

2720 Residence

2720 71st Avenue SE
Mercer Island, Washington 98040

Structural Engineering Calculations

Supplement Calculations for Review Comments (Round-5)



By

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Roof Framing with Rooftop Deck

	material weight in psf	
paving system	9.00	
roofing	0.50	
roofing protective board over insulation	0.38	
4.5" average rigid insulation	0.97	0.216 psf/inch
3/4" deck floor sheathing	2.50	
floor joists	3.00	4 plf 11.875 TJI-560 @16"
R30 batt insulation (8.25")	0.33	0.04 psf/inch
gyp sheathing ceiling	2.20	
misc. blockings and MEP system	1.12	
	<hr/> 20.00	<u>Used 25 psf</u>

roof deck area 970 sf

Roof without Rooftop Deck

	material weight in psf	
roofing	0.50	
roofing protective board over insulation	0.38	
4.5" average rigid insulation	0.97	0.216 psf/inch
5/8" roof sheathing	1.80	
floor joists	2.00	4 plf 11.875 TJI-560 @2'-0"
R30 batt insulation (8.25")	0.33	0.04 psf/inch
gyp sheathing ceiling	2.20	
misc. blockings and MEP system	1.82	
	<hr/> 10.00	<u>Used 15 psf</u>

average 15.8 psf
seismic mass =
15.8 psf + 5 pst = 20.8 psf
(5 psf walls to roof diaphragm)
Used 25 psf

roof area 700 sf

Floor Framing

	material weight in psf	
flooring and finishes	5.00	
3/4" floor sheathing	2.50	
floor joists	3.00	4 plf 11.875 TJI-560 @16"
gyp sheathing ceiling	2.20	
misc. blockings and MEP system	2.30	
	<hr/> 15.00	<u>Used 15 psf</u>

seismic mass =
15 psf + 10 pst = 25 psf
(10 psf walls to floor diaphragm)
Used 25 psf

Bm/Jst Location/Description: **Wind Girts of (3) 2x6 w/ A35 top and bottom**

Wind

wind load (psf) 44.00 *conservative* added point load (kips) 0.00

tributary width (ft) **6.00** point load location to farthest support (ft) 0.00

Beam Span (ft) **10.00** *conservative*

load duration/repetitive factor **1.60** **1.00**

Beam Data Base Number **2**

tributary load (plf) 264.00

moment (kip-ft) 3.30

shear/reaction (kips) 1.32

A35 capacity 670#/each **1.34**

		2.0E PSL	
		#N/A	Beam No.61-88
		Provided M	#N/A
		Provided V	#N/A
		Provided I	#N/A
	DF#2	Provided	24F-V4 or 24F-V8 DF GL
			Provided
Required S (in^3)	19.80	7.56	10.31
Required I (in^4)	76.32	20.80	76.32
Required A (in^2)	13.03	8.25	6.30
Size	2x6	Beam No.1-20	#N/A
			Beam No.20-60

INPUT DATA

MEMBER TYPE:	2	1	POST
		2	WALL STUD
		3	KING STUD

GEOMETRY DATA:

HEIGHT	h =	14	ft
UNBRACED LENGTH	Le x-x (H) =	14	ft
	Le y-y (B) =	1.33	ft

LOAD DATA:

DEAD LOAD		279	lbs
LIVE LOAD		466	lbs
TOTAL		745	lbs
LATERAL LOAD x-x		44	plf
	M=	1078	ft-lbs
	V=	308	lbs
LOAD DURATION		2	OCCUPANCY LIVE LOAD

DESIGN CRITERIA:

SECTION	1	pcs, B =	2	in
		H =	6	in
SPECIES (1 = DFL, 2 = SP)			1	DOUGLAS FIR-LARCH
GRADE (1, 2, 3, 4, 5, or 6)			4	No. 2
WET / DRY USE ? (1 = DRY, 2 = WE			1	DRY

