

DWELLING / GARAGE SEPARATION

REFER TO SECTIONS K202.5, K202.6, AND K202.7
WALLS. A minimum 1/2" gypsum board must be installed on all walls supporting finishing assemblies used for separation required by this section.
STAIRS. A minimum of 1/2" gypsum board must be installed on the underside and exposed side of all stairways.
CEILING. A minimum of 1/2" gypsum must be installed on the garage ceiling if there are no habitable rooms above the garage. If there are habitable rooms above the garage a minimum of 5/8" type X gypsum board must be installed on the garage ceiling.
OPENING PENETRATIONS. Openings between the garage and residence shall be equipped with self-closing doors not less than 1 3/8 inches (35 mm) in thickness, solid or laminated core self-closing doors not less than 1 3/8 inches (35 mm) thick, or 20-minute fire-rated doors.
DUCT PENETRATIONS. Ducts in the partition and ducts penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a minimum No. 26 gauge (0.45 mm) sheet steel or other approved material and shall have no openings into the garage.
OTHER PENETRATIONS. Penetrations through the partition required in Section K202.3 shall be protected as required by Section K102.11, Item 4.

SQUARE FOOTAGE

HEATED	
FIRST FLOOR	364 SQ.FT.
SECOND FLOOR	1154 SQ.FT.
TOTAL	1518 SQ.FT.
OPTIONAL UNHEATED	
DECK/PATIO/PORCH	187 SQ.FT.
THIRD GARAGE	276 SQ.FT.
TOTAL	463 SQ.FT.
UNHEATED	
FRONT PORCH	223 SQ.FT.
GARAGE	472 SQ.FT.
TOTAL	695 SQ.FT.

OPTIONAL PATIO, DECK, OR COVERED PORCH

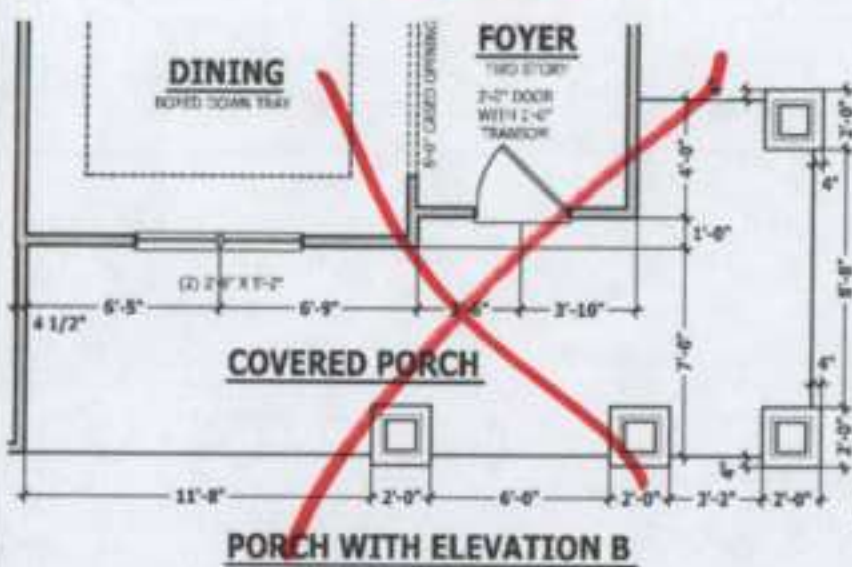


MUD ROOM WITH UPSTAIRS LAUNDRY

Raised hearth w/ stone

*2x6 wall
4" stack*

*DINING
BUILT DOWN TRAY
2x6*



PORCH WITH ELEVATION B

WALL THICKNESSES

Exterior walls and walls adjacent to a garage area are shown as 4" or as noted. 2 X 6 are shown as 4" to include 1/2" sheathing or gypsum. Subtract 1/2" for duct work.
 Interior walls are shown as 1/2" or as noted. 2 X 6 are shown as 1/2", and do not include gypsum.

OPTIONAL SIDE LOAD



FIRST FLOOR PLAN

SCALE 1/4" = 1'-0"

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FIRST FLOOR PLAN
Barstow II

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SQUARE FOOTAGE	
HEATED	1518
OPTIONAL UNHEATED	463
UNHEATED	695

STRUCTURAL NOTES

All construction shall conform to the latest requirements of the 2018 North Carolina Residential Building Code, plus all local codes and regulations. The documents in this set shall be construed to supersede the code.
JOB SITE PRACTICES AND SAFETY: Haynes Home Plans, Inc. assumes no liability for contractor practices and procedures or safety program. Haynes Home Plans, Inc. does not assume responsibility for the contractor failure to carry out the construction work in accordance with the contract documents. All members shall be trained, experienced, and proceed in accordance with good construction practices and the building code.

DESIGN LOADS	DEAD LOAD (PSF)	WIND LOAD (PSF)	DEFLECTION (IN)
Roof without storage	10	10	L/240
Attic with 1-week storage	20	10	L/240
Attic with 3-week storage	40	10	L/240
Subsides and decks	10	10	L/240
Fire escapes	40	10	L/240
Stairways and landings	200	-	-
Guardrail in-floor components	30	-	-
Perimeter vehicle parking	20	10	L/240
Roofs other than sloped	40	10	L/240
Sloped roofs	40	10	L/240
Walls	40	-	-
Floors	20	-	-

FRAMING LUMBER: All non-treated framing lumber shall be SPF #2 (18" x 875 PSI) or SPF #1 (18" x 750 PSI) and all treated lumber shall be SPF #2 (18" x 750 PSI) unless noted otherwise.
ENGINEERED WOOD BEAMS: Laminated veneer lumber (LVL) = 3 1/2" x 2000 PSI, 2" x 2000 PSI, 4" x 1.6e10 PSI. Parallel strand lumber (PSL) = 18" x 2000 PSI, 2" x 2000 PSI, 4" x 2.2e10 PSI. Laminated strand lumber (LSL) = 2000 PSI, 2" x 2000 PSI, 4" x 1.2e10 PSI. Treat all connections per manufacturer's instructions.
TRUSS AND JOIST MEMBERS: All roof truss and joist members shall be prepared in accordance with this document. Trusses and joists shall be installed according to the manufacturer's specifications. Any change in truss or joist layout shall be coordinated with Haynes Home Plans, Inc.
LINTELS: Deck lintels shall be 2 (1 1/2" x 2 (1 1/2" x 1/4" steel angle for up to 6'-0" span, 1" x 4" x 1/4" steel angle with 4" leg vertical for spans up to 8'-0" unless noted otherwise, 2 (1 1/2" x 3 (1 1/2" x 1/4" steel angle with 1/2" side at 2'-0" or corner for spans up to 10'-0", or flow noted otherwise).
FLOOR SHEATHING: OSB or CDX floor sheathing minimum 1/2" thick for 16" on center joist spacing, minimum 5/8" thick for 18" on center joist spacing, and minimum 3/4" thick for 24" on center joist spacing.
ROOF SHEATHING: OSB or CDX roof sheathing minimum 3/8" thick for 16" on center rafters and 1/2" for 24" on center rafters.
CONCRETE AND SOILS: See foundation notes.

ROOF TRUSS REQUIREMENTS

TRUSS DESIGN: Trusses to be designed and engineered in accordance with these drawings. Any variation with these drawings must be brought to Haynes Home Plans, Inc. attention before construction begins.
ANCHORAGE: All structural anchors for trusses due to uplift or bracing shall meet the requirements as specified on the truss schematics.
BEARING: All trusses shall be designed for bearing on SPF #2 plates or ledgers unless noted otherwise.

ATTIC ACCESS

SECTION 8007
RESTRICTED ATTIC ACCESS: An attic access opening shall be provided to attic areas that exceed 400 square feet (37.74 sqm) and have a vertical height of 80 inches (2032 mm) or greater. The net clear opening shall not be less than 20 inches (508 mm) by 24 inches (609 mm) and shall be located in a hallway or other readily accessible location. A 30-inch (762 mm) minimum unobstructed headroom in the attic space shall be provided at some point along the access opening. See Section 1100.1.3 for access requirements when mechanical equipment is located in attic.
Exceptions:
 1. Constructed areas not located over the main structure including porches, areas behind brick walls, dormers, bay windows, etc. are not required to have access.
 2. Pull-down stair ladders, drop-downs, firehoses, and hardware may protrude into the net clear opening.

WALL THICKNESSES

Exterior walls and walls adjacent to a garage area are shown as 4" or as noted. 2 x 6 are shown as 5 1/2" including 1/2" sheathing or gypsum. Sillmer 10" for stud face.
 Interior walls are shown as 1 1/2" or as noted. 2 x 4 are shown as 3 1/2", and do not include gypsum.

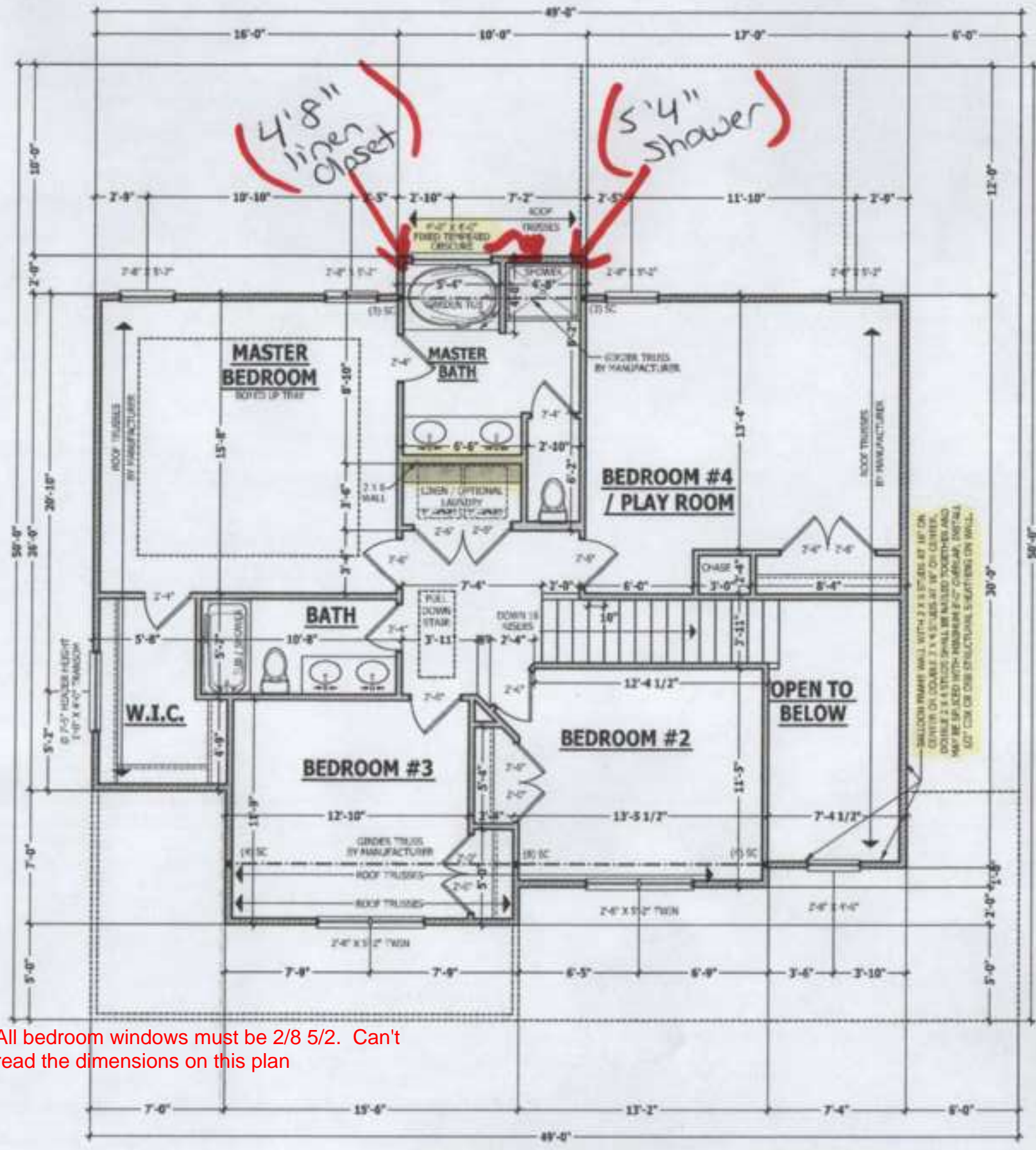
EXTERIOR HEADERS

(2) 2 x 6 WITH 1 JACK STUD EACH END UNLESS NOTED OTHERWISE
 - KING STUDS EACH END PER TABLE BELOW

HEADER SIZE	2'	2'-4"	2'-8"	3'-0"	3'-4"	3'-8"
NO. OF STUDS	1	2	3	4	5	6

INTERIOR HEADERS

- LOAD BEARING HEADERS (2) 2 x 6 WITH 1 JACK STUD AND 1 KING STUD EACH END UNLESS NOTED OTHERWISE
 - NON-LOAD BEARING HEADERS TO BE LADDER FRAMED



All bedroom windows must be 2/8 5/2. Can't read the dimensions on this plan

SECOND FLOOR PLAN
 SCALE 1/4" = 1'-0"

BRACING NOT SHOWN ON UPPER STORY PER R602.10.3.2 (5) & (6)

REVISIONS MUST BE MADE TO THE ORIGINAL SET OF DRAWINGS BEFORE CONSTRUCTION BEGINS. HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTOR PRACTICES AND PROCEDURES OR SAFETY PROGRAM. HAYNES HOME PLANS, INC. DOES NOT ASSUME RESPONSIBILITY FOR THE CONTRACTOR FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALL MEMBERS SHALL BE TRAINED, EXPERIENCED, AND PROCEED IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICES AND THE BUILDING CODE.

