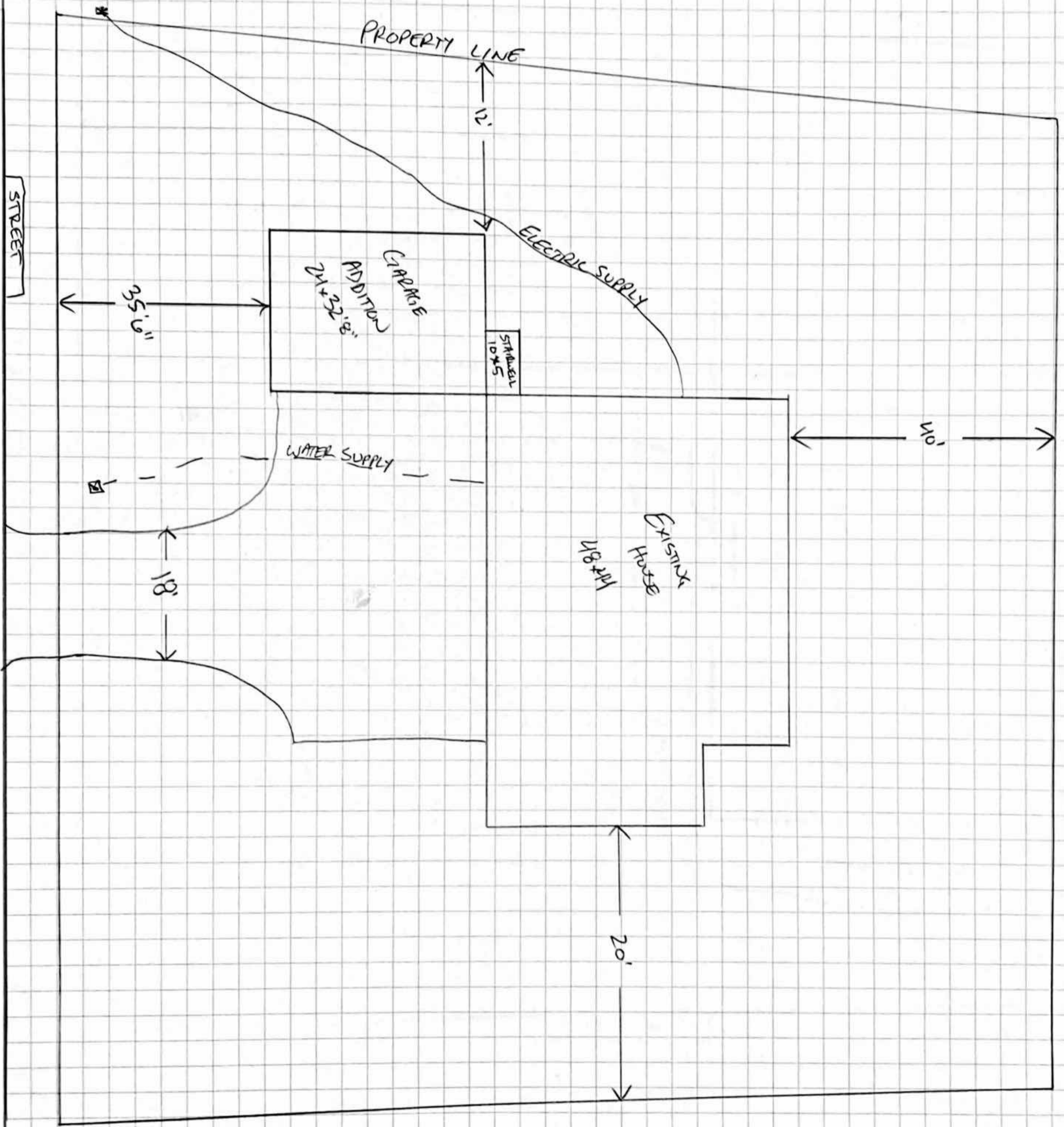
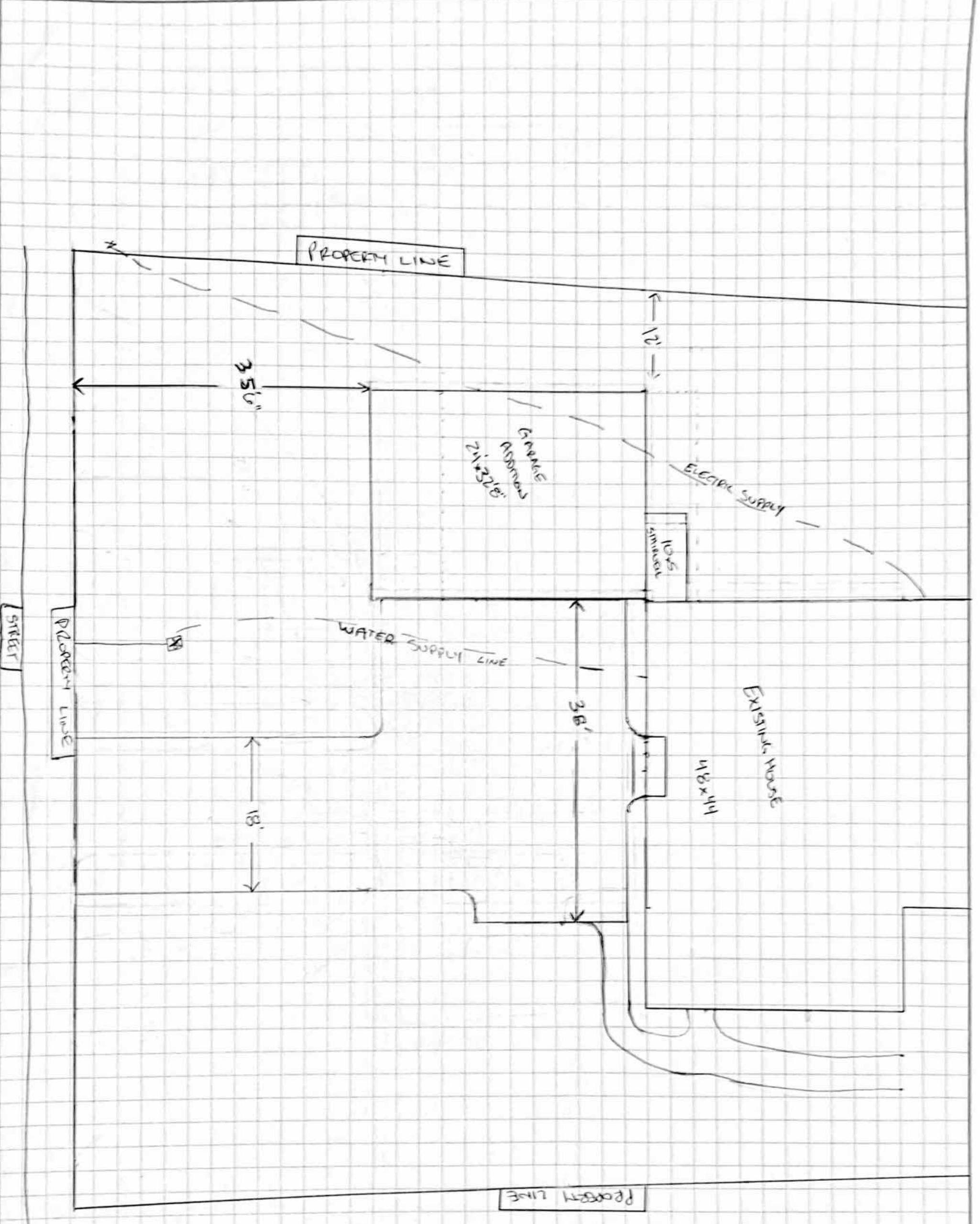




