

Strong-Drive[®]

SDWH TIMBER-HEX HDG Screw

Structural Wood-to-Wood Connections

SIMPSON

Strong-Tie[®]

Tough Enough for the
Most Demanding Jobs

(800) 999-5099
strongtie.com

Product Information



Great for all types of coastal projects

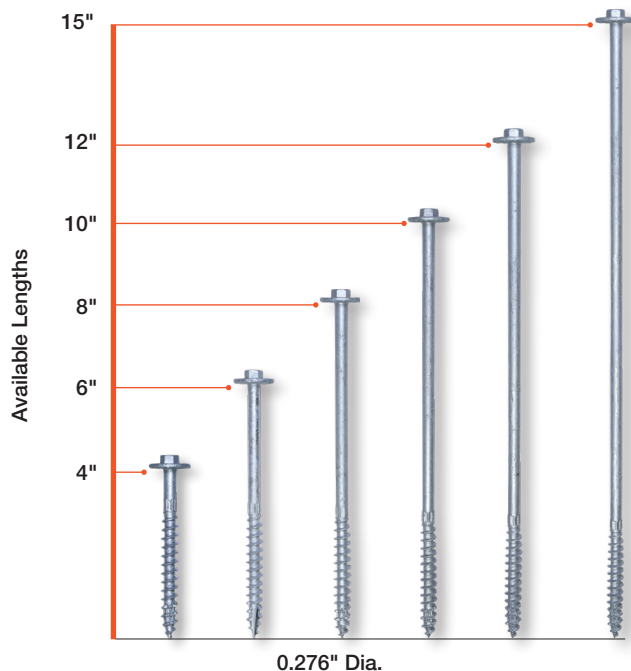
ASTM A153 Class-C hot-dip galvanized coating suitable for coastal and marine environments

Burly 0.276" shank diameter for heavy-duty structural applications

3/8" hex drive for secure driving

Oversized 0.930" diameter integral washer eliminates the need for a separate washer

SawTooth™ point design for fast starts and no predrilling



Codes/Standards

- IAPMO-UES ER-192 (SDWH271500G not listed)
- City of LA RR25906
- State of Florida FL13975 (15" length not covered)
- US Patent 9,523,383



Premium ball-lock hex driver bit included

Install Tip

- For best results, use a minimum of 1/2" low-speed corded drill to install

Product Information



Premium ball-lock hex driver bit holds the screw, allowing for easy placement

Save Time and Money

with the lowest installed cost pile-fastening solution on the market

- Install fastener from one side
- No predrilling necessary
- Drives fast, saving you time
- No need to purchase separate washers, nuts and bolts
- No expensive auger drill bits

Common Applications:

- Structural pilings
- Ledgers
- Piers
- Docks
- Boardwalks
- Anywhere you need a tough exterior structural fastener



Square Piling

One-Sided Stringers

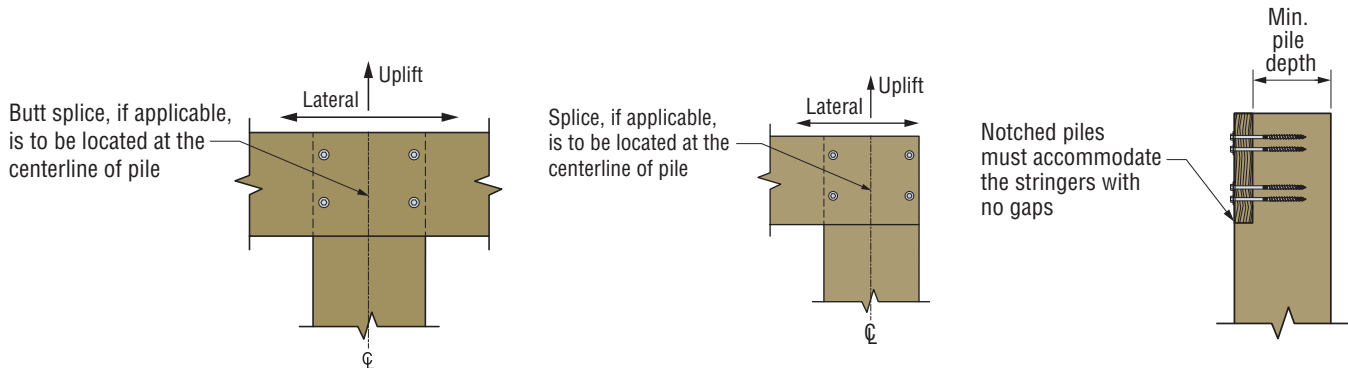


Table 1: Square Piles — Loads for One-Sided Stringer-to-Pile Connection

Pile Size (in.)	Total Stringers — Qty. and Size (in.)	Stringer Material	Total Fasteners — Qty. and Model	Notched Pile ?	Minimum Notched Pile Depth (in.)	Detail No.	Allowable Connection Loads (lb.)					
							Uplift			Lateral		
							Continuous and Lap	Butt ⁷	End	Continuous and Lap	Butt ⁷	End
8	(1) 2 x 10	SP	(4) SDWH27600G	Y	—	SQ1	1,555	1,505	780	2,020	1,670	1,010
8	(1) 2 x 10	SP	(4) SDWH27600G	N	6½		2,020	1,445	1,010	2,020	1,540	1,010
8	(2) 2 x 10	SP	(4) SDWH27600G	Y	5		1,570	1,570	1,025	1,710	1,565	995
8	(1) 4 x 10	DFL	(4) SDWH27600G	Y	4		1,605	1,095	805	1,825	1,560	915
8	(1) 1.75 x 9.5	LVL / LSL	(4) SDWH27600G	Y	6¼		1,425	1,425	715	2,090	2,090	1045
8	(2) 1.75 x 9.5	LVL / LSL	(4) SDWH27600G	Y	4½		1,605	1,095	805	1,825	1,560	915
8	(1) 3.5 x 9.25	PSL PLUS	(4) SDWH27600G	Y	4½		1,695	1,405	850	1,615	1,250	810
8	(1) 3.125 – 3.5 x 9.5	Glulam	(4) SDWH27600G	Y	4½		1,520	1,500	760	1,640	1,505	820
10	(1) 2 x 10	SP	(4) SDWH27600G	N	—	SQ2	2,020	1,445	1,010	2,020	1,540	1,010
10	(1) 2 x 10	SP	(4) SDWH27600G	Y	8½		1,555	1,505	780	2,020	1,670	1,010
10	(2) 2 x 10	SP	(4) SDWH27600G	Y	7		2,045	1,655	1,025	1,985	1,565	995
10	(3) 2 x 10	SP	(4) SDWH27800G	Y	5½		2,390	1,680	1,195	2,310	2,030	1,155
10	(1) 4 x 10	DFL	(4) SDWH27800G	Y	6		1,605	1,095	805	1,825	1,560	915
10	(1) 1.75 x 9.5	LVL / LSL	(4) SDWH27600G	Y	8¼		1,425	1,425	715	2,090	2,090	1,045
10	(2) 1.75 x 9.5	LVL / LSL	(4) SDWH27800G	Y	6½		1,605	1,095	805	1,825	1,560	915
10	(1) 3.5 x 9.25	PSL PLUS	(4) SDWH27800G	Y	6½		1,695	1,405	850	1,615	1,250	810
10	(1) 3.125 – 3.5 x 9.5	Glulam	(4) SDWH27800G	Y	6½		1,520	1,500	760	1,640	1,505	820
10	(3) 1.75 x 9.5	LVL / LSL	(4) SDWH27800G	Y	4¾		1,605	1,420	805	1,520	1,520	760
10	(1) 5.25 x 9.25	PSL PLUS	(4) SDWH27800G	Y	4¾		1,605	1,420	805	1,520	1,520	760
10	(1) 5.125 – 5.5 x 9.5	Glulam	(4) SDWH27800G	Y	4½		2,170	1,810	1,085	2,000	1,855	1,000
12	(1) 2 x 10	SP	(4) SDWH27600G	N	—		2,020	1,445	1,010	2,020	1,540	1,010
12	(1) 2 x 10	SP	(4) SDWH27600G	Y	10½		1,555	1,505	780	2,020	1,670	1,010
12	(2) 2 x 10	SP	(4) SDWH27600G	Y	9		2,045	1,655	1,025	1,985	1,565	995
12	(3) 2 x 10	SP	(4) SDWH27800G	Y	7½		2,390	1,680	1,195	2,310	2,030	1,155
12	(1) 4 x 10	DFL	(4) SDWH27800G	Y	8		1,605	1,095	805	1,825	1,560	915
12	(1) 1.75 x 9.5	LVL / LSL	(4) SDWH27600G	Y	10¼		1,425	1,425	715	2,090	2,090	1045
12	(2) 1.75 x 9.5	LVL / LSL	(4) SDWH27800G	Y	8½		1,605	1,095	805	1,825	1,560	915
12	(1) 3.5 x 9.25	PSL PLUS	(4) SDWH27800G	Y	8½		1,695	1,405	850	1,615	1,250	810
12	(1) 3.125 – 3.5 x 9.5	Glulam	(4) SDWH27800G	Y	8½		1,520	1,500	760	1,640	1,505	820

Square Piling

One-Sided Stringers

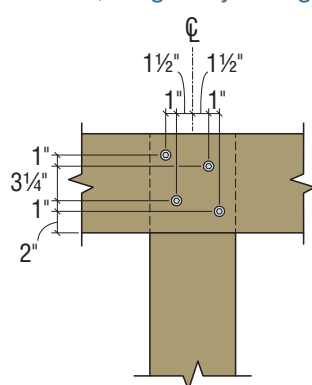
Table 1: Square Piles — Loads for One-Sided Stringer-to-Pile Connection (cont.)

Pile Size (in.)	Total Stringers — Qty. and Size (in.)	Stringer Material	Total Fasteners — Qty. and Model	Notched Pile ?	Minimum Notched Pile Depth (in.)	Detail No.	Allowable Connection Loads (lb.)				
							Uplift			Lateral	
							Continuous and Lap	Butt ⁷	End	Continuous and Lap	Butt ⁷ End
12	(3) 1.75 x 9.5	LVL / LSL	(4) SDWH27800G	Y	6¾	SQ2	1,605	1,420	805	1,520	1,520 760
12	(1) 5.25 x 9.25	PSL PLUS	(4) SDWH27800G	Y	6¾		1,605	1,420	805	1,520	1,520 760
12	(1) 5.125 – 5.5 x 9.5	Glulam	(4) SDWH27800G	Y	6½		2,170	1,810	1,085	2,000	1,855 1,000

- Design of framing (stringers) and columns is by others.
- Wooden piles and framing are Southern Pine (SP) or engineered wood products with minimum specific gravity or equivalent specific gravity of 0.50.
- Use the screw length cited in the tables and details.
- Where noted, dimensions and allowable connection loads are based on notched piles that must accommodate the stringers with adequate bearing and no gaps.
- Notched piles shall not be notched such that more than 50% of the cross section is removed.
- Unnotched piles may be assigned notched pile loads if the unnotched pile dimensions meet or exceed the maximum dimensions for the notched pile and fastener placement is the same.
- Tabulated values shall be multiplied by all applicable service adjustment factors per the NDS. Allowable loads are shown with a load duration factor

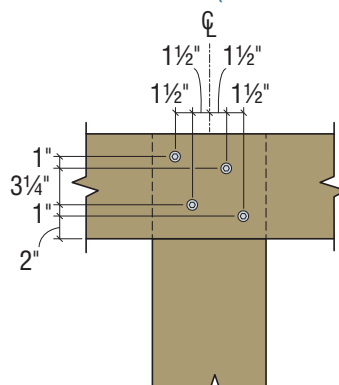
- of $C_D = 1.0$. Loads may be increased for load duration per the building code up to $C_D = 1.6$. For service moisture content greater than 19%, use $C_M = 0.70$.
- When the connection on an unnotched pile is simultaneously loaded in more than one direction, the allowable load must be evaluated using the unity equation: $(\text{Design uplift/Allowable uplift}) + (\text{Design lateral/Allowable lateral}) + (\text{Design vertical/Allowable vertical}) \leq 1.0$. If notched piles are used, the last term is zero.
 - For stringer thickness at least 1.5" and less than 3", use the table values for the conditions with a single 2x stringer.
 - Butt loads are based on all stringer members butted. For multi-ply stringers where one stringer is continuous, use the tabulated loads in the "Continuous and Lap" column. Refer to figures for details.

