

**Comparison & Contrast of
Face seal or Barrier EIFS Details to
Moisture Drainage Cladding Details
such as MD-EIFS, OCS, Traditional
Stucco, Adhered Stone Veneer, etc.
on Wood Frame Construction.**

September 19, 2021

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**ESEC – Exteriors & Stucco
Evaluation Consultants, Inc.**

Parker, Colorado



Standard Face seal EIFS Details vs. Standard Moisture Drainage Details

Face seal or Barrier - EIFS:

- The standardized Face seal or Barrier EIFS details are those published by EIMA.
- When installed these were called PB-EIFS.
- Must understand Concept of a Face seal EIFS system.

MD-Cladding Group:

- NO standardized MD-cladding details
- Group includes(current):
 - MD-EIFS
 - Hard Coat Stucco
 - Manmade Stone
 - Thin cut stone
 - DEFS
- Must understand Concept of a Moisture Drainage system.



Difference between Face seal - EIFS and MD Cladding

Face seal - EIFS

MD-Cladding (must have drainage plane and drainage provision)

WOOD OR STEEL FRAMING
SHEATHING
ADHESIVE
INSULATION BOARD
REINFORCING MESH EMBEDDED IN BASE COAT
FINISH COAT

NTS

NOTE
APPLICATION OF EIFS TO MASONRY
SUBSTRATES IS SIMILAR.

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	Revision No.	Issue Date	Drawing No.
	2	12/22/96	PB-100

WOOD OR STEEL FRAMING
SHEATHING
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REINFORCING MESH EMBEDDED IN BASE COAT
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Drainage Plane

Drainage Provision

NTS

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MD- Cladding must have some type of Water Resistive Barrier (WRB) or Weather Resistive Barrier (WRB) installed:

Building Paper:

- Two layers of grade D 60-minute paper recommended; however as required per local codes.
- Install paper horizontally in a shingled fashion.
- Lap at horizontal joints: Minimum 2” (varies).
- Lap at vertical joints: Minimum 6” (varies).
- Continuous thru Expansion joints (& Control Joints)
- Continuous at joints with other claddings

Proprietary House Wraps

- Per manufacturer’s directions & per local code (many jurisdictions require 2 layers).

Liquid applied Membrane:

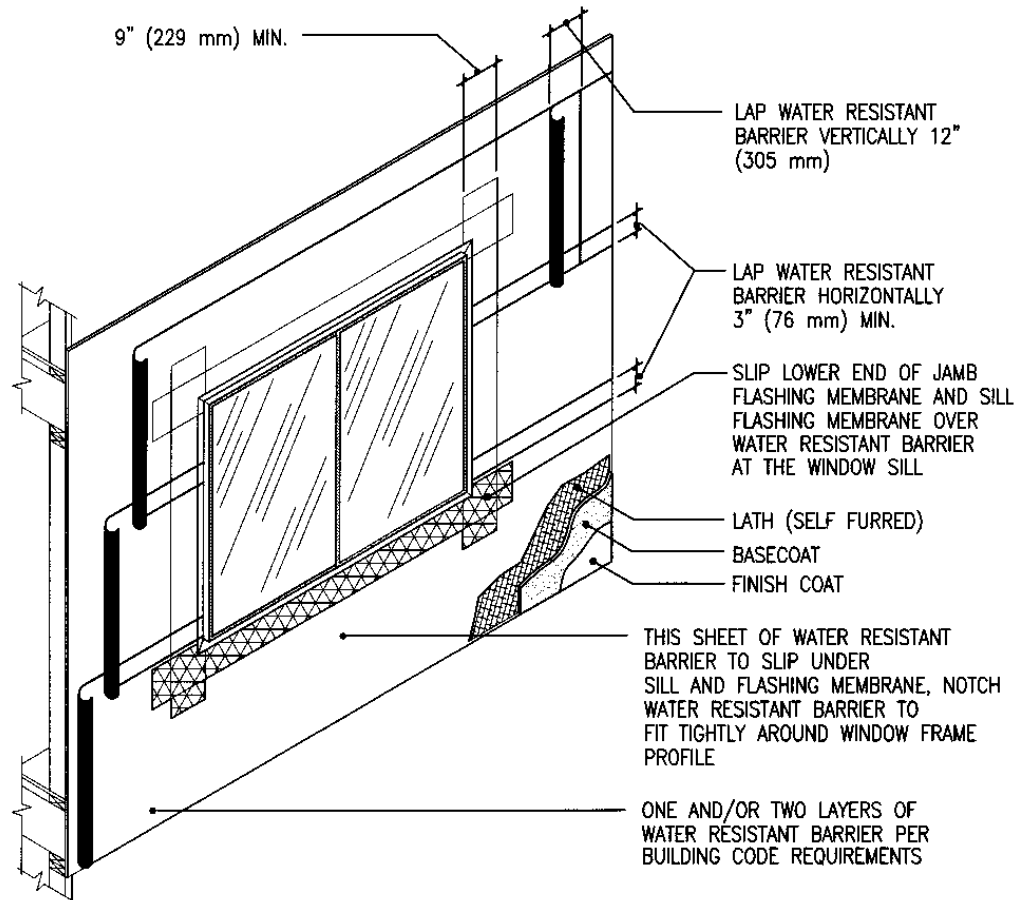
- Per manufacturer’s directions & per local code (sometimes 2 layers).



Window Flashing Paper & Water Resistant Barrier

Portland Cement
Plaster • Stucco

Resource Guide
Division 9



FWB3 – Flashing Membrane and Water Resistant Barrier Application Sequence



Slide 5

RH1

NWCB calls for 12" lap of Moisture Resistant Barrer vertically.

1997 UBC calls for a minimum of 6" & 2"; 1402.1

2000 IRC calls for a minimum of 6" & 2": R703.2

Ron Huffman, 9/6/2004

Details of Face seal - EIFS and MD Cladding Components that are only visible during construction.

Face seal-EIFS:

- **Substrate**
- **Window Flashing Paper?**
- **Window Head Flashing Installation?**
- **No Water Resistive Barrier**
- **Fiberglass Mesh Installation**
- **Accessory Installation**
- **EPS Installation**
- **EPS attachment method and condition**
- **Mesh installation**

MD- Cladding:

- **Substrate**
- **Window Flashing Paper.**
- **Window Head Flashing Installation?**
- **Water Resistive Barrier!**
- **Lath Installation?**
- **Accessories; casings, etc.**
- **Insulation if applicable**
- **Insulation attachment method and condition.**



Details of Face seal-EIFS and MD-Cladding that can be observed after system is complete.

Face seal-EIFS:

- Floor Line Expansion Joints
- Window Head, Jamb and Sill Details
- Foundation Details
- Kickout Flashings
- Parapet Wall Details
- Deck Flashings
- Abutment Details
- Penetration Details