See footing note

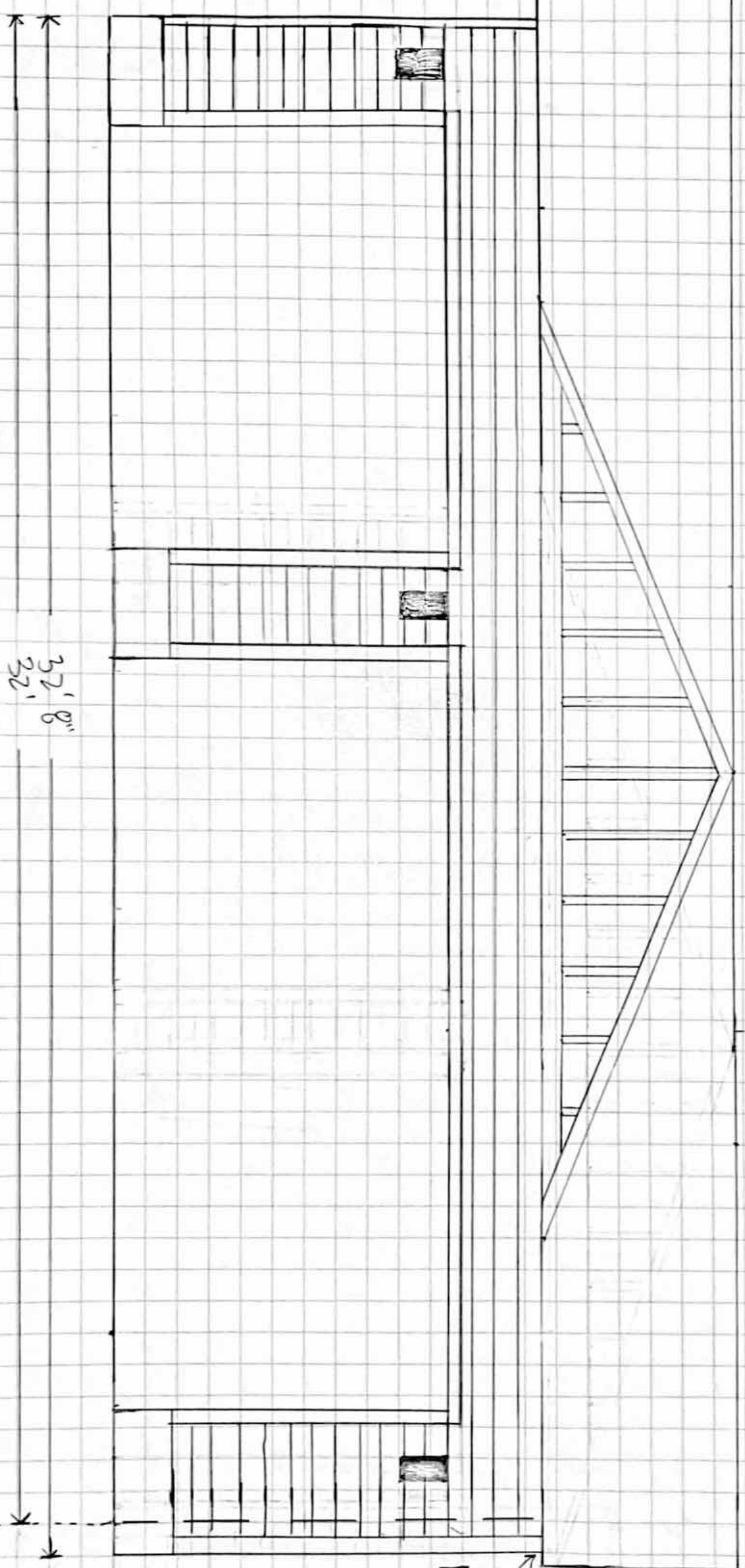


SITE MAP  
SCALE: NOT TO SCALE  
BY: BOB BOWEL  
5 MAR 2022



SITE MAP (EMERGENCY)  
 SCALE: 3/32" = 1'  
 BY: ERIC BOMER  
 5 MAR 2022

$B_1$   
 $B_2$   
 $T_1$

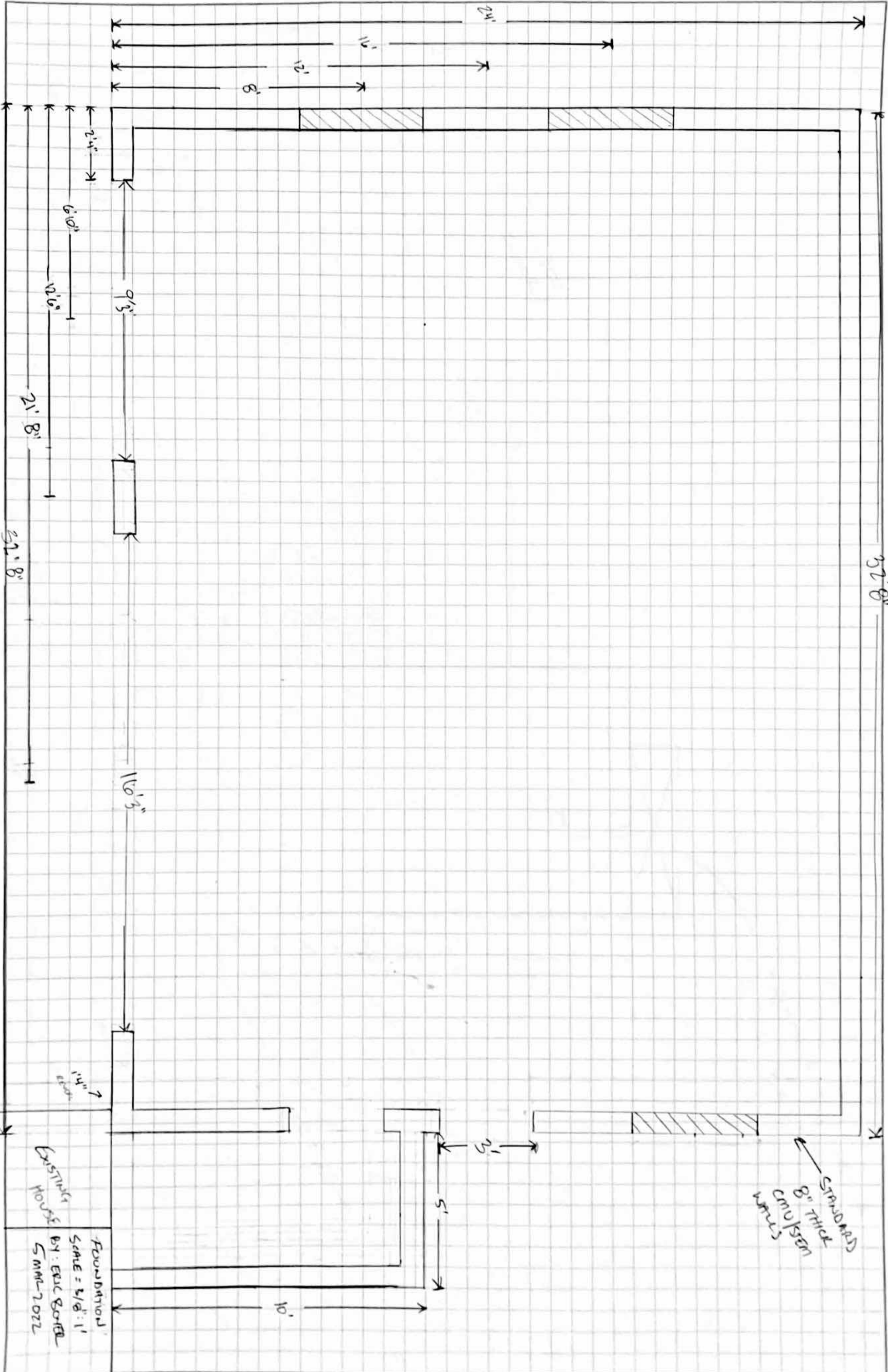


32' 8"  
 32'

