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

Ronald W. Huffman, P.E.

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.

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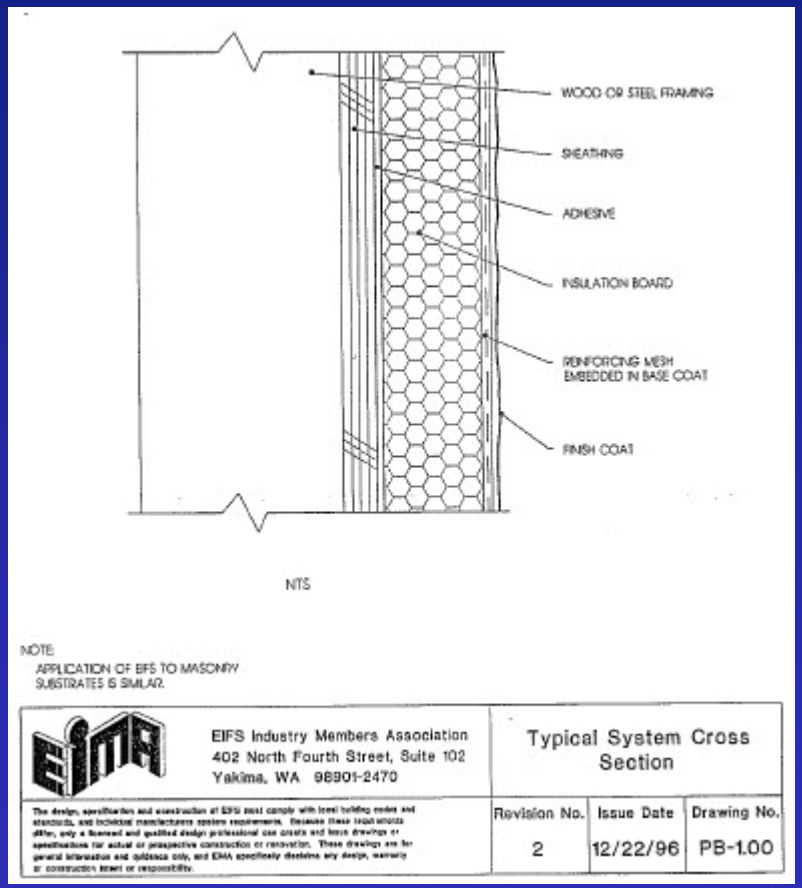
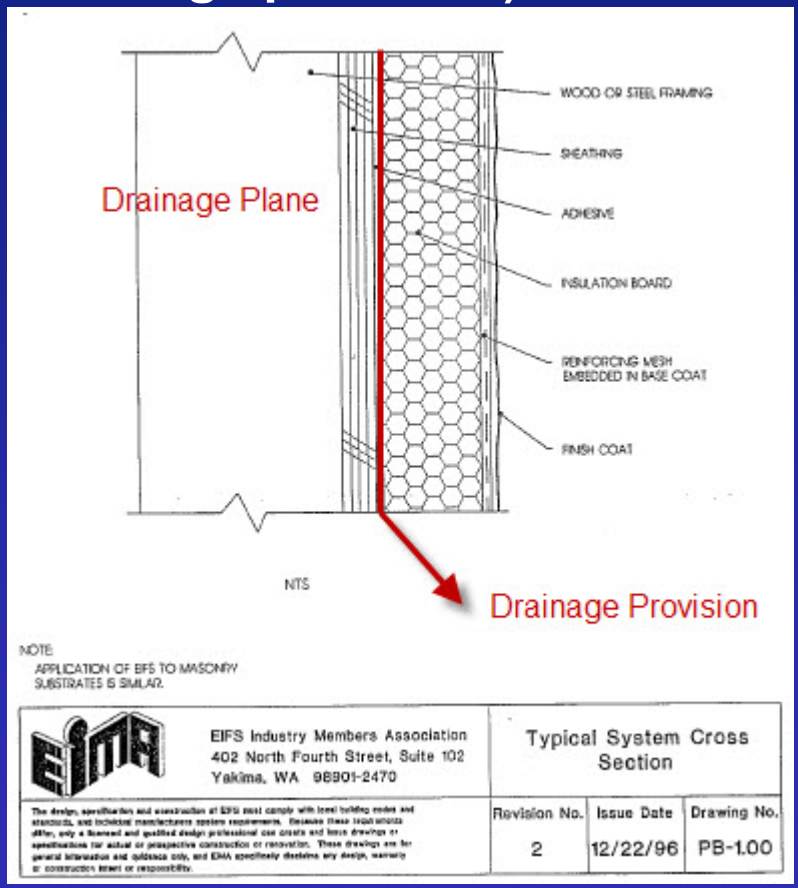
Difference between Face seal - EIFS and MD Cladding

Face seal - EIFS



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



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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).

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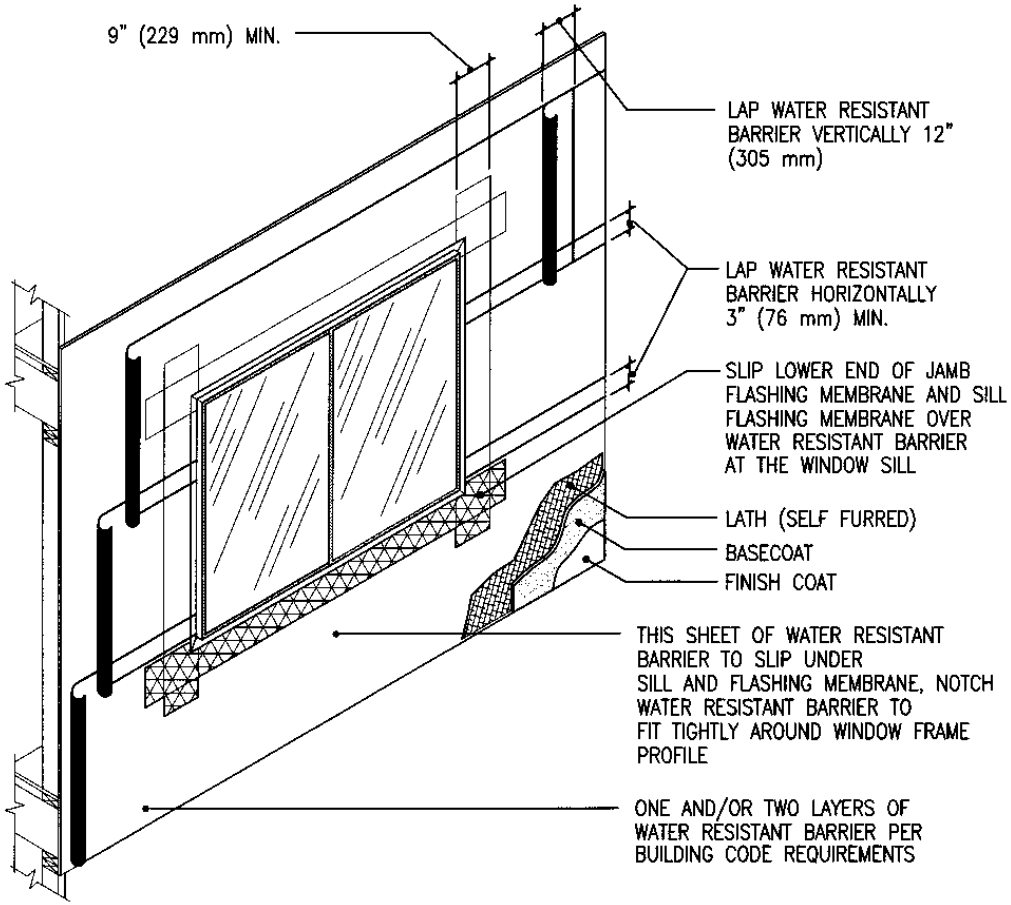
RH1

Window Flashing Paper & Water Resistant Barrier



FWB3 – Flashing Membrane and Water Resistant Barrier Application Sequence

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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.