One Sided, Single-Ply Stringers — Continuous Condition (End Condition Similar)



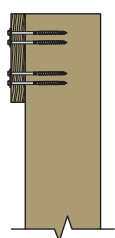
Detail SQ1

8" Square Pile (min.)

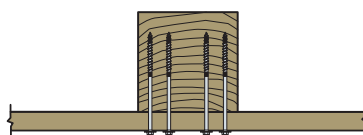


Detail SQ2

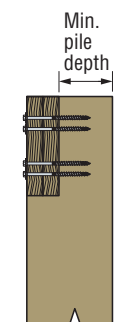
10" and 12" Square Pile (min.)



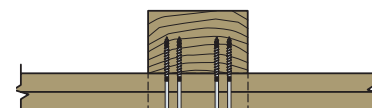
Unnotched



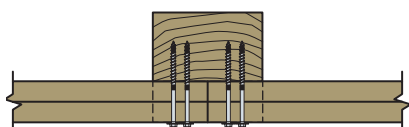
Unnotched, Continuous



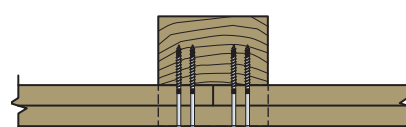
Notched



Notched, Continuous



Notched, Butt



Notched, Lap

(Inner Ply Butt shown, Outer Ply Continuous similar)

Square Piling

Two-Sided Stringers

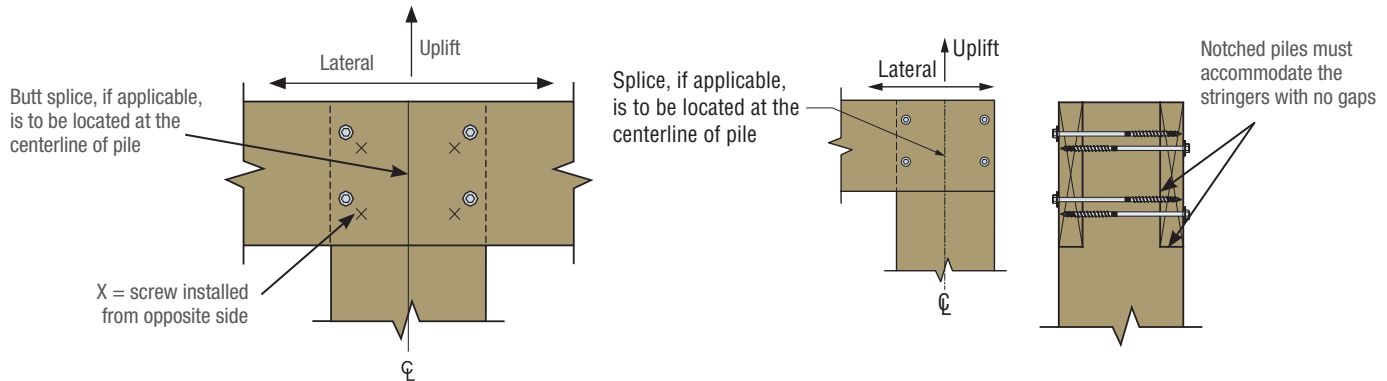


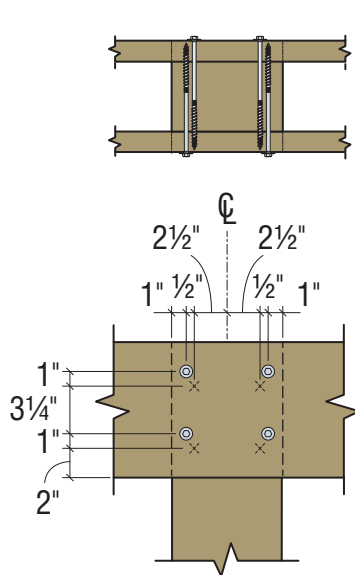
Table 2: Square Piles — Loads for Two-Sided Stringer-to-Pile Connection

Pile Size (in.)	Total Stringers — Qty. and Size (in.)	Detail No.	Total Fasteners — Qty. and Model No.	Allowable Continuous Connection Loads (lb.)					
				Uplift			Lateral		
				Continuous	Butt	End	Continuous	Butt	End
8	(2) 2 x 10	SQ3	(8) SDWH27800G	3,455	2,370	2,085	4,035	3,750	3,380
10	(2) 2 x 10	SQ4	(8) SDWH271000G	4,405	3,290	2,380	4,705	4,290	4,125
12	(2) 2 x 10	SQ5	(8) SDWH271200G	4,140	3,480	2,490	5,095	5,095	4,205
10	(4) 2 x 10	SQ6	(8) SDWH271000G	5,100	4,160	3,095	5,870	4,900	3,685
12	(4) 2 x 10	SQ7	(8) SDWH271200G	7,840	5,530	4,600	7,090	6,025	5,160
12	(4) 2 x 12	SQ8	(12) SDWH271200G	9,705	5,920	5,275	8,305	8,305	7,640

- Design of framing (stringers) and columns is by others.
- Wooden piles and framing are Southern Pine (SP) or engineered wood products with minimum specific gravity or equivalent specific gravity of 0.55.
- Use the screw lengths cited in the tables and details.
- Tabulated loads are total load, not per side, and are based on double shear action with the same size and quantity of stringers on opposing faces of the pile.
- Dimensions and allowable connection loads are based on notched piles that must accommodate the stringers with adequate bearing and no gaps.
- Notched piles shall not be notched such that more than 50% of the cross section is removed.
- Unnotched piles may be assigned notched pile loads if the unnotched pile dimensions meet or exceed the maximum dimensions for the notched pile and fastener placement is the same.
- Tabulated values shall be multiplied by all applicable service adjustment factors per the NDS. Allowable loads are shown with a load duration factor of $C_D=1.0$. Loads may be increased for load duration per the building code up to $C_D=1.6$. For service moisture content greater than 19%, use $C_M=0.70$.
- When the connection on an unnotched pile is simultaneously loaded in more than one direction, the allowable load must be evaluated using the unity equation: $(\text{Design uplift}/\text{Allowable uplift}) + (\text{Design lateral}/\text{Allowable lateral}) + (\text{Design vertical}/\text{Allowable vertical}) \leq 1.0$. If notched piles are used, the last term is zero.
- For stringer thickness at least 1.5" and less than 3", use the table values for the conditions with a single 2x stringer.
- Butt loads are based on all stringer members butted. For multi-ply stringers where one stringer is continuous, use the tabulated loads in the "Continuous and Lap" column. Refer to figures for details.

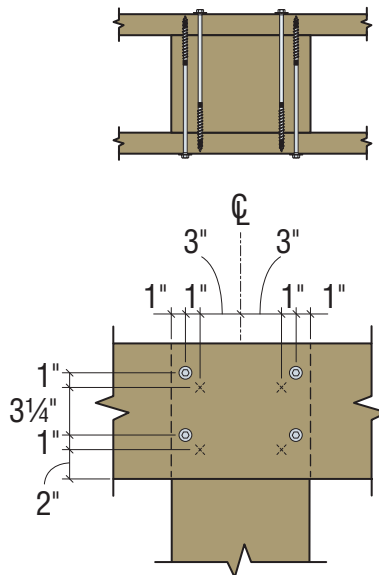
Square Piling

Two-Sided, Single-Ply Stringers — Continuous Condition (End Condition Similar)



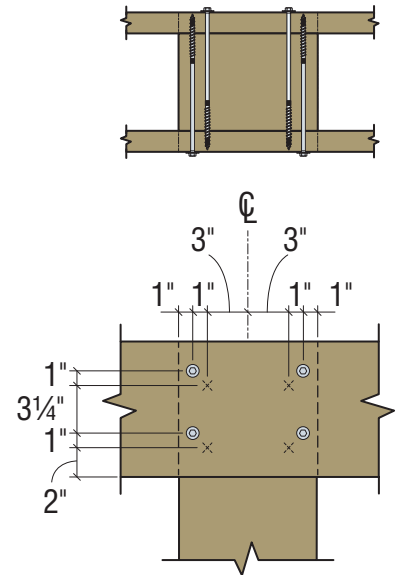
Detail SQ3 — 8" Square Pile
Two-Sided 2x10

(8) 8" SDWH Timber-Hex HDG Screws



Detail SQ4 — 10" Square Pile
Two-Sided 2x10

(8) 10" SDWH Timber-Hex HDG Screws

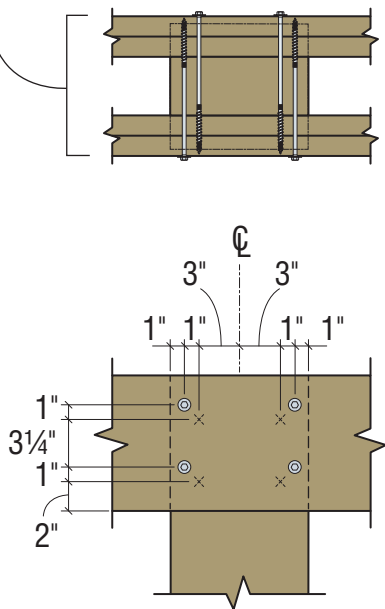


Detail SQ5 — 12" Square Pile
Two-Sided 2x10

(8) 12" SDWH Timber-Hex HDG Screws

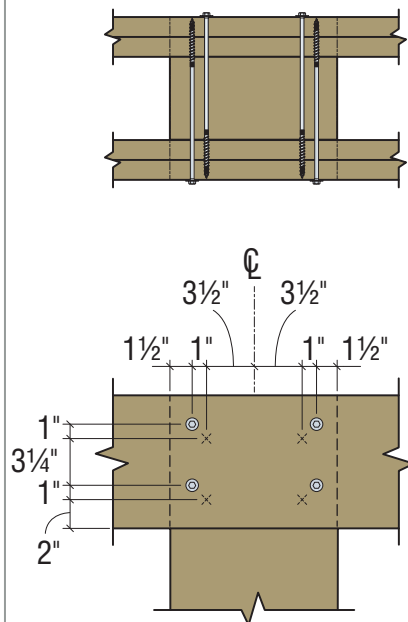
Two-Sided, Double-Ply Stringers — Continuous Condition (End Condition Similar)

Stringers will
overhang by 1/2"



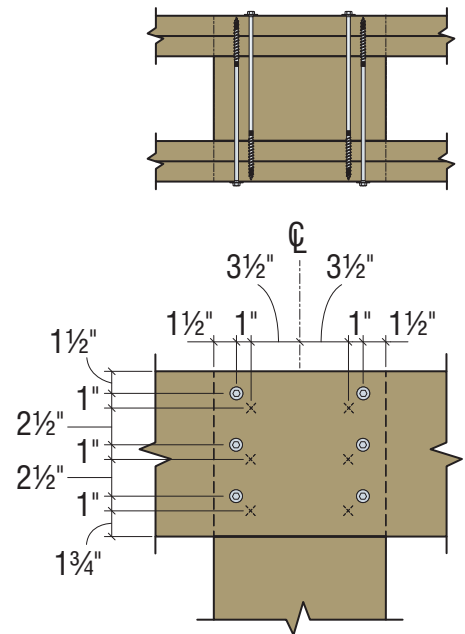
Detail SQ6 — 10" Square Pile
Two-Sided, Double 2x10