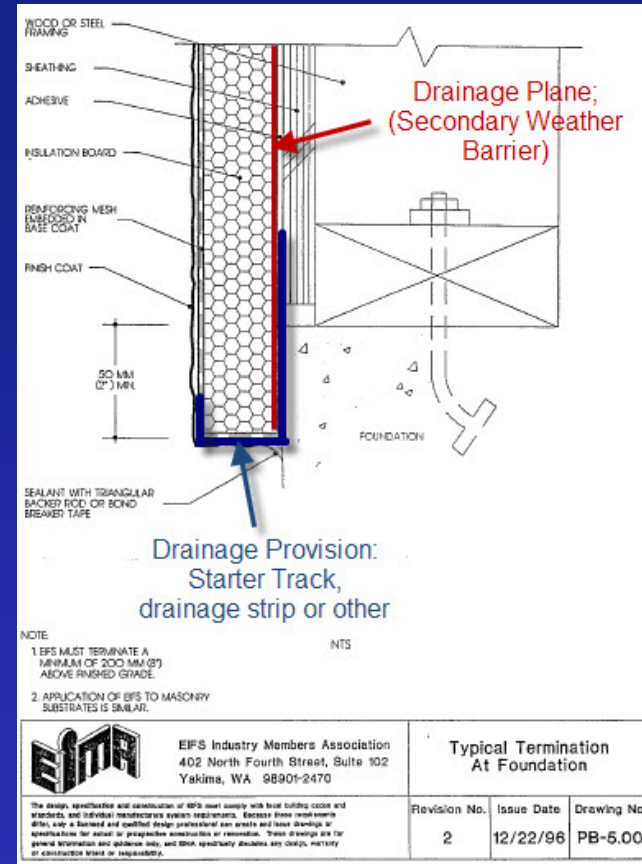
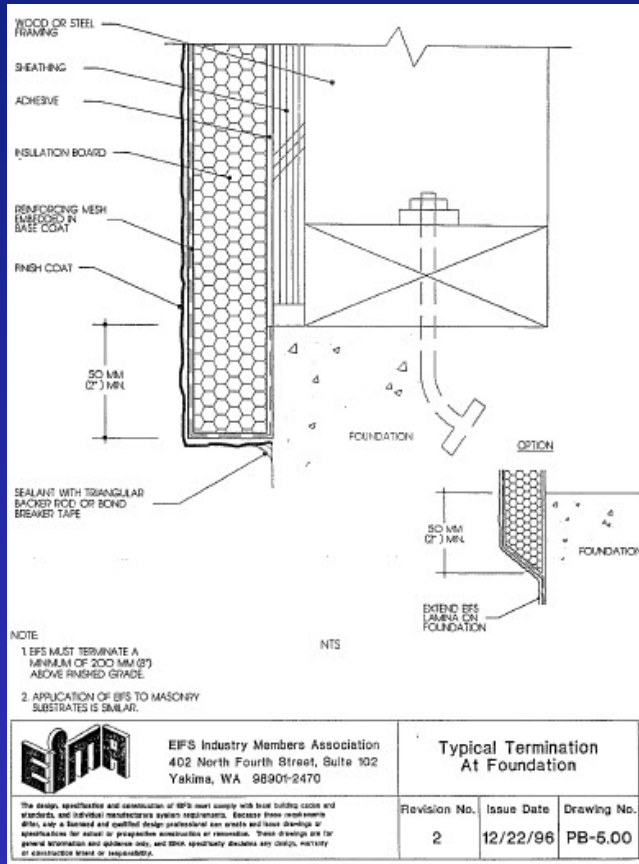
MD-Claddings:

- Floor Line Expansion Joints
- Window Head, Jamb and Sill Details
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- Parapet Wall Details
- Deck Flashings
- Abutment Details
- Penetration Details

What differentiates these claddings from each other?