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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
- Foundation Details
- Kickout Flashings
- Parapet Wall Details
- Deck Flashings
- Abutment Details
- Penetration Details

What differentiates these claddings from each other?

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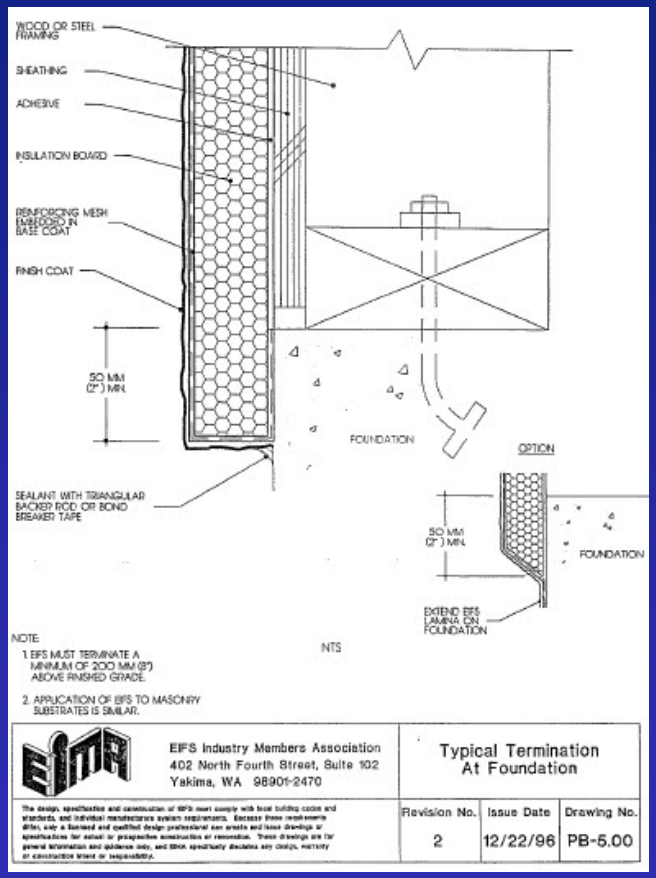
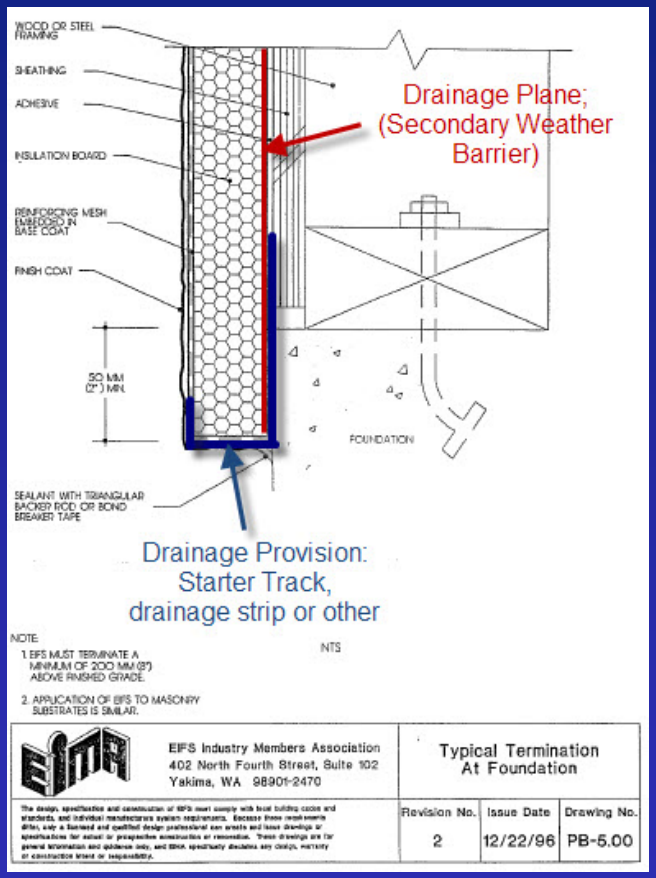
Face seal –EIFS at foundation vs. MD-Cladding at foundation





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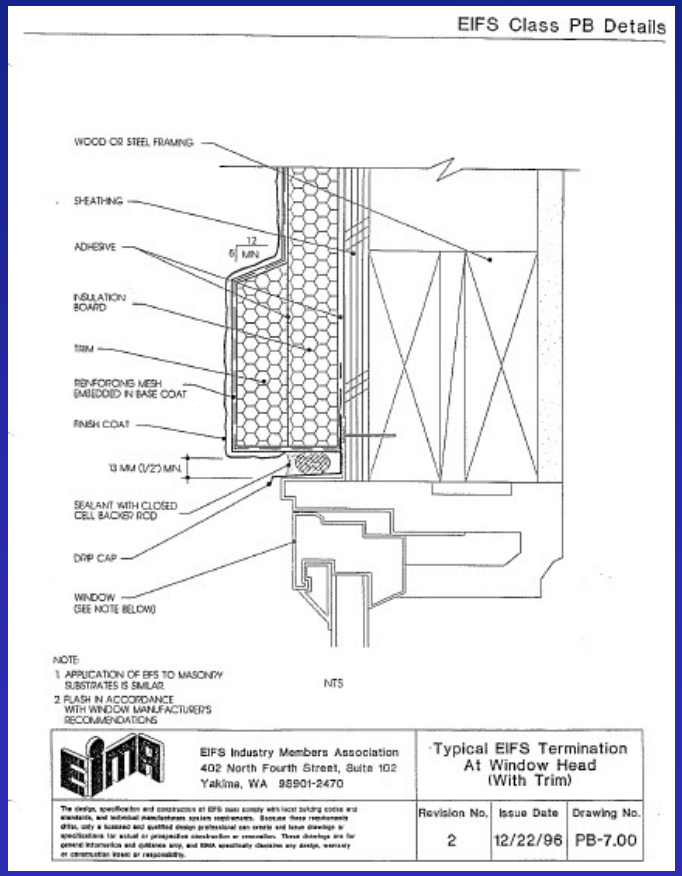
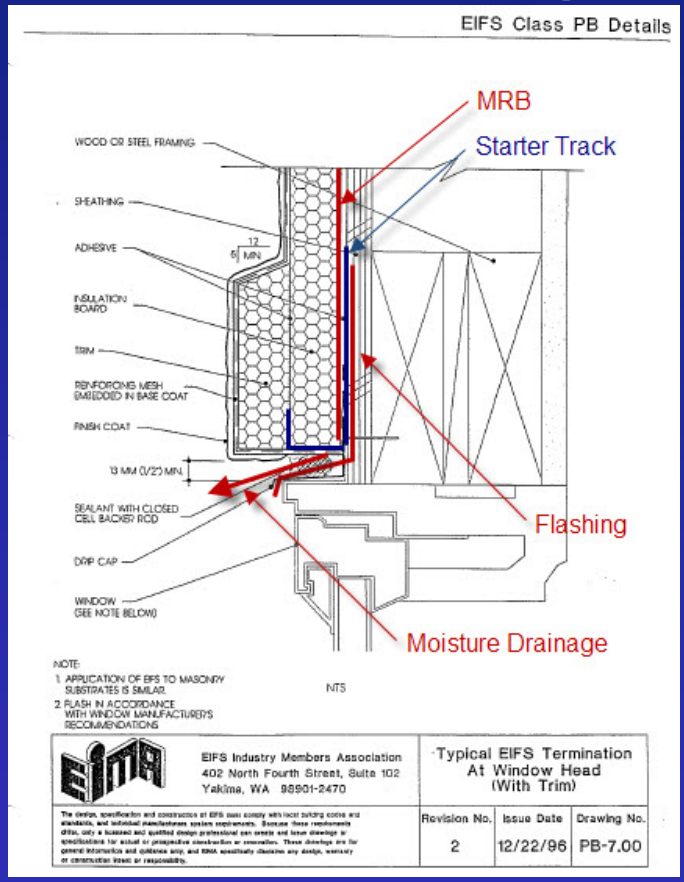
Face seal-EIFS vs MD Cladding at Window Head