DESIGN SUMMARY

USE: 1 - 2" x 6" DOUGLAS FIR-LARCH No. 2

- CHECK VERTICAL LOADS : $f_c < F_c'$?
90 psi < 486 psi **ok**
- CHECK BENDING LOADS : $f_b < F_b'$?
1711 psi < 2153 psi **ok**
- CHECK INTERACTION : $\left(\frac{f_c}{F_c'}\right)^2 + \left(\frac{1}{1 - f_c/F_{cEx}}\right) \frac{f_{bx}}{F_{bx}'} < 1$?
1.000 < 1 **ok**
- CHECK SHEAR LOADS : $f_v < F_v'$?
56 psi < 288 psi **ok**
- HORIZONTAL DEFLECTION AT MIDDLE
 $\Delta = 5wh^4 / (384EI) + 2.4wh^2 / (Ebd) = 1 \frac{1}{6}$ in
(h / 145)

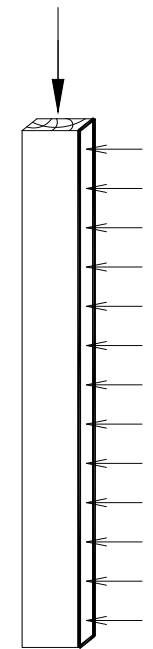
ANALYSIS

COLUMN BASIC DESIGN STRESSES:

COMPRESSIVE STRESS	$F_c =$	1350	psi
MODULUS OF ELASTICITY	$E =$	1600	ksi
BENDING STRESS (X-Axis)	$F_{bx} =$	900	psi
BENDING STRESS (Y-Axis)	$F_{by} =$	900	psi
SHEAR STRESS (X-Axis)	$F_v =$	180	psi

COLUMN PROPERTIES:

COLUMN SECTION	X-Dir	dx =	5.50	in
	Y-Dir	dy =	1.50	in
AREA		A =	8.25	in ²
SECTION PROPERTIES	Abt. xx	Sx =	7.56	in ³
		Ix =	20.80	in ⁴
	Abt. yy	Sy =	2.06	in ³
LENGTH-DEPTH RATIO		Le x-x / dx =	30.5	
		Le y-y / dy =	10.6	



ADJUSTMENT FACTORS:

		F_{bx}'	F_{by}'	F_c'	F_v'	E'
DURATION FACTOR	C_D	1.60	1.60	1.60	1.60	
MOISTURE FACTOR	C_M	1.00	1.00	1.00	1.00	1.00
TEMPERATURE FACTOR	C_t	1.00	1.00	1.00	1.00	1.00
INCISING FACTOR	C_i	1.00	1.00	1.00	1.00	1.00
SIZE FACTOR	C_F	1.30	1.30	1.10		1.00
FLAT USE FACTOR	C_{fu}		1.15			
COLUMN STABILITY	C_P			0.205		
REPETITIVE MEMBER	C_r	1.15	1.15			
BEAM STABILITY	C_L	1.00	1.00			

COLUMN PARAMETER $c = 0.80$
 MODULUS OF ELASTICITY $E'_{min} = 580$ ksi
 CRITICAL EULER BUCKLING VALUES
 $F_{cE} = 511$ psi
 $F_c^* = 2376$ psi

ADJUSTED PROPERTIES:

MODULUS OF ELASTICITY	$E' =$	1600	ksi
BENDING STRESS (X-Axis)	$F_{bx}' =$	2153	psi
BENDING STRESS (Y-Axis)	$F_{by}' =$	2476	psi

AXIAL STRESS $F_c' = 486$ psi
 SHEAR STRESS $F_v' = 288$ psi

ACTUAL STRESSES:

AXIAL STRESS	$f_c =$	90.3	psi
BENDING STRESSES	$f_{bx} =$	1710.5	psi

SHEAR STRESS $f_v = 56$ psi

Bm/Jst Location/Description: **UA SUPPORTING A DISCONTINUOUS SHEAR WALL**

Roof SHEAR FORCE AND HD FORCE FOR LINE C.8 ARE 1.21K AND 0.72K RESPECTIVELY

dead load (psf)	15.00		
live load (psf)	25.00	additional total point load (kips)	0.00
tributary width (ft)	2.00	point load location to farthest support (ft)	0.00

Floor

dead load (psf)	15.00	0.72K * (3.0 OVERSTRENGTH / 1.6 LOAD DURATION)=1.35 K	
live load (psf)	40.00	additional total point load (kips)	1.35
tributary width (ft)	2.00	point load location to farthest support (ft)	10.00

