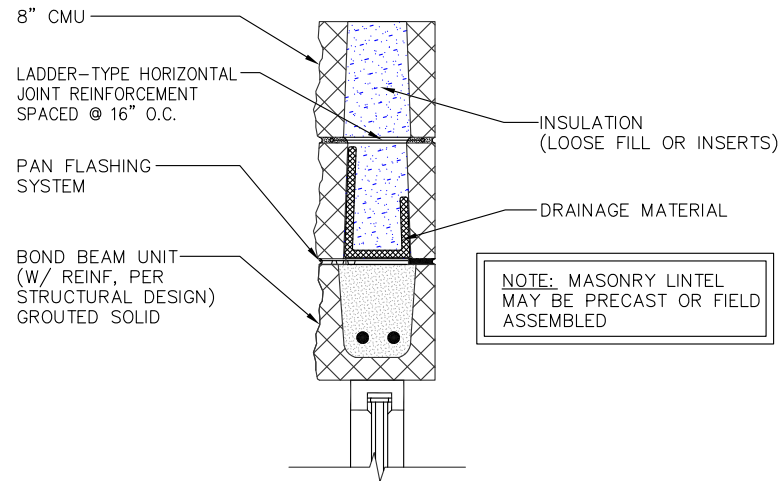
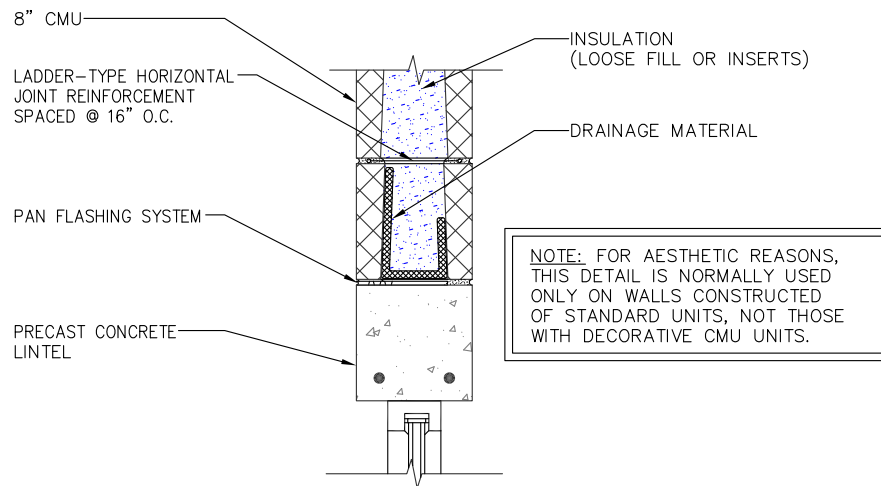


**NOTES:**

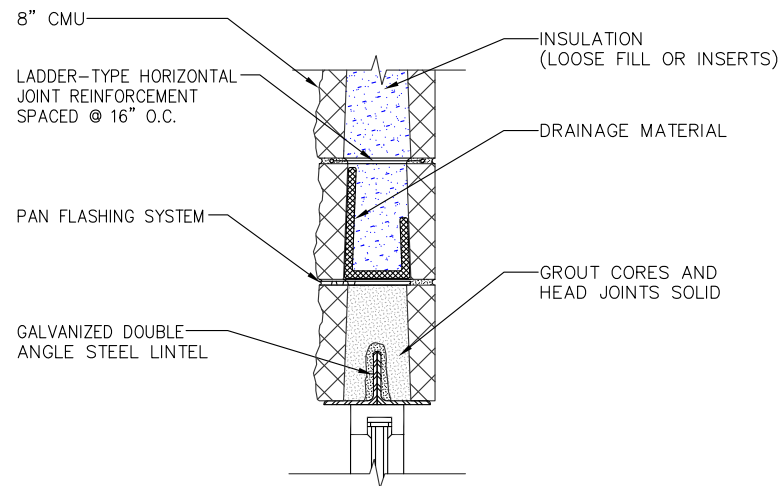
- 1) CONTINUE PAN FLASHING SYSTEM A MINIMUM OF ONE CELL BEYOND BOTH JAMB EDGES OF THE OPENING.
- 2) UNPROTECTED ALUMINUM DOOR AND WINDOW FRAMES CAN INTERACT WITH CEMENT-BASED MATERIALS AND INCUR DAMAGE. SEE PCA "MASONRY TODAY" VOLUME II, No. 1 FOR RECOMMENDATIONS.  
([www.cement.org/masonry/cc\\_al\\_frames.asp](http://www.cement.org/masonry/cc_al_frames.asp))