(8) 10" SDWH Timber-Hex HDG Screws



Detail SQ7 — 12" Square Pile
Two-Sided, Double 2x10

(8) 12" SDWH Timber-Hex HDG Screws



Detail SQ8 — 12" Square Pile
Two-Sided, Double 2x12

(12) 12" SDWH Timber-Hex HDG Screws

Square Piling

Multiple-Sided, Multi-Ply Stringers — Corner/End Condition

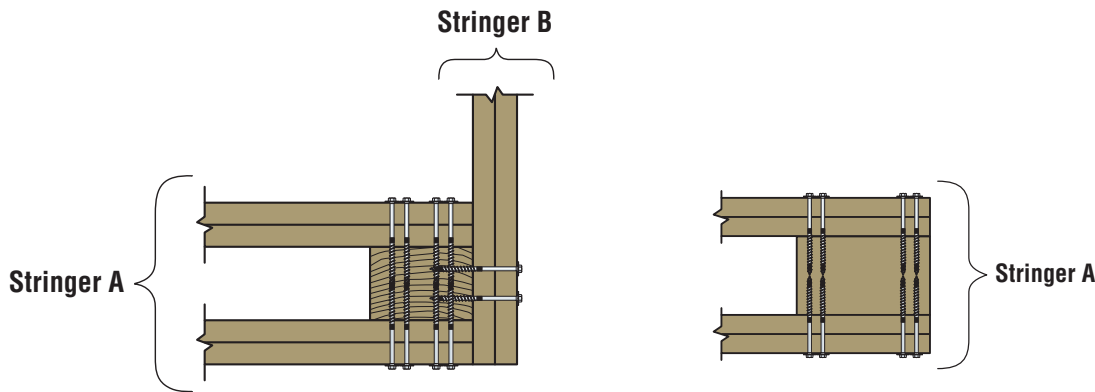


Table 3: Square Piles — Loads for End/Corner Connections

Pile Size (in.)	Stringer Configuration					Notched Pile ?	Detail No.	Allowable Connection Loads (lb.)			
	Stringer A			Stringer B				Uplift		Lateral	
	# of Sides	Plies — Qty. and Size (in.)	Fasteners — Qty. and Model	Plies — Qty. and Size (in.)	Fasteners — Qty. and Model			A Side	B Side	A Side	B Side
8	2	(1) 2 x 10	(8) SDWH27400G	(1) 2 x 10	(2) SDWH27400G	Y	SC1	2,050	895	1,700	850
8	2	(1) 2 x 10	(8) SDWH27800G	(1) 2 x 10	(2) SDWH27400G			2,330	895	2,865	850
8	1	(1) 2 x 10	(4) SDWH27400G	(1) 2 x 10	(4) SDWH27400G	Y	SC4	880	880	1,320	1,320
10	2	(1) 2 x 10	(8) SDWH27400G	(1) 2 x 10	(2) SDWH27400G	Y	SC2	2,050	895	1,700	850
10	2	(1) 2 x 10	(8) SDWH271000G	(1) 2 x 10	(2) SDWH27400G			2,330	895	2,865	850
10	1	(1) 2 x 10	(4) SDWH27400G	(1) 2 x 10	(4) SDWH27400G	Y	SC5	880	880	1,320	1,320
10	2	(2) 2 x 10	(8) SDWH27600G	(1) 2 x 10	(2) SDWH27400G	Y	SC7	2,860	895	2,830	850
10	2	(2) 2 x 10	(8) SDWH271000G	(1) 2 x 10	(2) SDWH27400G			3,455	895	3,505	850
10	1	(2) 2 x 10	(8) SDWH27600G	(2) 2 x 10	(2) SDWH27600G	Y	SC9	2,860	980	2,830	1,060
10	2	(2) 2 x 10	(8) SDWH271000G	(2) 2 x 10	(2) SDWH27600G			3,455	980	3,505	1,060
10	1	(2) 2 x 10	(4) SDWH27600G	(2) 2 x 10	(4) SDWH27600G	Y	SC11	1,620	1,620	1,610	1,610
12	2	(1) 2 x 10	(8) SDWH27400G	(1) 2 x 10	(2) SDWH27400G	Y	SC3	2,050	895	1,700	850
12	2	(1) 2 x 10	(8) SDWH271200G	(1) 2 x 10	(2) SDWH27400G			2,330	895	2,865	850
12	1	(1) 2 x 10	(4) SDWH27400G	(1) 2 x 10	(4) SDWH27400G	Y	SC6	880	880	1,320	1,320
12	2	(2) 2 x 10	(8) SDWH27600G	(1) 2 x 10	(2) SDWH27400G	Y	SC8	2,860	895	2,830	850
12	2	(2) 2 x 10	(8) SDWH271200G	(1) 2 x 10	(2) SDWH27400G			3,455	895	3,505	850
12	2	(2) 2 x 10	(8) SDWH27600G	(2) 2 x 10	(2) SDWH27600G	Y	SC10	2,860	980	2,830	1,060
12	2	(2) 2 x 10	(8) SDWH271200G	(2) 2 x 10	(2) SDWH27600G			3,455	980	3,505	1,060
12	1	(2) 2 x 10	(4) SDWH27600G	(2) 2 x 10	(4) SDWH27600G	Y	SC12	1,620	1,620	1,610	1,610

1. Design of framing (stringers) and columns is by others.

2. Wooden piles and framing are Southern Pine (SP) or engineered wood product with a minimum specific gravity or equivalent specific gravity of 0.55.

3. Use screw lengths cited in the tables and details.

4. Dimensions and allowable connection loads are based on notched piles that must accommodate the stringers with adequate bearing and no gaps.

5. Notched piles shall not be notched such that more than 50% of the cross section is removed.

6. Unnotched piles may be assigned notched pile loads if the unnotched pile dimensions meet or exceed the maximum dimensions for the notched pile and fastener placement is the same.

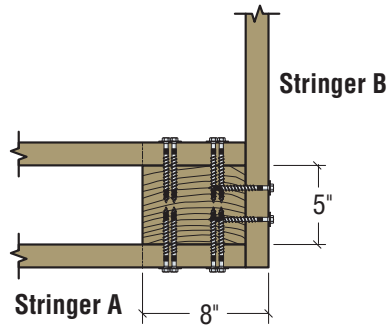
7. Tabulated values shall be multiplied by all applicable service adjustment factors per the NDS. Allowable loads are shown with a load duration factor of $C_D=1.0$. Loads may be increased for load duration per the building code up to $C_D=1.6$. For service moisture content greater than 19%, use $C_M=0.70$.

8. When the connection on an unnotched pile is simultaneously loaded in more than one direction, the allowable load must be evaluated using the unity equation: (Design uplift/Allowable uplift)+(Design lateral/Allowable lateral) + (Design vertical/Allowable vertical) ≤ 1.0 . If notched piles are used, the vertical term is zero.

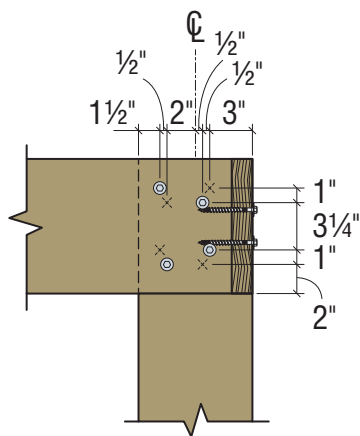
9. For stringer thickness at least 1.5" and less than 3", use the table values for the conditions with a single 2x stringer.

Square Piling

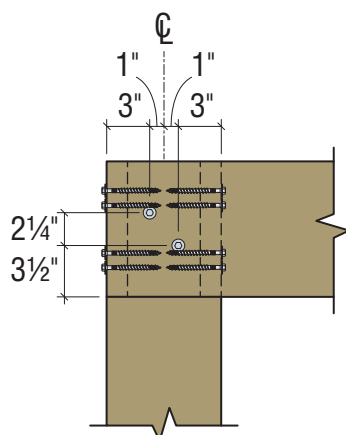
Multiple-Sided, Single-Ply Stringer — Corner/End Condition



Plan



Stringer A Elevation

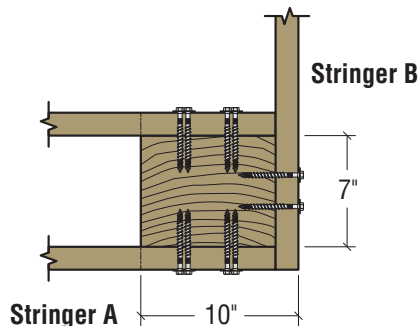


Stringer B Elevation

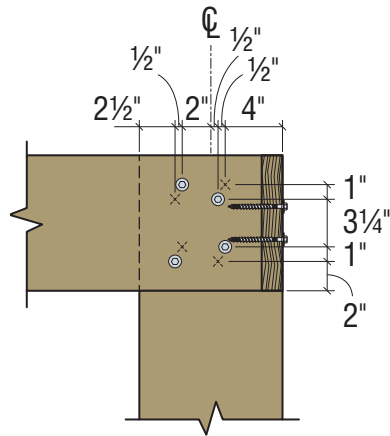
Detail SC1 — 8" Square Pile

Side A: (8) 4" or 8" SDWH Timber-Hex HDG Screws

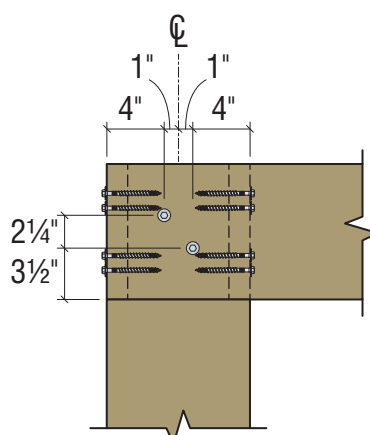
Side B: (2) 4" SDWH Timber-Hex HDG Screws



Plan



Stringer A Elevation

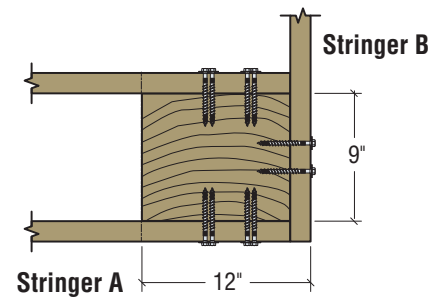


Stringer B Elevation

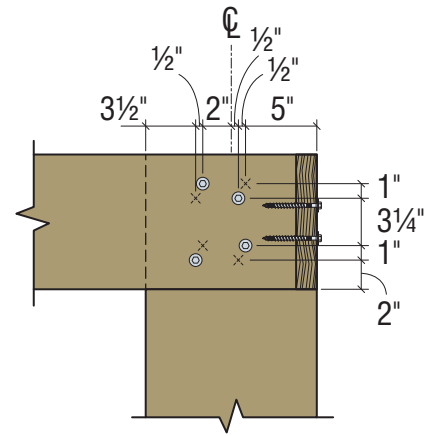
Detail SC2 — 10" Square Pile

Side A: (8) 4" or 10" SDWH Timber-Hex HDG Screws

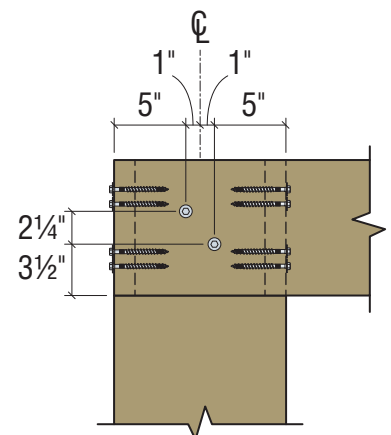
Side B: (2) 4" SDWH Timber-Hex HDG Screws