EXISTING HOUSE

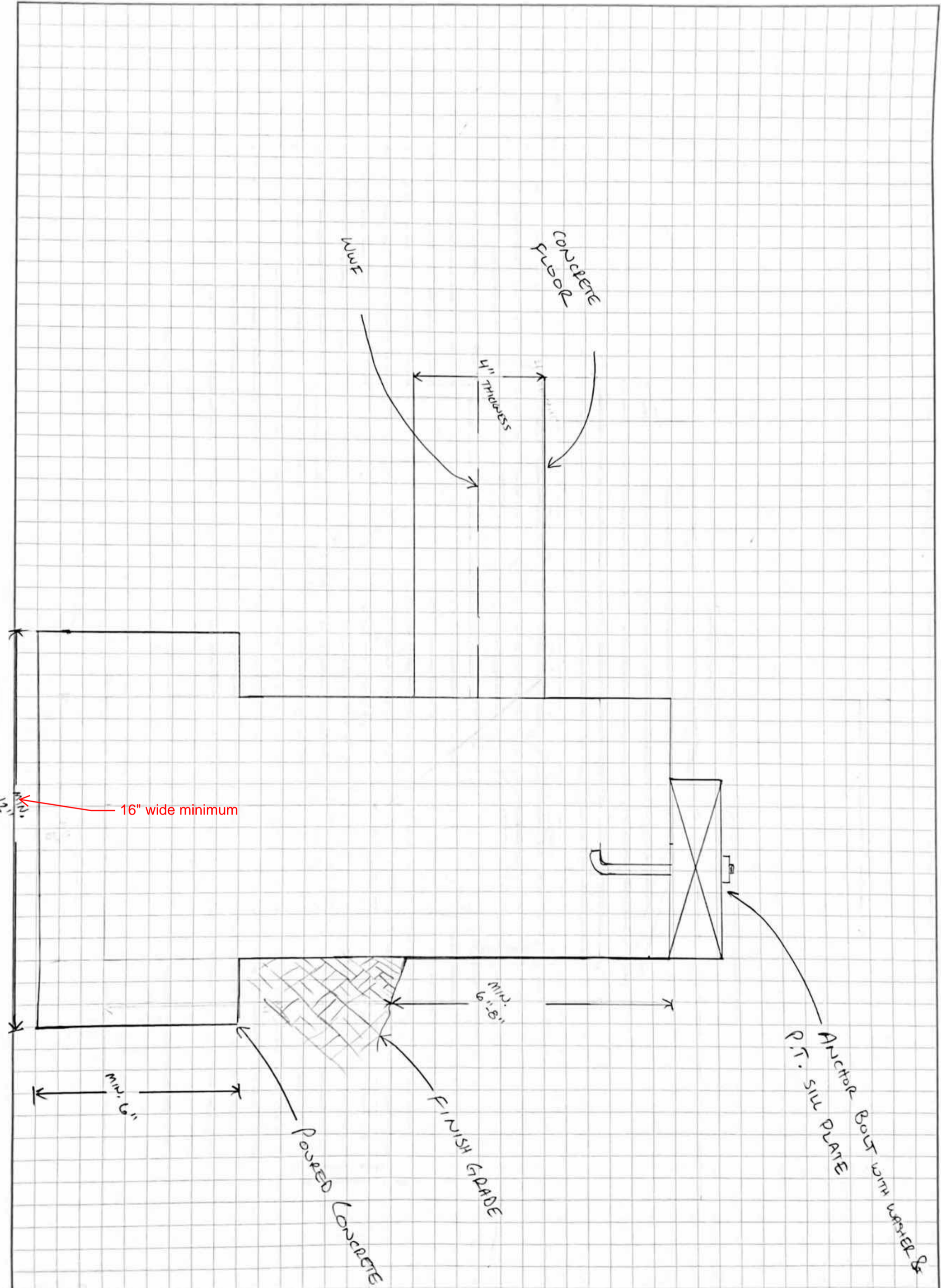
DOUBLE TOP PLATE  
 2x4 FRAMING  
 16" O.C.

FRONT ELEVATION  
 SCALE = 3/8" = 1'  
 BS: EPIC ROSTER  
 5 MAR 2022

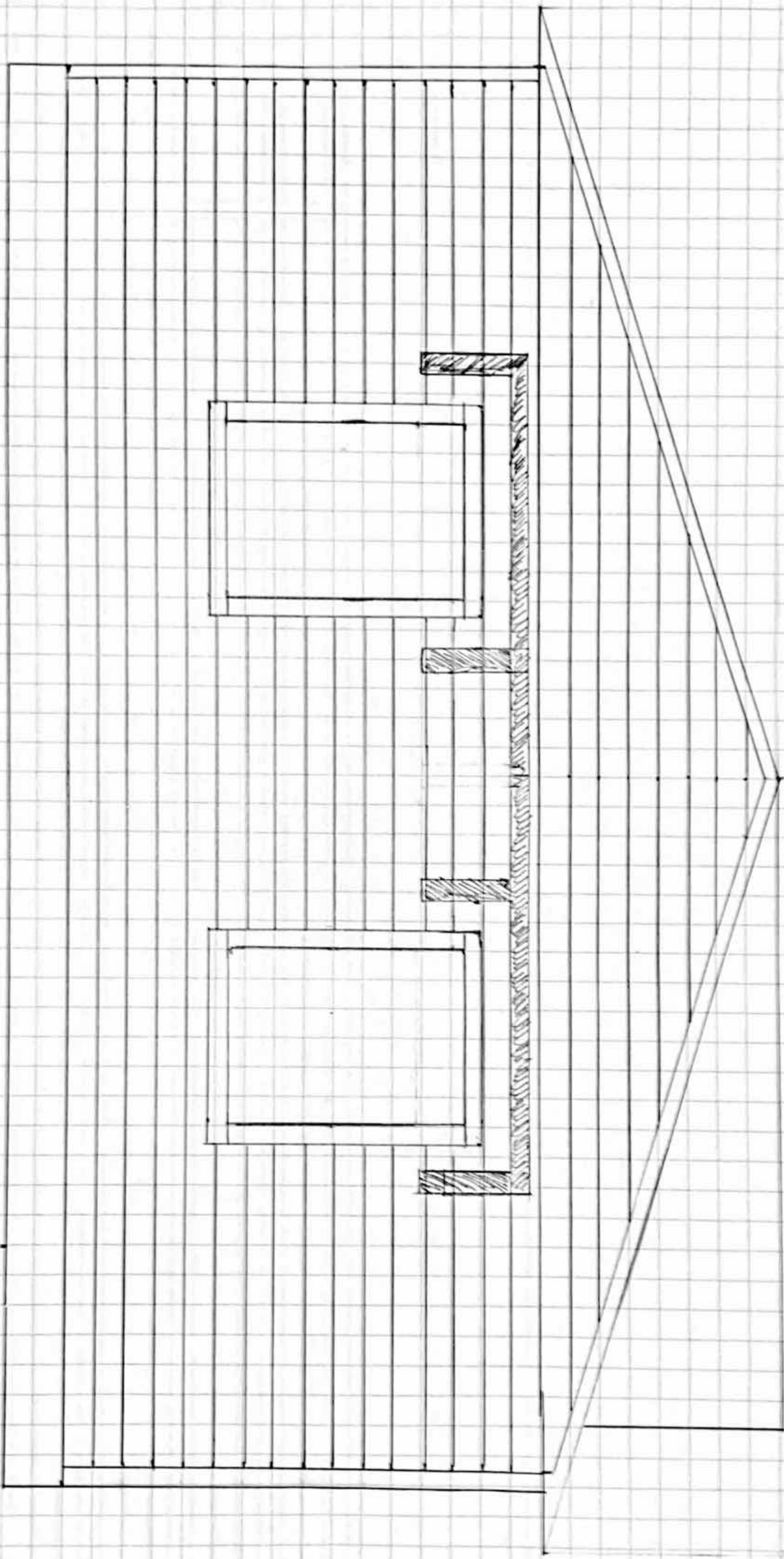


EXISTING HOUSE  
 FOUNDATION  
 SCALE = 1/8" = 1'  
 BY: EUC BOPBA  
 5/11/2022

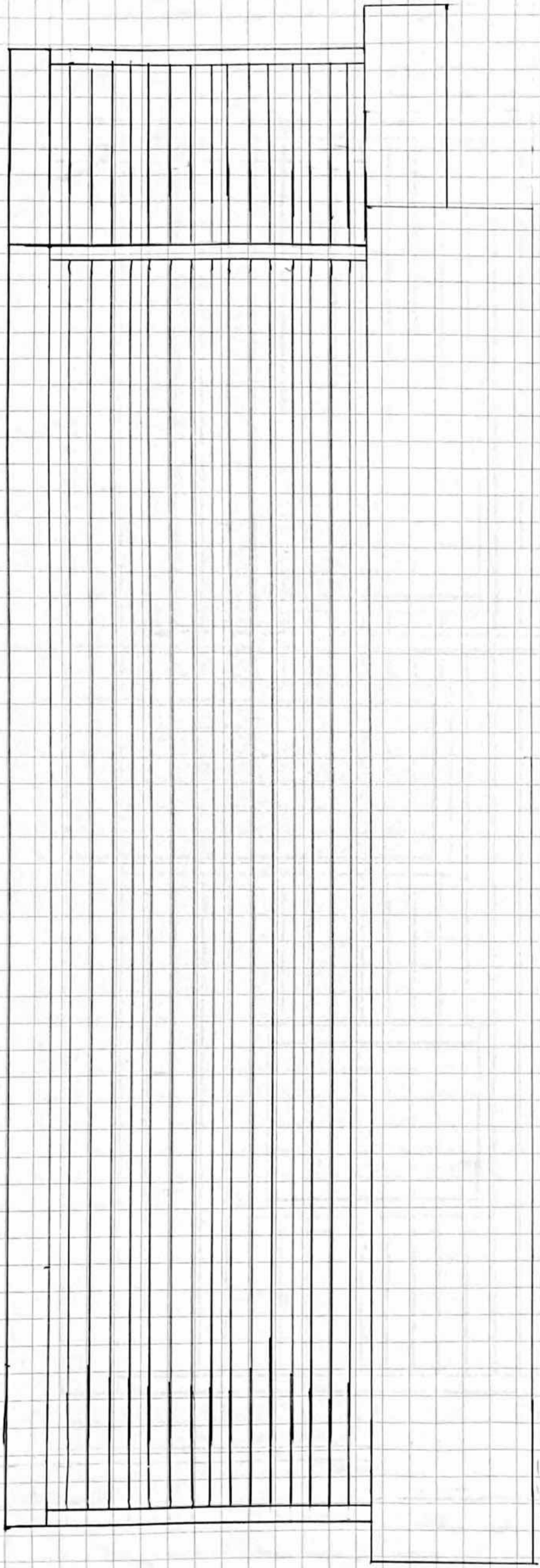
STANDARD  
 8" THICK  
 CMU/STEM  
 WALLS