SECOND FLOOR PLAN
Barstow II

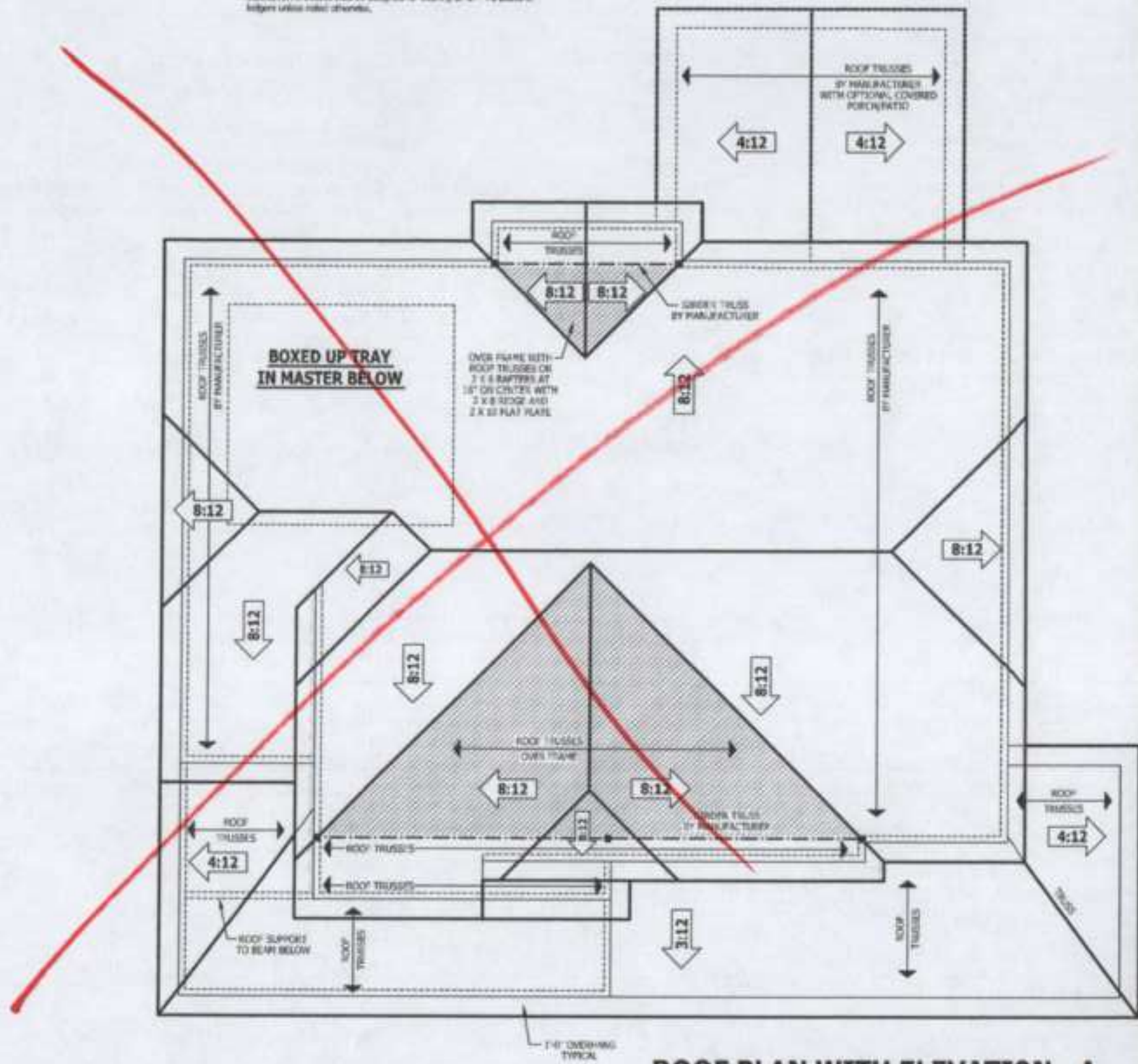
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SQUARE FOOTAGE	HEATED	UNHEATED
FLOOR	1,100	0
CEILING	0	0
WALLS	0	0
ROOF	0	0
TOTAL	1,100	0

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ROOF TRUSS REQUIREMENTS

TRUSS DESIGN. Trusses to be designed and engineered in accordance with these drawings. Any variation with these drawings must be brought to Haynes Weaver Plans, Inc. attention before construction begins.
ANCHORAGE. All essential anchors for trusses due to uplift or loading shall meet the requirements as specified on the truss submittals.
BEARING. All trusses shall be designed for bearing on SPF #2 plates or ledgers unless noted otherwise.



ROOF PLAN WITH ELEVATION - A

SCALE 1/4" = 1'-0"

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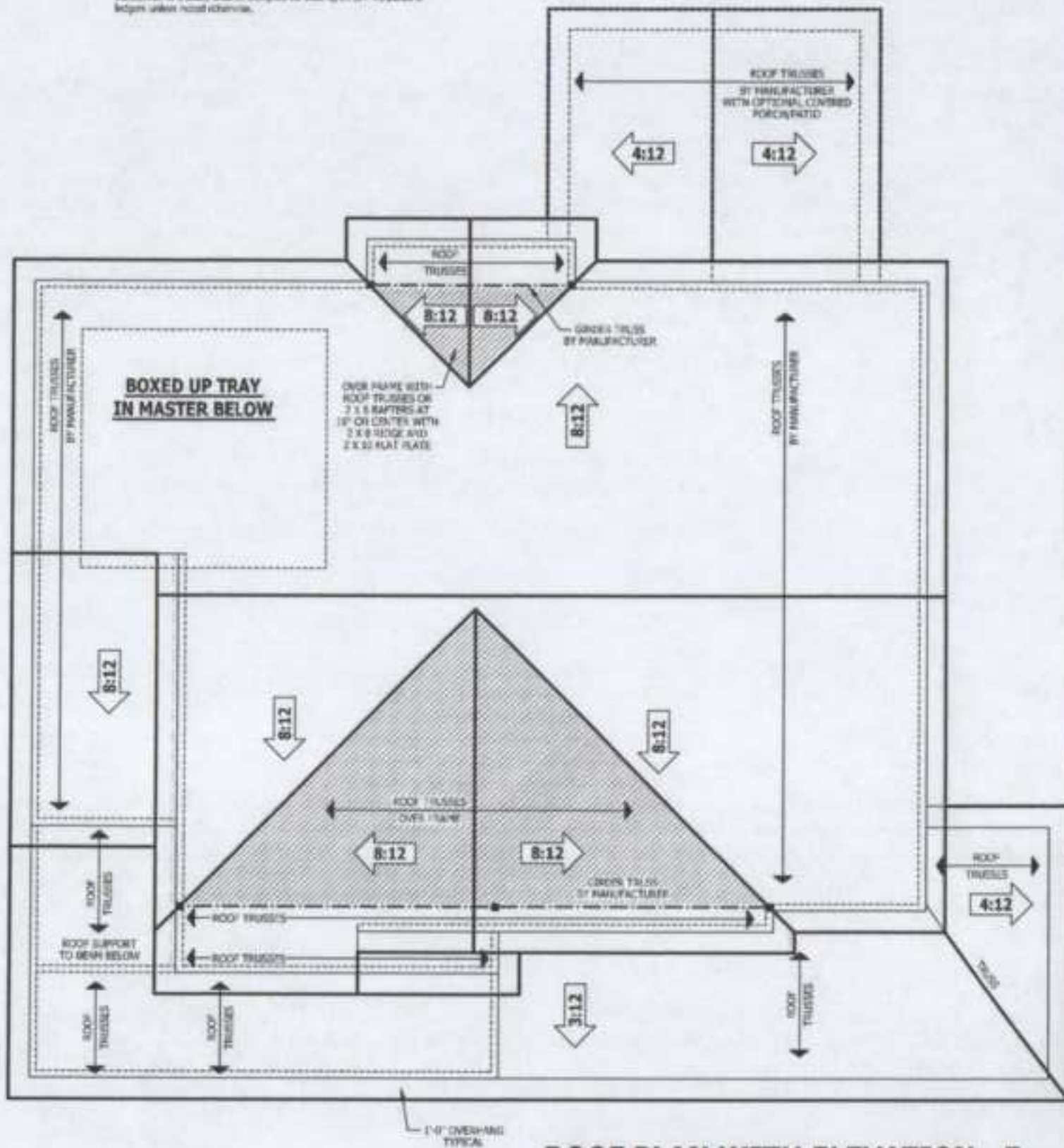
ROOF PLAN - A
Barstow II

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SQUARE FOOTAGE	
NET AREA	3,000
GROSS AREA	3,500
OFFICIAL SQUARES	3,000
FINISHED AREA	3,000
UNFINISHED AREA	500
TOTAL AREA	3,500

ROOF TRUSS REQUIREMENTS

TRUSS DESIGN. Trusses to be designed and engineered in accordance with these drawings. Any variation with these drawings must be brought to Haynes Home Plans, Inc. attention before construction begins.
ANCHORAGE. All support anchors for trusses due to uplift or bearing shall meet the requirements as specified on the truss schematics.
BEARING. All trusses shall be designed for bearing on GFI #2 joists or ledgers unless noted otherwise.