3A MASONRY LINTEL (PREFERRED)  
A-1



3C PRECAST CONCRETE LINTEL  
A-1



3B DOUBLE ANGLE STEEL LINTEL  
A-1

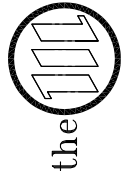
## SHORT SPAN LINTELS

**DAILEY ENGINEERING, INC.**  
8485 STEPHENSON ROAD  
ONSTED, MI 48865

PH. # (517) 467-9000  
FAX # (517) 467-9010

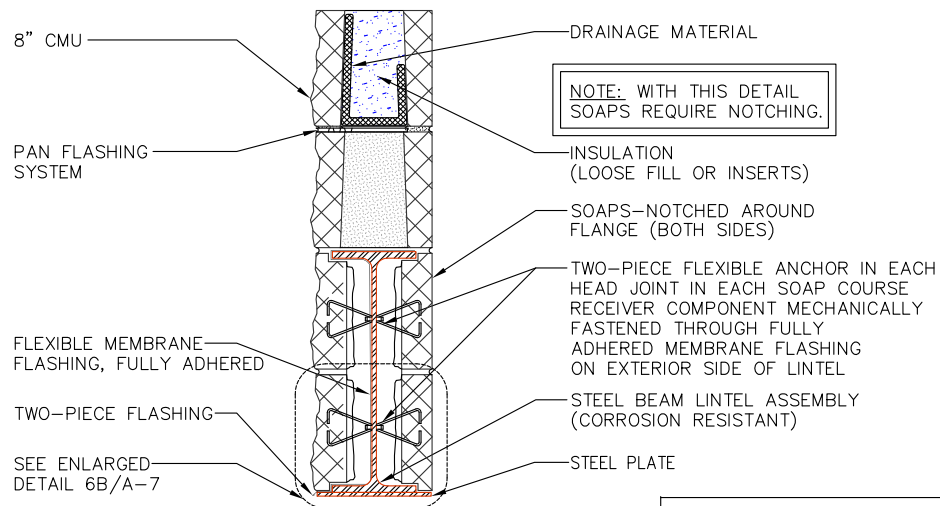


**the Masonry Institute of Michigan, Inc.**



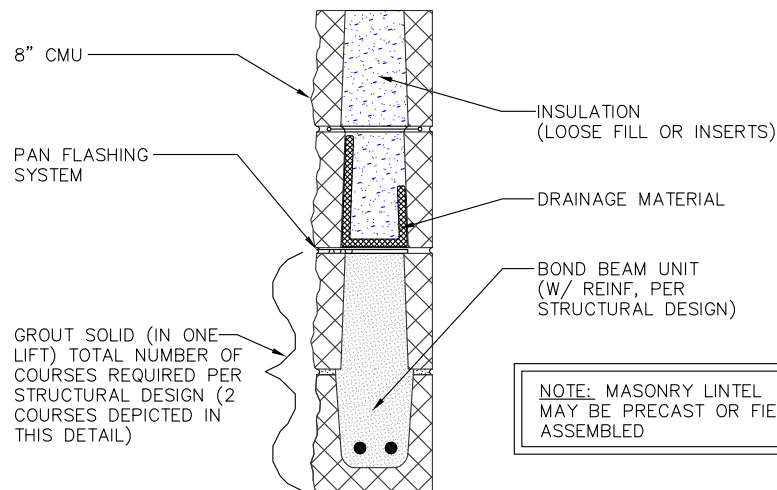
GENERIC WALL DESIGN - 8" SINGLE WYTHE CMU

