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

07/28/2022

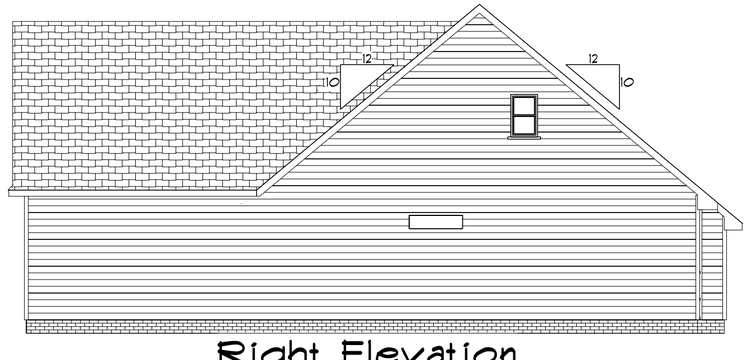
Harnett COUNTY NORTH CAROLINA

Rear Elevation

Scale: 1/8"= 1'0"

Left Elevation

Scale: 1/8"= 1'0"



Right Elevation

Scale: 1/8"= 1'0"

DATE: 2/16/2022
REVISED
DRAWING#

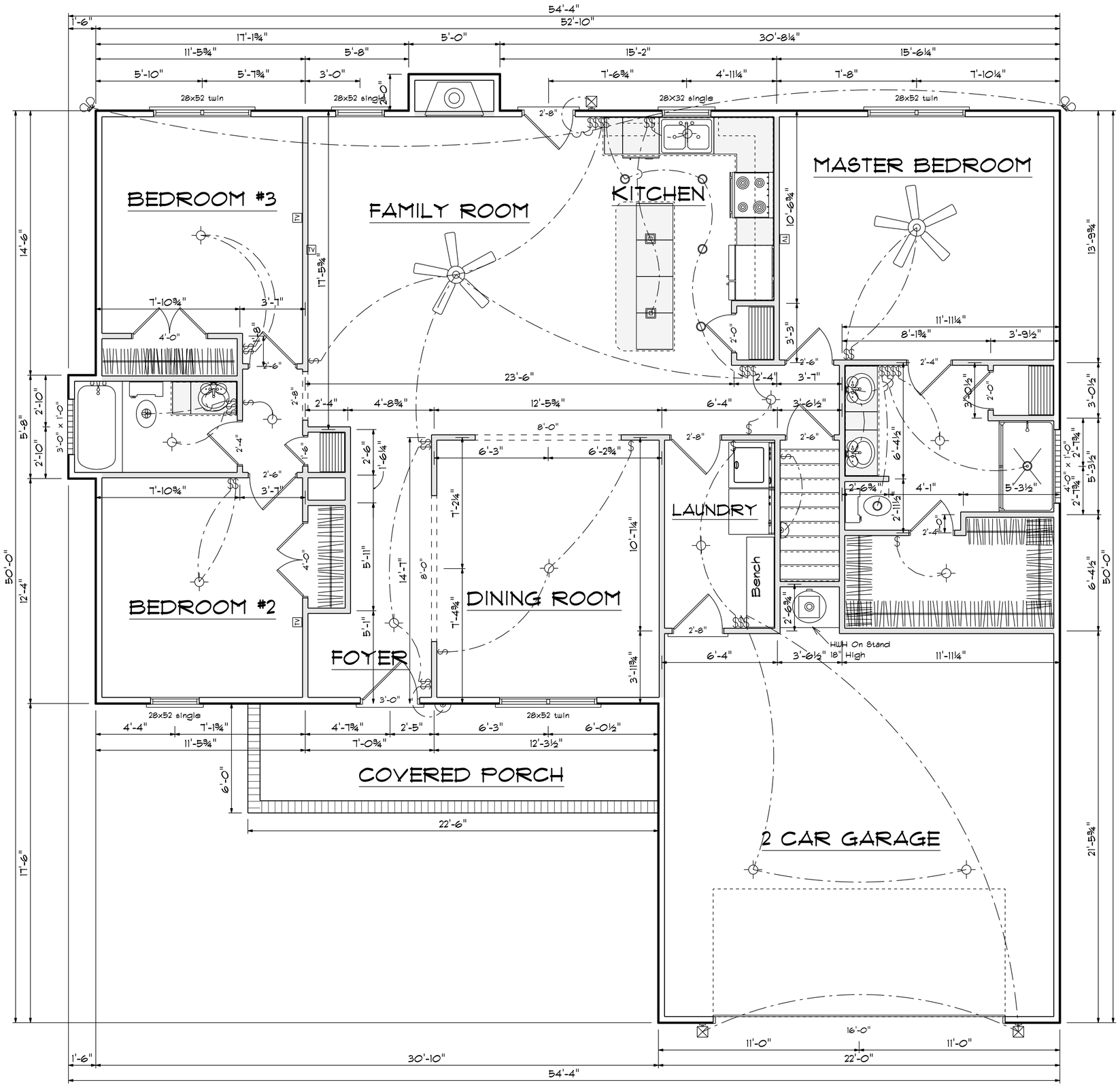
SCALE: 1/4"
DRAWN BY
APPROVED

Plan #1

Welco Contractors Inc.