ROOF PLAN WITH ELEVATION - B

SCALE 1/4" = 1'-0"

THIS DOCUMENT SETS A STANDARD FOR CONSTRUCTION AND IS NOT A CONTRACT DOCUMENT. IT IS THE PROPERTY OF HAYNES HOME PLANS, INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. ANY UNAUTHORIZED USE OF THIS DOCUMENT IS PROHIBITED. HAYNES HOME PLANS, INC. 910.658.4444

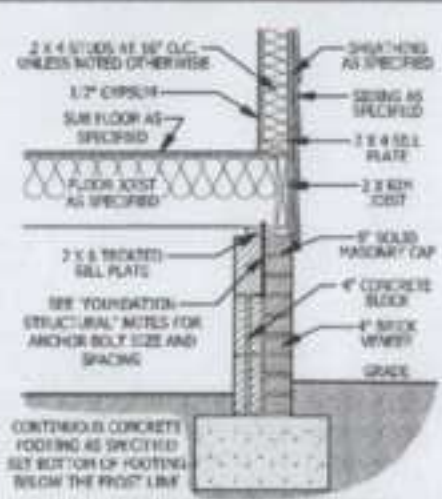
ROOF PLAN - B
Barstow II

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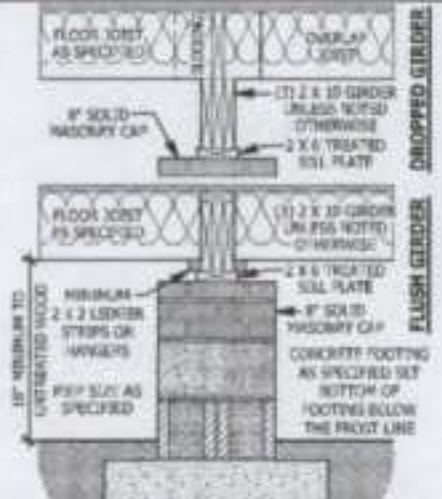
SQUARE FOOTAGE	
HEATED	3,000
UNHEATED	100
TOTAL	
3,100	
OPTIONAL UNHEATED	
UNHEATED	0
TOTAL	0

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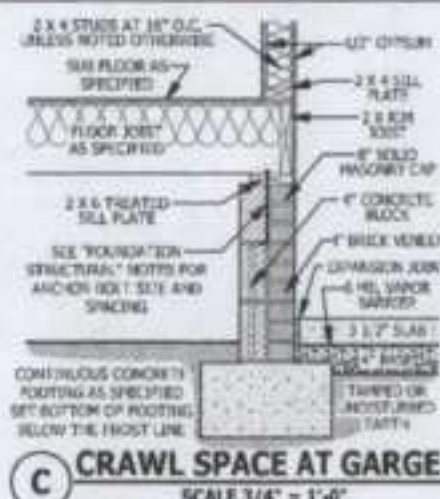
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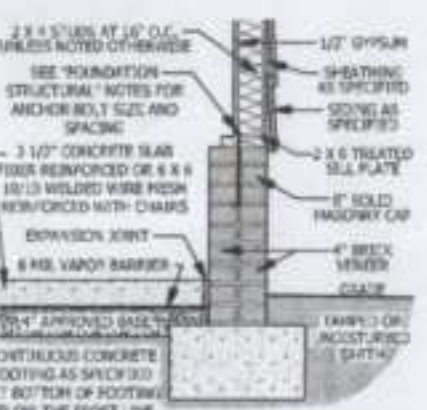
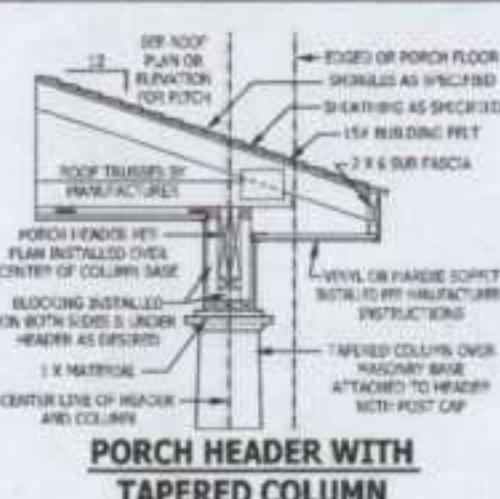
A CRAWL SPACE WALL
SCALE 3/4" = 1'-0"



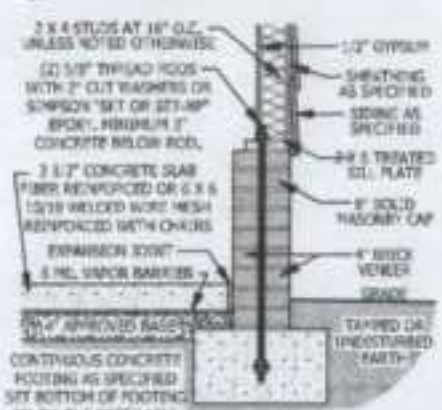
B DROPPED/ FLUSH PIER
SCALE 3/4" = 1'-0"



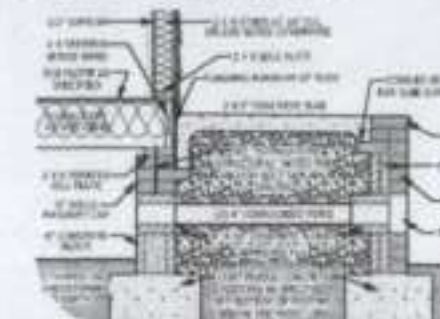
C CRAWL SPACE AT GARGE
SCALE 3/4" = 1'-0"



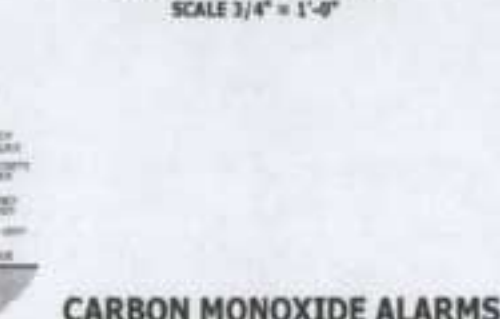
D GARAGE STEM WALL
SCALE 3/4" = 1'-0"



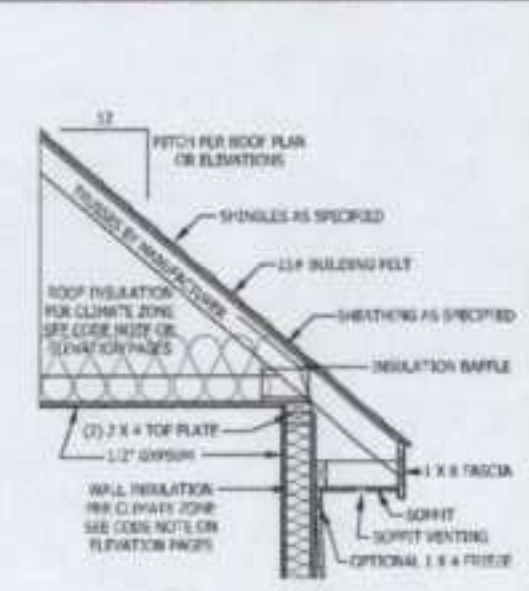
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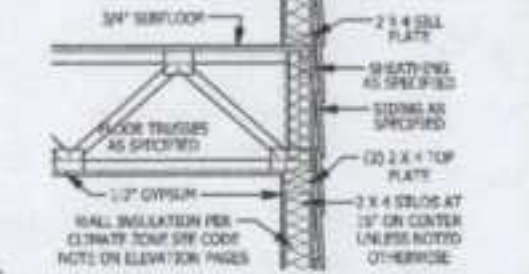
F FILLED PORCH SECTION WITH VENT
SCALE 1/2" = 1'-0"



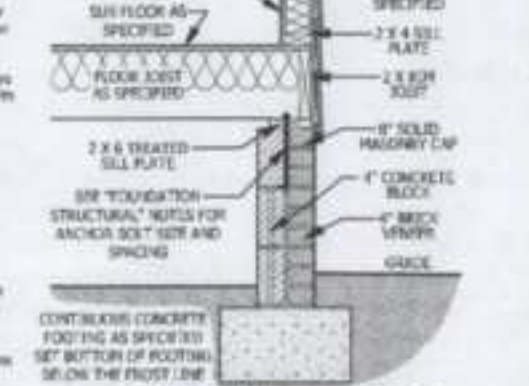
G DECK ATTACHMENT
SCALE 1/2" = 1'-0"



PORCH HEADER WITH TAPERED COLUMN
SCALE 3/4" = 1'-0"



TYPICAL WALL DETAIL
SCALE 3/4" = 1'-0"



TYPICAL STAIR DETAIL
SCALE 1/4" = 1'-0"

DECK STAIR NOTES

SECTION AM110
AM110.1 Stairs shall be constructed per Figure AM110. Stringers shall be no greater than 2 feet apart between supports. Spacing between stringers shall be based upon decking material used per AP101.1. Each stringer shall have a minimum 2 1/2 inches between step cut and back of stringer. If used, suspended headers shall be attached with 3/8 inch galvanized bolts with nuts and washers to securely support stringers at the top.

DECK BRACING

SECTION AM109
AM109.1 Deck bracing. Decks shall be braced to provide lateral stability. The following are acceptable means to provide lateral stability:
AM109.1.1 When the deck floor height is less than 4'-0" above finished grade per Figure AM109 and the deck is attached to the structure in accordance with Section AM101, lateral bracing is not required.
AM109.1.2 A 4 x 4 wood knee brace shall be provided on each column in both directions. The knee brace shall attach to each post at a point not less than 1/3 of the post length from the top of the post, and the brace shall be angled between 45 degrees and 60 degrees from the horizontal. Knee braces shall be braced to the post and the galvanized band with one 5/8 inch bolt spaced galvanized bolt with nut and washer at both ends of the brace per Figure AM109.1.
AM109.1.3 For handrailing areas without knee braces or diagonal bracing, lateral stability may be provided by anchoring the deck in accordance with Figure AP106.2 and the following:
AM109.1.3.1 A 2 x 4 diagonal vertical brace bracing may be provided in two perpendicular directions for handrailing decks or parallel to the structure at the exterior column line for attached decks. The 2 x 4's shall be attached to the posts with one 5/8 inch bolt spaced galvanized bolt with nut and washer at each end of each bracing member per Figure AP106.2.
AM109.1.3.2 For attachment of piles in Coastal Regions, see Chapter 45.

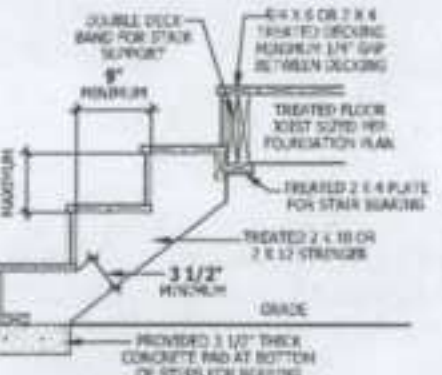


FIGURE AM110 TYPICAL DECK STAIR DETAIL
SCALE 3/4" = 1'-0"

SMOKE ALARMS

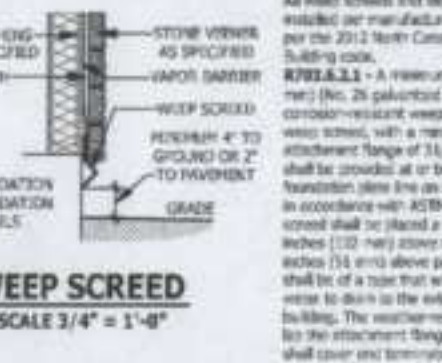
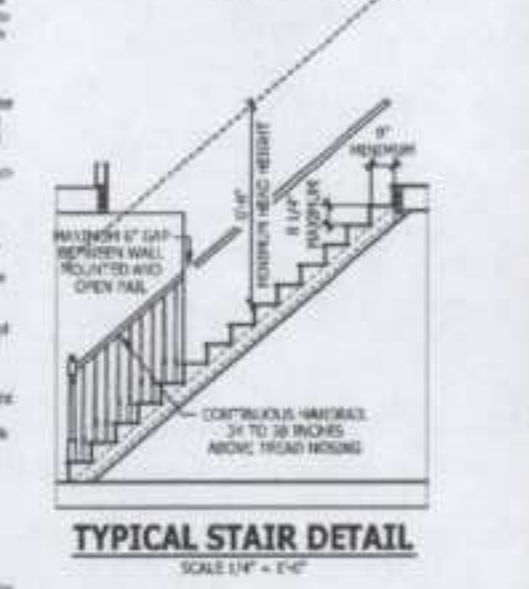
SECTION R314
R314.1 Smoke detector and notification. All smoke alarms shall be listed in accordance with UL 217 and installed in accordance with the provisions of this code and the manufacturer's warning equipment instructions of NFPA 72.
R314.2 Smoke detection systems. Household fire alarm systems installed in accordance with NFPA 72 that include smoke alarms, or a combination of smoke detector and audible notification device installed as required by this section for smoke alarms, shall be installed. The household fire alarm system shall provide the same level of smoke detection and alarm as required by this section for smoke alarms, where a household fire warning system is installed using a combination of smoke detector and audible notification device. It shall become a permanent feature of the occupancy and owned by the homeowner. The system shall be maintained by an approved supervising station and be maintained in accordance with NFPA 72.
Exception: Where smoke alarms are provided meeting the requirements of Section R314.1.
R314.3 Location. Smoke alarms shall be installed in the following locations:
1. In each sleeping room.
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional story of the dwelling, including basements and habitable attic (finished) but not including crawl spaces, unfinished (unvented) attics and unfinished (unvented) attics-over. In sleeping or sleeping units with split levels and without an intervening level between adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
When more than one smoke alarm is required to be installed within an individual dwelling unit, the alarm devices shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit.
R314.4 Power source. Smoke alarms shall receive their primary power from the building wiring when such wiring is connected to a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be grounded and utilize a disconnecting switch after the first branch for the maximum protection. Smoke alarms shall be interconnected.