IN CHARGE:	
DRAWN:	M.W.F.
APPROVED:	
DATE:	05/03/2011
TITLE:	SHORT SPAN LINTEL DETAILS
SHEET:	A-4



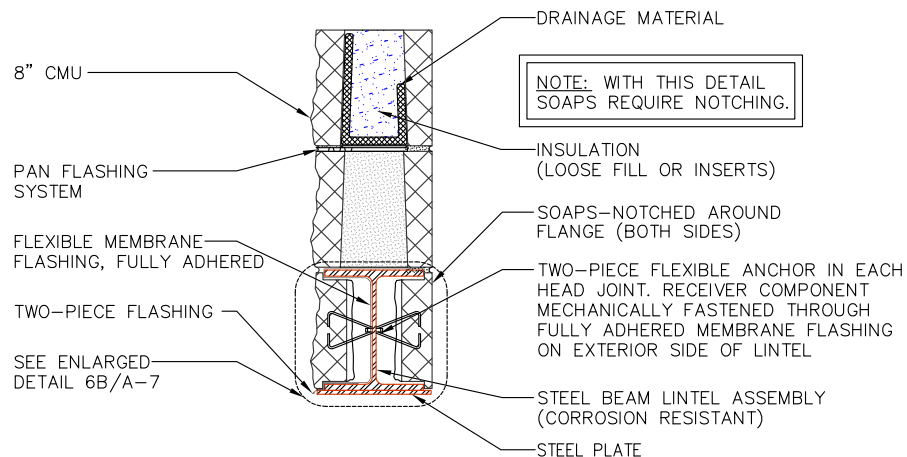
NOTE: WITH THIS DETAIL SOAPS REQUIRE NOTCHING.

4D 16" STEEL LINTEL  
A-1 (W16 SERIES)



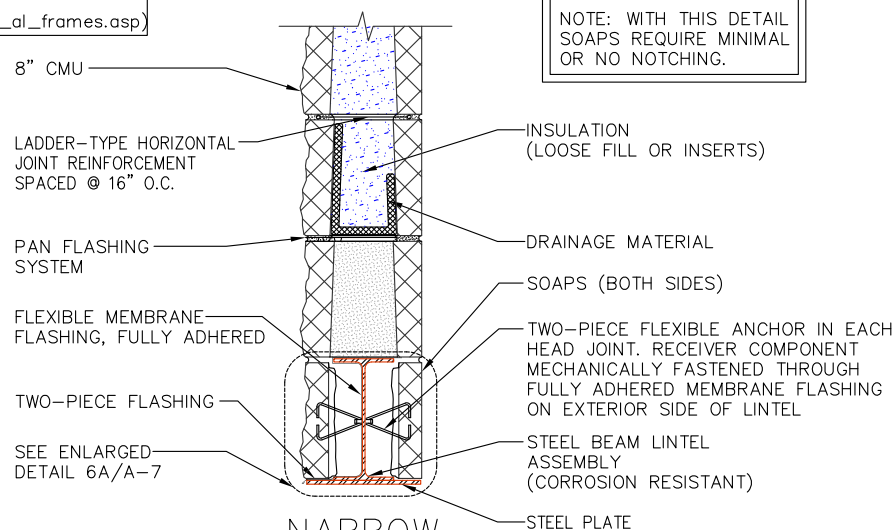
NOTE: MASONRY LINTEL MAY BE PRECAST OR FIELD ASSEMBLED

4A MASONRY LINTEL (PREFERRED)  
A-1



NOTE: WITH THIS DETAIL SOAPS REQUIRE NOTCHING.

4C WIDE FLANGE 8" STEEL LINTEL  
A-1 (W8 SERIES)



NOTE: WITH THIS DETAIL SOAPS REQUIRE MINIMAL OR NO NOTCHING.

4B NARROW FLANGE 8" STEEL LINTEL  
A-1 (W8 SERIES)

