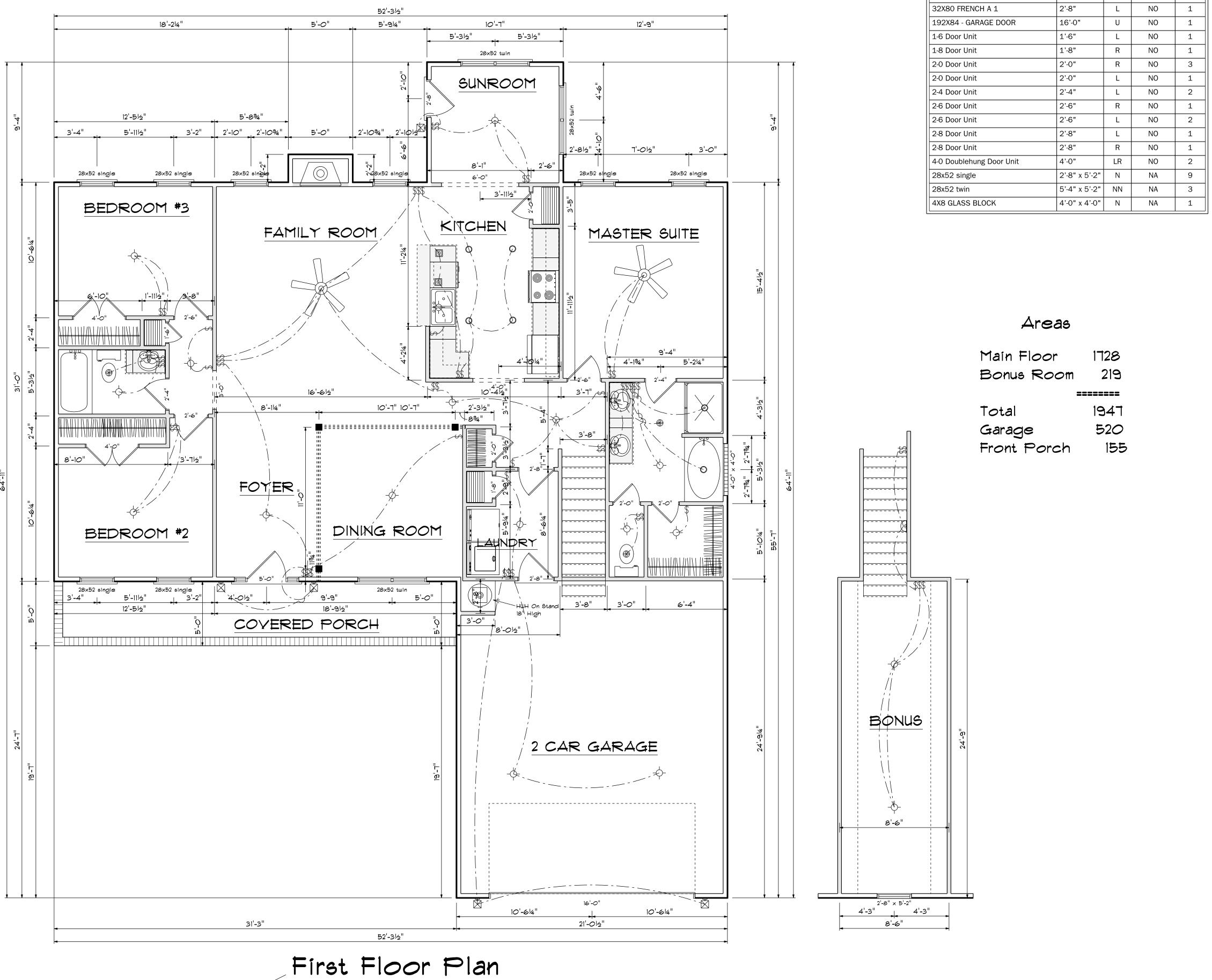
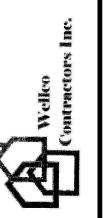