CARBON MONOXIDE ALARMS

SECTION R315
R315.1 Carbon monoxide alarms. In new construction, dwelling units shall be provided with an approved carbon monoxide alarm installed outside of each separate sleeping area in the immediate vicinity of the bedrooms (as directed by the alarm manufacturer).
R315.2 Where required in existing dwellings. In existing dwellings, where interior alterations, repairs, full-fine guidance replacements, or additions requiring a permit occurs, or when one or more sleeping rooms are added or created, carbon monoxide alarms shall be provided in accordance with Section R315.1.
R315.3 Alarm requirements. The required carbon monoxide alarms shall be audible in all bedrooms per background noise levels with all sleeping doors closed. Single station carbon monoxide alarms shall be listed in compliance with UL 2004 and shall be installed in accordance with the code and the manufacturer's installation instructions.

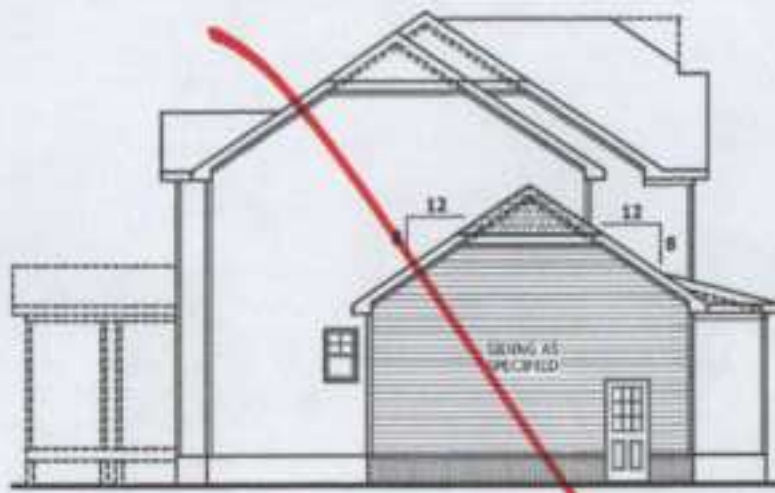
STAIRWAY NOTES

R311.7
R311.7.1 Handrails. The minimum handrail in all parts of the stairway shall not be less than 4 feet 0 inches (1219 mm) measured vertically from the sloped line following the tread nosing or from the face surface of the landing or platform in the portion of the stairway.
R311.7.2 New treads and nosings. New treads and nosings shall meet the requirements of this section. For the purposes of this section all dimensions and dimensional surfaces shall be exclusive of carpets, rugs or runners.
R311.7.2.1 Rise height. The maximum rise height shall be 8 1/4 inches (210 mm). The rise shall be measured vertically between leading edges of the adjacent treads.
R311.7.2.2 Tread depth. The minimum tread depth shall be 9 inches (229 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and to a right angle to the nosing's leading edge. Where treads shall have a minimum tread depth of 9 inches (229 mm) measured at a point 37 inches (940 mm) from the nosing where the tread is narrower. Where treads shall have a minimum tread depth of 4 inches (102 mm) at any point.
R311.7.2.3 Profile. The radius of nosing at the nosing shall be no greater than 5/16 inch (7.9 mm). A nosing not less than 3/4 inch (19 mm) but not more than 1 1/4 inches (31 mm) shall be provided on stairways with nosing treads.
R311.7.7 Handrails. Handrails shall be provided on at least one side of each continuous run of treads or flight with four or more treads.
R311.7.7.1 Height. Handrail height, measured vertically from the sloped plane opposing the tread nosing, or finish surface of nosing treads, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).
Exception:
1. The use of a white, laminate or starting string shall be allowed over the lowest nosing.
2. Where handrail strings or handrails are used to provide continuous transitions between flights, the transition from handrail to guardrail, or used at the start of the flight, the handrail height at the flight or landing shall be permitted to exceed the maximum height.
R311.7.7.2 Continuity. Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top step of the flight to a point directly above the lowest step of the flight. Handrail ends shall be enclosed or shall terminate in wall caps or safety caps. Handrails attached to a wall shall have a clearance of not less than 1 1/2 inch (38 mm) between the wall and the handrail.
Exception:
1. Handrails shall be permitted to be attached to a wall cap.
2. The use of a white, laminate, starting string or starting nosing shall be allowed over the lowest nosing.
3. Two or more separate walls shall be connected continuously if the connection of the walls occurs within 6 inches (152 mm) of each other, if separating between a wall-mounted handrail and a guardrail handrail, the wall-mounted rail must return into the wall.



WEEP SCREED
SCALE 3/4" = 1'-0"

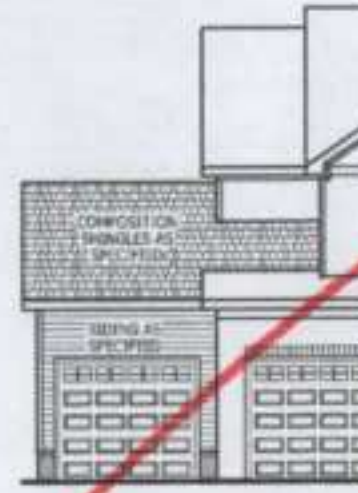
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SIDE ELEVATION
SCALE 1/8" = 1'-0"



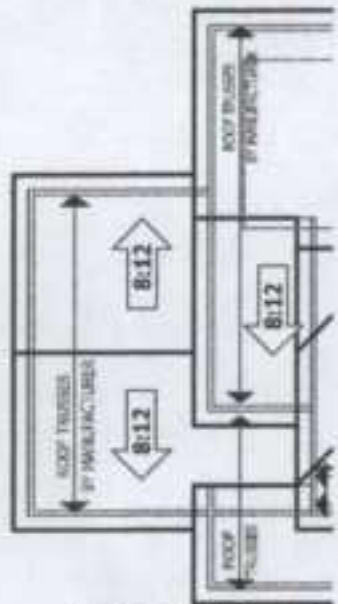
REAR ELEVATION
SCALE 1/8" = 1'-0"



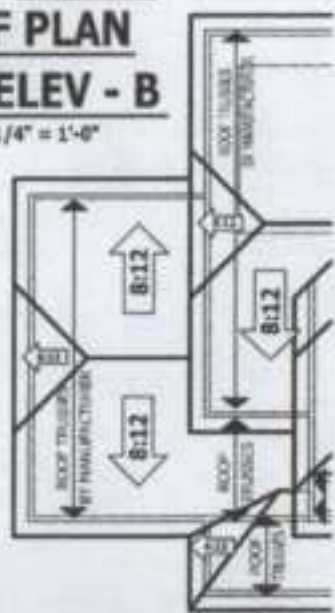
ELEVATION - B
SCALE 1/8" = 1'-0"



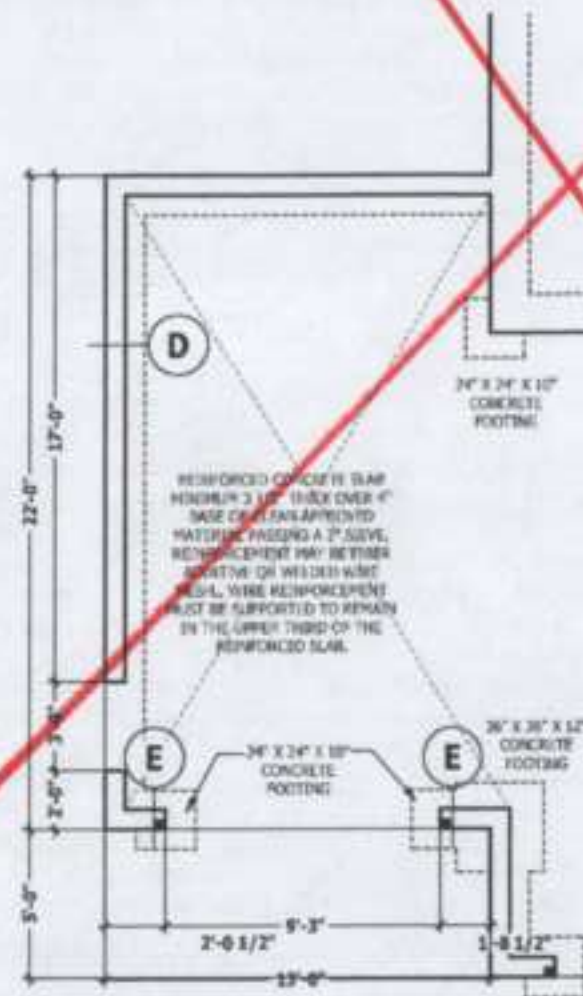
ELEVATION - A
SCALE 1/8" = 1'-0"



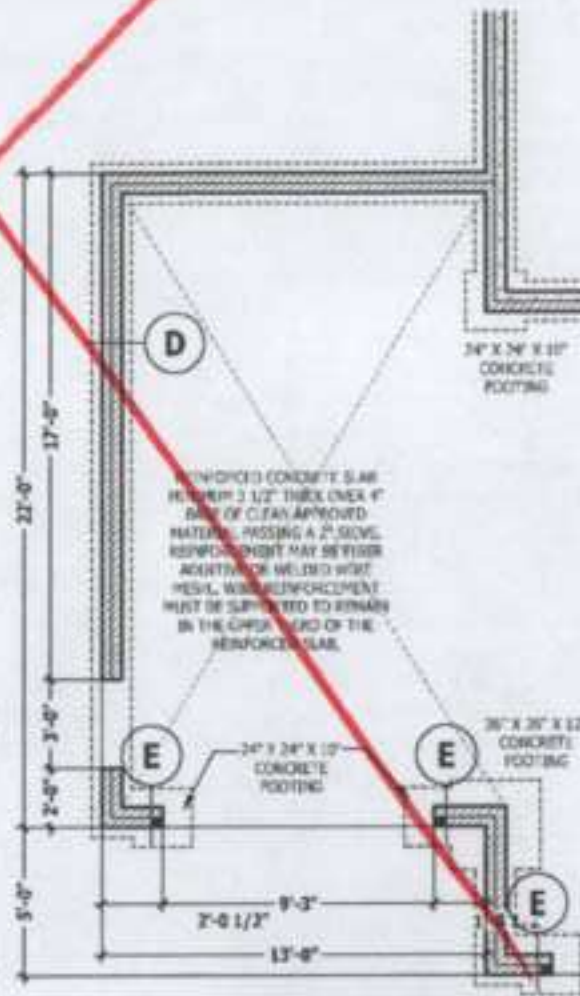
ROOF PLAN WITH ELEV - B
SCALE 1/4" = 1'-0"



ROOF PLAN WITH ELEV - A
SCALE 1/4" = 1'-0"



MONOLITHIC SLAB PLAN
SCALE 1/4" = 1'-0"



CRAWL SPACE / STEM WALL
SCALE 1/4" = 1'-0"



FIRST FLOOR PLAN
SCALE 1/4" = 1'-0"

REVISIONS LIST 2020 ALL DIMENSIONS AND CONSTRUCTION NOTES SHOWN ON THIS DRAWING. UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHALL BE TO THE FACE UNLESS OTHERWISE NOTED. ALL DIMENSIONS SHALL BE TO THE FACE UNLESS OTHERWISE NOTED. ALL DIMENSIONS SHALL BE TO THE FACE UNLESS OTHERWISE NOTED.