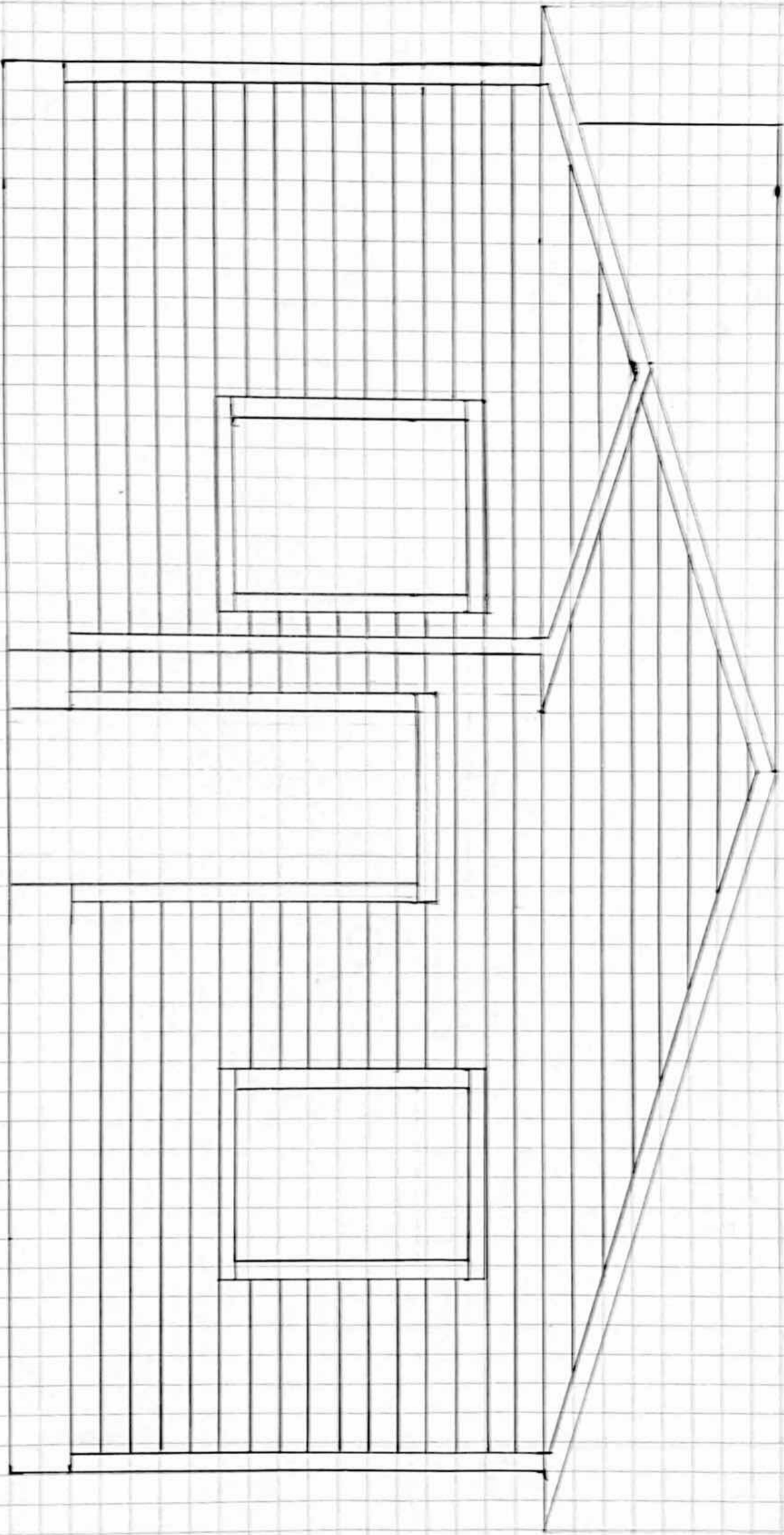
Foundations  
 Scale: 3/8" = 1'  
 BT: ERIC BORER  
 5 MAR 2022



