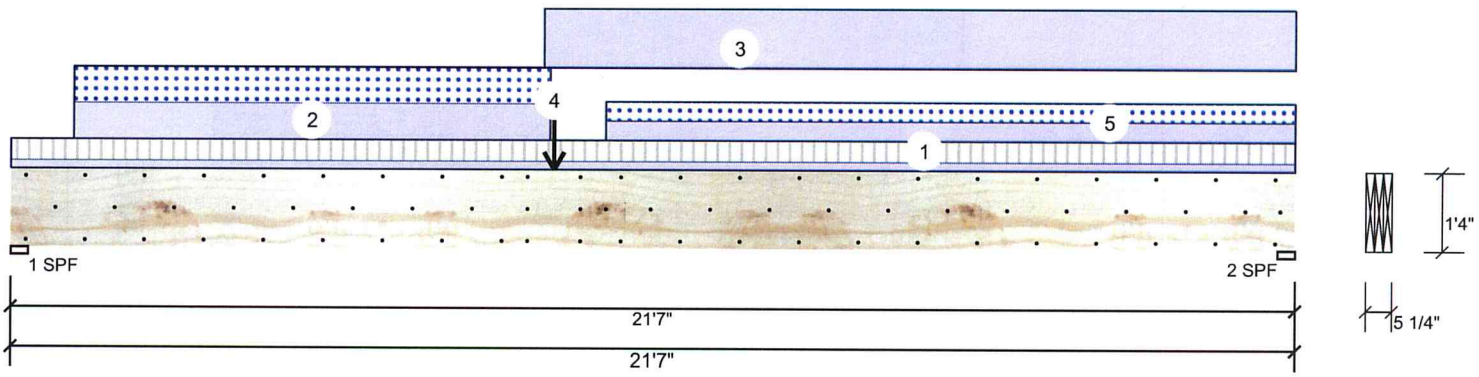
Client:	Ben Stout	Date:	3/16/2020
Project:		Input by:	Hampton Horrocks
Address:		Job Name:	Lot 13 Blackberry Manor
		Project #:	J0330-1192

BM2 Kerto-S LVL 1.750" X 16.000" 3-Ply - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Floor
Plies:	3	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	Yes
Deflection TL:	600	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	432	1471	700	0	0
2	432	1926	556	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	30%	1471 / 849	2320	L	D+0.75(L+S)
2 - SPF	3.500"	34%	1926 / 741	2666	L	D+0.75(L+S)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	14316 ft-lb	10'4 15/16"	62010 ft-lb	0.231 (23%)	D+0.75(L+S)	L
Unbraced	14316 ft-lb	10'4 15/16"	14322 ft-lb	1.000 (100%)	D+0.75(L+S)	L
Shear	2354 lb	20' 3/8"	20608 lb	0.114 (11%)	D+0.75(L+S)	L
LL Defl inch	0.107 (L/2379)	10'6 1/16"	0.529 (L/480)	0.200 (20%)	0.75(L+S)	L
TL Defl inch	0.335 (L/757)	10'9 7/16"	0.423 (L/600)	0.790 (79%)	D+0.75(L+S)	L

Design Notes

1 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
2 Refer to last page of calculations for fasteners required for specified loads.
3 Concentrated load fastener specification is in addition to hanger fasteners if a hanger is present.
4 Girders are designed to be supported on the bottom edge only.
5 Top loads must be supported equally by all plies.
6 Top must be laterally braced at a maximum of 13'5 5/8" o.c.
7 Bottom braced at bearings.
8 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	15 PLF	40 PLF	0 PLF	0 PLF	0 PLF	floor
2	Part. Uniform	1-0-12 to 9-0-12		Near Face	68 PLF	0 PLF	68 PLF	0 PLF	0 PLF	C1
3	Part. Uniform	8-11-8 to 21-7-0		Top	112 PLF	0 PLF	0 PLF	0 PLF	0 PLF	wall
4	Point	9-1-8		Near Face	295 lb	0 lb	295 lb	0 lb	0 lb	C2

Continued on page 2...

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/13/2022

Manufacturer Info

Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

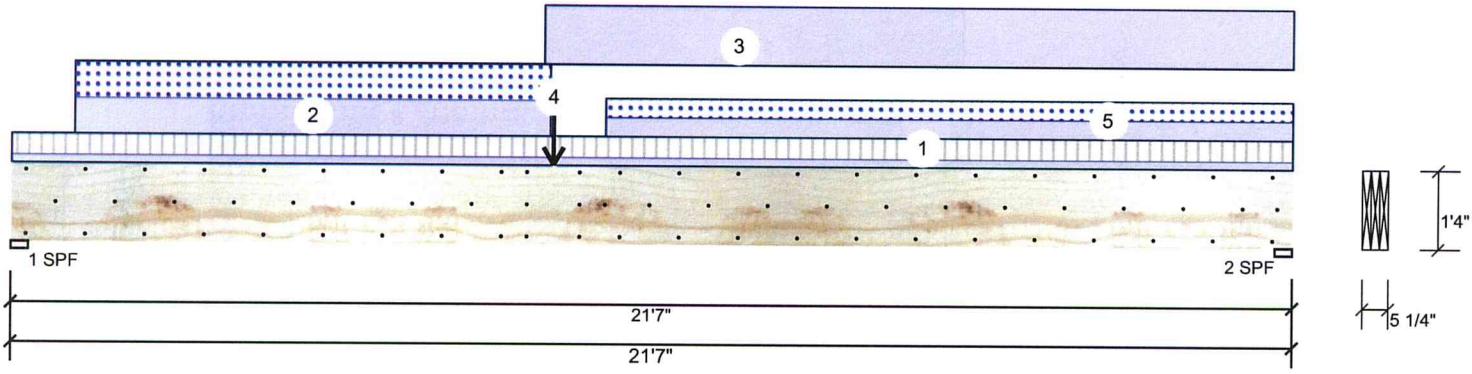
isDesign

Client: Ben Stout
Project:
Address:

Date: 3/16/2020
Input by: Hampton Horrocks
Job Name: Lot 13 Blackberry Manor
Project #: J0330-1192

BM2 Kerto-S LVL 1.750" X 16.000" 3-Ply - PASSED

Level: Level



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
5	Part. Uniform	10-0-0 to 21-7-0		Near Face	36 PLF	0 PLF	36 PLF	0 PLF	0 PLF	D1
	Self Weight				19 PLF					

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/13/2022

Manufacturer Info

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www.metsawood.com/us
ICC-ES: ESR-3633

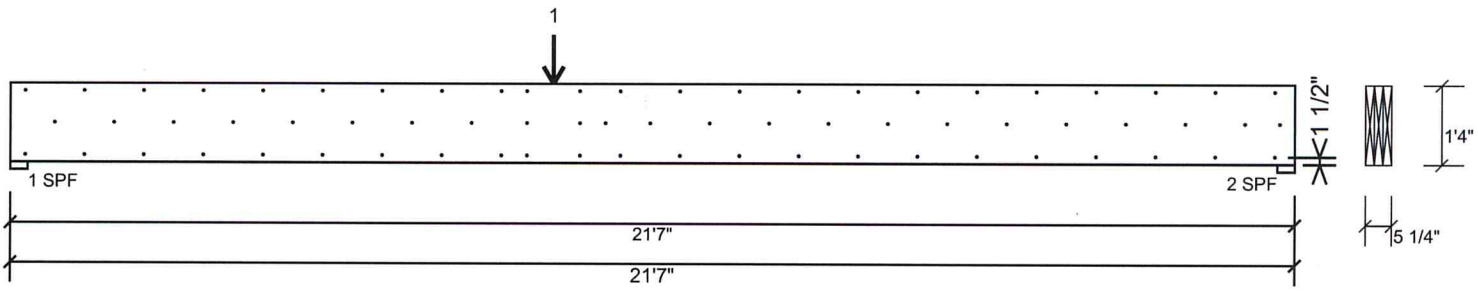
Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

CSD DESIGN BUILD

Client:	Ben Stout	Date:	3/16/2020
Project:		Input by:	Hampton Horrocks
Address:		Job Name:	Lot 13 Blackberry Manor
		Project #:	J0330-1192

BM2 Kerto-S LVL 1.750" X 16.000" 3-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. except for regions covered by concentrated load fastening. Nail from both sides. Maximum end distance not to exceed 6"

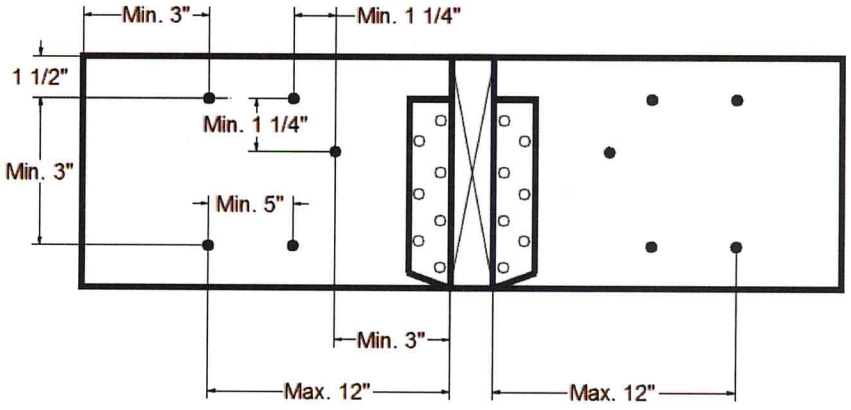
Capacity	32.1 %
Load	90.7 PLF
Yield Limit per Foot	282.4 PLF
Yield Limit per Fastener	94.1 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	D+S
Duration Factor	1.15

Concentrated Load

Fasten at concentrated side load at 9-1-8 with a minimum of (6) – 10d Box nails (.128x3") in the pattern shown. Repeat fasteners on both sides.