Wall

wall weight (psf)	10.00		
height (ft)	16.00		

Beam Span (ft) 18.00

load duration/repetitive factor 1.00 1.00

Beam Data Base Number	79		2.0E PSL	
tributary load (plf)	350.00		5-1/4x14	Beam No.61-88
moment (kip-ft)	20.18		Provided M	40.74
shear/reaction (kips)	3.90		Provided V	14.21
			Provided I	1200.00
			24F-V4 or 24F-V8 DF GL	Provided
Required S (in^3)	193.68	280.73	100.88	1200.45
Required I (in^4)	839.87	2456.38	839.87	26244.00
Required A (in^2)	47.90	96.25	35.45	243.00
Size	6x18	Beam No.1-20	6-3/4x36	Beam No.20-60

Bm/Jst Location/Description: **UB SUPPORTING A DISCONTINUOUS SHEAR WALL**

Roof SHEAR FORCE AND HD FORCE FOR LINE D.8 ARE 0.64K AND 1.09K RESPECTIVELY

dead load (psf)	15.00		
live load (psf)	25.00	additional total point load (kips)	0.00
tributary width (ft)	2.00	point load location to farthest support (ft)	0.00

Floor

dead load (psf)	15.00	1.09K * (3.0 OVERSTRENGTH / 1.6 LOAD DURATION)=1.35 K	
live load (psf)	40.00	additional total point load (kips)	2.04
tributary width (ft)	2.00	point load location to farthest support (ft)	10.50

Wall

wall weight (psf)	10.00		
height (ft)	16.00		

Beam Span (ft) 14.67

load duration/repetitive factor 1.00 1.00

Beam Data Base Number	79		2.0E PSL	
tributary load (plf)	350.00		5-1/4x14	Beam No.61-88
moment (kip-ft)	15.50		Provided M	40.74
shear/reaction (kips)	4.03		Provided V	14.21
			Provided I	1200.00
			24F-V4 or 24F-V8 DF GL	Provided
Required S (in^3)	148.84	280.73	77.52	1200.45
Required I (in^4)	526.02	2456.38	526.02	26244.00
Required A (in^2)	49.46	96.25	36.61	243.00
Size	6x18	Beam No.1-20	6-3/4x36	Beam No.20-60

Bm/Jst Location/Description: **U6 SEISMIC**

Roof SHEAR FORCE AND HD FORCE FOR LINE 8 ARE 1.27K AND 0.00 K RESPECTIVELY

dead load (psf)	20.00		
live load (psf)	45.00	additional total point load (kips)	0.00
tributary width (ft)	16.00	point load location to farthest support (ft)	0.00

Floor

dead load (psf)	15.00	POINT LOAD FROM U8 INCLUDING AMPLIFIED SEISMIC FORCE 4.0 K	
live load (psf)	40.00	additional total point load (kips)	4.03
tributary width (ft)	8.00	point load location to farthest support (ft)	13.00

Wall

wall weight (psf)	10.00		
height (ft)	10.00		
Beam Span (ft)	16.00		
load duration/repetitive factor	1.00		1.00

Beam Data Base Number			STEEL BEAM	W12x26
tributary load (plf)	1580.00		Required	Provided
moment (kip-ft)	60.38	S BxH I	30.79	33.40
shear/reaction (kips)	15.91		179.68	6.5" x 12.25" 204.00
			24F-V4 or 24F-V8 DF GL	Provided
Required S (in ³)	579.62	#N/A	301.88	#N/A
Required I (in ⁴)	2234.16	#N/A	2234.16	#N/A
Required A (in ²)	251.25	#N/A	96.43	#N/A
Size	#N/A	Beam No.1-20	#N/A	Beam No.20-60