## LONG SPAN LINTELS

DAILEY ENGINEERING, INC.  
8485 STEPHENSON ROAD  
ONSTED, MI 48865

PH. # (517) 467-9000  
FAX # (517) 467-9010



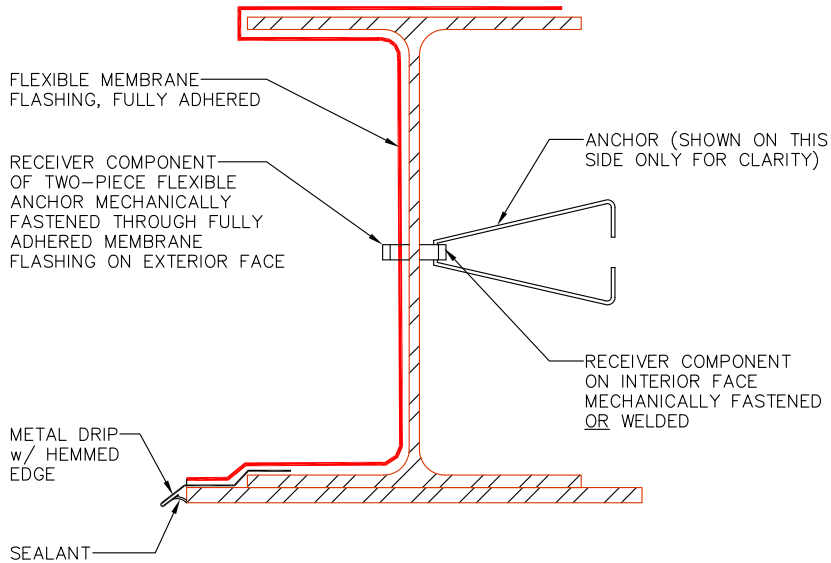
the Masonry Institute of Michigan, Inc.

GENERIC WALL DESIGN - 8" SINGLE WYTHE CMU

IN CHARGE:	
DRAWN:	M.W.F.
APPROVED:	
DATE:	05/03/2011
TITLE:	LONG SPAN LINTEL DETAILS
SHEET:	A-5

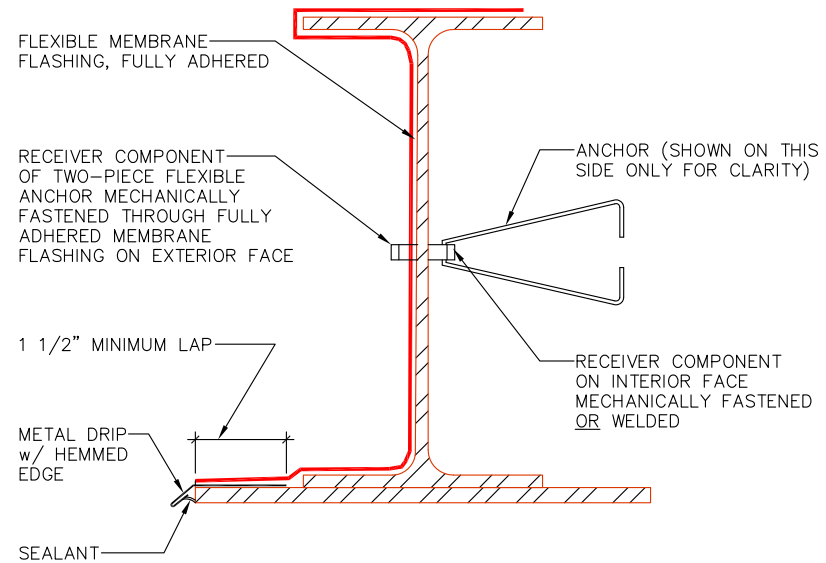
NOTE: THIS DETAIL PERTAINS TO STEEL LINTELS W/ FLANGE WIDTHS OF 5 1/4" TO 5 1/2". FOR NARROW FLANGE WIDTHS, SEE DETAIL 6A. FOR FLANGE WIDTHS GREATER THAN 5 1/2" THE METAL DRIP EDGE LIKELY WILL NEED TO BE OMITTED.

(CMU NOT SHOWN FOR CLARITY)

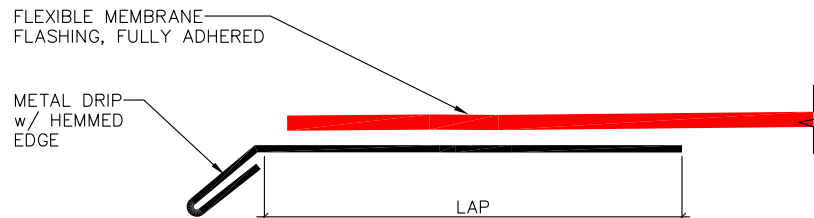


6B  
A-5  
ENLARGED FLASHING DETAIL AT WIDE FLANGE STEEL LINTELS

(CMU NOT SHOWN FOR CLARITY)



