

FWAZ/FWANZ Foundation Wall Angle

FWA foundation anchors connect the foundation or basement walls to the floor system to resist out-of-plane forces imposed by soil pressure. The FWAZ attaches through the mudsill into the foundation using the Simpson Strong-Tie® Titen HD® heavy-duty screw anchor, eliminating the need for separate anchor bolts into the rim joist. The FWANZ fastens to the mudsill with nails, relying on other anchorage (by Designer) to anchor the rim joist to the foundation. The spacing of the FWA anchors is independent of the joist spacing, allowing for a multitude of options based on soil pressures.

Special Features:

- Compatible with solid sawn joists, I-joists and floor trusses.
- Testing performed on most common rim materials and types.
- Addresses design needs set forth in Section 1610.1 in the IBC and Section R404 in the IRC.
- Eliminates the need of costly cantilevered foundation designs.

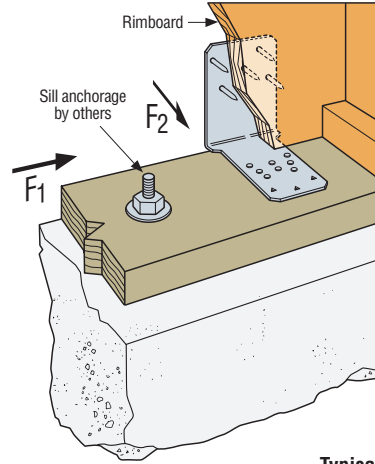
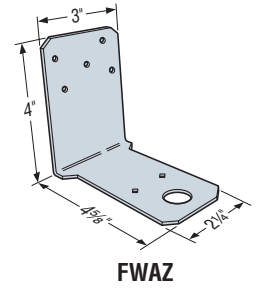
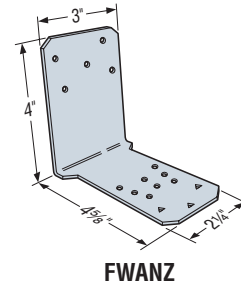
MATERIAL: 14 gauge

FINISH: ZMAX® coating. See Corrosion Information, page 18-19.

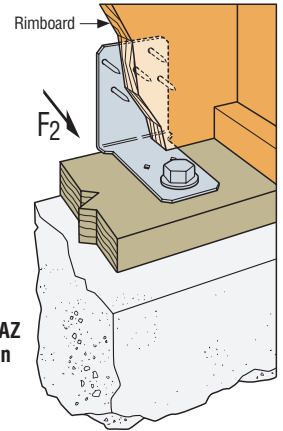
INSTALLATION: • Use all specified fasteners. See General Notes.

- Connectors must be fastened directly to the outside face of the rim board with 5-10dx1½ (0.148" dia. x 1½") long nails.
- Connectors must be located within 4" of adjacent joist/blocking for floor joist spacing up to 48" o.c. and may be centered between joists/blocking for 16" o.c. floor joist spacing.
- When floor joists are parallel to the rim board, full depth blocking shall be used in the first two bays of the floor per 2006 IRC Section R404.1.
- Splice joint not permitted on rim board in same bay unless blocking is placed on both sides of the splice. The maximum sill plate thickness to be used for the FWAZ only shall be 1½".
- FWAZ only—must be anchored to the foundation wall with ⅝"x6" mechanically galvanized Titen HD anchor (included).
- Cast-in-place anchor bolts may not be used as a substitute.
- When I-joist rim material is used, backer blocks must be used. Installed per manufacturer's recommendations.

CODES: See page 20 for Code Reference Key Chart. Refer to IBC 1610.1.



Typical FWANZ Installation



Typical FWAZ Installation

These products are available with additional corrosion protection. Additional products on this page may also be available with this option, check with Simpson Strong-Tie for details.