FRONT LOAD THIRD CAR
Barstow II

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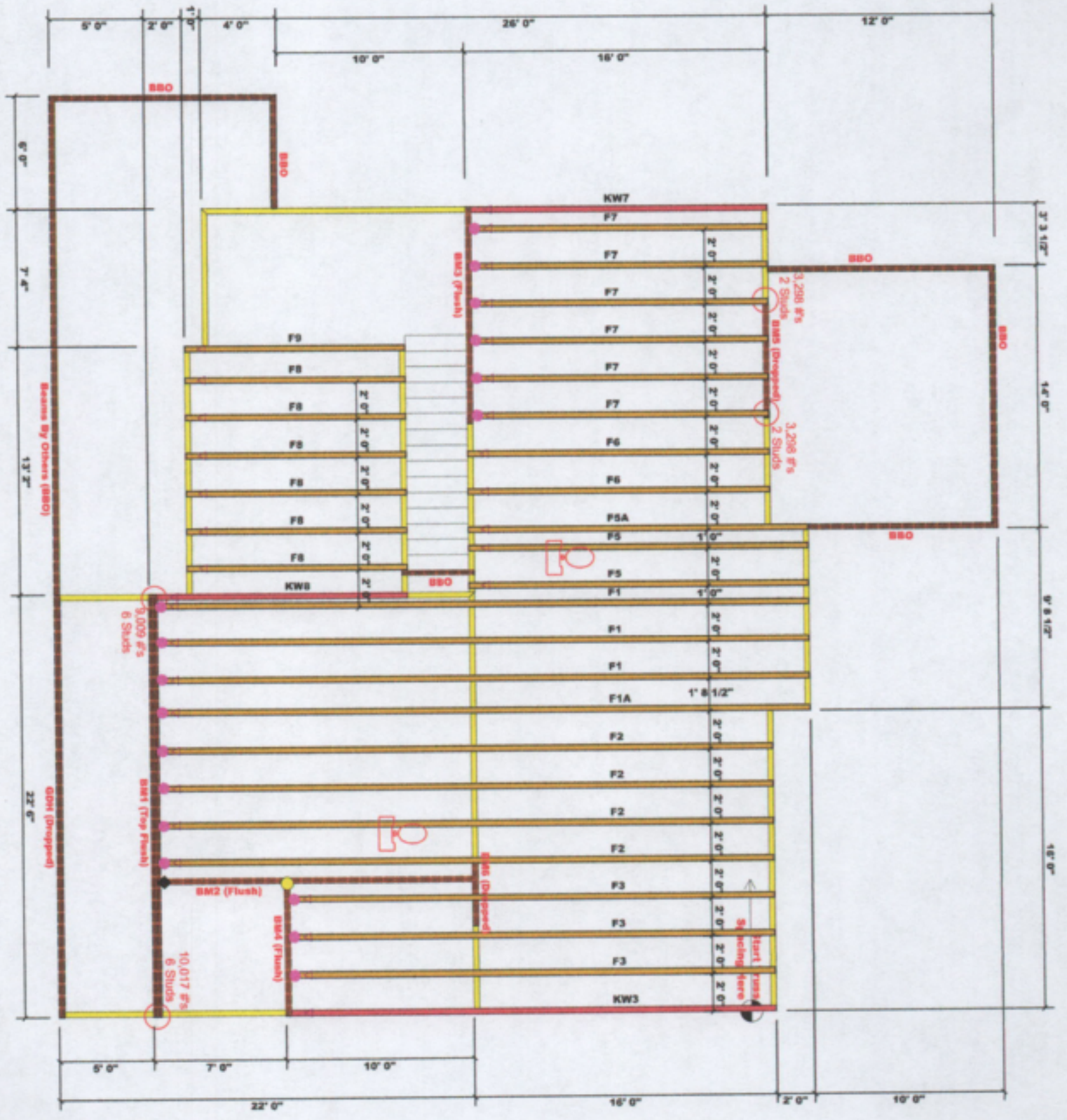
HAYNES HOME PLANS, INC.

SQUARE FOOTAGE	
HEATED	1,812
UNHEATED	1,012
TOTAL	2,824

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ADDENDUM

PlotID	Length	Product	Pieces	Net Qty	Fab Type
BMS (Dropped)	7' 0"	1-3/4" x 9-1/4" LVL Kerto-S	2	2	FF
BM6 (Dropped)	4' 0"	1-3/4" x 9-1/4" LVL Kerto-S	2	2	FF
GDH (Dropped)	23' 0"	1-3/4" x 14" LVL Kerto-S	2	2	FF
BM2 (Flush)	17' 0"	1-3/4" x 16" LVL Kerto-S	2	2	FF
BM3 (Flush)	12' 0"	1-3/4" x 16" LVL Kerto-S	2	2	FF
BM4 (Flush)	7' 0"	1-3/4" x 16" LVL Kerto-S	2	2	FF
BM1 (Top Flush)	23' 0"	1-3/4" x 23-7/8" LVL Kerto-S	3	3	FF

- = HUS410 (Qty. 17)
- = THD410 (Qty. 1)
- ◆ = THD412 (Qty. 1)



Truss Placement Plan
SCALE: 1/4" = 1'-0"

▲ = Denotes Left End of Truss
 (Reference Engineered Truss Drawing)

○ -- Denotes Reaction Greater than 3,000 lbs.
 Reaction / # of Studs

COMTECH ROOF & FLOOR TRUSSES & BEAMS Reilly Road Industrial Park Fayetteville, N.C. 28309 Phone: 910.844.8787 Fax: 910.844.4444		CHRISTINE SHIVY CHRISTINE SHIVY	
BUILDER: Southern Touch Homes JOB NAME: [Redacted] PLAN: Barstow II "B" SEAL DATE: Seal Date QUOTE #: Quote # JOB #: J0322-1382	CITY / CO.: Angier / Harnett ADDRESS: [Redacted] MODEL: Floor DATE REV.: / / DRAWN BY: Christine Shivy SALES REP.: Lenny Norris	LOAD CHART FOR JACK STUDS [Table with columns for Truss Size, Spacing, and Load Capacity]	[Small text block with technical notes and disclaimer]

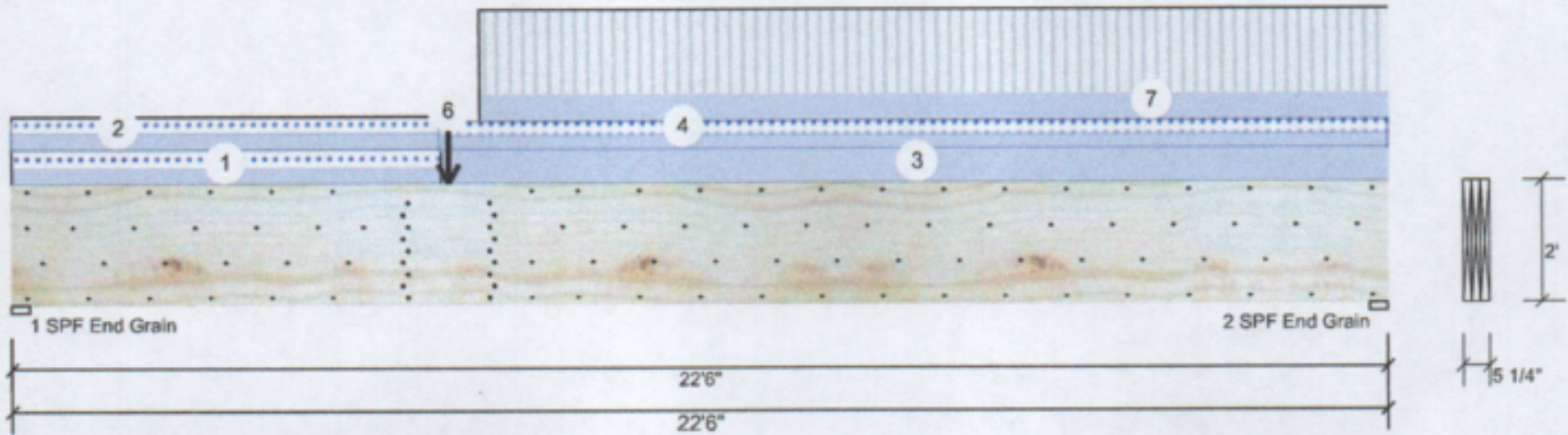


Client: Southern Touch Homes
 Project: Barstow II "B"
 Address: Barstow II "B"

Date: 4/6/2022
 Input by: Christine Shivy
 Job Name: Barstow II "B"
 Project #:

BM1 Kerto-S LVL 1.750" X 24.000" 3-Ply - PASSED

Level: Level



Member Information

Type:	Girder
Plies:	3
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal - II
Temperature:	Temp <= 100°F

Application:	Floor
Design Method:	ASD
Building Code:	IBC/IRC 2015
Load Sharing:	Yes
Deck:	Not Checked

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	5907	4111	1162	0	0
2	Vertical	5045	3964	685	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	65%	4111 / 5907	10017	L	D+L
2 - SPF End Grain	3.500"	Vert	58%	3964 / 5045	9009	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	65693 ft-lb	7'1 7/8"	114169 ft-lb	0.575 (58%)	D+L	L
Unbraced	65693 ft-lb	7'1 7/8"	65752 ft-lb	0.999 (100%)	D+L	L
Shear	10635 lb	2'3 1/2"	26880 lb	0.396 (40%)	D+L	L
LL Defl inch	0.304 (L/871)	10'5 15/16"	0.552 (L/480)	0.551 (55%)	L	L
TL Defl inch	0.507 (L/522)	10'7 11/16"	0.735 (L/360)	0.690 (69%)	D+L	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 4 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 Concentrated load fastener specification is in addition to hanger fasteners if a hanger is present.
- 5 Simpson fasteners applied from a single side of the member use tip values where published.
- 6 Girders are designed to be supported on the bottom edge only.
- 7 Top loads must be supported equally by all plies.
- 8 Top must be laterally braced at a maximum of 3'11 9/16" o.c.
- 9 Bottom must be laterally braced at end bearings.
- 10 Lateral slenderness ratio based on single ply width.

Notes

Calculated Structural 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 preservative chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multiply 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

5. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

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

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



This design is valid until 11/3/2024

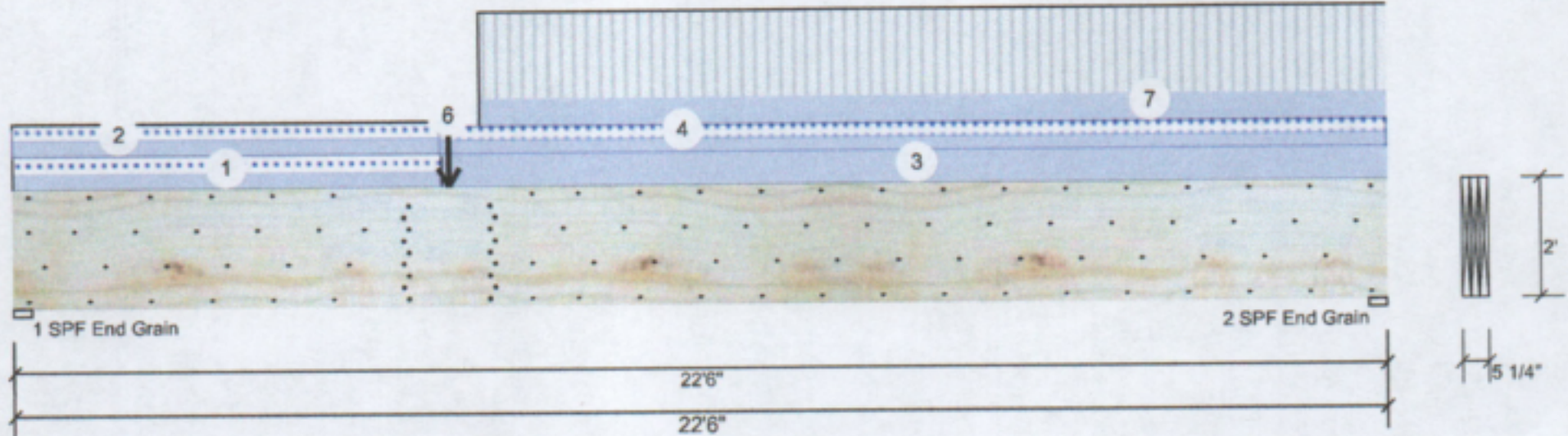


Client: Southern Touch Homes
 Project: Barstow II "B"
 Address: Barstow II "B"

Date: 4/6/2022
 Input by: Christine Shivy
 Job Name: Barstow II "B"
 Project #:

BM1 Kerto-S LVL 1.750" X 24.000" 3-Ply - PASSED

Level: Level



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 7-0-0		Far Face	61 PLF	0 PLF	61 PLF	0 PLF	0 PLF	M4
2	Part. Uniform	0-0-0 to 7-0-0		Near Face	56 PLF	0 PLF	56 PLF	0 PLF	0 PLF	M8A
3	Part. Uniform	7-0-0 to 22-6-0		Top	125 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Exterior Wall
4	Part. Uniform	7-0-0 to 22-6-0		Near Face	45 PLF	0 PLF	45 PLF	0 PLF	0 PLF	M8
5	Point	7-1-12		Far Face	2160 lb	6480 lb	0 lb	0 lb	0 lb	BM2
6	Point	7-1-12		Top	331 lb	0 lb	331 lb	0 lb	0 lb	D1GE
	Bearing Length	0-3-8								
7	Part. Uniform	7-7-12 to 22-6-0		Far Face	101 PLF	301 PLF	0 PLF	0 PLF	0 PLF	F1
	Self Weight				28 PLF					