Plan



Stringer A Elevation



Stringer B Elevation

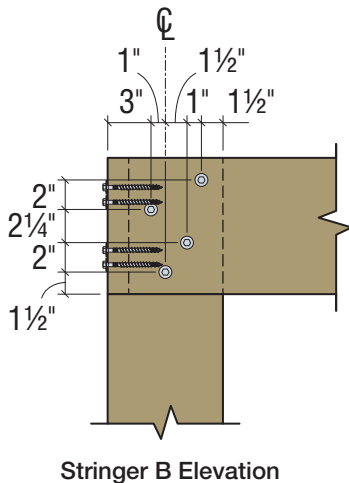
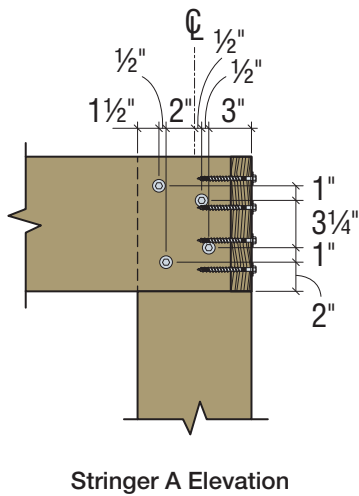
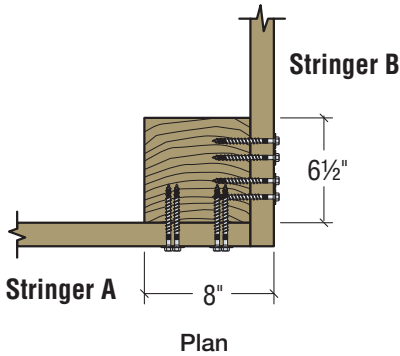
Detail SC3 — 12" Square Pile

Side A: (8) 4" or 12" SDWH Timber-Hex HDG Screws

Side B: (2) 4" SDWH Timber-Hex HDG Screws

Square Piling

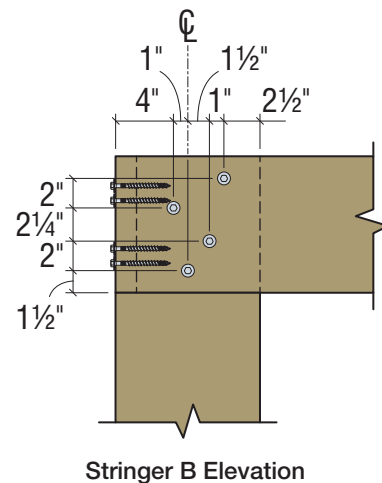
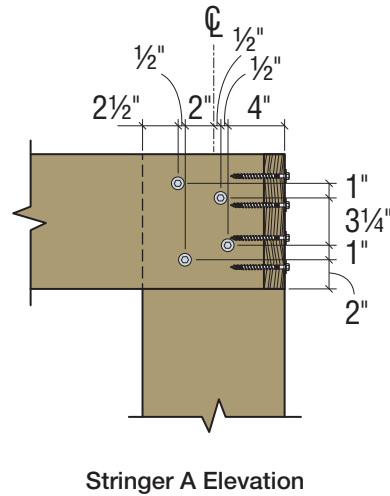
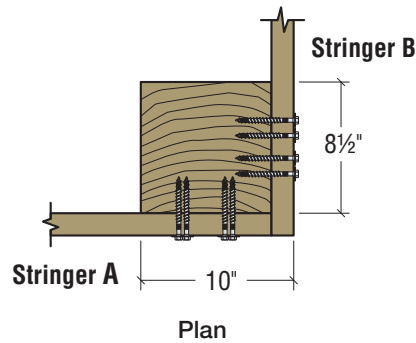
Two-Sided, Single-Ply Stringer — Corner/End Condition



Detail SC4 — 8" Square Pile

Side A: (4) 4" SDWH Timber-Hex HDG Screws

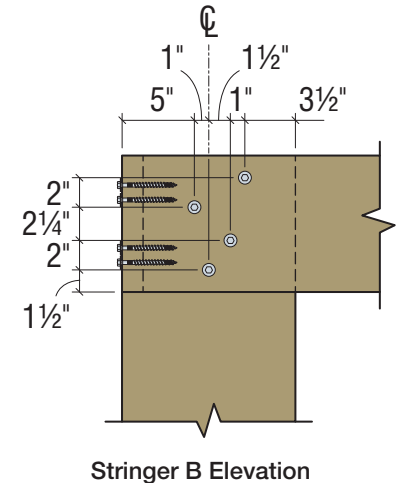
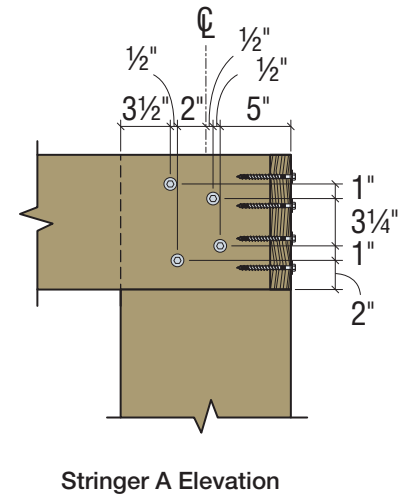
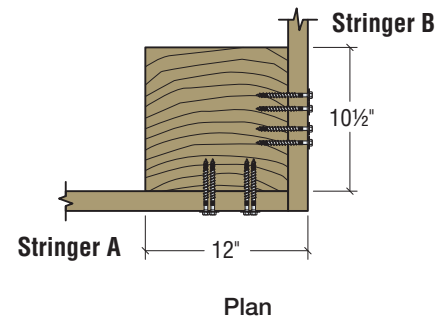
Side B: (4) 4" SDWH Timber-Hex HDG Screws



Detail SC5 — 10" Square Pile

Side A: (4) 4" SDWH Timber-Hex HDG Screws

Side B: (4) 4" SDWH Timber-Hex HDG Screws



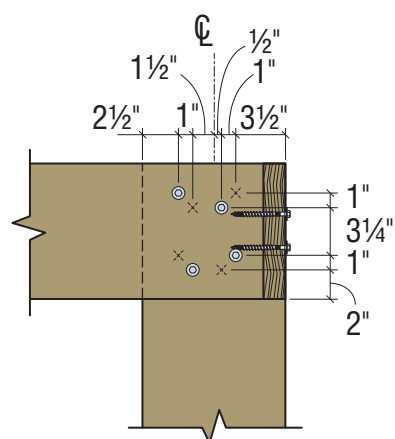
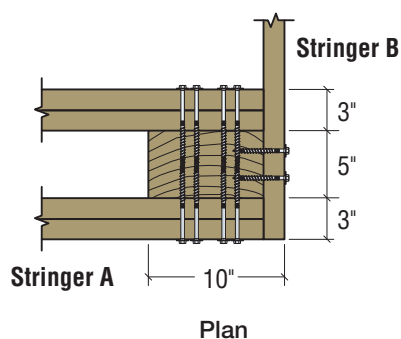
Detail SC6 — 12" Square Pile

Side A: (4) 4" SDWH Timber-Hex HDG Screws

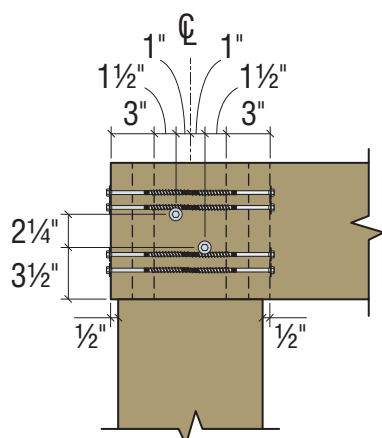
Side B: (4) 4" SDWH Timber-Hex HDG Screws

Square Piling

Two-Sided, Double-Ply and One-Sided, Single-Ply Stringers — Corner/End Condition



Stringer A Elevation

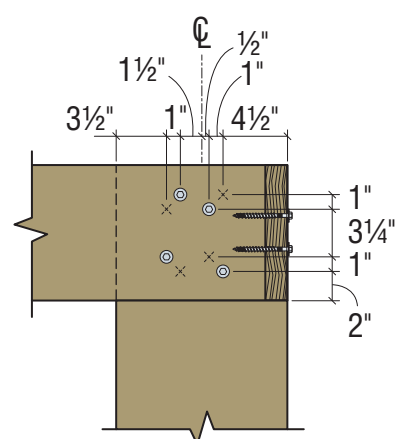
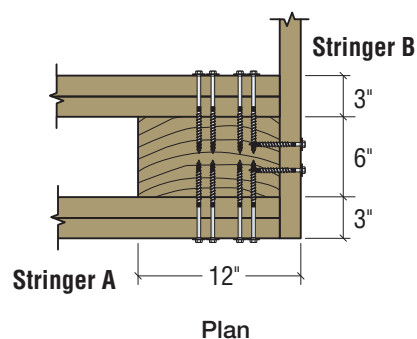


Stringer B Elevation

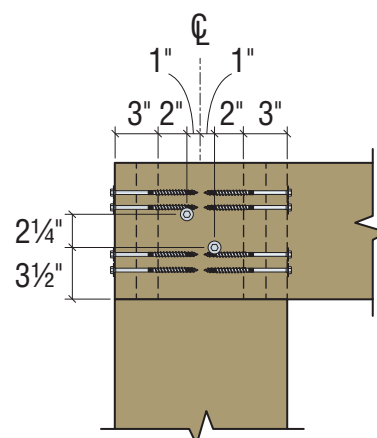
Detail SC7 – 10" Square Pile

Side A: (8) 4" or 8" SDWH Timber-Hex
HDG Screws

Side B: (2) 4" SDWH Timber-Hex
HDG Screws



Stringer A Elevation



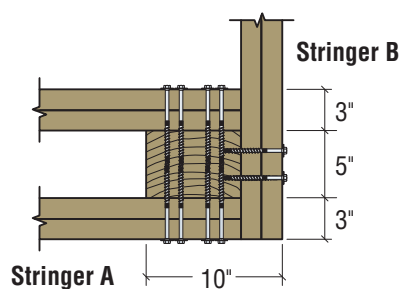
Stringer B Elevation

Detail SC8 – 12" Square Pile

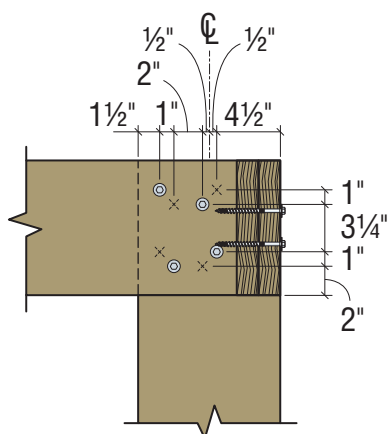
Side A: (8) 6" or 10" SDWH Timber-Hex
HDG Screws

Side B: (2) 4" SDWH Timber-Hex
HDG Screws

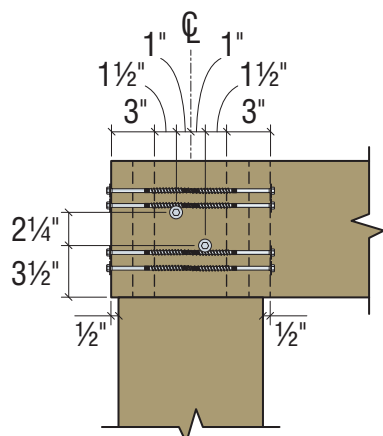
Three-Sided, Double-Ply Stringers — Corner/End Condition