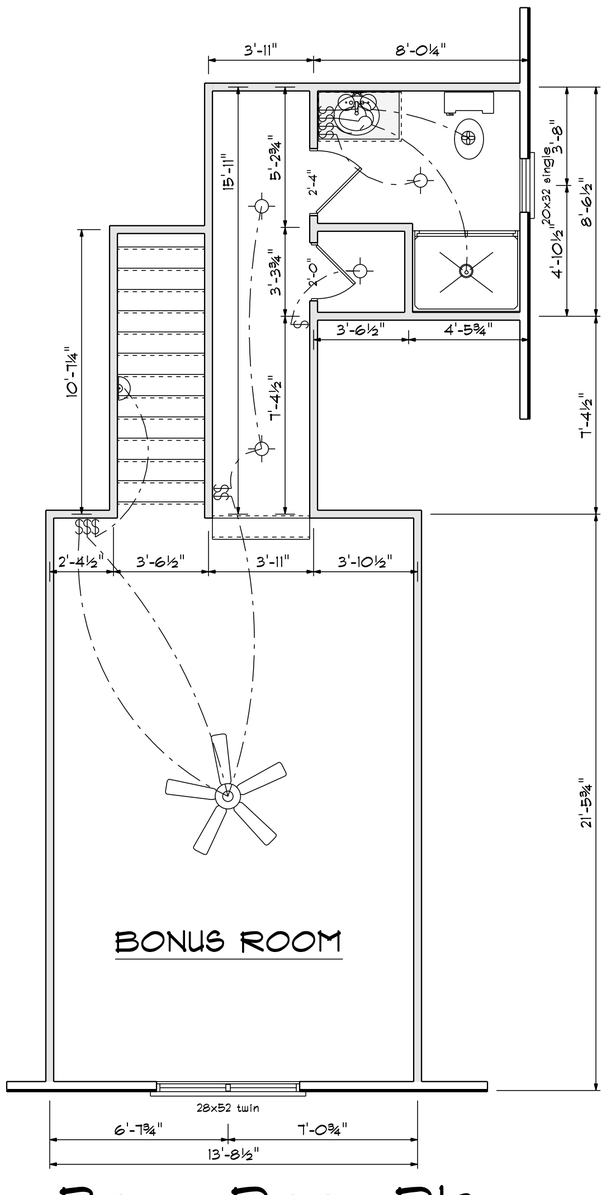
Areas

Main Floor	1650
Bonus Room	445
Total Heated	2095
Garage	479
Front Porch	146



First Floor Plan

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



Bonus Room Plan

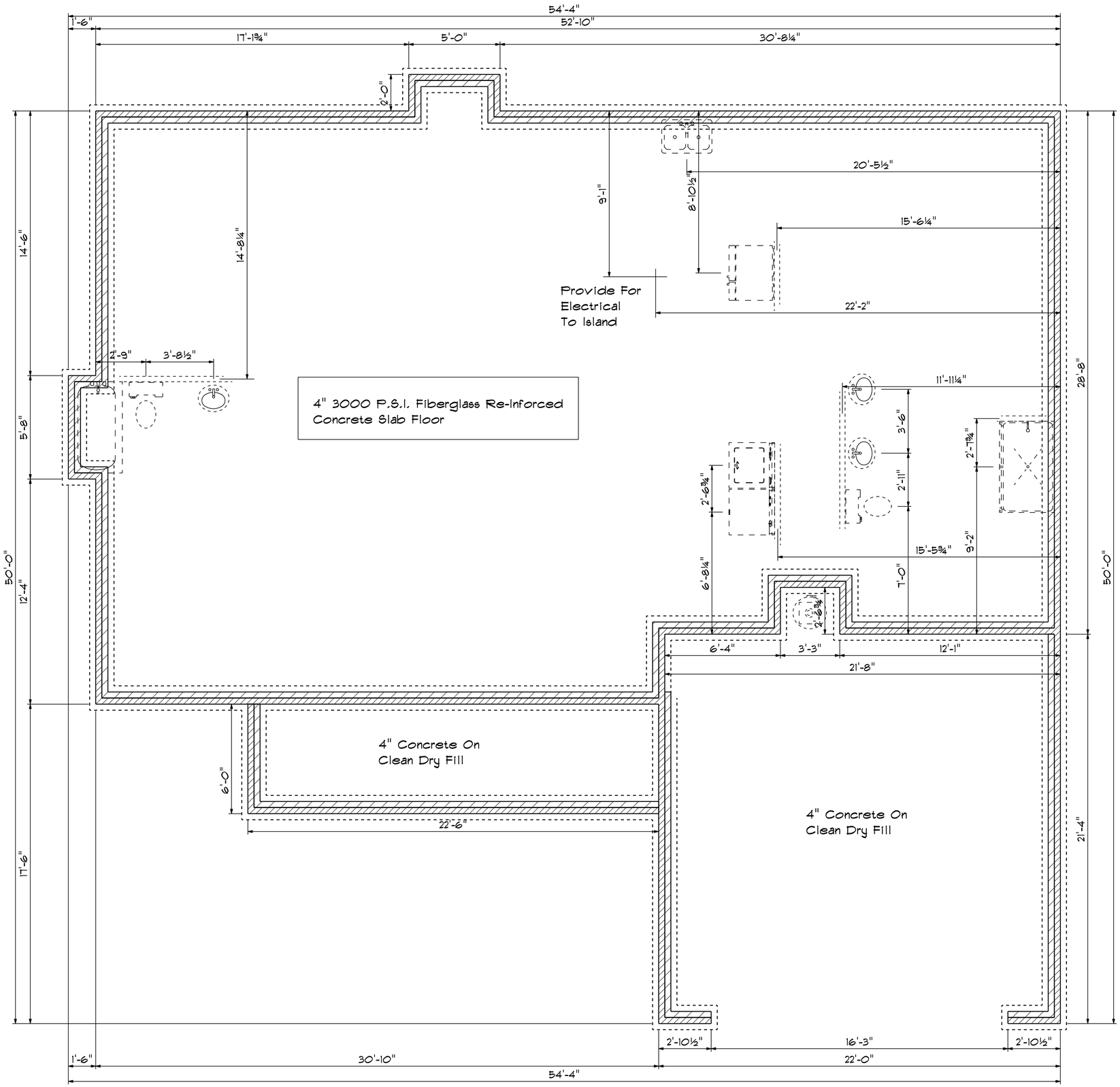
Scale: 1/4"= 1'-0"