6A  
A-5  
ENLARGED FLASHING DETAIL AT NARROW FLANGE STEEL LINTELS



6C  
A-5  
ENLARGED TWO-PIECE FLASHING DETAIL

IN CHARGE:	
DRAWN:	M.W.F.
APPROVED:	
DATE:	05/03/2011
TITLE:	TWO-PIECE FLASHING DETAILS
SHEET:	A-7

NOTE: 8" BEARING IS SHOWN AND IS TYPICAL, BUT SHOULD BE INCREASED IF NECESSARY BASED ON STRUCTURAL BEARING CALCULATIONS

STEEL REINFORCEMENT  
IN SOLID GROUTED CELLS

CONTROL JOINT (BACKER ROD  
AND SEALANT)

GROUT SOLID (IN ONE  
LIFT) TOTAL NUMBER OF  
COURSES REQUIRED PER  
STRUCTURAL DESIGN (3  
COURSES DEPICTED IN  
THIS DETAIL)

LINTEL STEEL  
REINFORCEMENT

MASONRY LINTEL  
(MAY BE PRE-CAST  
OR FIELD ASSEMBLED)

SLIP PLANE  
(BACKER ROD & SEALANT)

GROUT SOLID UNDER  
LINTEL BEARING AS REQUIRED

OPENING

ELEVATION VIEW

NOTE: EVEN FOR FIELD ASSEMBLED MASONRY LINTELS, DO NOT OVERLAP/INTERLOCK THE LINTEL REINFORCING WITH THE WALL REINFORCING.

PREFORMED CONTROL  
JOINT GASKET (SEE  
SHEET A-9)

BACKER ROD AND SEALANT  
ON BED JOINT ON ALL  
THREE EXPOSED FACES

#15 FELT (BOND BREAKER)

JAMB OPENING  
FACE

ISOMETRIC VIEW

SLIP PLANE/CONTROL JOINT  
@ LONG SPAN MASONRY LINTELS  
(SPANS OF APPROXIMATELY 12' UP TO 20')

9

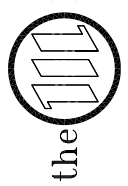
A-10

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FAX # (517) 467-9010



the Masonry Institute of Michigan, Inc.



GENERIC WALL DESIGN - 8" SINGLE WYTHE CMU

IN CHARGE:

DRAWN: M.W.F.

APPROVED:

DATE: 05/03/2011

TITLE:

SLIP PLANE/  
CONTROL JOINT  
@ MASONRY LINTELS

SHEET:

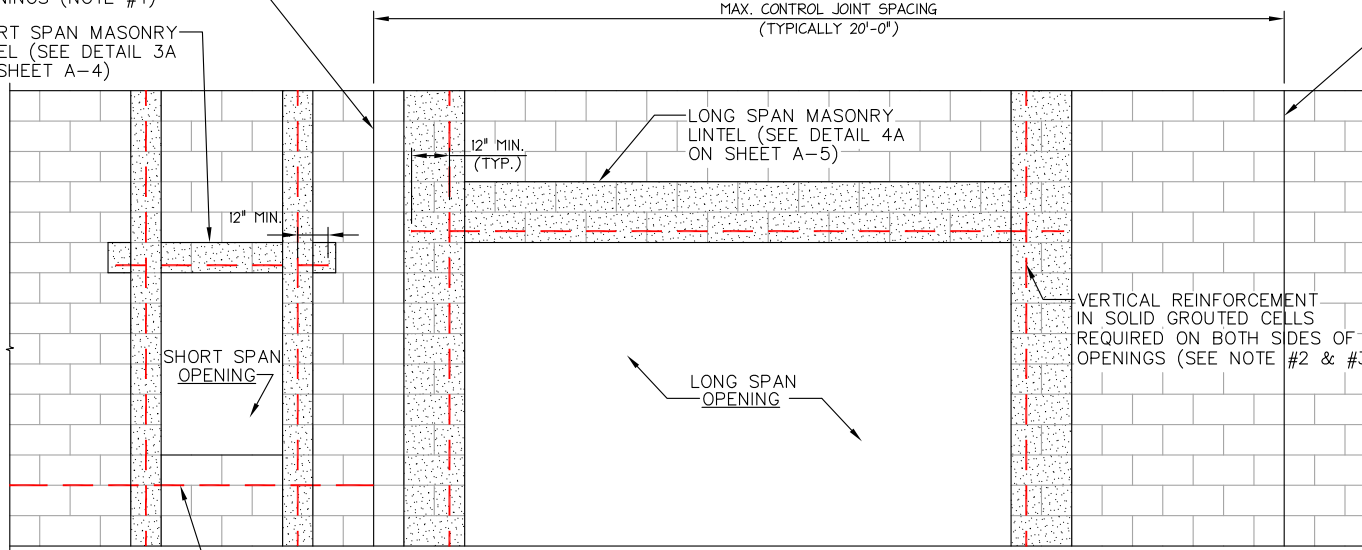
A-10

CONTROL JOINT (LOCATED AWAY FROM EDGE OF WALL OPENINGS (NOTE #4))

SHORT SPAN MASONRY LINTEL (SEE DETAIL 3A ON SHEET A-4)

MAX. CONTROL JOINT SPACING (TYPICALLY 20'-0")

CONTROL JOINT (LOCATED AWAY FROM EDGE OF WALL OPENINGS (NOTE #4))



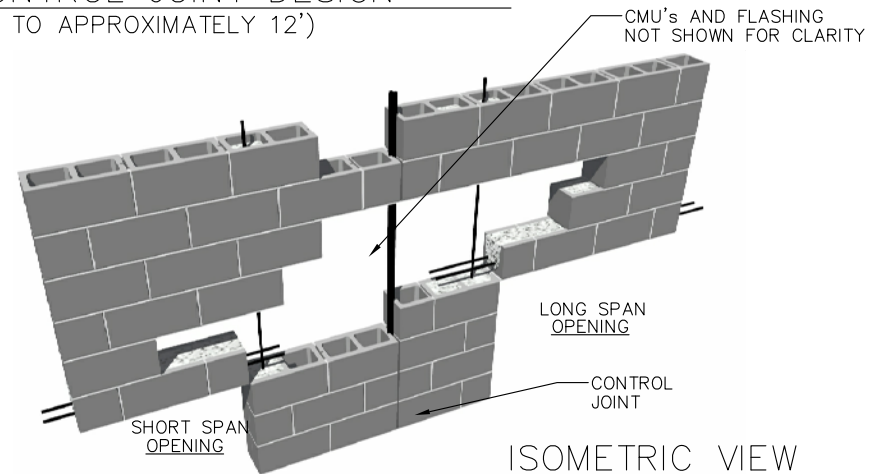
## ELEVATION VIEW

11  
A-12

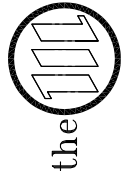
## REINFORCED MASONRY OPENINGS & ASSOCIATED CONTROL JOINT DESIGN (SPANS UP TO APPROXIMATELY 12')

### NOTES:

- 1) TRADITIONALLY, CONTROL JOINTS HAVE TYPICALLY BEEN LOCATED AT OR VERY CLOSE TO THE SIDES OF OPENINGS. HOWEVER IT IS THE MIM'S PREFERENCE FOR CONTROL JOINTS TO BE LOCATED AWAY FROM THE EDGE OF OPENINGS AND TO ADD REINFORCEMENT AROUND THE OPENINGS.
- 2) FOR BEST PERFORMANCE, THE VERTICAL REINFORCEMENT SHOULD BE PREFERABLY PLACED IN THE CELL IMMEDIATELY ADJACENT TO THE OPENING. HOWEVER IF THIS CELL IS CONGESTED, THE VERTICAL REINFORCEMENT MAY BE PLACED IN THE 2nd. CELL FROM THE OPENING.
- 3) ON LONG SPAN OPENINGS IT IS RECOMMENDED TO GROUT BOTH THE 1st. AND 2nd. CELLS FROM THE OPENING TO PROVIDE ADDITIONAL RESISTANCE FOR ATTACHING THE DOOR OR WINDOW FRAME.
- 4) FOR CONTROL JOINT DETAILS SEE SHEET A-9.



## ISOMETRIC VIEW



IN CHARGE:	
DRAWN:	M.W.F.
APPROVED:	
DATE:	05/03/2011
TITLE:	REINFORCED MASONRY OPENING & ASSOCIATED CONTROL JOINT DESIGN
SHEET:	A-12