LEFT ELEVATION  
SCALE: 1/2" = 1'  
BY: BOB BORD  
5 MAR 2022

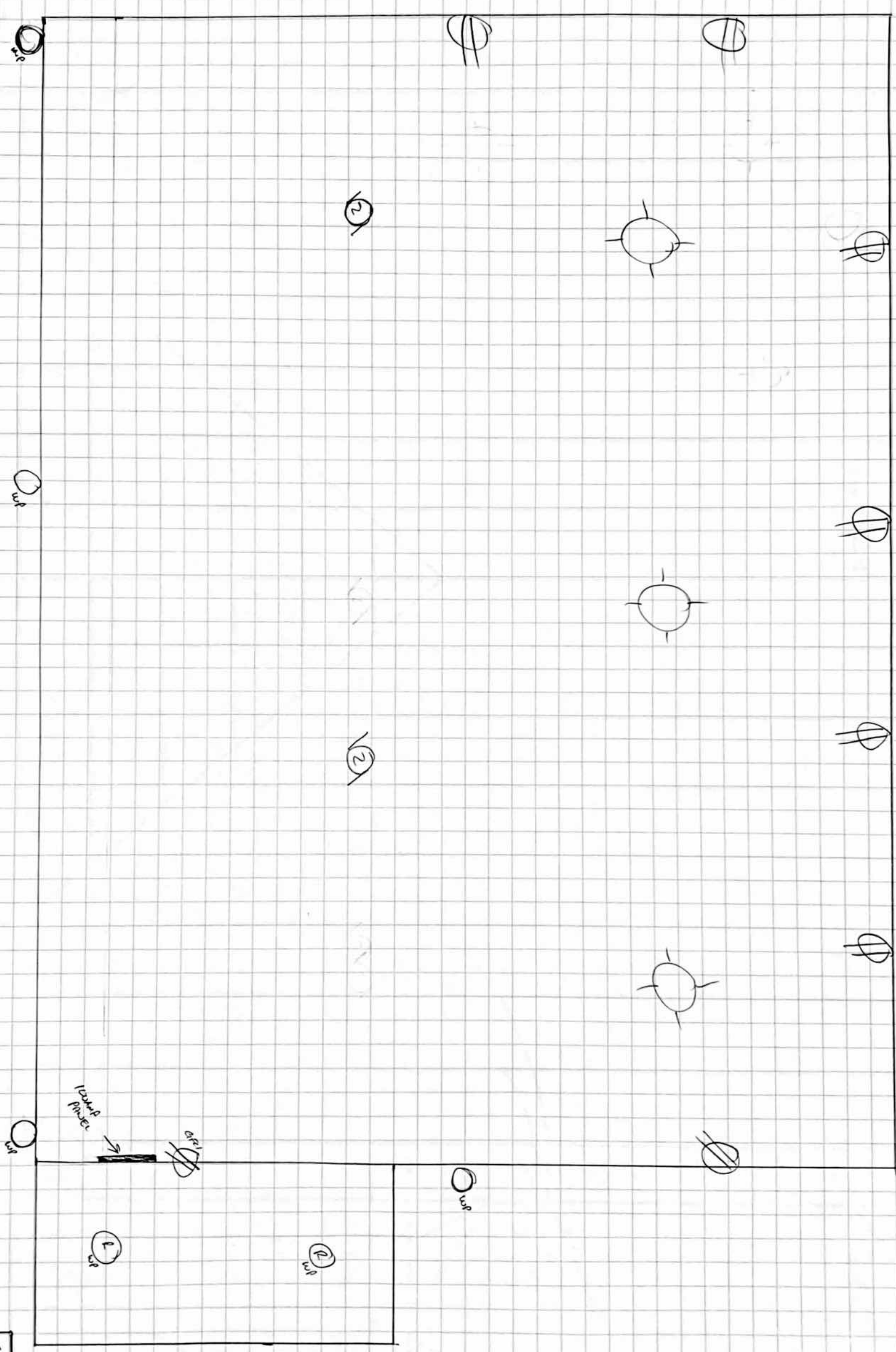


GENE EUGENIAD  
SCALE 3/8" : 1'  
BY ERIC ROYER  
5 MAR 2012

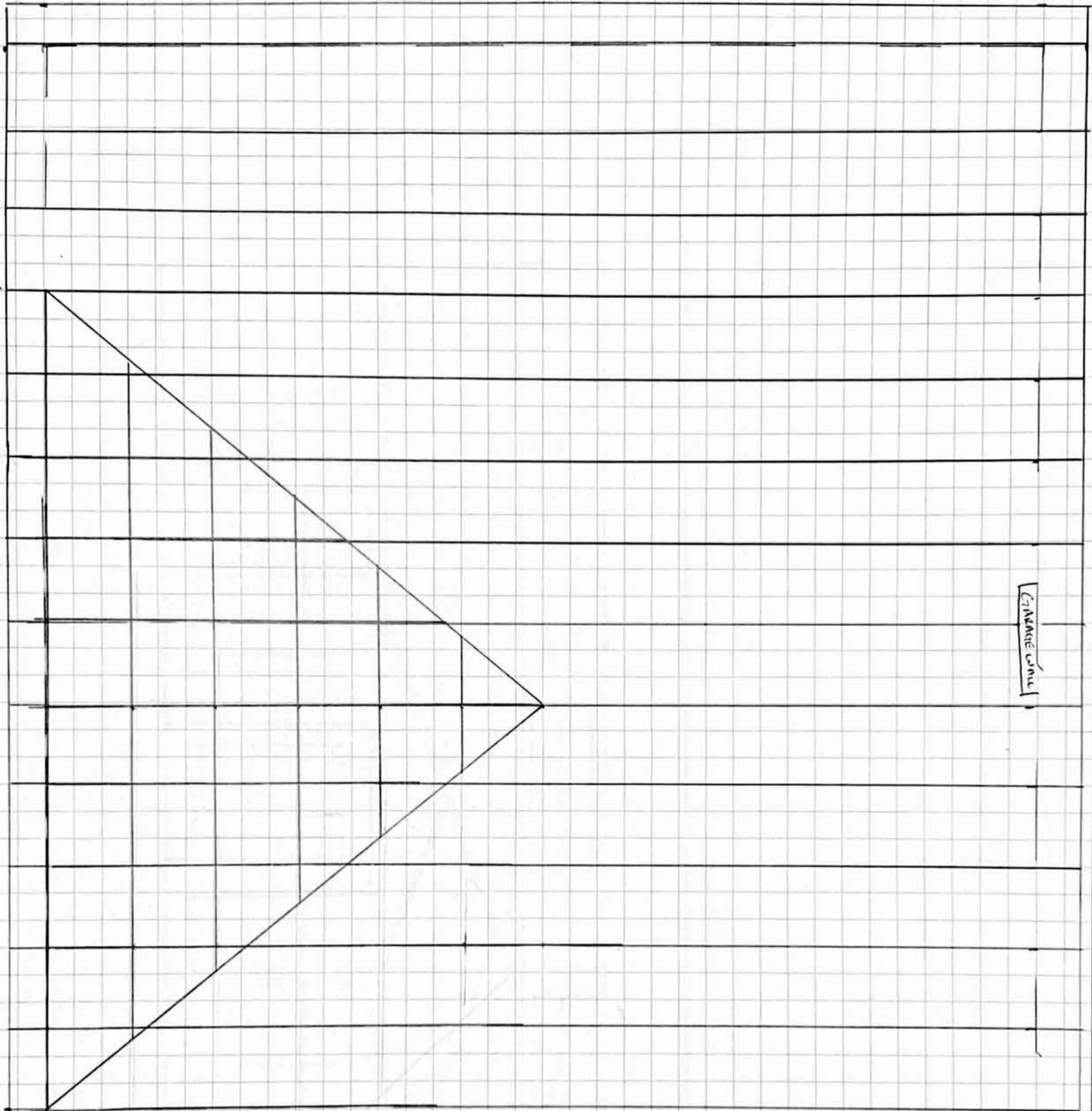


RIGHT ELEVATION  
SCALE = 1/2" = 1'  
BY EOL BOWEN  
5 MAR 2022





ELECTRICAL  
 SCALE: 3/16" = 1'  
 BY: ERIC BOMER  
 5 MARCH 2012



CHANGE UNIT

EXISTING  
TRUSSES

MANUFACTURED  
TRUSSES  
2" O.C.

12"  
OVERHANG

12"  
OVERHANG

DATE: 11/1/22  
SCALE: 3/8" = 1'  
BY: CDR/ROBERT  
5 MAR 2022

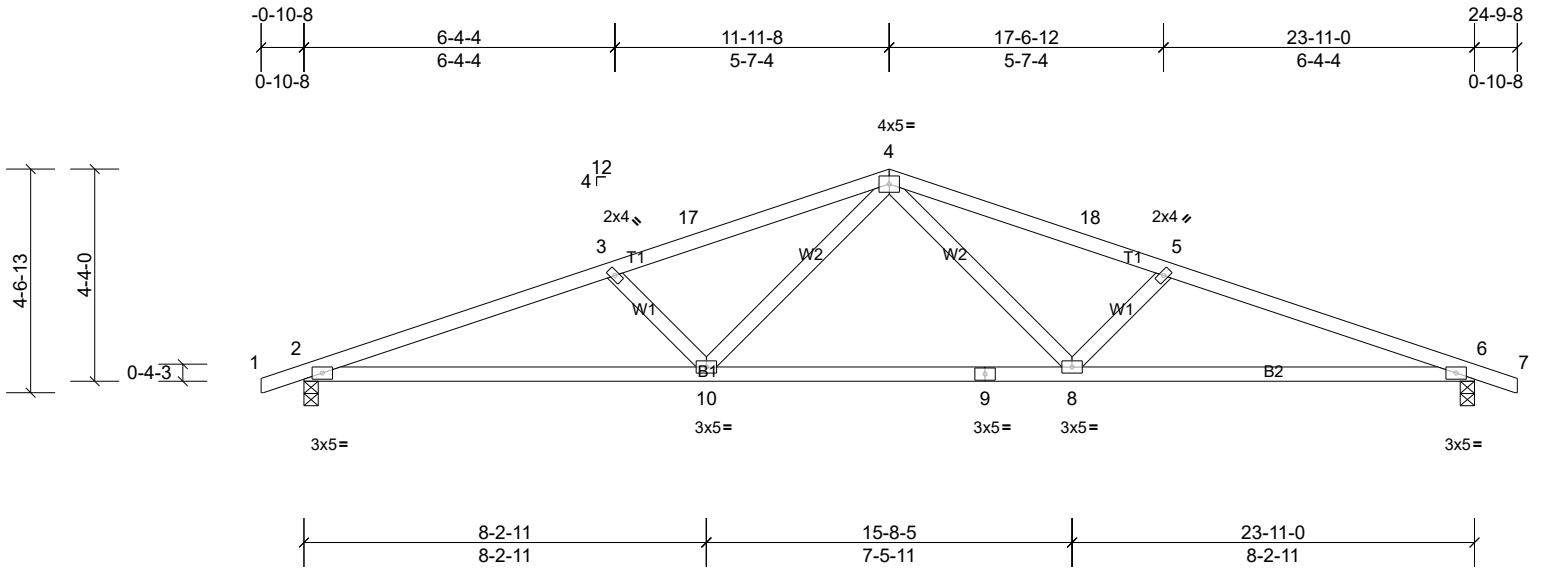
Job Boyer	Truss A	Truss Type Common	Qty 16	Ply 1	Job Reference (optional)
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Carter Components - Sanford, Sanford, NC, user

Run: 8.5 S 0 Jan 6 2022 Print: 8.500 S Jan 6 2022 MiTek Industries, Inc. Mon Apr 11 07:40:33

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ID: vE4eHsSmhBQCgcucuoJLoNzRt5b-wgpUOAlIfChV6i50LRZDVedlg2YMKoZt42NIBWzRt3C



Scale = 1:47.1

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	0.47	Vert(LL)	-0.11	10-13	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.27	10-13	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.07	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 100 lb	FT = 20%

**LUMBER**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.2 \*Except\* W1:2x4 SP No.3

**BRACING**

TOP CHORD  
 BOT CHORD

Structural wood sheathing directly applied or 3-4-6 oc purlins.  
 Rigid ceiling directly applied or 8-5-13 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS** (lb/size) 2=850/0-3-8, (min. 0-1-8), 6=850/0-3-8, (min. 0-1-8)

Max Horiz 2=42 (LC 15)  
 Max Uplift 2=-36 (LC 11), 6=-36 (LC 12)  
 Max Grav 2=1008 (LC 2), 6=1008 (LC 2)

