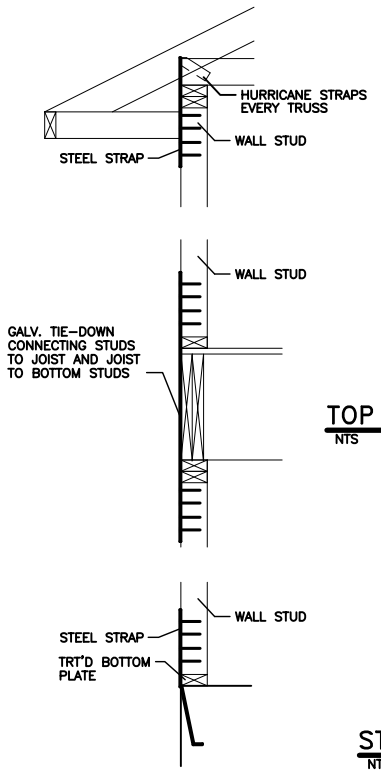
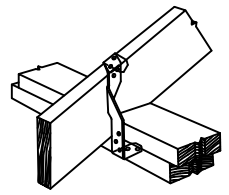


TYPICAL UPLIFT CONNECTIONS
NTS



TOP PLATE TO RAFTER DETAIL
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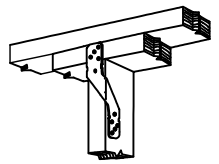
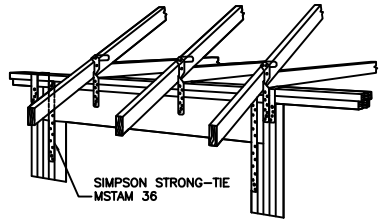
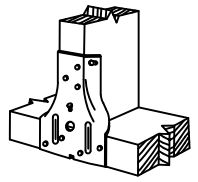


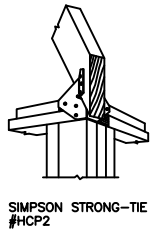
STUD TO TOP PLATE DETAIL
NTS



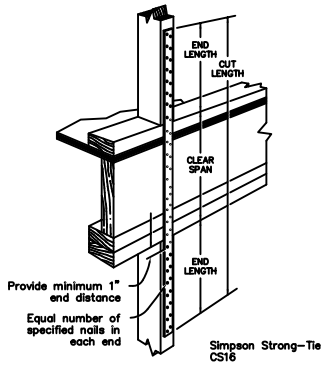
HEADER TO TOP PLATE DETAIL
NTS



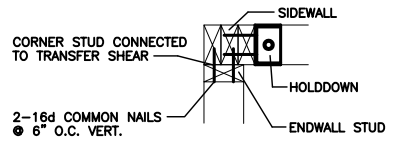
STUD TO SOLE PLATE DETAIL
NTS



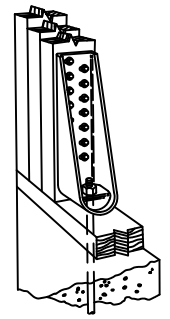
HIP CORNER PLATE DETAIL
NTS



STUD TO STUD
NTS



TYPICAL CORNER HOLD DOWN
NTS



SHEARWALL HOLD DOWNS
NTS

WINDBORNE DEBRIS PROTECTION FASTENING SCHEDULE FOR WOOD STRUCTURAL PANELS

FASTENER TYPE	FASTENER SPACING: PANEL SPAN ≤ 4 FOOT	4 FOOT PANEL SPAN ≤ 6 FOOT	6 FOOT PANEL SPAN ≤ 8 FOOT
2-1/2" #6 WOOD SCREWS	16"	12"	9"
2-1/2" #8 WOOD SCREWS	16"	16"	12"

THERMAL COMPONENT CRITERIA (U-FACTOR AND R-VALUE)

MAX. GLAZING U-FACTOR	MINIMUM INSULATION R-VALUE: CEILINGS	WALLS	FLOORS	BASEMENT WALLS	CRAWL SPACE WALLS
.75	R-26	R-13	R-11	R-5	R-5

DESIGN CRITERIA:

