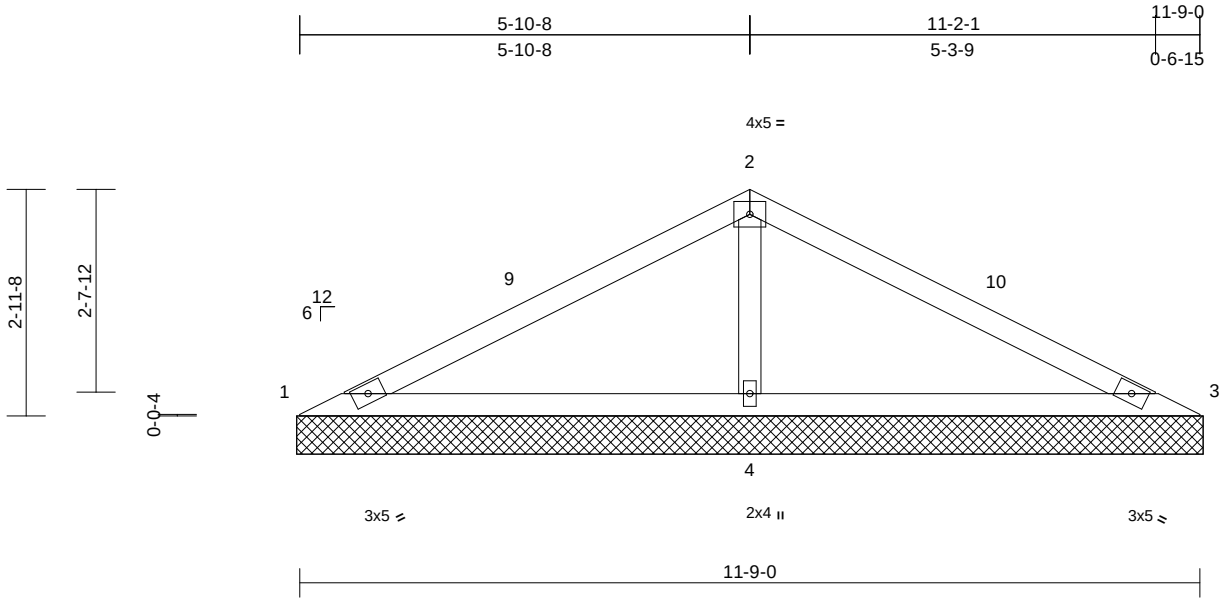
LOAD CASE(S) Standard

October 29,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	VL2	Valley	1	1	I69186937 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:26 ID:vt0uODXhaBl0oMUBp6RS0CyzaU8-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f Page: 1



Scale = 1:30.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.50	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.42	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.16	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 39 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 10-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=11-10-0, 3=11-10-0, 4=11-10-0
Max Horiz 1=29 (LC 14)
Max Uplift 1=-44 (LC 22), 3=-44 (LC 21)
Max Grav 1=77 (LC 38), 3=77 (LC 39), 4=899 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-174/519, 2-3=-169/519
BOT CHORD 1-4=-432/216, 3-4=-432/216
WEBS 2-4=-742/317

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 5-11-0, Exterior(2R) 5-11-0 to 8-11-0, Interior (1) 8-11-0 to 11-10-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) All bearings are assumed to be SP No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 44 lb uplift at joint 1 and 44 lb uplift at joint 3.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

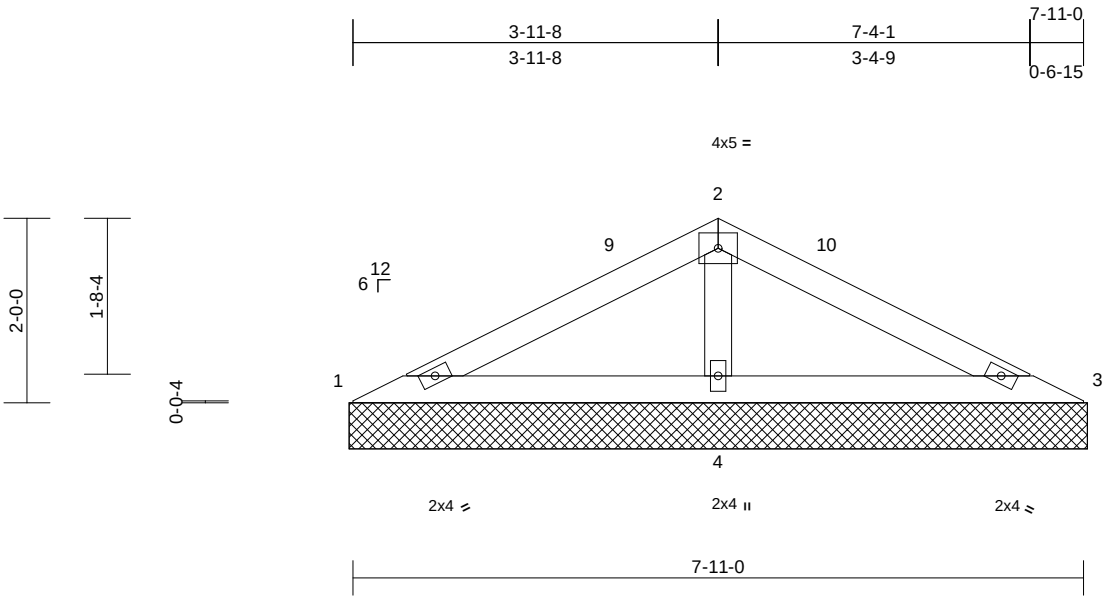
LOAD CASE(S) Standard

October 29,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	VL3	Valley	1	1	I69186938 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:26 ID:vt0uODXhaBl0oMUBp6RS0CyzaU8-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f Page: 1



Scale = 1:25

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.23	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 25 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 7-11-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=8-0-0, 3=8-0-0, 4=8-0-0
Max Horiz 1=-19 (LC 13)
Max Uplift 1=-1 (LC 15), 3=-5 (LC 16)
Max Grav 1=91 (LC 21), 3=91 (LC 22), 4=536 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-128/280, 2-3=-120/280
BOT CHORD 1-4=-249/174, 3-4=-249/174
WEBS 2-4=-409/222

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 4-0-0, Exterior(2R) 4-0-0 to 6-9-3, Interior (1) 6-9-3 to 8-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) All bearings are assumed to be SP No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1 lb uplift at joint 1 and 5 lb uplift at joint 3.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

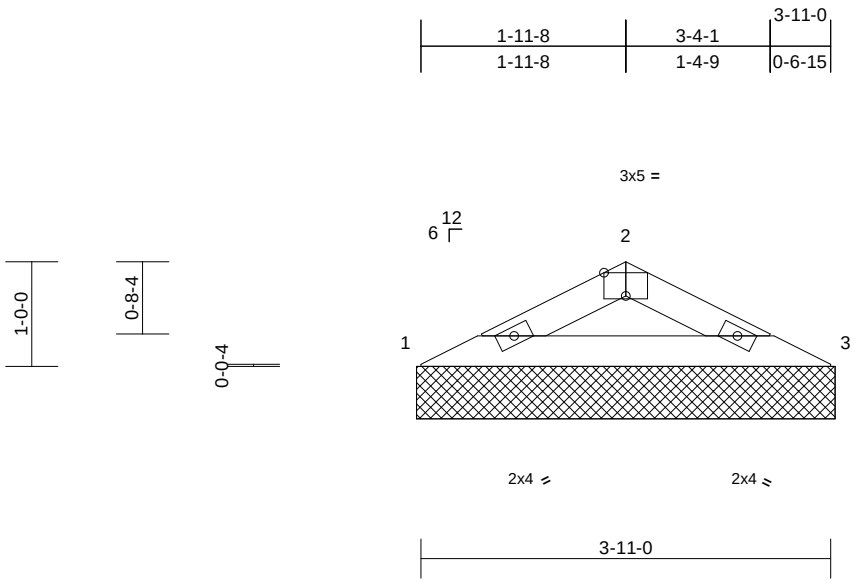
October 29,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	VL4	Valley	1	1	I69186939 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:27 Page: 1
ID:vt0uODXhaBl0oMUBp6RS0CyzaU8-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:22

Plate Offsets (X, Y): [2:0-2-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.12	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 10 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-11-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-0-0, 3=4-0-0
Max Horiz 1=-9 (LC 13)
Max Grav 1=160 (LC 2), 3=160 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-314/170, 2-3=-314/159
BOT CHORD 1-3=-149/274

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) All bearings are assumed to be SP No.2 .
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

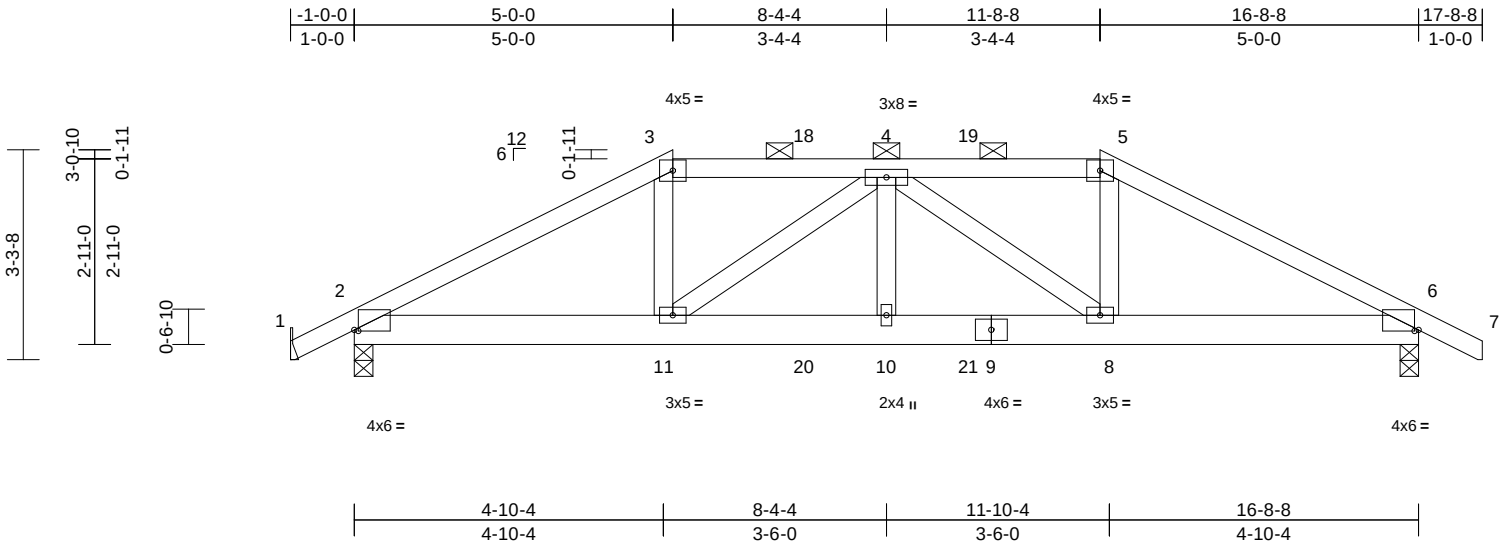
LOAD CASE(S) Standard

October 29,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	B01	Hip Girder	1	1	I69186940 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:25 Page: 1
ID:3RF4eDsx9VrahSyz_j9w4PyzakV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:36.2

Plate Offsets (X, Y): [2:0-0-12,0-0-3], [6:0-0-12,0-0-3]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	-0.08	10	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.14	10-11	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.34	Horz(CT)	0.04	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 91 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-2-11 oc purlins, except 2-0-0 oc purlins (3-7-8 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1= Mechanical, 2=0-3-8, 6=0-3-8
Max Horiz 1=-32 (LC 9)
Max Uplift 1=-144 (LC 36), 2=-78 (LC 11), 6=-63 (LC 12)
Max Grav 1=28 (LC 11), 2=1753 (LC 36), 6=1563 (LC 36)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-38/120, 2-3=-2641/118, 3-4=-2246/123, 4-5=-2283/129, 5-6=-2680/124, 6-7=0/36
BOT CHORD 2-11=-77/2288, 10-11=-98/2780, 8-10=-98/2780, 6-8=-60/2325
WEBS 3-11=0/812, 4-11=-757/56, 4-10=0/270, 4-8=-727/60, 5-8=0/820