Plan



Stringer A Elevation

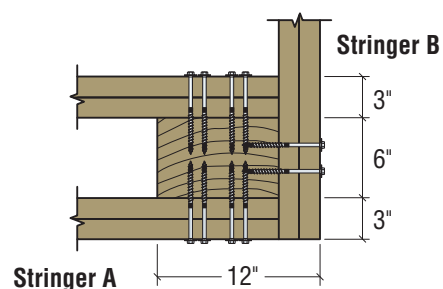


Stringer B Elevation

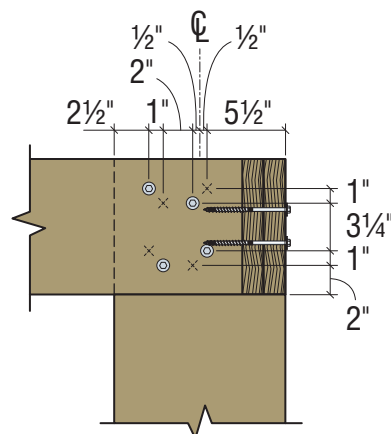
Detail SC9 – 10" Square Pile

Side A: (8) 6" or 10" SDWH Timber-Hex
HDG Screws

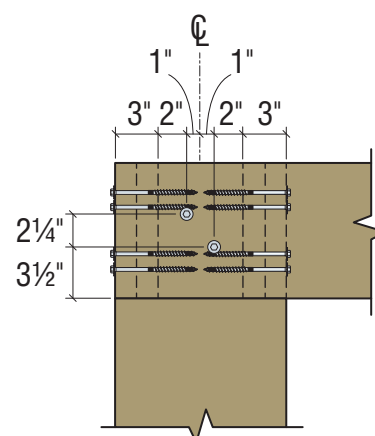
Side B: (2) 4" or 6" SDWH Timber-Hex
HDG Screws



Plan



Stringer A Elevation



Stringer B Elevation

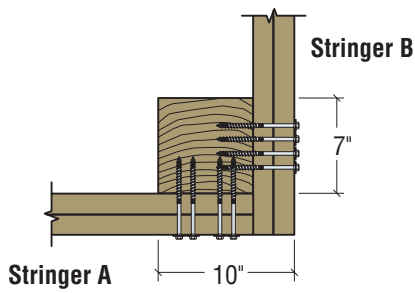
Detail SC10 – 12" Square Pile

Side A: (8) 6" or 12" SDWH Timber-Hex
HDG Screws

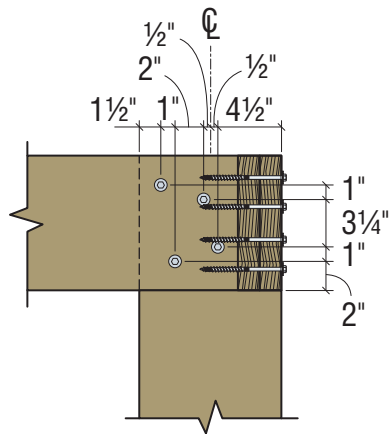
Side B: (2) 4" or 6" SDWH Timber-Hex
HDG Screws

Square Piling

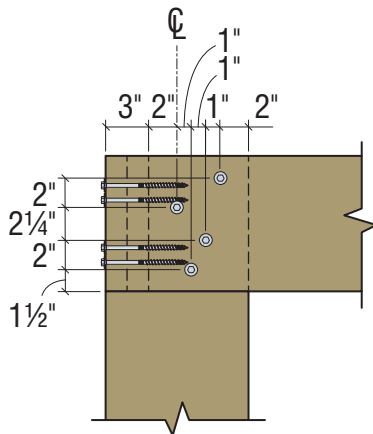
Two-Sided, Double-Ply Stringer — Corner/End Condition



Plan



Stringer A Elevation

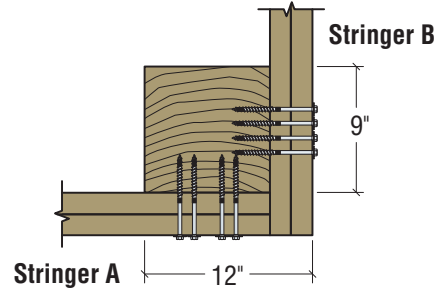


Stringer B Elevation

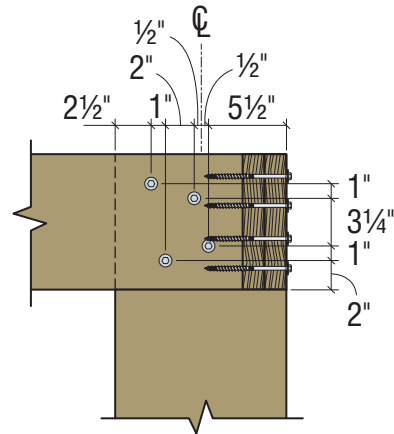
Detail SC11 — 10" Square Pile

Side A: (4) 10" SDWH Timber-Hex HDG Screws

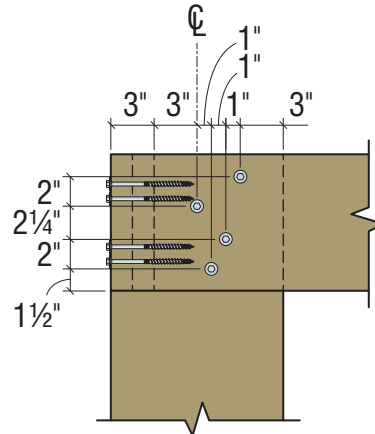
Side B: (4) 6" SDWH Timber-Hex HDG Screws



Plan



Stringer A Elevation



Stringer B Elevation

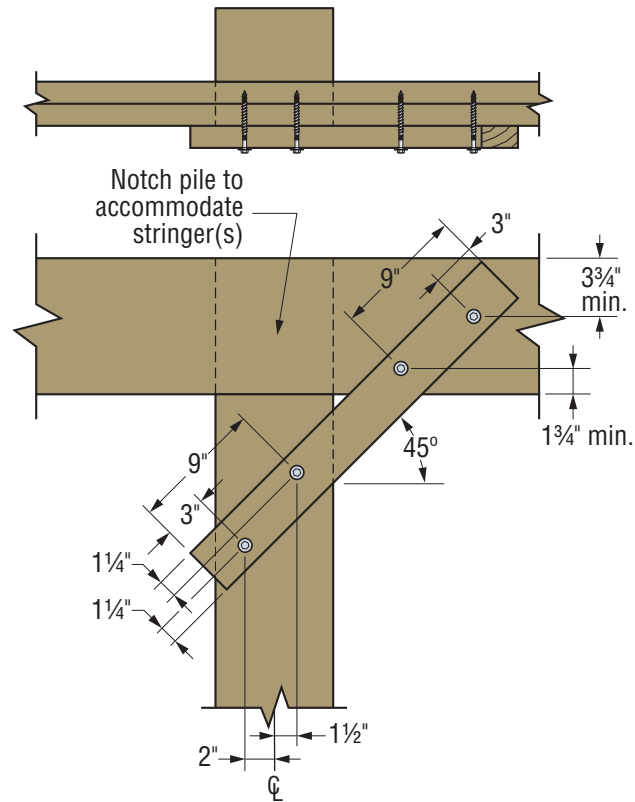
Detail SC12 — 12" Square Pile

Side A: (4) 6" SDWH Timber-Hex HDG Screws

Side B: (4) 6" SDWH Timber-Hex HDG Screws

Square Piling

Stringer-to-Square Pile Bracing



Detail SB1

2x4 Brace with (2) SDWH27400G
Screws at Each End

Table 4: Square Piles — Loads for Stringer-to-Square-Pile Bracing Connections

Screw Model	Brace Size (in.)	Brace Type	Number of Screws per End of Brace	Detail No.	Allowable Load in Tension or Compression (lb.)
SDWH27400G	2x4	DF or SP	2	SB1	750

- Design of framing (stringers) and columns is by others.
- Wooden piles and framing are Southern Pine (SP), glulam, LVL, LSL and PSL PLUS stringers and shall have minimum specific gravity or equivalent specific gravity of 0.50.
- Use screw lengths cited in tables and details.
- Tabulated values shall be multiplied by all applicable service adjustment factors per the NDS. Allowable loads are shown with a load duration factor of $C_D=1.0$. Loads may be increased for load duration per the building code up to $C_D=1.6$. For service moisture content greater than 19%, use $C_M=0.70$.
- Minimum stringer thickness shall be 2.5" to accommodate screw length.
- See figure for spacing requirements.