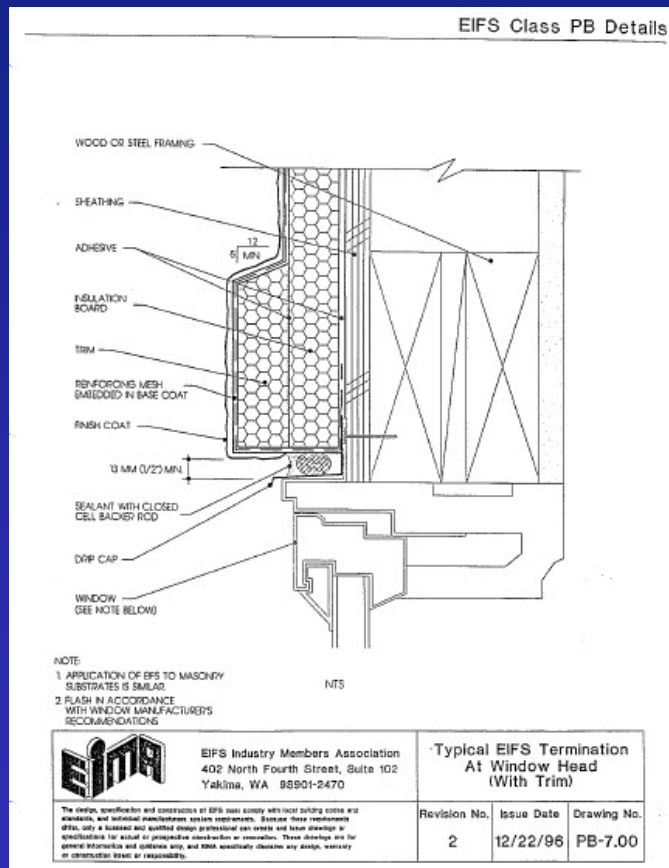


Face seal –EIFS at foundation vs. MD-Cladding at foundation

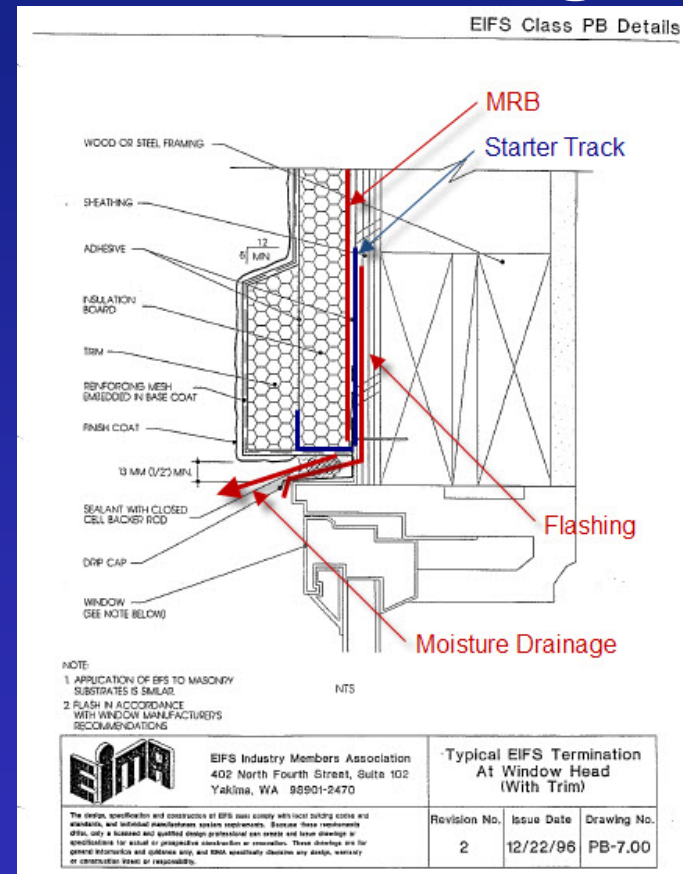


Face seal-EIFS vs MD Cladding at Window Head

Face seal – EIFS

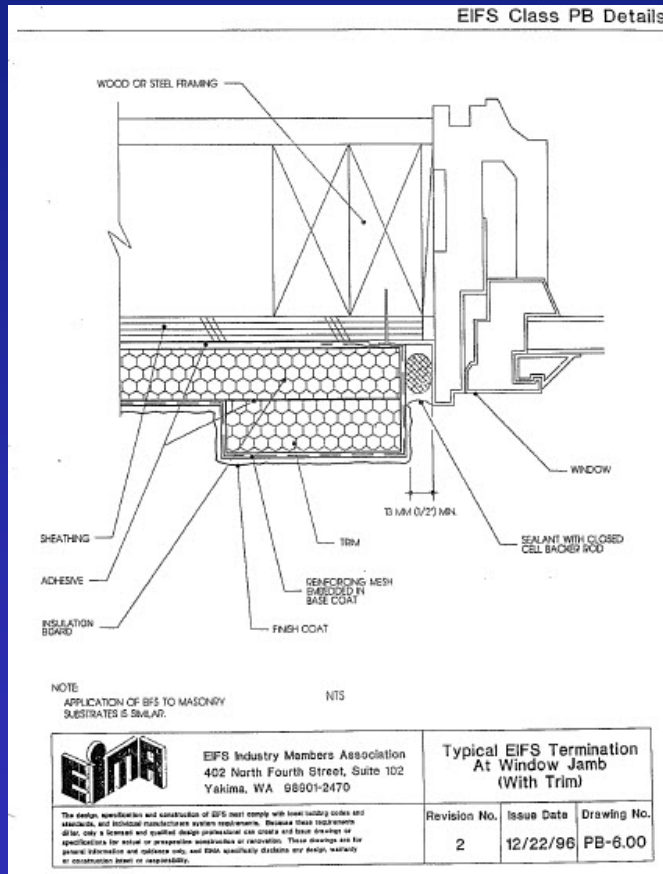


MD - Cladding

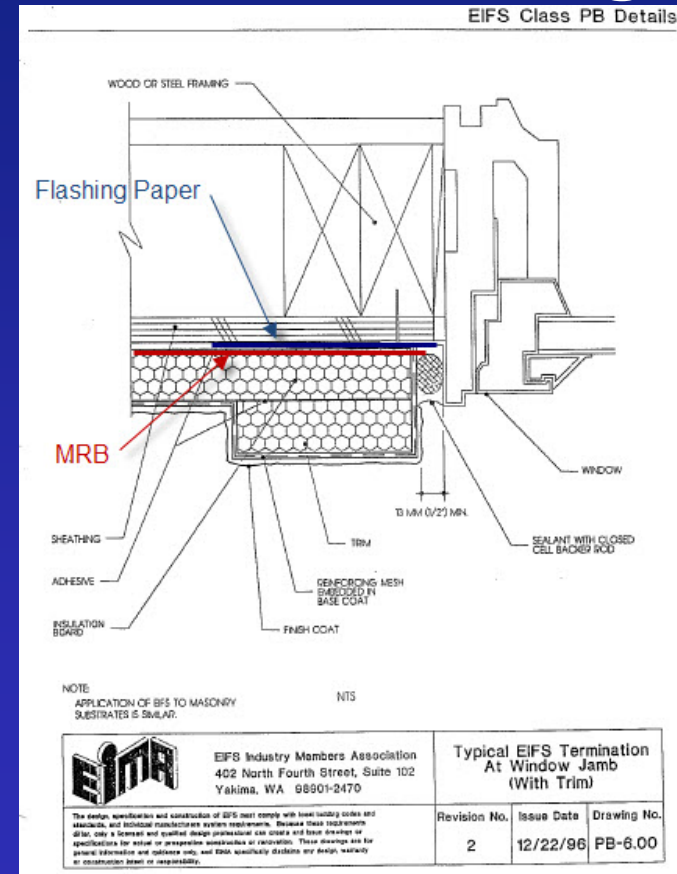


Face seal-EIFS vs MD Cladding at Window Jamb

Face seal – EIFS