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Bearings are assumed to be: , Joint 2 SP No.2 , Joint 6 SP No.2 .
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 144 lb uplift at joint 1.
11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 6. This connection is for uplift only and does not consider lateral forces.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 139 lb down and 39 lb up at 5-0-0, 139 lb down and 37 lb up at 7-0-12, 139 lb down and 37 lb up at 8-4-4, and 139 lb down and 37 lb up at 9-7-12, and 139 lb down and 39 lb up at 11-8-8 on top chord, and 415 lb down and 23 lb up at 5-0-0, 47 lb down at 7-0-12, 47 lb down at 8-4-4, and 47 lb down at 9-7-12, and 415 lb down and 23 lb up at 11-7-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
15) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-13=-70, 3-13=-48, 3-5=-58, 5-7=-48, 12-15=-20
Concentrated Loads (lb)
Vert: 3=-114 (F), 5=-114 (F), 11=-415 (F), 10=-47 (F), 8=-415 (F), 4=-109 (F), 18=-109 (F), 19=-109 (F), 20=-47 (F), 21=-47 (F)

October 29,2024

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	A11	Hip	1	1	I69186941
					Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:21 Page: 1

ID:tyQwU1ca42QcRoeFuDXn_TyzaRS-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

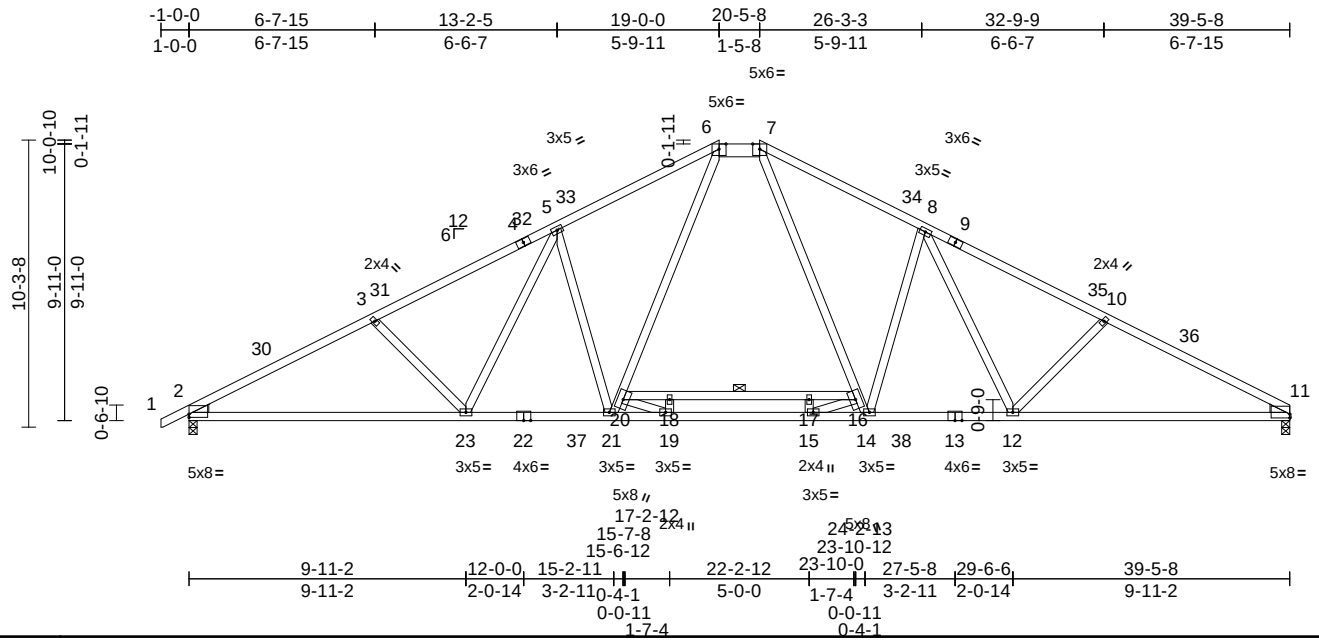


Plate Offsets (X, Y): [2:Edge,0-1-6], [11:Edge,0-1-10]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.82	Vert(LL)	-0.33	15-19	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.59	15-19	>803	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.78	Horz(CT)	0.17	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 234 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 6-7:2x6 SP No.2, 1-4,9-11:2x4 SP No.1

BOT CHORD 2x4 SP 2400F 2.0E *Except* 20-16:2x4 SP No.2, 22-13:2x4 SP No.1

WEBS 2x4 SP No.3 *Except* 6-21,7-14:2x4 SP No.2

WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except
2-0-0 oc purlins (4-5-3 max.): 6-7.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
5-2-7 oc bracing: 18-20,16-17
4-8-13 oc bracing: 17-18.

REACTIONS (size) 2=0-3-8, 11=0-3-8
Max Horiz 2=103 (LC 14)
Max Grav 2=2201 (LC 50), 11=2161 (LC 50)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/33, 2-3=-4415/0, 3-5=-4197/0, 5-6=-3735/4, 6-7=-2742/57, 7-8=-3735/1, 8-10=-4199/0, 10-11=-4417/0

BOT CHORD 2-23=-171/3864, 21-23=0/3403, 19-21=0/2727, 15-19=0/3651, 14-15=0/2728, 12-14=0/3407, 11-12=-158/3866, 18-20=-1241/0, 17-18=-1241/0, 16-17=-1241/0

WEBS 3-23=-343/152, 5-23=-15/540, 20-21=-123/1071, 6-20=0/1473, 7-16=0/1472, 14-16=-122/1069, 8-14=-805/176, 8-12=-23/542, 10-12=-343/157, 5-21=-804/176, 18-19=-219/0, 19-20=0/1215, 15-17=-219/0, 15-16=0/1215

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-9 to 2-11-12, Interior (1) 2-11-12 to 19-0-0, Exterior(2E) 19-0-0 to 20-5-8, Exterior(2R) 20-5-8 to 26-3-10, Interior (1) 26-3-10 to 39-5-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) 200.0lb AC unit load placed on the bottom chord, 19-8-12 from left end, supported at two points, 5-0-0 apart.
7) Provide adequate drainage to prevent water ponding.
8) All plates are 3x5 MT20 unless otherwise indicated.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) All bearings are assumed to be SP 2400F 2.0E .
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

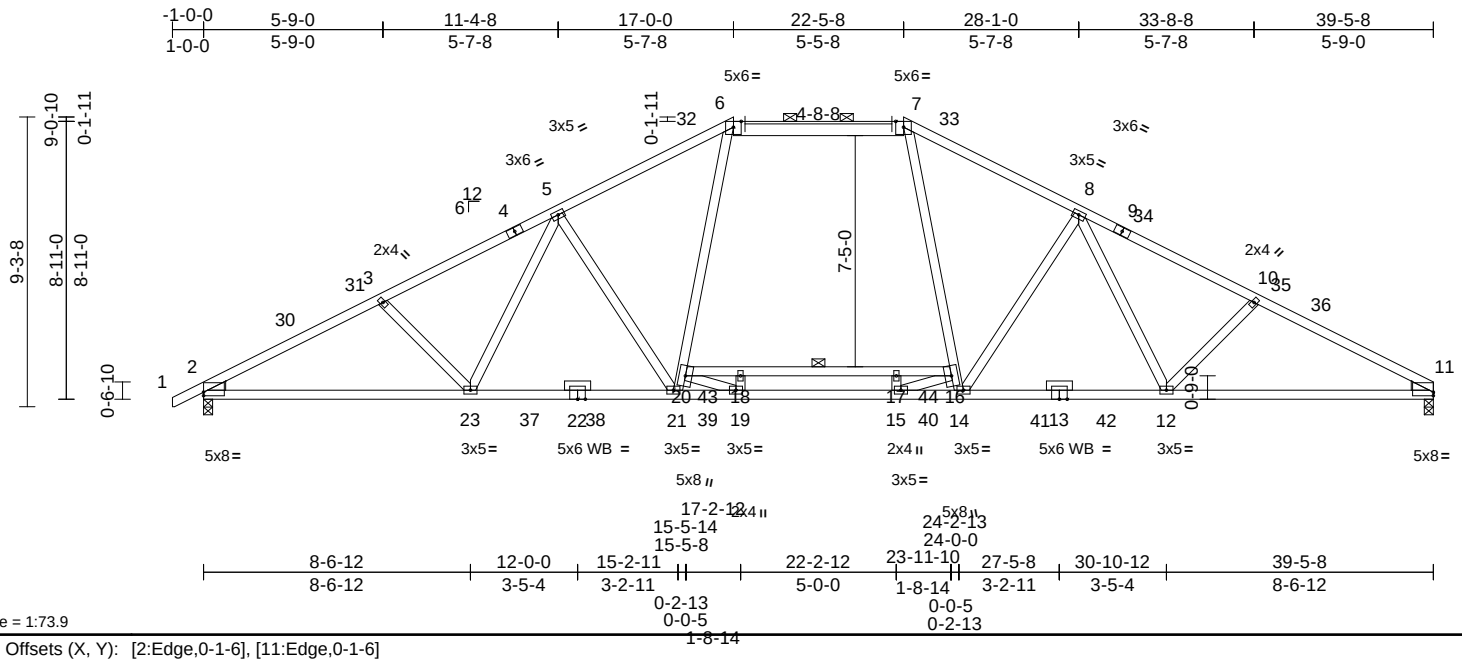
October 29,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	A12	Hip	1	1	I69186942
					Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:21 Page: 1

ID:fxenH5YZ9VimFXRBqYwX?QyzaOx-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:73.9

Plate Offsets (X, Y): [2:Edge,0-1-6], [11:Edge,0-1-6]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	-0.44	12-14	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.60	12-14	>785	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.68	Horz(CT)	0.16	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 230 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP 2400F 2.0E *Except* 6-7:2x6 SP No.2
BOT CHORD	2x4 SP 2400F 2.0E *Except* 20-16:2x4 SP No.2
WEBS	2x4 SP No.3 *Except* 6-21,7-14:2x4 SP No.2
OTHERS	2x4 SP No.3
WEDGE	Left: 2x4 SP No.3 Right: 2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-6-1 oc purlins, except 2-0-0 oc purlins (4-3-8 max.): 6-7.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 5-4-1 oc bracing: 18-20,16-17 4-10-10 oc bracing: 17-18.

REACTIONS (size) 2=0-3-8, 11=0-3-8
Max Horiz 2=92 (LC 14)
Max Grav 2=2210 (LC 50), 11=2170 (LC 50)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/33, 2-3=-4455/0, 3-5=-4257/0, 5-6=-3672/0, 6-7=-2966/37, 7-8=-3672/0, 8-10=-4260/0, 10-11=-4459/0
BOT CHORD	2-23=-120/3893, 21-23=0/3528, 19-21=0/2901, 15-19=0/3840, 14-15=0/2902, 12-14=0/3529, 11-12=-113/3898, 18-20=-1180/0, 17-18=-1180/0, 16-17=-1180/0
WEBS	3-23=-262/131, 5-23=-7/441, 8-12=-10/444, 10-12=-266/139, 20-21=-45/920, 6-20=0/1303, 7-16=0/1304, 14-16=-45/920, 18-19=-257/6, 19-20=0/1227, 15-17=-257/7, 15-16=0/1226, 5-21=-721/158, 8-14=-723/159

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-9 to 2-11-12, Interior (1) 2-11-12 to 17-0-0, Exterior(2E) 17-0-0 to 22-5-8, Exterior(2R) 22-5-8 to 28-1-0, Interior (1) 28-1-0 to 39-5-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) 200.0lb AC unit load placed on the bottom chord, 19-8-12 from left end, supported at two points, 5-0-0 apart.
7) Provide adequate drainage to prevent water ponding.
8) All plates are 3x5 MT20 unless otherwise indicated.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) All bearings are assumed to be SP 2400F 2.0E .
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