Round Piling

One-Sided Stringers — Continuous Condition

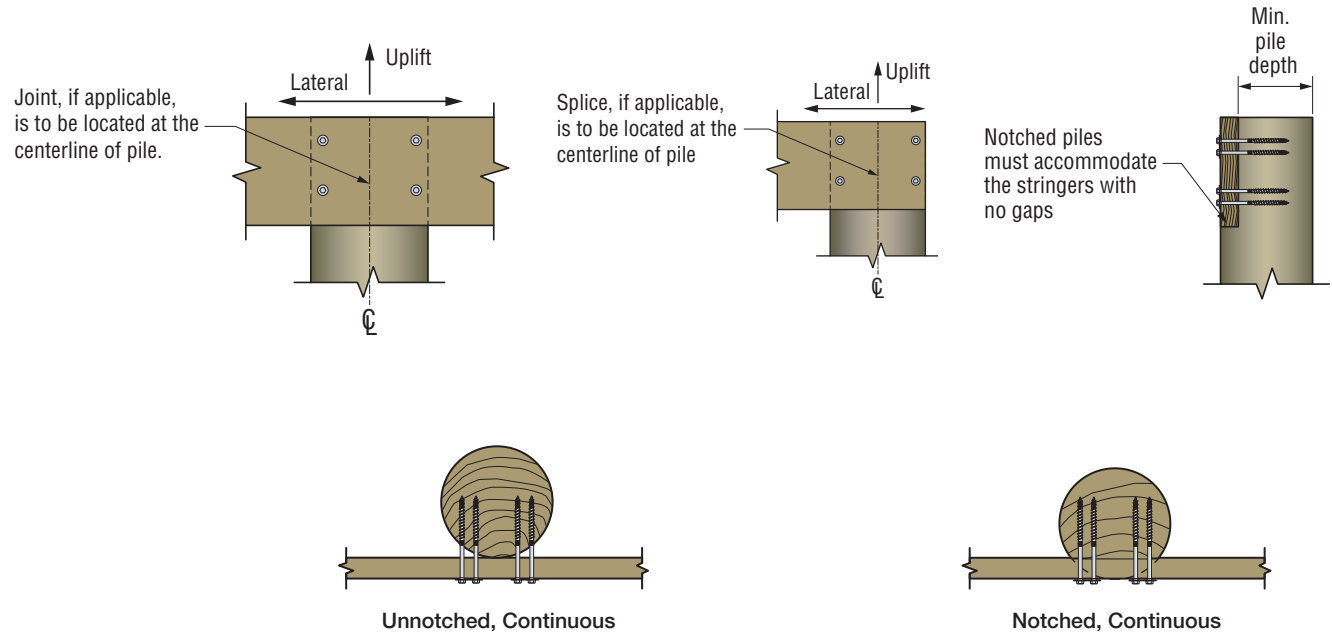


Table 5: Round Piles — Loads for One-Sided, Stringer-to-Pile Connection

Pile Size (in.)	Total Stringers — Qty. and Size (in.)	Stringer Type	Total Fasteners — Qty. and Model	Notched Pile ?	Minimum Notched Pile Depth (in.)	Detail No.	Allowable Connection Loads (lb.)					
							Uplift			Lateral		
							Continuous	Butt	End	Continuous	Butt	End
8	(1) 2 x 10	SP	(4) SDWH27600G	N	—	RP1	2,020	1,445	1,010	2,020	1,540	1,010
8	(1) 2 x 10	SP	(4) SDWH27600G	Y	6½		1,555	1,505	780	2,020	1,670	1,010
8	(2) 2 x 10	SP	(4) SDWH27600G	Y	5		1,570	1,570	1,025	1,710	1,565	995
8	(1) 4 x 10	DFL	(4) SDWH27600G	Y	4½		1,605	1,095	805	1,825	1,560	915
8	(1) 1.75 x 9.5	LVL / LSL	(4) SDWH27600G	Y	6¼		1,425	1,425	715	2,090	2,090	1,045
8	(2) 1.75 x 9.5	LVL / LSL	(4) SDWH27600G	Y	4½		1,605	1,095	805	1,825	1,560	915
8	(1) 3.5 x 9.25	PSL PLUS	(4) SDWH27600G	Y	4½		1,695	1,405	850	1,615	1,250	810
8	(1) 3.125 to 3.5 x 9.5	Glulam	(4) SDWH27600G	Y	4½		1,985	1,880	995	1,445	1,445	725
10	(1) 2 x 10	SP	(4) SDWH27600G	N	—	RP2	2,020	1,445	1,010	2,020	1,540	1,010
10	(1) 2 x 10	SP	(4) SDWH27600G	Y	8½		1,555	1,505	780	2,020	1,670	1,010
10	(2) 2 x 10	SP	(4) SDWH27800G	Y	7		2,045	1,655	1,025	1,985	1,565	995
10	(3) 2 x 10	SP	(4) SDWH27800G	Y	5½		2,390	1,680	1,195	2,310	2,030	1,155
10	(1) 4 x 10	DFL	(4) SDWH27800G	Y	6½		1,605	1,095	805	1,825	1,560	915
10	(1) 1.75 x 9.5	LVL / LSL	(4) SDWH27600G	Y	8¼		1,425	1,425	715	2,090	2,090	1,045
10	(2) 1.75 x 9.5	LVL / LSL	(4) SDWH27800G	Y	6½		1,605	1,095	805	1,825	1,560	915
10	(1) 3.5 x 9.25	PSL PLUS	(4) SDWH27800G	Y	6½		1,695	1,405	850	1,615	1,250	810
10	(1) 3.125 to 3.5 x 9.5	Glulam	(4) SDWH27800G	Y	6½		1,985	1,880	995	1,445	1,445	725
10	(3) 1.75 x 9.5	LVL / LSL	(4) SDWH27800G	Y	4¾		1,605	1,420	805	1,520	1,520	760
10	(1) 5.25 x 9.25	PSL PLUS	(4) SDWH27800G	Y	4¾		1,605	1,420	805	1,520	1,520	760
10	(1) 5.25 x 9.5	Glulam	(4) SDWH27800G	Y	4¾		1,420	1,400	710	2,215	1,845	1,110

Round Piling

One-Sided Stringers

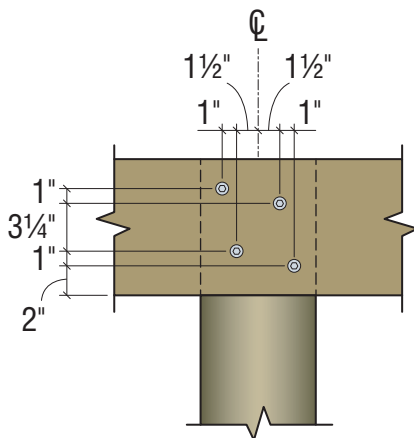
Table 5: Round Piles — Loads for One-Sided, Stringer-to-Pile Connection (cont.)

Pile Size (in.)	Total Stringers — Qty. and Size (in.)	Stringer Type	Total Fasteners — Qty. and Model	Notched Pile ?	Minimum Notched Pile Depth (in.)	Detail No.	Allowable Connection Loads (lb.)					
							Uplift			Lateral		
							Continuous	Butt	End	Continuous	Butt	End
12	(1) 2 x 10	SP	(4) SDWH27600G	N	—	RP2	2,020	1,445	1,010	2,020	1,540	1,010
12	(1) 2 x 10	SP	(4) SDWH27600G	Y	10½		1,555	1,505	780	2,020	1,670	1,010
12	(2) 2 x 10	SP	(4) SDWH27800G	Y	9		2,045	1,655	1,025	1,985	1,565	995
12	(3) 2 x 10	SP	(4) SDWH27800G	Y	7½		2,390	1,680	1,195	2,310	2,030	1,155
12	(1) 4 x 10	DFL	(4) SDWH27800G	Y	8½		1,605	1,095	805	1,825	1,560	915
12	(1) 1.75 x 9.5	LVL / LSL	(4) SDWH27600G	Y	10¼		1,425	1,425	715	2,090	2,090	1,045
12	(2) 1.75 x 9.5	LVL / LSL	(4) SDWH27800G	Y	8½		1,605	1,095	805	1,825	1,560	915
12	(1) 3.5 x 9.25	PSL PLUS	(4) SDWH27800G	Y	8½		1,695	1,405	850	1,615	1,250	810
12	(1) 3.125 x 3.5 x 9.5	Glulam	(4) SDWH27800G	Y	8½		1,985	1,880	995	1,445	1,445	725
12	(3) 1.75 x 9.5	LVL / LSL	(4) SDWH27800G	Y	6¾		1,605	1,420	805	1,520	1,520	760
12	(1) 5.25 x 9.25	PSL PLUS	(4) SDWH27800G	Y	6¾		1,605	1,420	805	1,520	1,520	760
12	(1) 5.25 x 9.5	Glulam	(4) SDWH27800G	Y	6¾		1,420	1,400	710	2,215	1,845	1,110

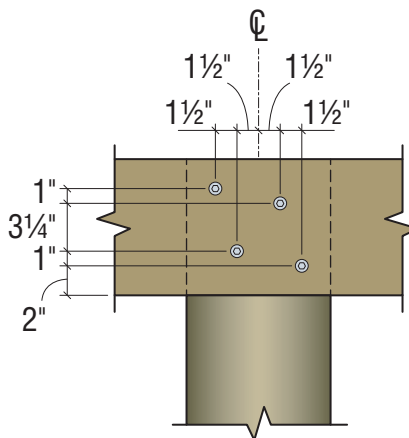
- Design of framing (stringers) and columns is by others.
- Wooden piles and framing are Southern Pine (SP) or engineered wood products with minimum specific gravity or equivalent specific gravity of 0.50.
- Use the screw length cited in the tables and details.
- Dimensions and allowable connection loads are based on notched piles that must accommodate the stringers with adequate bearing and no gaps.
- Notched piles shall not be notched such that more than 50% of the cross section is removed.
- Unnotched piles may be assigned notched pile loads if the unnotched pile dimensions meet or exceed the maximum dimensions for the notched pile and fastener placement is the same.
- Tabulated values shall be multiplied by all applicable service adjustment factors per the NDS. Allowable loads are shown with a load duration factor of

- $C_D = 1.0$. Loads may be increased for load duration per the building code up to $C_D = 1.6$. For service moisture content greater than 19%, use $C_M = 0.70$.
- When the connection on an unnotched pile is simultaneously loaded in more than one direction, the allowable load must be evaluated using the unity equation: (Design uplift/Allowable uplift) + (Design lateral/Allowable lateral) + (Design vertical/Allowable vertical) ≤ 1.0 . If notched piles are used, the last term is zero.
- For stringer thickness at least 1.5" and less than 3", use the table values for the conditions with a single 2x stringer.
- Butt loads are based on all stringer members butted. For multi-ply stringers where one stringer is continuous, use the tabulated loads in the "Continuous and Lap" column. Refer to figures for details.

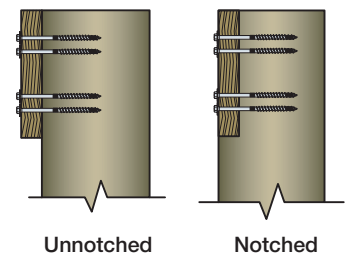
One-Sided, Single-, Double- or Triple-Ply Stringer — Continuous Condition (End Condition Similar)



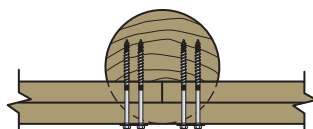
Detail RP1
8" Round Piles



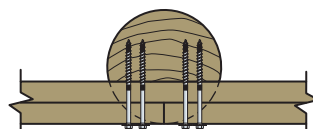
Detail RP2
10" and 12" Round Piles



Section View



Notched, Butt



Notched, Lap

(Outer Ply Butt, Inner Ply Continuous similar)

Round Piling

Two-Sided Stringers

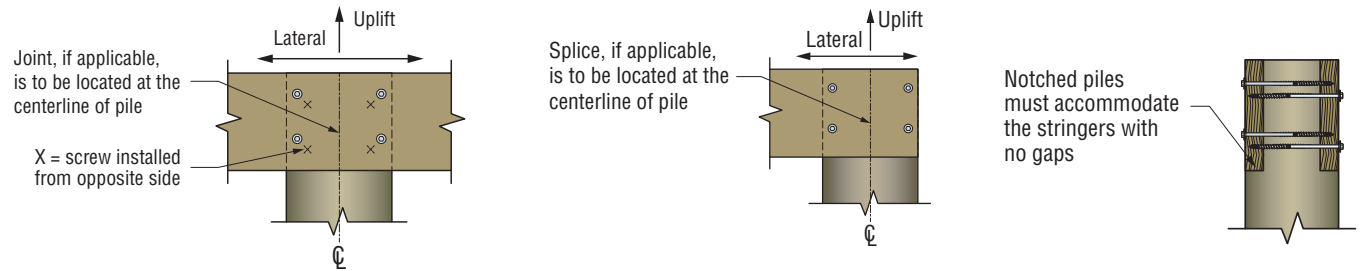


Table 6: Round Pile — Loads for Two-Sided, Stringer-to-Pile Connection

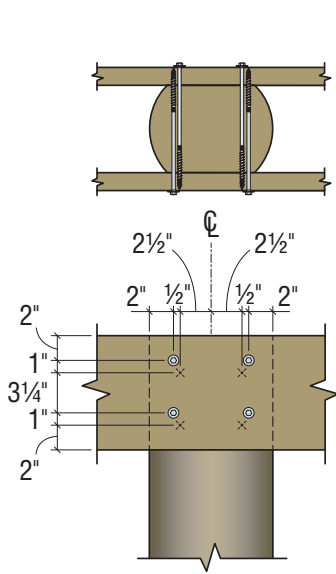
Pile Size (in.)	Total Stringers — Qty. and Size (in.)	Detail	Total Fasteners — Qty. and Model	Allowable Connection Loads (lb.)					
				Uplift			Lateral		
				Continuous	Butt	End	Continuous	Butt	End
10	(2) 2 x 10	RP3	(8) SDWH271000G	3,965	2,960	2,140	3,430	3,190	2,875
12	(2) 2 x 10	RP4	(8) SDWH271200G	3,725	3,130	2,240	4,000	3,645	3,505
14	(2) 2 x 10	RP5	(8) SDWH271200G	1,865	1,565	1,120	2,000	1,825	1,755
10	(4) 2 x 10	RP6	(8) SDWH271000G	4,590	3,745	2,785	3,430	3,190	2,875
12	(4) 2 x 10	RP7	(8) SDWH271200G	7,055	4,975	4,140	4,990	4,165	3,130
12	(4) 2 x 12	RP8	(12) SDWH271200G	8,735	5,330	4,750	6,000	5,470	5,260
14	(4) 2x10	RP9	(8) SDWH271200G	3,530	2,490	2,070	2,495	2,085	1,565
14	(4) 2x12	RP10	(12) SDWH271200G	4,370	2,665	2,375	3,000	2,735	2,630

- Design of framing (stringers) and columns is by others.
- Wooden piles and framing are Southern Pine (SP) or engineered wood products with minimum specific gravity or equivalent specific gravity of 0.50.
- Wooden piles and framing are Southern Pine (SP) or engineered wood products with specific gravity or equivalent specific gravity of 0.55.
- Use the screw lengths cited in the tables and details.
- Tabulated loads are total load, not per side, and are based on double shear action with the same size and quantity of stringers on opposing faces of the pile.
- Dimensions and allowable connection loads are based on notched piles that must accommodate the stringers with adequate bearing and no gaps.
- Notched piles shall not be notched such that more than 50% of the cross section is removed.
- Unnotched piles may be assigned notched pile loads if the unnotched-pile dimensions meet or exceed the maximum dimensions for the notched pile and fastener placement is the same.

