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Installation Manual EXTERIOR WALL SIPs



Thermapan
Structural
Insulated
Panels

EXTERIOR WALL SIPs Installation Manual

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Appendix A: Allowable Header Loads – Panel Lintel/Headers

EXTERIOR WALL SIPs Installation Manual

1. General Requirements

1.1 Scope

The basic design and construction requirements for the Thermapan Structural Insulated Panel (SIP) wall system is set forth in this specification. Criteria for materials, environmental control, design loads, and structural design are included. Where requirements are based on internationally recognized standards and specifications, these standards and specifications are referenced without elaboration.

Installers shall reference engineering design package for fastening arrangements.

2. Materials

- 2.1** The Thermapan Wall SIP is composed of an expanded polystyrene (EPS) foam core laminated between two layers of oriented strand board (OSB) with a structural adhesive. (See Detail W-1)
- 2.2** Framing Lumber shall be DOC PS 20 or NLGA No.2 or better.
- 2.3** Wire nails, ring nails, spikes and staples shall conform to CSA B111 or ANSI/ASME B11.1.
- 2.4** Wood screws shall conform to ANSI/ASME B18.6.1..
- 2.5** SIP screws shall conform to ICC-AC233.
- 2.6** Caulking Compounds shall conform to CAN/CGSB 19.13 or ASTM C 920.
- 2.7** Polyethylene Sheeting shall conform to CAN/CGSB-37.2, CAN/CGSB-37.16, or ASTM D 4397.
- 2.8** Low expansion foam seal shall conform to AAMA 812-04.
- 2.9** Structural adhesive shall conform to CAN/CGSB 71GP26, APA AFG-01 or ASTM D3498.

3. Electrical Wiring

- 3.1** All wire chases to be vertically cut into the wall SIP at a minimum depth of 2". See Detail W-14.

4. Interior Finish

- 4.1** The interior of the wall SIP can be finished with any of the common required building code materials. It is recommended that the SIP joints and connections be sealed as per Details AB-1 and AB-2.

5. Exterior Cladding

- 5.1** A weather barrier is to be installed over the exterior OSB of the SIP and under the cladding and/or furring. Refer to Details W-15 and W-16 and your local building code for compliant weather barrier materials.

MATERIALS ESTIMATING
**Above Grade Exterior Walls
Estimation Only**

Lumber Requirements:

- SPF Single top and bottom plate
- OSB 1-1/8" (28mm) Cap plate – 12 ft (3658mm) lengths
- Every panel requires a spline
- Every corner requires 2 SPF studs
- Windows and doors require jack studs as per OBC and cripples

Caulking and Sealant Requirements:

- Every 1200 sqft (111 m²) of SIP equals 1 case of Expandable Foam
- Every 2000 sqft (185 m²) of SIP requires 1 case of Sealant

Fasteners:

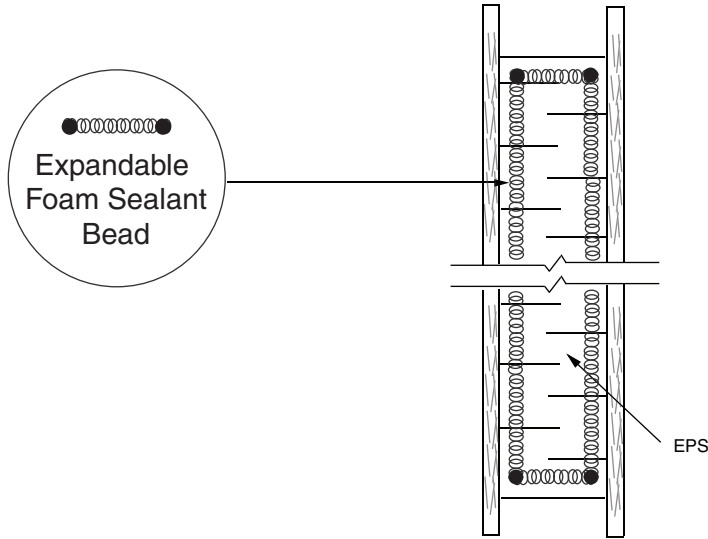
- Recommend 2" (50mm) Ring nail or 2" (50mm) screws for connection to panel
- 3.0 times the square footage of SIPs

AIR BARRIER

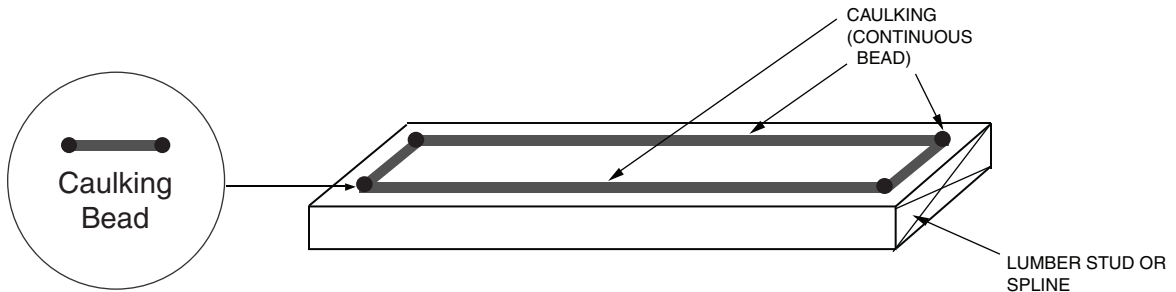
RECOMMENDED DETAILS FOR AIR BARRIER SEALANTS

All sealants, FOAM (A) or CAULKING (B), should be applied onto the SIP in a continuous rectangular pattern along the outer most edge of the area to be sealed.

(A) A low expansion EXPANDABLE FOAM SEALANT should conform to the AAMA 812-04 standard. Apply a 1/2 inch or a 12.5 mm diameter of a *continuous* bead of expandable foam sealant onto the SIP:



(B) A CAULKING SEALANT should conform to ASTM C920-02 and/or CAN/CGSB 19.13-M. Apply a 3/8 inch or a 10 mm diameter *continuous* bead of caulking onto the lumber spline:



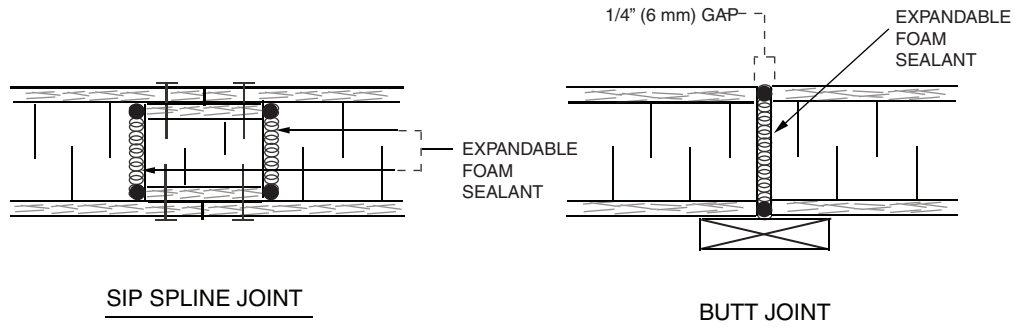
www.thermapan.com
1-877-443-WALL (9255)

TITLE		PROJECT	
AIR BARRIER DETAILS FOR AIR BARRIER SEALANTS			
REFERENCE		SCALE	
		N.T.S.	
DATE	REVISION	DWG. No.	
NOVEMBER 2010	1	AB-1	

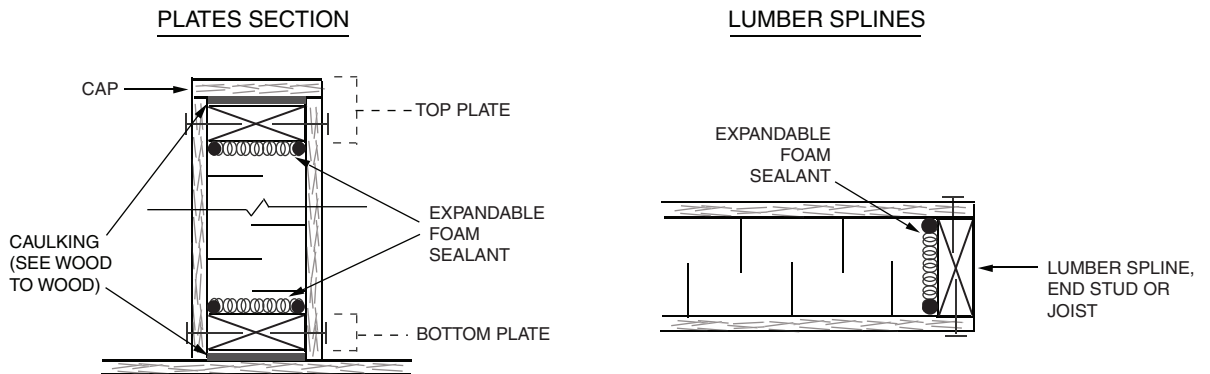
AIR BARRIER

RECOMMENDED DETAILS FOR SEALING SIP CONNECTIONS

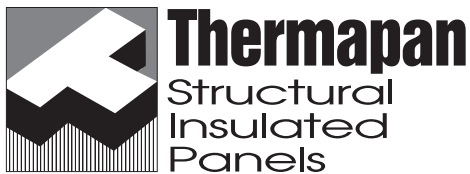
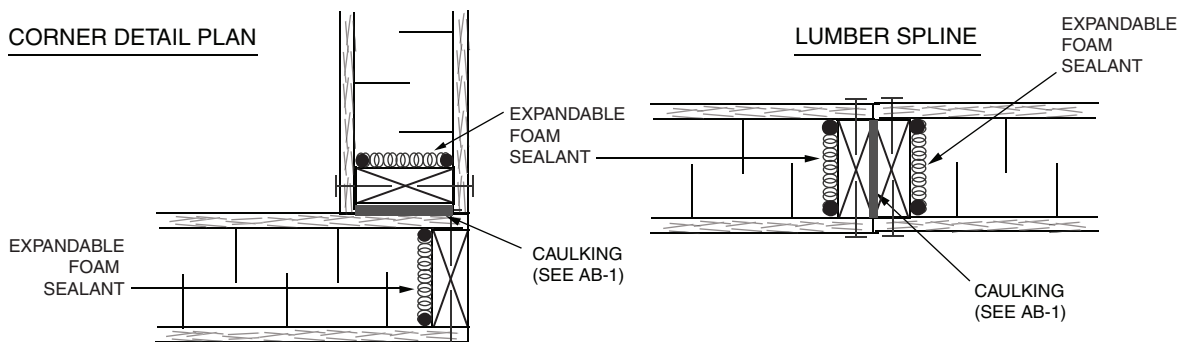
(1) Foam to Foam: Use a low expansion foam sealant.



(2) Foam to Wood: Use a low expansion foam sealant.



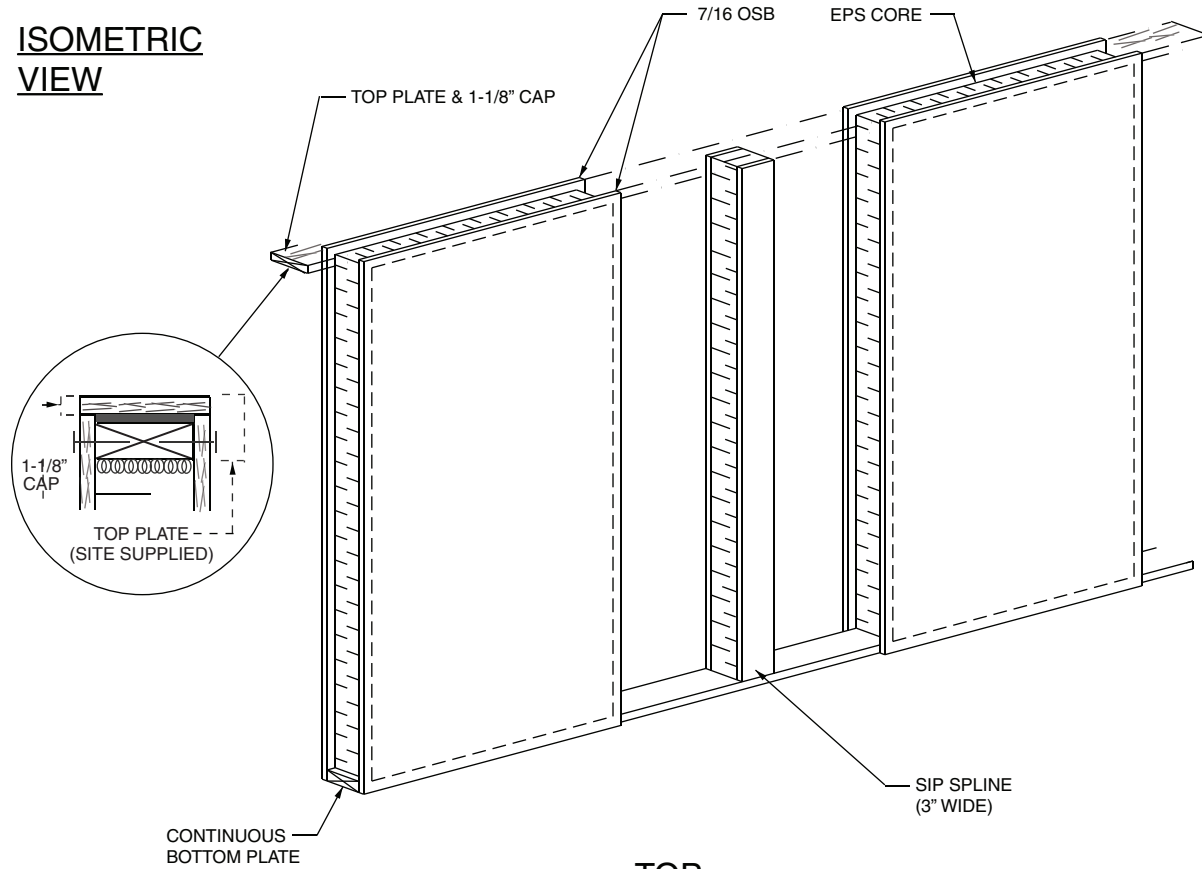
(3) Wood to Wood: Use caulking and a low expansion foam sealant.