Standard and Balloon Framing on Concrete Foundations

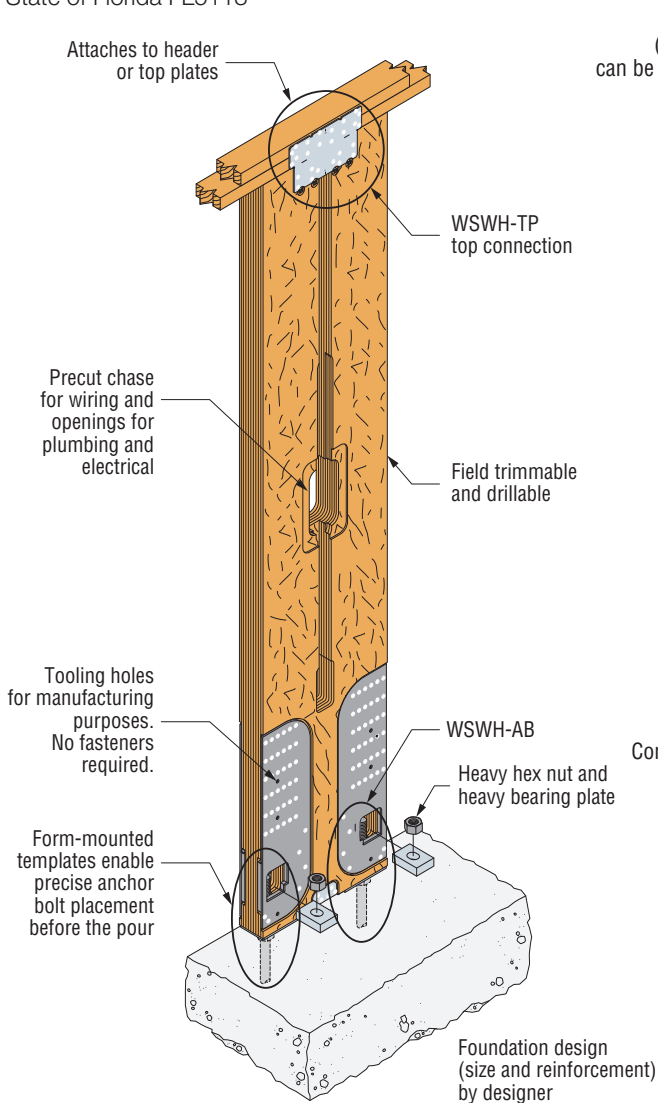
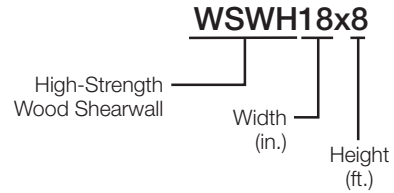
Simpson Strong-Tie® Strong-Wall® high-strength wood shearwalls combine design flexibility with performance. Field trimmable, they can be customized to accommodate varying heights or rake walls. They are evaluated to the 2018 IRC/IBC and are listed by ICC-ES.

Installation

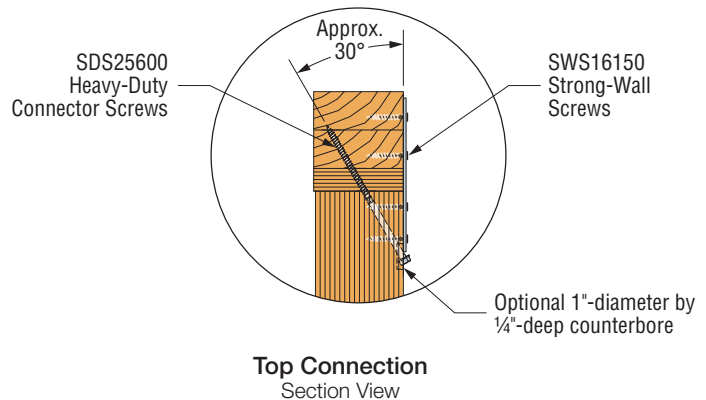
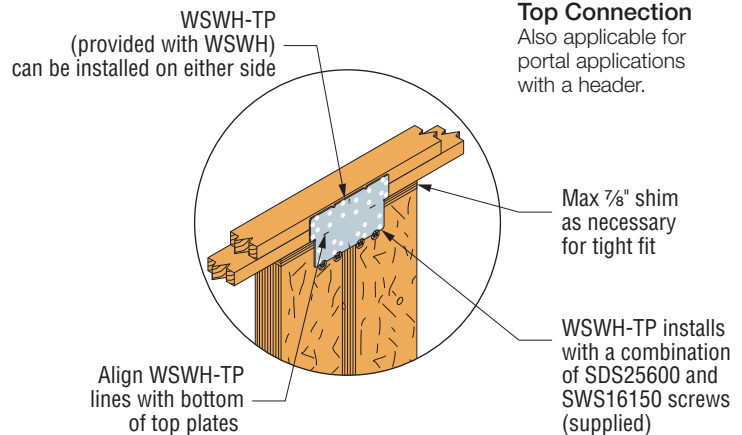
- All panels may be field trimmed to a minimum of 74½". Trim height from top of panel only, do not trim from sides or bottom. Drilling holes in the Strong-Wall high-strength wood shearwalls is not allowed except as shown on p. 36.
- Anchor bolt nuts should be finger tight plus ½ turn.
- Maximum shim thickness between the shearwall and top plates or header is 7⁄8". For additional shim thicknesses, see detail 9/WSWH2 on p. 35.
- Walls may also be used in 2x6 wall framing. Install the panel flush to the outside face of the framing and add furring to the opposite face as required to accommodate finish material. See detail 6/WSWH2 on p. 33.
- Top connection installs with a combination of SDS25600 Heavy-Duty Connector screws and SWS16150 Strong-Wall screws.