THE CONSTRUCTION FOR SAID RESIDENCE, WHERE BASIC WIND SPEED IS 130 MILES PER HOUR, IS DESIGNED IN ACCORDANCE WITH:
AMERICAN FOREST AND PAPER ASSOCIATION (AF&PA) WOOD FRAME CONSTRUCTION MANUAL FOR ONE AND TWO FAMILY DWELLINGS (WFCM) 2001 EDITION
AS WELL AS THE INTERNATIONAL RESIDENTIAL CODE (IRC) 2003 EDITION

UPLIFT CONNECTIONS

ROOF ASSEMBLY TO WALL ASSEMBLY:

UPLIFT CONNECTIONS SHALL BE FROM RAFTER OR TRUSS TO WALL STUD. WHEN RAFTERS OR TRUSSES ARE NOT LOCATED DIRECTLY ABOVE STUDS, RAFTERS SHALL BE ATTACHED TO THE WALL PLATE AND THE WALL TOP PLATE SHALL BE ATTACHED TO THE WALL STUD WITH UPLIFT CONNECTIONS. UPLIFT CONNECTIONS SHALL BE IN ACCORDANCE WITH TABLE BELOW.

WALL ASSEMBLY TO WALL ASSEMBLY:

STORY TO STORY UPLIFT CONNECTIONS FROM UPPER STORY WALL STUD TO LOWER STORY WALL STUD. WHEN UPPER STORY WALL STUDS ARE NOT LOCATED DIRECTLY ABOVE LOWER WALL STUDS, THE STUDS SHALL BE ATTACHED TO A COMMON MEMBER IN THE FLOOR ASSEMBLY BY UPLIFT CONNECTIONS. UPLIFT CONNECTIONS SHALL BE IN ACCORDANCE WITH TABLE BELOW.

WALL ASSEMBLY TO FOUNDATION:

FIRST FLOOR WALL STUDS SHALL BE CONNECTED TO THE FOUNDATION, SILL, PLATE, OR BOTTOM PLATE. A MINIMUM OF A 1-1/4" x 20 GA. ASTM A653 GRADE 33 STEEL STRAP SHALL BE NAILED TO THE WALL STUDS AND HAVE A MINIMUM EMBEDMENT OF 7 INCHES IN CONCRETE FOUNDATIONS AND SLABS-ON-GRADE, 15 INCHES IN MASONRY BLOCK FOUNDATIONS, OR BE LAPPED UNDER THE BOTTOM PLATE, 3 INCH SQUARE WASHERS SHALL BE USED ON THE ANCHOR BOLTS AND ANCHOR BOLT SPACINGS SHALL NOT EXCEED THE REQUIREMENTS. STEEL STRAPS EMBEDDED IN OR IN CONTACT WITH SLAB-ON-GRADE OR MASONRY BLOCK FOUNDATIONS SHALL BE HOT-DIPPED GALV. AFTER FABRICATION, OR MANUF. FROM G185 OR Z450 GALV. STL. CONNECTIONS SHALL BE IN ACCORDANCE WITH TABLE BELOW.

HOLDDOWNS

HOLDDOWNS ARE REQUIRED AT THE END OF EACH SEGMENTED SHEARWALL SEGMENT OR AT THE EACH END OF A PERFORATED SHEARWALL. WHEN FULL HEIGHT SHEARWALL SEGMENTS MEET AT A CORNER, A SINGLE HOLDDOWN SHALL BE PERMITTED TO BE USED TO RESIST THE OVERTURNING FORCES IN BOTH DIRECTIONS WHEN THE CORNER FRAMING IN THE ADJOINING WALLS IS FASTENED TOGETHER TO TRANSFER THE UPLIFT LOAD.

FIRESTOPPING NOTES:

1. FIRESTOPPING SHALL BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS (BOTH VERTICAL AND HORIZONTAL) AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORIES, AND BETWEEN A TOP STORY AND THE ROOF SPACE.
2. PROVIDE FIRESTOPPING IN ALL CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES, AT THE CEILING AND FLOOR LEVEL.
3. PROVIDE FIRESTOPPING AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACE SUCH AS SOFFITS, DROP CEILING, COVE CEILINGS, ETC.
4. PROVIDE FIRESTOPPING IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN.
5. PROVIDE FIRESTOPPING AT OPENINGS AROUND VENTS, PIPES, DUCTS, CHIMNEYS AND FIREPLACES AT CEILING AND FLOOR LEVEL, WITH NON-COMBUSTIBLE MATERIALS.
6. FIREBLOCKING OF CORNICES OF A TWO-FAMILY DWELLING IS REQUIRED AT THE LINE OF DWELLING UNIT SEPARATION.