Face seal – EIFS



MD - Cladding



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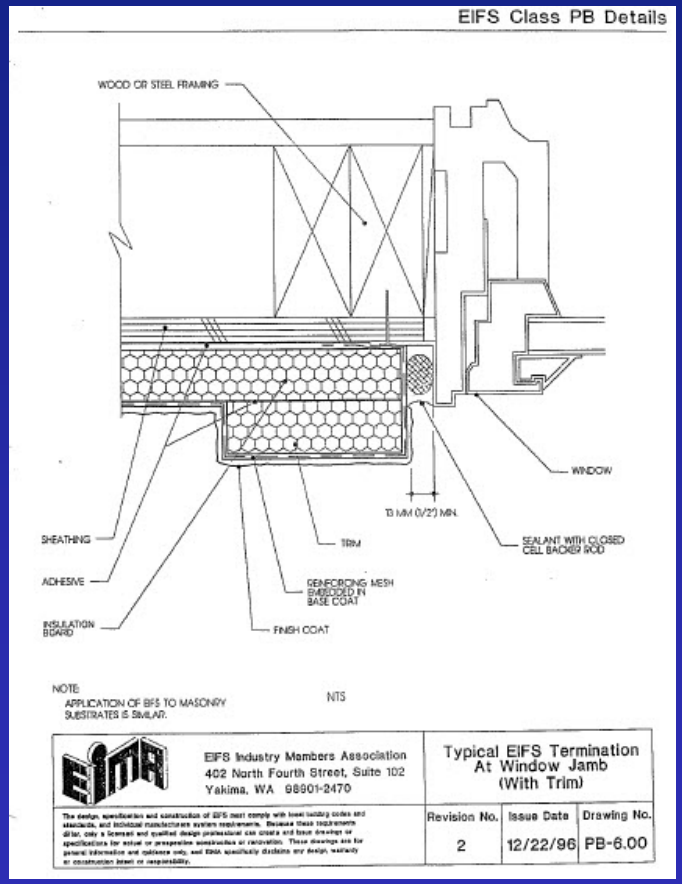
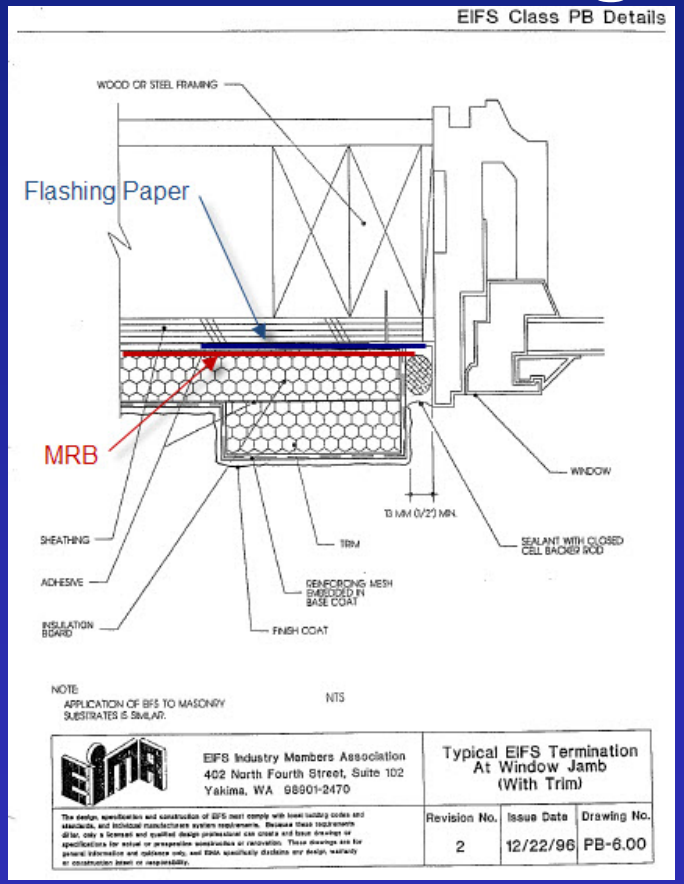
Face seal-EIFS vs MD Cladding at Window Jamb

Face seal – EIFS



MD - Cladding



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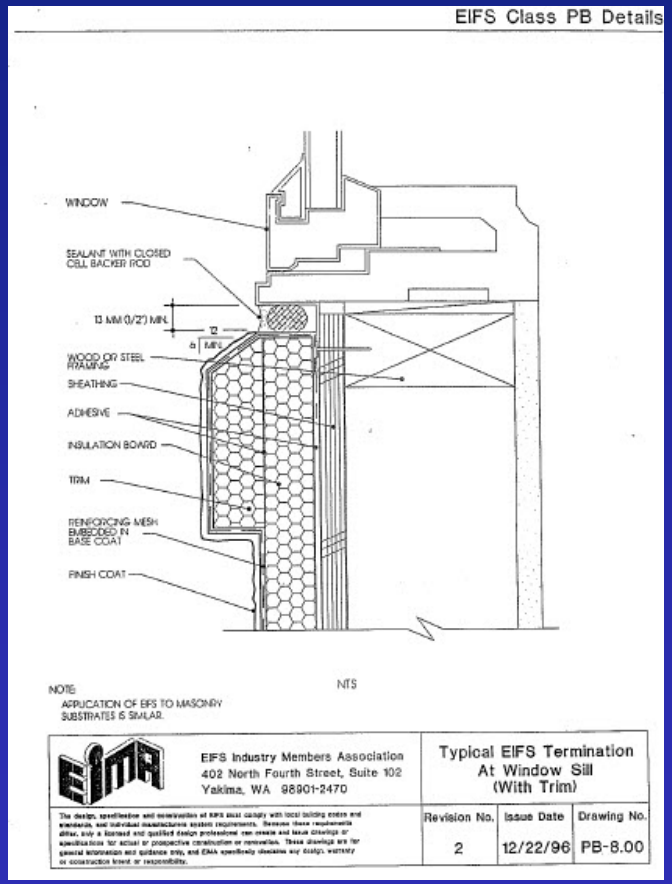
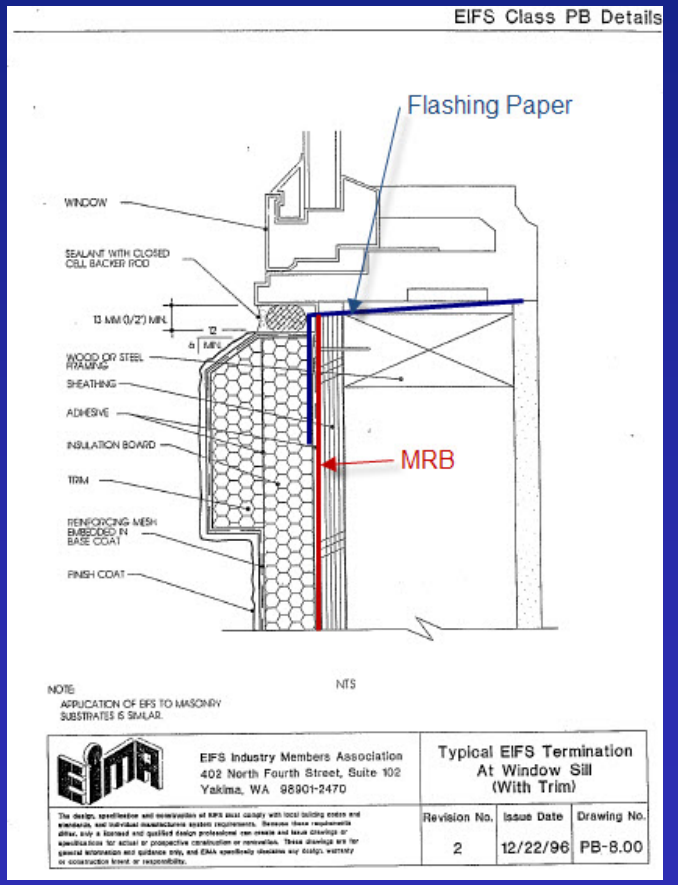
Face seal-EIFS vs MD Cladding at Window Sill