Capacity	69.7 %
Load	393.3lb.
Total Yield Limit	564.7 lb.
Cg	0.9998
Yield Limit per Fastener	94.1 lb.
Yield Mode	IV
Load Combination	D+S
Duration Factor	1.15

Min/Max fastener distances for Concentrated Side Loads



Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/13/2022

Manufacturer Info

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www.metsawood.com/us
ICC-ES: ESR-3633

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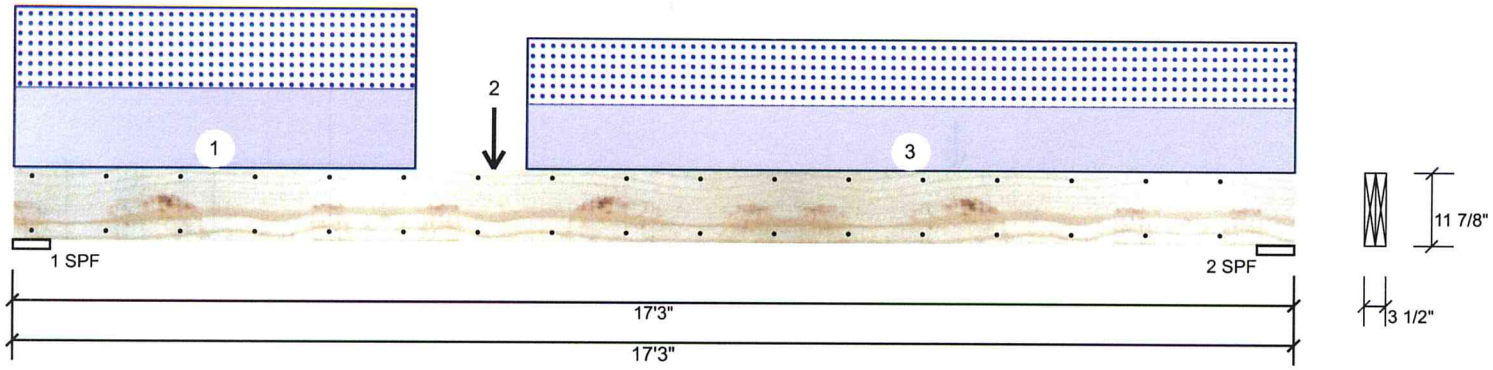
910-864-TRUS

Client:	Ben Stout	Date:	3/16/2020
Project:		Input by:	Hampton Horrocks
Address:		Job Name:	Lot 13 Blackberry Manor
		Project #:	J0330-1192

GDH Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	661	581	0	0
2	0	592	512	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	6.000"	14%	661 / 581	1242	L	D+S
2 - SPF	6.000"	12%	592 / 512	1104	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4723 ft-lb	7'10 1/16"	22897 ft-lb	0.206 (21%)	D+S	L
Unbraced	4723 ft-lb	7'10 1/16"	6086 ft-lb	0.776 (78%)	D+S	L
Shear	1041 lb	1'5 1/8"	10197 lb	0.102 (10%)	D+S	L
LL Defl inch	0.114 (L/1720)	8'5 3/4"	0.409 (L/480)	0.280 (28%)	S	L
TL Defl inch	0.245 (L/803)	8'5 7/8"	0.546 (L/360)	0.450 (45%)	D+S	L

Design Notes

1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
2 Refer to last page of calculations for fasteners required for specified loads.
3 Girders are designed to be supported on the bottom edge only.
4 Top loads must be supported equally by all plies.
5 Top braced at bearings.
6 Bottom braced at bearings.
7 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Part. Uniform	0-0-0 to 5-4-12		Top	66 PLF	0 PLF	66 PLF	0 PLF	0 PLF	C1
2	Point	6-5-8		Top	178 lb	0 lb	178 lb	0 lb	0 lb	C3
3	Part. Uniform	6-10-12 to 17-3-0		Top	54 PLF	0 PLF	54 PLF	0 PLF	0 PLF	D1
	Self Weight				9 PLF					

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
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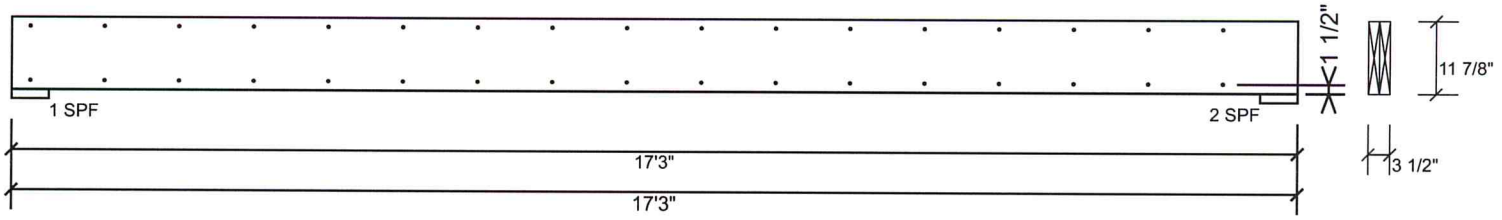
910-864-TRUS

Client:	Ben Stout	Date:	3/16/2020
Project:		Input by:	Hampton Horrocks
Address:		Job Name:	Lot 13 Blackberry Manor
		Project #:	J0330-1192

GDH Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6"

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
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Handling & Installation

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Fayetteville, NC
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ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: J0320-1192
Lot 13 Blackberry Manor

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Comtech, Inc - Fayetteville.

Pages or sheets covered by this seal: E14188639 thru E14188650

My license renewal date for the state of North Carolina is December 31, 2020.

North Carolina COA: C-0844

March 16,2020

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	Lot 13 Blackberry Manor
J0320-1192	F01	Floor	4	1	E14188639
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Mar 10 2020 MiTek Industries, Inc. Mon Mar 16 13:08:51 2020 Page 1
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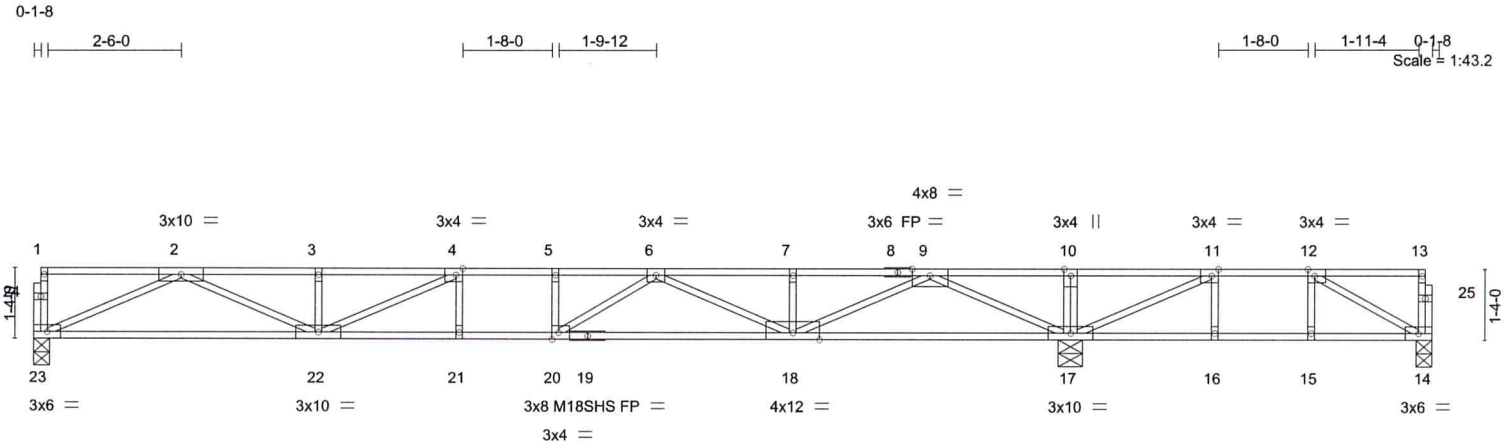

19-4-4 22-7-14 23-2-8 26-1-0
19-4-4 3-3-10 0-6-10 2-10-8

Plate Offsets (X,Y)-- [4:0-1-8,Edge], [11:0-1-8,Edge], [12:0-1-8,Edge], [20:0-1-8,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.78	Vert(LL)	-0.28	20	>813	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.79	Vert(CT)	-0.39	18-20	>590	360	M18SHS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.82	Horz(CT)	0.06	17	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 131 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)

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

REACTIONS. (size) 23=0-3-8, 14=0-3-8, 17=0-5-8
Max Uplift 14=-141(LC 3)
Max Grav 23=975(LC 10), 14=265(LC 4), 17=1769(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3037/0, 3-4=-3037/0, 4-5=-3597/0, 5-6=-3597/0, 6-7=-2479/0, 7-9=-2479/0, 9-10=0/1470, 10-11=0/1470, 11-12=-260/472
BOT CHORD 22-23=0/1848, 21-22=0/3597, 20-21=0/3597, 18-20=0/3339, 17-18=0/966, 16-17=-472/260, 15-16=-472/260, 14-15=-472/260
WEBS 2-23=-2029/0, 2-22=0/1315, 3-22=-300/0, 9-17=-2391/0, 9-18=0/1726, 7-18=-260/0, 4-22=-814/0, 6-18=-995/0, 6-20=-27/641, 12-14=-293/547, 11-17=-1314/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) All plates are 1.5x3 MT20 unless otherwise indicated.
4) Plates checked for a plus or minus 1 degree rotation about its center.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 14=141.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.

March 16,2020

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

Job	Truss	Truss Type	Qty	Ply	Lot 13 Blackberry Manor
J0320-1192	F02	Floor	3	1	E14188640
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Mar 10 2020 MiTek Industries, Inc. Mon Mar 16 13:08:52 2020 Page 1
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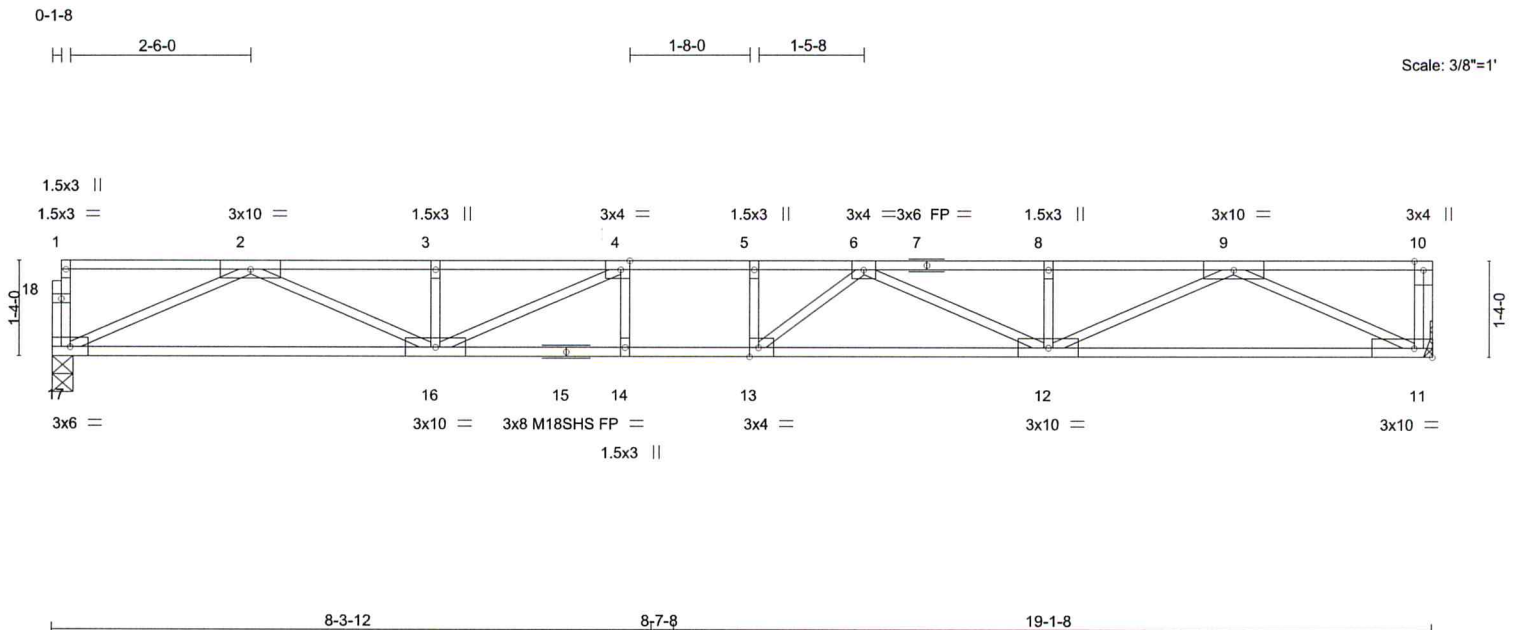

Plate Offsets (X,Y)-- [4:0-1-8,Edge], [13:0-1-8,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.73	Vert(LL)	-0.33	12-13	>689	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.92	Vert(CT)	-0.46	12-13	>494	360	M18SHS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.69	Horz(CT)	0.08	11	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 96 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-7-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 12-13.