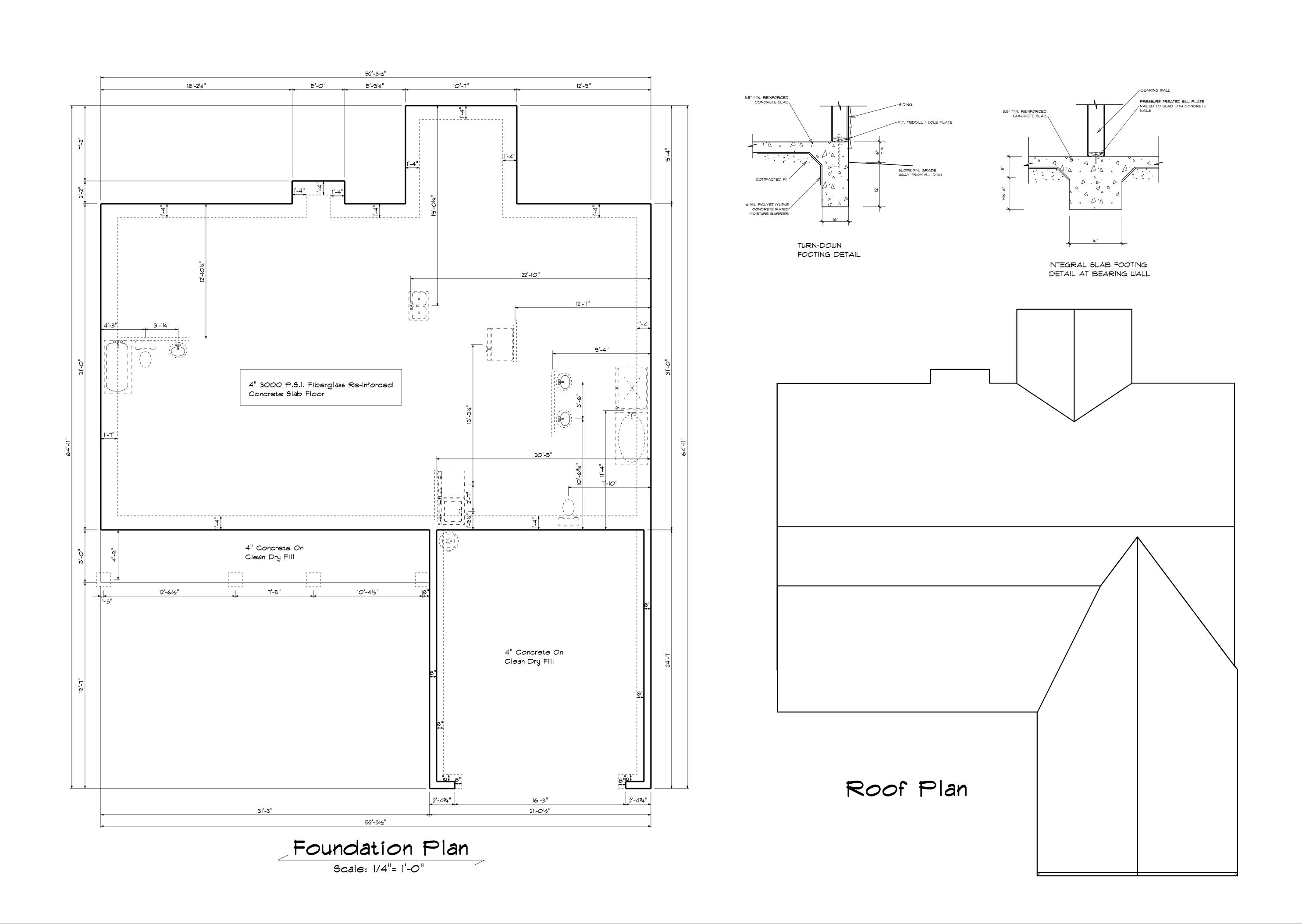
Wellow (



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

OPENING SCHEDULE								
PRODUCT CODE	SIZE	HINGE	REVERSED	COUNT				
60X80 LH ENTRY - 2 SL	5'-0"	L	NA	1				
32X80 FRENCH A 1	2'-8"	L	NO	1				
192X84 - GARAGE DOOR	16'-0"	U	NO	1				
1-6 Door Unit	1'-6"	L	NO	1				
1-8 Door Unit	1'-8"	R	NO	1				
2-0 Door Unit	2'-0"	R	NO	3				
2-0 Door Unit	2'-0"	L	NO	1				
2-4 Door Unit	2'-4"	L	NO	2				
2-6 Door Unit	2'-6"	R	NO	1				
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				
28x52 single	2'-8" x 5'-2"	N	NA	9				
28x52 twin	5'-4" x 5'-2"	NN	NA	3				
4X8 GLASS BLOCK	4'-0" x 4'-0"	N	NA	1				