Notes

Calculated Structural 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, multiply 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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 301 Merritt 7 Building, 2nd Floor
 Norwalk, CT 06851
 (800) 622-5850
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 28314
 910-864-TRUS





Client: Southern Touch Homes

Date: 4/6/2022

Project: Barstow II "B"

Input by: Christine Shivy

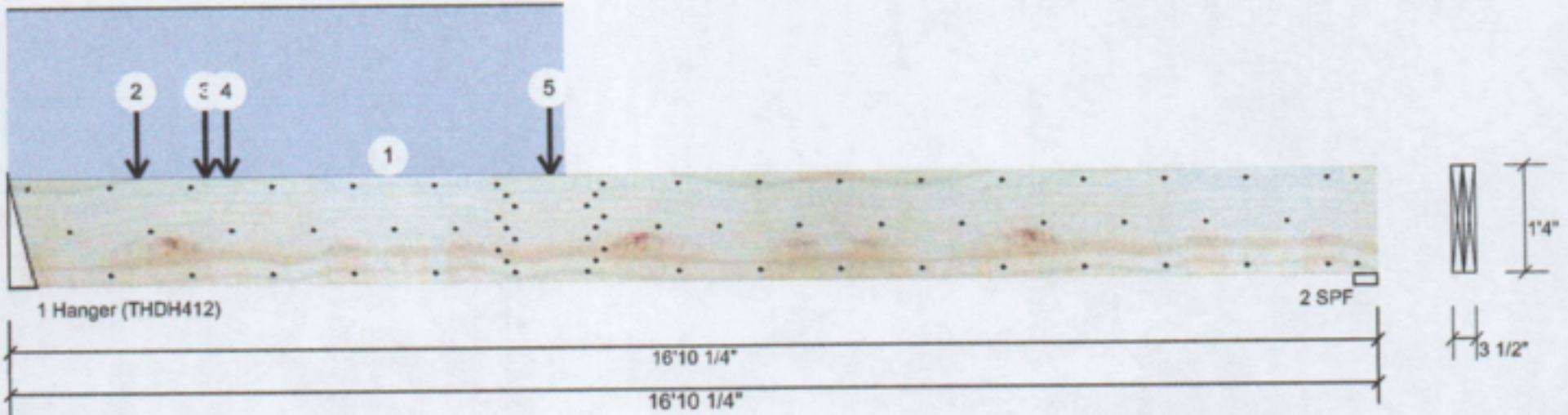
Address: Barstow II "B"

Job Name: Barstow II "B"

Project #:

BM2 Kerto-S LVL 1.750" X 16.000" 2-Ply - PASSED

Level: Level



Member Information

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

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

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	975	4880	3759	0	0
2	Vertical	628	1043	563	0	0

Bearings

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	4.000"	Vert	73%	4880 / 3759	8639	L	D+S
2 - SPF	3.500"	Vert	37%	1043 / 894	1937	L	D+0.75(L+S)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	18652 ft-lb	6'3 11/16"	39750 ft-lb	0.469 (47%)	D+0.75(L+S)	L
Unbraced	18652 ft-lb	6'3 11/16"	18711 ft-lb	0.997 (100%)	D+0.75(L+S)	L
Shear	8384 lb	1'8"	13739 lb	0.610 (61%)	D+S	L
LL Defl inch	0.175 (L/1123)	7'3 11/16"	0.409 (L/480)	0.428 (43%)	0.75(L+S)	L
TL Defl inch	0.377 (L/522)	7'3 1/8"	0.546 (L/360)	0.690 (69%)	D+0.75(L+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 3 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 Concentrated load fastener specification is in addition to hanger fasteners if a hanger is present.
- 5 Fill all hanger nailing holes.
- 6 Girders are designed to be supported on the bottom edge only.
- 7 Top loads must be supported equally by all plies.
- 8 Top must be laterally braced at a maximum of 6'3 1/4" o.c.
- 9 Bottom must be laterally braced at end bearings.
- 10 Lateral slenderness ratio based on single ply width.

Notes
 Calculated Structural 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

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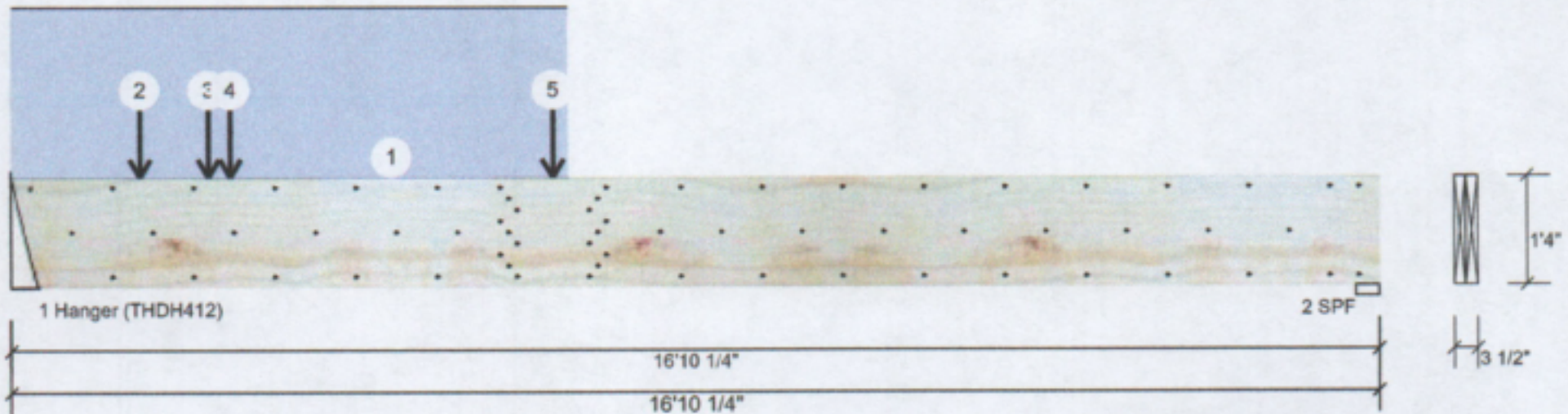


Client: Southern Touch Homes
 Project: Barstow II "B"
 Address: Barstow II "B"

Date: 4/6/2022
 Input by: Christine Shivy
 Job Name: Barstow II "B"
 Project #:

BM2 Kerto-S LVL 1.750" X 16.000" 2-Ply - PASSED

Level: Level



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 6-10-4		Top	125 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Exterior Wall
2	Point	1-7-2		Top	388 lb	0 lb	388 lb	0 lb	0 lb	B1GE
	Bearing Length	0-3-8								
3	Point	2-5-4		Top	3415 lb	0 lb	3415 lb	0 lb	0 lb	B1GR
	Bearing Length	0-3-8								
4	Point	2-8-8		Top	519 lb	0 lb	519 lb	0 lb	0 lb	A4GE
	Bearing Length	0-3-8								
5	Point	6-8-2		Near Face	535 lb	1603 lb	0 lb	0 lb	0 lb	BM4
	Self Weight				12 PLF					

Notes
 Calculated Structural Design 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, multiply 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) 622-5650
www.metsawood.com/us

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 28314
 910-864-TRUS



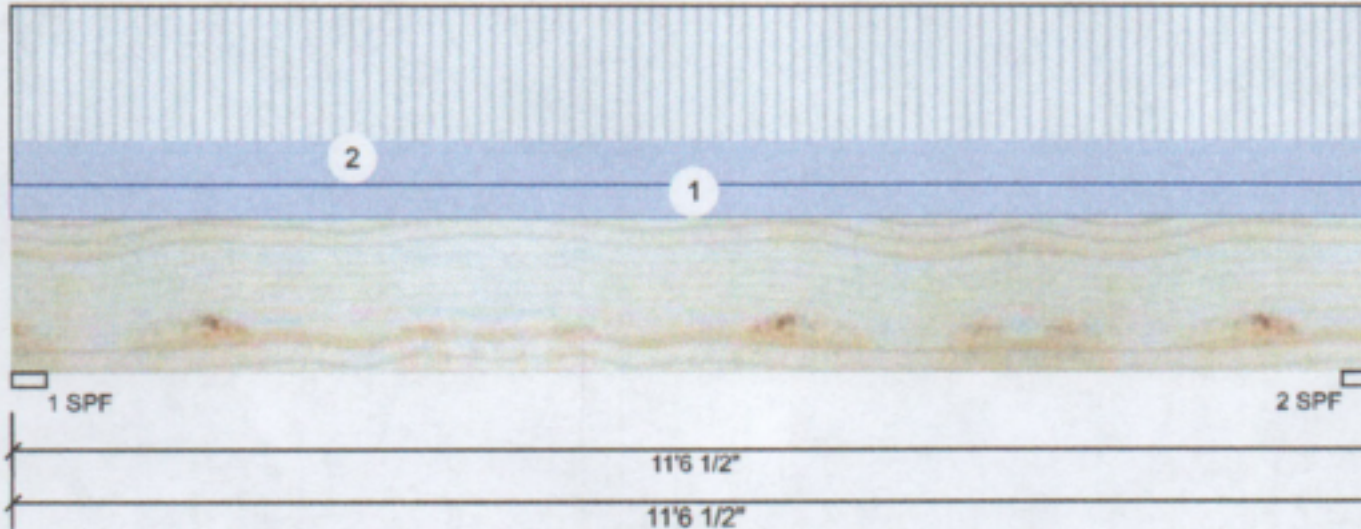


Client: Southern Touch Homes
 Project: Barstow II "B"
 Address: Barstow II "B"

Date: 4/6/2022
 Input by: Christine Shivy
 Job Name: Barstow II "B"
 Project #:

BM3 Kerto-S LVL 1.750" X 16.000" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder
Piles:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	240
Importance:	Normal - II
Temperature:	Temp <= 100°F

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

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	1824	1145	0	0	0
2	Vertical	1824	1145	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	57%	1145 / 1824	2969	L	D+L
2 - SPF	3.500"	Vert	57%	1145 / 1824	2969	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7929 ft-lb	5'9 1/4"	34565 ft-lb	0.229 (23%)	D+L	L
Unbraced	7929 ft-lb	5'9 1/4"	11133 ft-lb	0.712 (71%)	D+L	L
Shear	2712 lb	9'11"	11947 lb	0.227 (23%)	D+L	L
LL Defl inch	0.055 (L/2411)	5'9 1/4"	0.278 (L/480)	0.199 (20%)	L	L
TL Defl inch	0.090 (L/1481)	5'9 1/4"	0.555 (L/240)	0.162 (16%)	D+L	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 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at end bearings.
- 6 Bottom must be laterally braced at end 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	Uniform			Top	80 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Interior Wall
2	Uniform			Far Face	106 PLF	316 PLF	0 PLF	0 PLF	0 PLF	F7
	Self Weight				12 PLF					

Notes
 Calculated Structural 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 preservative

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

5. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

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 301 Merritt 7 Building, 2nd Floor
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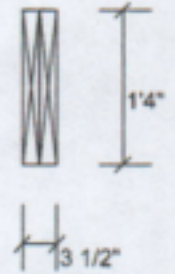
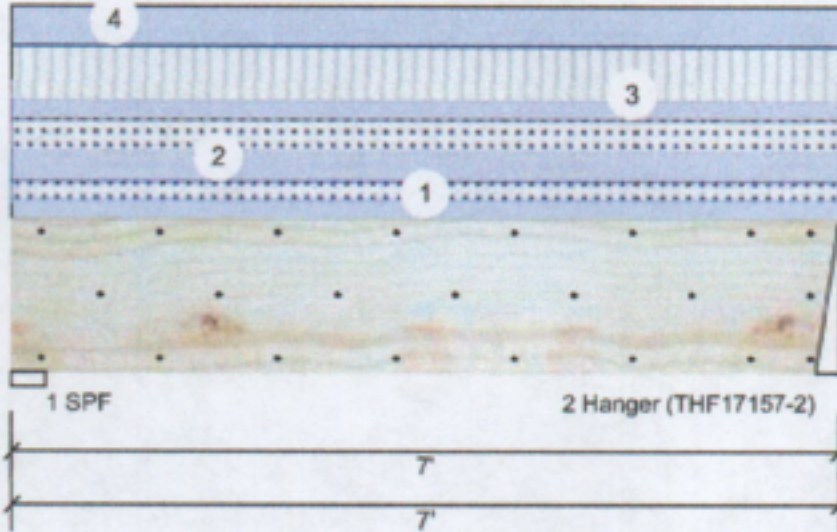