HEADER NAILING SCHEDULE

DESCRIPTION	NUM. OF COM. NAILS	NUM. OF BOX NAILS	SPACING
HEAD. TO HEAD. (FACE-NAILED)	8d	10d	6" O.C. EDGES/ 12" O.C. FIELD
SOLID BLOCKING REQ'D FOR ALL HEADERS			

SILL or BOTTOM PLATE TO FND. CONNECTIONS RESISTING UPLIFT LOADS-130MPH WINDS EXP. "B"

BOTTOM PLATE TO FND. ANCHOR BOLT CONNECTION RESISTING	FOUNDATION SUPPORTING	MAX. ANCHOR BOLT SPACING (in.): 8' END ZONES	INTERIOR ZONES
UPLIFT LOADS	1-3 STORIES	28	33

SILL or BOTTOM PLATE TO FND. CONNECTIONS RESISTING SHEAR LOADS-130MPH WINDS EXP. "B"

BOTTOM PLATE TO FND. ANCHOR BOLT CONNECTION RESISTING	FOUNDATION SUPPORTING	MAX. ANCHOR BOLT SPACING (in.): 1/2" ANC. BOLTS	5/8" ANC. BOLTS
SHEAR LOADS	1-3 STORIES	30	45

JACK STUD REQ.-EXP. B FOR EXT. LOADBEARING WALLS

HEADER SUPPORTING	HEADER SPAN (ft.)	HEADER WIDTH: 3"	4.5"	5"	6.5" (NO. JACK STUDS REQ.)
ROOF AND CEILING	2	1	1	1	1
	4	1	1	1	1
	6	2	1	2	2
	8	2	2	2	2
	10	3	2	2	2
	12	3	2	2	2
	14	4	3	2	2
	16	4	3	3	2
ROOF, CEILING, AND 1 CENTER BEARING FLR.	2	1	1	1	1
	4	2	1	1	1
	6	2	2	2	1
	8	3	2	2	3
	10	4	3	2	2
	12	4	3	3	2
	14	5	3	3	3
	16	5	4	3	3

HEADER WIDTH-3" (2-2x), 4.5" (3-2x), 5", 6.5" (4-2x)

HEADER SPANS-FOR INT. LOADBEARING WALLS

HEADER SUPPORTING	SIZE	BLDG. WIDTH (ft.): 12	24	36 (SPANS (ft-in.))
ONE FLOOR (CENTER BEARING)	(2)2x4'S	4'-4"	3'-1"	2'-6"
	(2)2x6'S	6'-5"	4'-6"	3'-8"
	(2)2x8'S	8'-1"	5'-9"	4'-8"
	(2)2x10'S	9'-11"	7'-0"	5'-9"
	(2)2x12'S	11'-6"	8'-1"	6'-7"
	(3)2x8'S	10'-2"	7'-2"	5'-10"
	(3)2x10'S	12'-5"	8'-9"	7'-2"
	(3)2x12'S	14'-4"	10'-2"	8'-3"
	(4)2x8'S	11'-6"	8'-3"	6'-9"
	(4)2x10'S	14'-4"	10'-1"	8'-3"
	(4)2x12'S	*	11'-9"	9'-7"
2 FLOORS ONLY (CENTER BEARING)	(2)2x4'S	2'-10"	2'-1"	1'-8"
	(2)2x6'S	4'-2"	3'-1"	2'-6"
	(2)2x8'S	5'-4"	3'-11"	3'-3"
	(2)2x10'S	6'-6"	4'-9"	3'-11"
	(2)2x12'S	7'-6"	5'-6"	4'-7"
	(3)2x8'S	6'-8"	4'-10"	4'-0"
	(3)2x10'S	8'-1"	6'-0"	4'-11"
	(3)2x12'S	9'-5"	6'-11"	5'-9"
	(4)2x8'S	7'-8"	5'-8"	4'-8"
	(4)2x10'S	9'-4"	6'-10"	5'-8"
	(4)2x12'S	10'-10"	8'-0"	6'-7"

* MAX. SPAN EXCEEDS 16' (SPANS LIM. TO 16')

WALL SHEATH. OR CLAD. REQ. FOR WIND LOAD-EXP. B

SHEATHING LOCATION	STUD SPAC.	E: MAX. NAIL SPAC. FOR 8d COM. NAILS OR 10d BOX NAILS (INCHES, O.C.)	F
INTERIOR ZONE	12" O.C.	6	12
	16" O.C.	6	12
	24" O.C.	6	12
PERIMETER EDGE ZONE	12" O.C.	6	12
	16" O.C.	6	12
	24" O.C.	6	12
130 MPH WINDS-EXPOSURE "B" (TYP.)			