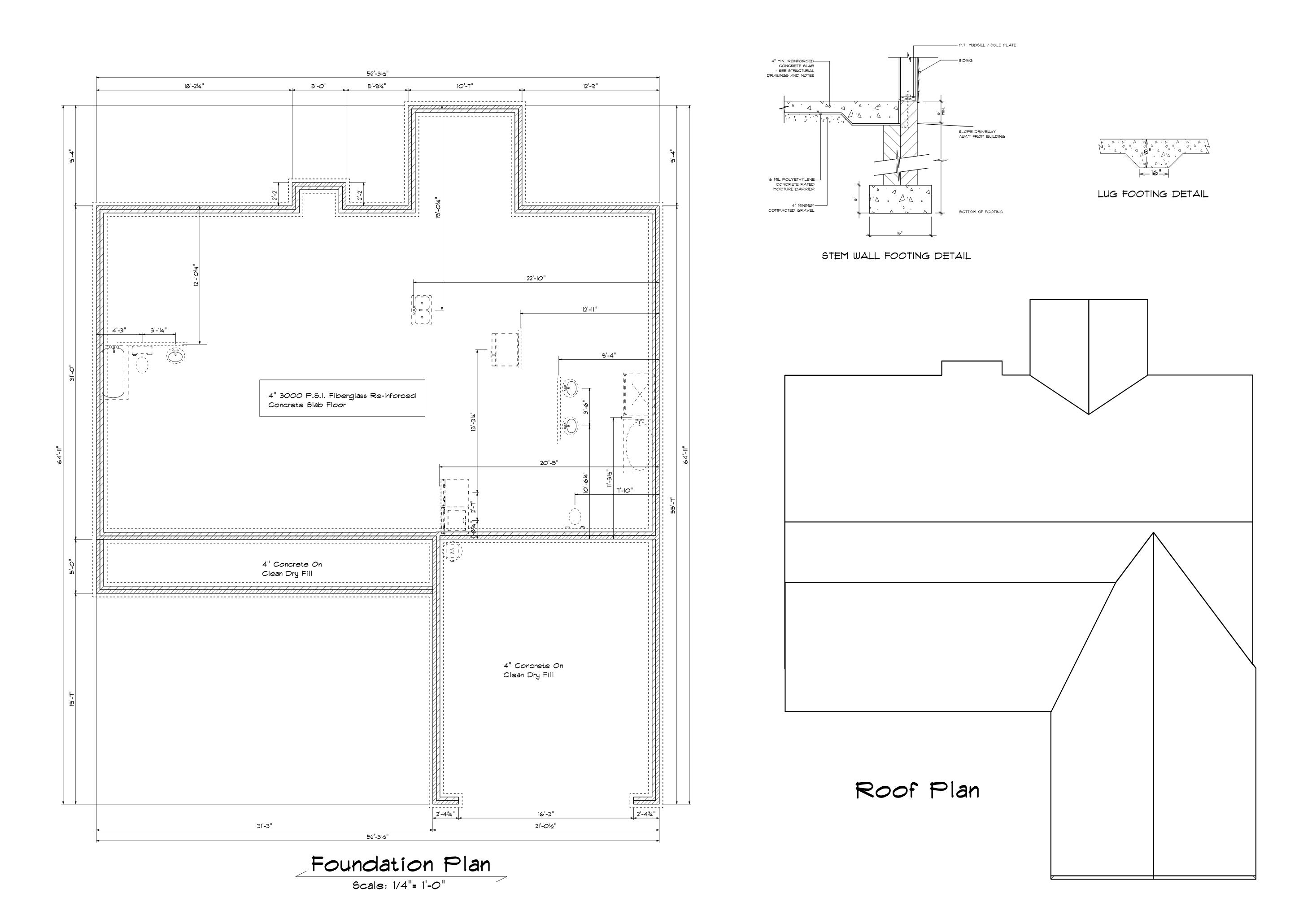


REVISED
DRAWING#

DRAWN BY APPROVED

10 mg/m # 0 mg/m # 0

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