- Tabulated values shall be multiplied by all applicable service adjustment factors per the NDS. Allowable loads are shown with a load duration factor of $CD = 1.0$. Loads may be increased for load duration per the building code up to $CD = 1.6$. For service moisture content greater than 19%, use $CM=0.70$.
- When the connection on an unnotched pile is simultaneously loaded in more than one direction, the allowable load must be evaluated using the unity equation: $(\text{Design uplift}/\text{Allowable uplift}) + (\text{Design lateral}/\text{Allowable lateral}) + (\text{Design vertical}/\text{Allowable vertical}) \leq 1.0$. If notched piles are used, the last term is zero.
- For stringer thickness at least 1.5" and less than 3", use the table values for the conditions with a single 2x stringer.
- Butt loads are based on all stringer members butted. For multi-ply stringers where one stringer is continuous, use the tabulated loads in the "Continuous and Lap" column. Refer to figures for details.

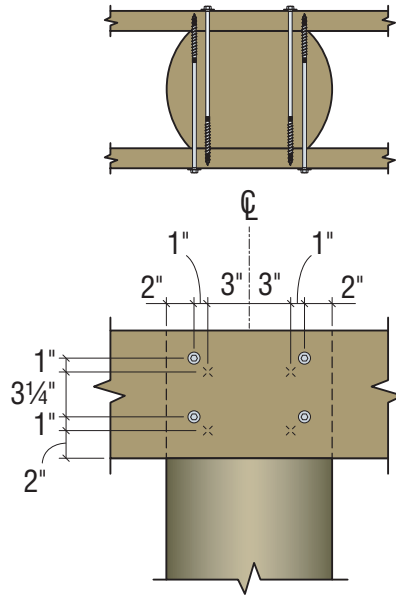
Round Piling

Two-Sided, Single-Ply Stringer — Continuous Condition (End Condition Similar)



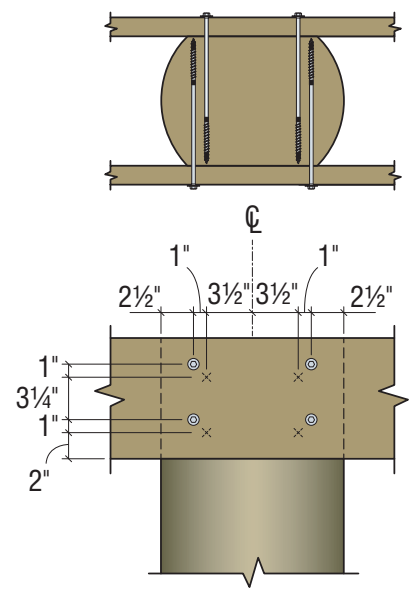
Detail RP3 — 10" Round Pile
Single 2x10

(8) 10" SDWH Timber-Hex HDG Screws



Detail RP4 — 12" Round Pile
Single 2x10

(8) 12" SDWH Timber-Hex HDG Screws

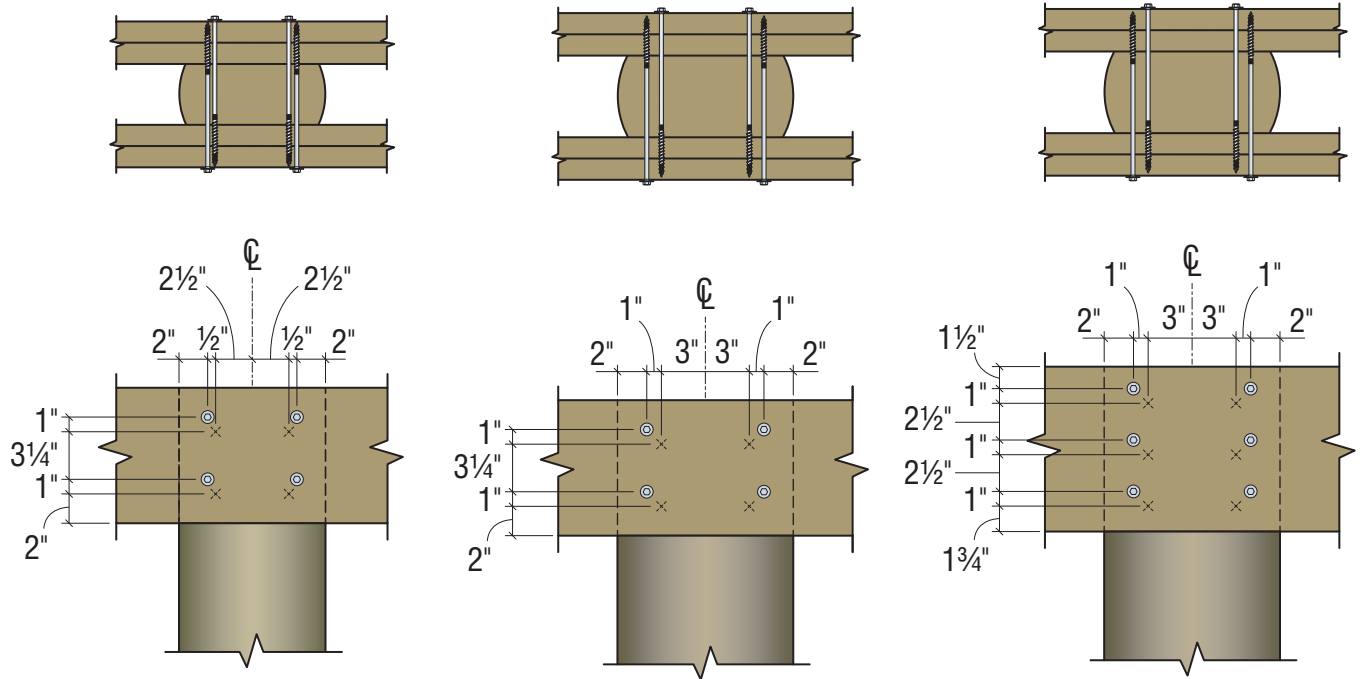


Detail RP5 — 14" Round Pile
Single 2x10

(8) 12" SDWH Timber-Hex HDG Screws

Round Piling

Two-Sided, Double-Ply Stringer — Continuous Condition (End Condition Similar)



Detail RP6 — 10" Round Pile
Two-Sided, Double-Ply 2x10

(8) 10" SDWH Timber-Hex HDG Screws

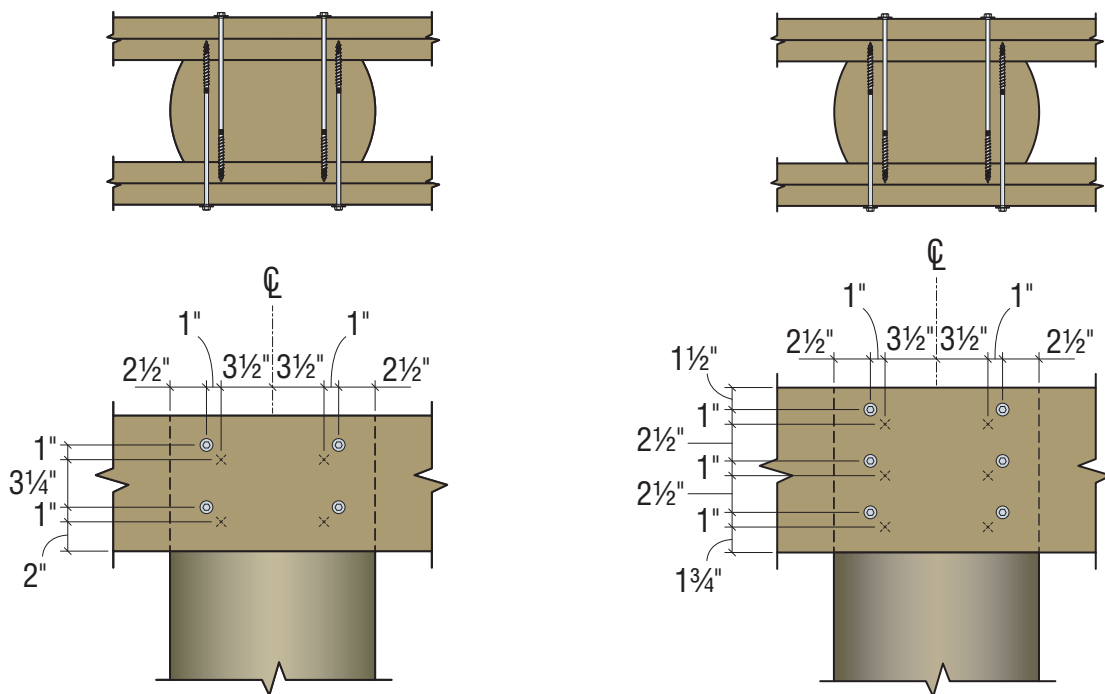
Detail RP7 — 12" Round Pile
Two-Sided, Double-Ply 2x10

(8) 12" SDWH Timber-Hex HDG Screws

Detail RP8 — 12" Round Pile
Two-Sided, Double-Ply 2x12

(12) 12" SDWH Timber-Hex HDG Screws

Two-Sided, Double-Ply Stringer — Continuous Condition (End Condition Similar)



Detail RP9 — 14" Round Pile
Two-Sided, Double-Ply 2x10

(8) 12" SDWH Timber-Hex HDG Screws

Detail RP10 — 14" Round Pile
Two-Sided, Double-Ply 2x12

(12) 12" SDWH Timber-Hex HDG Screws

Round Piling

End/Corner Condition

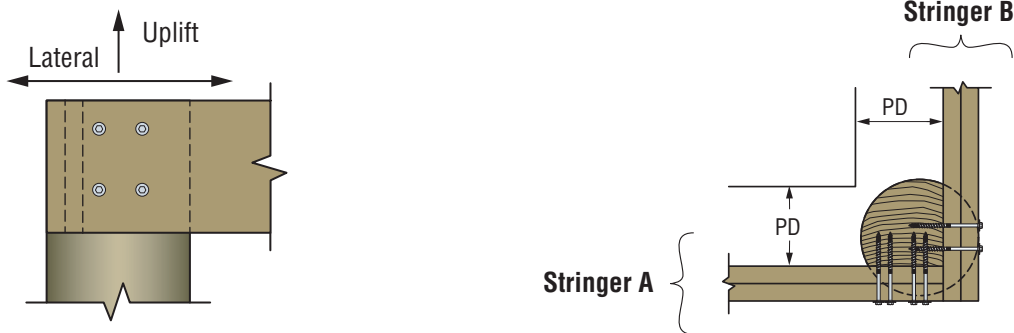


Table 7: Round Pile — Loads for End/Corner Connection

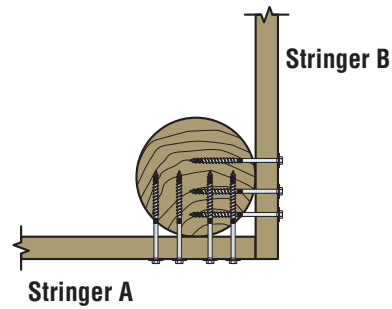
Pile Size (in.)	Stringer A		Stringer B		Notched Pile ?	Detail No.	Minimum Notched Pile Depth (in.) PD	Allowable Connection Loads per Stringers (lb.)	
	Plies — Qty. and Size (in.)	Fasteners — Qty. and Model	Plies — Qty. and Size (in.)	Fasteners — Qty. and Model				Uplift	Lateral
8	(1) 2 x 10	(4) SDWH27600G	(1) 2 x 10	(4) SDWH27600G	N	RC1	—	1,140	1,615
8	(2) 2 x 10	(4) SDWH27800G	(2) 2 x 10	(4) SDWH27800G	N	RC1	—	1,655	1,585
8	(1) 2 x 10	(4) SDWH27400G	(1) 2 x 10	(4) SDWH27400G	Y	RC2	6½	1,035	1,455
8	(2) 2 x 10	(3) SDWH27600G	(2) 2 x 10	(3) SDWH27600G	Y	RC3	5	1,310	1,110
10	(1) 2 x 10	(4) SDWH27600G	(1) 2 x 10	(4) SDWH27600G	N	RC1	—	1,140	1,615
10	(2) 2 x 10	(4) SDWH27800G	(2) 2 x 10	(4) SDWH27800G	N	RC1	—	1,655	1,585
10	(1) 2 x 10	(4) SDWH27400G	(1) 2 x 10	(4) SDWH27400G	Y	RC2	8½	1,035	1,455
10	(2) 2 x 10	(3) SDWH27600G	(2) 2 x 10	(3) SDWH27600G	Y	RC3	7	1,310	1,110
12	(1) 2 x 10	(4) SDWH27600G	(1) 2 x 10	(4) SDWH27600G	N	RC1	—	1,140	1,615
12	(2) 2 x 10	(4) SDWH27800G	(2) 2 x 10	(4) SDWH27800G	N	RC1	—	1,655	1,585
12	(1) 2 x 10	(4) SDWH27400G	(1) 2 x 10	(4) SDWH27400G	Y	RC2	10½	1,035	1,455
12	(2) 2 x 10	(3) SDWH27600G	(2) 2 x 10	(3) SDWH27600G	Y	RC3	9	1,310	1,110

- Design of framing (stringers) and columns is by others.
- Wooden piles and framing are Southern Pine (SP) or engineered wood products with minimum specific gravity or equivalent specific gravity of 0.55.
- Use the screw lengths cited in the tables and details.
- Dimensions and allowable connection loads are based on notched piles that must accommodate the stringers with adequate bearing and no gaps.
- Notched piles shall not be notched such that more than 50% of the cross section is removed.
- Unnotched piles may be assigned notched pile loads if the unnotched pile dimensions meet or exceed the maximum dimensions for the notched pile and fastener placement is the same.