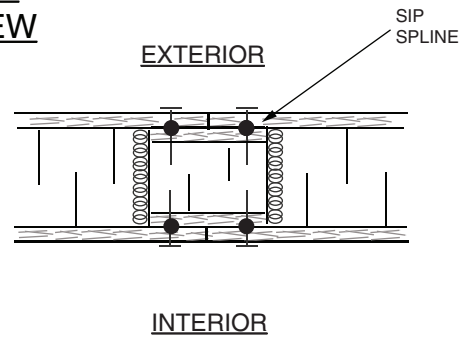
www.thermapan.com
1-877-443-WALL (9255)

TITLE		PROJECT	
AIR BARRIER DETAILS FOR SEALING SIP CONNECTIONS			
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DATE	REVISION	DWG. No.	
APRIL 2014		AB-2	

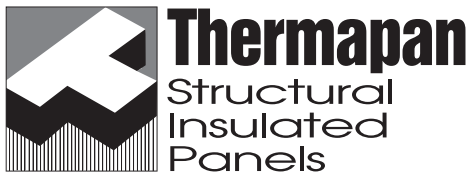
**ISOMETRIC
VIEW**



**TOP
VIEW**



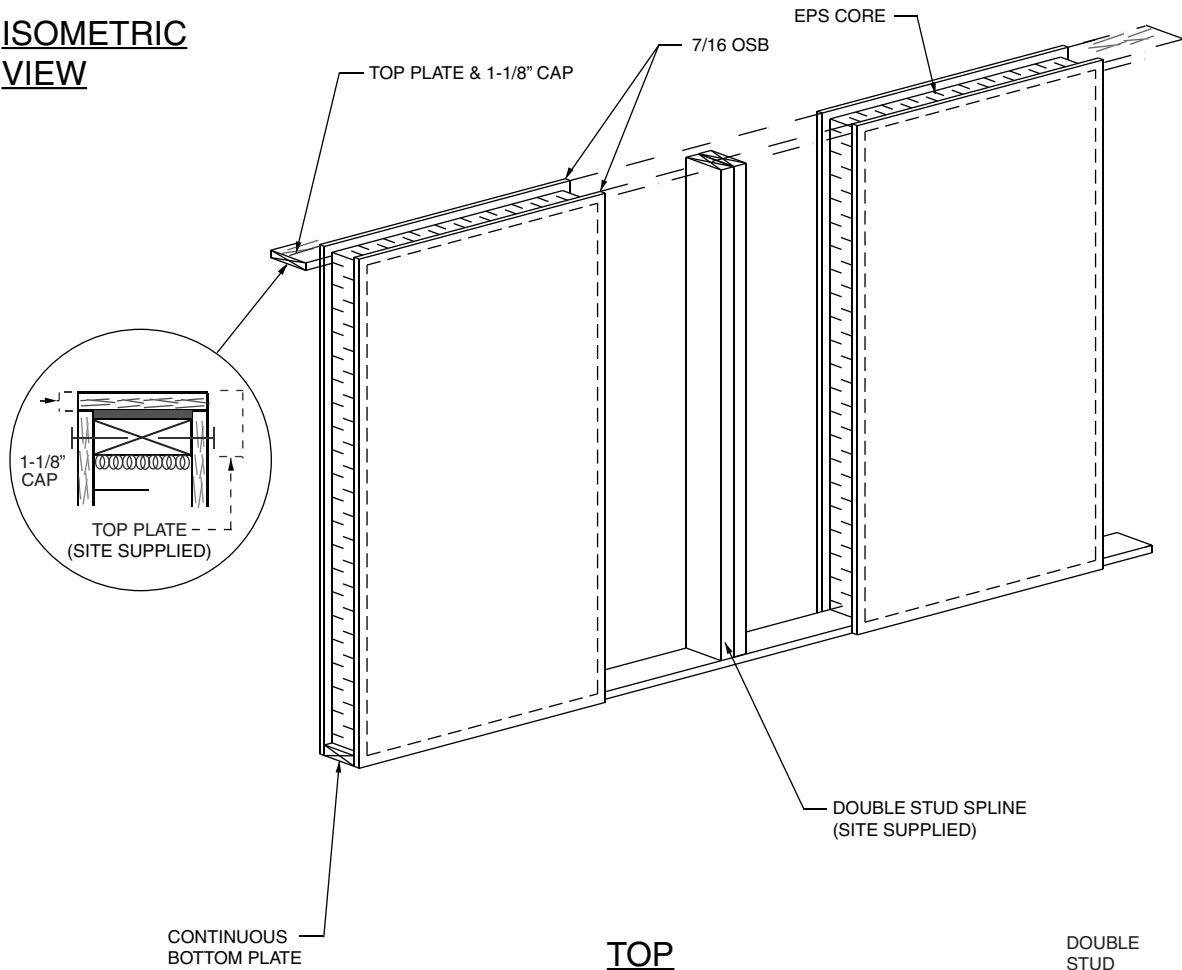
NOTE: REFER TO AIR BARRIER (AB-2) DETAIL FOR SEALING SIP CONNECTIONS.



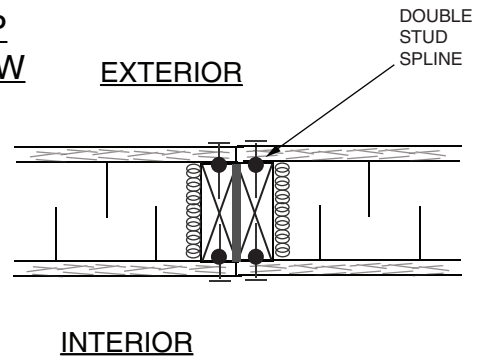
www.thermapan.com
1-877-443-WALL (9255)

TITLE		FOAM CORE (SIP) SPLINE DETAIL	
REFERENCE	SCALE	N.T.S.	
DATE	REVISION	DWG. No.	
APRIL 2014	6	W-1	

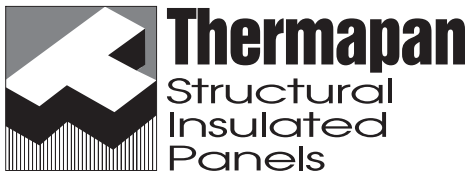
**ISOMETRIC
VIEW**



**TOP
VIEW**

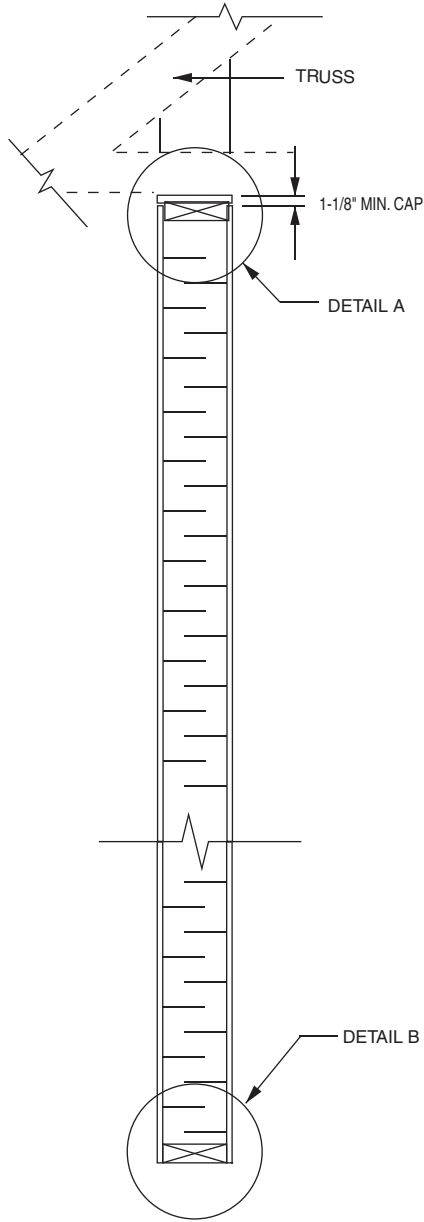


NOTE: REFER TO AIR BARRIER (AB-2) DETAIL FOR SEALING SIP CONNECTIONS.



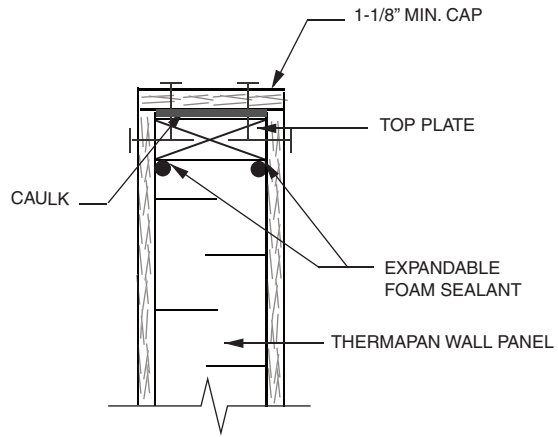
www.thermapan.com
1-877-443-WALL (9255)

TITLE			WOOD STUD SPLINE JOINT DETAIL		
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		N.T.S.			
DATE		REVISION	DWG. No.		
APRIL 2014		6	W-2		

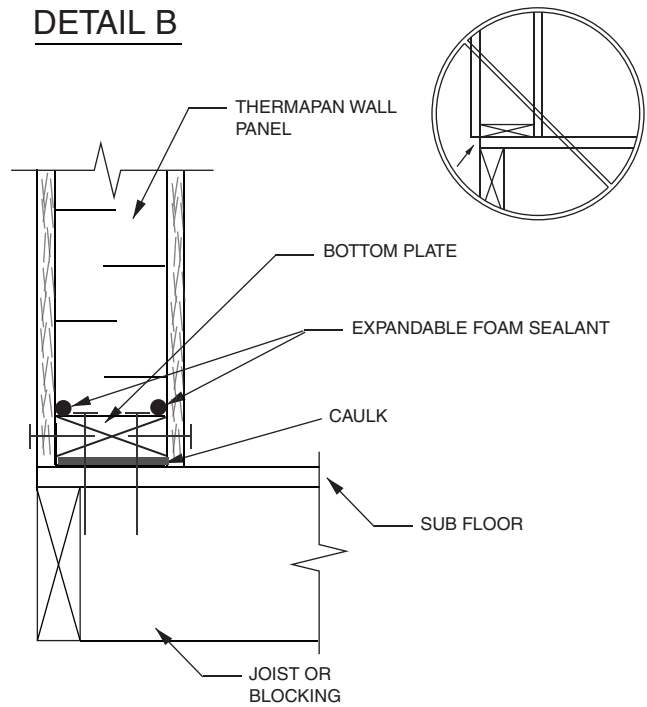


SECTION

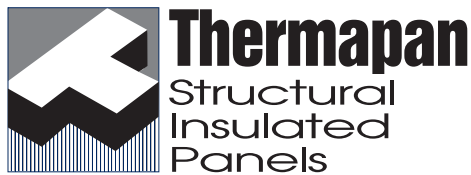
DETAIL A



DETAIL B



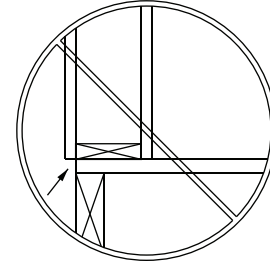
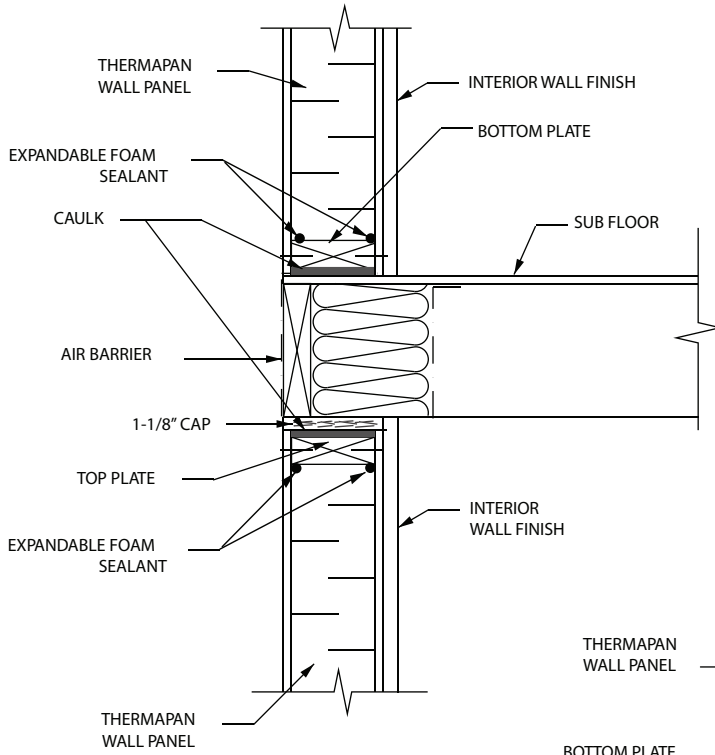
NOTE: REFER TO AIR BARRIER (AB-2) DETAIL FOR SEALING SIP CONNECTIONS.



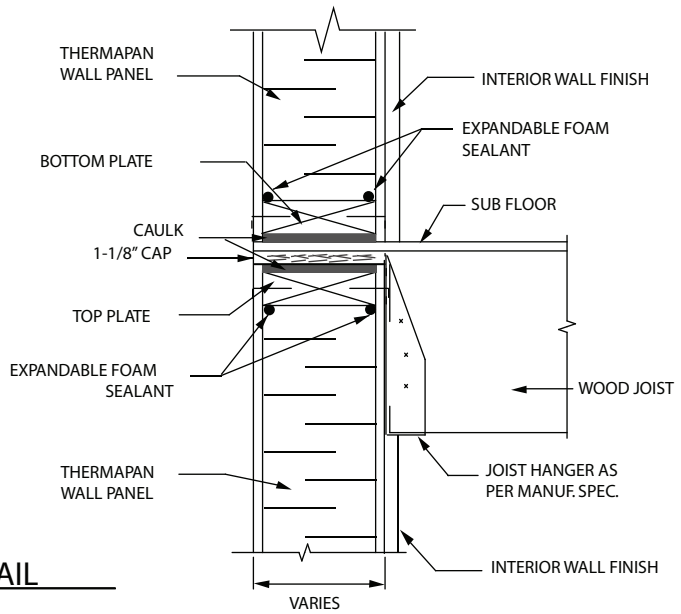
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1-877-443-WALL (9255)

TITLE		PROJECT	
TYPICAL WALL SECTION			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
APRIL 2014	6	W-3	

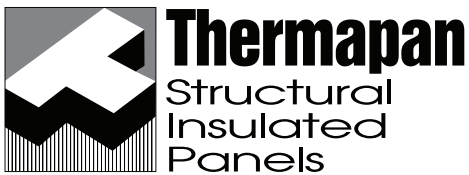
PLATFORM FRAMING



SUSPENDED FLOOR DETAIL

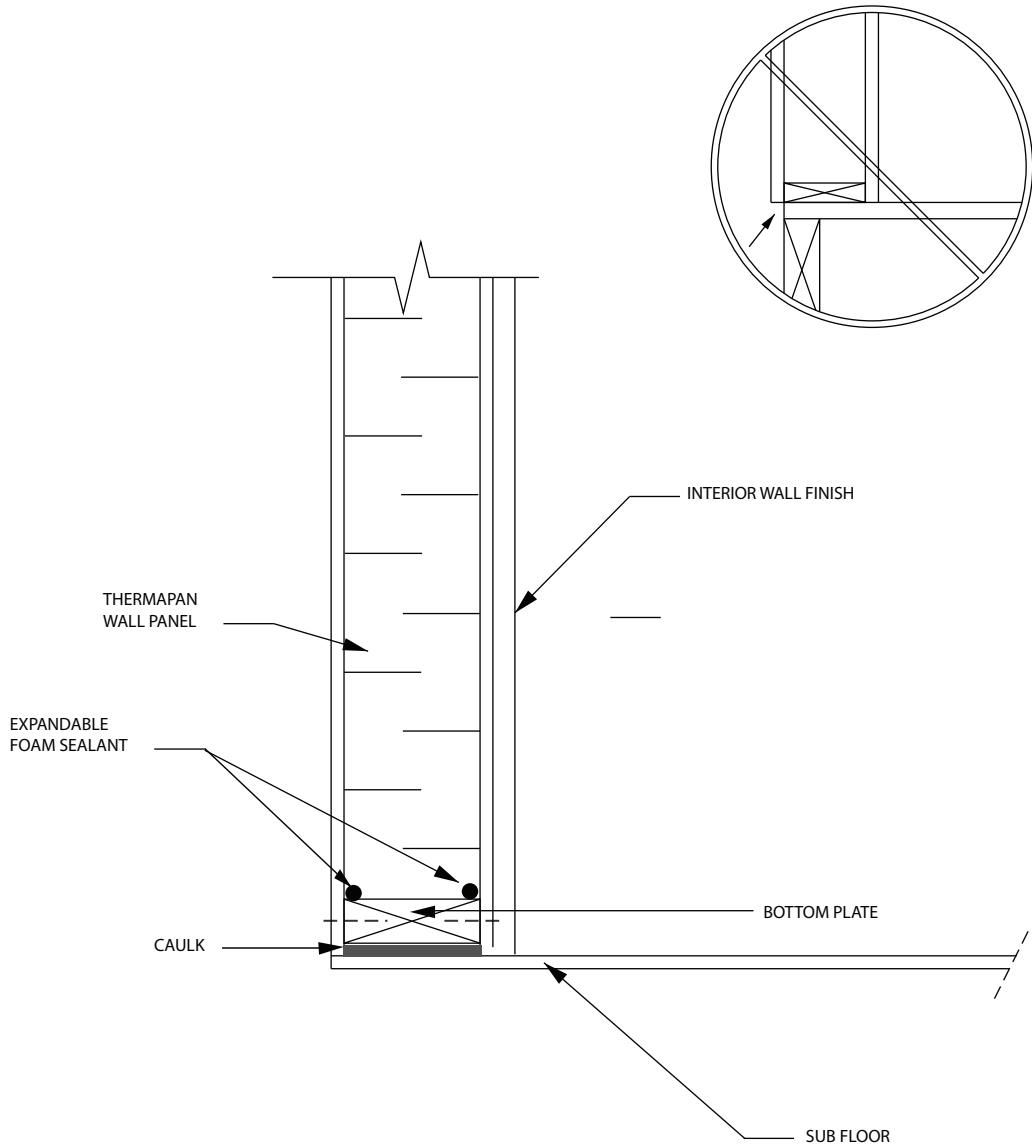


NOTE : REFER TO AIR BARRIER (AB-2) DETAIL FOR SEALING SIP CONNECTIONS.