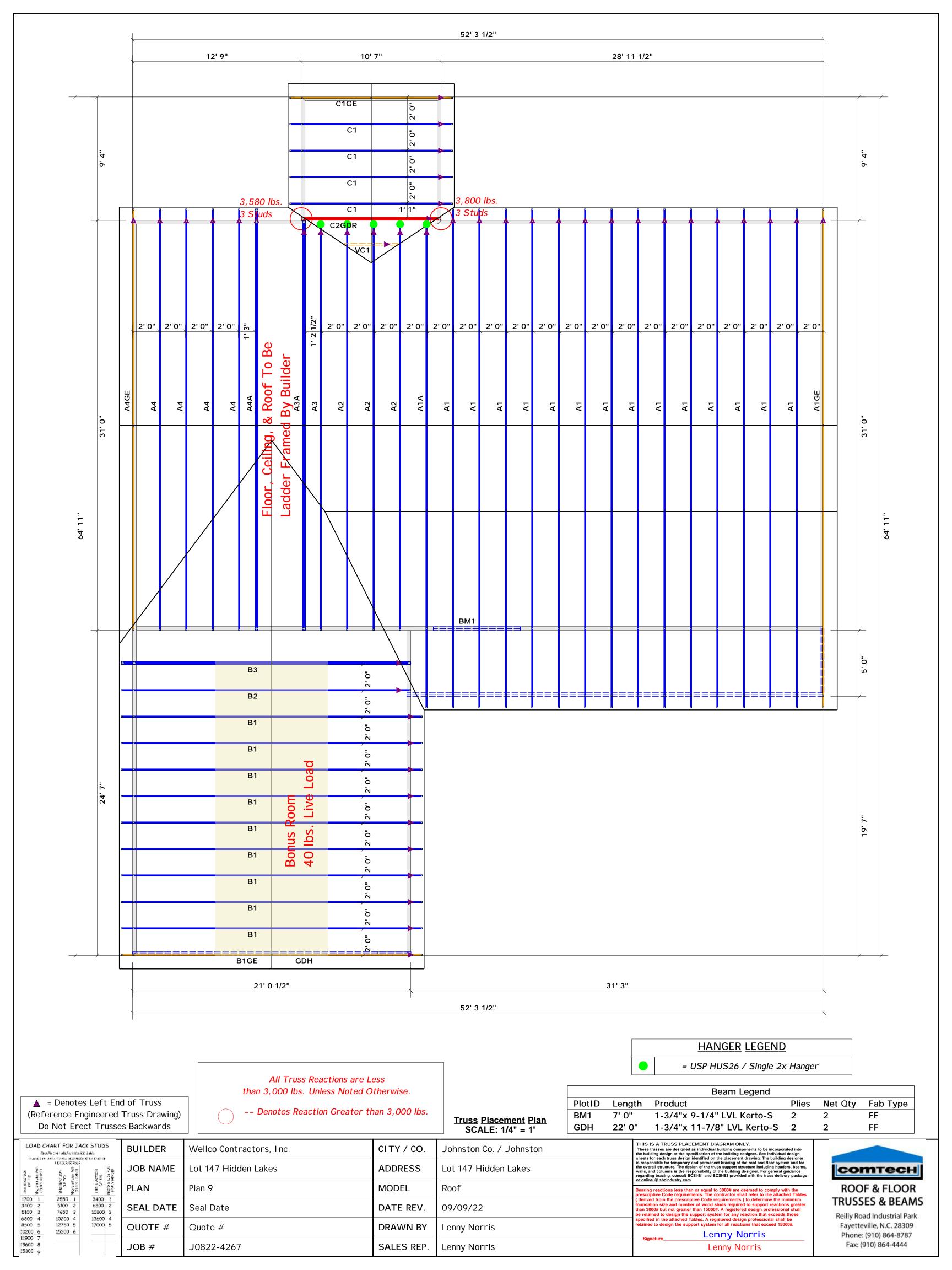
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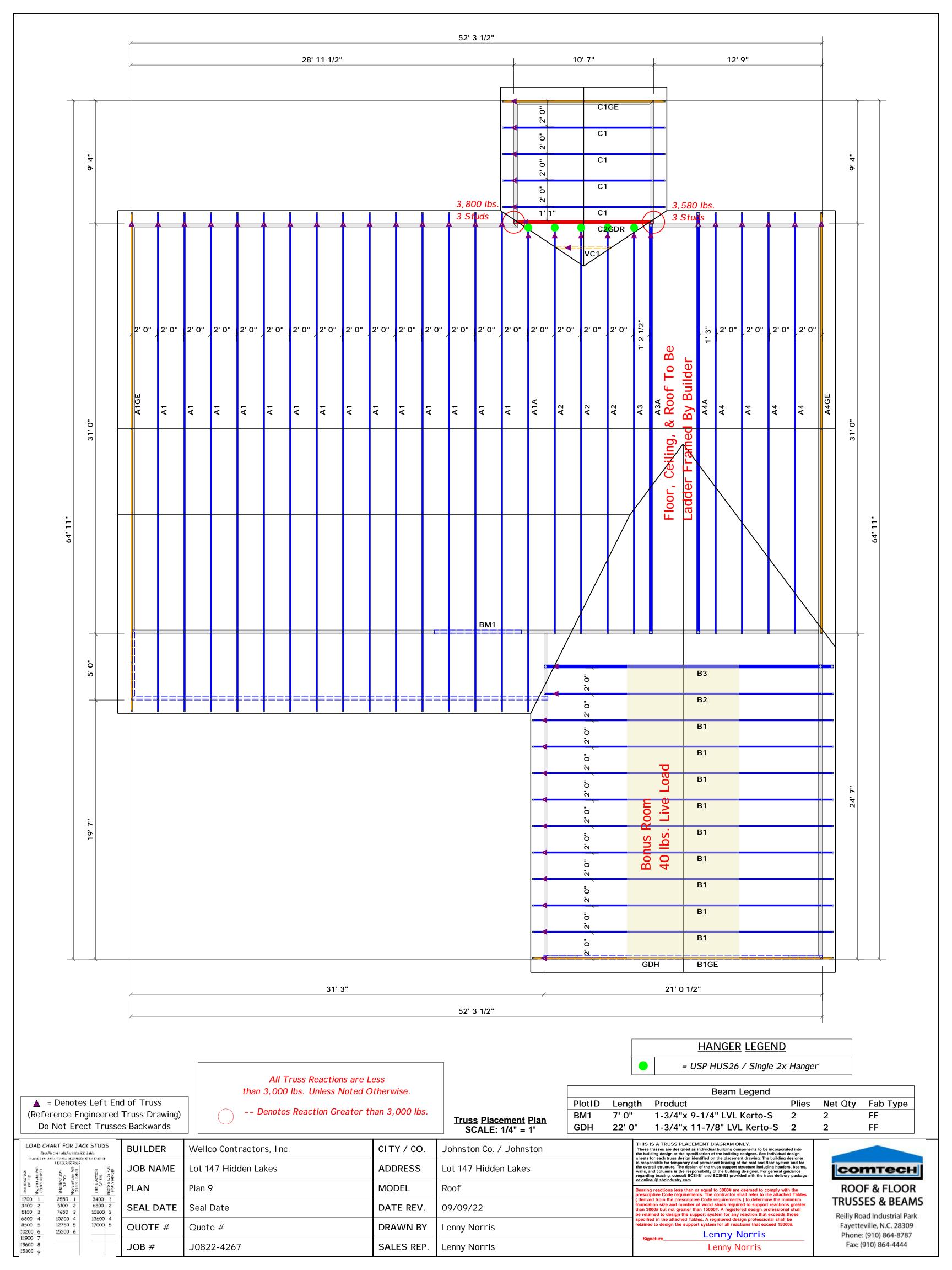
DRAWING\*