REACTIONS. (size) 17=0-3-8, 11=Mechanical
Max Grav 17=1032(LC 1), 11=1038(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3273/0, 3-4=-3273/0, 4-5=-4003/0, 5-6=-4003/0, 6-8=-3285/0, 8-9=-3285/0
BOT CHORD 16-17=0/1972, 14-16=0/4003, 13-14=0/4003, 12-13=0/3936, 11-12=0/1977
WEBS 2-17=-2165/0, 2-16=0/1439, 3-16=-289/16, 4-16=-1021/0, 9-11=-2176/0, 9-12=0/1446, 6-12=-720/0, 6-13=-246/479

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) Plates checked for a plus or minus 1 degree rotation about its center.
4) Refer to girder(s) for truss to truss connections.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
6) CAUTION, Do not erect truss backwards.

March 16,2020

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

Job	Truss	Truss Type	Qty	Ply	Lot 13 Blackberry Manor
J0320-1192	F03	Floor	3	1	E14188641
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

8.330 s Mar 10 2020 MiTek Industries, Inc. Mon Mar 16 13:08:52 2020 Page 1
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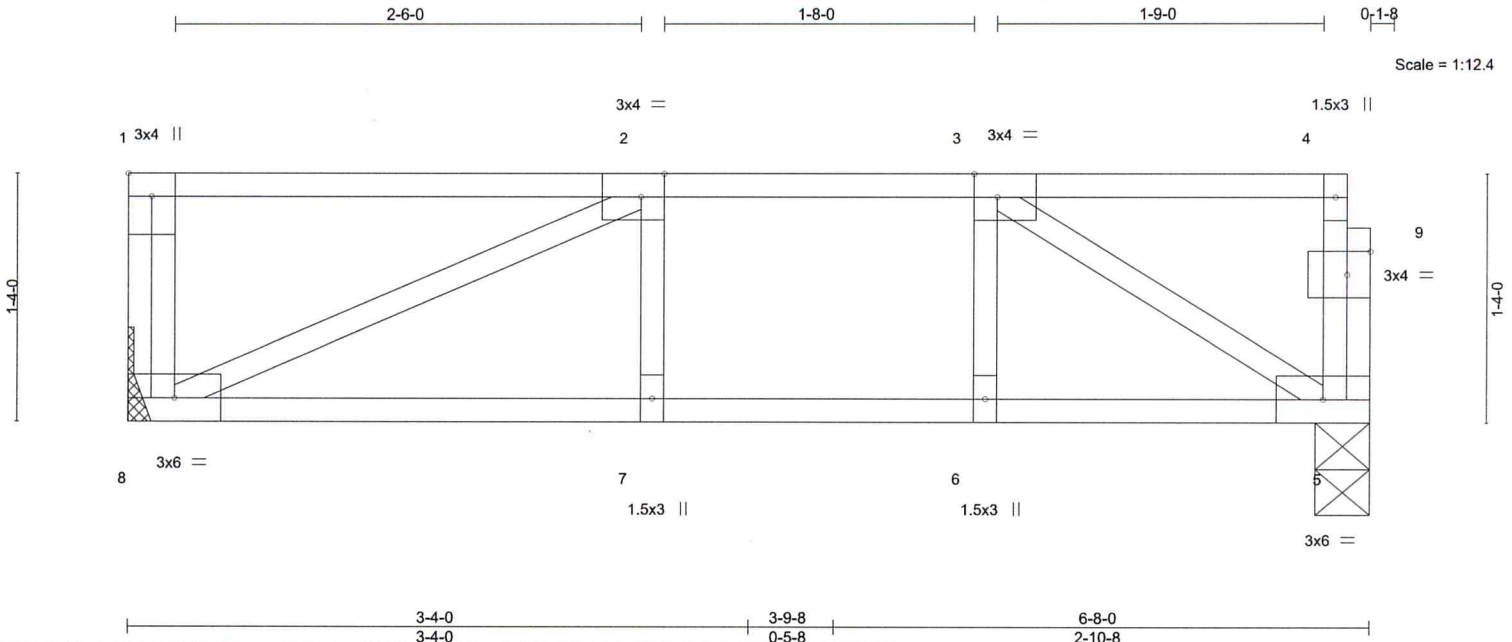

3-4-0	3-9-8	6-8-0
3-4-0	0-5-8	2-10-8

Plate Offsets (X,Y)-- [1:Edge,0-1-8], [2:0-1-8,Edge], [3:0-1-8,Edge], [9:0-1-8,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.38	Vert(LL)	-0.04	7-8	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.30	Vert(CT)	-0.06	7-8	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.00	5	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-S							Weight: 36 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)

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) 8=Mechanical, 5=0-3-8
Max Grav 8=353(LC 1), 5=347(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-467/0
BOT CHORD 7-8=0/467, 6-7=0/467, 5-6=0/467
WEBS 2-8=-512/0, 3-5=-546/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Refer to girder(s) for truss to truss connections.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
5) CAUTION, Do not erect truss backwards.

March 16,2020

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

Job	Truss	Truss Type	Qty	Ply	Lot 13 Blackberry Manor
J0320-1192	F04	Floor	5	1	E14188642
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

8.330 s Mar 10 2020 MiTek Industries, Inc. Mon Mar 16 13:08:53 2020 Page 1
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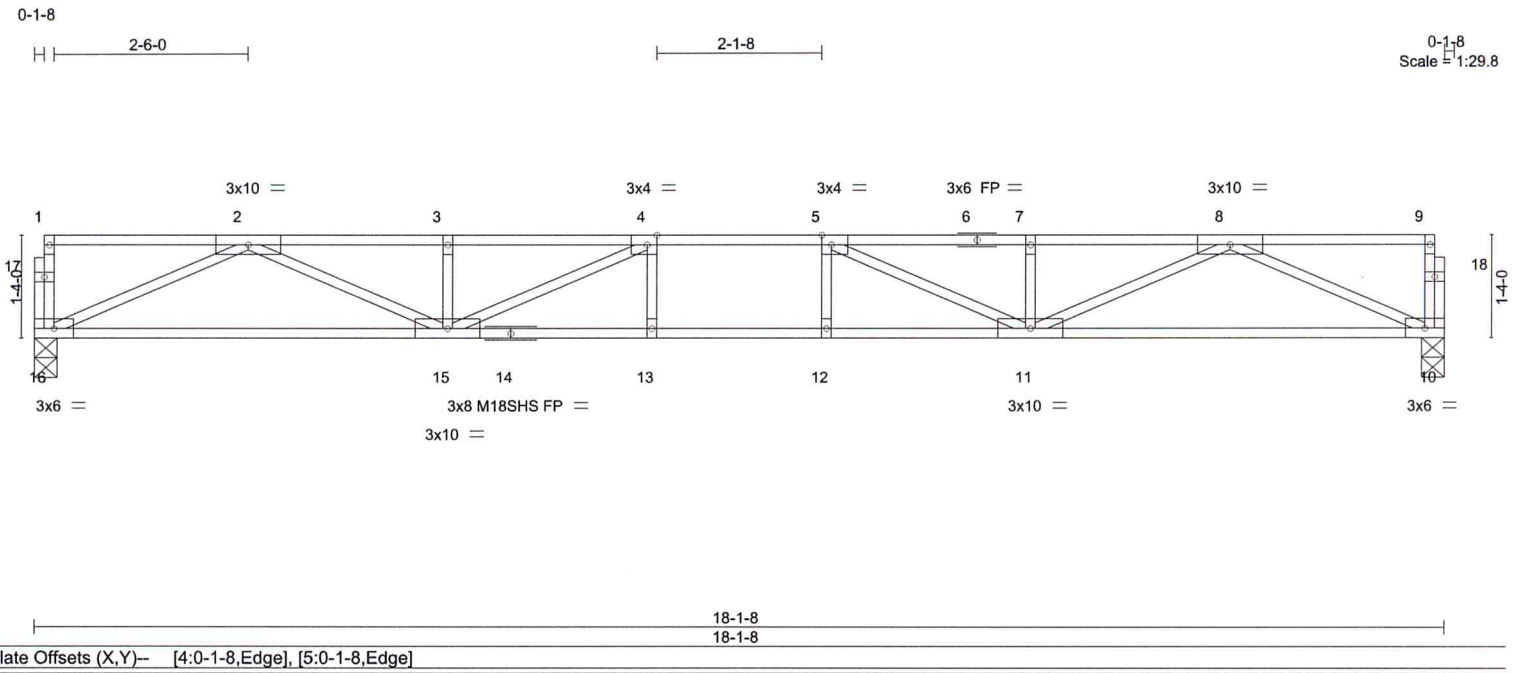

Plate Offsets (X,Y)-- [4:0-1-8,Edge], [5:0-1-8,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.56	Vert(LL)	-0.28	13-15	>772	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.90	Vert(CT)	-0.36	13-15	>589	360	M18SHS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.07	10	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 90 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)

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) 16=0-3-8, 10=0-3-8
Max Grav 16=977(LC 1), 10=977(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3048/0, 3-4=-3048/0, 4-5=-3605/0, 5-7=-3048/0, 7-8=-3048/0
BOT CHORD 15-16=0/1853, 13-15=0/3605, 12-13=0/3605, 11-12=0/3605, 10-11=0/1853
WEBS 2-16=-2034/0, 2-15=0/1321, 3-15=-304/9, 8-10=-2034/0, 8-11=0/1321, 7-11=-304/9, 4-15=-893/0, 5-11=-893/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) All plates are 1.5x3 MT20 unless otherwise indicated.
4) Plates checked for a plus or minus 1 degree rotation about its center.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

