



GC5 - FORTIFIED Home™ - Gold Compliance Form for Contractor – Prescriptive Continuous Load Path for New Construction

For High Wind designations, the continuous load path (CLP) design may be the responsibility of a licensed design professional following prescriptive guidance per the 2018 Wood Frame Construction Manual incorporating 2018 IRC requirements and prescriptive FORTIFIED requirements per section 6.4.2 of the 2020 FORTIFIED Home Standard. This form is intended to verify that the prescriptive structural components required by FORTIFIED listed in Appendix F of the 2020 FORTIFIED Home Standard have been installed. All sections must be completed and signed by the installing contractor. Form not valid if all sections are not filled out, initialed and/or signed by installing contractor. IBHS does not take responsibility for the continuous load path design of the home.

1. General Information (complete a thru j):

- a. FORTIFIED ID: \_\_\_\_\_ (Obtain from homeowner or FORTIFIED Evaluator)
b. Homeowner's Name: \_\_\_\_\_
c. Property Street Address: \_\_\_\_\_
d. City: \_\_\_\_\_
e. State: \_\_\_\_\_
f. ZIP: \_\_\_\_\_
g. County: \_\_\_\_\_
h. Building Code and Edition: \_\_\_\_\_
i. Permit Number: \_\_\_\_\_
j. Date Installation was completed: \_\_\_\_\_

2. Building Eligibility

Prescriptive CLP design measures per the 2018 Wood Frame Construction Manual may ONLY be used for homes conforming to both the limitations listed in the Wood Frame Construction Manual and the following additional FORTIFIED limitations. Check to confirm that the building meets ALL of the following:

- One or two-story wood framed structure
Mean roof height shall not exceed 33'
Minimum 4/12 roof pitch
Maximum building width shall not exceed 36'
Maximum building length shall not exceed 80'
Length of building shall not exceed 2.25 times the building width
Exterior and/or shear wall line offset shall not exceed 4'
Gables shall not exceed 10' height at peak
Wall top plate to roof ridge height shall not exceed 10'
Wall height shall not exceed 10'
Wall openings shall be less than 6'-0" wide.
At any side of the structure, the total length of full-height wall (i.e., sum of lengths of wall with no openings) shall not be less than 60% of the overall wall length
Structure must be supported by slab on grade reinforced concrete footing in conformance with Table F4.



**3. Structural Installation Requirements**

Check here to confirm that a licensed design professional has prepared and provided the prescriptive continuous load path design requirements for the home to the installing contractor prior to construction per the 2018 Wood Frame Construction Manual, incorporating fastening guidance per 2018 IRC Table R602.3(1) and appendix F of the 2020 FORTIFIED Home Standard.

Installing contractor’s signature on this form confirms that ALL of the following FORTIFIED requirements from appendix F of the 2020 FORTIFIED Home Standard have been incorporated into the construction of the home:

**1. Design Parameters:**

- a. Designs shall correspond to Exposure C or greater
- b. Designs shall correspond to ultimate windspeed,  $V_{ult} = 130$  mph or greater
- c. Roof snow load shall not exceed 30 psf
- d. Roof dead load shall not exceed 20 psf

**2. Roof Framing:**

Roof framing system with roof sheathing and sheathing attachment constructed to meet or exceed the following minimum requirements:

- a. Minimum  $1\frac{5}{32}$ -in-thick wood structural panels
- b. Sheathing attached in accordance with one of the following fastening schedules:
  - 8d common nails or 10d box nails at 4 in. O.C. on all roof framing members
  - 8d ring shank nails at 6 in. O.C. on all roof framing members
- c. Roof structure
  1. Roof structural members shall not exceed 24” O.C. spacing
  2. If trusses:
 

Engineered trusses designed for minimum  $V_{ult} = 130$  mph for terrain Exposure C
  3. If rafter system:
    - Collar ties on all rafter pairs
    - Rafters sized for span per 2018 WFCM for minimum  $V_{ult} = 130$  mph for terrain Exposure C
    - Install strap, with the minimum capacity listed in Table F1, over top of ridge board connecting tops of rafter pairs

Table F1. Required Minimum Capacities for Ridge Straps Connecting Pairs of Rafters Based on Roof Span and 24-in. Spacing between Rafters

Roof Span (ft)	20	24	28	32	36
Strap Capacity (lb)	592	710	830	948	1,066

- Gable rake roof sheathing overhang shall not exceed 12” and outlooker framing member spacing shall not exceed 24”
- Gables shall not exceed 10’ height at peak and stud spacing shall not exceed 16” O.C.

**3. Roof to Wall Connections:**

Anchor roof structure to exterior wall below using metal connectors following the requirements listed below:

- a. Metal connectors connecting roof structure to exterior wall system at all wall-to-roof framing connections (trusses and rafters) sized to meet the load requirements of Table F2 as shown in Figure 1.