DRAWN BY APPROVED

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Wellco Contractors Inc.





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Client: Wellco Contractors

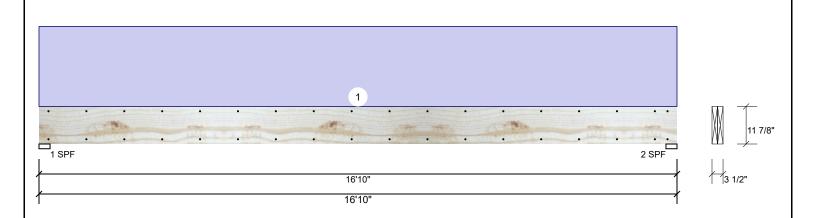
Project: Address:

9/9/2022 Input by: Curtis Quick Job Name: Plan 9 Beams

Project #:

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

Level: Level



Member Info	rmation			Rea	ctions UNP	ATTERN	IED Ib	(Uplift)			
Type:	Girder	Application:	Floor	Brg	Direction	Live		Dead	Snow	Wind	Const
Plies:	2	Design Method:	ASD	1	Vertical	0		2182	0	0	0
Moisture Condition	on: Dry	Building Code:	IBC/IRC 2015	2	Vertical	0		2182	0	0	0
Deflection LL:	480	Load Sharing:	No								
Deflection TL:	360	Deck:	Not Checked								
Importance:	Normal - II										
Temperature:	Temp <= 100°F										
				Bea	rings						
				Bea	aring 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			Тор	250 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				9 PLF					

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.