DATE: 2/16/2022
REVISED
DRAWING#

SCALE: 1/4"
DRAWN BY
APPROVED

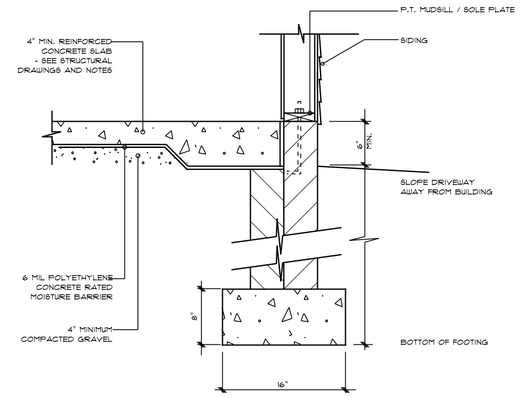
Plan #1

Welco Contractors Inc.



Foundation Plan

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



STEM WALL FOOTING DETAIL

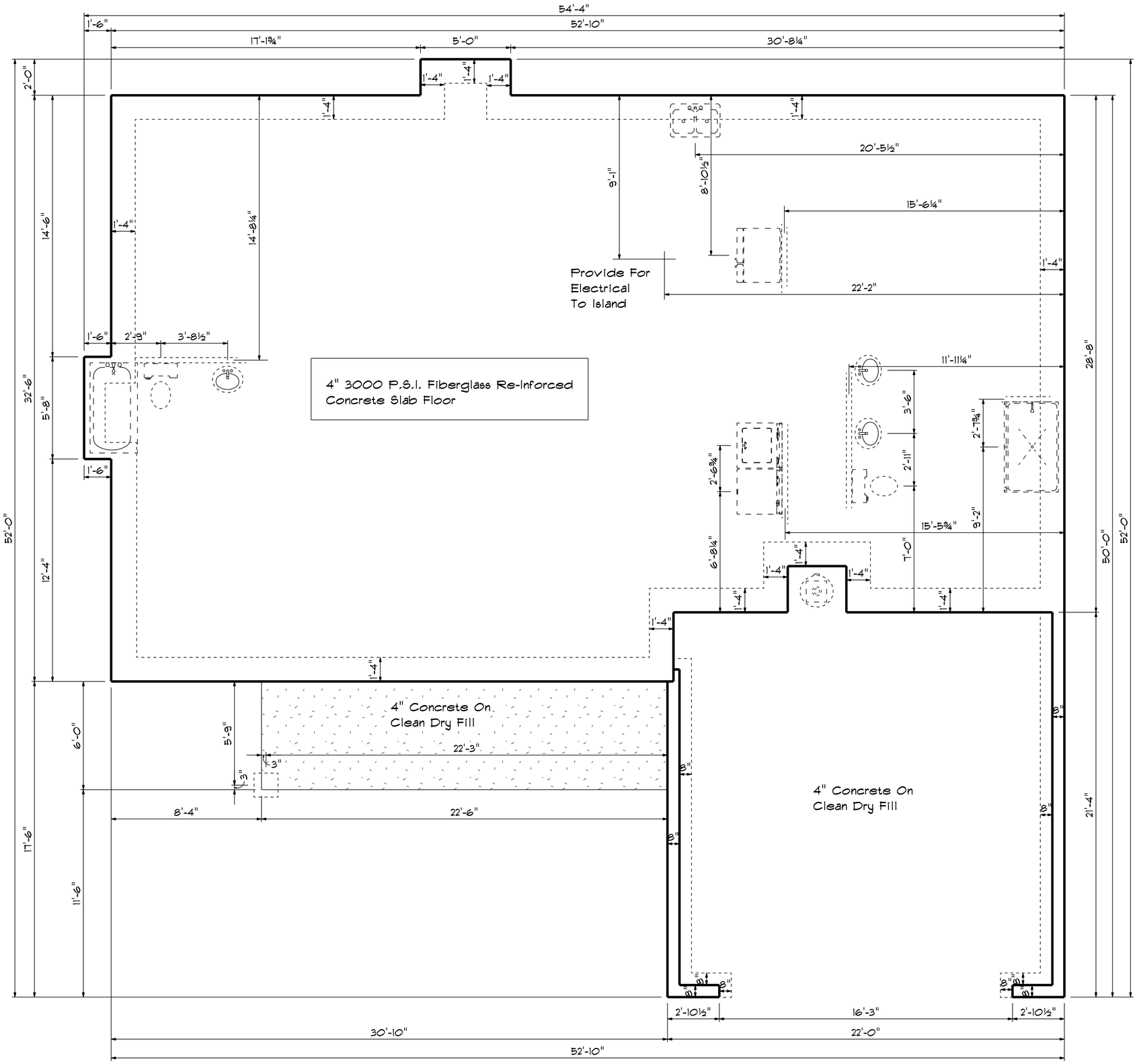
OPENING SCHEDULE				
PRODUCT CODE	SIZE	HINGE	REVERSED	COUNT
36X80 COLONIAL A 1	3'-0"	L	NO	1
32X80 FRENCH A 1	2'-8"	R	NO	1
192X84 - 1 PANEL GARAGE DOOR	16'-0"	U	NO	1
1-6 Door Unit	1'-6"	L	NO	1
2-0 Door Unit	2'-0"	R	NO	1
2-0 Door Unit	2'-0"	L	NO	1
2-4 Door Unit	2'-4"	L	NO	3
2-6 Door Unit	2'-6"	R	NO	2
2-6 Door Unit	2'-6"	L	NO	2
2-8 Door Unit	2'-8"	L	NO	1
2-8 Door Unit	2'-8"	R	NO	1
4-0 Doublehung Door Unit	4'-0"	LR	NO	2
28X32 single	2'-8" x 3'-2"	N	NA	1
28x52 single	2'-8" x 5'-2"	N	NA	2
28x52 twin	5'-4" x 5'-2"	NN	NA	3
4X8 GLASS BLOCK	3'-0" x 1'-0"	N	NA	1
4X8 GLASS BLOCK	4'-0" x 1'-0"	N	NA	1