Codes: ICC-ES ESR-2652, City of LA Building Code Supplement and State of Florida FL5113

Strong-Wall High-Strength Wood Shearwall Naming Legend



Standard Installation
US Patent 10,711,477



Standard and Balloon Framing on Concrete Foundations

Strong-Wall® High-Strength Wood Shearwalls

Strong-Wall High-Strength Wood Shearwall Model No.	Panel Evaluation Height, H _e (lb.) ⁶	Allow Vertical Load, P (lb.) ⁴	2,500 psi Concrete						3,000 psi Concrete					
			Seismic ³			Wind			Seismic ³			Wind		
			Allowable ASD Shear Load, V (lb.)	Drift at Allowable Shear, Δ (in.) ⁷	Anchor Tension at Allowable Shear, T (lb.) ¹¹	Allowable ASD Shear Load, V (lb.)	Drift at Allowable Shear, Δ (in.) ⁷	Anchor Tension at Allowable Shear, T (lb.) ¹¹	Allowable ASD Shear Load, V (lb.)	Drift at Allowable Shear, Δ (in.) ⁷	Anchor Tension at Allowable Shear, T (lb.) ¹¹	Allowable ASD Shear Load, V (lb.)	Drift at Allowable Shear, Δ (in.) ⁷	Anchor Tension at Allowable Shear, T (lb.) ¹¹
WSWH12x7	78	1,000	1,300	0.32	13,295	1,670	0.43	17,075	1,300	0.32	13,295	1,670	0.43	17,075
		4,000	1,300	0.32	13,295	1,670	0.43	17,075	1,300	0.32	13,295	1,670	0.43	17,075
		7,500	1,300	0.32	13,295	1,670	0.43	17,075	1,300	0.32	13,295	1,670	0.43	17,075
WSWH18x7	78	1,000	3,795	0.32	23,680	4,470	0.39	27,890	3,795	0.32	23,680	4,470	0.39	27,890
		4,000	3,795	0.32	23,680	4,365	0.38	27,245	3,795	0.32	23,680	4,470	0.39	27,890
		7,500	3,795	0.32	23,680	4,050	0.36	25,285	3,795	0.32	23,680	4,470	0.39	27,890
WSWH24x7	78	1,000	7,450	0.30	33,210	7,795	0.34	34,755	7,450	0.30	33,210	7,795	0.34	34,755
		4,000	7,450	0.30	33,210	7,565	0.33	33,715	7,450	0.30	33,210	7,795	0.34	34,755
		7,500	7,115	0.28	31,715	7,115	0.31	31,715	7,450	0.30	33,210	7,795	0.34	34,755
WSWH12x8	93.25	1,000	1,030	0.40	12,580	1,325	0.53	16,195	1,030	0.40	12,580	1,325	0.53	16,195
		4,000	1,030	0.40	12,580	1,325	0.53	16,195	1,030	0.40	12,580	1,325	0.53	16,195
		7,500	1,030	0.40	12,580	1,325	0.53	16,195	1,030	0.40	12,580	1,325	0.53	16,195
WSWH18x8	93.25	1,000	3,060	0.39	22,835	3,880	0.52	28,925	3,060	0.39	22,835	3,955	0.53	29,490
		4,000	3,060	0.39	22,835	3,650	0.49	27,245	3,060	0.39	22,835	3,955	0.53	29,490
		7,500	3,060	0.39	22,835	3,390	0.46	25,285	3,060	0.39	22,835	3,955	0.53	29,490
WSWH24x8	93.25	1,000	6,240	0.37	33,240	6,650	0.43	35,430	6,240	0.37	33,240	6,910	0.45	36,815
		4,000	6,240	0.37	33,240	6,330	0.41	33,715	6,240	0.37	33,240	6,910	0.45	36,815