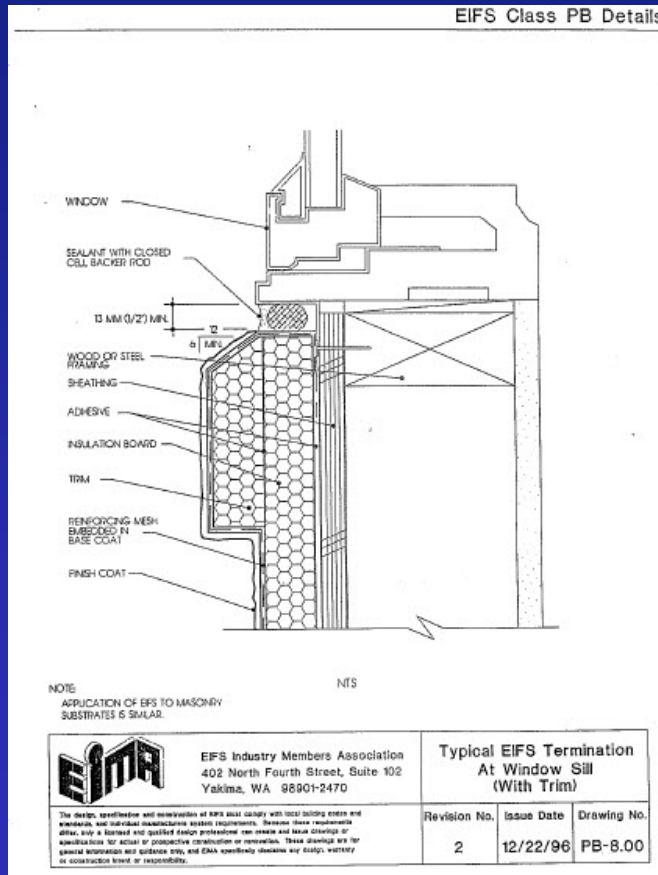


MD - Cladding

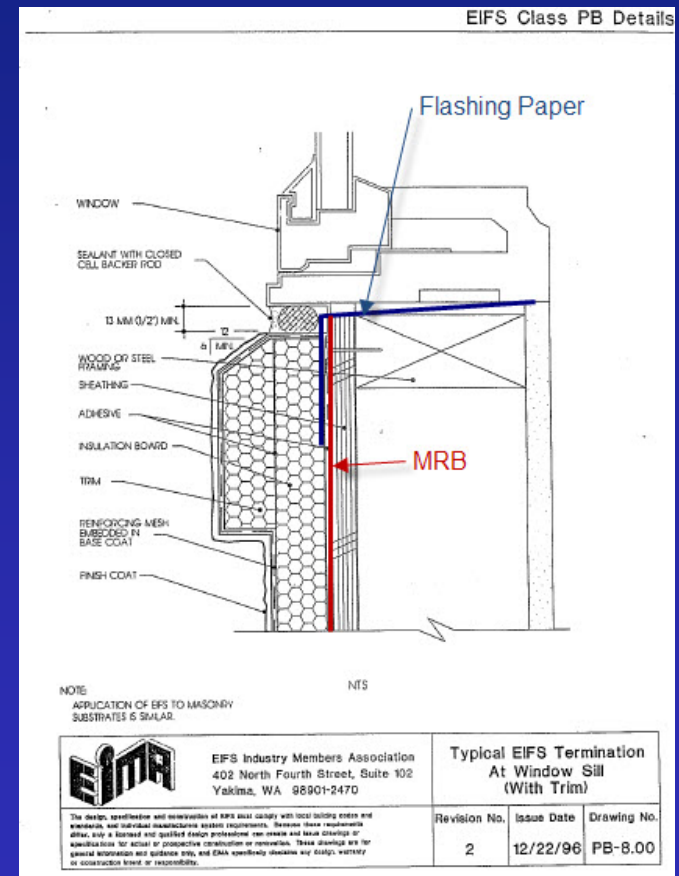


Face seal-EIFS vs MD Cladding at Window Sill

Face seal – EIFS

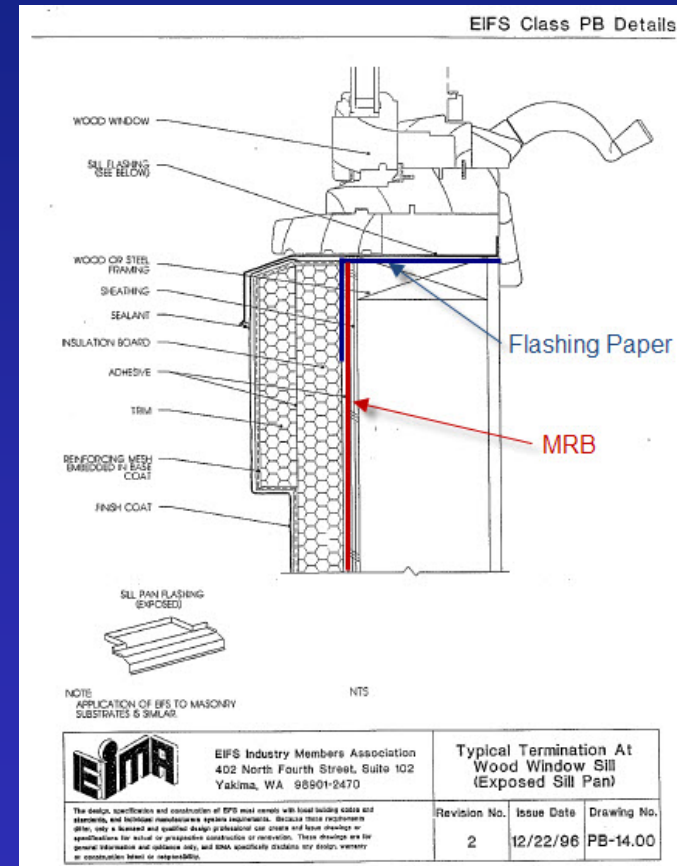
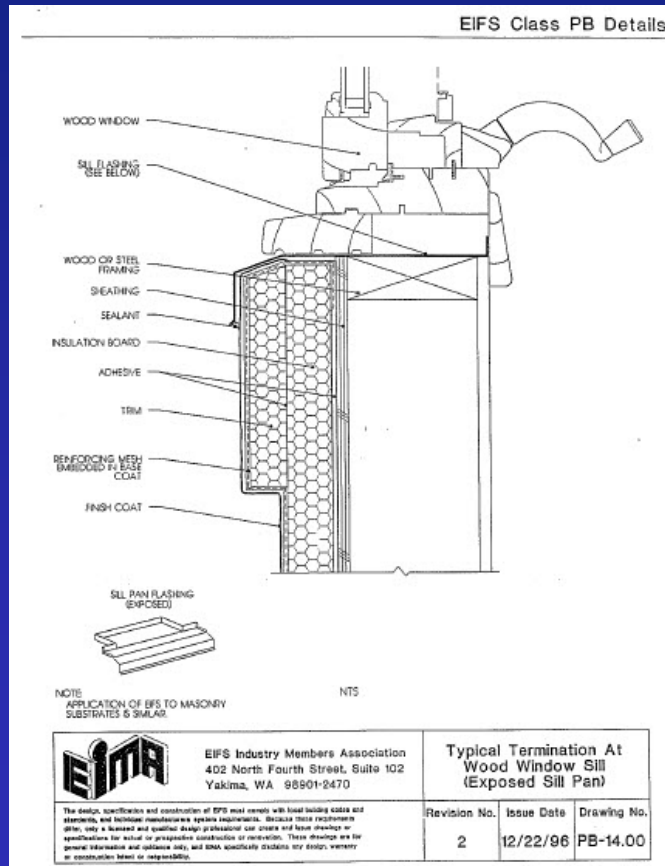


MD - Cladding



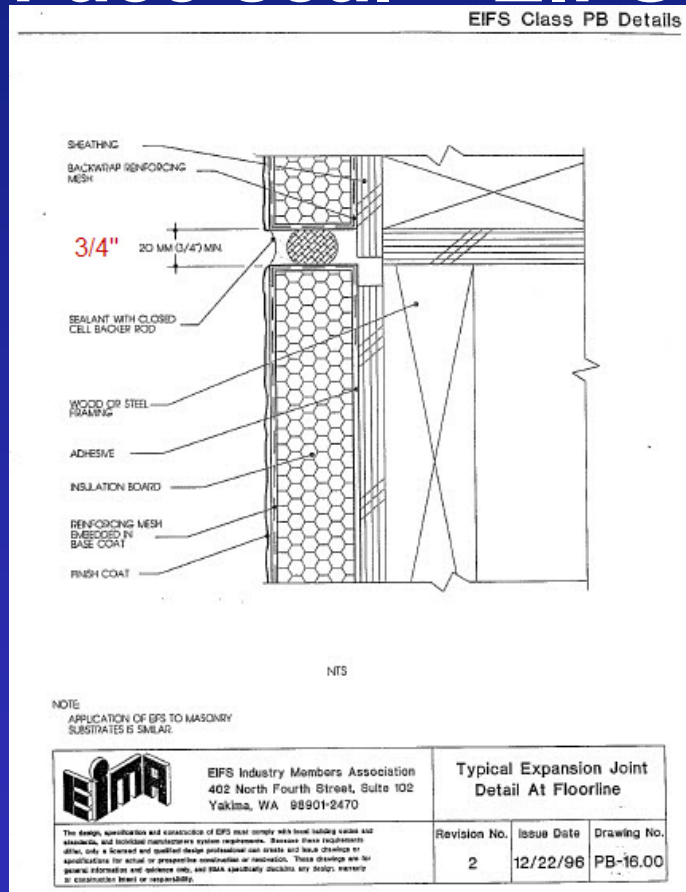
Face seal-EIFS vs MD Cladding at Window Sill with Pan Flashing