Table F2. Roof-to-Wall Connector Minimum Capacities Based on Roof Span and 24-in. Spacing between Rafters or Trusses

Roof Span (ft)	20	24	28	32	36
Strap Uplift Capacity (lb)	448	512	578	642	706
Strap Lateral Capacity, $F_2^3$ (lb)	308				
Strap Shear Capacity, $F_1^4$ (lb)	162R <sup>2</sup>				

**Notes:**

1. Based on 15 psf roof and ceiling dead load.
2.  $R = L/W$  for wind perpendicular to the ridge and  $R=W/L$  for wind parallel to the ridge, where  $W$  is the building width and  $L$  is the building length.
3.  $F_2$  load direction is perpendicular to the wall (Refer to Figure 1).
4.  $F_1$  load direction is parallel to the wall (Refer to Figure 1).

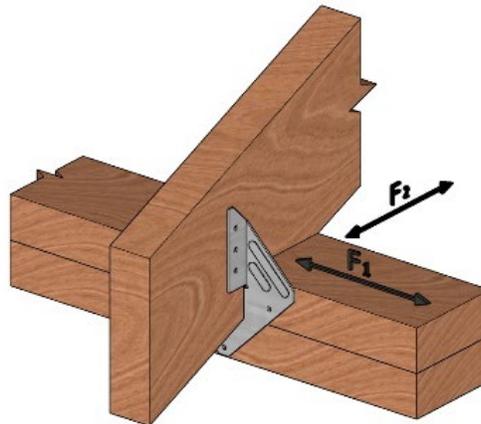


Figure 1. Roof to Wall Connections

- b. If wall sheathing is used to transfer loads from top plate in wood frame walls to studs, metal straps connecting the trusses/rafters to the top plate of the wall must be on the same side as the sheathing or additional metal connectors are required to transfer loads from the wall top plate to the wall studs and they must be located on the same side of the top plate as the metal straps connecting the trusses or rafters to the top plate.

**5. Interior Shear Walls:**

- a. Interior shear wall stud member spacing shall not exceed 16 in. O.C.
- b. Interior shear walls must be fully sheathed with 7/16" minimum wood structural panels attached with 8d common nails at a maximum of 4 in O.C. along edges and 12 in. O.C. in the field of the panels and shall be permitted for floor and/or ceiling joists on slab-on-grade concrete footing size per Table F4.



**6. Exterior Wall Construction:**

- a. Wall stud member spacing shall not exceed 16 in. O.C.
- b. Wood frame exterior walls must be fully sheathed on the exterior face including areas above or below wall openings with minimum 7/16-in. wood structural panels. Exterior wall sheathing shall be attached to the wall framing using the following:
  - 1. For one-story building or top story of two-story building, wood structural panels shall be fastened to the wall studs with 8d common nails, 10d box nails or 8d ring shank nails at a maximum of 4 in. O.C. along all edges and 12 in. O.C. to framing members in the field of the panels.
  - 2. For bottom story of two-story building, wood structural panels shall be fastened to the wall studs with 8d common nails, 10d box nails or 8d ring shank nails at a maximum of 3 in. O.C. along all edges and 12 in. O.C. to framing members in the field of the panels.
- c. Wood frame exterior walls must be fully sheathed on the interior face including areas above or below wall openings with minimum 1/2 -in. gypsum wallboard attached with 5d cooler nails at a maximum of 7 in. O.C. along edges and 12 in. O.C. in the field of the panels.

**7. Floor to Floor Connections (for 2-story structures):**

- a. For 2-story wood frame buildings to transfer vertical loads, install metal straps that connect wall studs from the wall above to wall studs in the wall below or from wall studs above to the rim board and from the rim board to the wall studs below to achieve the uplift capacities outlined in Table F3. Straps can be installed on each stud or at some other convenient spacing not to exceed 8 ft. For example, for a 24-ft roof span with straps installed at 4-ft spacing, the required capacity of the strap would be 784 lb (196 lb multiplied by 4-ft spacing).

Table F3. Floor-to-Floor Connection Loads per Ft of Wall Length Based on Roof Span

Roof Span (ft)	20	24	28	32	36
Strap Capacity (lb/ft of wall length)	164	196	229	261	296

**Note:** based on wall dead weight of 7 psf and height of 8’.

- b. For 2-story wood frame buildings to transfer shear loads, use continuous sheathing (minimum 4 ft) that spans across the floor depth to connect the upper wall, rim board, and lower wall per fastening schedule specified in 2018 IRC Table R602.3(1). Nail spacing along studs shall not be less than 3 in.
- c. Hold-downs connecting upper shear walls to lower shear walls shall each have a capacity of 4,360 lb as per Table F5.
- d. Floor sheathing shall be wood structural panels with 3/4 in. minimum thickness installed over floor support members and fastened with 10d common nails @ 4” O.C. to perimeter rim joists and edges and @ 12” O.C. in the field.
- e. Exterior wall framing connection to floor diaphragm (top plate of lower wall and bottom plate of upper wall) shall be adequate to resist a shear load of 308 lbs per liner foot.