ROOF SHEATH. OR CLAD. REQ. FOR WIND LOAD-EXP. B

SHEATHING LOCATION	RAFTER/ TRUSS SPAC.	E: MAX. NAIL SPAC. FOR 8d COM. NAILS OR 10d BOX NAILS (INCHES, O.C.)	F
INTERIOR ZONE	12" O.C.	6	12
	16" O.C.	6	12
	24" O.C.	6	12
PERIMETER EDGE ZONE	12" O.C.	6	6
	16" O.C.	6	6
	24" O.C.	6	6
130 MPH WINDS-EXPOSURE "B" (TYP.)			

HEADER SPANS-EXPOSURE B FOR EXTERIOR LOADBEARING WALLS

HEADER SIZE	SPAN	NO. FULL HGT. STUDS REQ. AT EA. END
(2)2x4'S	4'-7"	2
(2)2x6'S	5'-6"	2
(2)2x8'S	6'-1"	3
(2)2x10'S	6'-8"	3
(2)2x12'S	7'-1"	3
(3)2x8'S	7'-5"	3
(3)2x10'S	8'-3"	3
(3)2x12'S	8'-8"	3
(4)2x8'S	8'-7"	3
(4)2x10'S	9'-6"	3
(4)2x12'S	10'-0"	4

UPLIFT CONNECTIONS-130MPH WINDS EXP. "B"

CONNECTION	FRAMING SPACING (in.)	ROOF SPAN (ft.)	U	L	S	NUM. OF 8d COM. NAILS OR 10d BOX NAILS IN EA. END OF 1-1/4"x20 GA. STRAP
ROOF ASSEMBLY TO WALL ASSEMBLY	16" O.C.	28	499	246	109R	5
WALL ASSEMBLY TO WALL ASSEMBLY	16" O.C.	28	499	246	109R	5
WALL ASSEMBLY TO FOUNDATION	16" O.C.	28	194	185	436	5

JACK STUD REQUIREMENTS-FOR INTERIOR LOADBEARING WALLS

HEADER SUPPORTING	HEADER SPAN (ft.)	ROOF SPAN (ft.): 12 FEET 3"	4.5"	5"	6.5"	24 FEET 3"	4.5"	5"	6.5"	36 FEET 3"	4.5"	5"	6.5" (NO. JACK STUDS REQ.)
ROOF AND CEILING	2	1	1	1	1	1	1	1	1	1	1	1	1
	4	1	1	1	1	1	1	1	1	1	1	1	1
	6	1	1	1	1	1	1	1	2	1	1	1	1
	8	1	1	1	1	2	1	1	2	2	2	2	1
	10	1	1	1	1	2	2	1	3	2	2	2	2
	12	1	1	1	1	2	2	2	3	2	2	2	2
	14	2	1	1	1	3	2	2	2	4	3	3	2
	16	2	1	1	1	3	2	2	2	4	3	3	2
ROOF, CEILING, AND 1 CENTER BEARING FLR.	2	1	1	1	1	1	1	1	1	2	1	1	1
	4	1	1	1	1	2	1	1	1	3	2	2	2
	6	2	1	1	1	3	2	2	2	4	3	3	2
	8	2	2	1	1	3	2	2	2	5	3	3	3
	10	2	2	2	1	4	3	3	2	6	4	4	3
	12	3	2	2	2	5	3	3	3	7	5	4	4
	14	3	2	2	2	5	4	3	3	8	5	5	4
	16	4	3	2	2	6	4	4	3	9	6	5	5

HEADER WIDTH-3" (2-2x), 4.5" (3-2x), 5", 6.5" (4-2x)

REVISED: 04-18-06

UPLIFT CONNECTIONS
DR. EDUARDO HERNANDEZ
CEDAR LAKE ROAD
BILOXI, MISSISSIPPI

LA QUINTA INN & SUITES

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