Face seal – EIFS

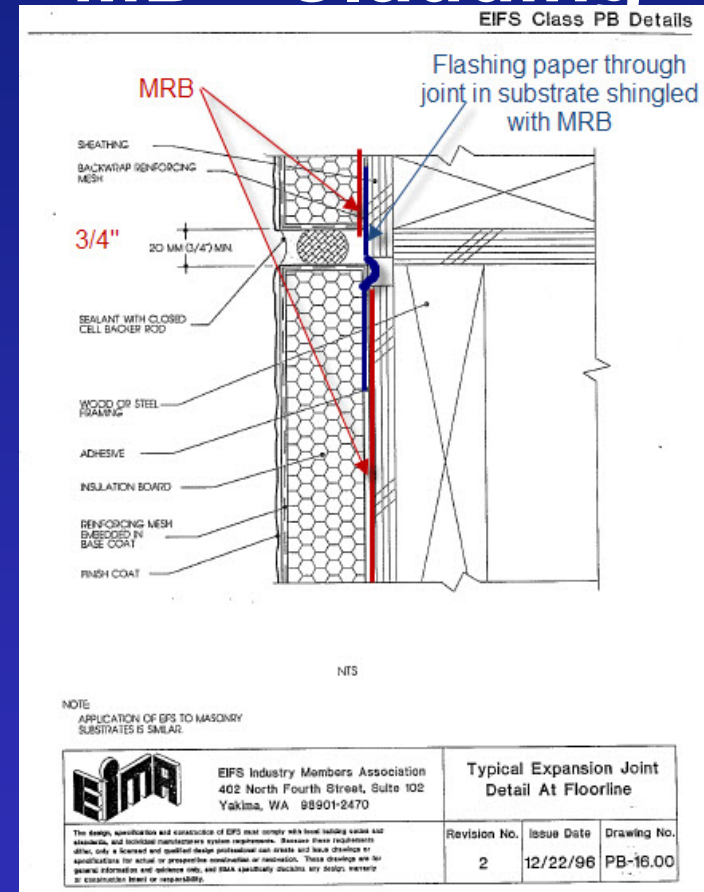


Face seal-EIFS vs. MD Cladding at Floor Line Expansion Joint

Face seal – EIFS

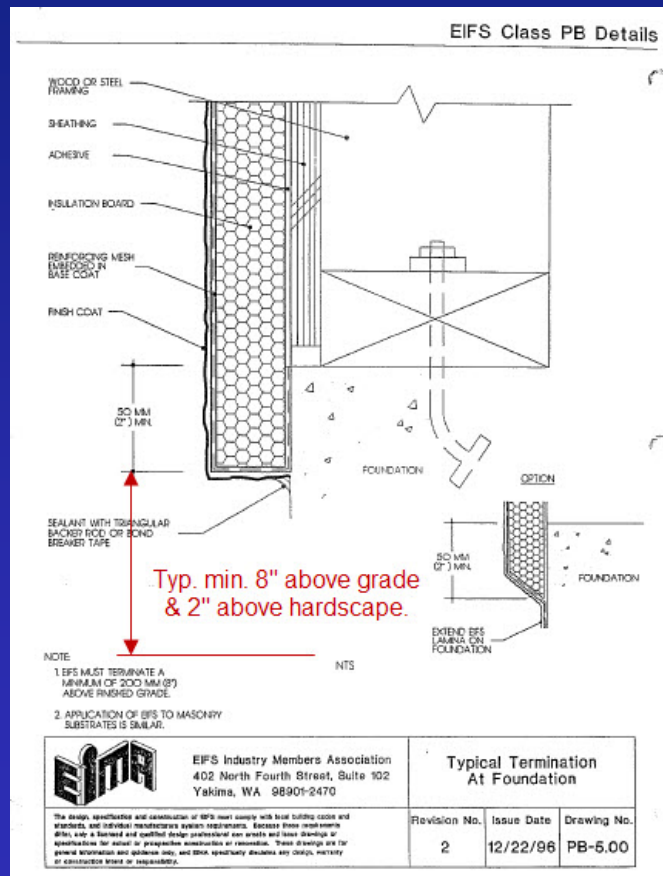


MD - Cladding

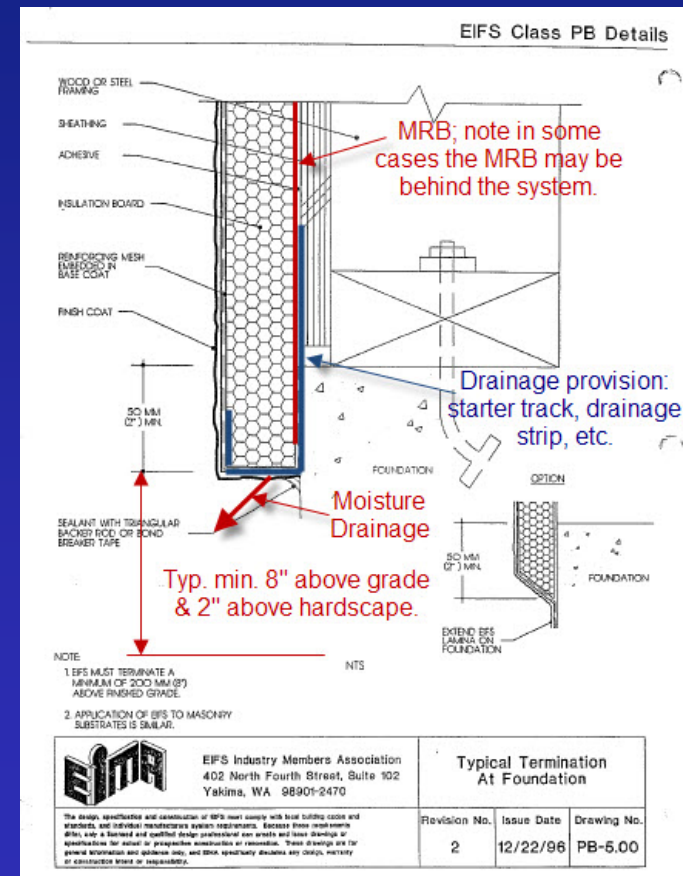


Face seal-EIFS vs. MD Cladding at Foundation Termination

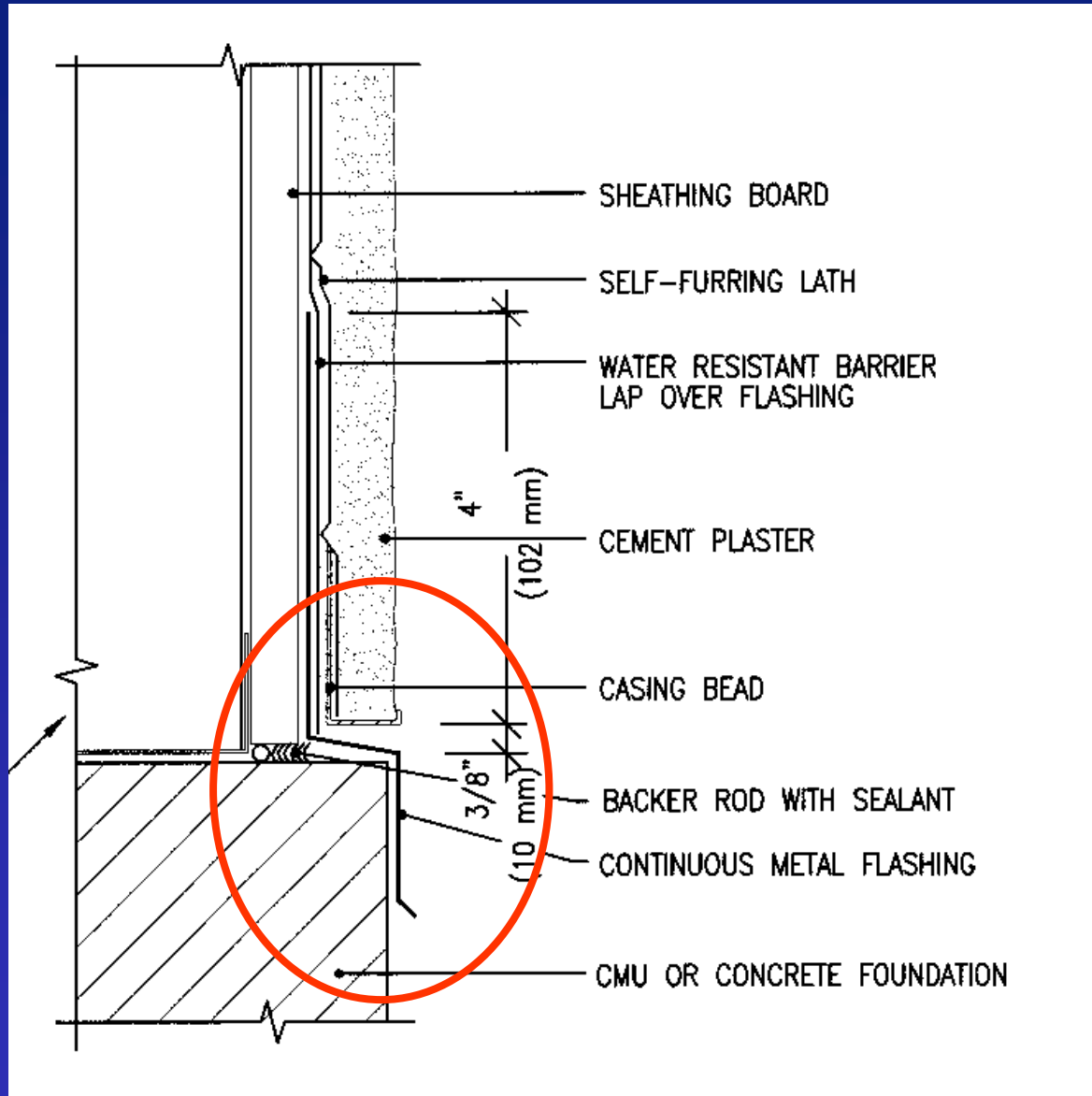
Face seal – EIFS



MD - Cladding



Why might one need this detail ?



Joint had to be Flashed because of misalignment with foundation



What do you see here?



HCS at Patio or Slab



What do you see here?



**HCS laps top of Foundation.
Finish on Foundation wall for aesthetics.**



Any Problems?



Slab improperly cast against wood framing (painted OSB is exposed).

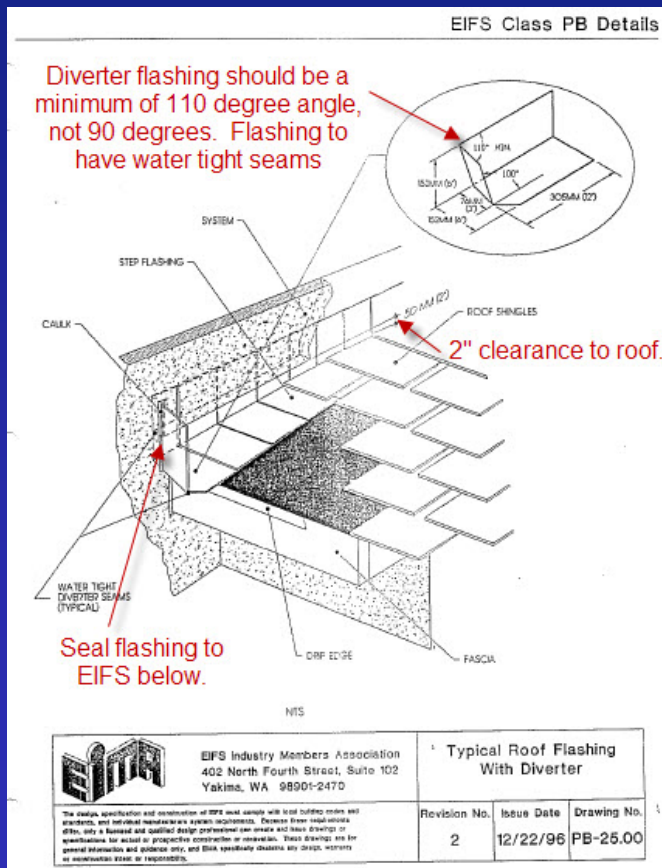
MD-EIFS installed tight to slab with no provision for drainage or slab movement.