**8. Opening Framing Connections:**

- a. Strapping is required at ends of openings in wood frame exterior walls when openings are greater than 3 ft and less than 6’ wide:
  - 1. Strap double top plate to king stud using strapping with 1,295 lb capacity at each end of opening.
  - 2. Header to be connected directly to double-top plates or by infill studs to top plate for 353 plf by straps, clips, ties, or metal connectors, etc.
  - 3. Strap end of header to jack stud using strapping with 1,060 lb uplift capacity at each end of header.



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- 4. Connect king/jack stud-pack to support wall below or foundation using strapping with capacity of 1,295 lb at each end of opening.

9. Footings & Wall Anchorage:

- a. Anchor floor system and exterior walls to foundation using 5/8-in-diameter anchor bolts with 8” embedment into concrete and a 3-in. x 3-in. x 1/4-in-thick plate washer at 24” o.c. maximum and 6” from end of bottom plate.
- b. Slab on grade reinforced concrete footing shall conform with Table F4 minimum requirements:

Table F4. Concrete Footing Size and Reinforcement

	1-Story	2-Story
<b>Footing Size (Width x Depth)</b>	20" W x 16" D	21" W x 12" D
<b>Min. Reinforcement</b>	(3) #5 continuous	(3) #5 continuous

*Note: Footing sizes are based on 36’ roof span uplift resistance and 2018 IRC Table R403.1 minimum width and thickness for concrete footing.*

- c. Hold-downs connecting exterior walls at corners and interior shear walls at ends to foundation shall be installed. The capacity of the hold-down shall be 4,360 lb for each story level as per Table F5.

Table F5. Required Capacities for Shear Wall Hold-Downs

Location	1-Story	2-Story
Upper wall to lower wall	N/A	4,360 lb
Wall to foundation	4,360 lb	8,720 lb

10. Floor joist blocking:

- a. Blocking shall be installed at floor deck edges in the first 2 joist or truss bays from exterior walls for edges where walls are parallel to floor joists or floor trusses. Blocking shall be spaced a maximum of 4 ft o.c. and connected using three (3) 16d nails at each end and two (2) 16d nails through the floor sheathing above. For a second-floor-level floor system, a strap with a minimum capacity of 200 lb shall be installed so that it wraps the outside edge of the double top plate of the wall below and is connected to the bottom of the blocking in the first bay.

11. Gable end bracing:

- a. Gable end bracing is required for systems not using balloon framing or walls with continuous reinforcing to the roof deck level. Install continuous 2- x 4-in. lateral brace at ceiling from gable end truss to opposite end of attic at 6 ft o.c. Each lateral brace to have a minimum 20 gauge metal strap connected to the lateral brace that also wraps over bottom chord of gable end wall plate/truss, over the top plate of wall below and is connected to stud in wall below. Strap to be fastened with ten (10) 8d nails at each end of strap for wood frame wall below. Blocking (2- x 4-in.) must be added in bay between gable wall framing and first ceiling joist or truss and attached to bottom of lateral brace with four (4) 10d nails. Refer to Fig. 3.7a in 2018 WFCM.



4. Certification

I certify that I am a licensed building contractor, registered architect or engineer in the state of \_\_\_\_\_ or a building code official (who is duly authorized by the state of \_\_\_\_\_ or its county’s municipalities, to verify building code compliance).

In my professional opinion, based on my knowledge, information, and belief, I certify that, as of the date shown below, all applicable installation requirements for continuous load path listed above have been incorporated in the construction of the home located at:

\_\_\_\_\_  
\_\_\_\_\_

Furthermore, I understand that any person who makes a false statement or misrepresentation, and any other person knowingly, with an intent to injure, defraud, or deceive, who assists, abets, solicits, or conspires with such person to make a false statement or misrepresentation may be subject to both criminal and/or civil penalties. By completion of this Affidavit, the undersigned does not make a health or safety certification.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Company: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_ ZIP: \_\_\_\_\_

License or Registration Number: \_\_\_\_\_

**NOTE:** Completion of this form in its entirety does not, by itself, satisfy FORTIFIED requirements for continuous load path installation. Additional information presented by the FORTIFIED Evaluator will also be considered in determining if FORTIFIED continuous load path installation requirements have been