Face seal – EIFS



MD - Cladding



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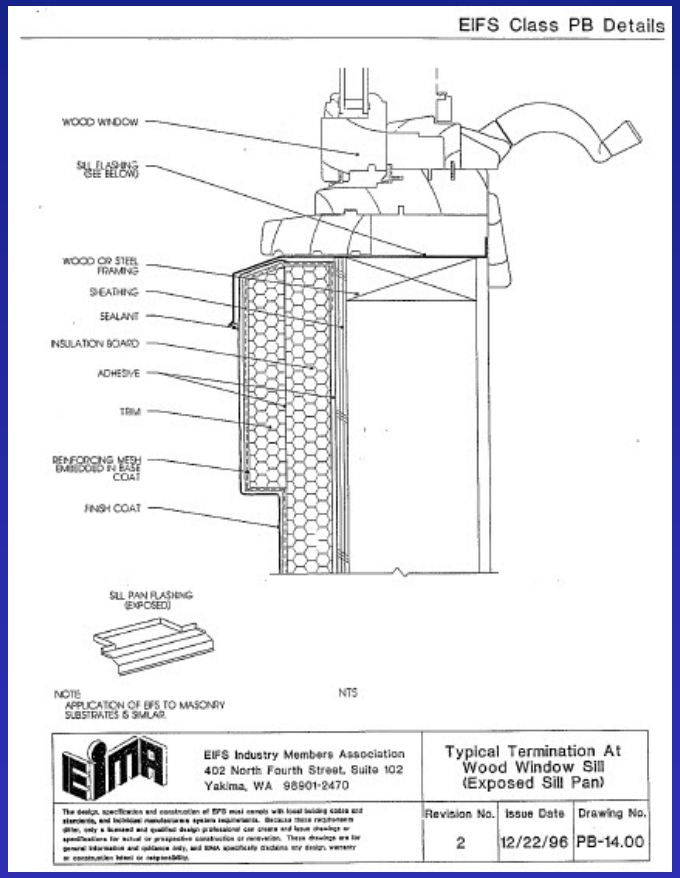
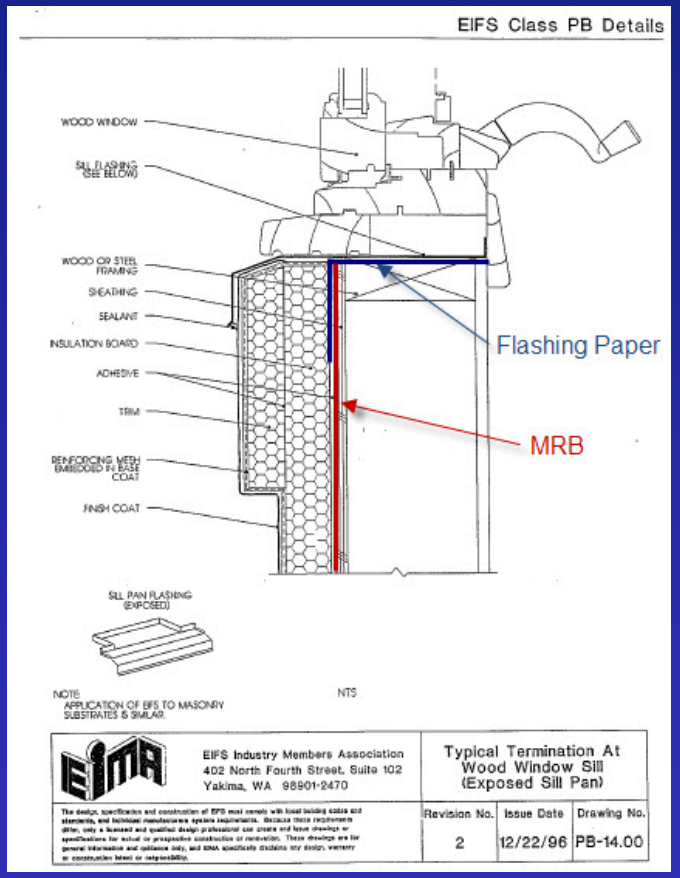
Face seal-EIFS vs MD Cladding at Window Sill with Pan Flashing

Face seal – EIFS



MD - Cladding



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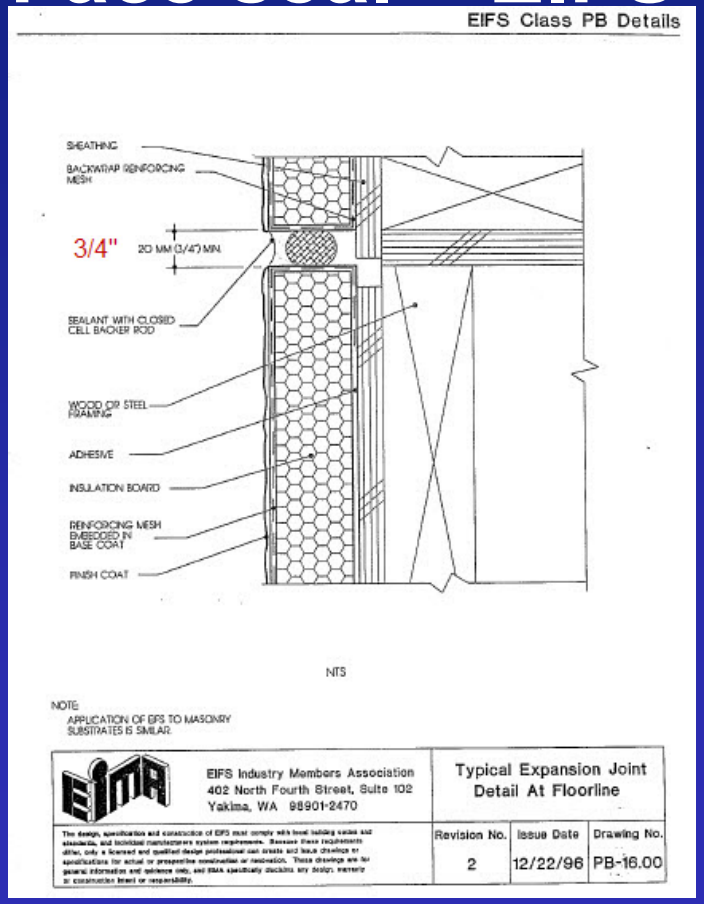
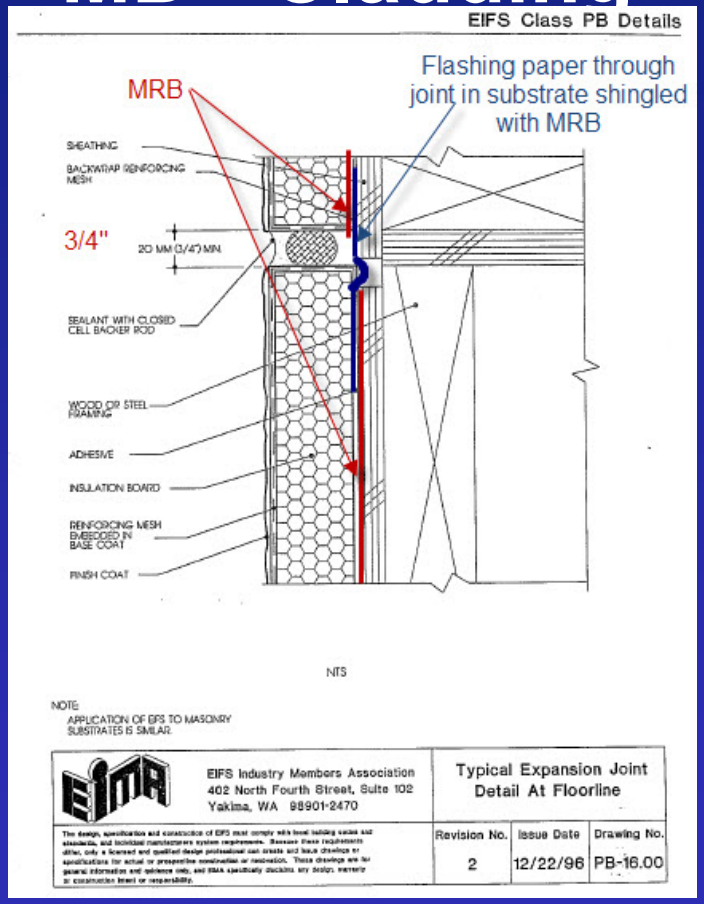
Face seal-EIFS vs. MD Cladding at Floor Line Expansion Joint