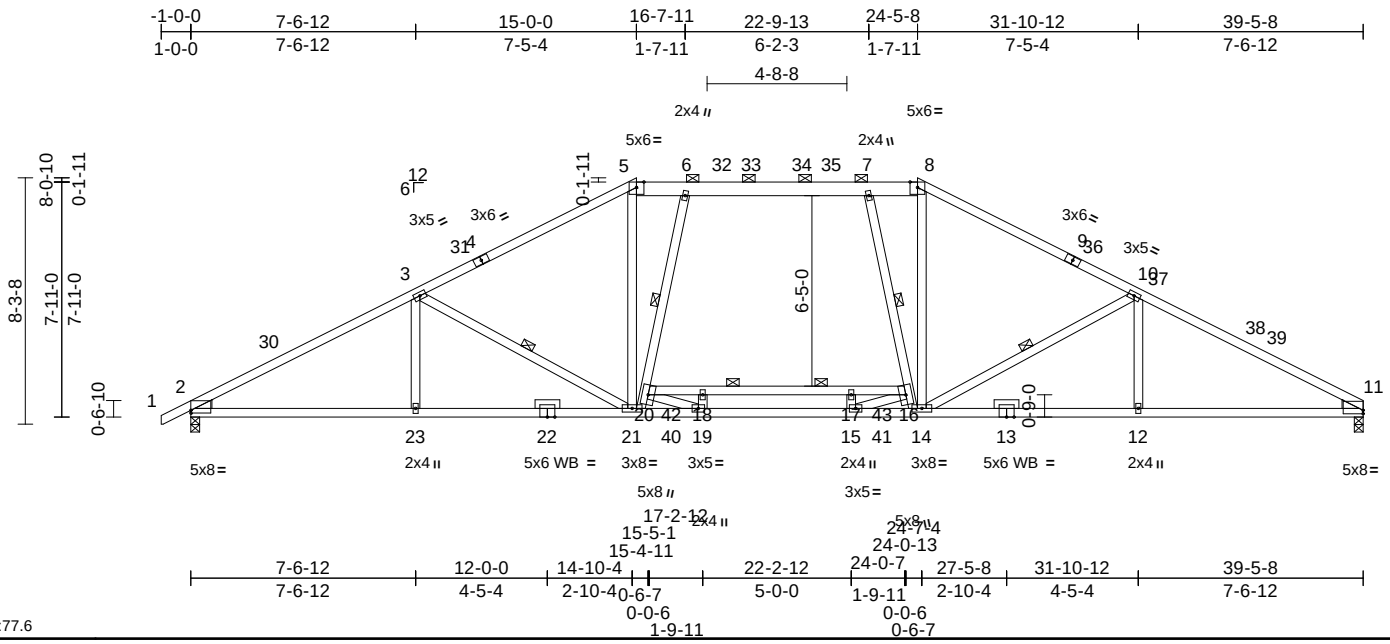
LOAD CASE(S) Standard

October 29,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	A13	Hip	1	1	I69186943 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:22 Page: 1
ID:twIdpUOPVveonFA6uc6tMHyzaK_-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:77.6

Plate Offsets (X, Y): [2:Edge,0-1-2], [11:Edge,0-1-6]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.98	Vert(LL)	-0.29	15-19	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.56	15-19	>841	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.61	Horz(CT)	0.18	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 235 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E *Except* 5-8:2x6 SP No.2, 9-11:2x4 SP No.1
BOT CHORD 2x4 SP 2400F 2.0E *Except* 20-16:2x4 SP No.2, 22-13:2x4 SP No.1
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied, except
2-0-0 oc purlins (3-10-14 max.): 5-8.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 3-21, 6-21, 7-14, 10-14

REACTIONS (size) 2=0-3-8, 11=0-3-8
Max Horiz 2=82 (LC 14)
Max Grav 2=2158 (LC 50), 11=2112 (LC 50)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/33, 2-3=-4308/0, 3-5=-3581/0, 5-6=-3103/0, 6-7=-3163/5, 7-8=-3103/0, 8-10=-3581/0, 10-11=-4300/0
BOT CHORD 2-23=-121/3746, 21-23=0/3746, 19-21=0/3329, 15-19=0/4323, 14-15=0/3329, 12-14=0/3742, 11-12=-150/3742, 18-20=-1437/0, 17-18=-1437/0, 16-17=-1437/0
WEBS 3-23=0/243, 3-21=-795/149, 5-21=0/1416, 20-21=-1060/0, 6-20=-716/161, 7-16=-714/163, 14-16=-1058/0, 8-14=0/1416, 10-14=-790/149, 10-12=0/240, 18-19=-230/0, 19-20=0/1290, 15-17=-231/0, 15-16=0/1290

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-9 to 2-11-12, Interior (1) 2-11-12 to 15-0-0, Exterior(2R) 15-0-0 to 20-6-15, Interior (1) 20-6-15 to 24-5-8, Exterior(2R) 24-5-8 to 30-0-7, Interior (1) 30-0-7 to 39-5-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) 200.0lb AC unit load placed on the bottom chord, 19-8-12 from left end, supported at two points, 5-0-0 apart.
7) Provide adequate drainage to prevent water ponding.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) All bearings are assumed to be SP 2400F 2.0E .
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

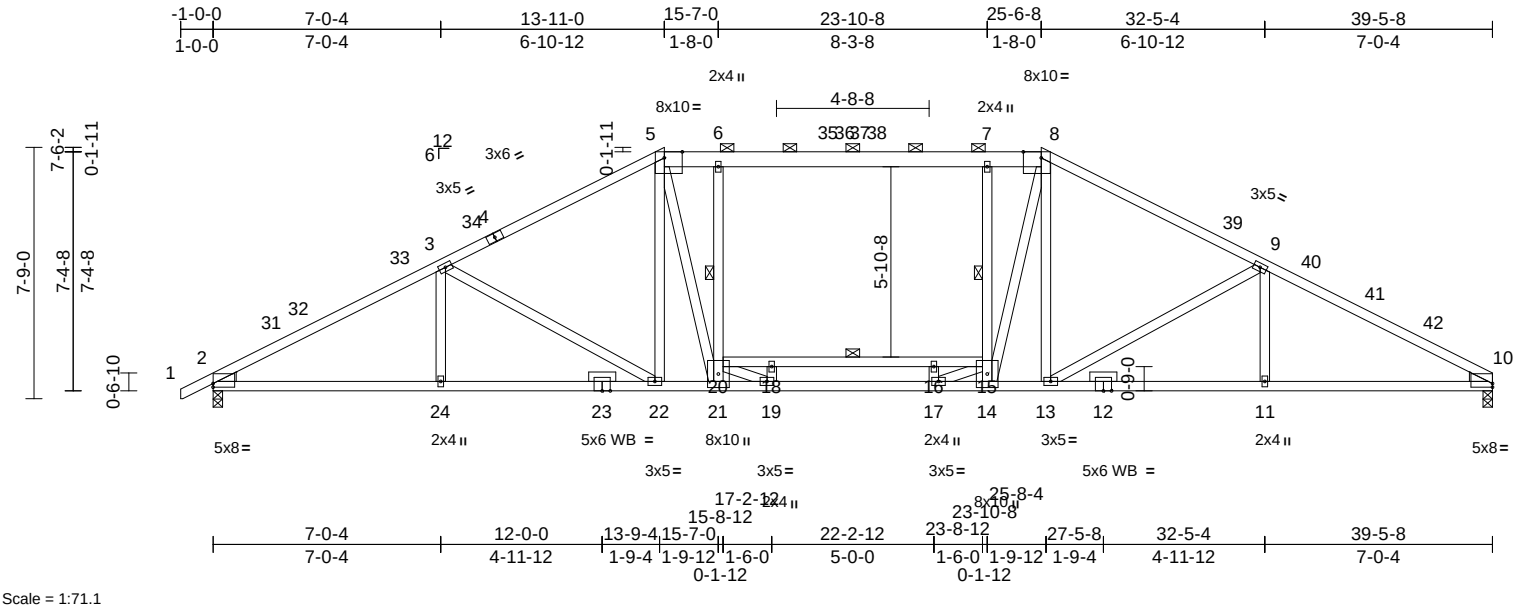
LOAD CASE(S) Standard

October 29,2024

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	A14	Hip	1	1	I69186944 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:22 Page: 1
ID:naE7dYtZYi8L294lbypjrDyzaI3-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:71.1

Plate Offsets (X, Y): [2:Edge,0-1-6], [5:0-6-10,Edge], [8:0-6-10,Edge], [10:Edge,0-1-6]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.91	Vert(LL)	-0.27	19-21	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.51	17-19	>927	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.82	Horz(CT)	0.17	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 249 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP 2400F 2.0E *Except* 5-8:2x6 SP No.2, 1-4:2x4 SP No.1
BOT CHORD	2x4 SP 2400F 2.0E *Except* 20-15:2x4 SP No.2, 23-12:2x4 SP No.1
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3
WEDGE	Left: 2x4 SP No.3 Right: 2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied, except 2-0-0 oc purlins (3-6-9 max.): 5-8.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 5-8-1 oc bracing: 18-20,15-16 5-2-0 oc bracing: 16-18.
WEBS	1 Row at midpt 6-21, 7-14

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=77 (LC 14)
Max Grav 2=2144 (LC 50), 10=2103 (LC 50)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/33, 2-3=-4272/0, 3-5=-3609/0, 5-6=-3460/0, 6-7=-3451/0, 7-8=-3459/0, 8-9=-3610/0, 9-10=-4285/0
BOT CHORD	2-24=-109/3713, 22-24=0/3713, 21-22=0/3103, 19-21=0/3284, 17-19=0/4234, 14-17=0/3285, 13-14=0/3105, 11-13=0/3726, 10-11=-120/3726, 18-20=-1047/0, 16-18=-1047/0, 15-16=-1047/0
WEBS	3-24=0/217, 3-22=-714/134, 5-22=-10/544, 8-13=-12/546, 9-13=-727/138, 9-11=0/223, 20-21=-1245/0, 6-20=-819/155, 14-15=-1236/0, 7-15=-812/156, 18-19=-236/0, 19-20=0/1247, 16-17=-236/0, 15-17=0/1247, 8-14=0/1325, 5-21=0/1332

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-9 to 2-11-12, Interior (1) 2-11-12 to 13-11-0, Exterior(2R) 13-11-0 to 19-5-15, Interior (1) 19-5-15 to 25-6-8, Exterior(2R) 25-6-8 to 31-1-7, Interior (1) 31-1-7 to 39-5-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) 200.0lb AC unit load placed on the bottom chord, 19-8-12 from left end, supported at two points, 5-0-0 apart.
7) Provide adequate drainage to prevent water ponding.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) All bearings are assumed to be SP 2400F 2.0E .
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

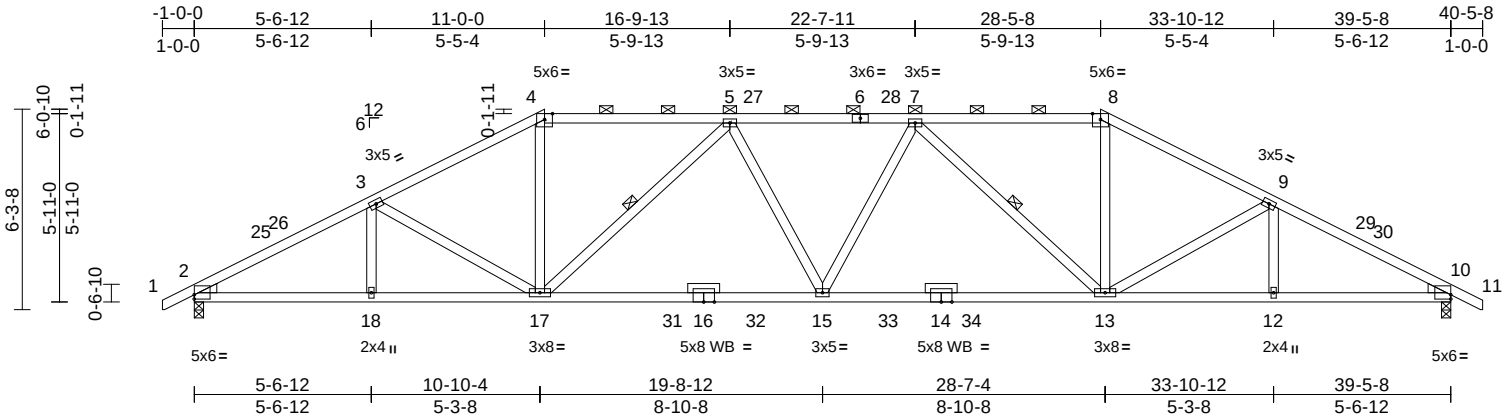
October 29,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	A16	Hip	1	1	I69186945 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:23 ID:74DlukyiW325NnHSOaekQVyzaXS-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:72.3