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

TOP CHORD 2-3=-2279/572, 3-17=-2015/481, 4-17=-1955/500, 4-18=-1955/500, 5-18=-2015/481, 5-6=-2279/572  
 BOT CHORD 2-10=-471/2134, 9-10=-252/1423, 8-9=-252/1423, 6-8=-474/2134  
 WEBS 4-8=-103/652, 5-8=-422/224, 4-10=-103/652, 3-10=-422/224

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; 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 (2) 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
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- 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.
- \* 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.
- One RT7A MiTek 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.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

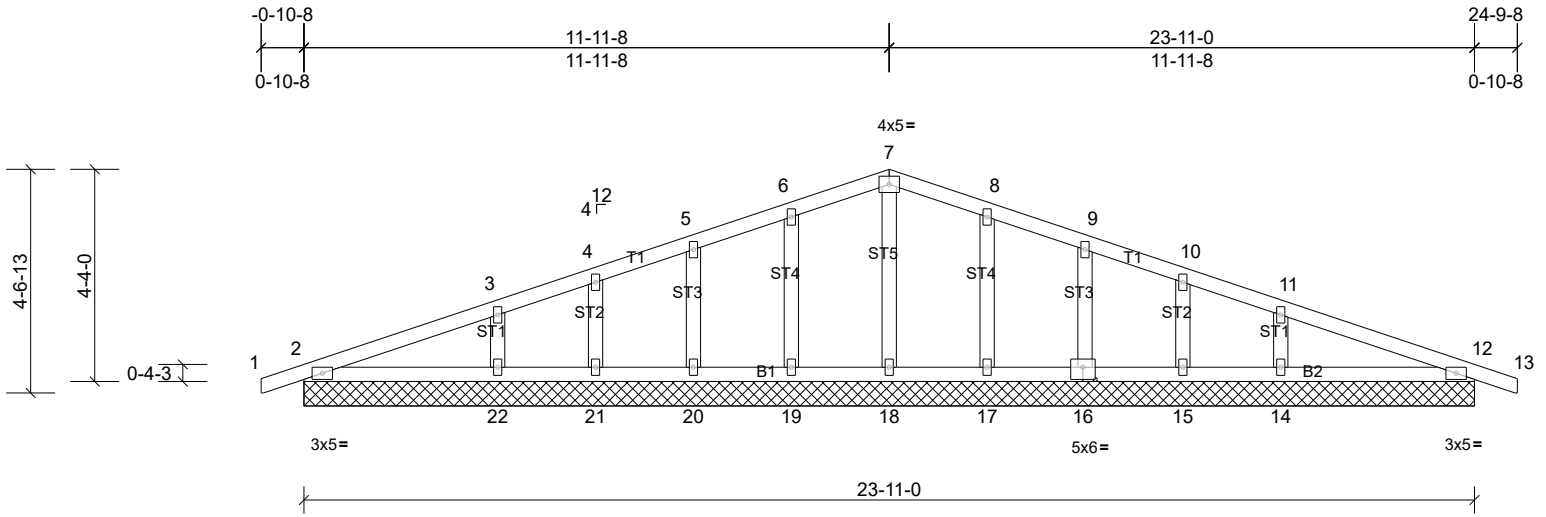
Job Boyer	Truss AE	Truss Type Common Supported Gable	Qty 2	Ply 1	Job Reference (optional)
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Carter Components - Sanford, Sanford, NC, user

Run: 8.5 S 0 Jan 6 2022 Print: 8.500 S Jan 6 2022 MiTek Industries, Inc. Mon Apr 11 07:40:34

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ID:Ca?HIFX92LIDbGxyonx\_aszRT5U-OsNsbWJNQVpMksgCv84S1s9XfR2v3Hf0i7RjyzRT3B



Scale = 1:47.1

Plate Offsets (X, Y): [16:0-3-0,0-3-0]

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	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	12	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 107 lb	FT = 20%

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

**BRACING**  
 TOP CHORD  
 BOT CHORD

Structural wood sheathing directly applied or 6'-0-0 oc purlins.  
 Rigid ceiling directly applied or 10'-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS** All bearings 23-11-0.  
 (lb) - Max Horiz 2=42 (LC 15), 23=42 (LC 15)  
 Max Uplift All uplift 100 (lb) or less at joint(s) 2, 12, 14, 15, 16, 17, 19, 20, 21, 22, 23, 27  
 Max Grav All reactions 250 (lb) or less at joint(s) 2, 12, 15, 16, 17, 18, 19, 20, 21, 23, 27 except 14=311 (LC 34), 22=311 (LC 33)

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

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; 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 (2) 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
  - 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.
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - 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.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - \* 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.
  - One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 19, 20, 21, 22, 17, 16, 15, 14, and 12. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

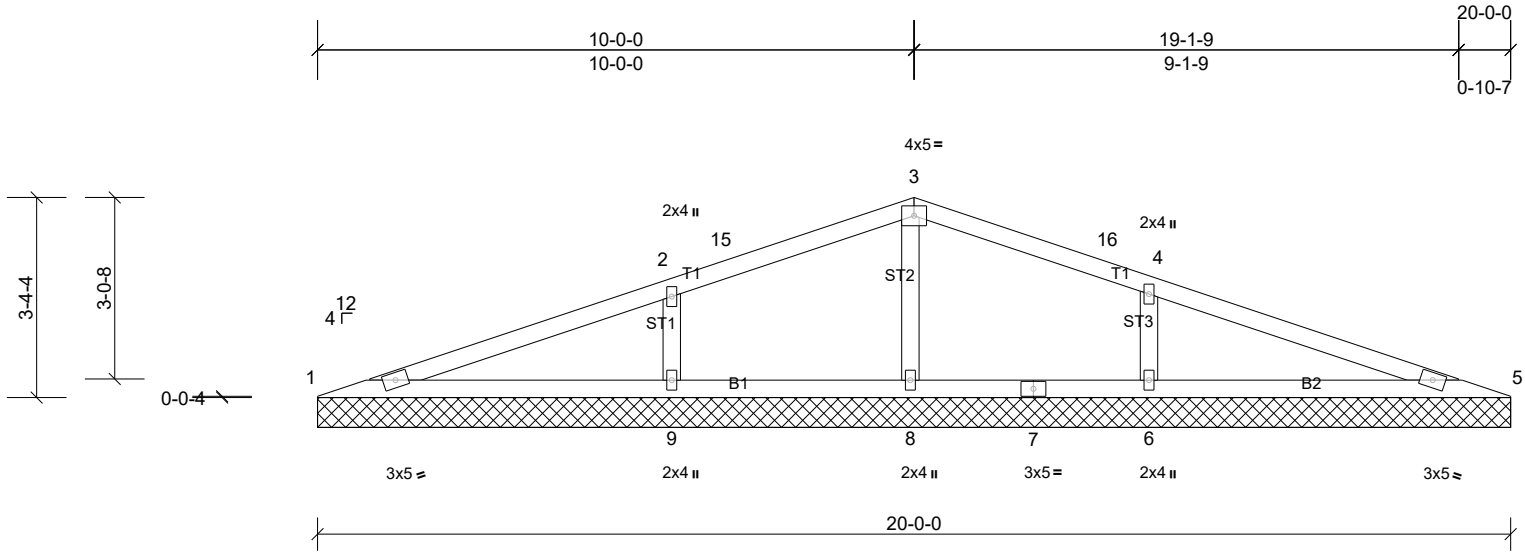
Job Boyer	Truss V	Truss Type Valley	Qty 1	Ply 1	Job Reference (optional)
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Carter Components - Sanford, Sanford, NC, user

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ID:VvwxDedYOVBDxLzllZdMKzRt5N-OsNsbWJNQVpMksgCv84S1s9RYR0J3Fu0Ii7RjyzRt3B



Scale = 1:38.6

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.53	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.27	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horiz(TL)	-0.02	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 67 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** All bearings 20-0-0.  
 (lb) - Max Horiz 1=31 (LC 15)  
 Max Uplift All uplift 100 (lb) or less at joint(s) 1, 5, 6, 9, 14  
 Max Grav All reactions 250 (lb) or less at joint(s) 1, 5, 14 except 6=474 (LC 33), 8=642 (LC 2), 9=464 (LC 32)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-163/758, 2-15=-96/688, 3-15=-87/737, 3-16=-82/720, 4-16=-91/654, 4-5=-160/748  
 BOT CHORD 1-9=-672/192, 8-9=-672/192, 7-8=-659/188, 6-7=-659/188, 5-6=-659/188  
 WEBS 3-8=-612/149, 2-9=-319/165, 4-6=-326/170

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; 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 (2) 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
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - Gable requires continuous bottom chord bearing.
  - \* 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1.
  - One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9 and 6. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

