



Multifamily Forensics

Lessons Learned

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ZIP System

Wall & Roof Sheathing

- Includes vapor permeable WRB
- When installed according to Huber's guidelines, it qualifies as an ABAA Air Barrier Assembly
- Uses ZIP tape produced by 3M Co. as integral system component



ZIP System Tape

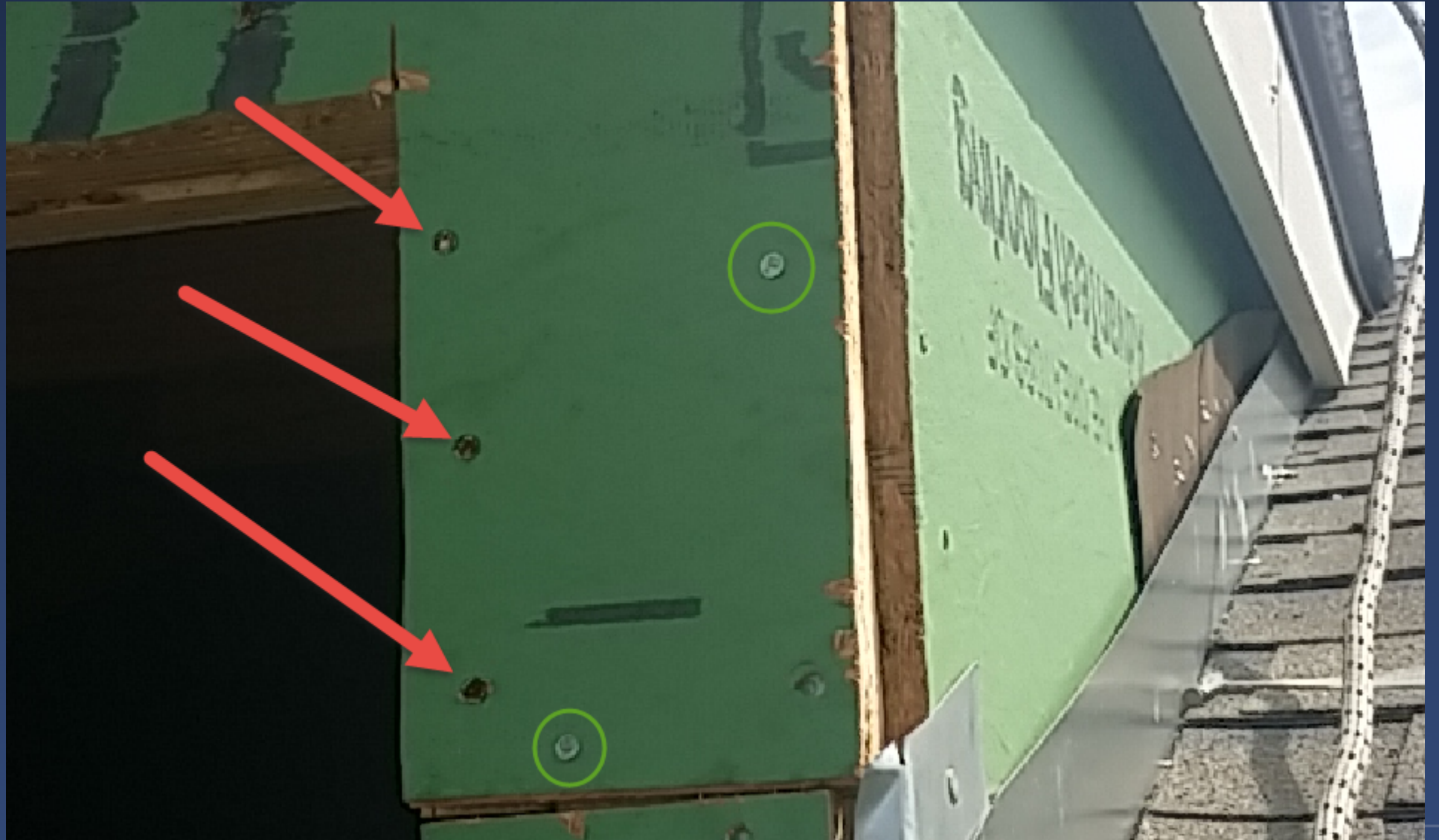
- Most obvious weakness of system
- Pressure activated acrylic adhesive
- Use a roller to adhere well
- Tongue and groove system ensures taped joints are correct size

Must Roll the Tape



Fastener Penetrations

- Recommended to be driven flush with the sheathing
- Over-driven fasteners are generally acceptable (for WRB, not shear strength)
- Removed fasteners must be patched with ZIP System Tape



Well Flashed Penetrations

- Install the ZIP tape from bottom to top (shingle lap)
- Turn tape onto penetration ~1/2-inch (non-flanged penetrations)



Deficient Penetrations

- Not Shingle-lapped
- Not turned onto non-flanged penetration
- Missing ZIP tape