		7,500	5,950	0.35	31,715	5,950	0.38	31,715	6,240	0.37	33,240	6,910	0.45	36,815
WSWH12x9	105.25	1,000	850	0.45	11,750	1,095	0.60	15,145	850	0.45	11,750	1,095	0.60	15,145
		4,000	850	0.45	11,750	1,095	0.60	15,145	850	0.45	11,750	1,095	0.60	15,145
		7,500	850	0.45	11,750	1,095	0.60	15,145	850	0.45	11,750	1,095	0.60	15,145
WSWH18x9	105.25	1,000	2,575	0.45	21,680	3,325	0.60	27,975	2,575	0.45	21,680	3,325	0.60	27,975
		4,000	2,575	0.45	21,680	3,235	0.58	27,245	2,575	0.45	21,680	3,325	0.60	27,975
		7,500	2,575	0.45	21,680	3,005	0.54	25,285	2,575	0.45	21,680	3,325	0.60	27,975
WSWH24x9	105.25	1,000	5,150	0.43	30,975	5,890	0.52	35,430	5,150	0.43	30,975	6,120	0.54	36,815
		4,000	5,150	0.43	30,975	5,605	0.50	33,715	5,150	0.43	30,975	6,120	0.54	36,815
		7,500	5,150	0.43	30,975	5,275	0.47	31,715	5,150	0.43	30,975	6,120	0.54	36,815
WSWH12x10	117.25	1,000	700	0.50	10,750	900	0.67	13,855	700	0.50	10,750	900	0.67	13,855
		4,000	700	0.50	10,750	900	0.67	13,855	700	0.50	10,750	900	0.67	13,855
		7,500	700	0.50	10,750	900	0.67	13,855	700	0.50	10,750	900	0.67	13,855
WSWH18x10	117.25	1,000	2,140	0.50	20,055	2,755	0.67	25,840	2,140	0.50	20,055	2,755	0.67	25,840
		4,000	2,140	0.50	20,055	2,755	0.67	25,840	2,140	0.50	20,055	2,755	0.67	25,840
		7,500	2,140	0.50	20,055	2,695	0.65	25,285	2,140	0.50	20,055	2,755	0.67	25,840
WSWH24x10	117.25	1,000	4,010	0.48	26,860	5,215	0.67	34,935	4,010	0.48	26,860	5,215	0.67	34,935
		4,000	4,010	0.48	26,860	5,030	0.64	33,715	4,010	0.48	26,860	5,215	0.67	34,935
		7,500	4,010	0.48	26,860	4,735	0.61	31,715	4,010	0.48	26,860	5,215	0.67	34,935
WSWH12x11	129.25	1,000	595	0.56	10,055	765	0.73	12,930	595	0.56	10,055	765	0.73	12,930
		4,000	595	0.56	10,055	765	0.73	12,930	595	0.56	10,055	765	0.73	12,930
		7,500	595	0.56	10,055	765	0.73	12,930	595	0.56	10,055	765	0.73	12,930
WSWH18x11	129.25	1,000	1,960	0.55	20,240	2,520	0.73	26,060	1,960	0.55	20,240	2,520	0.73	26,060
		4,000	1,960	0.55	20,240	2,520	0.73	26,060	1,960	0.55	20,240	2,520	0.73	26,060
		7,500	1,960	0.55	20,240	2,445	0.71	25,285	1,960	0.55	20,240	2,520	0.73	26,060
WSWH24x11	129.25	1,000	4,000	0.54	29,550	4,795	0.68	35,430	4,000	0.54	29,550	4,985	0.70	36,815
		4,000	4,000	0.54	29,550	4,565	0.64	33,715	4,000	0.54	29,550	4,985	0.70	36,815
		7,500	4,000	0.54	29,550	4,295	0.60	31,715	4,000	0.54	29,550	4,985	0.70	36,815

See footnotes on p. 15.