DATE: 2/16/2022
REVISED
DRAWING#

SCALE: 1/4"
DRAWN BY
APPROVED

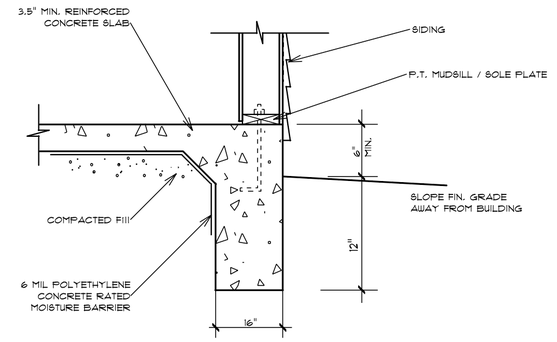
Plan #1

Welco Contractors Inc.

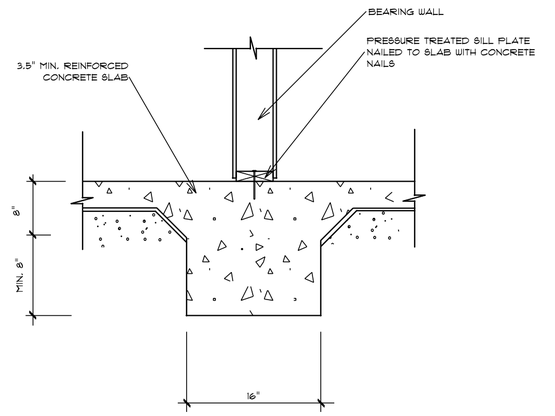


Foundation Plan

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



TURN-DOWN
FOOTING DETAIL



INTEGRAL SLAB FOOTING
DETAIL AT BEARING WALL

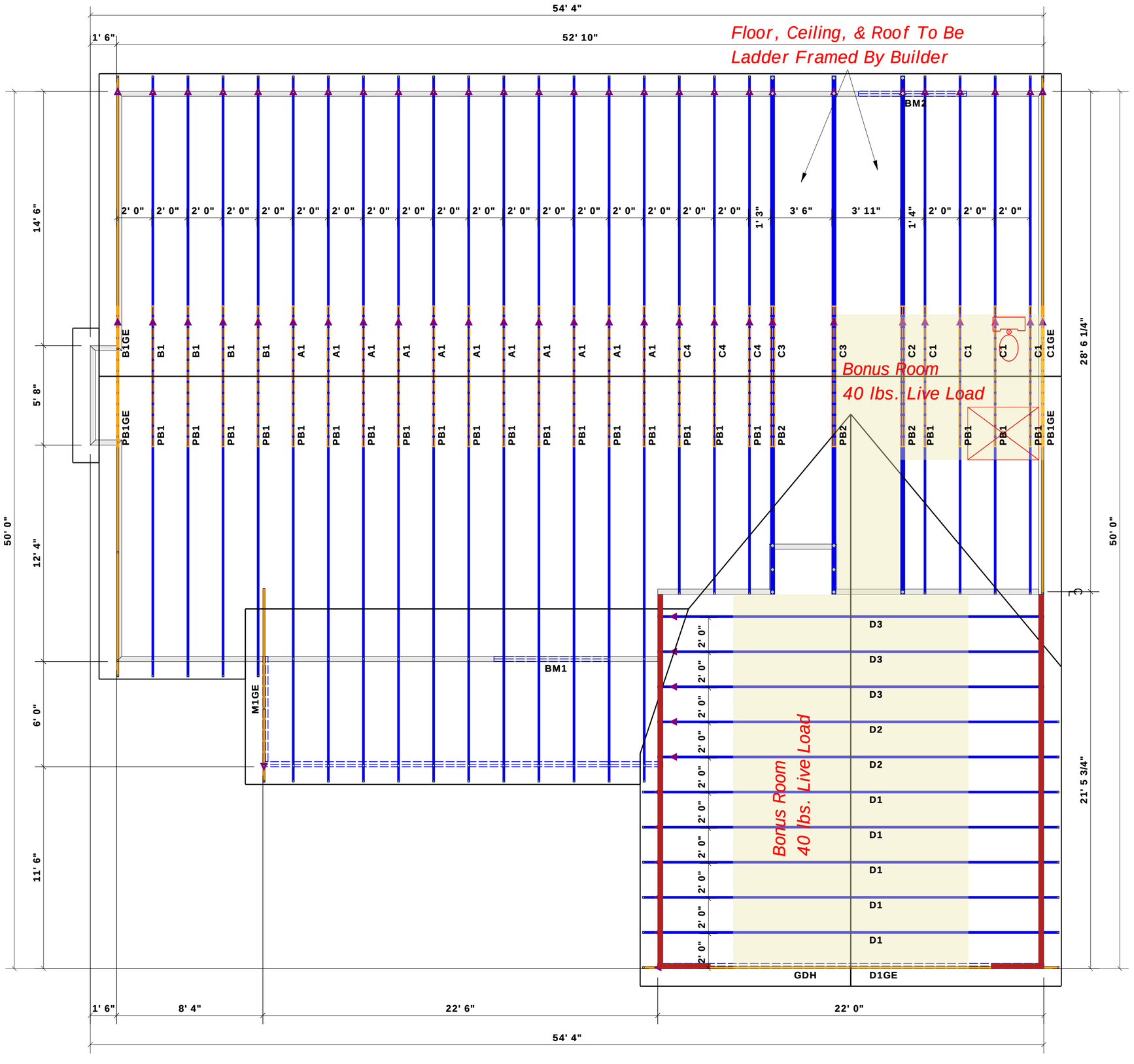
OPENING SCHEDULE				
PRODUCT CODE	SIZE	HINGE	REVERSED	COUNT
36X80 COLONIAL A 1	3'-0"	L	NO	1
32X80 FRENCH A 1	2'-8"	R	NO	1
192X84 - 1 PANEL GARAGE DOOR	16'-0"	U	NO	1
1-6 Door Unit	1'-6"	L	NO	1
2-0 Door Unit	2'-0"	R	NO	1
2-0 Door Unit	2'-0"	L	NO	1
2-4 Door Unit	2'-4"	L	NO	3
2-6 Door Unit	2'-6"	R	NO	2
2-6 Door Unit	2'-6"	L	NO	2
2-8 Door Unit	2'-8"	L	NO	1
2-8 Door Unit	2'-8"	R	NO	1
4-0 Doublehung Door Unit	4'-0"	LR	NO	2
28X32 single	2'-8" x 3'-2"	N	NA	1
28x52 single	2'-8" x 5'-2"	N	NA	2
28x52 twin	5'-4" x 5'-2"	NN	NA	3
4X8 GLASS BLOCK	3'-0" x 1'-0"	N	NA	1
4X8 GLASS BLOCK	4'-0" x 1'-0"	N	NA	1

DATE: 2/16/2022
REVISED
DRAWING#

SCALE: 1/4"
DRAWN BY
APPROVED

Plan #1

Welco Contractors Inc.



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

Hatch Legend
Garage Walls Dropped 1'

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

Beam Legend

PlotID	Length	Product	Plies	Net Qty	Fab Type
BM1	7' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF
BM2	7' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF
GDH	22' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF

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 Curtis Quick
Curtis Quick

LOAD CHART FOR JACK STUDS

(BASED ON TABLES R502.5(1) & (3))

NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADER/GIRDER

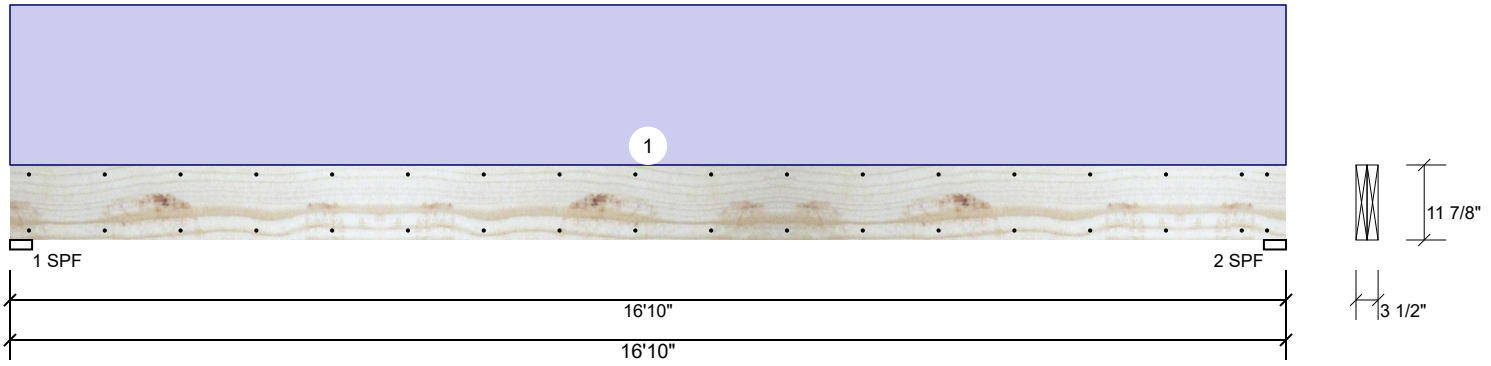
END REACTION (LBS)	REQ'D STUDS FOR (2) 2"X6" HEADER	END REACTION (LBS)	REQ'D STUDS FOR (3) 2"X6" HEADER	END REACTION (LBS)	REQ'D STUDS FOR (4) 2"X6" HEADER
1700	1	2550	1	3400	1
3400	2	5100	2	6800	2
5100	3	7650	3	10200	3
6800	4	10200	4	13600	4
8500	5	12750	5	17000	5
10200	6	15300	6		
11900	7				
13600	8				
15300	9				

BUILDER	Wellco Contractors
JOB NAME	Lot 109 Hidden Lakes
PLAN	Plan 1
SEAL DATE	Seal Date
QUOTE #	Quote #
JOB #	J0722-3677
CITY / CO.	Spring Lake / Harnett
ADDRESS	11 Sandalwood Dr.
MODEL	Model
DATE REV.	07/15/22
DRAWN BY	Curtis Quick
SALES REP.	Lenny Norris

Client:	Wellco Contractors	Date:	7/15/2022
Project:		Input by:	Curtis Quick
Address:		Job Name:	Plan 1 Beams
		Project #:	

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 - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	2182	0	0	0
2	Vertical	0	2182	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	42%	2182 / 0	2182	Uniform	D
2 - SPF	3.500"	Vert	42%	2182 / 0	2182	Uniform	D

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	8689 ft-lb	8'5"	17919 ft-lb	0.485 (48%)	D	Uniform
Unbraced	8689 ft-lb	8'5"	8702 ft-lb	0.998 (100%)	D	Uniform
Shear	1859 lb	15'6 5/8"	7980 lb	0.233 (23%)	D	Uniform
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.453 (L/433)	8'5 1/16"	0.546 (L/360)	0.831 (83%)	D	Uniform

Design Notes

1. Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2. Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3. Refer to last page of calculations for fasteners required for specified loads.
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 10'8 15/16" o.c.
7. Bottom must be laterally braced at end 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	250 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
	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
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 11/3/2024

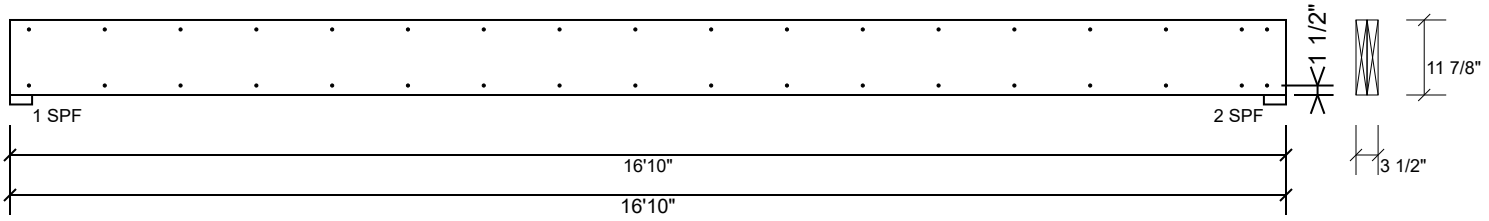
Manufacturer Info

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

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

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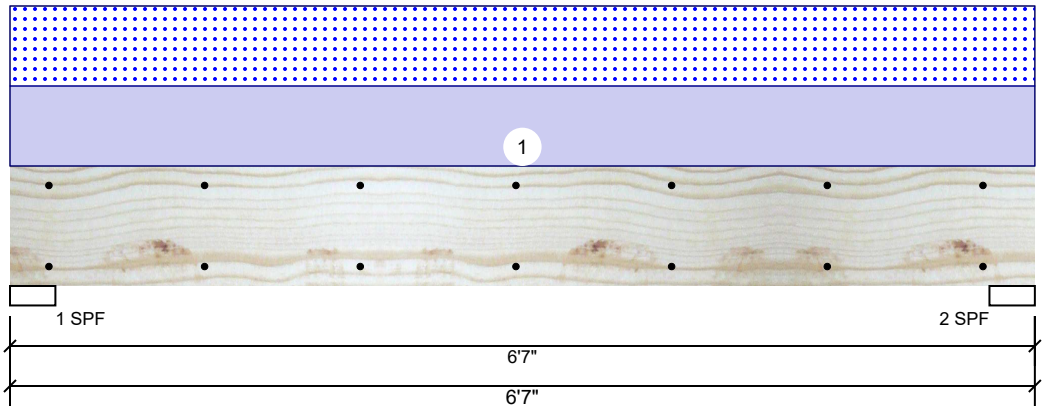
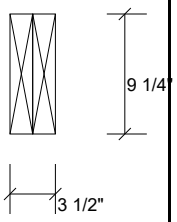
Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