March 16,2020

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

Job	Truss	Truss Type	Qty	Ply	Lot 13 Blackberry Manor
J0320-1192	F04GRD	Floor Girder	1	1	E14188643
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Mar 10 2020 MiTek Industries, Inc. Mon Mar 16 13:08:54 2020 Page 1
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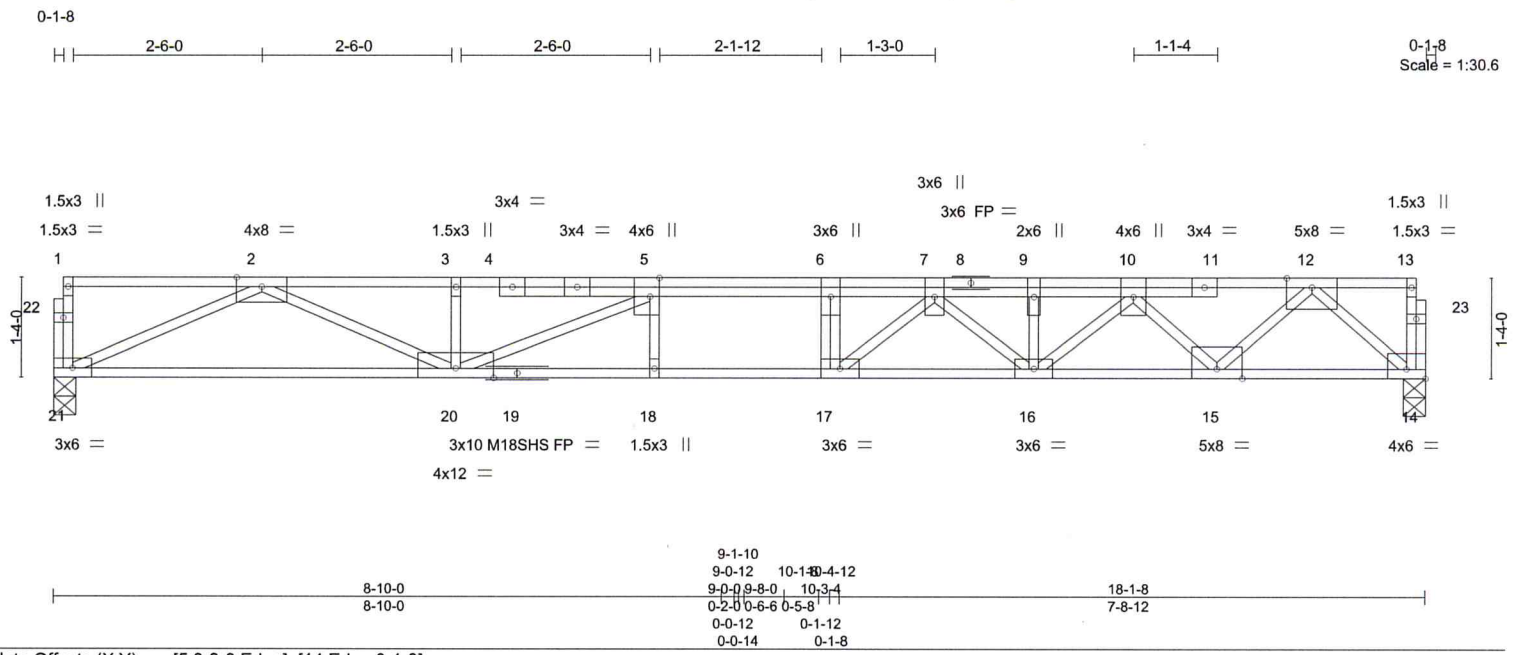

Plate Offsets (X,Y)-- [5:0-3-0,Edge], [14:Edge,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.64	Vert(LL)	-0.29	17	>741	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.70	Vert(CT)	-0.40	16-17	>532	360	M18SHS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.99	Horz(CT)	0.08	14	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 107 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat)

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) 21=0-3-8, 14=0-3-8
Max Grav 21=1156(LC 1), 14=1656(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3779/0, 3-5=-3785/0, 5-6=-5138/0, 6-7=-5138/0, 7-9=-5104/0, 9-10=-5104/0, 10-12=-3302/0
BOT CHORD 20-21=0/2246, 18-20=0/5138, 17-18=0/5138, 16-17=0/5288, 15-16=0/4671, 14-15=0/1804
WEBS 2-21=-2467/0, 2-20=0/1694, 5-20=-1665/0, 12-14=-2398/0, 12-15=0/2077, 10-15=-1979/0, 10-16=0/575, 7-17=-644/106, 6-17=-56/348

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) Plates checked for a plus or minus 1 degree rotation about its center.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
5) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 938 lb down at 14-3-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
6) 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 + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 14-21=-10, 1-13=-100
Concentrated Loads (lb)
Vert: 10=-858(B)

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

Job	Truss	Truss Type	Qty	Ply	Lot 13 Blackberry Manor
J0320-1192	F05	Floor	2	1	E14188644
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

8.330 s Mar 10 2020 MiTek Industries, Inc. Mon Mar 16 13:08:55 2020 Page 1
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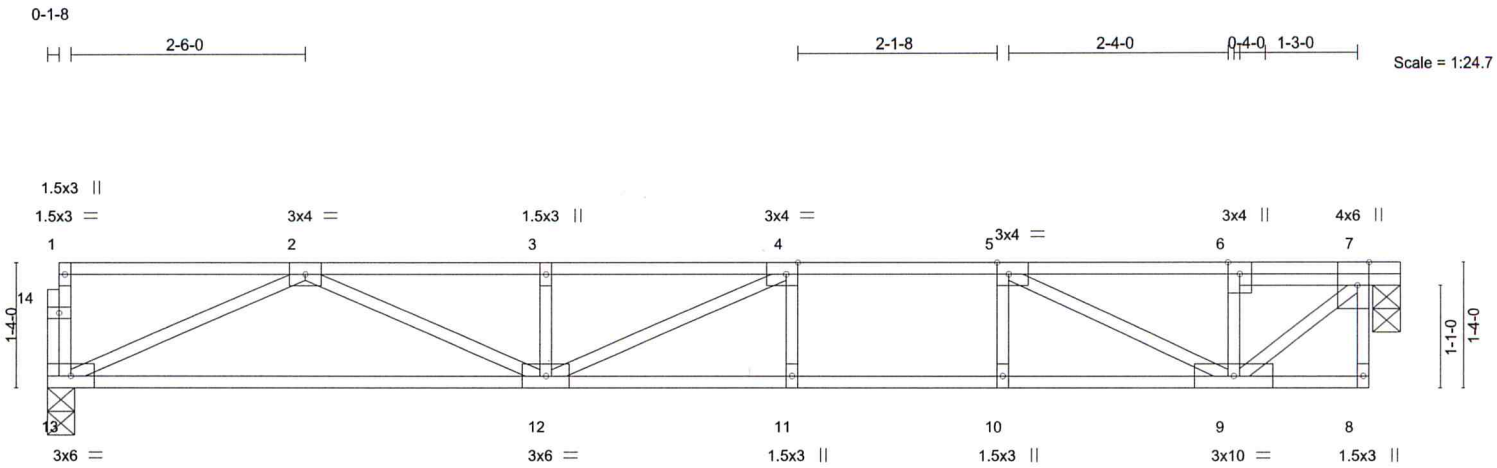

Plate Offsets (X,Y)-- [4:0-1-8,Edge], [5:0-1-8,Edge], [7:0-3-0,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.78	Vert(LL)	-0.27	11-12	>627	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.69	Vert(CT)	-0.35	11-12	>478	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.47	Horz(CT)	0.03	7	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 74 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat)

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) 13=0-3-8, 7=0-3-8
Max Grav 13=758(LC 1), 7=764(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2151/0, 3-4=-2151/0, 4-5=-1998/0, 5-6=-752/0, 6-7=-756/0
BOT CHORD 12-13=0/1383, 11-12=0/1998, 10-11=0/1998, 9-10=0/1998
WEBS 7-9=0/979, 2-13=-1516/0, 2-12=0/849, 3-12=-332/0, 4-12=-244/327, 5-9=-1388/0, 5-10=0/264

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
4) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
5) CAUTION, Do not erect truss backwards.

March 16,2020

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 13 Blackberry Manor
J0320-1192	F05GRD	FLOOR	1	1	E14188645
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Mar 10 2020 MiTek Industries, Inc. Mon Mar 16 13:08:55 2020 Page 1
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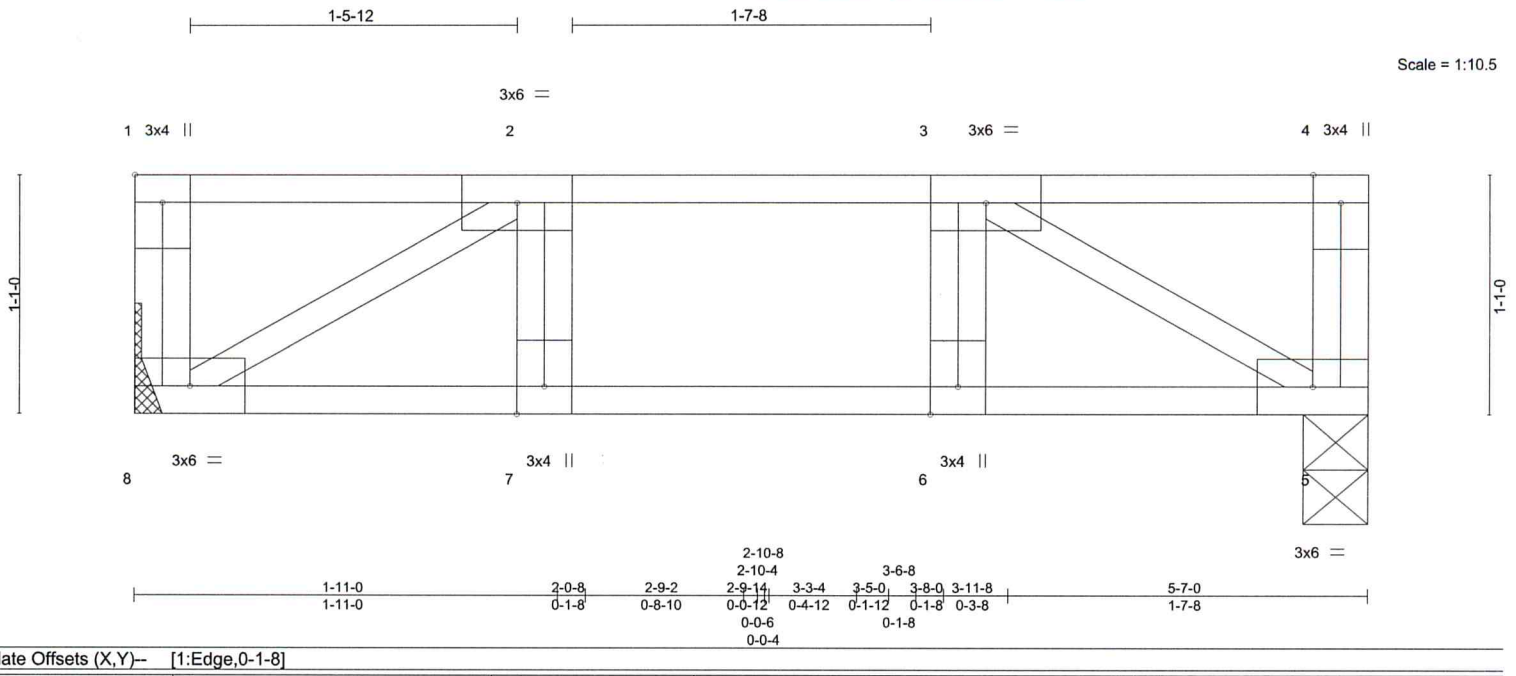