Face seal – EIFS



MD - Cladding



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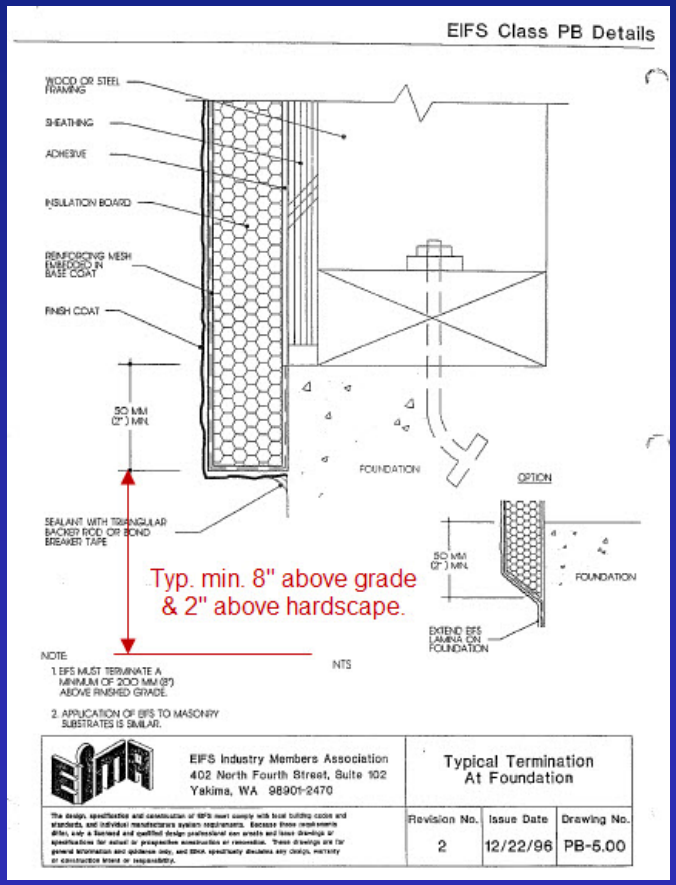
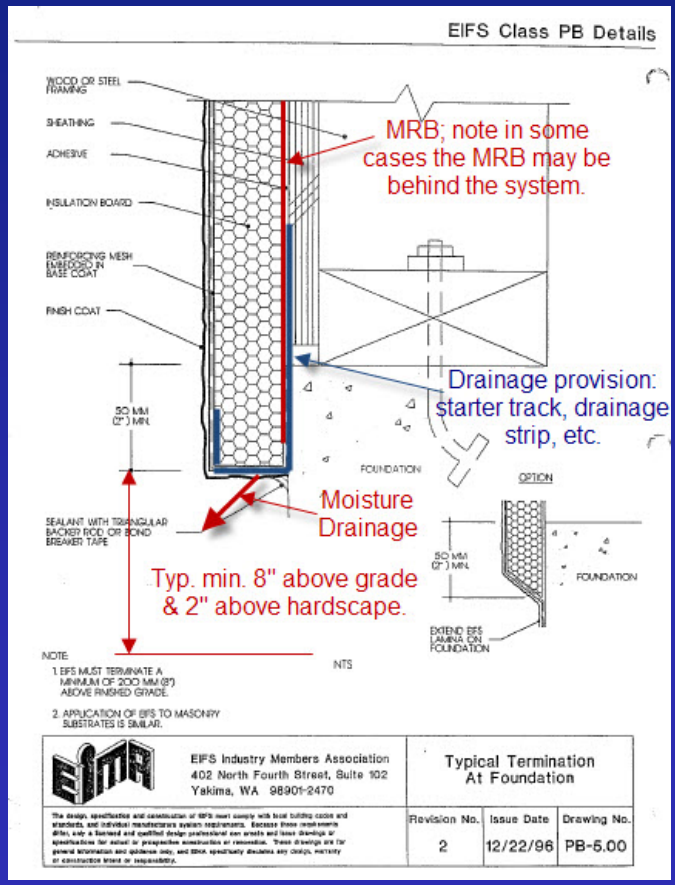
Face seal-EIFS vs. MD Cladding at Foundation Termination