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TITLE		PROJECT	
FLOOR-TO-WALL CONNECTION DETAIL			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
JUNE 2016	6	W-4	



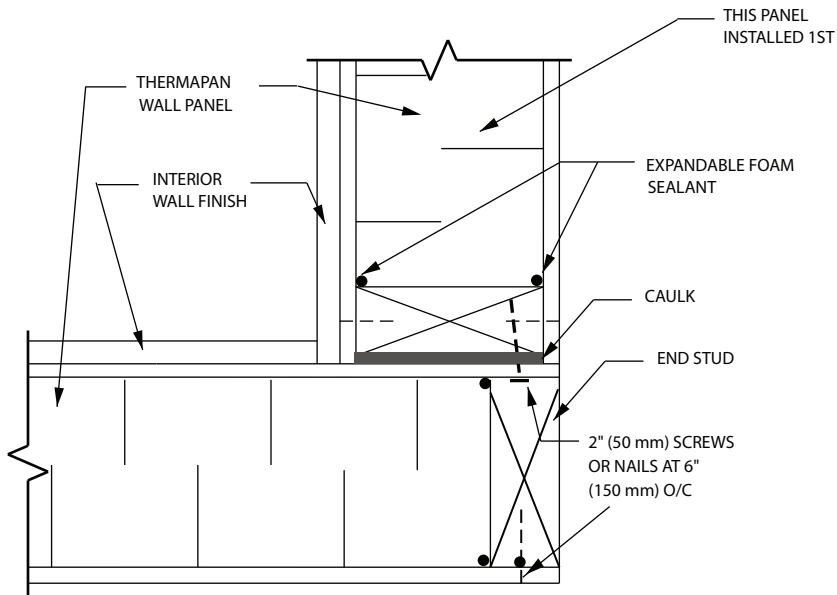
NOTE: REFER TO AIR BARRIER (AB-2) DETAIL FOR SEALING SIP CONNECTIONS.



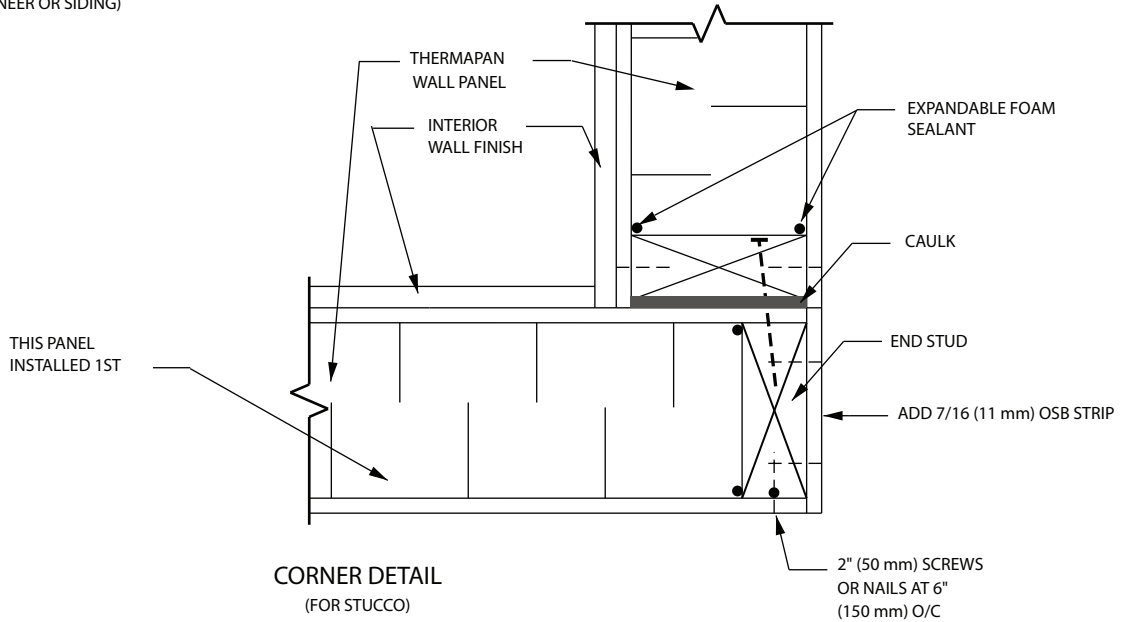
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1-877-443-WALL (9255)

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REFERENCE		SCALE	
		N.T.S.	
DATE	REVISION	DWG. No.	
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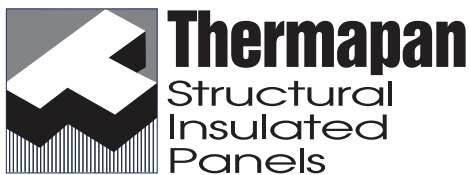


CORNER DETAIL
(FOR BRICK VENEER OR SIDING)



CORNER DETAIL
(FOR STUCCO)

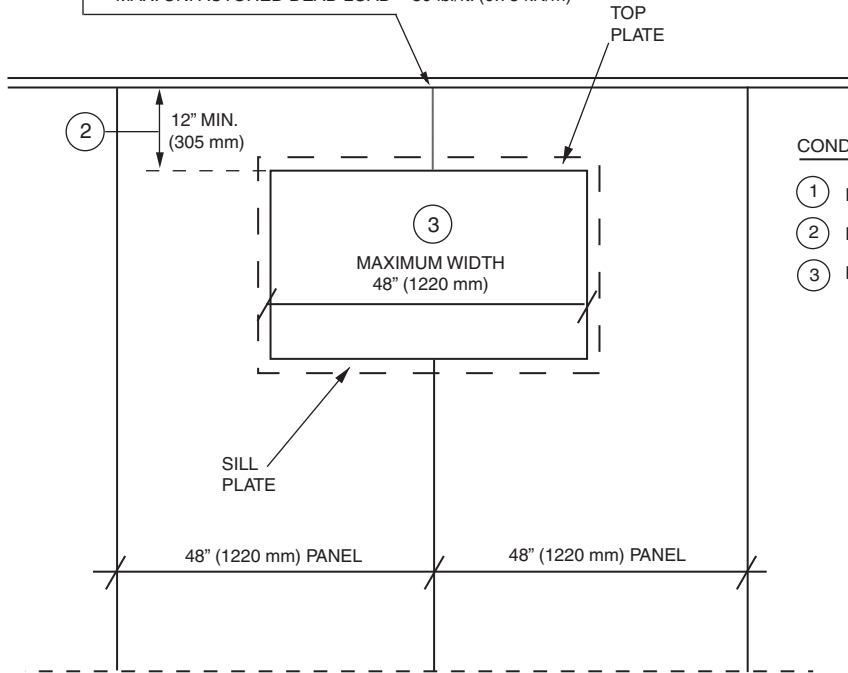
NOTE: REFER TO AIR BARRIER (AB-2) DETAIL FOR SEALING SIP CONNECTIONS.



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1-877-443-WALL (9255)

TITLE		PROJECT	
WALL BUTT CORNER CONNECTION DETAIL			
REFERENCE	SCALE	N.T.S.	
DATE	REVISION	DWG. No.	
MAY 2016	5	W-6	

- ① NON-LOAD BEARING WALL:
 MAX. UNFACTORED LIVE LOAD = 160 lb./ft. (2.4 kN/m)
 MAX. UNFACTORED DEAD LOAD = 50 lb./ft. (0.75 kN/m)

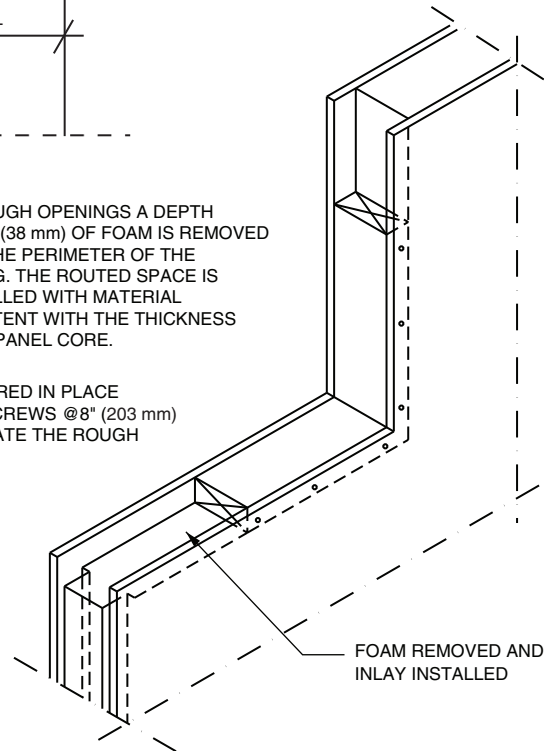


CONDITIONS

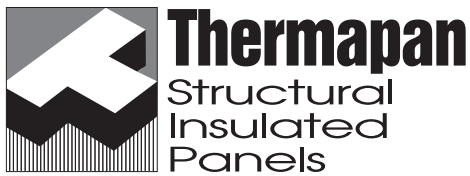
- ① NON-LOAD BEARING WALL
- ② MINIMUM LINTEL HEIGHT OF 12" (305 mm)
- ③ MAXIMUM OPENING WIDTH OF 48" (1220 mm)

FOR ROUGH OPENINGS A DEPTH OF 1-1/2" (38 mm) OF FOAM IS REMOVED FROM THE PERIMETER OF THE OPENING. THE ROUTED SPACE IS THEN FILLED WITH MATERIAL CONSISTENT WITH THE THICKNESS OF THE PANEL CORE.

THESE ARE SECURED IN PLACE WITH NAILS OR SCREWS @ 8" (203 mm) O/C MAX., TO CREATE THE ROUGH OPENING.



FOAM REMOVED AND INLAY INSTALLED



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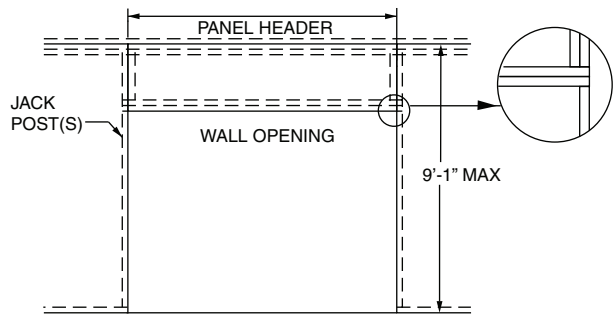
TITLE		PROJECT	
WINDOW CUT-OUT (NON-LOAD BEARING WALL)			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
FEBRUARY 2012	2	W-7	

DETAIL 1

CONDITION 1:

- (1) MAX 9'-1" WALL HEIGHT
- (2) MAX 5,000 LBS. (22.3 kN) FACTORED REACTION
- (3) CONFIRM JACK POST REACTIONS
- (4) SINGLE JACK STUD

NOTE: REFER TO APPENDIX A OR DESIGN HANDBOOK FOR ALLOWABLE HEADER LOADS.

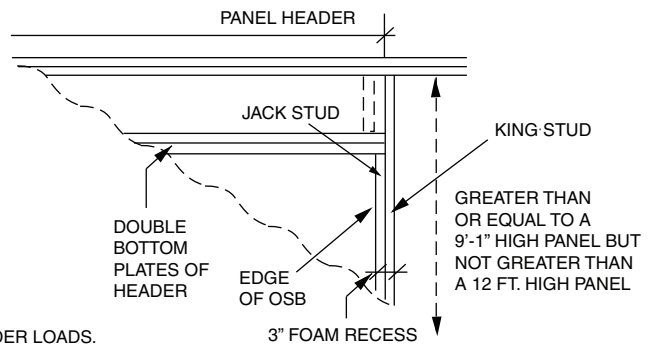


DETAIL 2

CONDITION 2:

- (1) $9'-1" \leq X \leq 12'$ (WALL HEIGHT)
- (2) MAX 5,000 LBS. (22.3 kN) FACTORED REACTION
- (3) CONFIRM JACK POST REACTIONS
- (4) SINGLE JACK AND KING STUD

NOTE: OSB TO BE ADDED TO BOTH SIDES OF STUDS WHEN ONLY 1-1/2" FOAM RECESS IS PROVIDED IN WALL PANEL. REFER TO APPENDIX A OR DESIGN HANDBOOK FOR ALLOWABLE HEADER LOADS.



DETAIL 3

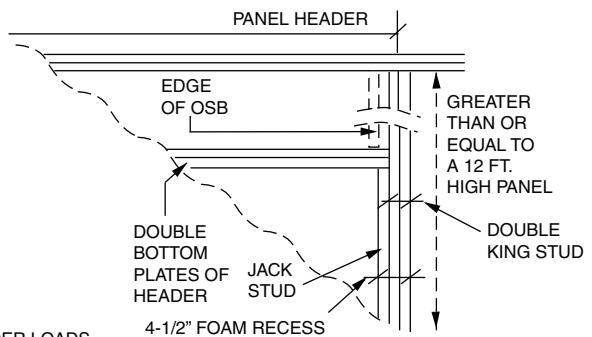
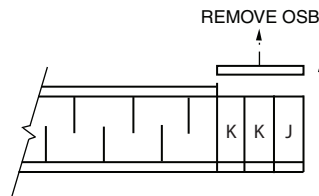
INSTALLING STUDS:

1. REMOVE OSB ONE SIDE
2. REMOVE FOAM
3. INSTALL STUDS
4. REPLACE OSB

CONDITION 3:

- (1) $X \geq 12'$ (WALL HEIGHT)
- (2) MAX 5000 LBS. (22.3 kN) FACTORED REACTION
- (3) CONFIRM JACK POST REACTIONS
- (4) SINGLE JACK AND DOUBLE KING STUDS

NOTE: REFER TO APPENDIX A OR DESIGN HANDBOOK FOR ALLOWABLE HEADER LOADS.



DETAIL 4

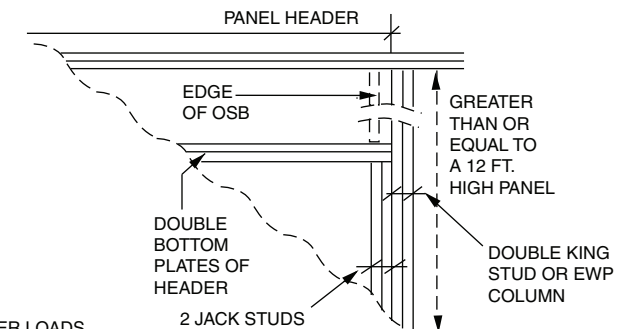
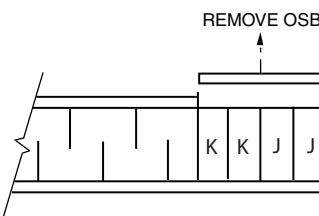
INSTALLING STUDS:

1. REMOVE OSB ONE SIDE
2. REMOVE FOAM
3. INSTALL STUDS
3. REPLACE OSB

CONDITION 4:

- (1) $X \geq 12'$ (WALL HEIGHT)
- (2) MAX 10,000 LBS. (44.6 kN) FACTORED REACTION
- (3) CONFIRM JACK POST REACTIONS
- (4) DOUBLE JACK AND DOUBLE KING STUDS

NOTE: REFER TO APPENDIX A OR DESIGN HANDBOOK FOR ALLOWABLE HEADER LOADS.