- Dry service conditions, unless noted otherwise
   LVL not to be treated with fire retardant or corrosive

## Handling & Installation

LVL beams must not be cut or drilled
Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

2 Damaged Beams must not be used

- Danaged Beams must not be used
  Design assumes top edge is laterally restrained
  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

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

Manufacturer Info

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



Page 1 of 4



isDesign

Client: Wellco Contractors

Project: Address:

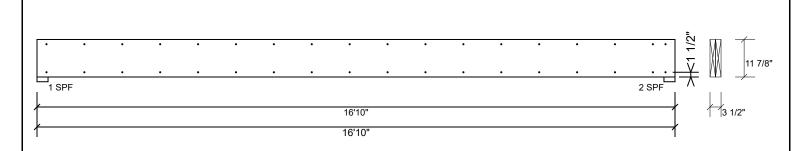
9/9/2022

Input by: Curtis Quick Job Name: Plan 9 Beams

Project #:

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

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".

1 3		`	,
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

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.

- Dry service conditions, unless noted otherwise
   LVL not to be treated with fire retardant or corrosive

# Handling & Installation

Handling & Installation

1. UVI 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

For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

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Manufacturer Info

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Page 2 of 4

CSD DESIGN



Client: Wellco Contractors

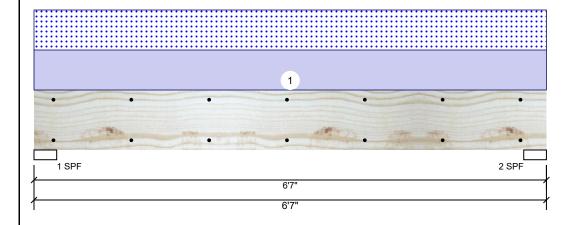
Project: Address: Date: 9/9/2022 Input by: Curtis Quick

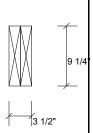
Project #:

1.750" X 9.250" 2-Ply - PASSED Kerto-S LVL BM<sub>1</sub>

Level: Level

Job Name: Plan 9 Beams





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## **Member Information**

Type: Plies: 2 Moisture Condition: Dry Deflection LL: 480 Deflection TL: 360 Importance: Normal - II Temp <= 100°F Temperature:

Application: Floor Design Method: ASD **Building Code: IBC/IRC 2015** Load Sharing: No Deck: Not Checked

Reactions UNPATTERNED Ib (Uplift) Wind Brg Direction Live Dead Snow Const 0 Vertical 1442 1419 0 0 2 Vertical 0 1442 1419 0 0

# **Bearings**

Bearing Length Dir. Cap. React D/L lb Total Ld. Case Ld. Comb. D+S 1 - SPF 3.500" Vert 1442 / 1419 2861 L 2 - SPF 3.500" Vert 55% 1442 / 1419 2861 L D+S

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4076 ft-lb	3'3 1/2"	14423 ft-lb	0.283 (28%)	D+S	L
Unbraced	4076 ft-lb	3'3 1/2"	10451 ft-lb	0.390 (39%)	D+S	L
Shear	1943 lb	1' 3/4"	7943 lb	0.245 (24%)	D+S	L
LL Defl inch	0.037 (L/2000)	3'3 1/2"	0.153 (L/480)	0.240 (24%)	S	L
TL Defl inch	0.074 (L/992)	3'3 1/2"	0.204 (L/360)	0.363 (36%)	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			Тор	431 PLF	0 PLF	431 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.

- Dry service conditions, unless noted otherwise
   LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

  Damaged Beams must not be used

  - Design assumes top edge is laterally restrained
    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

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Client: Wellco Contractors

Project: Address: Date:

Input by: Curtis Quick Job Name: Plan 9 Beams

9/9/2022

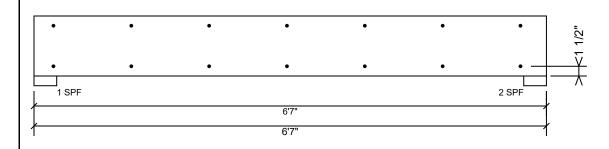
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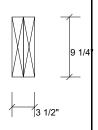
**Kerto-S LVL** BM1

1.750" X 9.250"

2-Ply - PASSED

Level: Level





Page 4 of 4

# 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

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.

- Dry service conditions, unless noted otherwise
   LVL not to be treated with fire retardant or corrosive

## Handling & Installation

- Handling & Installation

  1. UVI 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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