Plate Offsets (X,Y)-- [1:Edge,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.19	Vert(LL)	-0.03	6	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.37	Vert(CT)	-0.03	6-7	>999	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.43	Horz(CT)	0.01	5	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-S							Weight: 32 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-7-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 8=Mechanical, 5=0-3-8
Max Grav 8=958(LC 1), 5=958(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1573/0
BOT CHORD 7-8=0/1573, 6-7=0/1573, 5-6=0/1573
WEBS 2-8=-1799/0, 3-5=-1799/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Refer to girder(s) for truss to truss connections.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 5-8=-10, 1-4=-100
Concentrated Loads (lb)
Vert: 2=-664 3=-664

March 16,2020

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 13 Blackberry Manor
J0320-1192	F06	Floor	3	1	E14188646 Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Mar 10 2020 MiTek Industries, Inc. Mon Mar 16 13:08:56 2020 Page 1
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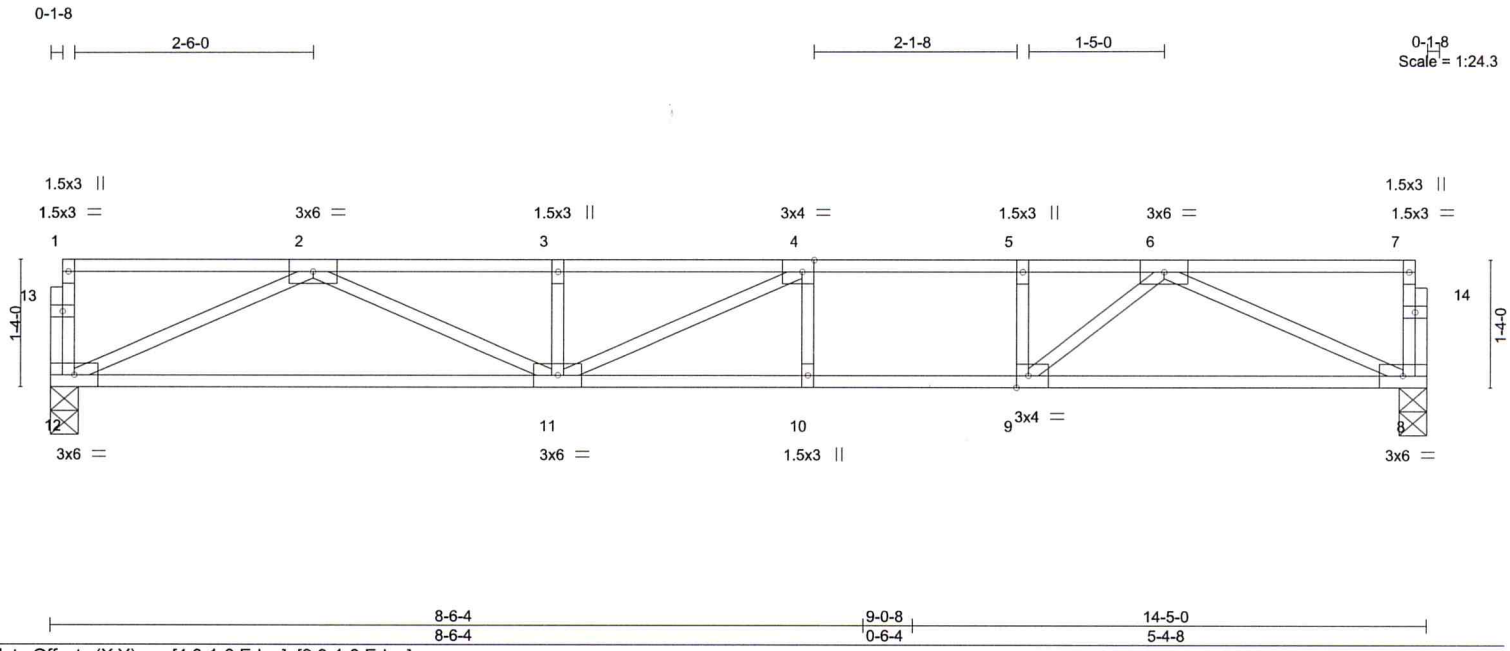

Plate Offsets (X,Y)-- [4:0-1-8,Edge], [9:0-1-8,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	1.00	Vert(LL)	-0.29	10-11	>579	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	1.00	Vert(CT)	-0.38	10-11	>445	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.45	Horz(CT)	0.03	8	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-S							Weight: 72 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied or 1-4-12 oc bracing.

REACTIONS. (size) 12=0-3-8, 8=0-3-8
Max Grav 12=773(LC 1), 8=773(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2216/0, 3-4=-2216/0, 4-5=-2099/0, 5-6=-2099/0
BOT CHORD 11-12=0/1412, 10-11=0/2099, 9-10=0/2099, 8-9=0/1432
WEBS 2-12=-1549/0, 2-11=0/889, 3-11=-346/0, 4-11=-279/300, 6-8=-1570/0, 6-9=0/945, 5-9=-425/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

March 16,2020

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A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 13 Blackberry Manor
J0320-1192	F07	FLOOR	10	1	E14188647
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

8.330 s Mar 10 2020 MiTek Industries, Inc. Mon Mar 16 13:08:56 2020 Page 1
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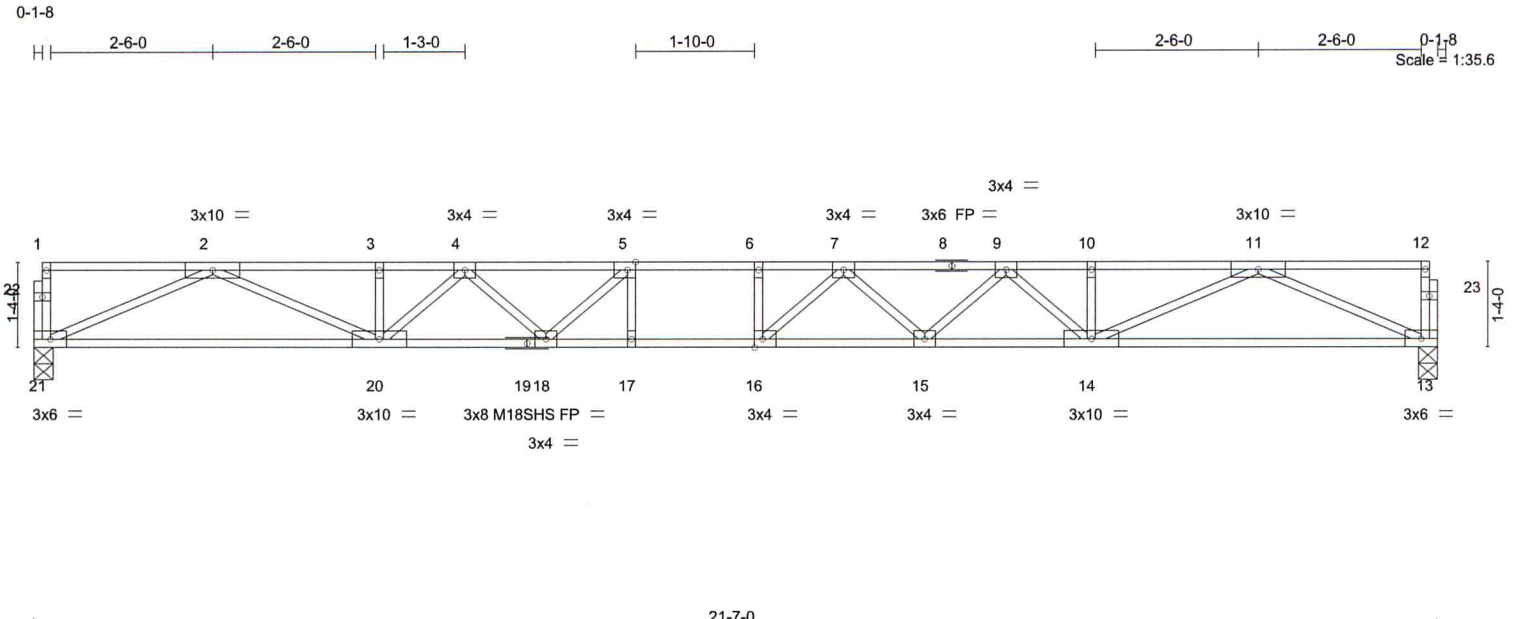

21-7-0
21-7-0

Plate Offsets (X,Y)-- [5:0-1-8,Edge], [16:0-1-8,Edge]

LOADING (psf)		SPACING-	1-7-3	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.61	Vert(LL)	-0.35	16	>723	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.57	Vert(CT)	-0.49	15-16	>524	360	M18SHS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.07	13	n/a	n/a		
BCDL	5.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 110 lb	FT = 20%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat)

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) 21=0-3-8, 13=0-3-8
Max Grav 21=933(LC 1), 13=933(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3068/0, 3-4=-3068/0, 4-5=-3792/0, 5-6=-4100/0, 6-7=-4100/0, 7-9=-3798/0, 9-10=-3066/0, 10-11=-3066/0
BOT CHORD 20-21=0/1815, 18-20=0/3517, 17-18=0/4100, 16-17=0/4100, 15-16=0/4047, 14-15=0/3525, 13-14=0/1814
WEBS 2-21=-1993/0, 2-20=0/1385, 11-13=-1993/0, 11-14=0/1384, 9-14=-624/0, 9-15=0/381, 7-15=-380/0, 7-16=-236/436, 4-20=-610/0, 4-18=0/476, 5-18=-633/0