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TITLE

PANEL LINTEL/HEADER DETAILS & BEARING CONDITIONS 1 - 4

PROJECT

REFERENCE

SCALE

N.T.S.

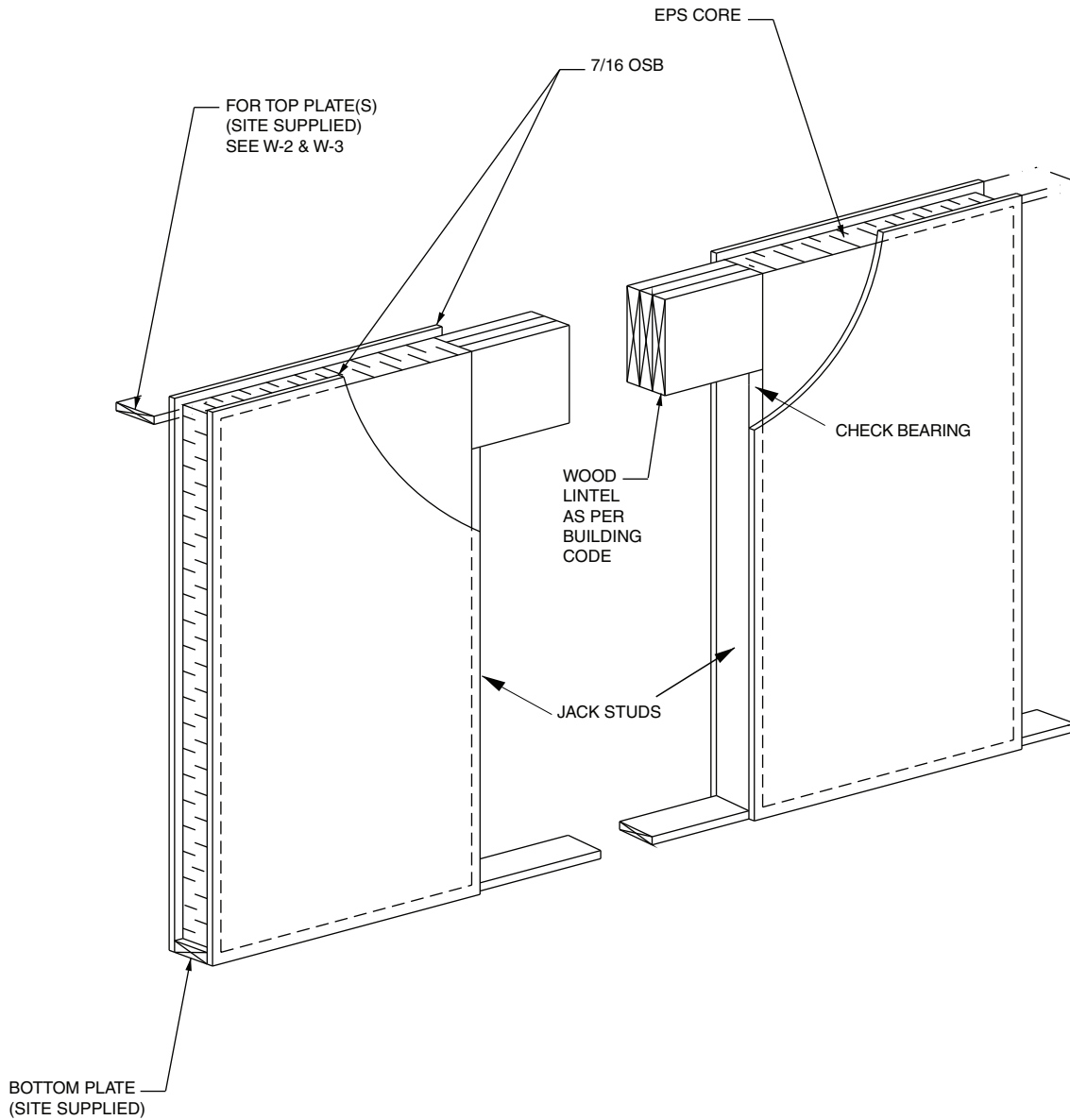
DATE

SEPTEMBER 2011

REVISION

DWG. No.

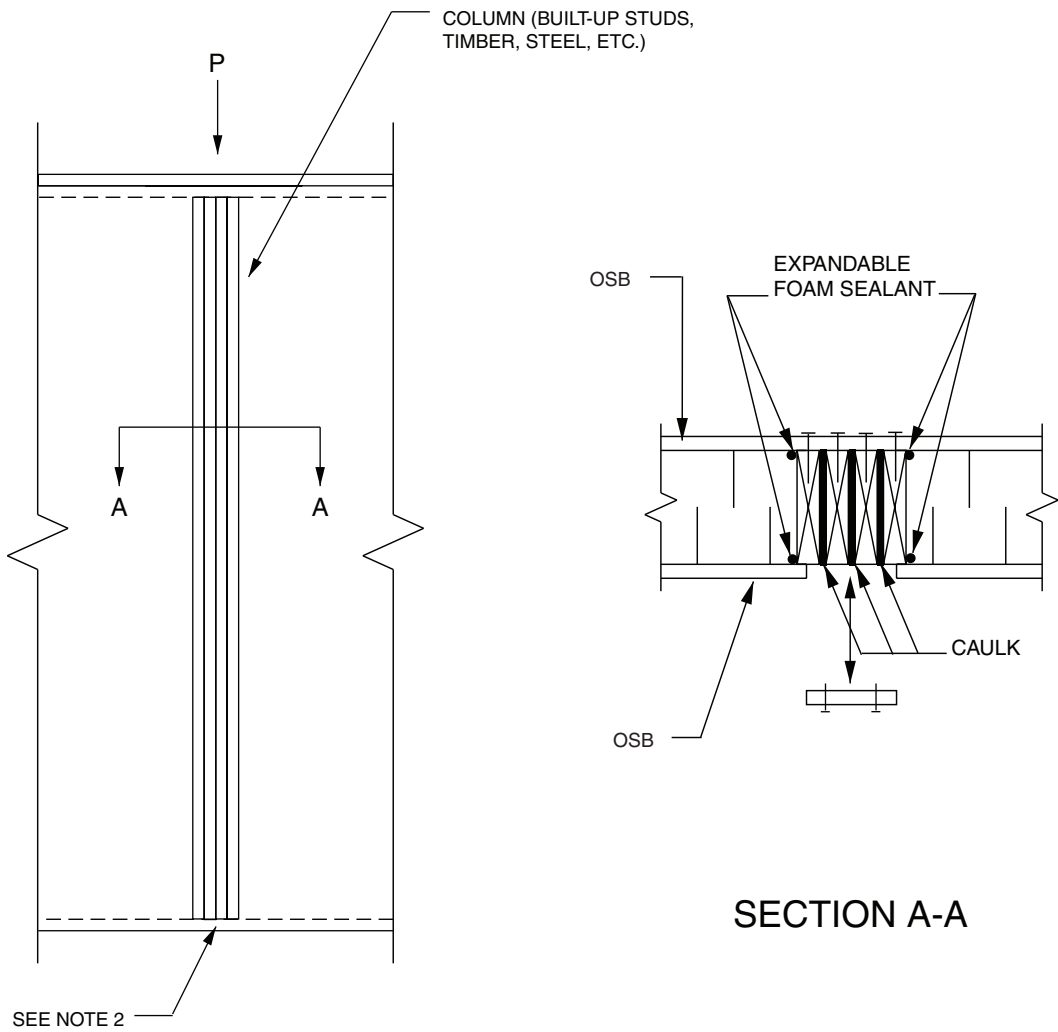
W-8



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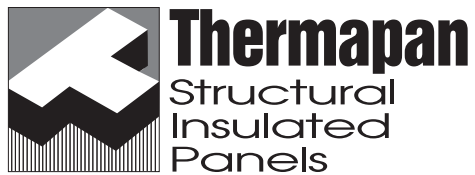
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TITLE		PROJECT	
LINTEL DETAIL (HEADER BY OTHERS)			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
SEPTEMBER 2011	4	W-9	



NOTE: INSTALL COLUMN AS PER LOCAL BUILDING CODE.

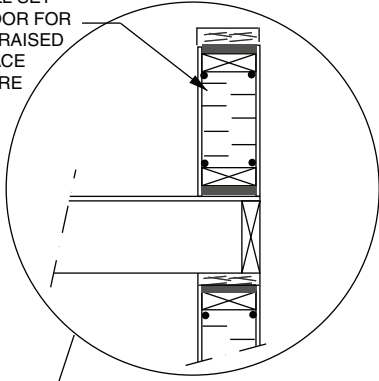
NOTE 2: REMOVE BOTTOM PLATE SECTION AND INSTALL COLUMN DIRECTLY ONTO FLOOR IF LOAD IS GREATER THAN BEARING RESISTANCE OF WOOD PLATE.



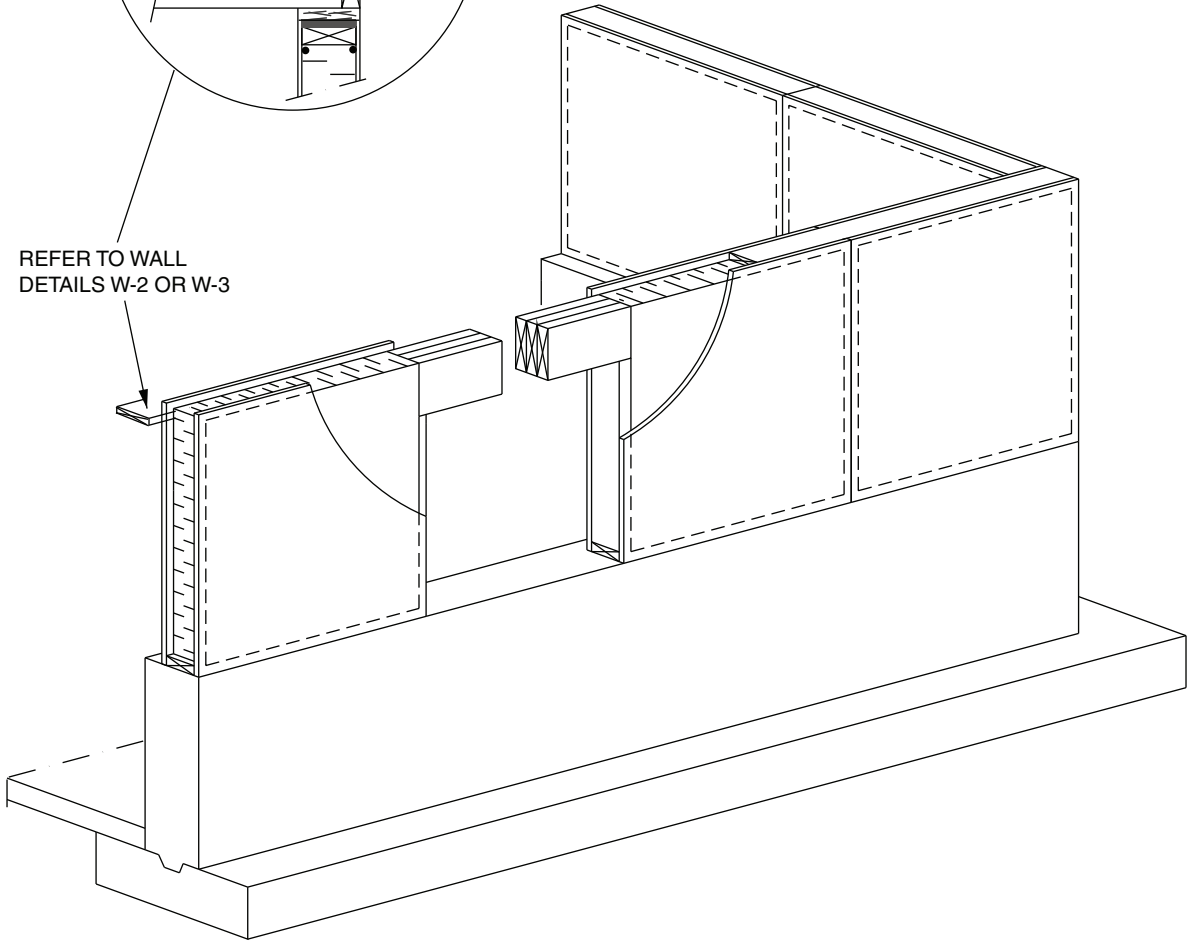
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TITLE		PROJECT	
POINT LOAD DETAIL			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
FEBRUARY 2012	4	W-10	

KNEE WALL SET
ONTO FLOOR FOR
ATTIC OR RAISED
ROOF SPACE
ENCLOSURE



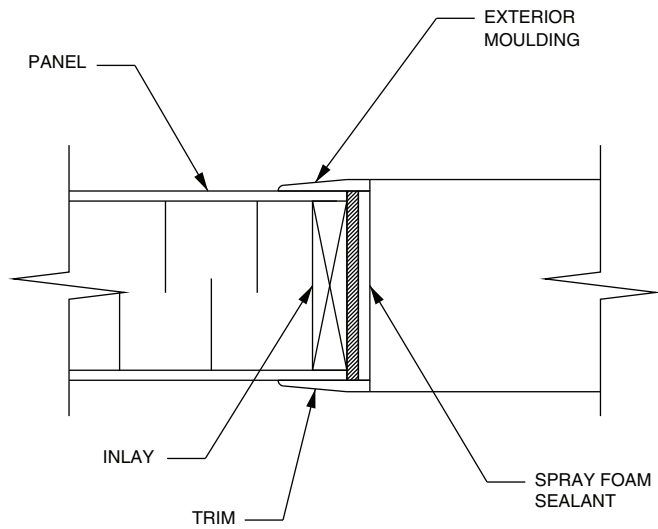
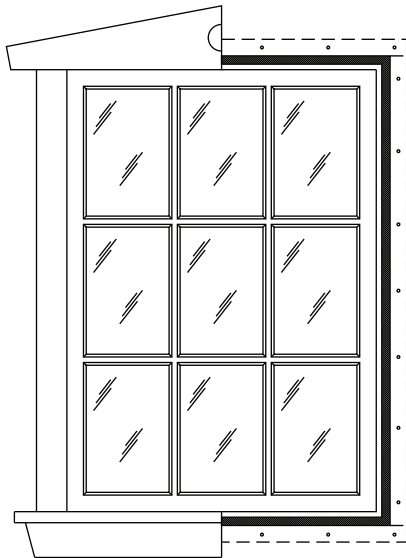
REFER TO WALL
DETAILS W-2 OR W-3



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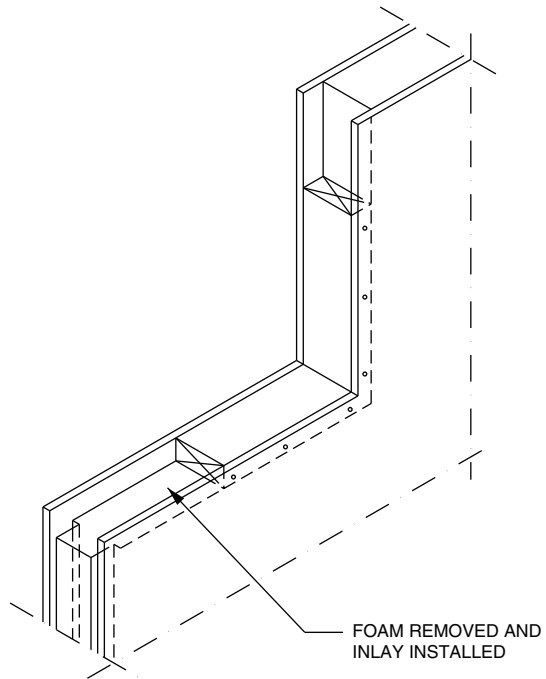
TITLE		PROJECT	
KNEE WALL DETAIL			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
MAY 2009	1	W-11	



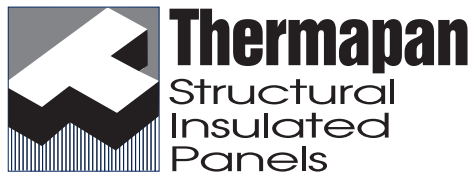
FOR ROUGH OPENINGS A DEPTH OF 1 1/2 " OF FOAM IS REMOVED FROM THE PERIMETER OF THE OPENING. THE ROUTED SPACE IS THEN FILLED WITH A MATERIAL CONSISTENT WITH THE THICKNESS OF THE PANEL CORE.