Slab settled exposing improper construction technique!

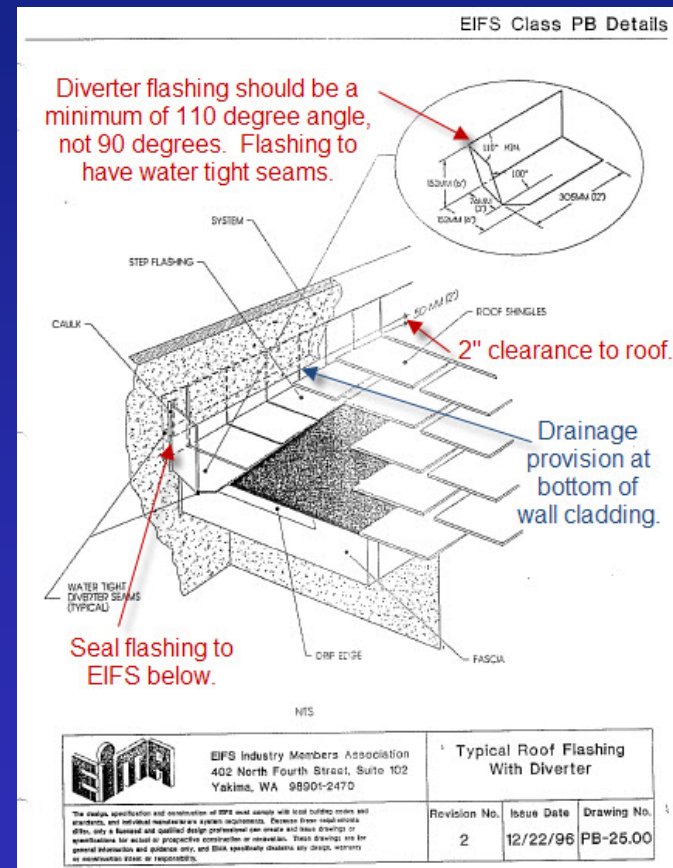


Face seal-EIFS vs. MD Cladding at Kickout Flashing

Face seal – EIFS



MD - Cladding



Any Issues Here?



1. Missing Kickout
2. Exposed OSB
3. Exposed Tyvek Stucco Wrap
4. Gutter into MD-EIFS
5. Incomplete Weep Casing/ Starter Track

Any Issues Here?



**Does only MD-EIFS
require kickout
flashings?**

Wrong!!

**Do gutters need to
be kept out of
MD-EIFS but not
Masonry?**

Wrong!!



Any Issues Here?



Is it true that MD-EIFS can not have water intrusion problems?

Wrong!



Face seal-EIFS vs. MD Cladding at Parapet Walls

Face seal – EIFS

MD - Cladding

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EIMA did not have a top of parapet wall detail in their 1996 details; their details called for 6 in 12 slope for tops of walls.

Manufacturers typically called for 2 1/2 inch lap of EIFS.

Labels in diagram:
 SLUICE
 METAL PARAPET FLASHING
 1X TREATED NAILER AND PLASTER STOP, INSTALL PRIOR TO CEMENT PLASTER INSTALLATION
 SEALANT
 WATER RESISTANT BARRIER, RUN UP OVER THE TOP AND DOWN OTHER SIDE IF POSSIBLE
 SHEATHING
 SELF-FURRING LATH
 CEMENT PLASTER

NOTE: FOR ADDITIONAL PROTECTION, A SELF-SEALING MEMBRANE SHALL BE ADDED OVER PARAPET FRAMING AND EXTENDED DOWN OVER THE WATER RESISTANT BARRIER

E12 – Parapet Coping Detail

TERMINATION AT PARAPET CAP FLASHING

Labels in diagram:
 1 Sheathing/Substrate
 2 Air/Water Resistant Barrier Coatings
 3 Vertical Notched Truss Adhesive Applied to Insulation Board
 4 EIFS Manufacturer Recommended Transition
 5 Insulation Board
 6 Reinforcing Mesh Embedded in Base Coat
 7 Reinforcing Mesh Pre-Wrapped to Back Side of Insulation Board 2" (51 mm) Min.
 8 Finish Coat
 9 Metal Coping/Flashing/Coping
 10 Roof Membrane/Flashing Under Coping

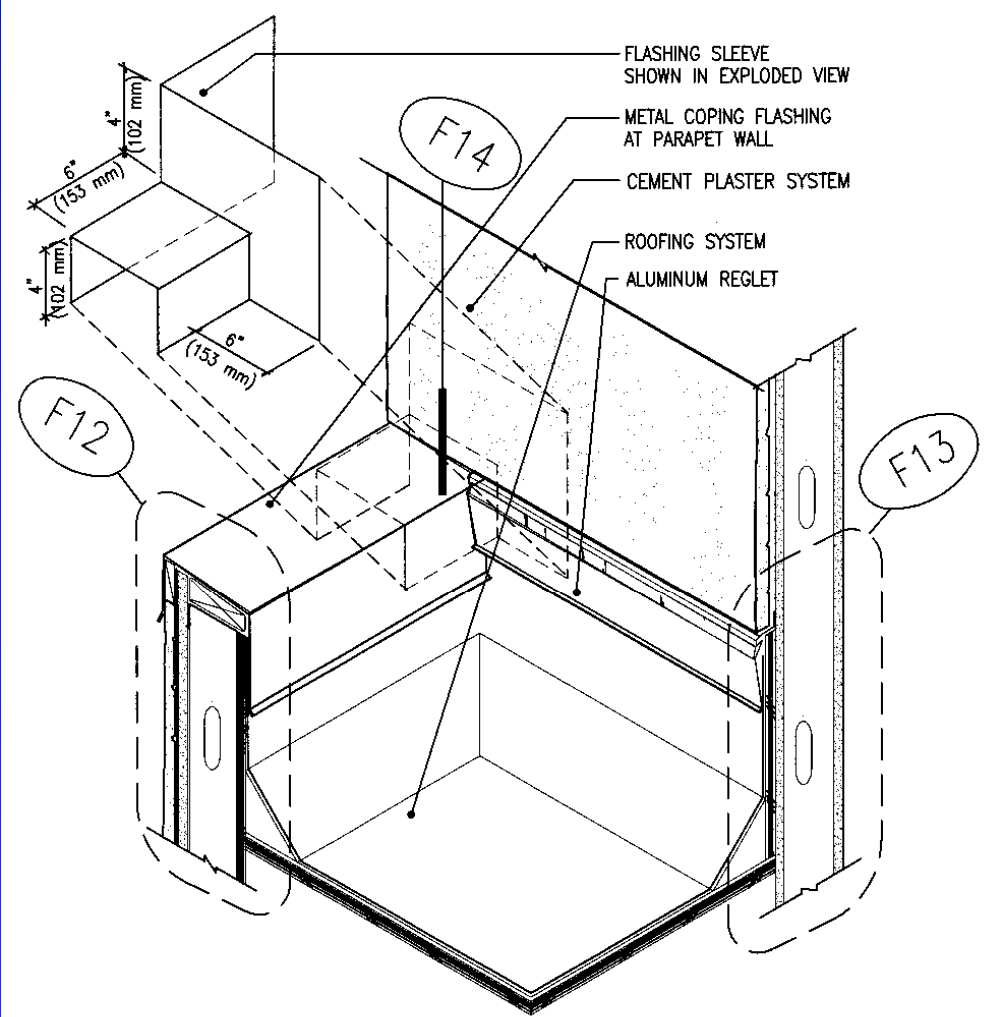
2 1/2 inch lap of EIFS

EIMA EIFS INDUSTRY MEMBERS ASSOCIATION

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Wall Coping Flashing & Joint at Wall