NOTES-
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) All plates are 1.5x3 MT20 unless otherwise indicated.
4) Plates checked for a plus or minus 1 degree rotation about its center.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 13 Blackberry Manor
J0320-1192	FKW1	Floor Supported Gable	1	1	E14188648
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Mar 10 2020 MiTek Industries, Inc. Mon Mar 16 13:08:57 2020 Page 1
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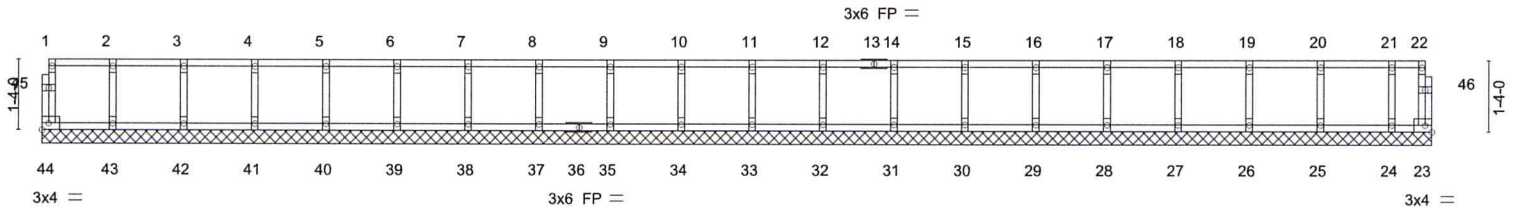

26-1-0
26-1-0

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	23	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-R							Weight: 114 lb	FT = 20%F, 11%E

LUMBER-

TOP CHORD	2x4 SP No.1(flat)
BOT CHORD	2x4 SP No.1(flat)
WEBS	2x4 SP No.3(flat)
OTHERS	2x4 SP No.3(flat)

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. All bearings 26-1-0.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 44, 23, 43, 42, 41, 40, 39, 38, 37, 35, 34, 33, 32, 31, 30, 29, 28, 27, 26, 25, 24

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES-
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Gable requires continuous bottom chord bearing.
4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
5) Gable studs spaced at 1-4-0 oc.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 13 Blackberry Manor
J0320-1192	FKW4	Floor Supported Gable	1	1	E14188649
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Mar 10 2020 MiTek Industries, Inc. Mon Mar 16 13:08:58 2020 Page 1
ID:Mx8V6g?IIBPF9OPoaUbLprzhKw_-p?foMq?NfSzjeoAh9p_yfrFGoxcuwYHk9ueZLzzaLp3

0-1-8 0-1-8

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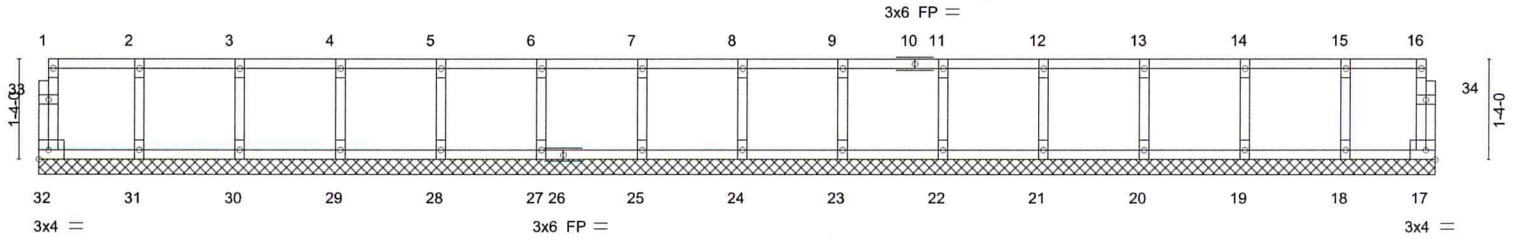

18-6-4
18-6-4

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	17	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-R							Weight: 82 lb	FT = 20%F, 11%E

LUMBER-

TOP CHORD	2x4 SP No.1(flat)
BOT CHORD	2x4 SP No.1(flat)
WEBS	2x4 SP No.3(flat)
OTHERS	2x4 SP No.3(flat)

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. All bearings 18-6-4.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 32, 17, 31, 30, 29, 28, 27, 25, 24, 23, 22, 21, 20, 19, 18

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES-
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Gable requires continuous bottom chord bearing.
4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
5) Gable studs spaced at 1-4-0 oc.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

March 16,2020

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

Job	Truss	Truss Type	Qty	Ply	Lot 13 Blackberry Manor
J0320-1192	FKW6	Floor Supported Gable	1	1	E14188650
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Mar 10 2020 MiTek Industries, Inc. Mon Mar 16 13:08:59 2020 Page 1
ID:Mx8V6g?IIBPF9OPoaUbLprzhKw_-HBDAaA??Ql5aGyluiWVBC3oRSLyvf?WuOYN6tQzaLp2

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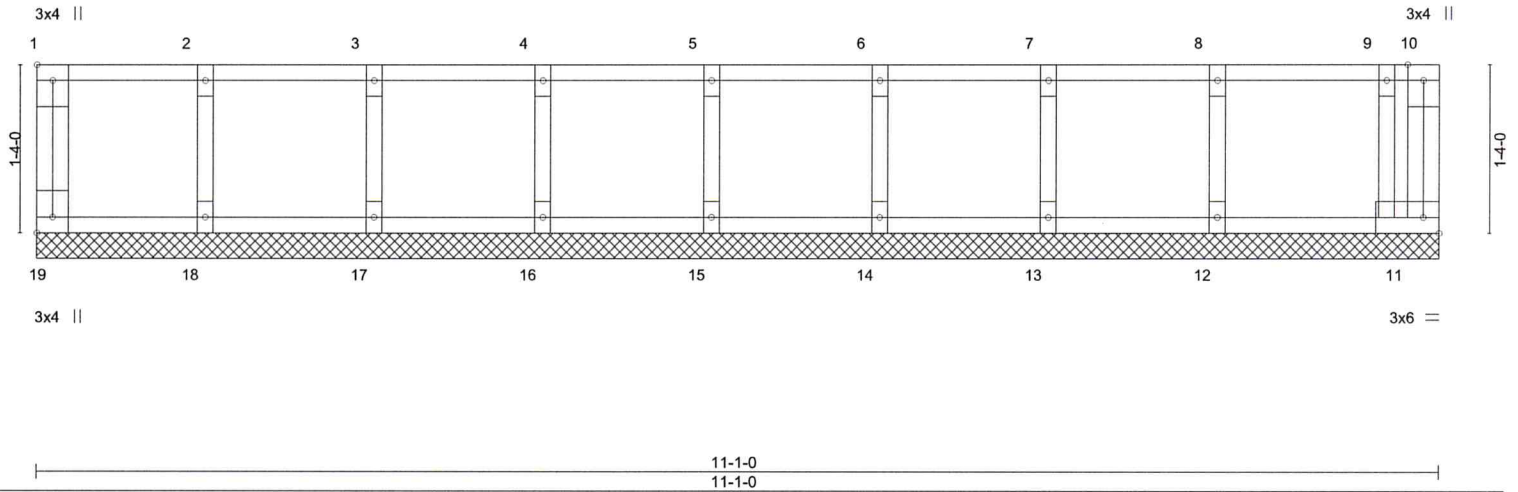


Plate Offsets (X,Y)-- [1:Edge,0-1-8], [19:Edge,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.02	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	11	n/a	n/a		
BCDL	5.0	Code IRC2015/TPI2014		Matrix-R							Weight: 52 lb	FT = 20%F, 11%E

LUMBER-

TOP CHORD	2x4 SP No.1(flat)
BOT CHORD	2x4 SP No.1(flat)
WEBS	2x4 SP No.3(flat)
OTHERS	2x4 SP No.3(flat)

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. All bearings 11-1-0.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 19, 11, 18, 17, 16, 15, 14, 13, 12

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

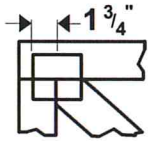
NOTES-
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Gable requires continuous bottom chord bearing.
4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
5) Gable studs spaced at 1-4-0 oc.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

March 16,2020

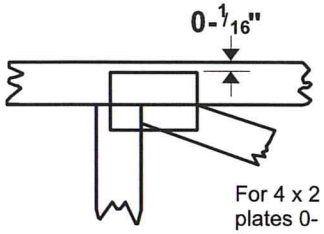
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

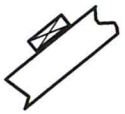
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

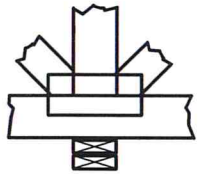
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

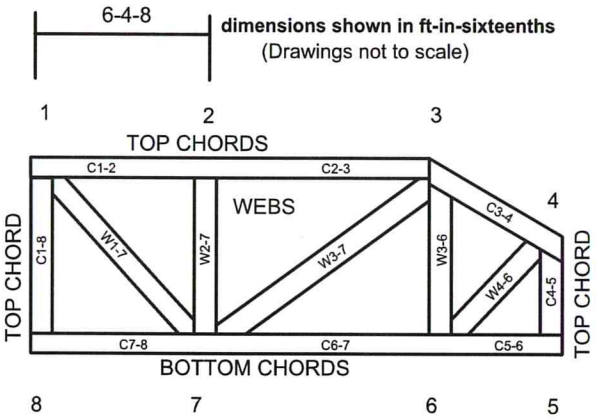


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & 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-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

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. 10/03/2015

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.

ob Estimate

ComTech
ROOF & FLOOR TRUSSES & BEAMS
eilly Road Industrial Park P.O. Box 40408
ayetteville, N.C. 28309 (910) 864-TRUS
:ary Office: (919) 816-0105

REQ. QUOTE DATE	/ /	**ORDER #**	J0320-1192
ORDER DATE	03/13/20	**QUOTE #**	
DELIVERY DATE	/ /	**CUSTOMER ACCT #**	0000007060
DATE OF INVOICE	/ /	**CUSTOMER PO #**	
ORDERED BY		**INVOICE #**	
SUPERINTENDANT	Ben Stout	**SALES REP**	Marshall Naylor
JOBSITE PHONE #	(910) 476-4502		
DESIGNER		**TRACKING**	Hampton Horrocks

Benjamin Stout Real Estate
PO Box 53798
Fayetteville, NC 28305
(910) 476-4502

Ben Stout Real Estate
13 Kotata Ave
Harnett County, NC

JOB NAME: Lot 13 Blackberry Manor **LOT #** 13 **SUBDIV:** Blackberry Manor
MODEL: Floor **TAG:** Northbrook **JOB CATEGORY:** Residential - Roof

DELIVERY INSTRUCTIONS:

SPECIAL INSTRUCTIONS:
1303 Fraser Drive

PLAN SEAL DATE: N/A

FLOOR TRUSSES

FLOOR PROFILE	QTY / PLY	DEPTH ID	SPAN FT-IN-16	END TYPE LEFT	END TYPE RIGHT	INT BEARING SIZE	INT BEARING LOCATION	CANTILEVER LEFT	CANTILEVER RIGHT	NOTES
	4	01-04-00 F01	26-01-00							
	3	01-04-00 F02	19-01-08							
	3	01-04-00 F03	06-08-00							
	5	01-04-00 F04	18-01-08							
	1	01-04-00 F04GRD	18-01-08							
	2	01-04-00 F05	14-05-00							
	1	01-01-00 F05GRD	05-07-00							
	3	01-04-00 F06	14-05-00							
	10	01-04-00 F07	21-07-00							
	1	01-04-00 FKW1	26-01-00							
	1	01-04-00 FKW4	18-06-04							
	1	01-04-00 FKW6	11-01-00							
	1	Truss Drawings With B-1 and B-3 Bracing And Handling Instructions (Included in truss price)								

FLOOR SUB-TOTAL: $ 2,084.45

ITEMS

TY	ITEM TYPE	SIZE	LENGTH FT-IN-16	PART NUMBER	NOTES
6	Hangers, USP	HUS 410			SIMPSON (HUS410)
2	LVL Beams (Sized)	LVL, 1-3/4" x 11-7/8" (S)	22-00-00		GDH
3	LVL Beams (Sized)	LVL, 1-3/4" x 16" (S)	22-00-00		BM2
2	LVL Beams (Sized)	LVL, 1-3/4" x 16" (S)	07-00-00		BM1
1	Hangers, USP	MSH422			SIMPSON (THA422)

ITEMS SUB-TOTAL: $ 812.47

ices quoted are valid for thirty days unless otherwise specified. Additional design time made necessary by incorrect undation installation or plan changes may require additional charges. This estimate includes sealed engineering of individual ıss drawings only. Any requirement for additional engineering services will be billed in quarter hour increments as costs e incurred.