Client: Southern Touch Homes
 Project: Barstow II "B"
 Address: Barstow II "B"

Date: 4/6/2022
 Input by: Christine Shivy
 Job Name: Barstow II "B"
 Project #:

BM4 Kerto-S LVL 1.750" X 16.000" 2-Ply - PASSED

Level: Level



Member Information

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

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

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	627	1280	584	0	0
2	Vertical	612	1250	571	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	42%	1280 / 908	2189	L	D+0.75(L+S)
2 - Hanger	2.500"	Vert	29%	1250 / 887	2137	L	D+0.75(L+S)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2973 ft-lb	3'6 1/2"	34565 ft-lb	0.086 (9%)	D+L	L
Unbraced	3412 ft-lb	3'6 1/2"	17713 ft-lb	0.193 (19%)	D+0.75(L+S)	L
Shear	1445 lb	5'5 1/2"	11947 lb	0.121 (12%)	D+L	L
LL Defl inch	0.008 (L/10459)	3'6 1/2"	0.166 (L/480)	0.046 (5%)	0.75(L+S)	L
TL Defl inch	0.018 (L/4341)	3'6 1/2"	0.222 (L/360)	0.083 (8%)	D+0.75(L+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 3 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 Fill all hanger nailing holes.
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be laterally braced at end bearings.
- 8 Bottom must be laterally braced at end bearings.
- 9 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			Near Face	61 PLF	0 PLF	61 PLF	0 PLF	0 PLF	M4
2	Uniform			Top	104 PLF	0 PLF	104 PLF	0 PLF	0 PLF	C1
3	Uniform			Far Face	59 PLF	177 PLF	0 PLF	0 PLF	0 PLF	F3
4	Uniform			Top	125 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Exterior Wall
	Self Weight				12 PLF					

Notes
 Calculated Structural 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 preservative

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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 301 Merritt 7 Building, 2nd Floor
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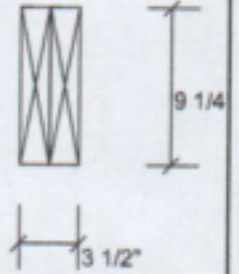
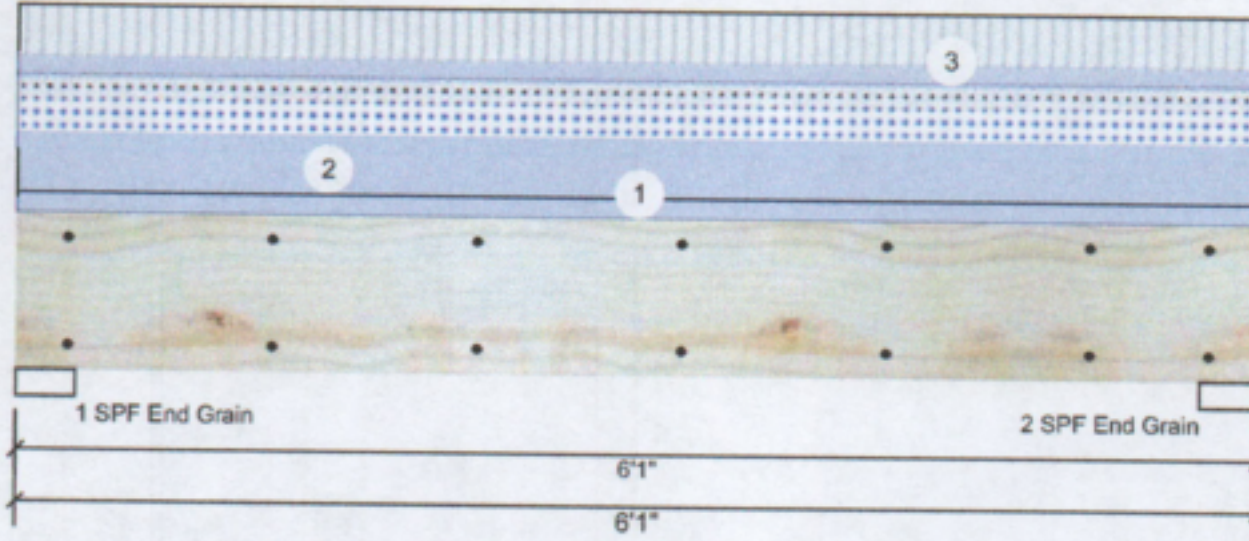


Client: Southern Touch Homes
 Project: Barstow II "B"
 Address: Barstow II "B"

Date: 4/6/2022
 Input by: Christine Shivy
 Job Name: Barstow II "B"
 Project #:

BM5 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



Member Information

Reactions UNPATTERNED lb (Uplift)

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

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

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	961	1783	1059	0	0
2	Vertical	961	1783	1059	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	32%	1783 / 1515	3298	L	D+0.75(L+S)
2 - SPF End Grain	3.500"	Vert	32%	1783 / 1515	3298	L	D+0.75(L+S)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4288 ft-lb	3' 1/2"	14423 ft-lb	0.297 (30%)	D+0.75(L+S)	L
Unbraced	4288 ft-lb	3' 1/2"	10944 ft-lb	0.392 (39%)	D+0.75(L+S)	L
Shear	2151 lb	1' 3/4"	7943 lb	0.271 (27%)	D+0.75(L+S)	L
LL Defl inch	0.031 (L/2156)	3' 1/2"	0.141 (L/480)	0.223 (22%)	0.75(L+S)	L
TL Defl inch	0.068 (L/990)	3' 1/2"	0.188 (L/360)	0.363 (36%)	D+0.75(L+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	125 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Exterior Wall
2	Uniform			Top	348 PLF	0 PLF	348 PLF	0 PLF	0 PLF	A1
3	Uniform			Top	106 PLF	316 PLF	0 PLF	0 PLF	0 PLF	F7
	Self Weight				7 PLF					

<p>Notes</p> <p>Calculated Structural 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.</p> <p>Lumber</p> <ol style="list-style-type: none"> 1. Dry service conditions, unless noted otherwise 2. LVL not to be treated with fire retardant or corrosive chemicals 	<p>Handling & Installation</p> <ol style="list-style-type: none"> 1. LVL beams must not be cut or drilled 2. Refer to manufacturer's product information regarding installation requirements, multiply 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 	<p>5. For flat roofs provide proper drainage to prevent ponding</p>	<p>Manufacturer Info</p> <p>Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us</p>	<p>Comtech, Inc. 1001 S. Rally Road, Suite #630 Fayetteville, NC USA 28314 910-864-TRUS</p>
			<p>This design is valid until 11/3/2024</p>	

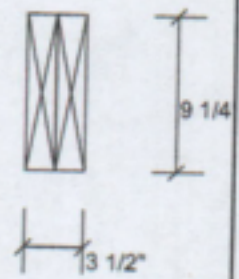
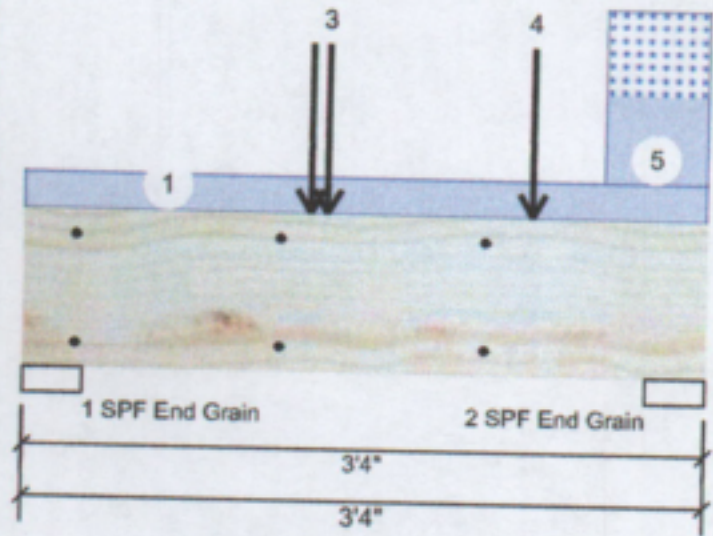


Client: Southern Touch Homes
 Project: Barstow II "B"
 Address: Barstow II "B"

Date: 4/6/2022
 Input by: Christine Shivy
 Job Name: Barstow II "B"
 Project #:

BM6 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



Member Information

Reactions UNPATTERNED lb (Uplift)

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

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

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	1004	914	401	0	0
2	Vertical	1667	1127	392	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total Ld.	Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	19%	914 / 1054	1968	L	D+0.75(L+S)
2 - SPF End Grain	3.500"	Vert	27%	1127 / 1667	2793	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2228 ft-lb	1'5 3/4"	12542 ft-lb	0.178 (18%)	D+L	L
Unbraced	2228 ft-lb	1'5 3/4"	11972 ft-lb	0.186 (19%)	D+L	L
Shear	2038 lb	2'3 1/4"	6907 lb	0.295 (30%)	D+L	L
LL Defl inch	0.008 (L/4191)	1'5 3/4"	0.072 (L/480)	0.115 (11%)	0.75(L+S)	L
TL Defl inch	0.014 (L/2383)	1'5 3/4"	0.096 (L/360)	0.151 (15%)	D+0.75(L+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	100 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Interior Wall
2	Point	1-4-12		Top	669 lb	0 lb	669 lb	0 lb	0 lb	C2
	Bearing Length	0-3-8								
3	Point	1-5-12		Top	406 lb	1218 lb	0 lb	0 lb	0 lb	F3
	Bearing Length	0-3-8								

Continued on page 2...

Notes
 Calculated Structural 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 preservative

Handling & Installation
 1. LVL beams must not be cut or drilled
 2. Refer to manufacturer's product information regarding installation requirements, multiply 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. Rolly Road, Suite #630
 Fayetteville, NC
 USA
 28314
 910-861-TRUS



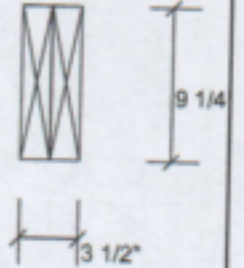
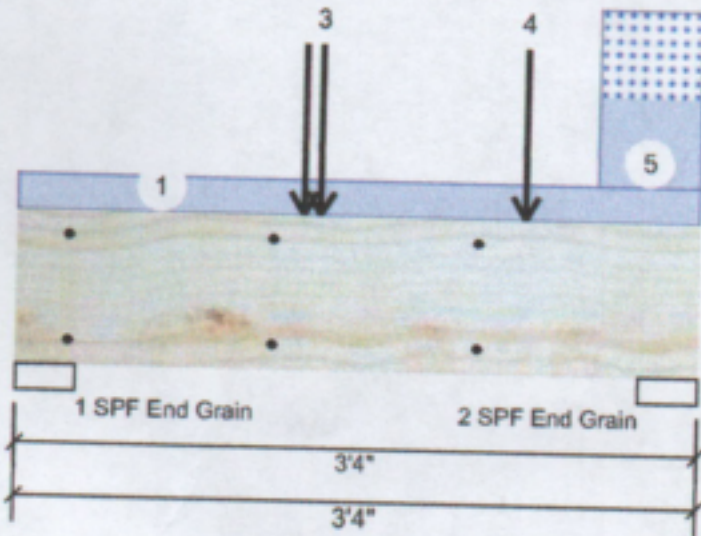


Client: Southern Touch Homes
 Project: Barstow II "B"
 Address: Barstow II "B"

Date: 4/6/2022
 Input by: Christine Shivy
 Job Name: Barstow II "B"
 Project #:

BM6 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
4	Point	2-5-12		Top	485 lb	1453 lb	0 lb	0 lb	0 lb	BM2
	Bearing Length	0-3-8								
5	Part. Uniform	2-10-0 to 3-4-0		Top	247 PLF	0 PLF	247 PLF	0 PLF	0 PLF	A4GE
	Self Weight				7 PLF					