Plate Offsets (X, Y): [2:Edge,0-1-10], [10:Edge,0-1-10]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.73	Vert(LL)	-0.30	15-17	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.54	15-17	>871	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.41	Horz(CT)	0.13	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 213 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP 2400F 2.0E
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3
WEDGE	Left: 2x4 SP No.3 Right: 2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-4-4 oc purlins, except 2-0-0 oc purlins (2-10-0 max.): 4-8.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 5-17, 7-13

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=-60 (LC 13)
Max Grav 2=1776 (LC 50), 10=1776 (LC 50)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/36, 2-3=-3486/272, 3-4=-3179/274, 4-5=-2830/274, 5-7=-3662/299, 7-8=-2830/274, 8-9=-3179/274, 9-10=-3486/272, 10-11=0/36
BOT CHORD	2-18=-169/3032, 17-18=-169/3032, 15-17=-150/3511, 13-15=-143/3511, 12-13=-179/3034, 10-12=-179/3034
WEBS	3-18=-5/107, 3-17=-477/101, 4-17=-14/1088, 5-17=-1014/89, 5-15=0/270, 7-15=0/270, 7-13=-1014/89, 8-13=-14/1088, 9-13=-477/101, 9-12=-5/107

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-9 to 2-11-12, Interior (1) 2-11-12 to 11-0-0, Exterior(2R) 11-0-0 to 16-9-13, Interior (1) 16-9-13 to 28-5-8, Exterior(2R) 28-5-8 to 33-10-12, Interior (1) 33-10-12 to 40-5-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SP 2400F 2.0E .
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

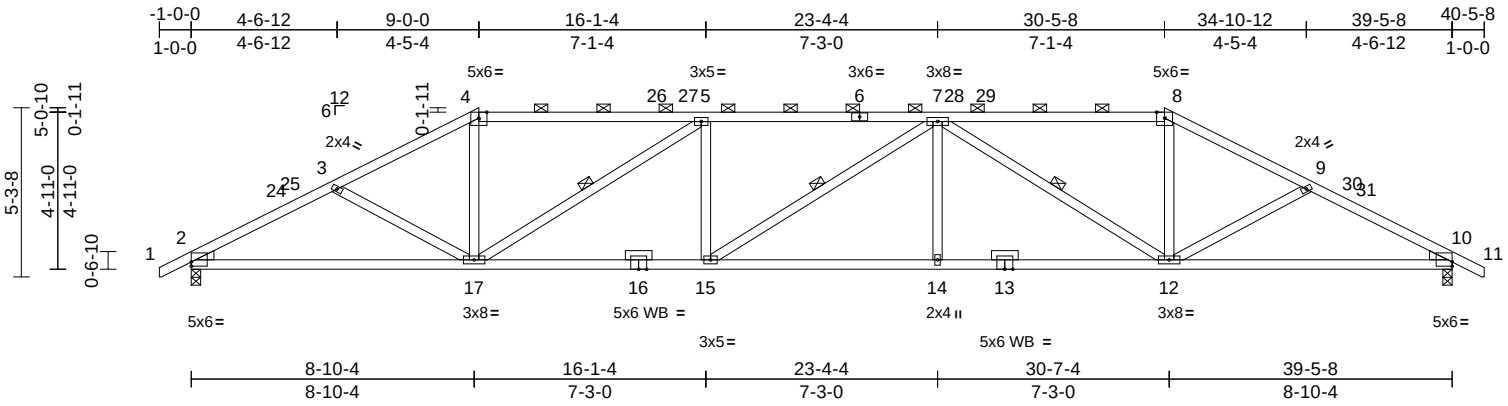
October 29,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	A17	Hip	1	1	I69186946 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:23 ID:qCEFIjT_9StwyUeZVTP7FryzaY5-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:72.1

Plate Offsets (X, Y): [2:Edge,0-1-10], [10:Edge,0-1-10]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.79	Vert(LL)	-0.31	14-15	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.59	14-15	>803	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.61	Horz(CT)	0.19	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 205 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2 *Except* 4-6,6-8:2x4 SP 2400F 2.0E
BOT CHORD	2x4 SP No.1
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3
WEDGE	Left: 2x4 SP No.3 Right: 2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-2-14 oc purlins, except 2-0-0 oc purlins (3-10-1 max.): 4-8.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 5-17, 7-15, 7-12

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=-50 (LC 13)
Max Grav 2=1636 (LC 2), 10=1636 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/36, 2-3=-2933/299, 3-4=-2903/260, 4-5=-2585/258, 5-7=-3852/343, 7-8=-2585/258, 8-9=-2903/260, 9-10=-2933/299, 10-11=0/36
BOT CHORD	2-17=-197/2554, 15-17=-189/3852, 14-15=-180/3850, 12-14=-180/3850, 10-12=-207/2555
WEBS	3-17=-312/117, 4-17=0/909, 5-17=-1506/103, 5-15=0/198, 7-15=-95/98, 7-14=0/148, 7-12=-1504/104, 8-12=0/908, 9-12=-312/117

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-9 to 2-11-12, Interior (1) 2-11-12 to 9-0-0, Exterior(2R) 9-0-0 to 14-6-15, Interior (1) 14-6-15 to 30-5-8, Exterior(2R) 30-5-8 to 36-0-7, Interior (1) 36-0-7 to 40-5-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SP No.1 .
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

October 29,2024

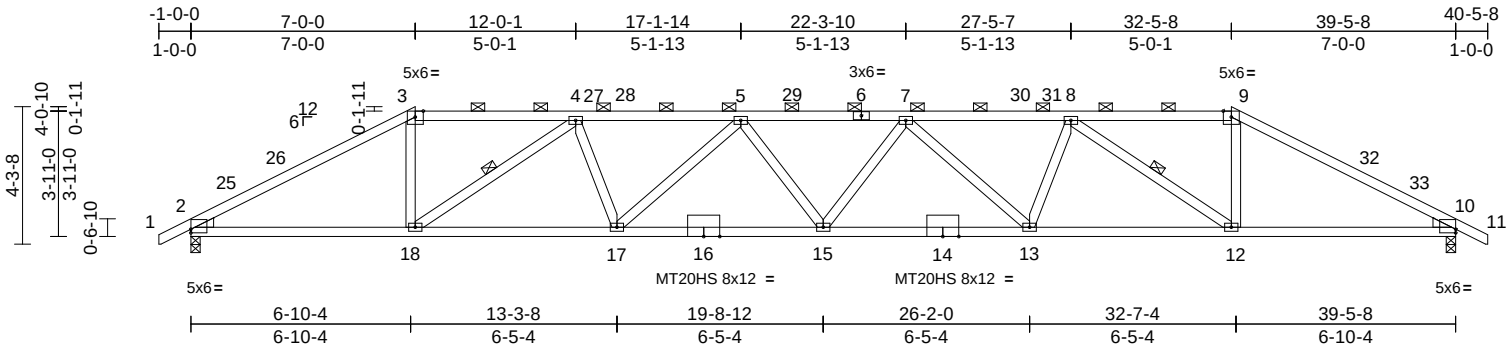
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	A18	Hip	1	1	I69186947 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:23 ID:DzK6DIttTiqjB6zLhOYsJkyzaYr-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:71.9

Plate Offsets (X, Y): [2:Edge,0-1-6], [10:Edge,0-1-6]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.44	Vert(LL)	-0.39	15	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.68	15-17	>698	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.52	Horz(CT)	0.18	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 192 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP 2400F 2.0E
BOT CHORD	2x4 SP 2400F 2.0E
WEBS	2x4 SP No.3
WEDGE	Left: 2x4 SP No.3 Right: 2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-1-3 oc purlins, except 2-0-0 oc purlins (3-6-6 max.): 3-9.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 4-18, 8-12

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=40 (LC 14)
Max Grav 2=1655 (LC 43), 10=1655 (LC 43)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/36, 2-3=-3153/254, 3-4=-2732/257, 4-5=-4494/344, 5-7=-5007/360, 7-8=-4492/344, 8-9=-2731/257, 9-10=-3152/254, 10-11=0/36
BOT CHORD	2-18=-184/2776, 17-18=-232/4284, 15-17=-265/4965, 13-15=-260/4963, 12-13=-223/4283, 10-12=-192/2775
WEBS	3-18=0/1159, 9-12=0/1159, 4-18=-1901/123, 8-12=-1900/123, 4-17=0/626, 5-17=-647/79, 5-15=0/117, 7-15=0/117, 7-13=-646/79, 8-13=0/625

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-9 to 2-11-12, Interior (1) 2-11-12 to 7-0-0, Exterior(2R) 7-0-0 to 12-6-15, Interior (1) 12-6-15 to 32-5-8, Exterior(2R) 32-5-8 to 38-0-7, Interior (1) 38-0-7 to 40-5-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are MT20 plates unless otherwise indicated.
8) All plates are 3x5 MT20 unless otherwise indicated.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) All bearings are assumed to be SP 2400F 2.0E .
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

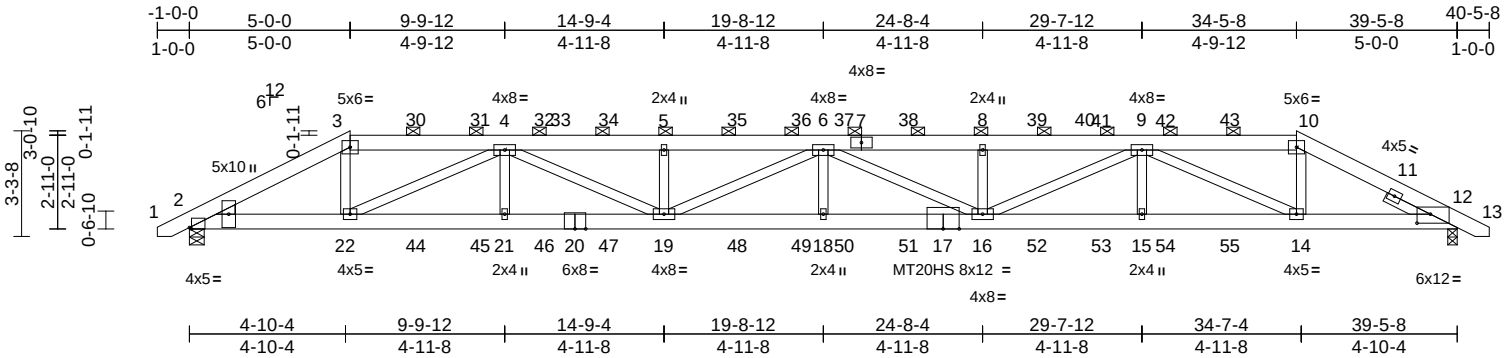
LOAD CASE(S) Standard

October 29,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	A19	Hip Girder	1	2	I69186948 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:25 Page: 1
ID:fTqWVaaZJKzEUOmwqd9NufyzaeP-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:71.7

Plate Offsets (X, Y): [2:0-0-12,Edge], [12:0-5-0,0-3-6]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	-0.43	18	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.75	18	>633	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	NO	WB	0.33	Horz(CT)	0.14	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 525 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP 2400F 2.0E
BOT CHORD 2x6 SP 2400F 2.0E
WEBS 2x4 SP 2400F 2.0E
WEDGE Left: 2x4 SP No.3
SLIDER Right 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 3-10.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 12=0-3-8
Max Horiz 2=-29 (LC 9)
Max Uplift 2=-106 (LC 8), 12=-107 (LC 7)
Max Grav 2=3183 (LC 35), 12=3204 (LC 35)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-3=-6750/269, 3-4=-5913/249, 4-5=-12627/481, 5-6=-12627/481, 6-8=-12577/479, 8-9=-12577/479, 9-10=-5728/242, 10-12=-6566/263, 12-13=0/35
BOT CHORD 2-22=-222/6060, 21-22=-375/10182, 19-21=-375/10182, 18-19=-481/13410, 16-18=-481/13410, 15-16=-351/10098, 14-15=-351/10098, 12-14=-195/5874
WEBS 3-22=-29/2565, 4-22=-4767/195, 4-21=0/225, 4-19=-101/2728, 5-19=-612/129, 6-19=-884/47, 6-18=0/223, 6-16=-936/48, 8-16=-608/129, 9-16=-103/2766, 9-15=0/243, 9-14=-4880/198, 10-14=-29/2553