SUB-TOTAL	$2,896.92
SALES TAX 7.00%	$202.78
GRAND TOTAL	$3099.70

ACCEPTED BY SELLER

BY: _____

TITLE: _____

DATE OF ACCEPTANCE: _____

ACCEPTED BY BUYER

PURCHASER: _____

BY: _____ TITLE: _____

ADDRESS: _____

_____

PHONE: _____ DATE: _____

WARNING: As part of this proposal, we warn that trusses can be dangerous and cause property damage or personal injury if improperly installed and / or aced. Customer acceptance hereof shall constitute his affirmative representation to us that he is trained in the proper and safe methods of truss installation d bracing, and will use such methods. Customer acknowledges receipt of instructional pamphlet entitle: 'Bracing Wood Trusses: Commentary and recom-endations', HIB-91, as published by the Truss Plate Institute, Inc., and also the engineering drawings showing the required lateral bracing. By his acceptance, ıstomer agrees, for himself, his agents and employees, to hold Comtech Inc. harmless from any and all actions for property damage, personal injury, or ongful death resulting from improper installation and / or bracing during erection of the trusses comprehended hereby.

eaction Summary of Order

omTech ROOF & FLOOR TRUSSES & BEAMS
y Road Industrial Park P.O. Box 40408
etteville, N.C. 28309 (910) 864-TRUS
y Office: (919) 816-0105

REQ. QUOTE DATE	/ /	ORDER #	J0320-1192
ORDER DATE	03/13/20	QUOTE #	
DELIVERY DATE	/ /	CUSTOMER ACCT #	0000007060
DATE OF INVOICE	/ /	CUSTOMER PO #	
ORDERED BY		INVOICE #	
COUNTY	Harnett	TERMS	
SUPERINTENDANT	Ben Stout	SALES REP	Marshall Naylor
JOBSITE PHONE #	(910) 476-4502	SALES AREA	Hampton Horrocks

Benjamin Stout Real Estate
PO Box 53798
Fayetteville, NC 28305
(910) 476-4502

Ben Stout Real Estate
13 Kotata Ave
Harnett County, NC

JOB NAME: Lot 13 Blackberry Manor **LOT #** 13 **SUBDIV:** Blackberry Manor
MODEL: Floor **TAG:** Northbrook **JOB CATEGORY:** Residential - Roof

DELIVERY INSTRUCTIONS:

SPECIAL INSTRUCTIONS:
1303 Fraser Drive

PLAN SEAL DATE: N/A

ILDING DEPARTMENT
or Order

OVERHANG INFO		HEEL HEIGHT	00-06-08	REQ. LAYOUTS				REQ. ENGINEERING				QUOTE	BY	DATE
END CUT	RETURN													
	NO	GABLE STUDS	16 IN. OC			JOBSITE	1			JOBSITE	1	LAYOUT	mn	03/13/20
												CUTTING		/ /

LOOR TRUSSES

LOADING INFORMATION

TCLL-TCDL-BCLL-BCDL	STRESS INCR.
40.0,10.0,0.0,5.0	1.00

FLOOR TRUSS SPACING: 24.0 IN. O.C. (TYP.)

FLOOR PROFILE	QTY / PLY	DEPTH ID	BASE SPAN	O/A SPAN	END TYPE LEFT	END TYPE RIGHT	INT BEARING SIZE	INT BEARING LOCATION	REACTIONS
	4	01-04-00 F01	26-01-00	26-01-00					Joint 14 265.5 lbs. -140.8 lbs. / Joint 17 1768.8 lbs. 774.6 lbs. / Joint 23 974.7 lbs. 255.8 lbs.
	3	01-04-00 F02	19-01-08	19-01-08					Joint 11 1038.1 lbs. 478.6 lbs. / Joint 17 1031.9 lbs. 541.2 lbs.
	3	01-04-00 F03	06-08-00	06-08-00					Joint 5 346.7 lbs. 220.1 lbs. / Joint 8 352.9 lbs. 182.9 lbs.
	5	01-04-00 F04	18-01-08	18-01-08					Joint 10 976.9 lbs. 493.4 lbs. / Joint 16 976.9 lbs. 493.4 lbs.
	1	01-04-00 F04GRD	18-01-08	18-01-08					Joint 14 1655.6 lbs. 1239.2 lbs. / Joint 21 1155.8 lbs. 672.4 lbs.
	2	01-04-00 F05	14-05-00	14-05-00					Joint 7 764.3 lbs. 499.9 lbs. / Joint 13 758.0 lbs. 313.7 lbs.
	1	01-01-00 F05GRD	05-07-00	05-07-00					Joint 5 957.6 lbs. 868.7 lbs. / Joint 8 957.6 lbs. 868.7 lbs.
	3	01-04-00 F06	14-05-00	14-05-00					Joint 8 772.9 lbs. 497.1 lbs. / Joint 12 772.9 lbs. 325.2 lbs.
	10	01-04-00 F07	21-07-00	21-07-00					Joint 13 933.1 lbs. 436.9 lbs. / Joint 21 933.1 lbs. 480.5 lbs.

eaction Summary of Order

ComTech ROOF & FLOOR TRUSSES & BEAMS
lly Road Industrial Park P.O. Box 40408
'etteville, N.C. 28309 (910) 864-TRUS
ry Office: (919) 816-0105

REQ. QUOTE DATE	/ /	ORDER #	J0320-1192
ORDER DATE	03/13/20	QUOTE #	
DELIVERY DATE	/ /	CUSTOMER ACCT #	0000007060
DATE OF INVOICE	/ /	CUSTOMER PO #	
ORDERED BY		INVOICE #	
COUNTY	Harnett	TERMS	
SUPERINTENDANT	Ben Stout	SALES REP	Marshall Naylor
JOBSITE PHONE #	(910) 476-4502	SALES AREA	Hampton Horrocks

Benjamin Stout Real Estate
PO Box 53798
Fayetteville, NC 28305
(910) 476-4502

Ben Stout Real Estate
13 Kotata Ave
Harnett County, NC

JOB NAME: Lot 13 Blackberry Manor **LOT #** 13 **SUBDIV:** Blackberry Manor
MODEL: Floor **TAG:** Northbrook **JOB CATEGORY:** Residential - Roof

DELIVERY INSTRUCTIONS:

SPECIAL INSTRUCTIONS:
1303 Fraser Drive

PLAN SEAL DATE: N/A

JILDING DEPARTMENT
oor Order

OVERHANG INFO		HEEL HEIGHT	00-06-08	REQ. LAYOUTS				REQ. ENGINEERING					BY	DATE
END CUT	RETURN											QUOTE		/ /
	NO	GABLE STUDS	16 IN. OC			JOBSITE	1			JOBSITE	1	LAYOUT	mn	03/13/20
												CUTTING		/ /

FLOOR TRUSSES

LOADING INFORMATION

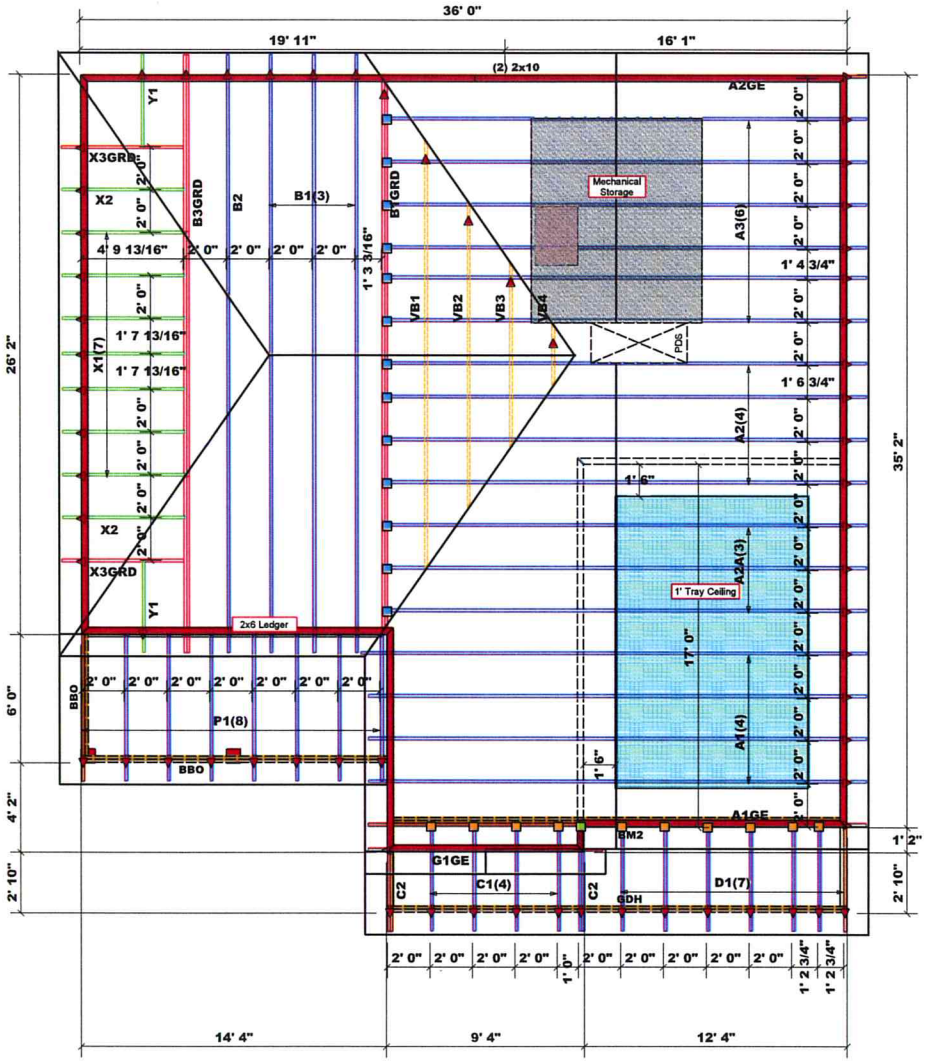
TCLL-TCDL-BCLL-BCDL	STRESS INCR.
40.0,10.0,0.0,5.0	1.00

FLOOR TRUSS SPACING: 24.0 IN. O.C. (TYP.)