Client:	Wellco Contractors	Date:	7/15/2022
Project:		Input by:	Curtis Quick
Address:		Job Name:	Plan 1 Beams
		Project #:	

BM1 Kerto-S LVL 1.750" X 9.250" 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 - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1564	1541	0	0
2	Vertical	0	1564	1541	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	60%	1564 / 1541	3105	L	D+S
2 - SPF	3.500"	Vert	60%	1564 / 1541	3105	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4423 ft-lb	3'3 1/2"	14423 ft-lb	0.307 (31%)	D+S	L
Unbraced	4423 ft-lb	3'3 1/2"	10451 ft-lb	0.423 (42%)	D+S	L
Shear	2108 lb	1' 3/4"	7943 lb	0.265 (27%)	D+S	L
LL Defl inch	0.040 (L/1842)	3'3 1/2"	0.153 (L/480)	0.261 (26%)	S	L
TL Defl inch	0.080 (L/914)	3'3 1/2"	0.204 (L/360)	0.394 (39%)	D+S	L

Design Notes

1. Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2. Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3. Refer to last page of calculations for fasteners required for specified loads.
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 end bearings.
7. Bottom must be laterally braced at end 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	468 PLF	0 PLF	468 PLF	0 PLF	0 PLF	A1
	Self Weight				7 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 11/3/2024

Manufacturer Info

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www.metsawood.com/us

Comtech, Inc.
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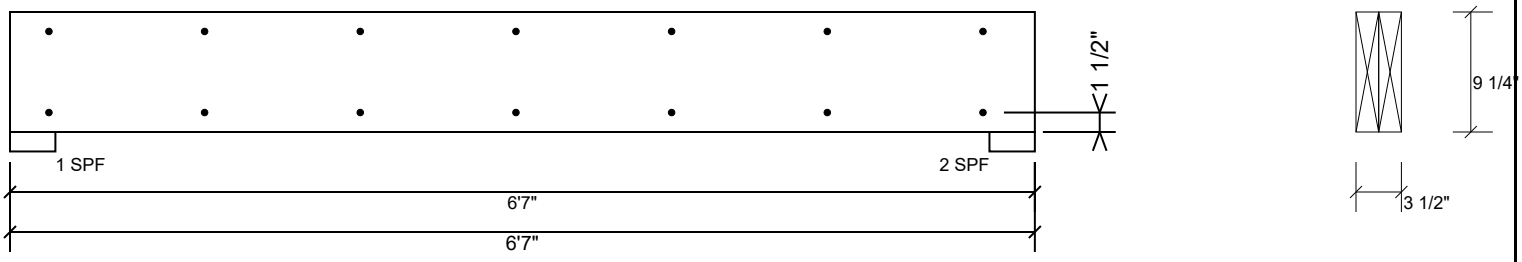
28314
910-864-TRUS

Client:	Wellco Contractors	Date:	7/15/2022
Project:		Input by:	Curtis Quick
Address:		Job Name:	Plan 1 Beams
		Project #:	

BM1 Kerto-S LVL 1.750" X 9.250" 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
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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6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

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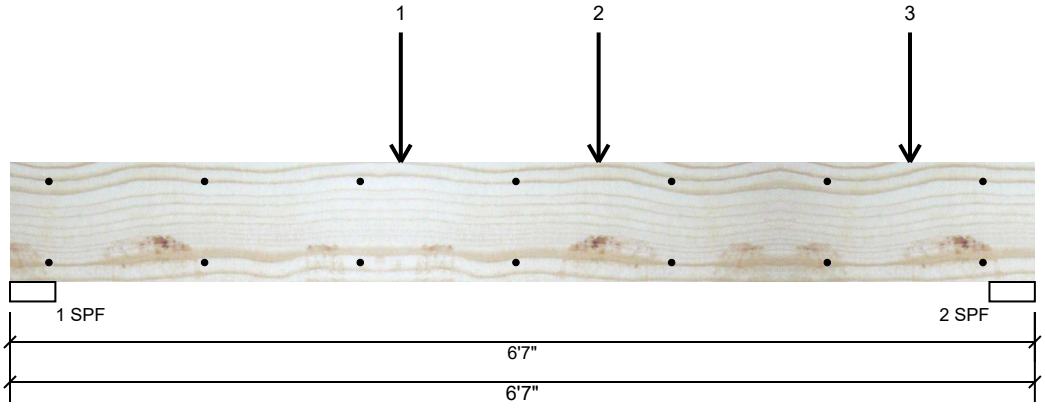
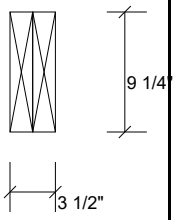
Client:	Wellco Contractors	Date:	7/15/2022
Project:		Input by:	Curtis Quick
Address:		Job Name:	Plan 1 Beams
		Project #:	