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
8) Provide adequate drainage to prevent water ponding.
9) All plates are MT20 plates unless otherwise indicated.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) All bearings are assumed to be SP 2400F 2.0E .
12) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 12. This connection is for uplift only and does not consider lateral forces.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

October 29,2024

Continued on page 2

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

15) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 139 lb down and 39 lb up at 5-0-0, 139 lb down and 37 lb up at 7-0-12, 139 lb down and 37 lb up at 9-0-12, 139 lb down and 37 lb up at 11-0-12, 139 lb down and 37 lb up at 13-0-12, 139 lb down and 37 lb up at 15-0-12, 139 lb down and 37 lb up at 17-0-12, 139 lb down and 37 lb up at 19-0-12, 139 lb down and 37 lb up at 20-4-12, 139 lb down and 37 lb up at 22-4-12, 139 lb down and 37 lb up at 24-4-12, 139 lb down and 37 lb up at 26-4-12, 139 lb down and 37 lb up at 28-4-12, 139 lb down and 37 lb up at 30-4-12, and 139 lb down and 37 lb up at 32-4-12, and 139 lb down and 39 lb up at 34-5-8 on top chord, and 415 lb down and 23 lb up at 5-0-0, 47 lb down at 7-0-12, 47 lb down at 9-0-12, 47 lb down at 11-0-12, 47 lb down at 13-0-12, 47 lb down at 15-0-12, 47 lb down at 17-0-12, 47 lb down at 19-0-12, 47 lb down at 20-4-12, 47 lb down at 22-4-12, 47 lb down at 24-4-12, 47 lb down at 26-4-12, 47 lb down at 28-4-12, 47 lb down at 30-4-12, and 47 lb down at 32-4-12, and 415 lb down and 23 lb up at 34-4-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

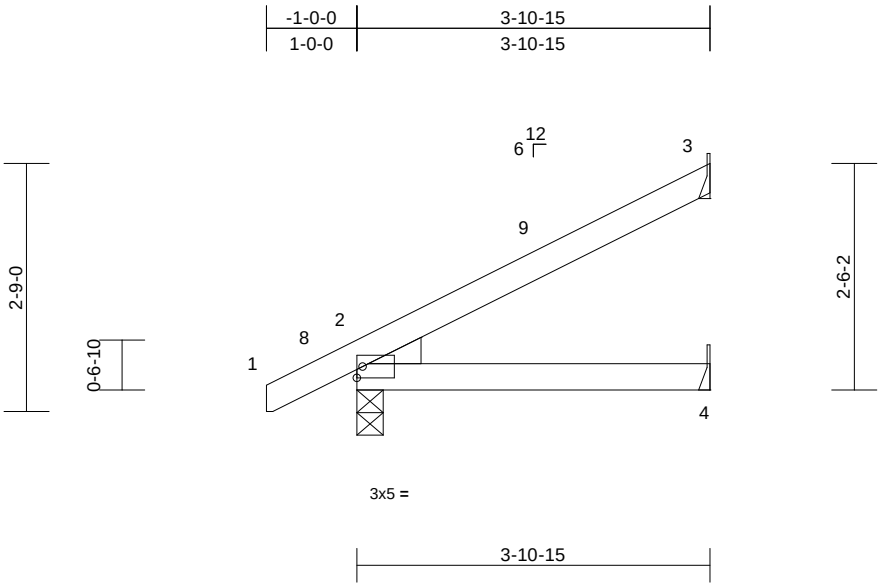
LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-3=-48, 3-10=-58, 10-13=-48, 23-26=-20
   Concentrated Loads (lb)
   Vert: 3=-114 (B), 22=-415 (B), 19=-47 (B), 5=-109 (B), 8=-109 (B), 16=-47 (B), 14=-415 (B), 10=-114 (B), 30=-109 (B), 31=-109 (B), 32=-109 (B), 34=-109 (B), 35=-109 (B), 36=-109 (B), 37=-109 (B), 38=-109 (B), 39=-109 (B), 41=-109 (B), 42=-109 (B), 43=-109 (B), 44=-47 (B), 45=-47 (B), 46=-47 (B), 47=-47 (B), 48=-47 (B), 49=-47 (B), 50=-47 (B), 51=-47 (B), 52=-47 (B), 53=-47 (B), 54=-47 (B), 55=-47 (B)

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	CJ2	Jack-Open	12	1	I69186949 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:26 Page: 1
ID:?xhs5DRYiY5A9UVUdeZUqkyzamK-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:25.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	0.01	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	-0.02	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 15 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEDGE Left: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-10-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=59 (LC 15)
Max Uplift 3=-31 (LC 15)
Max Grav 2=267 (LC 22), 3=126 (LC 22), 4=49 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/33, 2-3=-150/107
BOT CHORD 2-4=-206/98

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-9 to 2-0-7, Interior (1) 2-0-7 to 3-10-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Bearings are assumed to be: , Joint 2 SP No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 31 lb uplift at joint 3.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

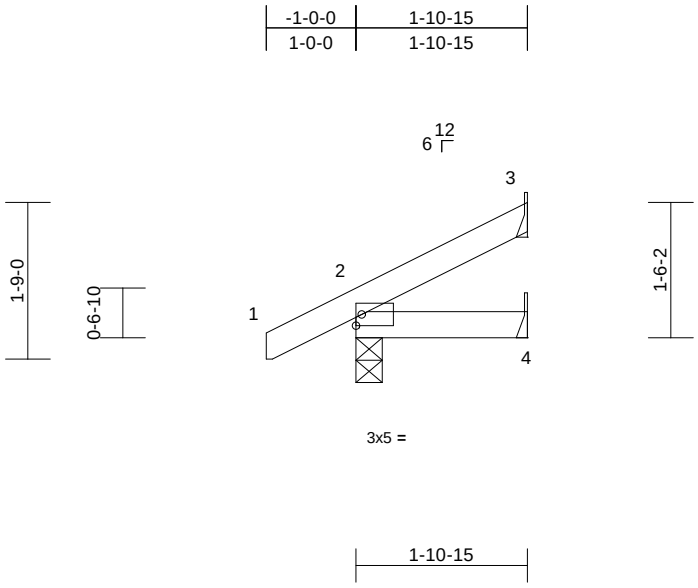
October 29,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	CJ1	Jack-Open	12	1	I69186950 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:26 Page: 1
ID:tiwMxaU3mncce5pFsUdQ?ayzamG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:25.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	0.00	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 8 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-10-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=34 (LC 15)
Max Uplift 2=-2 (LC 15), 3=-15 (LC 15)
Max Grav 2=169 (LC 22), 3=50 (LC 22), 4=18 (LC 33)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/33, 2-3=-81/63
BOT CHORD 2-4=-62/28

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Bearings are assumed to be: , Joint 2 SP No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 3.
9) H10A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

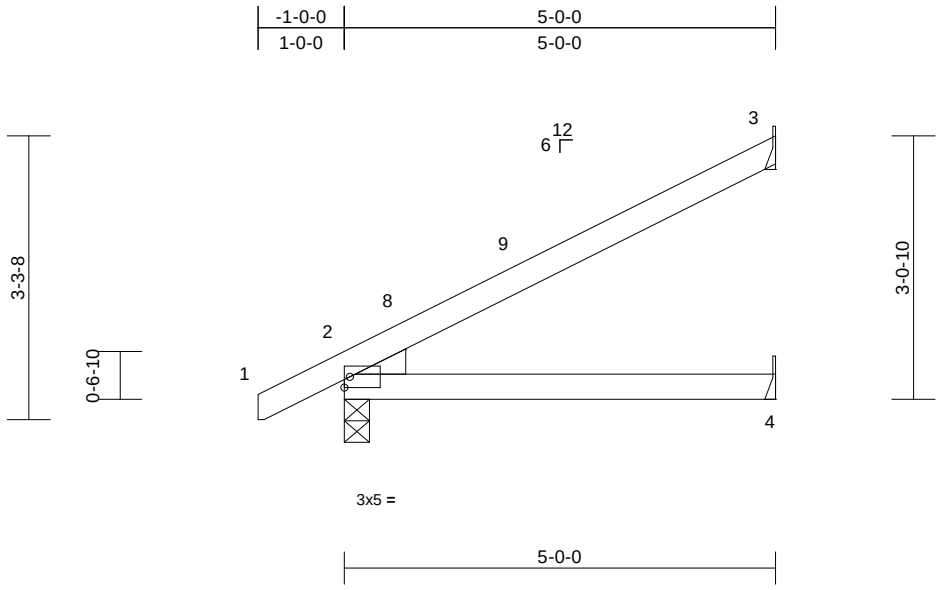
October 29,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	EJ1	Jack-Open	37	1	I69186951 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:26 Page: 1
ID:6ASLFrO1eKblgsCiOoUYguyzamO-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:26.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	0.04	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.07	4-7	>889	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 18 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEDGE Left: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=73 (LC 15)
Max Uplift 3=-40 (LC 15)
Max Grav 2=286 (LC 22), 3=167 (LC 22), 4=67 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/33, 2-3=-207/149
BOT CHORD 2-4=-301/163

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-9 to 2-0-7, Interior (1) 2-0-7 to 4-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Bearings are assumed to be: , Joint 2 SP No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 40 lb uplift at joint 3.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

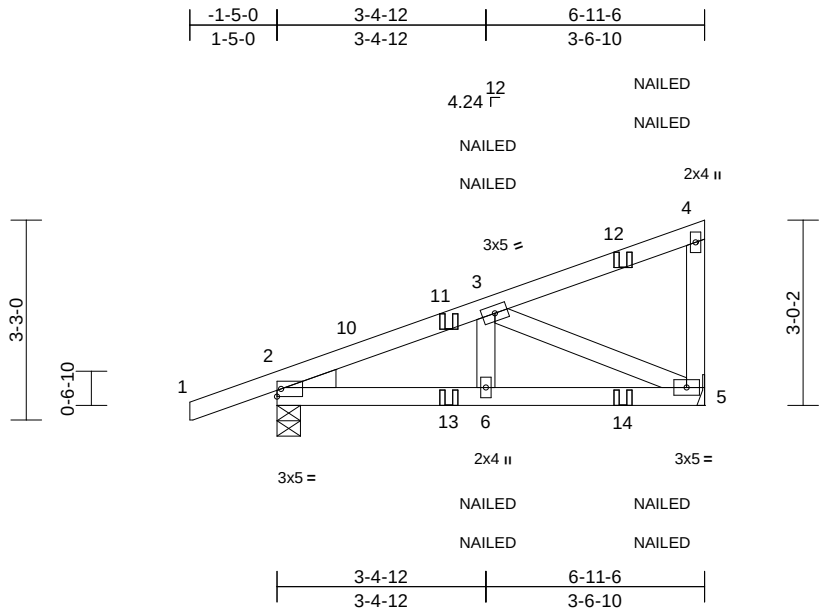
LOAD CASE(S) Standard

October 29,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	HJ1	Diagonal Hip Girder	6	1	I69186952 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:26 Page: 1
ID:6RzmqfbieYkKDT?_utIXsUyzam7-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:37.4

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.44	Vert(LL)	-0.01	5-6	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.28	Vert(CT)	-0.02	5-6	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.15	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 35 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
WEDGE Left: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-4-9, 5= Mechanical
Max Horiz 2=85 (LC 10)
Max Uplift 2=-42 (LC 7), 5=-23 (LC 8)
Max Grav 2=380 (LC 2), 5=397 (LC 18)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-507/94, 3-4=-68/45, 4-5=-145/43
BOT CHORD 2-6=-65/448, 5-6=-27/448
WEBS 3-6=0/88, 3-5=-487/33

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=13.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Bearings are assumed to be: Joint 2 SP No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 5.
9) One RT8A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