THESE ARE SECURED IN PLACE WITH NAILS OR SCREWS @8" O/C MAX., TO CREATE THE ROUGH OPENING.

THE WINDOW OR DOOR IS THEN INSTALLED CONVENTIONALLY.

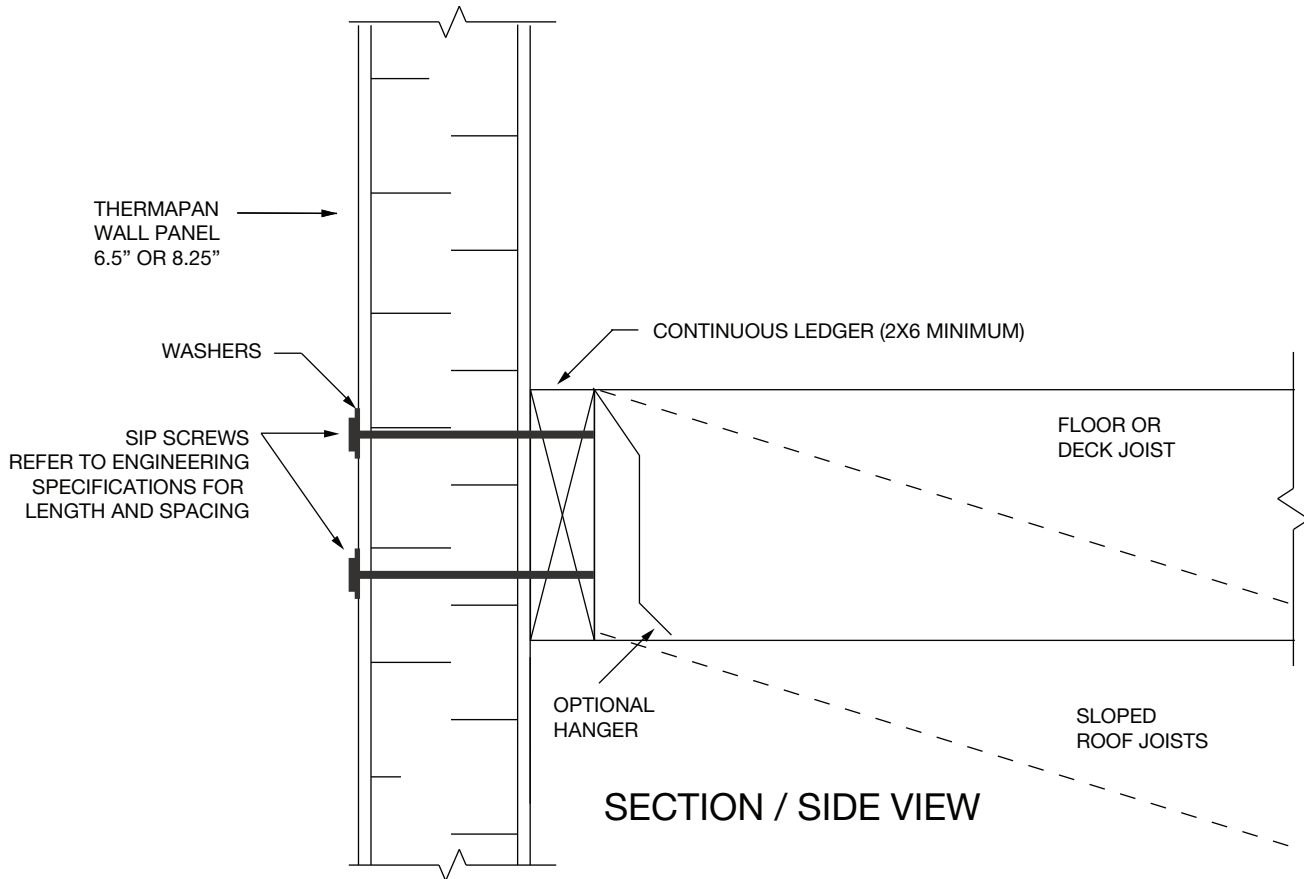


NOTE: REFER TO LINTEL DETAILS W-7.

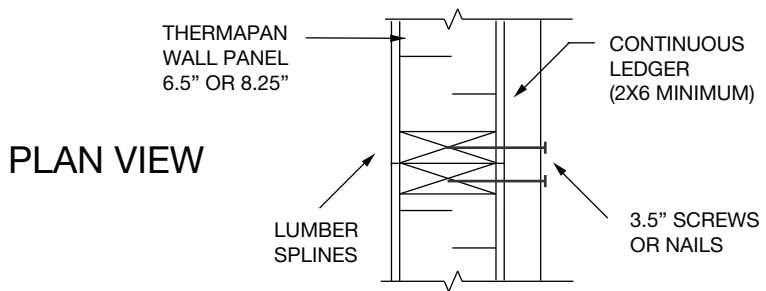


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TITLE		PROJECT	
DOOR & WINDOW ROUGH OPENINGS			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
FEBRUARY 2012	3	W-12	



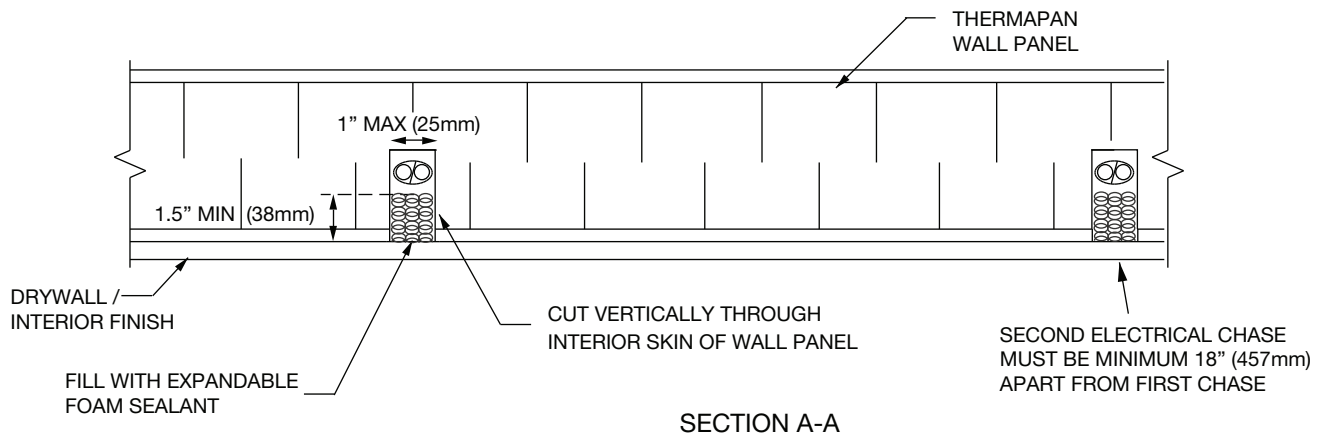
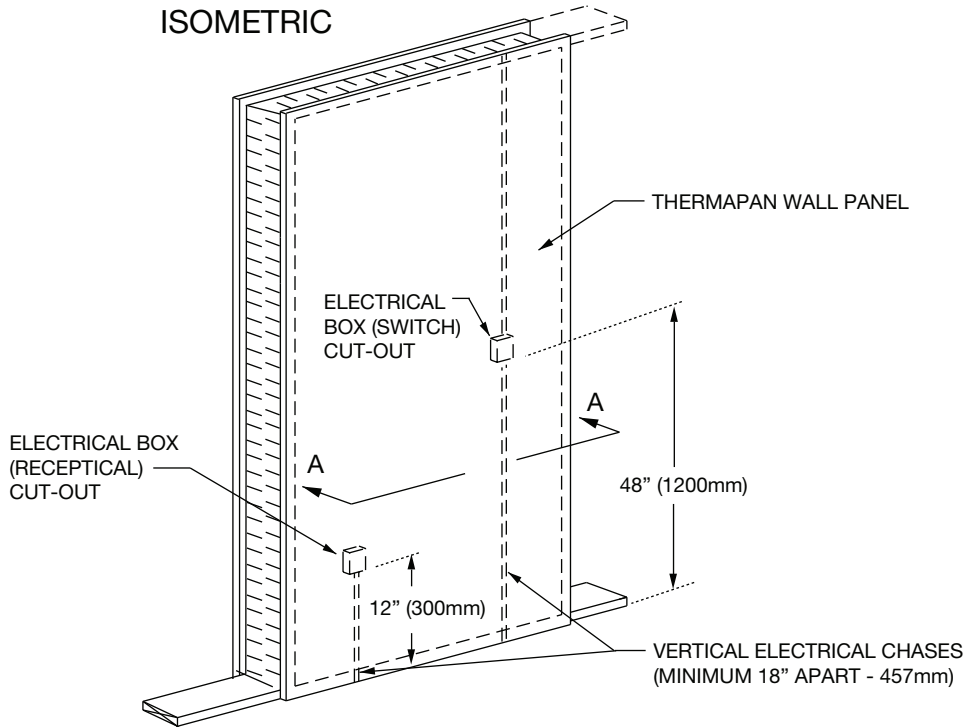
LEDGER CAN ALSO BE NAILED OR SCREWED (3.5" LONG) INTO LUMBER SPLINES (IF USED) AT 4' O/C



www.thermapan.com
1-877-443-WALL (9255)

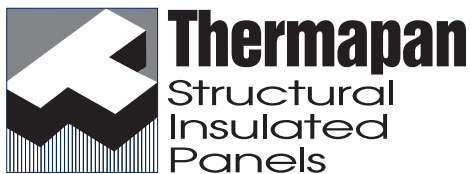
TITLE		PROJECT	
WOOD LEDGER ATTACHED TO SIP WALL PANEL [®]			
REFERENCE	SCALE	NTS	
DATE	REVISION	DWG. No.	
FEBRUARY 2012	2	W-13	

ISOMETRIC



NOTES:

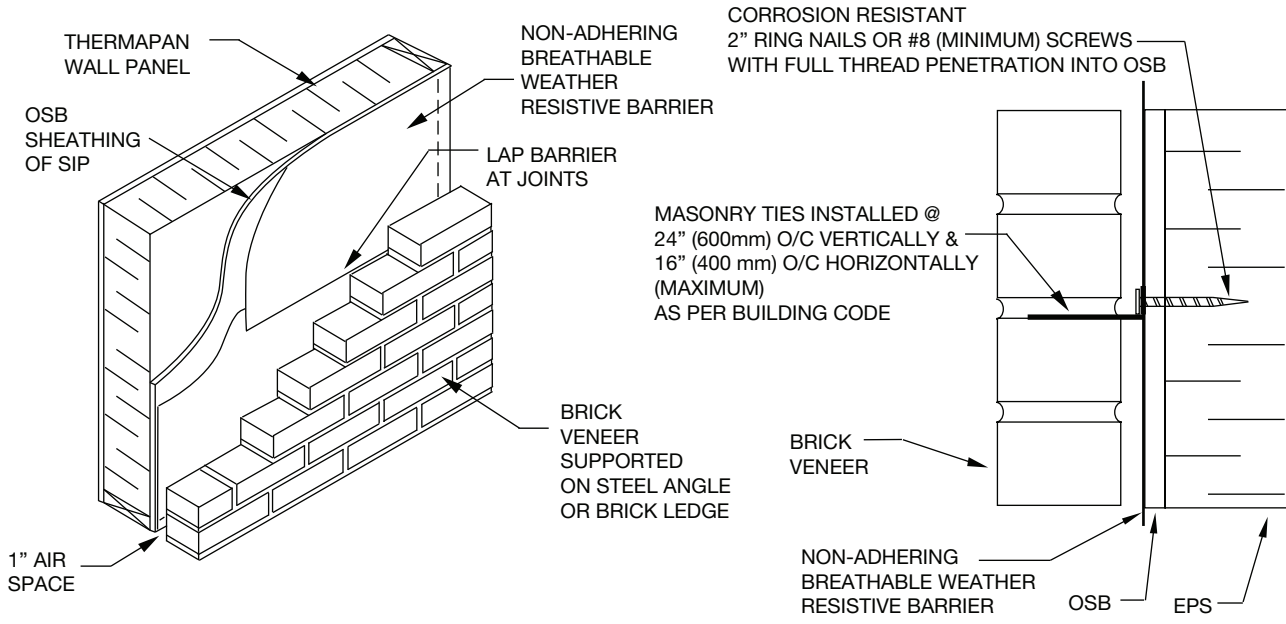
1. MAXIMUM OF TWO (2) VERTICAL CHASES PERMITTED FOR WALL PANELS 2'-6" (760mm) TO 4' (1220 mm) WIDE, MINIMUM 18"(457mm) APART.
2. MAXIMUM OF ONE (1) VERTICAL CHASE PERMITTED FOR WALL PANELS LESS THAN 2'-6" WIDE (760mm) .