Face seal – EIFS



MD - Cladding



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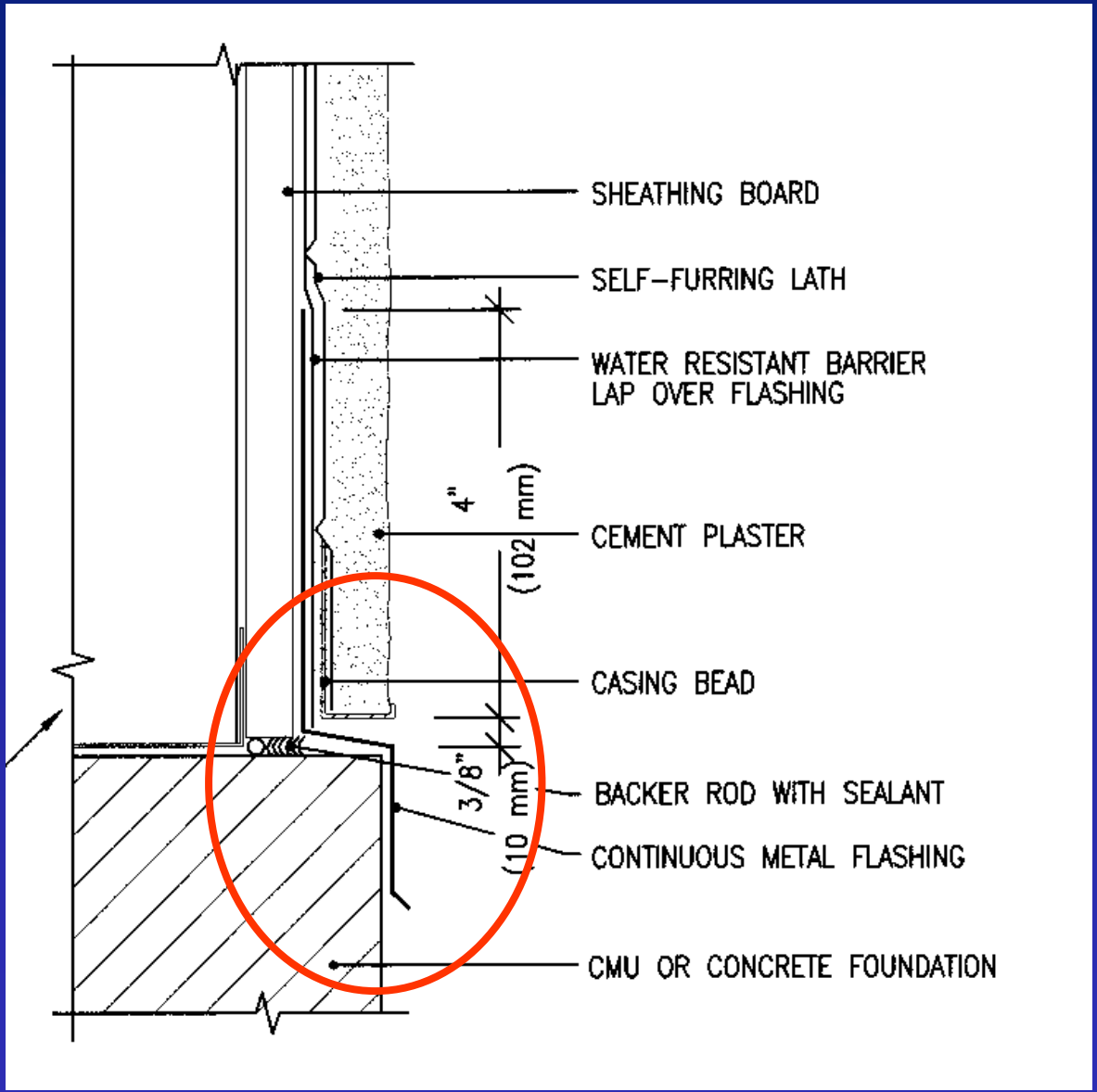
Why might one need this detail ?



Joint had to be Flashed because of misalignment with foundation

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What do you see here?

HCS at Patio or Slab

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What do you see here?

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

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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!

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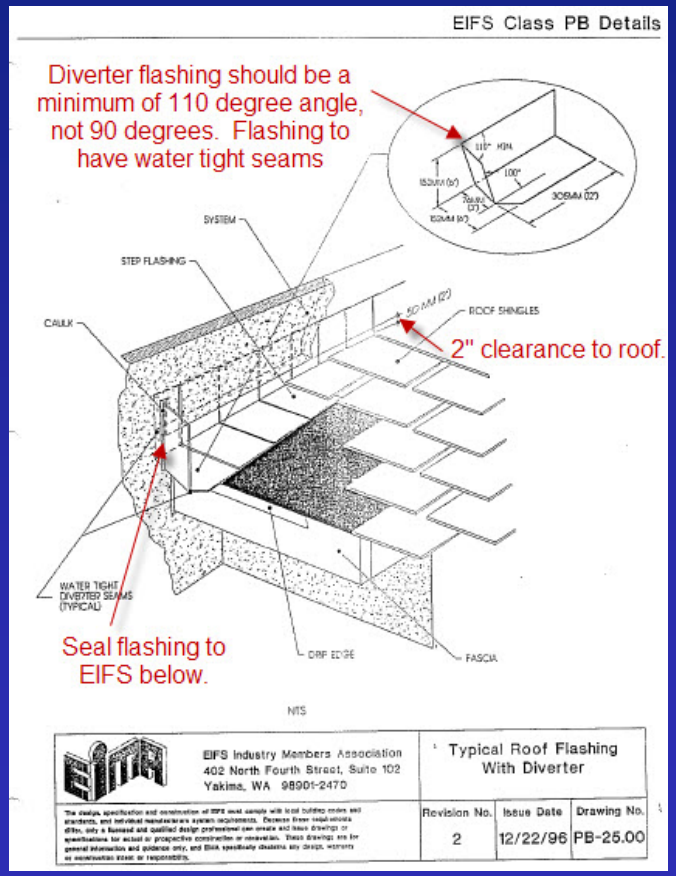
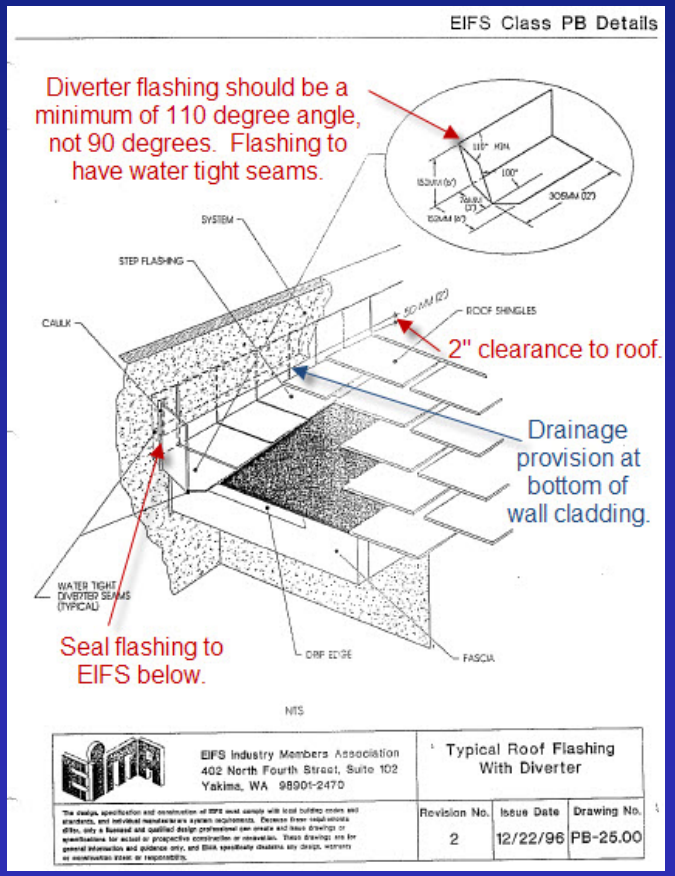
Face seal-EIFS vs. MD Cladding at Kickout Flashing

Face seal – EIFS



MD - Cladding



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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

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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!!

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Any Issues Here?

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

Wrong!

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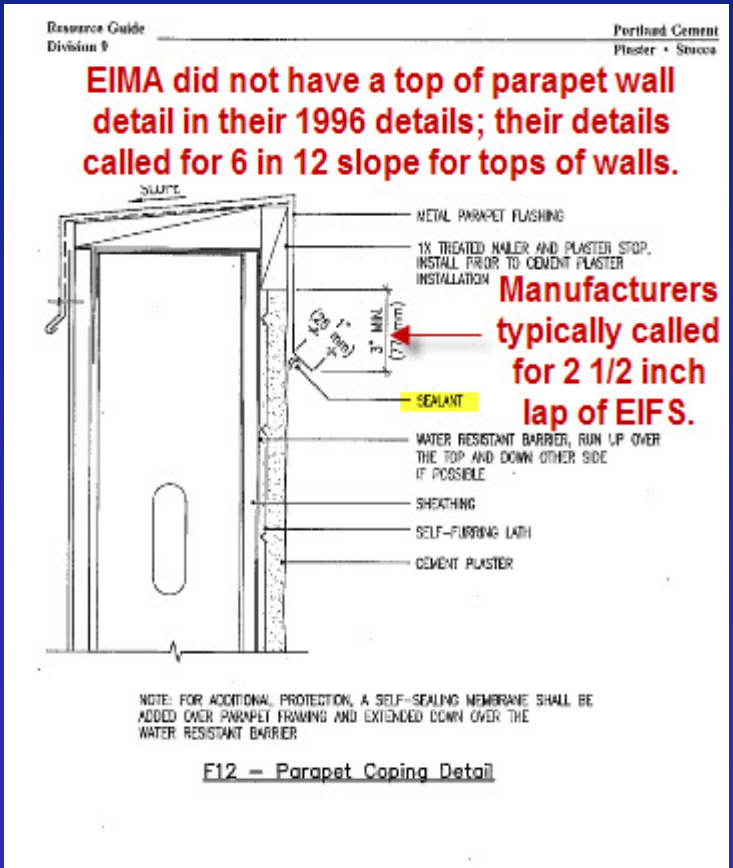
Face seal-EIFS vs. MD Cladding at Parapet Walls