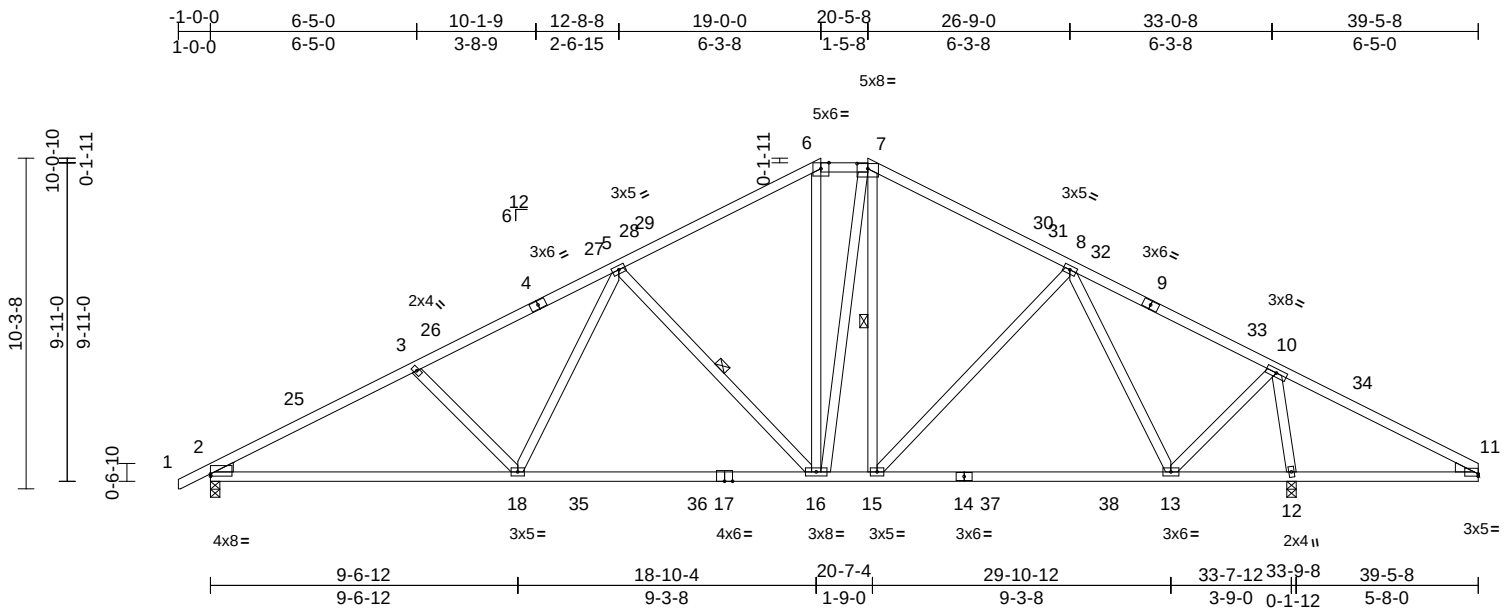
LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-48, 5-7=-20
Concentrated Loads (lb)
Vert: 12=-128 (F=-64, B=-64), 13=-2 (F=-1, B=-1), 14=-47 (F=-23, B=-23)

October 29,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	A08	Hip	1	1	I69186953 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:20 Page: 1
ID:IkRmL7VwvtjjGhD5XXxHl_yzaWl-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:71.7

Plate Offsets (X, Y): [2:Edge,0-0-14], [7:0-4-0,0-1-15], [11:Edge,0-0-14]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.78	Vert(LL)	-0.27	16-18	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.54	Vert(CT)	-0.44	16-18	>927	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.92	Horz(CT)	0.06	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 235 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP 2400F 2.0E
WEBS 2x4 SP No.3
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-9-9 oc purlins, except 2-0-0 oc purlins (4-4-13 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 5-16, 7-15

REACTIONS (size) 2=0-3-8, 12=0-3-8
Max Horiz 2=103 (LC 14)
Max Grav 2=1583 (LC 50), 12=2184 (LC 50)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/33, 2-3=-3100/196, 3-5=-2889/190, 5-6=-1923/202, 6-7=-1637/207, 7-8=-1851/189, 8-10=-1327/40, 10-11=-194/499
BOT CHORD 2-18=-199/2697, 16-18=-28/2186, 15-16=0/1480, 13-15=0/1440, 12-13=-119/171, 11-12=-373/207
WEBS 3-18=-342/137, 5-18=0/672, 5-16=-941/154, 6-16=-30/556, 7-16=-62/384, 7-15=-16/187, 8-15=-4/217, 8-13=-885/174, 10-13=-43/1502, 10-12=-2229/243

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-9 to 2-11-12, Interior (1) 2-11-12 to 19-0-0, Exterior(2E) 19-0-0 to 20-5-8, Exterior(2R) 20-5-8 to 26-0-7, Interior (1) 26-0-7 to 39-5-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SP 2400F 2.0E .
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

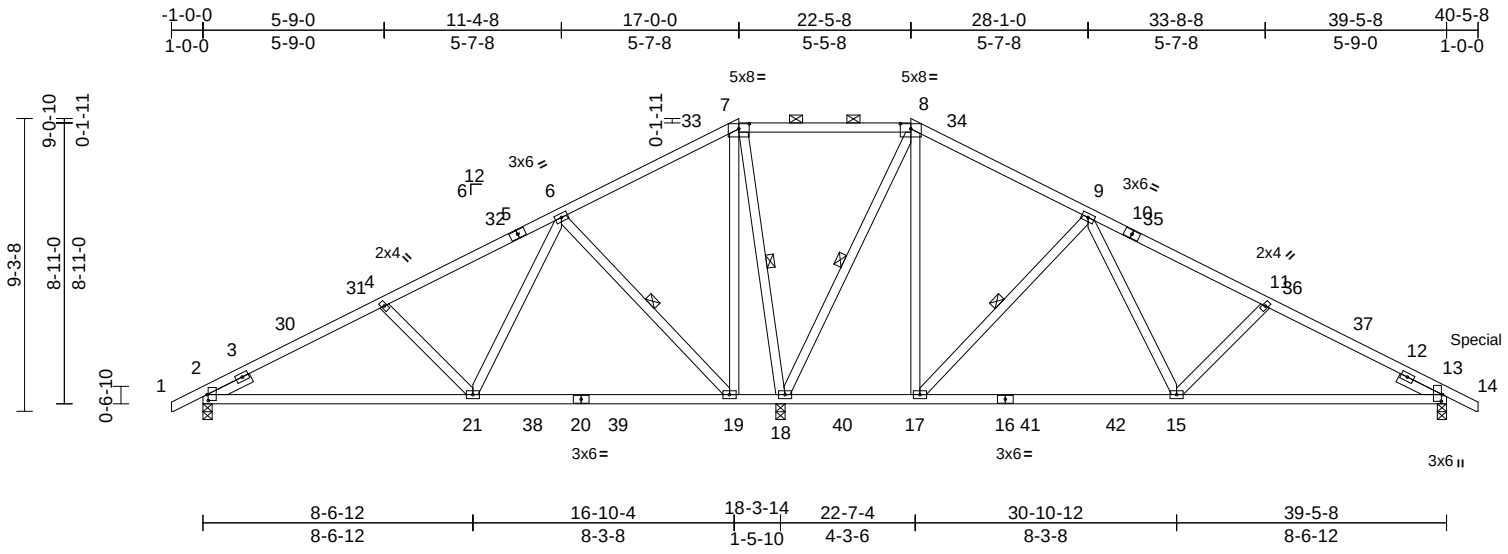
LOAD CASE(S) Standard

October 29,2024

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	A07	Hip	1	1	I69186954 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:20 Page: 1
ID:962klkweZEjgYLnbILCFqmyzagY-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:73.1

Plate Offsets (X, Y): [2:0-2-4,0-0-8], [7:0-4-0,0-1-15], [8:0-4-0,0-1-15], [13:0-2-8,0-0-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.67	Vert(LL)	-0.15	15-17	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.24	15-17	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.02	13	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 237 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-4-10 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 7-8.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 6-19, 9-17, 7-18, 8-18

REACTIONS (size) 2=0-3-8, 13=0-3-8, 18=0-3-8
Max Horiz 2=-91 (LC 13)
Max Uplift 2=-13 (LC 96), 13=-90 (LC 16)
Max Grav 2=647 (LC 90), 13=740 (LC 34), 18=2458 (LC 50)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/37, 2-4=-731/87, 4-6=-586/85, 6-7=0/629, 7-8=0/706, 8-9=-150/270, 9-11=-933/117, 11-13=-1095/123, 13-14=-72/28
BOT CHORD 2-21=-60/654, 19-21=-72/238, 18-19=-571/196, 17-18=-190/178, 15-17=0/505, 13-15=-36/966
WEBS 4-21=-377/120, 6-21=0/678, 6-19=-911/146, 7-19=-2/907, 8-17=-18/935, 9-17=-897/146, 9-15=0/655, 11-15=-369/126, 7-18=-1452/103, 8-18=-1410/112

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-9 to 2-11-12, Interior (1) 2-11-12 to 17-0-0, Exterior(2E) 17-0-0 to 22-5-8, Exterior(2R) 22-5-8 to 28-1-0, Interior (1) 28-1-0 to 40-5-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are 3x5 MT20 unless otherwise indicated.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) All bearings are assumed to be SP No.2 .
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 13. This connection is for uplift only and does not consider lateral forces.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 51 lb down and 167 lb up at 40-5-1 on top chord. The design/selection of such connection device(s) is the responsibility of others.
14) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-7=-48, 7-8=-58, 8-14=-48, 22-26=-20
Concentrated Loads (lb)
Vert: 14=64 (B)

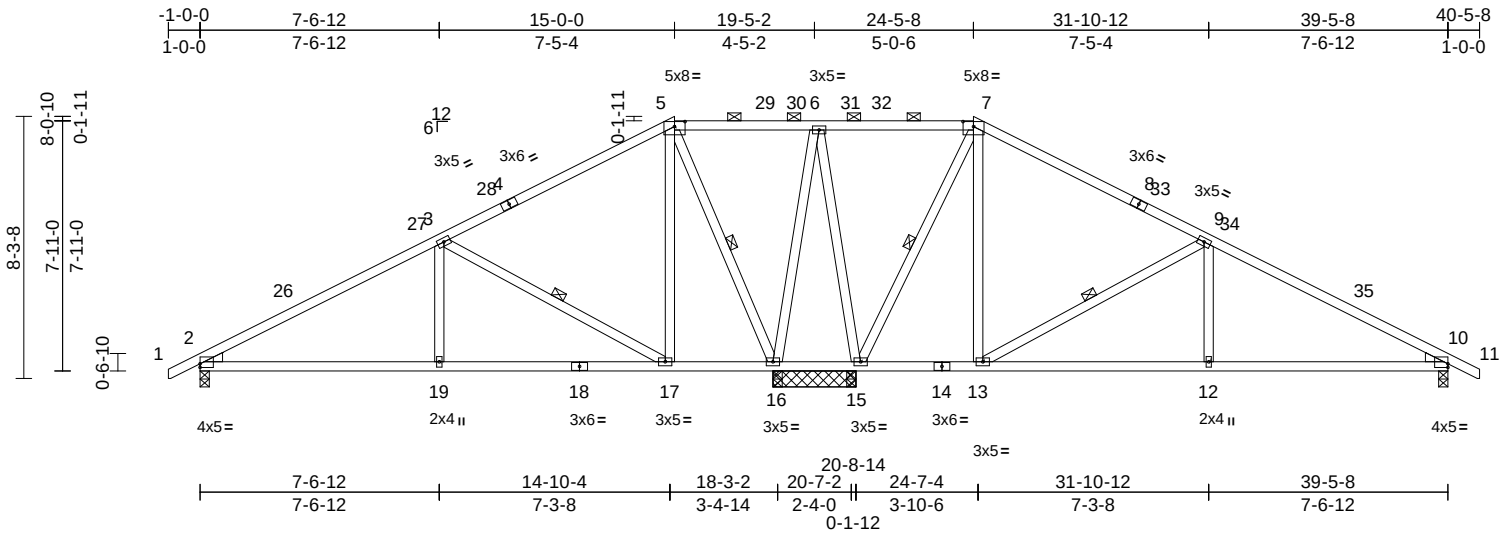
October 29,2024

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	A06	Hip	1	1	I69186955
					Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:20 ID:5haCTzKv6BYdApYAxZpmLRyzahJ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:72.9

Plate Offsets (X, Y): [2:Edge,0-1-6], [5:0-4-0,0-1-15], [7:0-4-0,0-1-15], [10:Edge,0-1-6]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	1.00	Vert(LL)	-0.04	19-22	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.12	19-22	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.42	Horz(CT)	0.02	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 231 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
WEDGE	Left: 2x4 SP No.3 Right: 2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied, except 2-0-0 oc purlins (10-0-0 max.): 5-7.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 3-17, 9-13, 5-16, 7-15