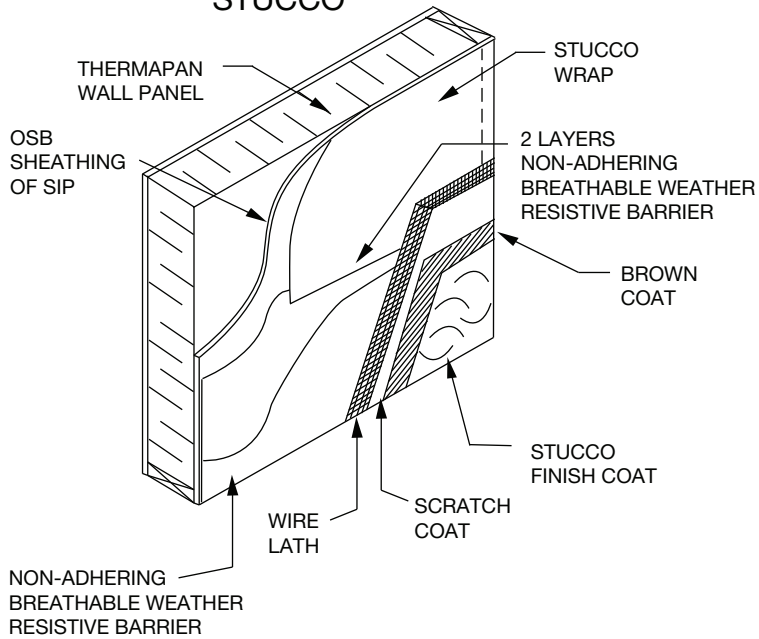
www.thermapan.com
1-877-443-WALL (9255)

TITLE		PROJECT	
VERTICAL ELECTRICAL CHASE [®]			
REFERENCE	SCALE		
DATE	REVISION	DWG. No.	
FEBRUARY 2018	2	W-14	

MASONRY VENEER



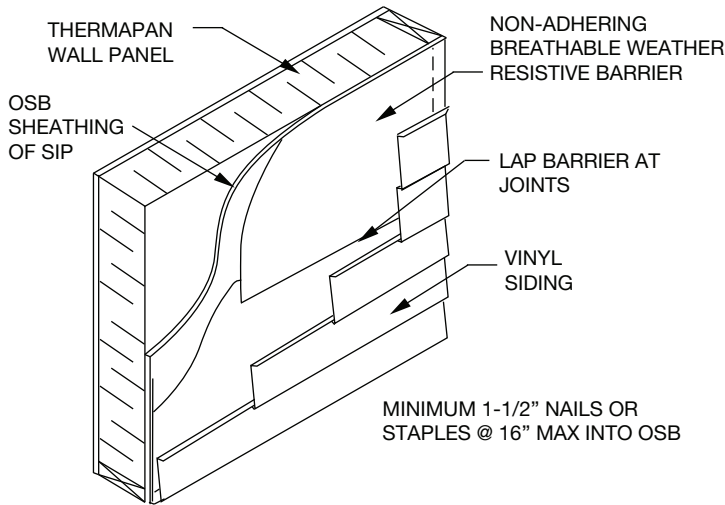
STUCCO



www.thermapan.com
1-877-443-WALL (9255)

TITLE		PROJECT	
EXTERIOR WALL CLADDING BRICK & STUCCO			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
AUGUST 2017	5	W-15	

VINYL SIDING

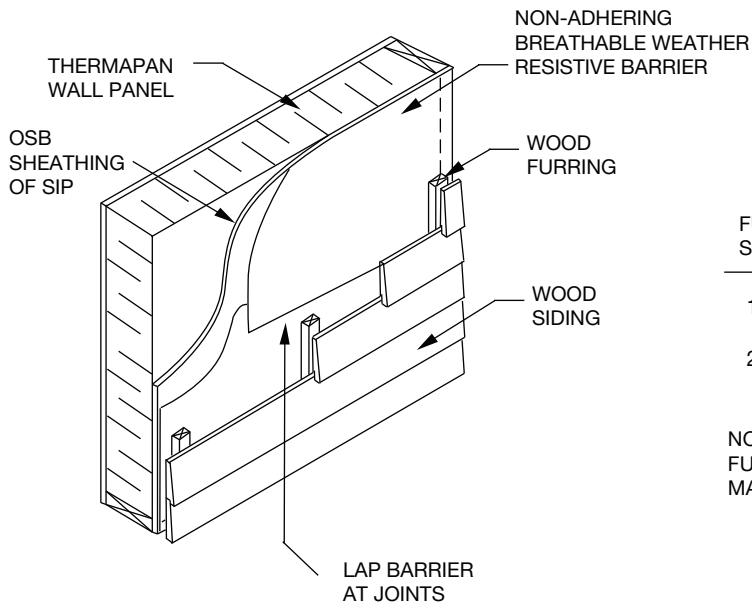


MINIMUM 1-1/2" NAILS OR STAPLES @ 16" MAX INTO OSB

FIBRE CEMENT SIDING

FOR FIBRE CEMENT LAP SIDING REFER TO MANUFACTURER'S RECOMMENDED FASTENING METHODS.

WOOD SIDING



FURRING REQUIREMENTS

FURRING SPACING	FASTENER SPACING (MIN 1-1/2" SCREWS)	FASTENER SPACING (MIN 1-1/4" NAILS)
16" O/C	10" O/C	8" O/C
24" O/C	8" O/C	8" O/C

NOTE: ALL NAILS TO BE RING (ANNULARLY THREADED). FURRING TO BE AS RECOMMENDED BY SIDING MANUFACTURER.



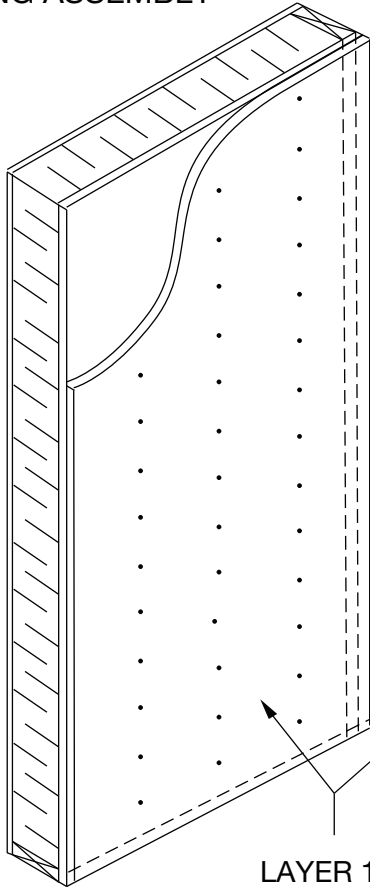
www.thermapan.com
 1-877-443-WALL (9255)

TITLE		PROJECT	
EXTERIOR WALL CLADDING: SIDING			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
AUGUST 2017	3	W-16	

FIRE RESISTANCE RATING - GYPSUM SPECIFICATIONS

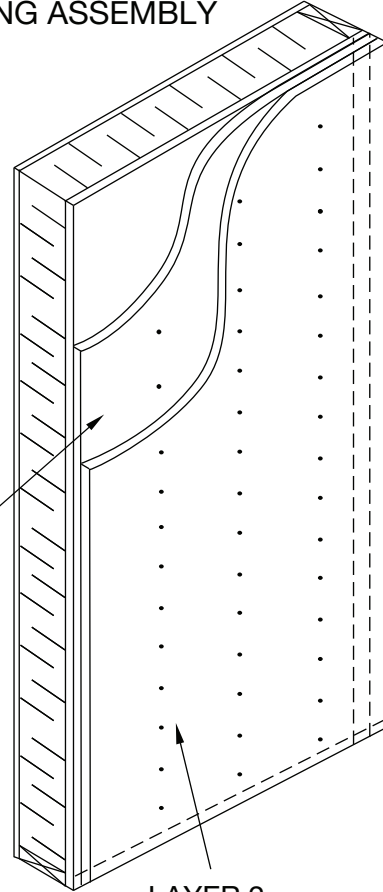
FIRE RESISTANCE RATING	LAYER #	GYPSUM THICKNESS	GYPSUM STANDARD TYPE
15 MINUTES	1	12.7mm (1/2")	CAN/CSA -A82.27-M, ASTM C 1396 OR ASTM C 36
45 MINUTES	1	12.7mm (1/2")	TYPE 'C' CAN/CSA -A82.27-M, ASTM C 1396 OR ASTM C 36
60 MINUTES	1	15.9mm (5/8")	TYPE 'X' CAN/CSA -A82.27-M, ASTM C 1396 OR ASTM C 36
120 MINUTES	1	15.9mm (5/8")	TYPE 'X' CAN/CSA -A82.27-M, ASTM C 1396 OR ASTM C 36
	2	15.9mm (5/8")	TYPE 'X' CAN/CSA -A82.27-M, ASTM C 1396 OR ASTM C 36

15, 45 & 60 MINUTE FIRE RESISTANCE RATING ASSEMBLY

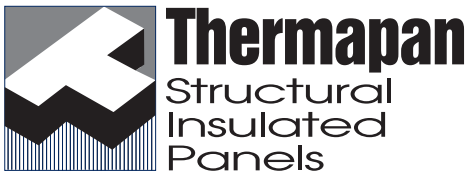


LAYER 1
 GYPSUM VENEER LAYER TO BE FASTENED WITH 32mm (1-1/4") COARSE GYPSUM SCREWS VERTICALLY AT 350mm (14") O/C IN ROWS OF 400mm (16")

120 MINUTE FIRE RESISTANCE RATING ASSEMBLY

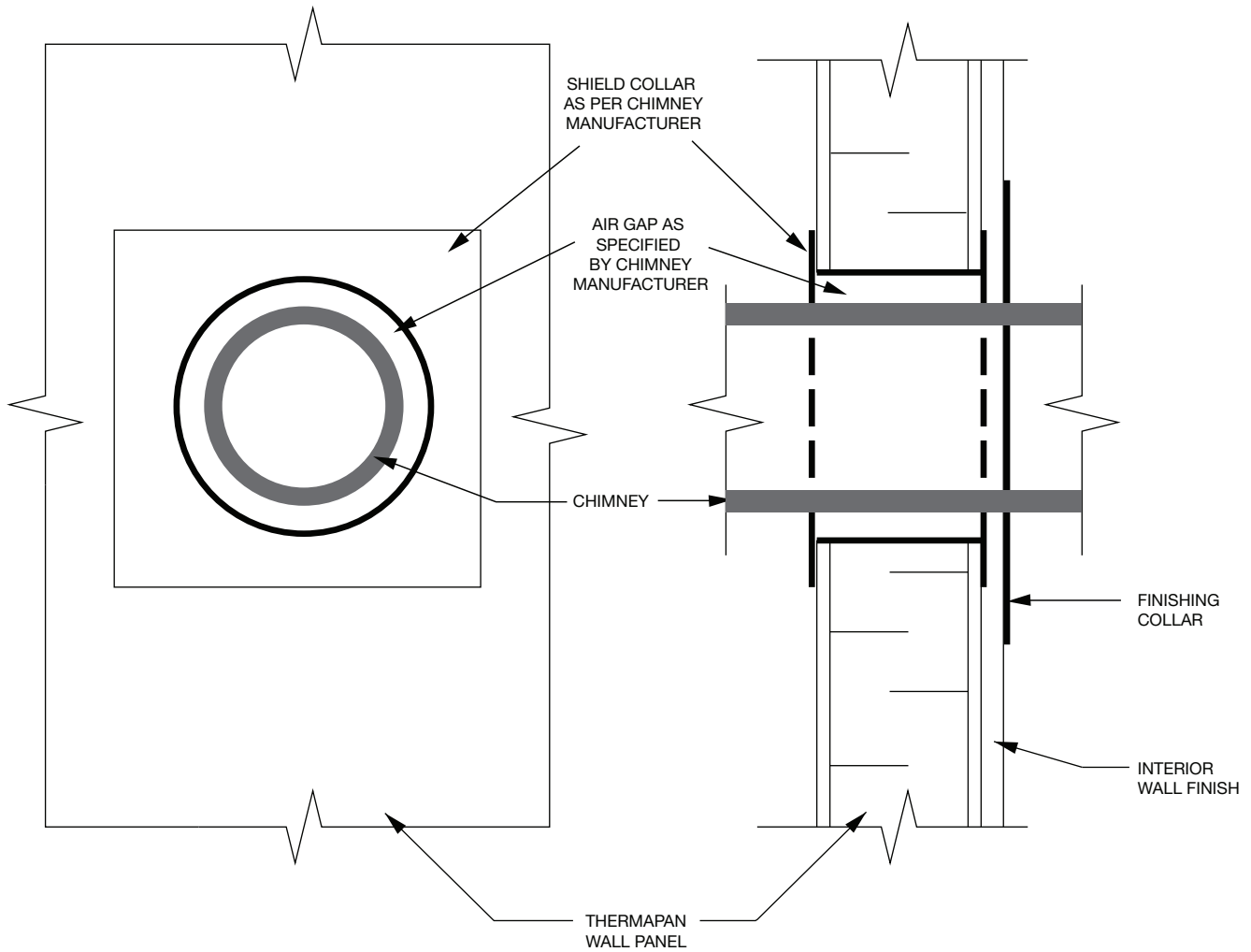


LAYER 2
 GYPSUM VENEER LAYER TO BE FASTENED WITH 60mm (2-1/2") COARSE GYPSUM SCREWS VERTICALLY AT 200mm (8") O/C IN ROWS OF 400mm (16")

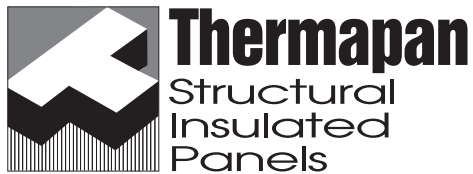


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 1-877-443-WALL (9255)

TITLE		PROJECT	
INTERIOR WALL FINISH: GYPSUM			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
OCTOBER 2013	1	W-17	

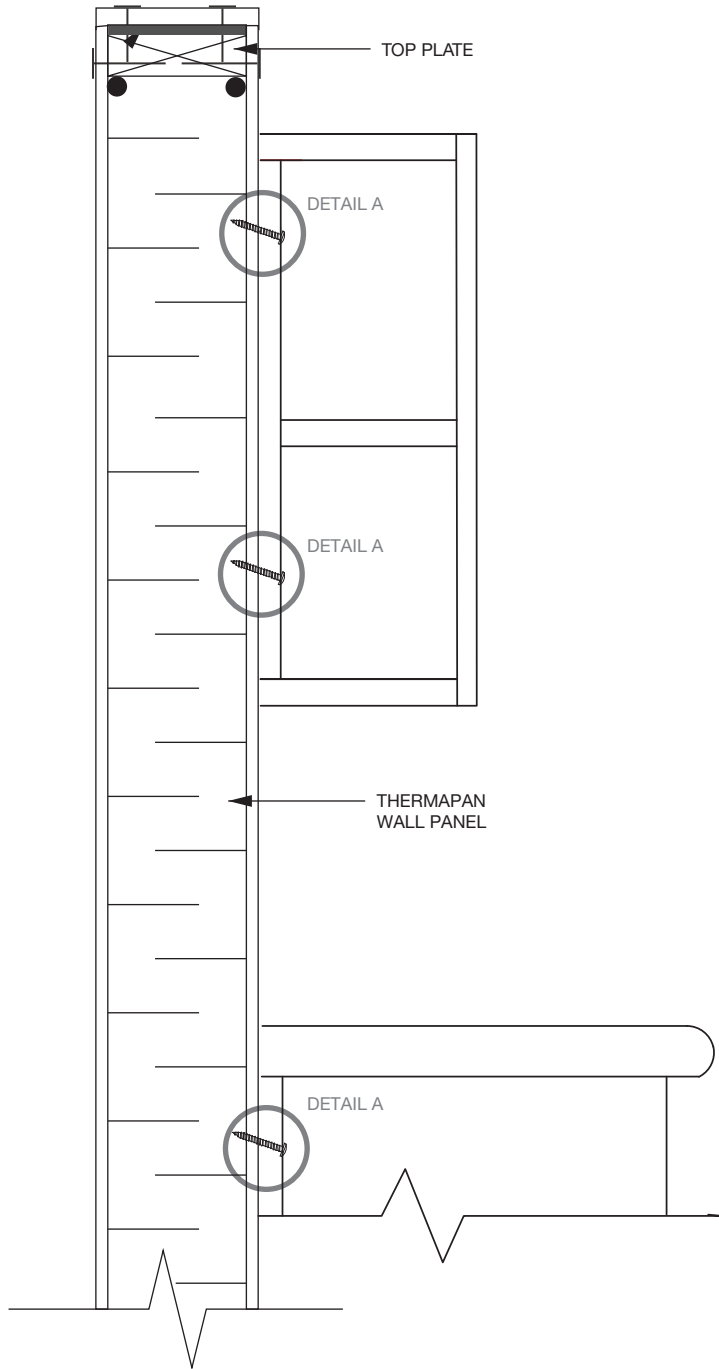


NOTE: ABOVE DETAILS ARE TYPICAL REQUIREMENTS TO INSTALL A PREFABRICATED METAL CHIMNEY IN A THERMAPAN STRUCTURAL INSULATED PANEL. THE CHIMNEY INSTALLATION MUST COMPLY WITH THE CHIMNEY MANUFACTURERS'S SPECIFICATION AND THE APPLICABLE BUILDING CODE.