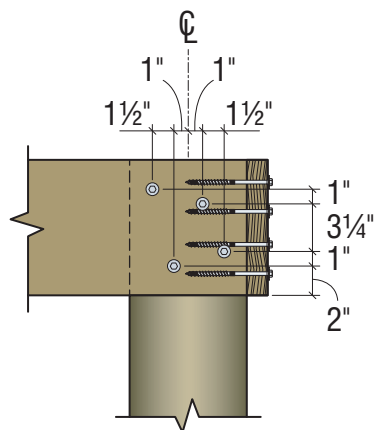
- Tabulated values shall be multiplied by all applicable service adjustment factors per the NDS. Allowable loads are shown with a load duration factor of $C_D = 1.0$. Loads may be increased for load duration per the building code up to $C_D = 1.6$. For service moisture content greater than 19%, use $C_M = 0.70$.
- When the connection on an unnotched pile is simultaneously loaded in more than one direction, the allowable load must be evaluated using the unity equation: $(\text{Design uplift/Allowable uplift}) + (\text{Design lateral/Allowable lateral}) + (\text{Design vertical/Allowable vertical}) \leq 1.0$. If notched piles are used, the vertical term is zero.
- For stringer thickness at least 1.5" and less than 3", use the table values for the conditions with a single 2x stringer.

Two-Sided Stringer

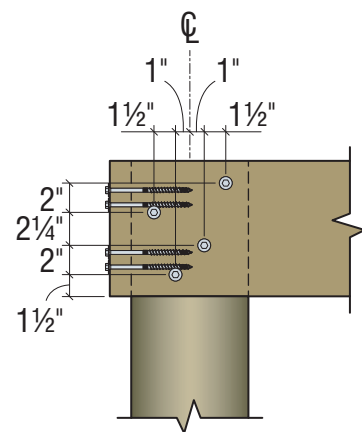
Corner Condition



Plan



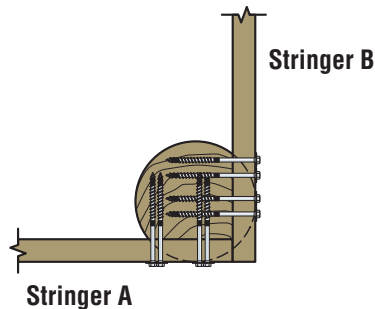
Stringer A Elevation



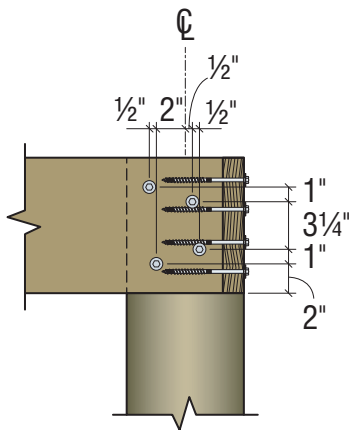
Stringer B Elevation

Detail RC1 — Unnotched Round Piles (Any Diameter, Any Qty. of Plies)

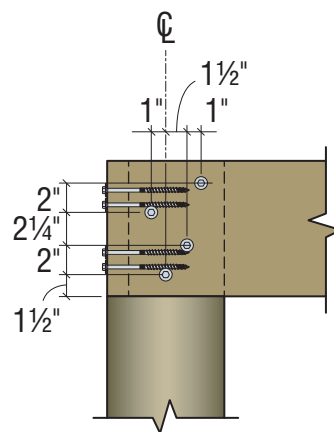
(4) SDWH Timber-Hex
HDG Screws, Length per Table



Plan



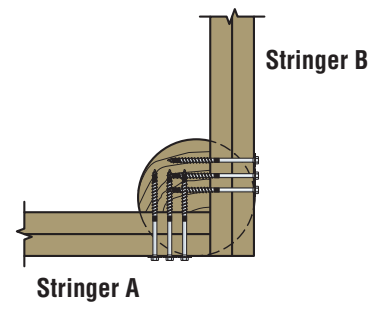
Stringer A Elevation



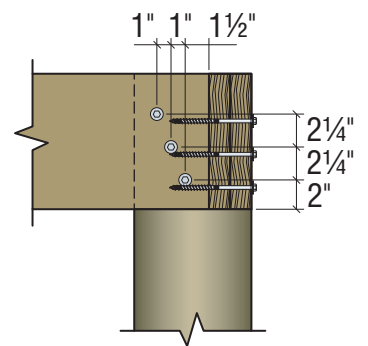
Stringer B Elevation

Detail RC2 — Notched Round Piles (Any Diameter), Single-Ply Stringer

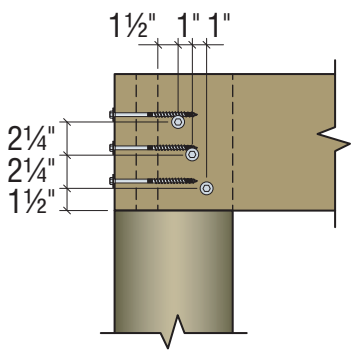
(4) 4" SDWH Timber-Hex
HDG Screws



Plan



Stringer A Elevation



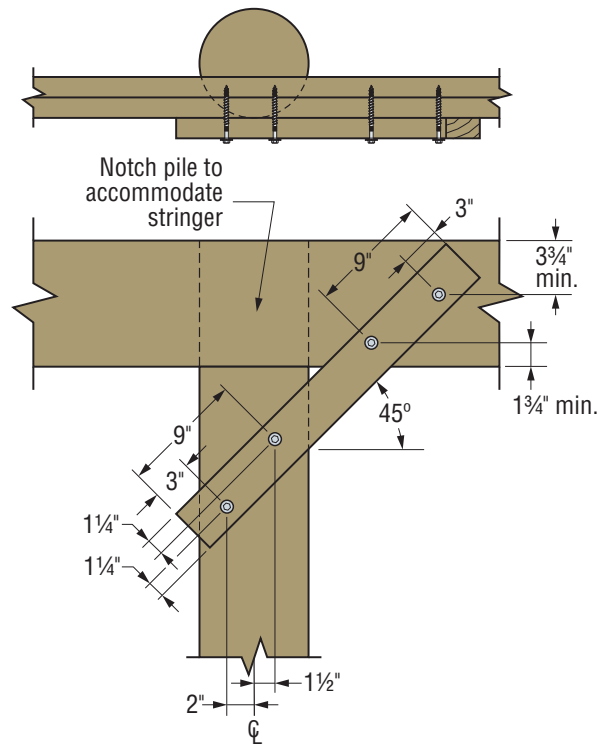
Stringer B Elevation

Detail RC3 — Notched Round Piles (Any Diameter), Double-Ply Stringer

(3) 6" SDWH Timber-Hex
HDG Screws

Round Piling

Stringer-to-Round Pile Bracing



Detail RB1

2x4 Brace with
(2) 4" SDWH Timber-Hex
HDG Screws at Each End

Table 8: Round Piles — Loads for Stringer-to-Pile Bracing Connections

Screw Model	Brace Size (in.)	Brace Type	Number of Screws per End of Brace	Detail No.	Allowable Load in Tension or Compression (lb.)
SDWH27400G	2x4	DF or SP	2	RB1	750

- Design of framing (stringers) and columns is by others.
- Wooden piles and framing are Southern Pine (SP) or engineered wood products with minimum specific gravity or equivalent specific gravity of 0.50.
- Use the screw lengths cited in the tables.
- Tabulated values shall be multiplied by all applicable service adjustment factors per the NDS. Allowable loads are shown with a load duration factor of $C_D=1.0$. Loads may be increased for load duration per the building code up to $C_D=1.6$. For service moisture content greater than 19%, use $C_M=0.70$.
- Minimum stringer thickness shall be 2.5" to accommodate screw length.
- See figure for spacing requirements.

Products

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Table 9: Product Information

Screw Length (in.)	Screw Dia. (in.)	Hex-Drive (in.)	Thread Length (in.)	Individually Flagged Retail Box		Retail		Mini-Bulk		Bucket	
				Fasteners per Pack	Model No.	Fasteners per Pack	Model No.	Fasteners per Pack	Model No.	Fasteners per Pack	Model No.
4	0.276	3/8	3	40	SDWH27400G-RP1	30	SDWH27400GR30	150	SDWH27400GMB	350	SDWH27400G
6	0.276	3/8	3	35	SDWH27600G-RP1	30	SDWH27600GR30	150	SDWH27600GMB	300	SDWH27600G
8	0.276	3/8	3	25	SDWH27800G-RP1	30	SDWH27800GR30	150	SDWH27800GMB	—	—
10	0.276	3/8	3	25	SDWH271000G-RP1	30	SDWH271000GR30	150	SDWH271000GMB	—	—
12	0.276	3/8	3	25	SDWH271200G-RP1	30	SDWH271200GR30	150	SDWH271200GMB	—	—
15	0.276	3/8	3	25	SDWH271500G-RP1	—	—	100	SDWH271500GMB	—	—

Table 10: Allowable Single-Fastener, Shear and Withdrawal Loads

Screw Length (in.)	Screw Dia. (in.)	Thread Length (in.)	Screw Model No.	Allowable Shear Loads (lb.)						Allowable Withdrawal Load, W (lb./in.)		
				Wood Side Member Thickness (in.)						SP	DF	HF/SPF
				SP		DF		HF/SPF				
				1.5	3	1.5	3	1.5	3			
4	0.276	3	SDWH27400G	505	—	440	—	400	—	287	255	212
6	0.276	3	SDWH27600G	505	545	440	545	400	450			
8	0.276	3	SDWH27800G	570	675	440	675	430	595			
10	0.276	3	SDWH271000G	570	675	440	675	430	595			
12	0.276	3	SDWH271200G	570	675	440	675	430	595			
15	0.276	3	SDWH271500G	570	675	440	675	430	595			

1. Tabulated values shall be multiplied by all applicable service adjustment factors per the NDS. Allowable loads are shown with a load duration factor of $C_D=1.0$. Loads may be increased for load duration per the building code up to $C_D=1.6$. For service moisture content greater than 19%, use $C_M=0.70$.
2. Tabulated shear loads are for both parallel-to-grain and perpendicular-to-grain loadings.
3. Allowable shear loads are based on full penetration into the main member. Full penetration is the full-screw length minus the side-member thickness.

4. Allowable withdrawal loads are based on the full thread length embedded in the main member.
5. For multiple fastener, shear connections, multiply table values by 0.80. Minimum fastener spacing: end distance 8", edge distance 1-1/2", distance between staggered rows of fasteners 5", distance between non-staggered rows of fasteners 4", and distance between fasteners in a row 8".

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