High-Strength Wood Shearwall Anchorage Solutions

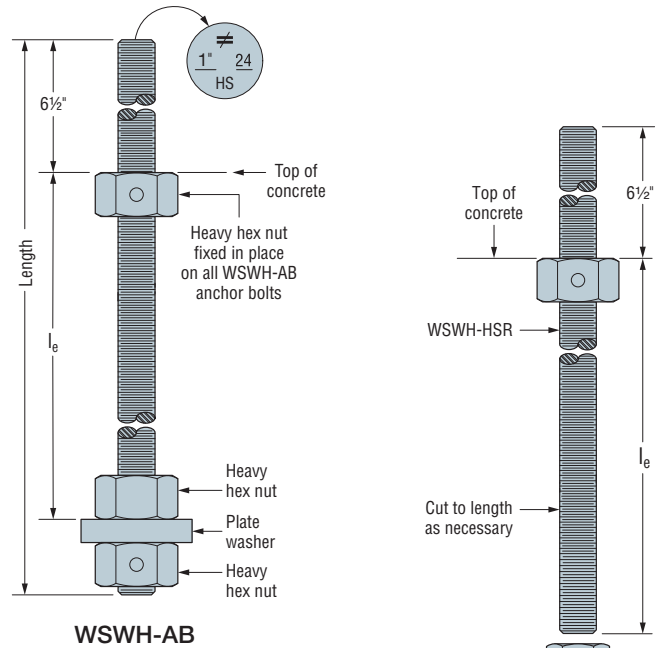
WSWH-AB Anchor Bolts

WSWH-AB anchor bolts in 1" diameters offer flexibility to meet specific project demands. Inspection is easy; the head is stamped with a No-Equal® symbol for identification, bolt length, bolt diameter, and optional "HS" for "High-Strength" if specified.

Material: ASTM F1554 Grade 36;
High-Strength (HS) ASTM A193 Grade B7

An additional nut for template installation is provided with each WSWH-AB.

Strong-Wall® High-Strength Wood Shearwall Model No.	Model No.	Dia. (in.)	Total Length (in.)	l _e (in.)
WSWH12 WSWH18 WSWH24	WSWH-AB1x24	1	24	15½
	WSWH-AB1x24HS	1	24	15½
	WSWH-AB1x30	1	30	21½
	WSWH-AB1x30HS	1	30	21½
	WSWH-AB1x36	1	36	27½
	WSWH-AB1x36HS	1	36	27½



WSWH-AB

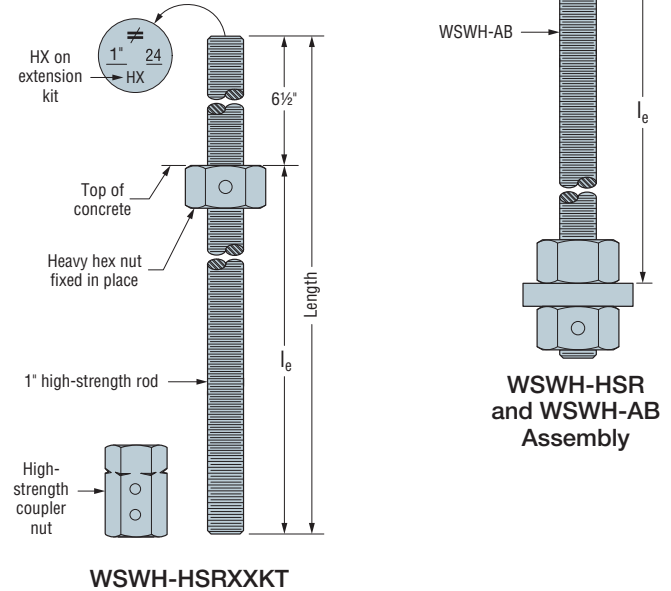
WSWH-HSR Extension Kit

WSWH-HSR allows for anchorage in tall stemwall applications where full embedment of a WSWH-AB into the footing is required. The head is stamped for identification like a WSWH-AB. Kit includes ASTM A193 Grade B7 high-strength rod with heavy hex nut fixed in place and high-strength coupler nut.