Notes

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Lumber

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

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

Manufacturer Info

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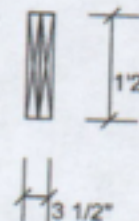
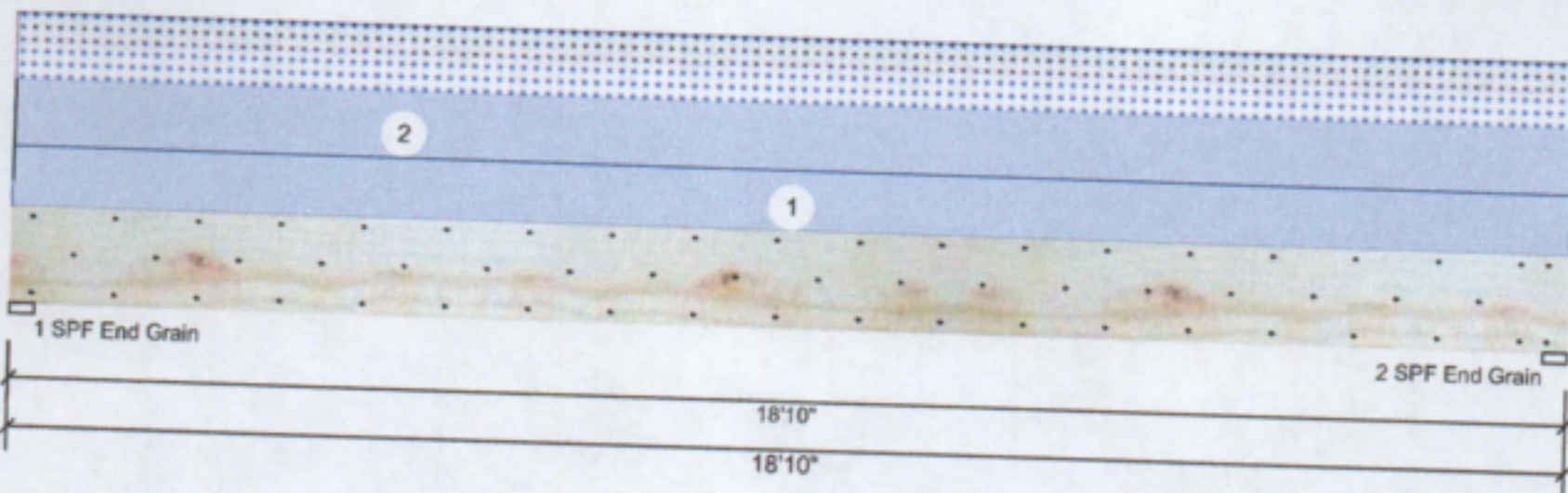


Client: Southern Touch Homes
 Project: Barstow II "B"
 Address: Barstow II "B"

Date: 4/6/2022
 Input by: Christine Shivy
 Job Name: Barstow II "B"
 Project #:

GDH Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED

Level: Level



Member Information

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

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

Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1270	603	0	0
2	Vertical	0	1270	603	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L Ib	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	18%	1270 / 603	1873	L	D+S
2 - SPF End Grain	3.500"	Vert	18%	1270 / 603	1873	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment Unbraced	8394 ft-lb	9'5"	31049 ft-lb	0.270 (27%)	D+S	L
Shear	1596 lb	1'5 1/2"	12021 lb	0.133 (13%)	D+S	L
LL Defl inch	0.109 (L/2025)	9'5 1/16"	0.459 (L/480)	0.237 (24%)	S	L
TL Defl inch	0.338 (L/652)	9'5 1/16"	0.612 (L/360)	0.553 (55%)	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 3 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 13'7 5/8" 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	60 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Exterior Load
2	Uniform			Top	64 PLF	0 PLF	64 PLF	0 PLF	0 PLF	M8
	Self Weight				11 PLF					

Notes
 Calculated Structural 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

5. For flat roofs provide proper drainage to prevent ponding

Manufacturer info

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Comtech, Inc.
 1001 S. Robly Road, Suite #639
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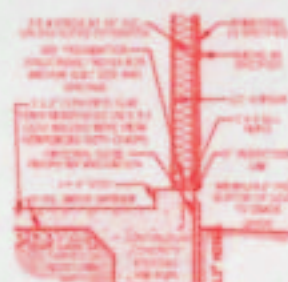
A MONOLITHIC SECTION
SCALE 1/2" = 1'-0"



C MONOLITHIC AT STEP
SCALE 1/2" = 1'-0"



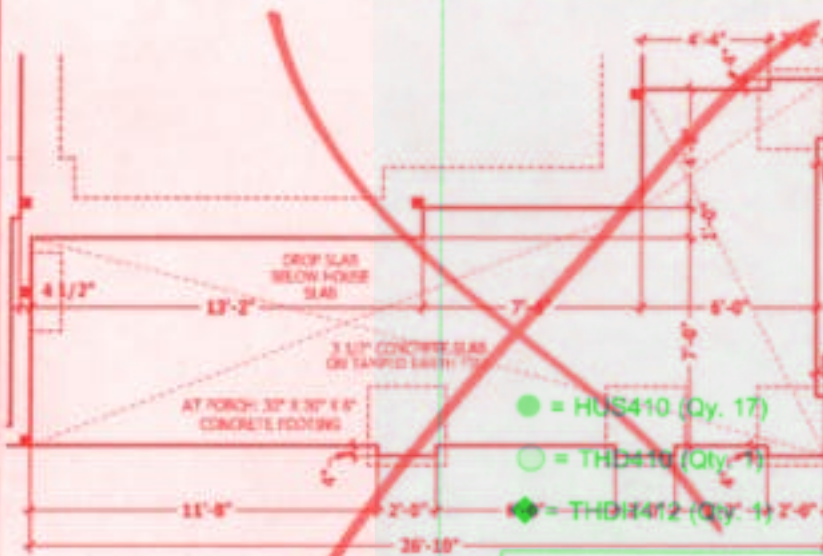
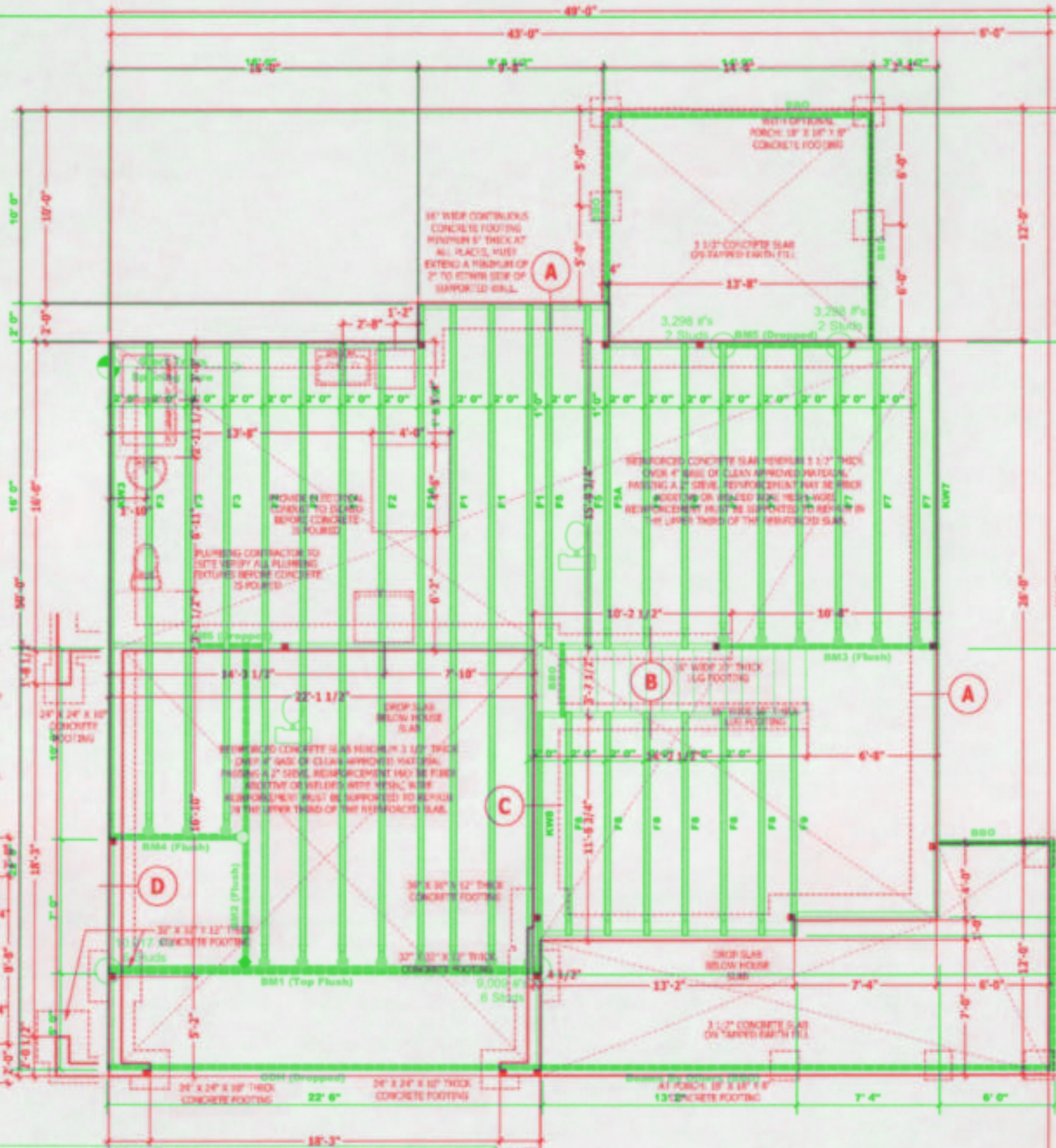
B LUG FOOTING SECTION
SCALE 1/2" = 1'-0"



D MONOLITHIC AT GARAGE
SCALE 1/2" = 1'-0"

FOUNDATION STRUCTURAL

115 to 120 high steel bars (1 1/2 to 2 1/2 dia)
CONTINUOUS FOOTING: 16" wide and 8" thick minimum, 30" wide minimum at brick veneer. Must extend 2" to other side of supported wall.
WISERS: (1) 2 x 10 girders unless noted otherwise.
PIERS: 24" x 16" size with 3" wide masonry cap on 30" x 20" x 12" concrete footing with maximum pier height of 64" with hollow masonry and 100# wire mesh.
POINT LOADS: Design with significant point load and should have solid blocking under, center of foundation wall.
115 and 120 NPS ANCHORS: 1/2" diameter anchor bolts embedded minimum 15", maximum 4'-0" on center, within 12" of plate ends, and maximum two anchor bolts per plate.
130 NPS ANCHORS: 1/2" diameter anchor bolts embedded minimum 15", maximum 4'-0" on center, within 12" of plate ends, and maximum two anchor bolts per plate.
CONCRETE: Concrete shall have a minimum 28 day strength of 3000 psi and a maximum 5" slump. An air-entrained per table 403.2. All concrete shall be in accordance with ACI standards. All rebar for pouring shall be taken from the end part of the pump.
SMALL: Allowable soil bearing pressure assumed to be 2000 PSI. The contractor must contact a geotechnical engineer and a structural engineer of satisfactory subsurface conditions are encountered. The surface area adjacent to the foundation wall shall be protected with absolute damage, and shall be graded so as to drain surface water away from foundation walls.



PORCH WITH ELEVATION B

- = HUS410 (Qty. 17)
- = THD410 (Qty. 1)
- ◆ = THD1412 (Qty. 1)

Products	Length	Product	Ply	Net Qty	Fab Type
BM5 (Dropped)	7' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF
BM6 (Dropped)	4' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF
GDH (Dropped)	23' 0"	1-3/4"x 14" LVL Kerto-S	2	2	FF
BM2 (Flush)	17' 0"	1-3/4"x 16" LVL Kerto-S	2	2	FF
BM3 (Flush)	12' 0"	1-3/4"x 16" LVL Kerto-S	2	2	FF
BM4 (Flush)	7' 0"	1-3/4"x 16" LVL Kerto-S	2	2	FF
BM1 (Top Flush)	23' 0"	1-3/4"x 23-7/8" LVL Kerto-S	3	3	FF

MONOLITHIC SLAB PLAN

SCALE 1/4" = 1'-0"

Truss Placement Plan
SCALE: 1/4" = 1'-0"

MONOLITHIC SLAB PLAN
Barstow II

WEAVER
HOMES
HOME PLANS, INC.
910.630.4100 • 910.630.4100

HOME PLANS, INC.
HOME PLANS, INC.
HOME PLANS, INC.

SQUARE FOOTAGE
TOTAL: 5000
LIVING: 3000
BEDROOM: 1000
BATH: 500
KITCHEN: 500
PORCH: 500

A - Denotes Left End of (Reference Engineer's Truss)

5/28/2020

All 2003198 plans are L...
PAGE 2 OF 7

Denotes Reaction Greater than Reaction / # of 5