REACTIONS (size) 2=0-3-8, 10=0-3-8, 15=2-7-8, 16=2-7-8
Max Horiz 2=-81 (LC 13)
Max Uplift 2=-22 (LC 15), 10=-34 (LC 16)
Max Grav 2=677 (LC 44), 10=701 (LC 44), 15=1048 (LC 44), 16=1035 (LC 44)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/33, 2-3=-921/122, 3-5=-165/198, 5-6=0/489, 6-7=0/493, 7-9=-207/160, 9-10=-969/122, 10-11=0/33
BOT CHORD	2-19=-169/747, 17-19=-48/747, 16-17=-96/104, 15-16=-484/118, 13-15=-56/104, 12-13=-29/790, 10-12=-119/790
WEBS	3-19=0/177, 3-17=-936/137, 5-17=0/559, 7-13=0/562, 9-13=-932/137, 9-12=0/176, 6-16=-222/50, 5-16=-1043/65, 6-15=-236/53, 7-15=-1049/72

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-9 to 2-11-12, Interior (1) 2-11-12 to 15-0-0, Exterior(2R) 15-0-0 to 20-6-15, Interior (1) 20-6-15 to 24-5-8, Exterior(2R) 24-5-8 to 30-0-7, Interior (1) 30-0-7 to 40-5-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SP No.2 .
9) H10A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 10. This connection is for uplift only and does not consider lateral forces.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

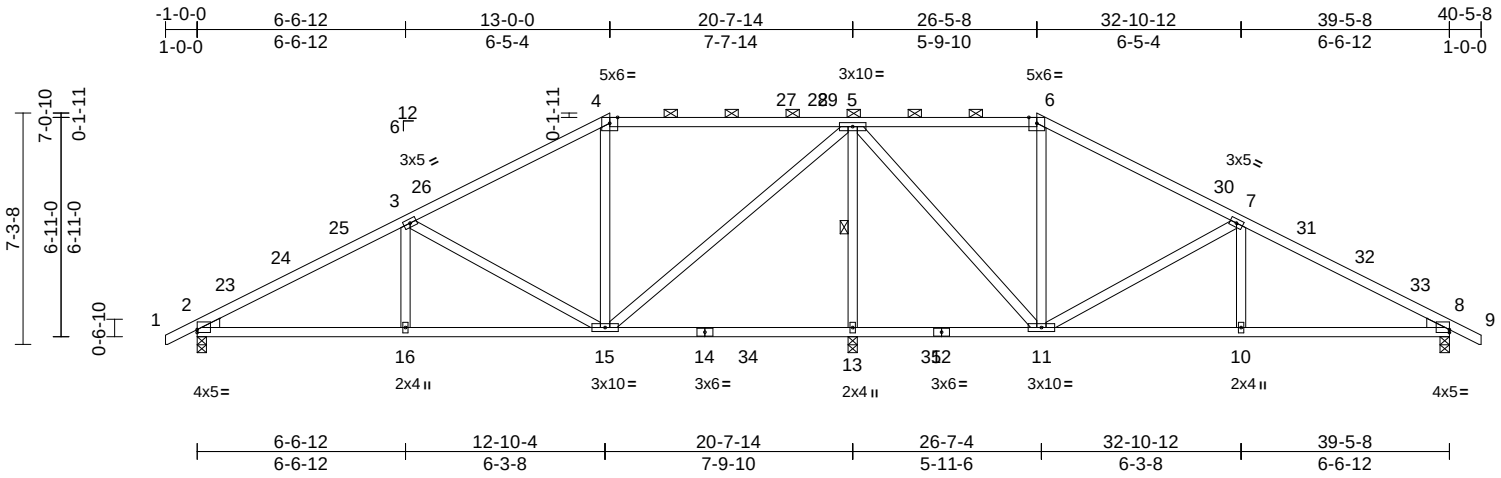
October 29,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	A05	Hip	1	1	I69186956 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:19 Page: 1
ID:RroppFm2x2l9ek1KEu_zUkyzai1-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:72.6

Plate Offsets (X, Y): [2:Edge,0-1-2], [8:Edge,0-1-2]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.79	Vert(LL)	-0.10	13-15	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.17	13-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.88	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 213 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2 *Except* 4-6:2x4 SP No.1
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
WEDGE	Left: 2x4 SP No.3 Right: 2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-8-15 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 4-6.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 5-13

REACTIONS (size) 2=0-3-8, 8=0-3-8, 13=0-3-8
Max Horiz 2=-71 (LC 13)
Max Uplift 2=-16 (LC 15), 8=-32 (LC 16)
Max Grav 2=847 (LC 50), 8=764 (LC 58), 13=2069 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/33, 2-3=-1378/146, 3-4=-613/142, 4-5=-494/164, 5-6=-270/149, 6-7=-375/131, 7-8=-1172/128, 8-9=0/33
BOT CHORD	2-16=-135/1146, 15-16=-49/1146, 13-15=-552/105, 11-13=-552/105, 10-11=-43/968, 8-10=-90/968
WEBS	3-16=0/245, 3-15=-856/124, 4-15=-203/73, 5-15=-63/1249, 5-13=-1970/221, 5-11=-57/1105, 6-11=-227/52, 7-11=-897/123, 7-10=0/271

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-9 to 2-11-12, Interior (1) 2-11-12 to 13-0-0, Exterior(2R) 13-0-0 to 18-6-15, Interior (1) 18-6-15 to 26-5-8, Exterior(2R) 26-5-8 to 32-0-7, Interior (1) 32-0-7 to 40-5-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SP No.2 .
9) H10A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 8. This connection is for uplift only and does not consider lateral forces.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

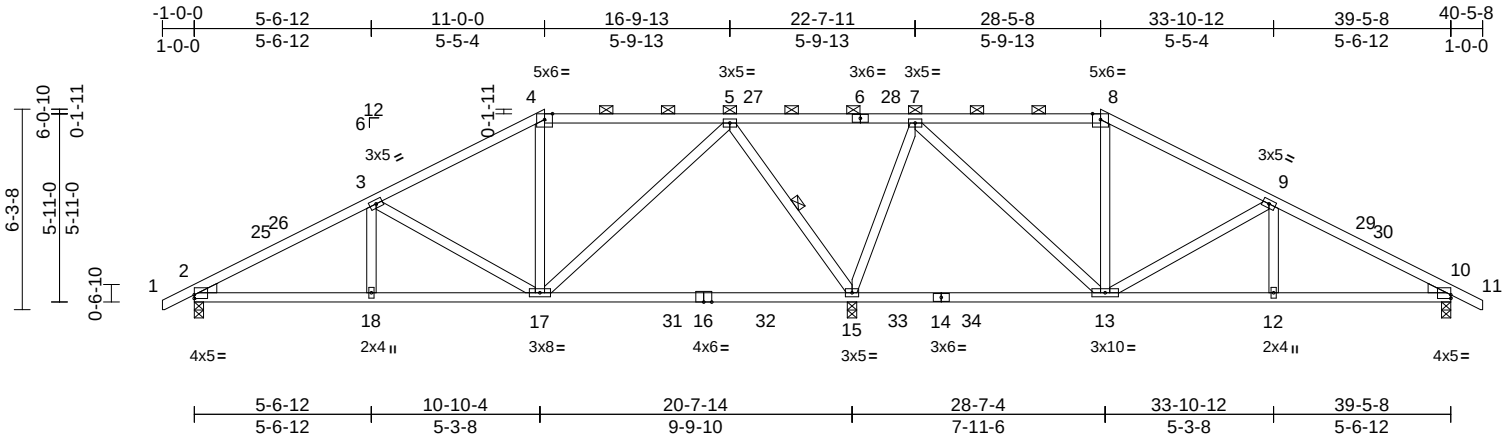
October 29,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	A04	Hip	1	1	I69186957 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:19 Page: 1
ID:ZXWSqFJCuNyY5v710wJ3xjyzaid-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:72.3

Plate Offsets (X, Y): [2:Edge,0-1-6], [10:Edge,0-1-6]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.73	Vert(LL)	-0.26	15-17	>960	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.43	15-17	>571	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.79	Horz(CT)	0.02	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 210 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-0-1 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 4-8.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 5-15

REACTIONS (size) 2=0-3-8, 10=0-3-8, 15=0-3-8
Max Horiz 2=-60 (LC 13)
Max Uplift 2=-10 (LC 15), 10=-26 (LC 16)
Max Grav 2=836 (LC 44), 10=756 (LC 44), 15=2236 (LC 49)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/36, 2-3=-1272/128, 3-4=-679/112, 4-5=-567/132, 5-7=0/782, 7-8=-324/121, 8-9=-426/106, 9-10=-1068/107, 10-11=0/36
BOT CHORD 2-18=-105/1053, 17-18=-42/1053, 15-17=-230/78, 13-15=-506/106, 12-13=-33/876, 10-12=-65/876
WEBS 3-18=0/154, 3-17=-657/120, 4-17=-98/77, 5-17=-25/976, 5-15=-1233/157, 7-15=-1146/161, 7-13=-60/1049, 8-13=-190/63, 9-13=-713/111, 9-12=0/202

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-9 to 2-11-12, Interior (1) 2-11-12 to 11-0-0, Exterior(2R) 11-0-0 to 16-9-13, Interior (1) 16-9-13 to 28-5-8, Exterior(2R) 28-5-8 to 33-10-12, Interior (1) 33-10-12 to 40-5-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SP No.2 .
9) H10A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 10. This connection is for uplift only and does not consider lateral forces.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

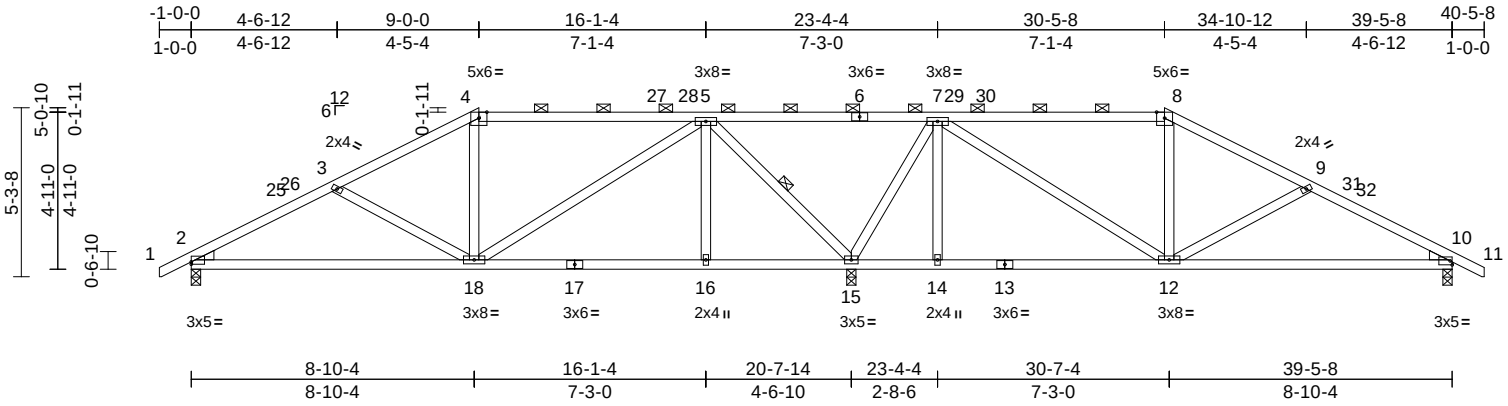
October 29,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	A03	Hip	1	1	I69186958 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:19 Page: 1
ID:JFPBpYnE09YfRIKm_O1_ifyzajI-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:72.1

Plate Offsets (X, Y): [2:Edge,0-0-14]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.03	16-18	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.12	18-21	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.71	Horz(CT)	0.02	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 207 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2 *Except* 4-6,6-8:2x4 SP No.1
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
WEDGE	Left: 2x4 SP No.3 Right: 2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-4-6 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 4-8.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 5-15

REACTIONS (size) 2=0-3-8, 10=0-3-8, 15=0-3-8
Max Horiz 2=-50 (LC 13)
Max Uplift 10=-5 (LC 16)
Max Grav 2=826 (LC 44), 10=756 (LC 44), 15=2164 (LC 43)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/36, 2-3=-1129/136, 3-4=-803/87, 4-5=-673/107, 5-7=-34/743, 7-8=-507/90, 8-9=-619/73, 9-10=-987/117, 10-11=0/36
BOT CHORD	2-18=-128/941, 16-18=-10/259, 15-16=-10/259, 14-15=-242/128, 12-14=-242/128, 10-12=-108/817
WEBS	3-18=-425/129, 4-18=-30/84, 8-12=-122/85, 9-12=-437/131, 5-16=0/120, 5-18=-58/666, 7-14=0/104, 7-12=-74/799, 5-15=-1414/137, 7-15=-1267/130