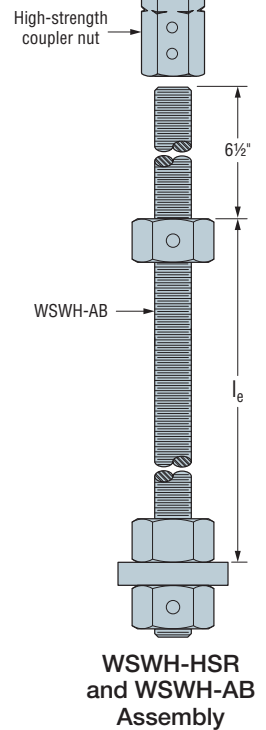
Strong-Wall High-Strength Wood Shearwall Model No.	Model No.	Dia. (in.)	Total Length (in.)	l _e (in.)
WSWH12 WSWH18 WSWH24	WSWH-HSR1x24KT	1	24	17½
	WSWH-HSR1x36KT	1	36	29½

Note: Do not use in place of WSWH-AB.

$$\text{Total } l_e = \text{WSWH-HSR } l_e + \text{WSWH-AB } l_e + 6\frac{1}{2}''$$



WSWH-HSRXXKT



WSWH-HSR and WSWH-AB Assembly

High-Strength Wood Shearwall Anchorage Solutions

Strong-Wall® High-Strength Wood Shearwalls

Tension Anchorage Solutions — 2,500 psi Concrete^{1,5,6}

Design Criteria	Concrete Condition	Anchor Strength ²	WSWH-AB1 Anchor Bolt		
			ASD Allowable Tension (lb.)	W (in.)	d _e (in.)
Seismic ³	Cracked	Standard	16,000	33	11
			17,100	35	12
		High-Strength	34,100	52	18
			36,800	55	19
	Uncracked	Standard	15,700	28	10
			17,100	30	10
		High-Strength	33,500	45	15
			36,800	48	16
Wind ⁴	Cracked	Standard	6,200	16	6
			11,400	24	8
			17,100	32	11
			21,100	36	12
		High-Strength	27,300	42	14
			34,100	48	16
			36,800	51	17
			36,800	51	17
	Uncracked	Standard	6,400	14	6
			12,500	22	8
			17,100	28	10
			22,900	33	11
		High-Strength	26,400	36	12
			34,200	42	14
			36,800	44	15
			36,800	44	15

See footnotes on p. 23.

Tension Anchorage Solutions — 3,000 psi Concrete^{1,5,6}

Design Criteria	Concrete Condition	Anchor Strength ²	WSWH-AB1 Anchor Bolt		
			ASD Allowable Tension (lb.)	W (in.)	d _e (in.)
Seismic ³	Cracked	Standard	16,000	31	11
			17,100	33	11
		High-Strength	33,900	49	17
			36,800	52	18
	Uncracked	Standard	16,300	27	9
			17,100	28	10
		High-Strength	34,000	43	15
			36,800	46	16
Wind ⁴	Cracked	Standard	5,600	14	6
			10,200	21	7
			17,100	30	10
			20,000	33	11
		High-Strength	26,500	39	13
			33,600	45	15
			36,800	48	16
			36,800	48	16
	Uncracked	Standard	6,200	13	6
			12,800	21	7
			17,100	26	9
			21,800	30	10
		High-Strength	28,900	36	12
			33,100	39	13
			36,800	42	14
			36,800	42	14

See footnotes on p. 23.



<https://www.strongtie.com/>

Coiled Strap Designer

www.strongtie.com



Input Data:

DEMAND LOAD 6000 lbs.	COILED STRAP MODEL CMST14 installed over sheathing	NAIL DIAMETER 0.148 in.	NAIL LENGTH 2.500 in.
WOOD SPECIES DFL			

Calculation Results:

COILED STRAP MODEL CMST14	NAIL SIZE 0.148 in. x 2 1/2 in.	END NAILS 31	TOTAL NAILS 62
NUMBER OF STUDS Double	ALLOWABLE STRAP CAPACITY 6085 lbs		



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Coiled Strap Cut Length Calculator

www.strongtie.com

Input Data:

COILED STRAP MODEL CMST14	NUMBER OF INSTALLED STRAPS 1	QUANTITY OF NAILS SPECIFIED? Yes
TOTAL NAILS PER STRAP 62	NAILS INSTALLED IN EVERY HOLE? Yes	SOLE PLATE DEPTH 0
SUB-FLOOR THICKNESS 0	TOP PLATES DEPTH 0	FLOOR DEPTH 0

Calculation Results:

TOTAL LINEAR FEET OF STRAP REQUIRED 4.833 linear ft.	END LENGTH 29 in.	TOTAL NUMBER OF NAILS 62 Nails
CLEAR SPAN 0 in.	CUT LENGTH 58 in.	