FLOOR PROFILE	QTY / PLY	DEPTH ID	BASE SPAN	O/A SPAN	END TYPE LEFT	END TYPE RIGHT	INT BEARING SIZE	INT BEARING LOCATION	REACTIONS
	1	01-04-00 FKW1	26-01-00	26-01-00					Joint 23 21.0 lbs. Joint 24 109.8 lbs. Joint 25 153.1 lbs. Joint 26 145.0 lbs. Joint 27 147.1 lbs.
	1	01-04-00 FKW4	18-06-04	18-06-04					Joint 17 47.8 lbs. Joint 18 133.5 lbs. Joint 19 150.0 lbs. Joint 20 145.8 lbs. Joint 21 146.9 lbs.
	1	01-04-00 FKW6	11-01-00	11-01-00					Joint 11 93.5 lbs. Joint 12 160.6 lbs. Joint 13 142.8 lbs. Joint 14 147.6 lbs. Joint 15 146.6 lbs.

ITEMS

QTY	ITEM TYPE	SIZE	LENGTH FT-IN-16	PART NUMBER	NOTES
6	Hangers, USP	HUS 410			SIMPSON (HUS410)
2	LVL Beams (Sized)	LVL, 1-3/4" x 11-7/8" (S)	22-00-00		GDH
3	LVL Beams (Sized)	LVL, 1-3/4" x 16" (S)	22-00-00		BM2
2	LVL Beams (Sized)	LVL, 1-3/4" x 16" (S)	07-00-00		BM1
1	Hangers, USP	MSH422			SIMPSON (THA422)



Truss Placement Plan
SCALE: 1/4" = 1'

Hatch Legend
Tray Ceiling
Padded HVAC
Second Floor Walls
Chase

Connector Information					Nail Information	
Sym	Product	Manuf	Qty	Supported Member	Header	Truss
	HUS26	USP	13	Varies	16d/3-1/2"	16d/3-1/2"
	JUS26	USP	10	Varies	10d/3"	10d/3"
	THD26-2	USP	1	Varies	16d/3-1/2"	10d/3"

▲ = Indicates Left End of Truss
(Reference Engineered Truss Drawing)
Do Not Erect Trusses Backwards

Dimension Notes
1. All exterior wall to wall dimensions are to face of sheathing unless noted otherwise
2. All interior wall dimensions are to face of frame wall unless noted otherwise
3. All exterior wall to truss dimensions are to face of frame wall unless noted otherwise

All Walls Shown Are Considered Load Bearing

COMTECH
ROOF & FLOOR TRUSSES & BEAMS
Reilly Road Industrial Park
Fayetteville, N.C. 28309
Phone: (910) 864-8787
Fax: (910) 864-4444

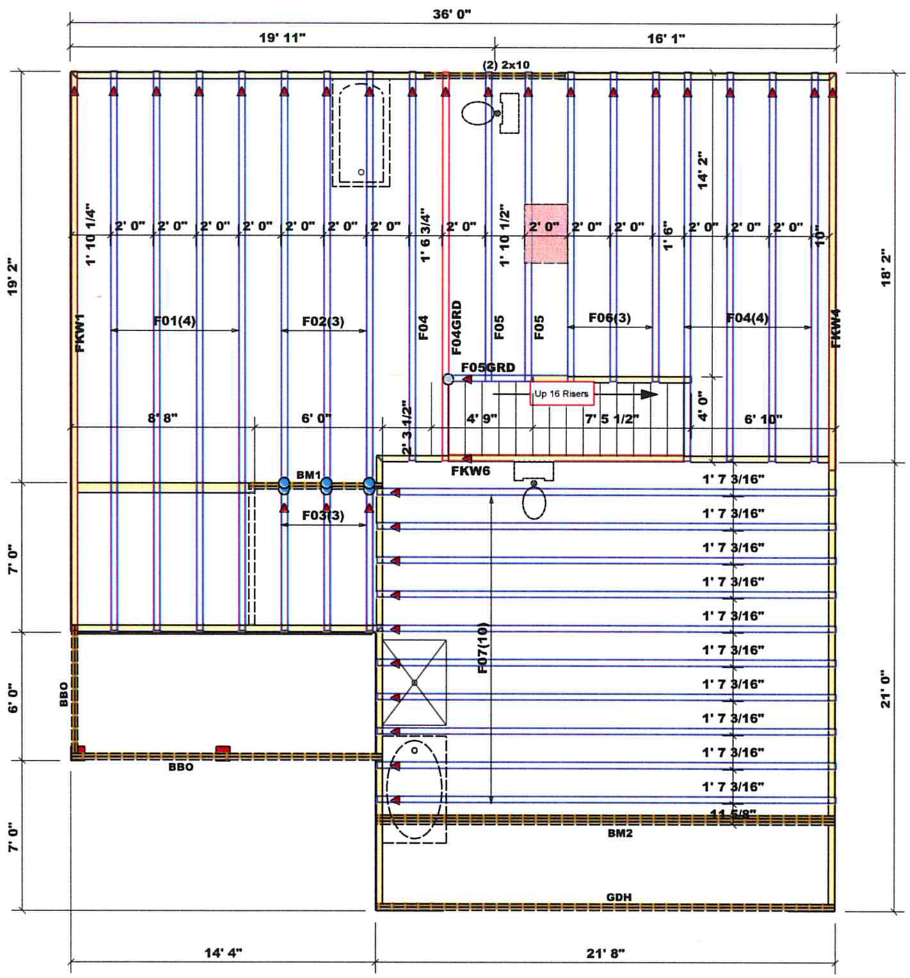
Bearing reactions less than or equal to 3000# are deemed to comply with the prescriptive Code requirements. The contractor shall refer to the attached Tables (derived from the prescriptive Code requirements) to determine the minimum foundation size and number of wood studs required to support reactions greater than 3000# but not greater than 15000#. A registered design professional shall be retained to design the support system for any reaction that exceeds those specified in the attached Tables. A registered design professional shall be retained to design the support system for all reactions that exceed 15000#.

Signature_____
Anthony Williams

LOAD CHART FOR JACK STUDS
(BASED ON TABLES R502.5(1) & (2))
NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADER/GIRDER

END REACTION (LB TOT)	REQ'D STUDS FOR (2) 2"x7" HEADER	END REACTION (LB TOT)	REQ'D STUDS FOR (3) 2"x7" HEADER	END REACTION (LB TOT)	REQ'D STUDS FOR (4) 2"x7" HEADER
1700	1	2550	1	3400	1
3400	2	5100	2	6800	2
5100	3	7650	3	10200	3
6800	4	10200	4	13600	4
8500	5	12750	5	17000	5
10200	6	15300	6		
11900	7				
13600	8				
15300	9				

BUILDER	Ben Strout Real Estate
JOB NAME	Lot 13 Blackberry Manor
PLAN	Northbrook
SEAL DATE	Seal Date
QUOTE #	Quote #
JOB #	J0320-1191
COUNTY	Harnett County
ADDRESS	Lot 13 Blackberry Manor
MODEL	Roof
DATE REV.	03/16/2020
DRAWN BY	Hampton Horrocks
SALESMAN	Marshall Naylor



Hatch Legend	
	Tray Ceiling
	Padded HVAC
	Second Floor Walls
	Chase

Products

PlotID	Length	Product	Plies	Net Qty
GDH	22' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2
BM2	22' 0"	1-3/4"x 16" LVL Kerto-S	3	3
BM1	7' 0"	1-3/4"x 16" LVL Kerto-S	2	2

Connector Information					Nail Information	
Sym	Product	Manuf	Qty	Supported Member	Header	Truss
(blue)	HUS410	USP	6	Varies	16d/3-1/2"	16d/3-1/2"
(grey)	MSH422	USP	1	Varies	10d/3"	10d/3"

▲ = Indicates Left End of Truss
(Reference Engineered Truss Drawing)
Do Not Erect Trusses Backwards

Dimension Notes

1. All exterior wall to wall dimensions are to face of sheathing unless noted otherwise
2. All interior wall dimensions are to face of frame wall unless noted otherwise
3. All exterior wall to truss dimensions are to face of frame wall unless noted otherwise

All Walls Shown Are Considered Load Bearing

Truss Placement Plan
SCALE: 1/4" = 1'

COMTECH
ROOF & FLOOR TRUSSES & BEAMS
Reilly Road Industrial Park
Fayetteville, N.C. 28309
Phone: (910) 864-8787
Fax: (910) 864-4444

Bearing reactions less than or equal to 3000# are deemed to comply with the prescriptive Code requirements. The contractor shall refer to the attached Tables (derived from the prescriptive Code requirements) to determine the minimum foundation size and number of wood studs required to support reactions greater than 3000# but not greater than 15000#. A registered design professional shall be retained to design the support system for any reaction that exceeds those specified in the attached Tables. A registered design professional shall be retained to design the support system for all reactions that exceed 15000#.

Signature____________
Anthony Williams

LOAD CHART FOR JACK STUDS
(BASED ON TABLES R502.5(1) & (b))
NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADER/GIRDER

END REACTION (UP TO)	REQ'D STUDS FOR (2) PLY HEADER	END REACTION (UP TO)	REQ'D STUDS FOR (3) PLY HEADER	END REACTION (UP TO)	REQ'D STUDS FOR (4) PLY HEADER
1700	1	2550	1	3400	1
3400	2	5100	2	6800	2
5100	3	7650	3	10200	3
6800	4	10200	4	13600	4
8500	5	12750	5	17000	5
10200	6	15300	6		
11900	7				
13600	8				
15300	9				

BUILDER	Ben Stout Real Estate	COUNTY	Harnett
JOB NAME	Lot 13 Blackberry Manor	ADDRESS	Lot 13 Blackberry Manor
PLAN	Northbrook	MODEL	Floor
SEAL DATE	Seal Date	DATE REV.	03/16/2020
QUOTE #	Quote #	DRAWN BY	Hampton Horrocks
JOB #	J0320-1192	SALESMAN	Marshall Naylor

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual building 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 system and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding bracing, consult BCSI-B1 and BCSI-B3 provided with the truss delivery package or online @ sbcindustry.com