Face seal – EIFS



MD - Cladding

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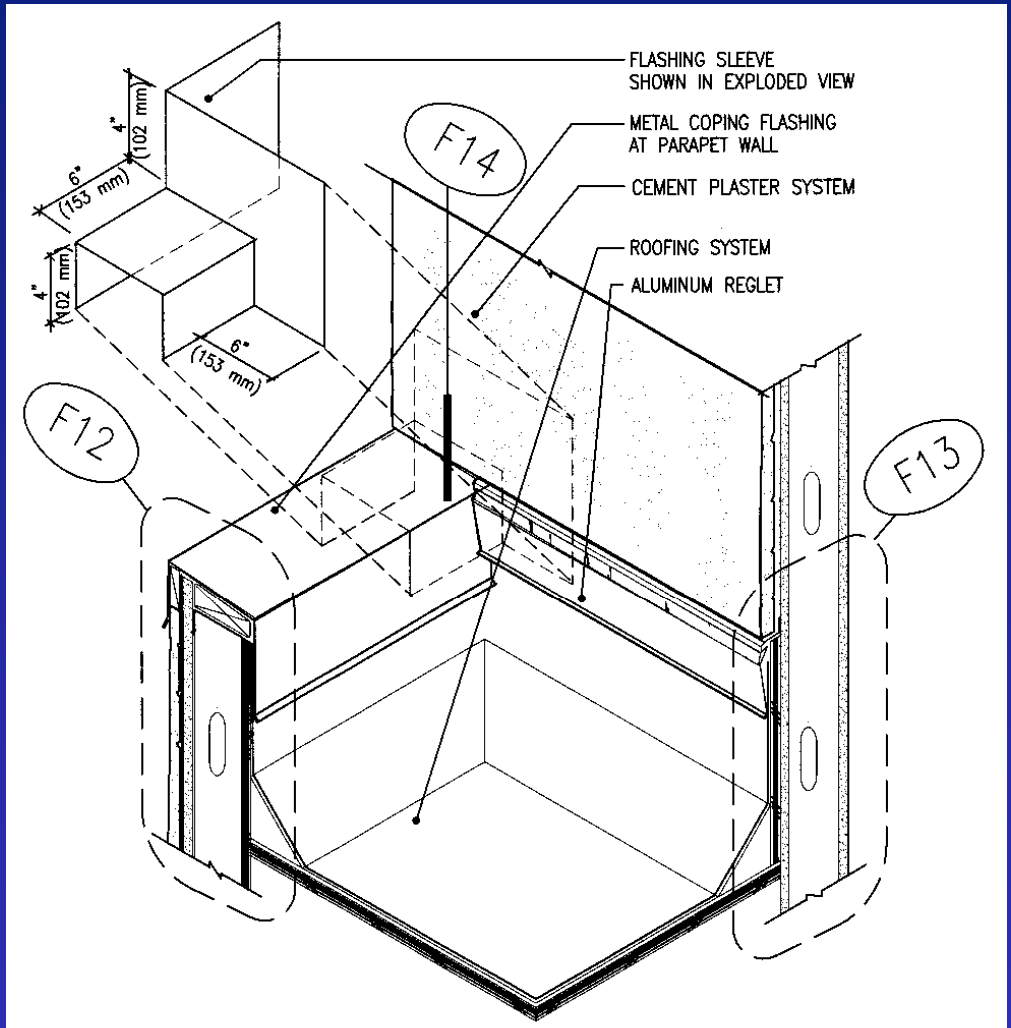
Wall Coping Flashing & Joint at Wall



F11 – Flashing/Roof Axonometric

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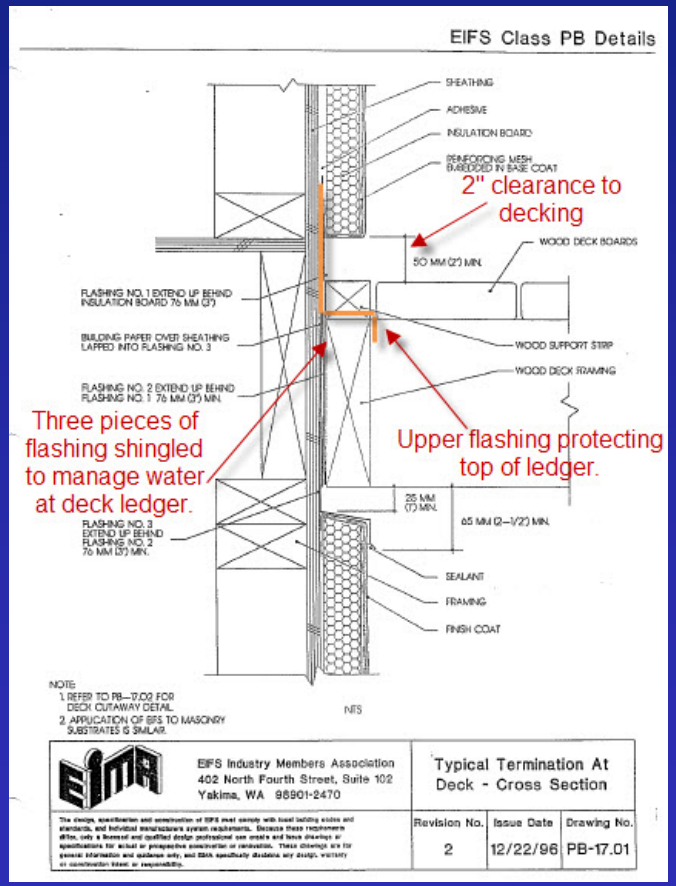
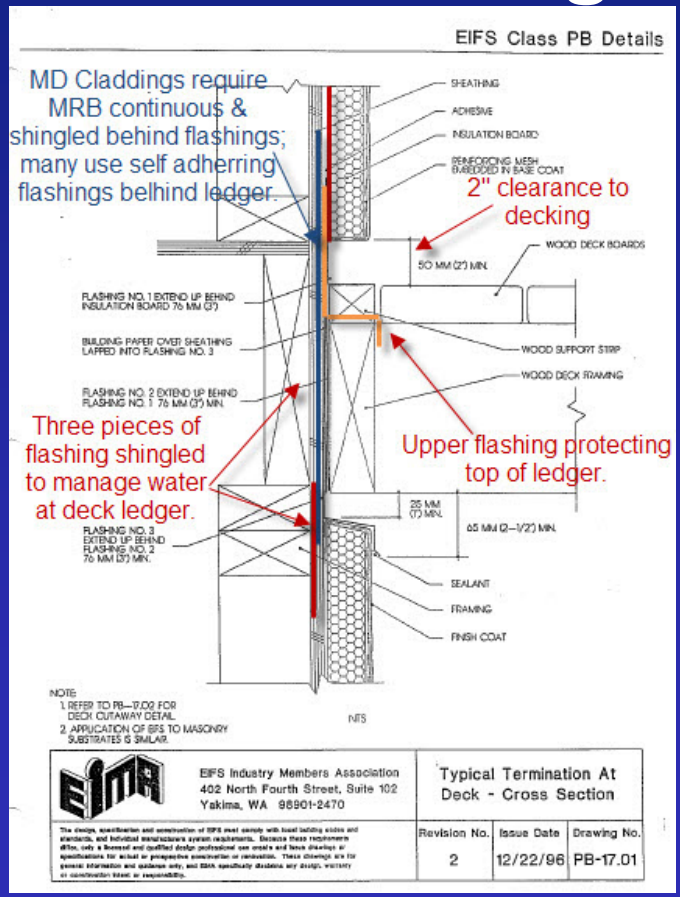
Face seal-EIFS vs. MD Cladding at Deck Ledger Flashing

Face seal – EIFS



MD - Cladding



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

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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.