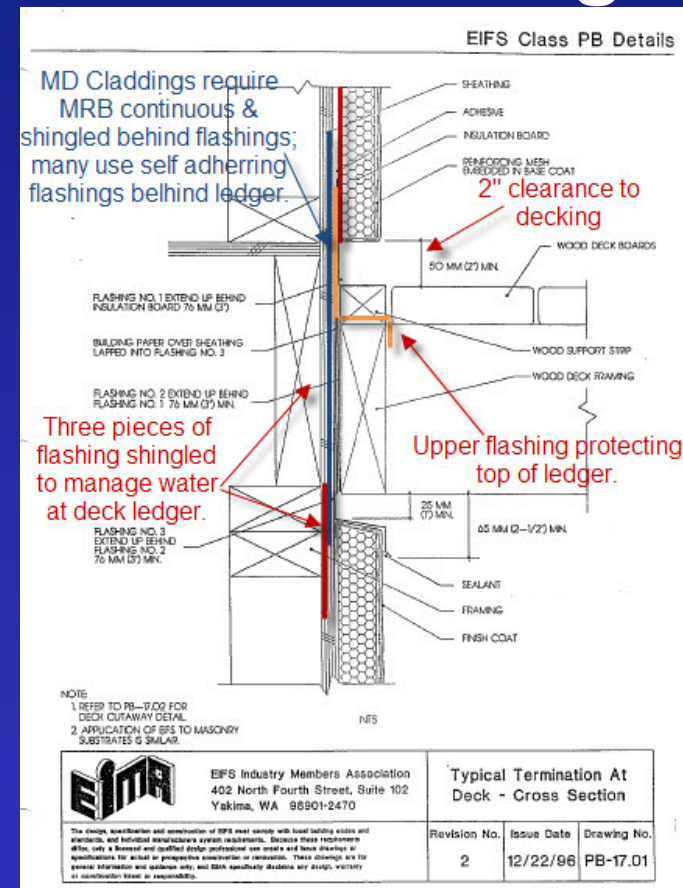
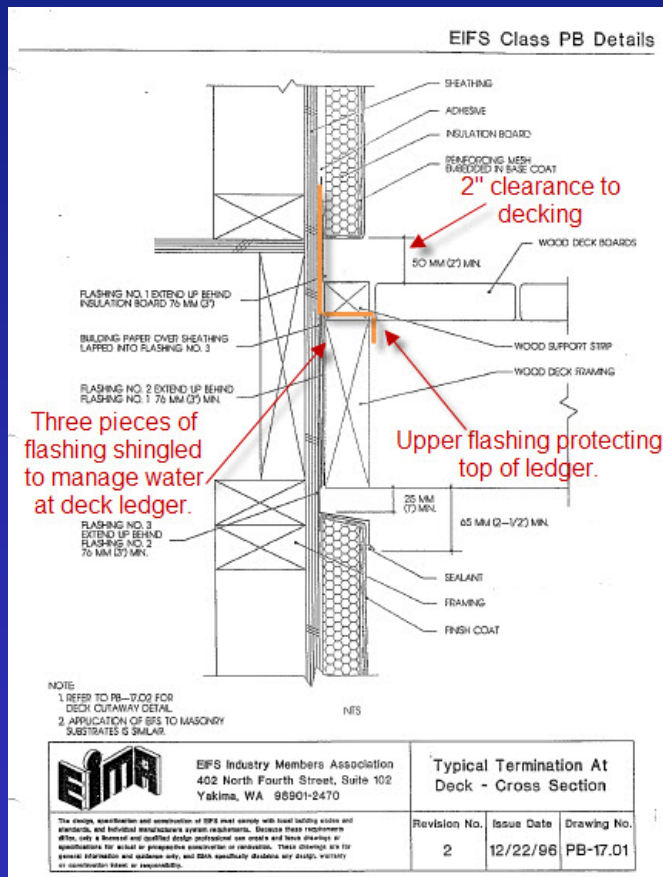
NOTE: LAP ALL FLASHING AND WATER RESISTANT BARRIER IN SHINGLE FASHION

F11 – Flashing/Roof Axonometric

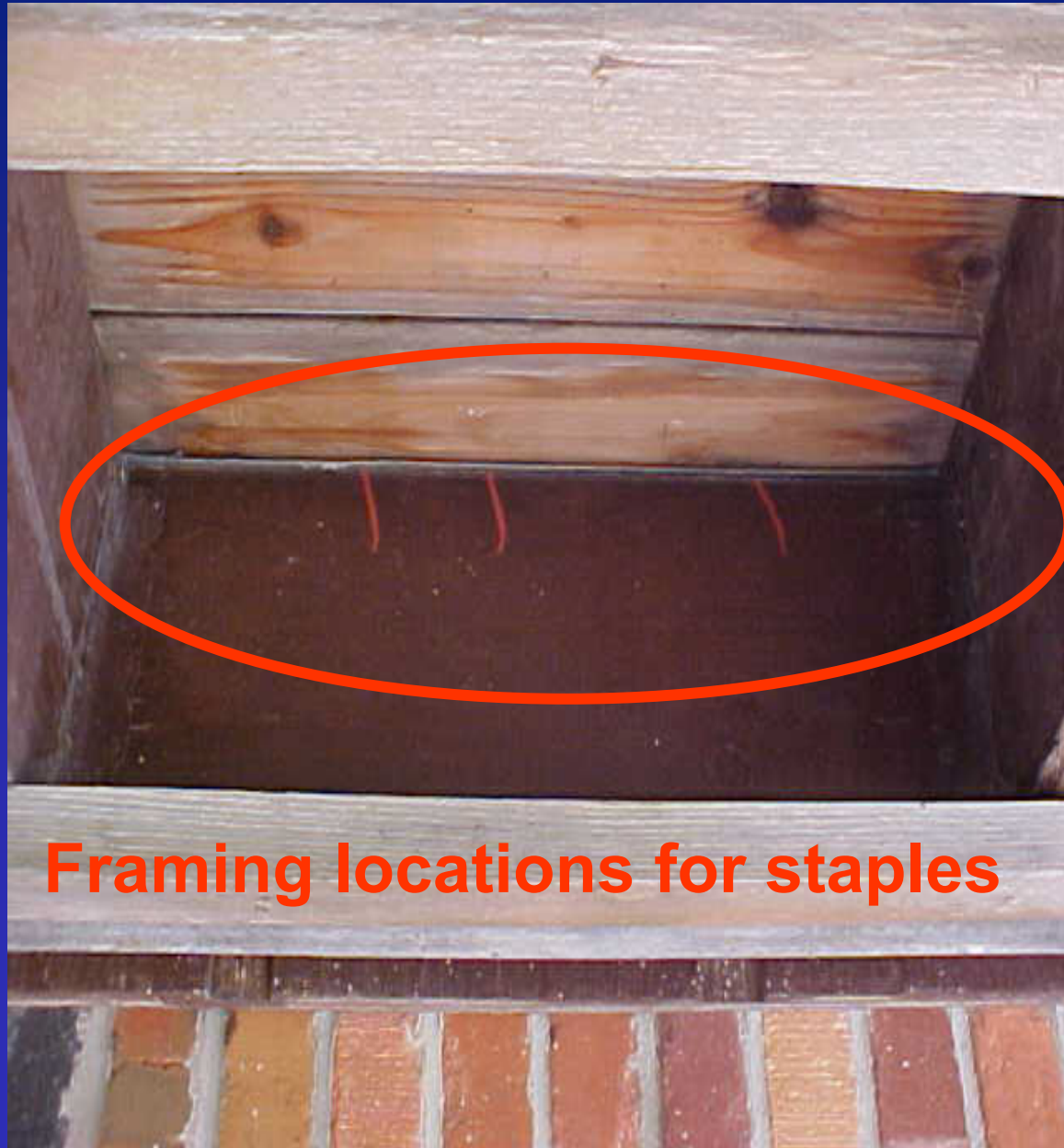


Face seal-EIFS vs. MD Cladding at Deck Ledger Flashing

Face seal – EIFS



**Flashing from HCS laps top of Ledger.
What are the red marks?**



Framing locations for staples



Traditional or Hard Coat Stucco; Basic Control and Expansion Joint rules:

- Should be set by Architect for aesthetic reasons and to help control cracking (not eliminate cracking).
- Expansion joints govern over control joints and should be placed where movement is anticipated (Floor Lines, dissimilar substrate).
- Moisture (or Water) Resistant Barrier must be continuous.
- Joints should be installed to limit size of panels to 144 sq. ft.
- Floor line Expansion joints are required for cross grain shrinkage of wood framing.