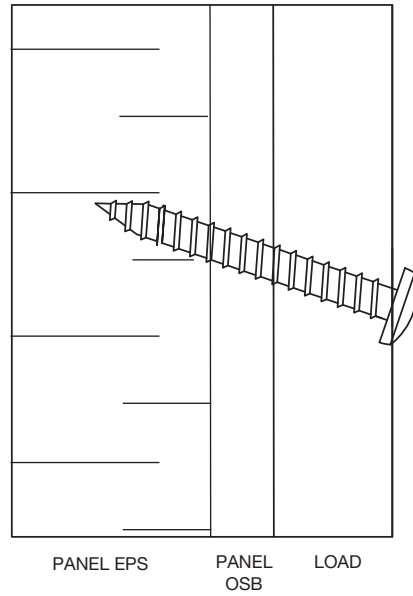


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1-877-443-WALL (9255)

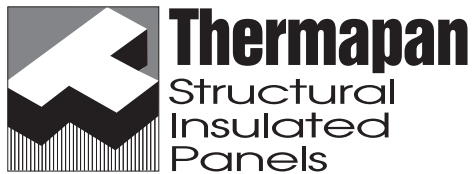
TITLE		PROJECT	
PRE-FABRICATED METAL CHIMNEY INSTALLATION IN WALL			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
FEBRUARY 2019		W-18	



DETAIL A



NOTE: NUMBER 10 TYPE A SHEET METAL SCREWS CAN RESIST A PULL OUT OF 120 POUNDS IN 7/16" OSB. CONTRACTOR TO CONFIRM LOAD TO BE SECURED AND NUMBER OF FASTENERS REQUIRED. FULL THICKNESS OF OSB TO RECEIVE SCREW THREAD ON ANGLE AS DETAILED



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1-877-443-WALL (9255)

TITLE		PROJECT	
SCREW FASTENER DETAIL FOR SECURING SHELVING TO THERMAPAN PANEL			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
FEBRUARY 2020		W-19	

TRUSSES INSTALLED AS PER LOCAL BUILDING CODE

5/8" TYPE X GYPSUM BD.
5/8" TYPE X GYPSUM BD.
SONOSECUR ACOUSTICAL PANEL
(one side only)
1/2" RESILIENT CHANNEL RC-1
6 1/2" STRUCTURAL FOAM
CORE PANEL

CONT. FIRE RATED
CAULKING TYP.

INSTALL AS PER LOCAL
BUILDING CODE OR JOIST
SUPPLIER SPEC.

5/8" TYPE X GYPSUM BD.
5/8" TYPE X GYPSUM BD.
SONOSECUR ACOUSTICAL PANEL
(one side only)
1/2" RESILIENT CHANNEL RC-1
6 1/2" STRUCTURAL FOAM
CORE PANEL

CONT. FIRE RATED CAULKING TYP.

INSTALL AS PER LOCAL
BUILDING CODE OR JOIST
SUPPLIER SPEC.

POURED CONCRETE OR
BLOCK FOUNDATION
WALL

* UL / ULC LABELLED GYPSUM SHEATHING

STRUCTURAL CAPACITY FOR WALL
NOT TO EXCEED 32.4 kn/m
(2217 LBS. PER LINEAR FOOT)
FOR OTHER REQUIREMENTS,
INCLUDING STRUCTURAL LOAD,
REFER TO MANUFACTURER'S
INSTRUCTIONS.

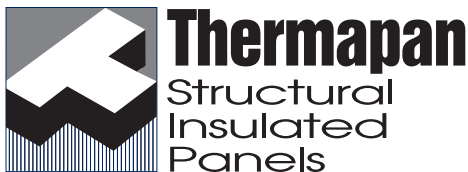
INSTALL TOP PLATE AND CAP
SECURED TO STUDS WITH 95 mm
SPIRAL NAILS

50 mm RING NAILS
@ 250 mm O/C (TYP.)

5/8" TYPE X GYPSUM BD.
5/8" TYPE X GYPSUM BD.
1/2" RESILIENT CHANNEL

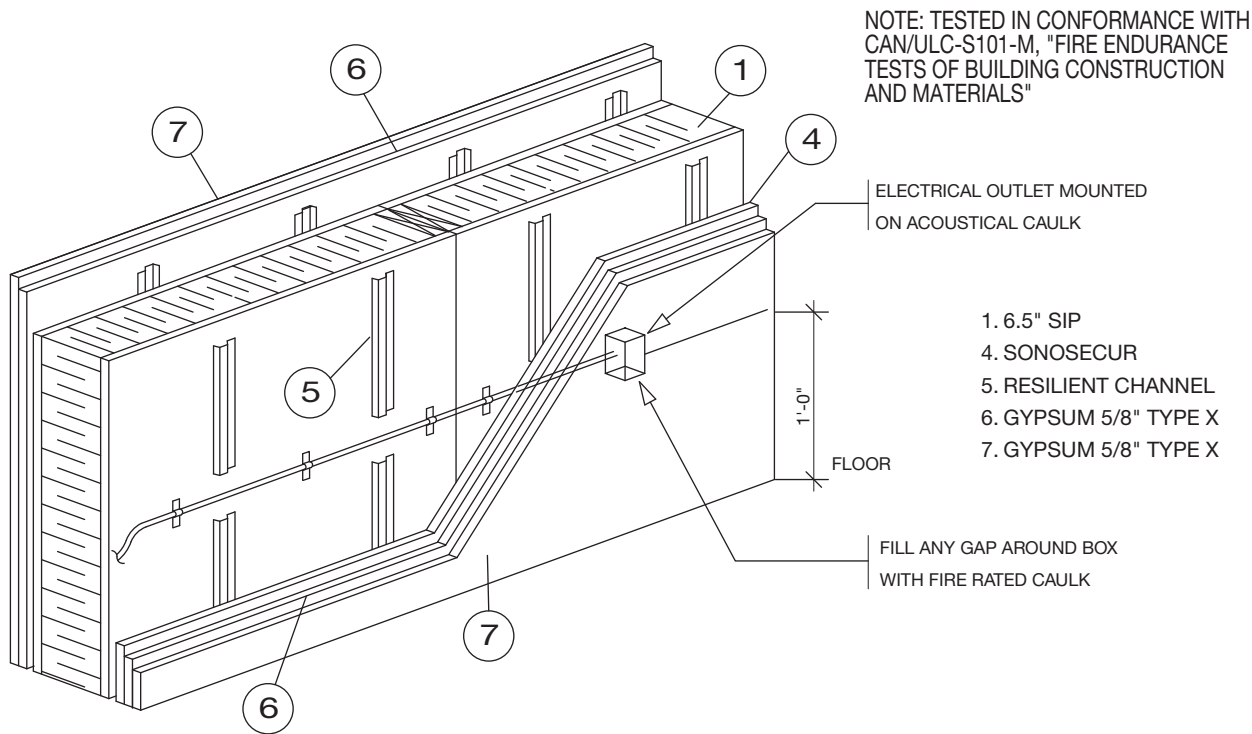
DOUBLE STUD SPLINE
SECURED TO PLATE WITH
83 mm SPIRAL NAILS

NOTE: TESTED IN CONFORMANCE WITH
CAN/ULC-S101-M, "FIRE ENDURANCE
TESTS OF BUILDING CONSTRUCTION AND
MATERIALS"



www.thermapan.com
1-877-443-WALL (9255)

TITLE			60 MIN. PARTYWALL SINGLE WALL STC RATING 50		
REFERENCE		SCALE			
		N.T.S.			
DATE		REVISION	DWG. No.		
DECEMBER 2018		8	W-PW-1		



ASSEMBLY OF RESILIENT CHANNEL (5)

THE RESILIENT CHANNELS ARE ORIENTED VERTICALLY AT 16" (400 mm) OC AND SECURED WITH 1" (25 mm) TYPE W GYPSUM BOARD SCREWS AT 16" (400 mm) OC TO THE STRUCTURAL INSULATED PANEL (SIP)

ASSEMBLY OF SONOSECUR ACOUSTIC PANEL (4)

TACK THE SONOSECUR ACOUSTIC PANEL WITH 1" (25 mm) LONG TYPE W GYPSUM BOARD SCREWS TO HOLD IN PLACE. THE SONOSECUR ACOUSTIC PANEL IS ASSEMBLED ON ONE SIDE ONLY.

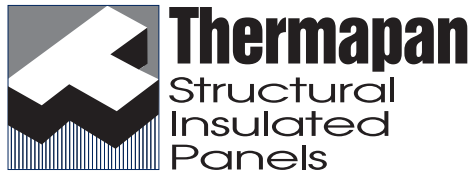
ASSEMBLY OF FIRST LAYER 5/8" TYPE X GYPSUM (6)

INSTALL THE FIRST GYPSUM LAYER (6) VERTICALLY ONTO RESILIENT CHANNELS WITH 1" (25 mm) TYPE W GYPSUM SCREWS SPACED 16" (400 mm) OC.

ASSEMBLY OF SECOND LAYER 5/8" TYPE X GYPSUM (7)

THE JOINTS OF THE SECOND LAYER SHOULD BE OFFSET AND STAGGERED FROM FIRST LAYER. THE SECOND LAYER SHOULD HAVE 1.75" (44 mm) SCREWS AT 12" (304 mm) OC. THE FIRST LAYER OF GYPSUM DOES NOT HAVE TO BE TAPED. ONLY THE SECOND LAYER HAS TO BE FINISHED. JOINTS SHOULD BE COVERED WITH COMPOUND, COVERED WITH JOINT TAPE AND COVERED WITH AN ADDITIONAL TWO COATS OF JOINT COMPOUND. SCREW HEADS COVERED WITH JOINT COMPOUND.

UL GYPSUM BOARD FIRECODE "X"



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 1-877-443-WALL (9255)

TITLE		
PARTYWALL ELECTRICAL DETAIL (60 MINUTE WALL RATED ASSEMBLY (SINGLE WALL) STC RATING 50)		
REFERENCE	SCALE	
8015	N.T.S.	
DATE	REVISION	DWG. No.
DECEMBER 2018	8	W-PW-2

TRUSSES INSTALLED AS PER BUILDING CODE

5/8" TYPE X GYPSUM BD.
5/8" TYPE X GYPSUM BD.
SONOSECUR ACOUSTICAL PANEL
(one side only)
1/2" RESILIENT CHANNEL RC-1
4 1/2" STRUCTURAL FOAM
CORE PANEL

1" AIR SPACE

CONTINUOUS FIRE RATED CAULKING

INSTALL AS PER LOCAL BUILDING CODE OR JOIST SUPPLIER SPEC.

5/8" TYPE X GYPSUM BD.
5/8" TYPE X GYPSUM BD.
SONOSECUR ACOUSTICAL PANEL
(one side only)
1/2" RESILIENT CHANNEL RC-1
4 1/2" STRUCTURAL FOAM
CORE PANEL

1" AIR SPACE

CONTINUOUS FIRE RATED CAULKING

INSTALL AS PER LOCAL BUILDING CODE OR JOIST SUPPLIER SPEC.

POURED CONCRETE OR BLOCK WALL FOUNDATION

ULC LABELLED CANADIAN GYPSUM COMPANY "SHEETROCK FIRECODE X" OR "SHEETROCK SW FIRECODE X"

STRUCTURAL CAPACITY FOR WALL NOT TO EXCEED 32.4 kn/m (2217 LBS. PER LINEAR FOOT) FOR OTHER REQUIREMENTS, INCLUDING STRUCTURAL LOAD, REFER TO MANUFACTURER'S INSTRUCTIONS.

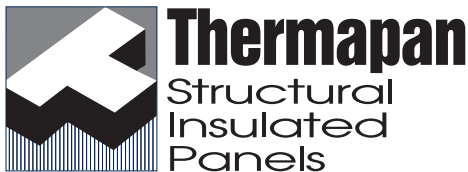
5/8" TYPE X GYPSUM BD.
5/8" TYPE X GYPSUM BD.
1/2" RESILIENT CHANNEL

INSTALL TOP PLATE AND CAP SECURED TO STUDS WITH 95 mm SPIRAL NAILS

50 mm RING NAILS @ 250 mm O/C (TYP)

DOUBLE STUD SPLINE SECURED TO PLATE WITH 83 mm SPIRAL NAILS

NOTE: TESTED IN CONFORMANCE WITH CAN/ULC-S101-M, "FIRE ENDURANCE TESTS OF BUILDING CONSTRUCTION AND MATERIALS"



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1-877-443-WALL (9255)

TITLE

60 MIN. PARTYWALL
DOUBLE WALL STC RATING 50

REFERENCE

7016

SCALE

N.T.S.

DATE

DECEMBER 2018

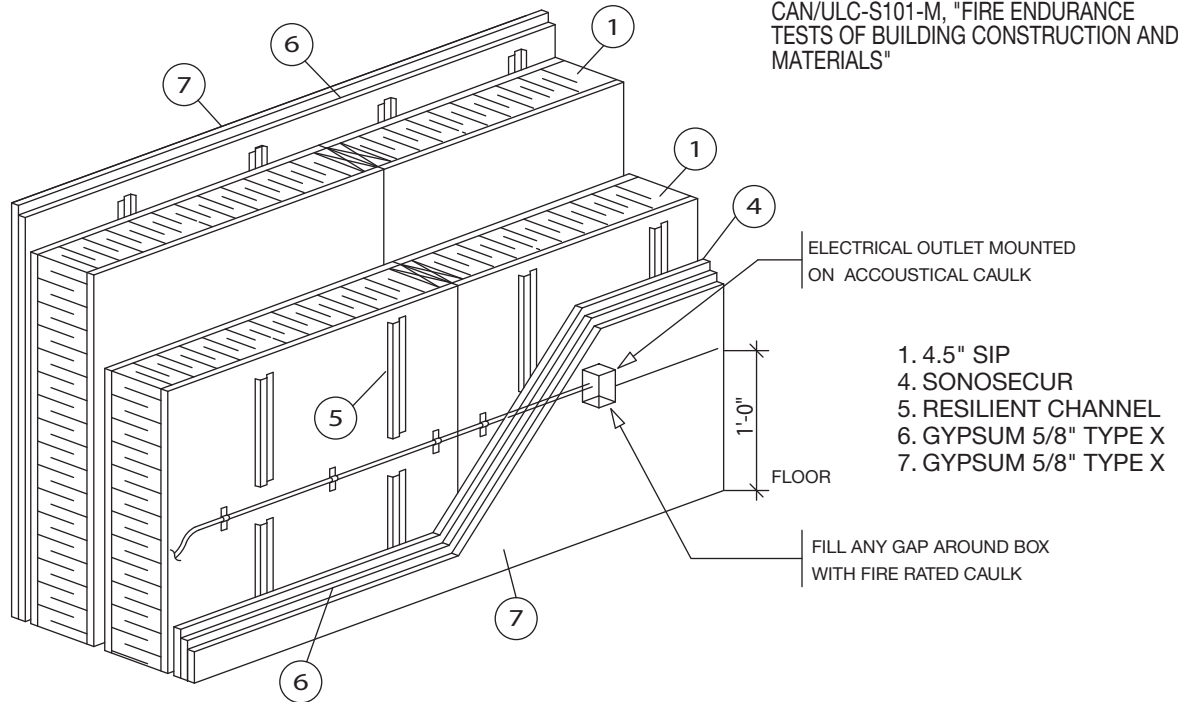
REVISION

5

DWG. No.

W-PW-3

NOTE: TESTED IN CONFORMANCE WITH CAN/ULC-S101-M, "FIRE ENDURANCE TESTS OF BUILDING CONSTRUCTION AND MATERIALS"



- 1. 4.5" SIP
- 4. SONOSECUR
- 5. RESILIENT CHANNEL
- 6. GYPSUM 5/8" TYPE X
- 7. GYPSUM 5/8" TYPE X

ASSEMBLY OF RESILIENT CHANNEL (5)

THE RESILIENT CHANNELS ARE ORIENTED VERTICALLY AT 16" (400 mm) OC AND SECURED WITH 1" (25 mm) TYPE W GYPSUM BOARD SCREWS AT 16" (400 mm) OC TO THE STRUCTURAL INSULATED PANEL (SIP).