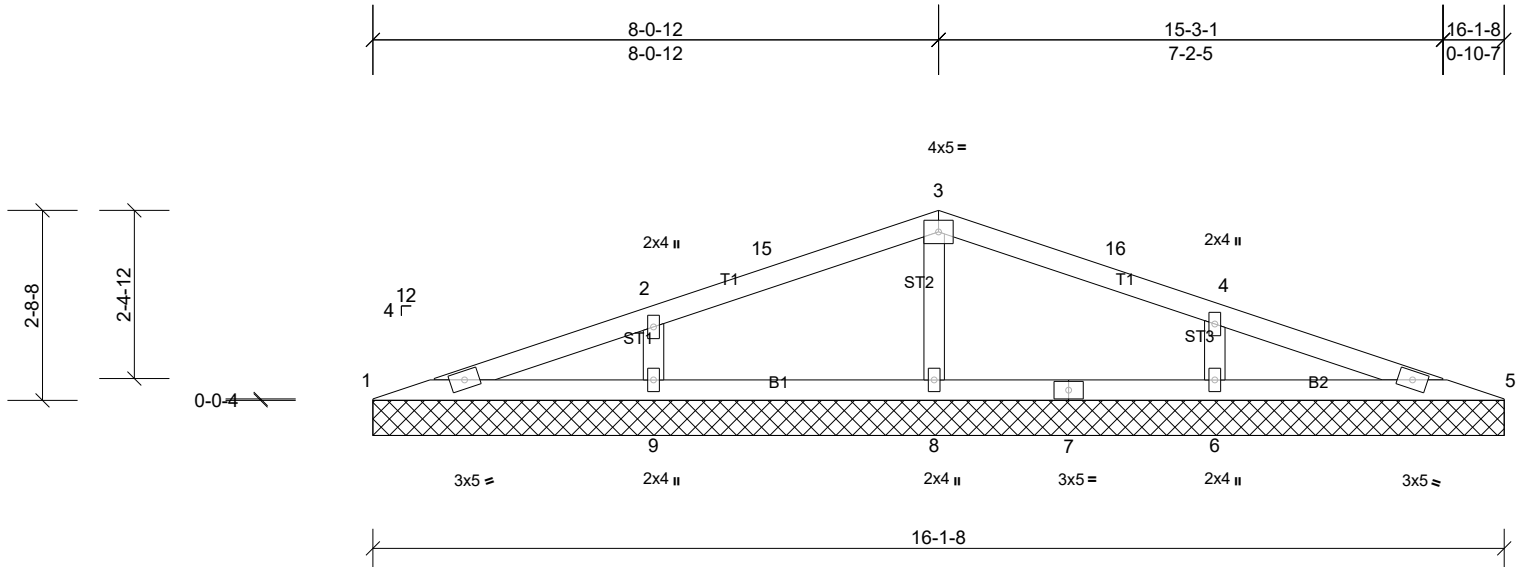
Job Boyer	Truss VA	Truss Type Valley	Qty 1	Ply 1	Job Reference (optional)
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Scale = 1:32.8

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	0.37	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	-0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 52 lb	FT = 20%

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

**BRACING**  
TOP CHORD  
BOT CHORD

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

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS** All bearings 16-1-8.  
(lb) - Max Horiz 1=25 (LC 15)  
Max Uplift All uplift 100 (lb) or less at joint(s) 1, 5, 6, 9, 14  
Max Grav All reactions 250 (lb) or less at joint(s) 1 except 6=391 (LC 33),  
8=557 (LC 2), 9=360 (LC 32)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-112/500, 2-15=-58/453, 3-15=-50/499, 3-16=-44/481, 4-16=-53/414, 4-5=-107/490  
BOT CHORD 1-9=-440/132, 8-9=-440/132, 7-8=-427/128, 6-7=-427/128, 5-6=-427/128  
WEBS 3-8=-496/145, 2-9=-263/144, 4-6=-273/146

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; 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 (2) 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
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - Gable requires continuous bottom chord bearing.
  - \* 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5, 5.
  - One RT7A MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9 and 6. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

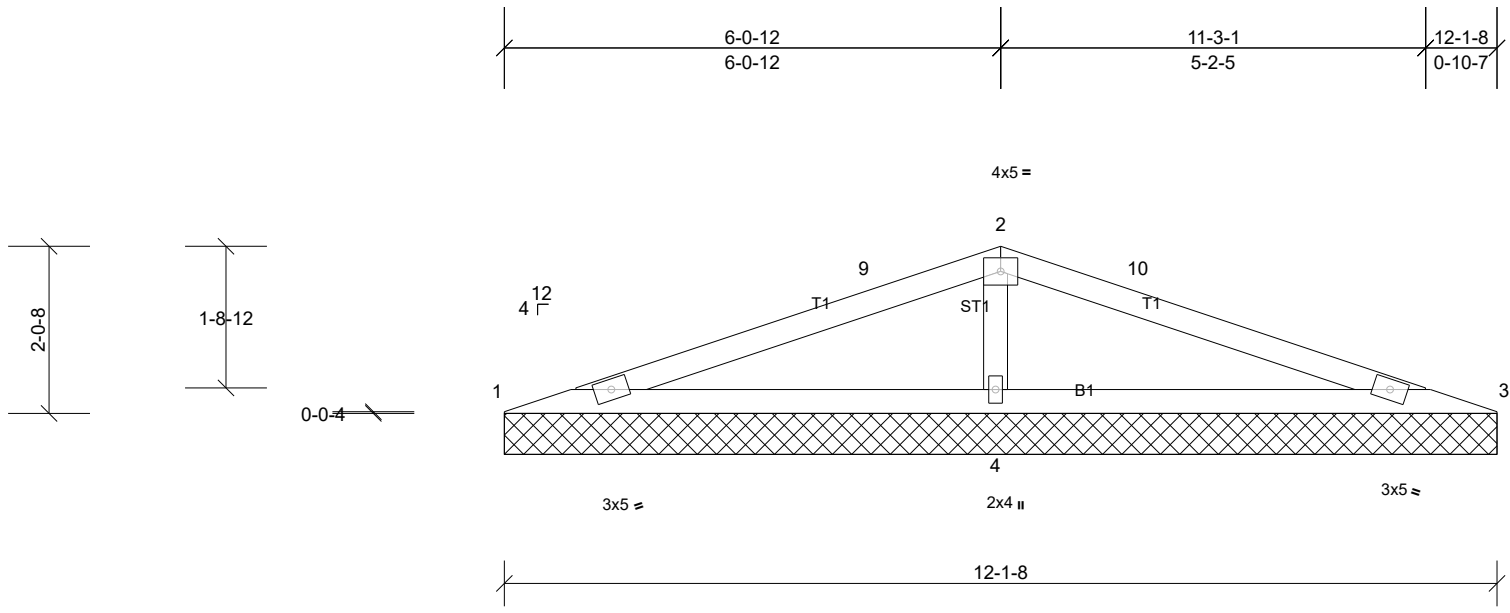
Job Boyer	Truss VB	Truss Type Valley	Qty 1	Ply 1	Job Reference (optional)
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Carter Components - Sanford, Sanford, NC, user

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Scale = 1:28.1

Loading	(psf)	Spacing	2-0-0	CSI	0.40	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.40	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.39	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 36 lb	FT = 20%

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

**BRACING**  
TOP CHORD  
BOT CHORD

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

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS** (lb/size) 1=58/12-1-8, (min. 0-1-8), 3=65/12-1-8, (min. 0-1-8),  
4=698/12-1-8, (min. 0-1-8)  
Max Horiz 1=19 (LC 15)  
Max Uplift 1=-9 (LC 33), 3=-12 (LC 16)  
Max Grav 1=112 (LC 32), 3=119 (LC 33), 4=825 (LC 2)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-9=-168/488, 2-9=-146/537, 2-10=-136/514, 3-10=-147/465  
BOT CHORD 1-4=-463/194, 3-4=-441/185  
WEBS 2-4=-614/255

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; 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 (2) 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
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.
- \* 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 9 lb uplift at joint 1 and 12 lb uplift at joint 3.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