Note: Remember that Floor Line Expansion joints are also Required in MD-EIFS and Barrier EIFS.



Control Joint layout on South Wall

Weep casing at soffit & HCS laps foundation.

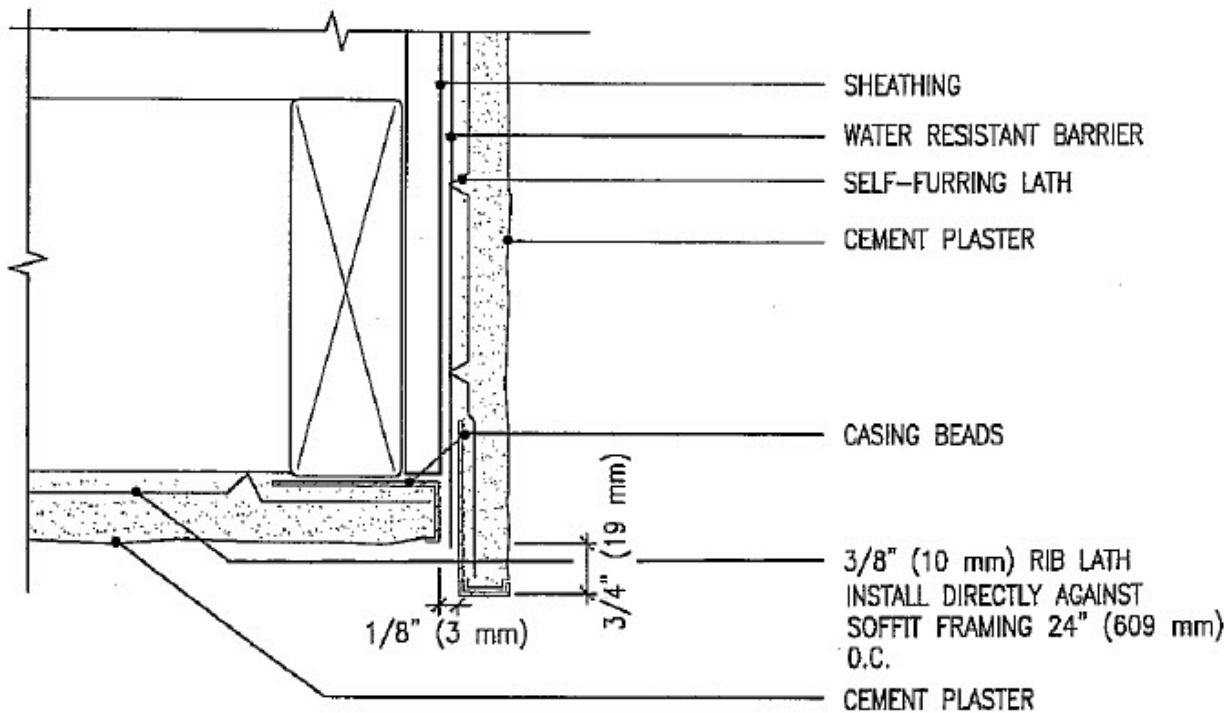


Weep casing at soffit with HCS band.



Wall to Soffit Corner; any Concerns?

SF7 – Stucco Soffit/Fascia



NOTES: FRAMING JOIST SPACED AT 24" (609 mm) REQUIRES 3/8" (10 mm) RIB LATH PERPENDICULAR TO JOINTS. LATH RIBS SHALL BE NESTED.

SF8 – Stucco Soffit/Fascia

Northwest
Wall & Ceiling Bureau

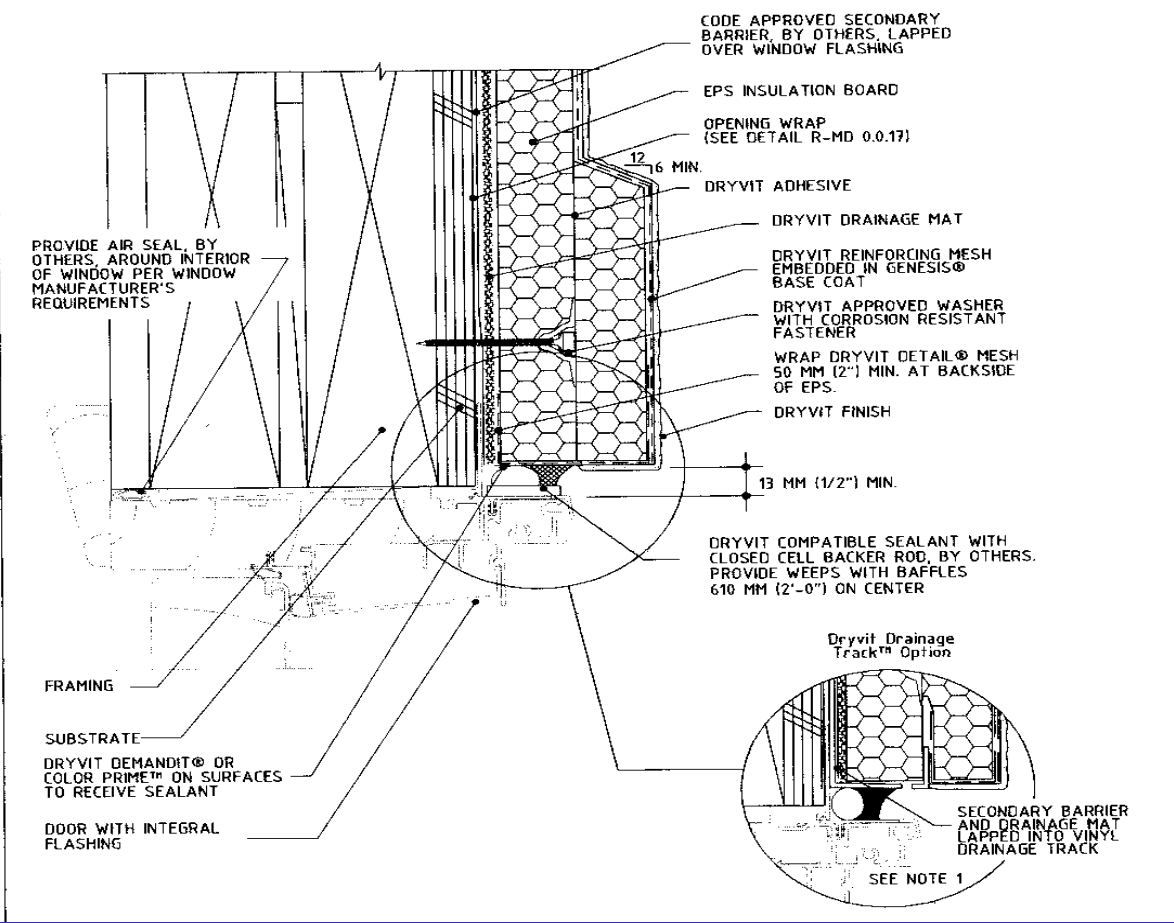
131



MRB must be able to drain.



MD-EIFS & Traditional or Hard Coat Stucco Window Head joints must allow for drainage



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