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-9 to 2-11-12, Interior (1) 2-11-12 to 9-0-0, Exterior(2R) 9-0-0 to 14-6-15, Interior (1) 14-6-15 to 30-5-8, Exterior(2R) 30-5-8 to 36-0-7, Interior (1) 36-0-7 to 40-5-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SP No.2 .
9) H10A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 10. This connection is for uplift only and does not consider lateral forces.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

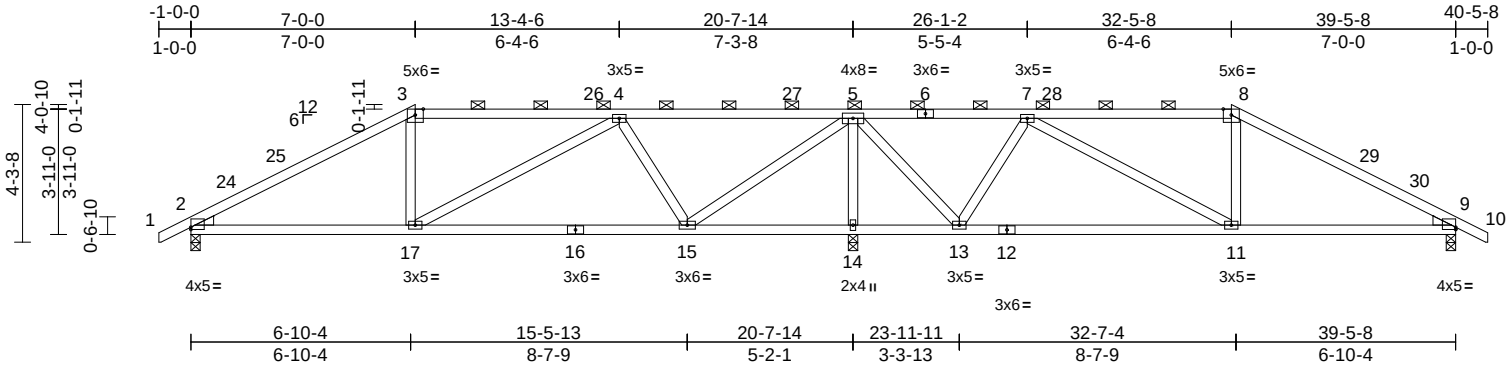
October 29,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	A02	Hip	1	1	I69186959 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:19 Page: 1
ID:Qy6qqYKPzUl2tSQTmPM39eyzaju-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:71.9

Plate Offsets (X, Y): [2:Edge,0-0-14], [9:Edge,0-0-14]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.93	Vert(LL)	-0.08	11-23	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.18	15-17	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.02	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 189 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied, except
2-0-0 oc purlins (5-3-6 max.): 3-8.
BOT CHORD Rigid ceiling directly applied or 5-11-12 oc bracing.

REACTIONS (size) 2=0-3-8, 9=0-3-8, 14=0-3-8
Max Horiz 2=-40 (LC 13)
Max Uplift 9=-14 (LC 16)
Max Grav 2=835 (LC 44), 9=777 (LC 44), 14=2213 (LC 43)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/36, 2-3=-1061/139, 3-4=-895/158, 4-5=-371/125, 5-7=-92/133, 7-8=-738/151, 8-9=-920/131, 9-10=0/36
BOT CHORD 2-17=-154/861, 15-17=-70/716, 14-15=-897/31, 13-14=-897/31, 11-13=-39/317, 9-11=-159/704
WEBS 3-17=0/109, 8-11=-31/82, 4-15=-807/137, 4-17=0/321, 5-15=-35/1471, 5-14=-2156/124, 5-13=-13/1155, 7-13=-833/120, 7-11=0/461

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-9 to 2-11-12, Interior (1) 2-11-12 to 7-0-0, Exterior(2R) 7-0-0 to 12-6-15, Interior (1) 12-6-15 to 32-5-8, Exterior(2R) 32-5-8 to 38-0-7, Interior (1) 38-0-7 to 40-5-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SP No.2 .
9) H10A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9. This connection is for uplift only and does not consider lateral forces.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

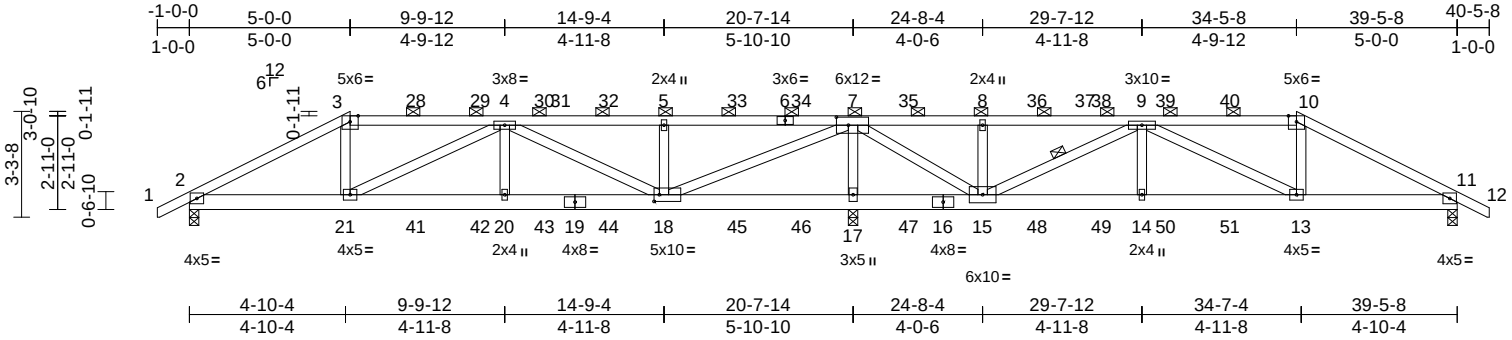
October 29,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	15 Overhills Creek-Roof-Plan 15 gable porch
24070033-B	A01	Hip Girder	1	1	I69186960 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Sep 25 2024 Print: 8.730 S Sep 25 2024 MiTek Industries, Inc. Fri Oct 25 15:59:18 Page: 1
ID:MRYbHYv0WX0eKT_zPKmdwzyzalj-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:71.7

Plate Offsets (X, Y): [7:0-4-8,0-3-0], [18:0-2-0,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.78	Vert(LL)	-0.11	18-20	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.20	18-20	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.98	Horz(CT)	0.04	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 225 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2 *Except* 19-16:2x6 SP 2400F 2.0E
WEBS 2x4 SP No.3 *Except* 18-7,7-15:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-6-4 oc purlins, except
2-0-0 oc purlins (3-1-9 max.): 3-10.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 17-18
4-6-0 oc bracing: 15-17.
WEBS 1 Row at midpt 9-15

REACTIONS (size) 2=0-3-8, 11=0-3-8, 17=0-3-8
Max Horiz 2=30 (LC 10)
Max Uplift 2=-50 (LC 11), 11=-49 (LC 12), 17=-150 (LC 8)
Max Grav 2=1393 (LC 36), 11=1223 (LC 36), 17=4133 (LC 35)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/36, 2-3=-2341/106, 3-4=-2040/107, 4-5=-918/54, 5-7=-918/54, 7-8=-1/234, 8-9=-1/234, 9-10=-1688/100, 10-11=-1985/95, 11-12=0/36
BOT CHORD 2-21=-75/2071, 20-21=-90/2410, 18-20=-90/2410, 17-18=-2624/115, 15-17=-2624/115, 14-15=-48/1678, 13-14=-48/1678, 11-13=-44/1710
WEBS 3-21=0/636, 4-21=-421/40, 4-20=0/283, 4-18=-1676/73, 5-18=-665/148, 7-18=-143/3858, 7-17=-3679/249, 8-15=-503/108, 9-15=-2118/86, 9-14=0/258, 9-13=-26/192, 10-13=0/463, 7-15=-101/2856

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=18.9 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Bearings are assumed to be: Joint 2 SP No.2 , Joint 17 SP 2400F 2.0E , Joint 11 SP No.2 .
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 17, and 11. This connection is for uplift only and does not consider lateral forces.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

October 29,2024

Continued on page 2

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 139 lb down and 39 lb up at 5-0-0, 139 lb down and 37 lb up at 7-0-12, 139 lb down and 37 lb up at 9-0-12, 139 lb down and 37 lb up at 11-0-12, 139 lb down and 37 lb up at 13-0-12, 139 lb down and 37 lb up at 15-0-12, 139 lb down and 37 lb up at 17-0-12, 139 lb down and 37 lb up at 19-0-12, 139 lb down and 37 lb up at 20-4-12, 139 lb down and 37 lb up at 22-4-12, 139 lb down and 37 lb up at 24-4-12, 139 lb down and 37 lb up at 26-4-12, 139 lb down and 37 lb up at 28-4-12, 139 lb down and 37 lb up at 30-4-12, and 139 lb down and 37 lb up at 32-4-12, and 139 lb down and 39 lb up at 34-5-8 on top chord, and 415 lb down and 23 lb up at 5-0-0, 47 lb down at 7-0-12, 47 lb down at 9-0-12, 47 lb down at 11-0-12, 47 lb down at 13-0-12, 47 lb down at 15-0-12, 47 lb down at 17-0-12, 47 lb down at 19-0-12, 47 lb down at 20-4-12, 47 lb down at 22-4-12, 47 lb down at 24-4-12, 47 lb down at 26-4-12, 47 lb down at 28-4-12, 47 lb down at 30-4-12, and 47 lb down at 32-4-12, and 415 lb down and 23 lb up at 34-4-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

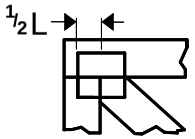
13) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

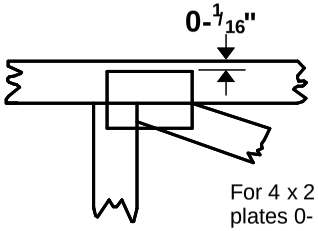
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-3=-48, 3-10=-58, 10-12=-48, 22-25=-20
   Concentrated Loads (lb)
   Vert: 3=-114 (F), 21=-415 (F), 18=-47 (F), 5=-109 (F), 17=-47 (F), 8=-109 (F), 15=-47 (F), 13=-415 (F), 7=-109 (F), 10=-114 (F), 28=-109 (F), 29=-109 (F), 30=-109 (F), 32=-109 (F), 33=-109 (F), 34=-109 (F), 35=-109 (F), 36=-109 (F), 38=-109 (F), 39=-109 (F), 40=-109 (F), 41=-47 (F), 42=-47 (F), 43=-47 (F), 44=-47 (F), 45=-47 (F), 46=-47 (F), 47=-47 (F), 48=-47 (F), 49=-47 (F), 50=-47 (F), 51=-47 (F)

Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.

This symbol indicates the required direction of slots in connector plates.

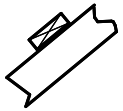
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

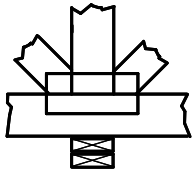
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

BEARING

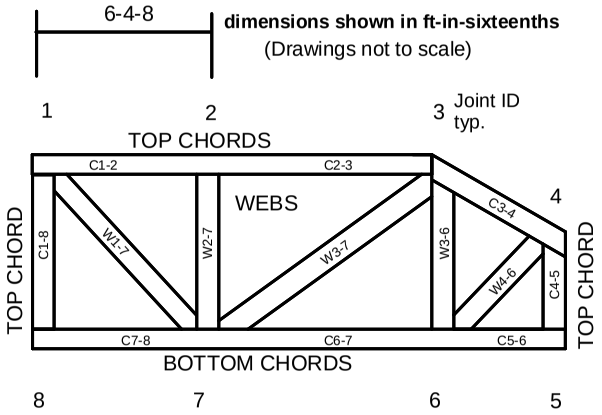


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

MiTek®

ENGINEERING BY TRENCO
A MiTek Affiliate

MiTek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.