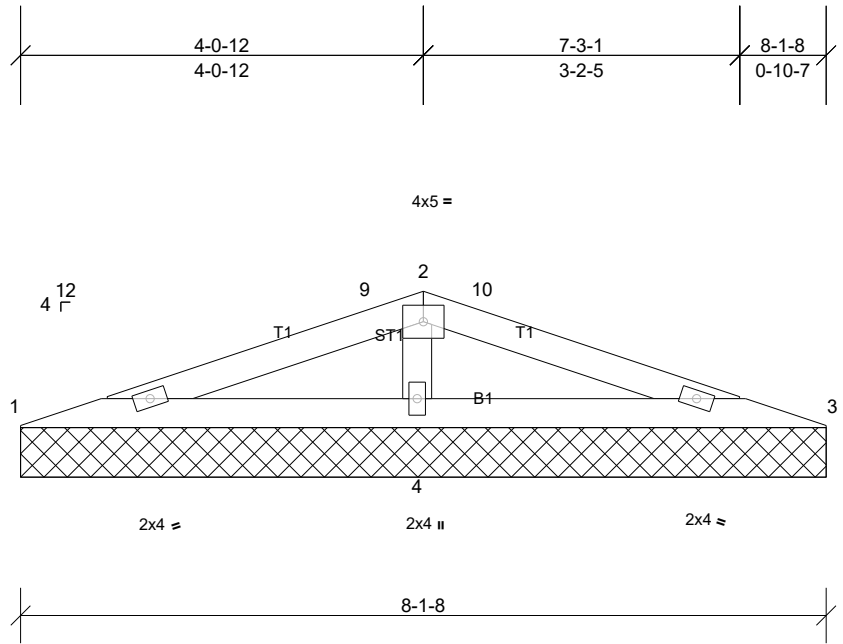
Job Boyer	Truss VC	Truss Type Valley	Qty 1	Ply 1	Job Reference (optional)
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Carter Components - Sanford, Sanford, NC, user

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Scale = 1:23.2

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	0.17	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.20	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 23 lb	FT = 20%

**LUMBER**

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

**BRACING**

TOP CHORD  
 BOT CHORD

Structural wood sheathing directly applied or 8-1-8 oc purlins.  
 Rigid ceiling directly applied or 6-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS** (lb/size) 1=63/8-1-8, (min. 0-1-8), 3=70/8-1-8, (min. 0-1-8), 4=417/8-1-8, (min. 0-1-8)  
 Max Horiz 1=12 (LC 15)  
 Max Uplift 1=-6 (LC 15), 3=-8 (LC 16)  
 Max Grav 1=97 (LC 32), 3=103 (LC 33), 4=493 (LC 2)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-9=-131/266, 2-9=-87/285, 2-10=-79/267  
 BOT CHORD 1-4=-252/130  
 WEBS 2-4=-313/145

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; 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 (2) 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
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.
- \* 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 6 lb uplift at joint 1 and 8 lb uplift at joint 3.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



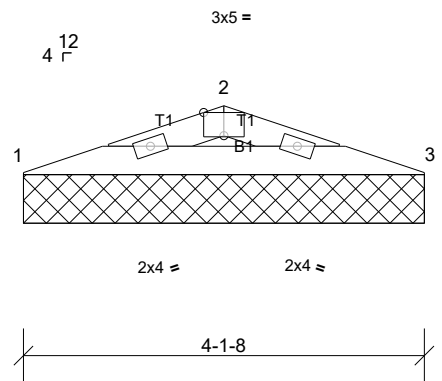
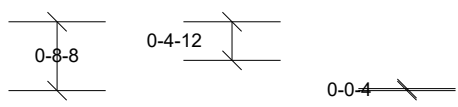
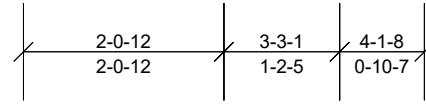
Job Boyer	Truss VD	Truss Type Valley	Qty 1	Ply 1	Job Reference (optional)
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Carter Components - Sanford, Sanford, NC, user

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Scale = 1:23.7

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	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.16	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	IRC2015/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  
 BOT CHORD

Structural wood sheathing directly applied or 4-1-8 oc purlins.  
 Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 1=140/4-1-8, (min. 0-1-8), 3=140/4-1-8, (min. 0-1-8)  
 Max Horiz 1=-5 (LC 20)  
 Max Uplift 1=-2 (LC 11), 3=-2 (LC 12)  
 Max Grav 1=165 (LC 2), 3=165 (LC 2)

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-357/151, 2-3=-346/150  
 BOT CHORD 1-3=-131/358

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) 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
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10; Min. flat roof snow load governs.
  - Unbalanced snow loads have been considered for this design.
  - Gable requires continuous bottom chord bearing.
  - \* 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2 lb uplift at joint 1 and 2 lb uplift at joint 3.
  - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



Customer:  
Job Name:  
City:  
Customer P...

Job Name: **Boyer**  
Level: **1st Floor**  
Label: **GDH - i11**  
Type: **Beam**

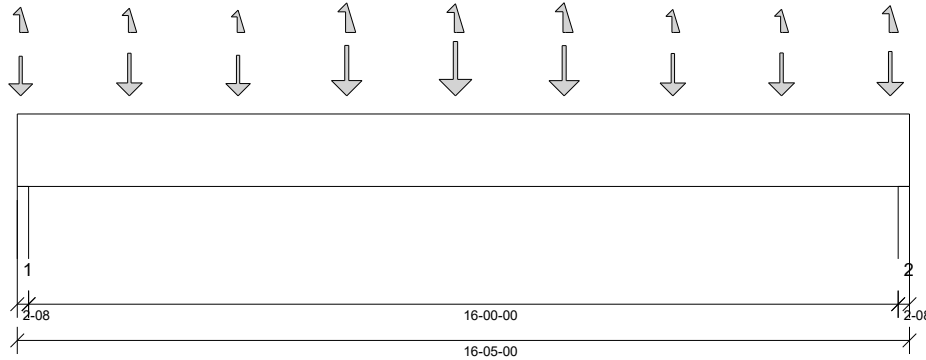
**2 Ply Member**  
**2.0 RigidLam DF LVL 1-3/4**  
**x 16**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.0.207.Update18.7

Report Version: 2020.10.28 04/19/2022 16:21



**DESIGN INFORMATION**

Building Code: IRC2015  
Design Methodology: ASD  
Risk Category: II (General Construction) Residential  
Service Condition: Dry  
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: 16'- 5"

**Bearing Stress of Support Material:**

- 1323 psi Wall @ 0'- 1 1/2"
- 1323 psi Wall @ 16'- 3 1/2"

**ANALYSIS RESULTS**

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	8'- 3/4"	D + Lr	1.15	24722 lb ft	42799 lb ft	Passed - 58%
Max Neg. Moment:	8'- 3/4"	0.6D + 0.6W	1.60	3496 lb ft	31153 lb ft	Passed - 11%
Max Shear:	1'- 6 1/2"	D + Lr	1.15	5091 lb	12451 lb	Passed - 41%
Live Load (LL) Pos. Defl.:	8'- 2 9/16"	Lr		0.270"	L/360	Passed - L/711
Total Load (TL) Pos. Defl.:	8'- 2 9/16"	D + Lr		0.487"	L/240	Passed - L/394

**SUPPORT AND REACTION INFORMATION**

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	2-08	D + Lr	1.15	6239 lb		6562 lb	11576 lb	Passed - 95%
1	2-08	0.6D + 0.6W	1.60		-764 lb	-	-	
2	2-08	D + Lr	1.15	6267 lb		6562 lb	11576 lb	Passed - 96%
2	2-08	0.6D + 0.6W	1.60		-795 lb	-	-	

**LOADING**

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	16'- 5"	Self Weight	Top	15 lb/ft	-	-	-	-
Point	0'- 3/4"	0'- 3/4"	A(Cond02)	Top	536 lb	-	357 lb	589 lb	168/-745 lb
Point	2'- 3/4"	2'- 3/4"	A(Cond08)	Top	574 lb	-	402 lb	675 lb	189/-679 lb
Point	4'- 3/4"	4'- 3/4"	A(Cond12)	Top	540 lb	-	362 lb	639/-25 lb	170/-530 lb
Point	6'- 3/4"	6'- 3/4"	A(Cond07)	Top	683 lb	-	531 lb	870/-20 lb	251/-994 lb
Point	8'- 3/4"	8'- 3/4"	A(Cond16)	Top	704 lb	-	558 lb	1058/-104 lb	262/-854 lb
Point	10'- 3/4"	10'- 3/4"	A(Cond09)	Top	682 lb	-	532 lb	857/-16 lb	250/-1007 lb
Point	12'- 3/4"	12'- 3/4"	A(Cond11)	Top	560 lb	-	384 lb	700/-35 lb	180/-564 lb
Point	14'- 3/4"	14'- 3/4"	A(Cond13)	Top	569 lb	-	396 lb	706/-45 lb	187/-567 lb
Point	16'- 3/4"	16'- 3/4"	A(Cond10)	Top	597 lb	-	428 lb	724 lb	202/-841 lb

**UNFACTORED REACTIONS**

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 2 1/2"	E6(i7)	2853 lb	-	1967 lb	3371/-106 lb	0 lb/ -4124 lb
2	16'- 2 1/2"	16'- 5"	E4(i4)	2834 lb	-	1982 lb	3447/-139 lb	0 lb/ -4124 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.

**PLY TO PLY CONNECTION**

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.