BM2 Kerto-S LVL 1.750" X 9.250" 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 - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1380	1357	0	0
2	Vertical	0	1696	1672	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	53%	1380 / 1357	2737	L	D+S
2 - SPF	3.500"	Vert	65%	1696 / 1672	3368	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6221 ft-lb	2'6 1/8"	14423 ft-lb	0.431 (43%)	D+S	L
Unbraced	6221 ft-lb	2'6 1/8"	10451 ft-lb	0.595 (60%)	D+S	L
Shear	2870 lb	5'6 1/4"	7943 lb	0.361 (36%)	D+S	L
LL Defl inch	0.052 (L/1405)	3'2 1/16"	0.153 (L/480)	0.342 (34%)	S	L
TL Defl inch	0.105 (L/698)	3'2 1/16"	0.204 (L/360)	0.515 (52%)	D+S	L

Design Notes

1. Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2. Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3. Refer to last page of calculations for fasteners required for specified loads.
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 end bearings.
7. Bottom must be laterally braced at end 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	Point	2-6-2		Top	1561 lb	0 lb	1561 lb	0 lb	0 lb	C2
	Bearing Length	0-3-8								
2	Point	3-9-6		Top	734 lb	0 lb	734 lb	0 lb	0 lb	C1
	Bearing Length	0-3-8								
3	Point	5-9-6		Top	734 lb	0 lb	734 lb	0 lb	0 lb	C1

Continued on page 2...

Notes

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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 11/3/2024

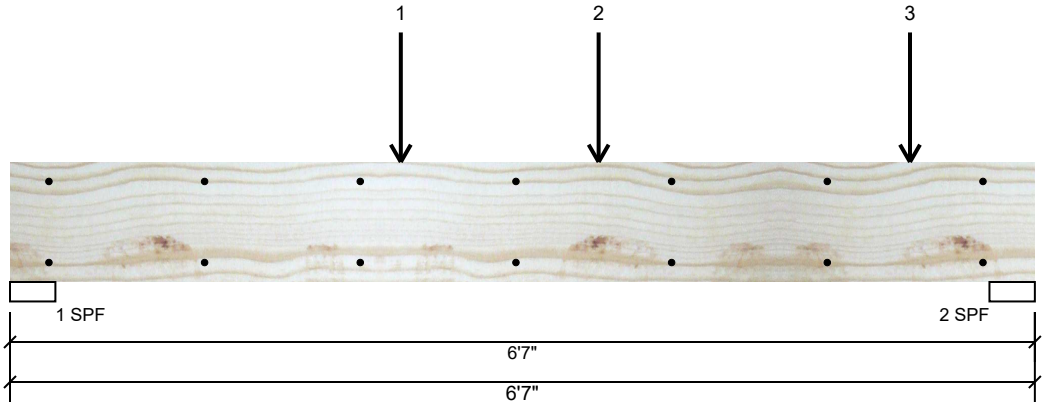
Manufacturer Info

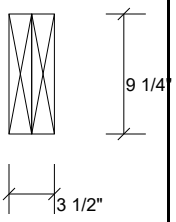
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

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

BM2 Kerto-S LVL 1.750" X 9.250" 2-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
	Bearing Length	0-3-8								
	Self Weight				7 PLF					

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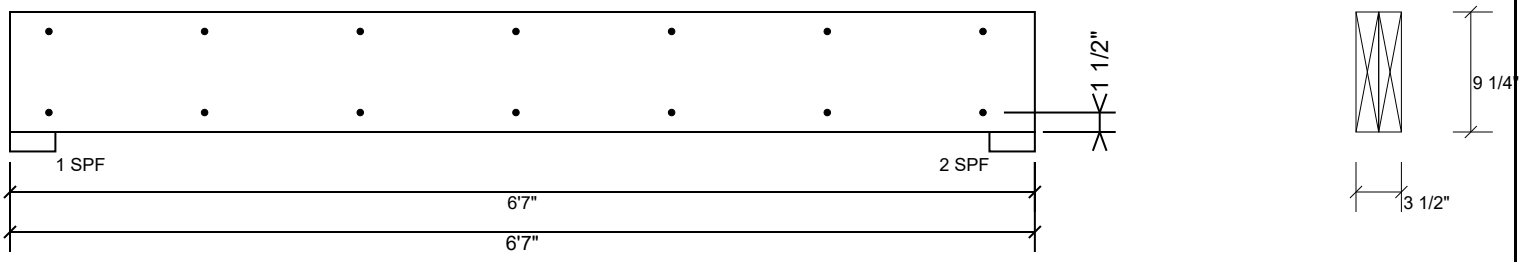
Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

Client:	Wellco Contractors	Date:	7/15/2022
Project:		Input by:	Curtis Quick
Address:		Job Name:	Plan 1 Beams
		Project #:	

BM2 Kerto-S LVL 1.750" X 9.250" 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

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