Model No.	Fasteners		Foundation Wall Thickness	Rim Board Material	Allowable Lateral F ₂ Loads				Code Ref.
	Rim	Concrete			Concrete f' _c =2500 psi	Concrete f' _c =3000 psi	Concrete f' _c =4000 psi	CMU f' _m =1500 psi	
FWAZ	5-10dx1½	1-⅝"x6" Titen HD Anchor (Included)	6"	1" OSB Rim	705	705	705	—	170
				1¼" I-joist Rim	880	880	880		
				1⅝" OSB Rim	880	880	880		
				2x Rim	880	880	880		
				1¼" LSL Rim	880	880	880		
				1¼" LVL Rim	880	880	880		
			8"	1" OSB Rim	705	705	705	615	
				1¼" I-joist Rim	880	1000	1000		
				1⅝" OSB Rim	880	1050	1050		
				2x Rim	880	1055	1170		
				1¼" LSL Rim	880	1055	1280		
				1¼" LVL Rim	880	1055	1280		

1. Lateral (F₂) loads are based on load duration factor C_D = 0.90 with no further increase allowed.
2. FWAZ spacing shall be per Designer. Refer to fier F-FWA (see page 212 for details) for prescriptive spacing options and additional information.
3. FWAZ must be located within 4" of adjacent joist/blocking for floor joist spacing up to 48" o.c. and may be centered between joists/blocking for 16" o.c. floor joist spacing.
4. Maximum sill plate thickness shall be 1½".
5. The Titen HD anchor used in the FWAZ to resist the out-of-plane (F₂) forces may also be used to resist in-plane shear forces provided the Designer determines the Titen HD anchor allowable loads (refer to C-SAS catalog, see page 212 for details) and evaluates the combined loading condition with the published F₂ loads.
6. **NAILS:** 10dx1½ = 0.148" dia. x 1½" long. See page 24-25 for other nail sizes and information.

Model No.	Sill Plate	Fastener (Quantity–Type)		Rim Board Material	Allowable F ₂ Load (DF/SP Sill Plate)			Allowable F ₂ Load (HF Sill Plate)			Code Ref.	
		Sill Plate	Rim Board		(90) ⁷	(100)	(160)	(90) ⁷	(100)	(160)		
FWANZ	2x4, 2-2x4, 3x4, 4x4	(8)	10dx1½	10dx1½	1" OSB Rim	895	895	895	815	895	895	170
					1⅝" OSB Rim	945	970	970	815	905	970	
					1¼" I-Joist Rim	945	1050	1275	815	905	1275	
					1¼" LSL Rim	945	1050	1315	815	905	1315	
					2x Rim	945	1050	1410	815	905	1345	
					1¼" LVL Rim	945	1050	1485	815	905	1345	
					1" OSB Rim	895	895	895	895	895	895	
	2x6, 2-2x6, 3x6, 4x6	(11)	10dx1½	10dx1½	1⅝" OSB Rim	1110	1110	1110	1110	1110	1110	
					1¼" I-Joist Rim	1135	1135	1135	1120	1135	1135	
					1¼" LSL Rim	1220	1220	1220	1120	1220	1220	
					2x Rim	1300	1440	1445	1120	1245	1445	
					1¼" LVL Rim	1300	1440	1645	1120	1245	1645	

1. FWANZ may be used to transfer F₁ loads up to 310 lbs. No further increase in load permitted.
2. For simultaneous F₁ and F₂ loads, the connector must be evaluated using the unity equation (see page 22).
3. Designer shall evaluate rim board and sill plate design based on demand load.
4. FWANZ spacing and sill plate anchorage to be specified by the Designer.
5. FWANZ must be located within 4" of adjacent joist/blocking for floor joist spacing up to 48" o.c. and may be centered between joists/blocking for 16" o.c. floor joist spacing.
6. When floor joists are parallel to the rimboard, Designer must ensure proper load transfer from rimboard into diaphragm.
7. Values based on a load duration factor C_D = 0.90.
8. **NAILS:** 10dx1½ = 0.148" dia. x 1½" long. See page 24-25 for other nail sizes and information.