ASSEMBLY OF SONOSECUR ACOUSTIC PANEL (4)

TACK THE SONOSECUR ACOUSTIC PANEL WITH 1" (25 mm) LONG TYPE W GYPSUM BOARD SCREWS TO HOLD IN PLACE. THE SONOSECUR ACOUSTIC PANEL IS ASSEMBLED ON ONE SIDE ONLY.

ASSEMBLY OF FIRST LAYER 5/8" TYPE X GYPSUM (6)

INSTALL THE FIRST GYPSUM LAYER (6) VERTICALLY ONTO RESILIENT CHANNELS WITH 1" (25 mm) TYPE W GYPSUM SCREWS SPACED 16" (400 mm) OC.

ASSEMBLY OF SECOND LAYER 5/8" TYPE X GYPSUM (7)

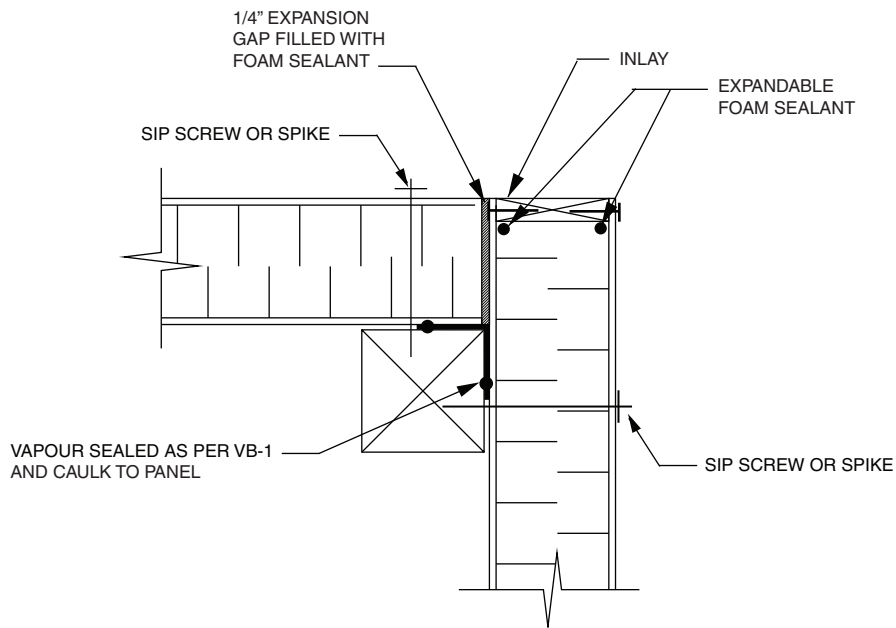
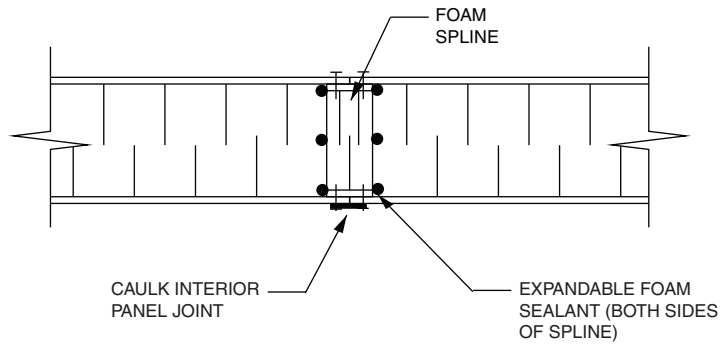
THE JOINTS OF THE SECOND LAYER SHOULD BE OFFSET AND STAGGERED FROM FIRST LAYER. THE SECOND LAYER SHOULD HAVE 1.75" (44 mm) SCREWS AT 12" (304 mm) OC . THE FIRST LAYER OF GYPSUM DOES NOT HAVE TO BE TAPED. ONLY THE SECOND LAYER HAS TO BE FINISHED. JOINTS SHOULD BE COVERED WITH COMPOUND, COVERED WITH JOINT TAPE AND COVERED WITH AN ADDITIONAL TWO COATS OF JOINT COMPOUND. SCREW HEADS COVERED WITH JOINT COMPOUND.

UL GYPSUM BOARD FIRECODE "X"



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1-877-443-WALL (9255)

TITLE		
PARTYWALL ELECTRICAL DETAIL (60 MIN. WALL RATED ASSEMBLY (DOUBLE WALL) STC RATING 50)		
REFERENCE	SCALE	
8015	N.T.S.	
DATE	REVISION	DWG. No.
DECMEBER 2018	6	W-PW-4



NOTE: REFER TO W-1 FOR SPLINE CONNECTION DETAILS. REFER TO AIR BARRIER (AB-1 & AB-2) DETAILS FOR SEALING SIP CONNECTIONS.

THE PANELS ARE FASTENED TO THE POST AT THE CORNERS AS SHOWN LEAVING A GAP TO BE SEALED WITH EXPANDING SPRAY FOAM.

DIMENSIONAL LUMBER INLAYS COMPLETE THE NAILING SURFACE AT THE CORNER.



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1-877-443-WALL (9255)

TITLE
**VERTICAL PANEL CONNECTIONS
SPLINE & CORNER
(TIMBERFRAME)**

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

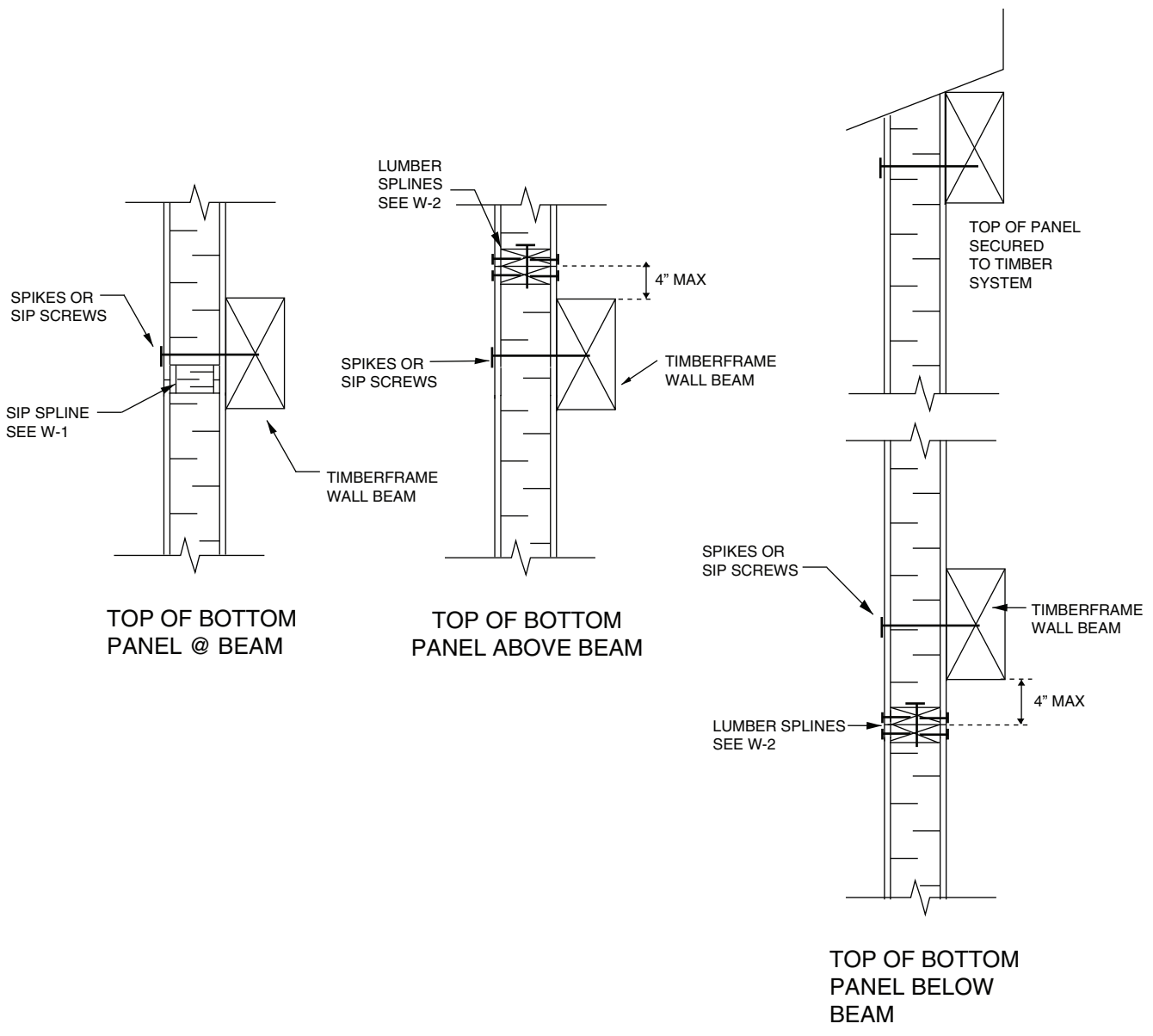
APRIL 2014

REVISION

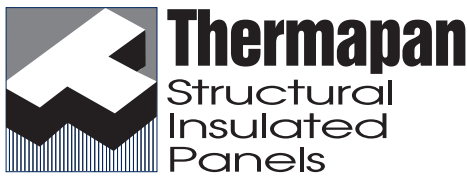
DWG. No.

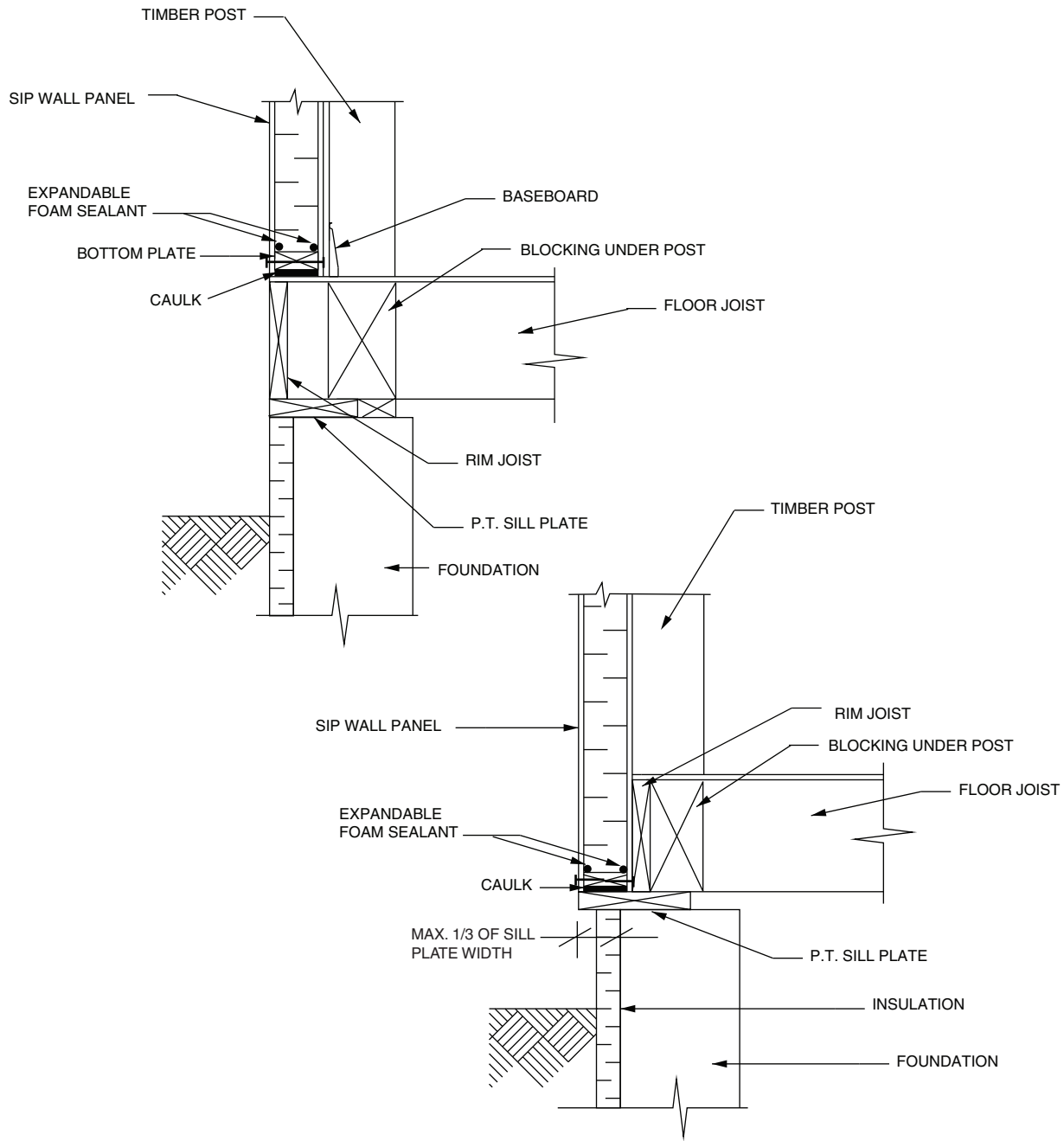
6

W-TF-1

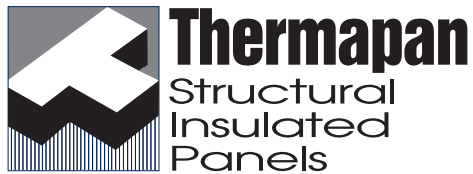


NOTE: REFER TO AIR BARRIER (AB-1 & AB-2) DETAILS FOR SEALING SIP CONNECTIONS.

 <p>www.thermapan.com 1-877-443-WALL (9255)</p>	TITLE		PROJECT	
	HORIZONTAL CONNECTIONS AT BEAMS (TIMBERFRAME)			
	REFERENCE	SCALE		
DATE	REVISION	DWG. No.		
APRIL 2014	3	W-TF-2	N.T.S.	



NOTE: REFER TO AIR BARRIER (AB-2) DETAIL FOR SEALING SIP CONNECTIONS.



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1-877-443-WALL (9255)

TITLE		PROJECT	
FOUNDATION DETAILS DECK OPTIONS (TIMBERFRAME)		PROJECT	
		SCALE	
REFERENCE	N.T.S.		
DATE	REVISION	DWG. No.	
APRIL 2014	5	W-TF-3	

APPENDIX A

Panel Header/Lintel Load Tables

Maximum (Factored) Axial Loads for 4.5" Panel Header/Lintel

Panel Header Dimensions		Maximum Load	
Depth (in)	Span (ft)	Uniform Load (plf)	Point Load (lb)
14	4	1595	3145
	6	615	1860
	8	485	1460
20	4	1845	3720
	6	800	2400
	8	586	1715
26	4	2030	4000
	6	972	2915
	8	670	1945

Maximum (Factored) Axial Loads for 6.5" Panel Header/Lintel

Panel Header Dimensions		Maximum Load	
Depth (in)	Span (ft)	Uniform Load (plf)	Point Load (lb)
14	4	1960	3860
	6	715	2145
	8	570	1715
20	4	2160	4290
	6	930	2790
	8	680	2000
26	4	2360	4720
	6	1145	3430
	8	785	2290

Maximum (Factored) Axial Loads for 8.25" Panel Header/Lintel

Panel Header Dimensions		Maximum Load	
Depth (in)	Span (ft)	Uniform Load (plf)	Point Load (lb)
14	4	2345	4575
	6	895	2715
	8	715	2145
20	4	2675	5360
	6	1160	3430
	8	860	2500
26	4	2945	5860
	6	1430	4300
	8	985	2860

Note: Maximum (Factored) loads are based on 1/4" (6mm) maximum vertical deflection.