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Control Joint layout on South Wall
Weep casing at soffit & HCS laps foundation.

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Weep casing at soffit with HCS band.

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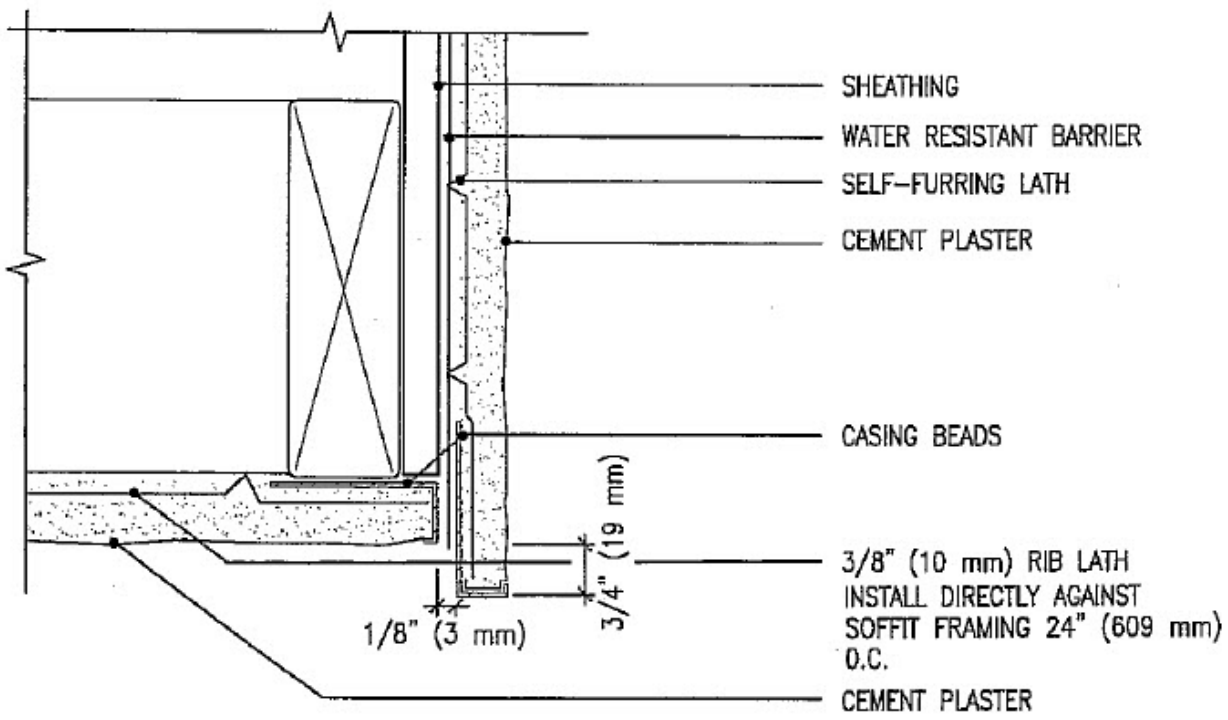
Wall to Soffit Corner; any Concerns?

SF7 – Stucco Soffit/Fascia

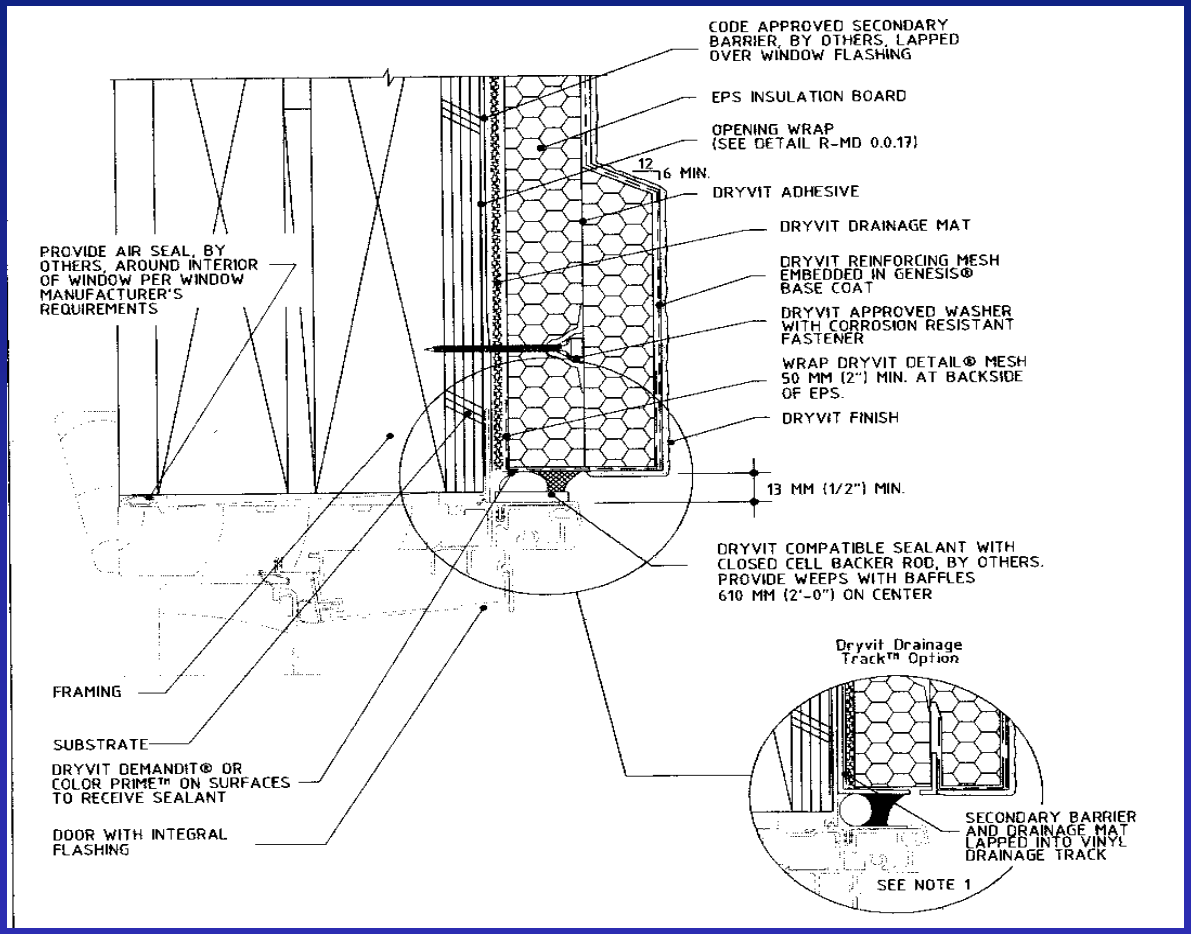


NOTES: FRAMING JOIST SPACED AT 24" (609 mm) REQUIRES 3/8" (10 mm) RIB LATH PERPENDICULAR TO JOINTS. LATH RIBS SHALL BE NESTED.

SF8 – Stucco Soffit/Fascia

MRB must be able to drain.

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



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