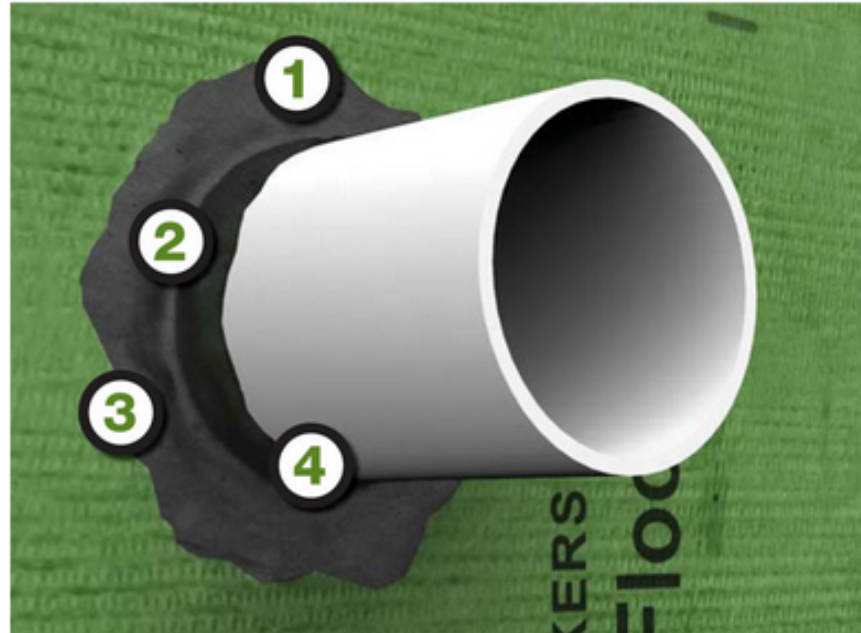
Terminations

- Zip tape
- Termination bar and sealant
- Liquid



Terminations

- Irregular Shapes causing difficult flashing?
Solution: Use Liquid Flash
- 180 day UV exposure warranted



- 1 | Optimal Viscosity**
Flows easily to seal irregular shapes and surfaces.
- 2 | Quick Cure Time**
Immediately weather resistant and tack free in as little as 20–40 minutes depending on conditions. Target thickness achieved when substrate is no longer visible.
- 3 | Weather and UV Resistant**
Warranted for up to 180 days of extreme weather and UV exposure.
- 4 | Proper Adhesion to a Wide Range of Surfaces**
Bonds to wood, concrete, masonry, architectural metals, glass, PVC, FRP, EPDM and most other building materials.

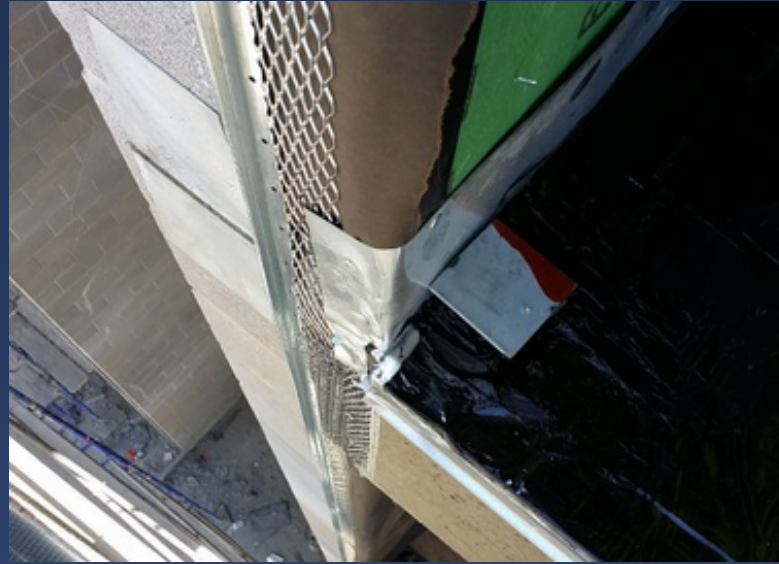
Terminations

- ZIP tape terminations at transition to membrane waterproofing system



Terminations

- Deficiencies seen in the field



Transitions

- Roof to wall (sidewall) transition

Correctly Stripped-in



No Strip-in Flashing



Transitions

- Zip to gypsum sheathing at breezeways

Not Stripped-in



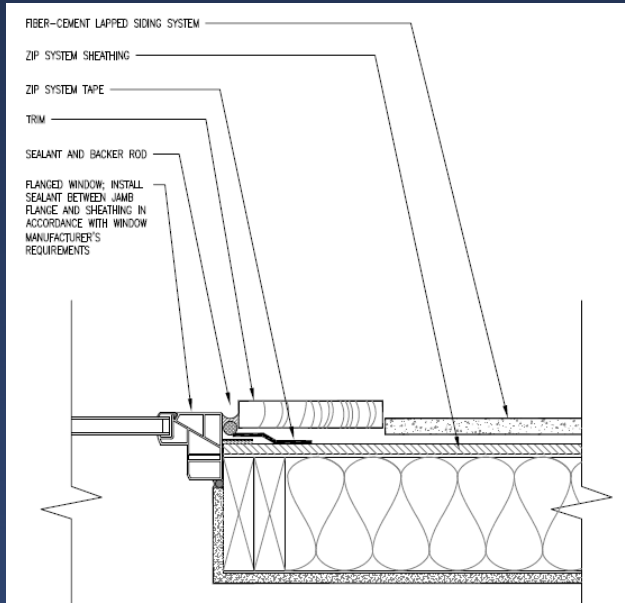
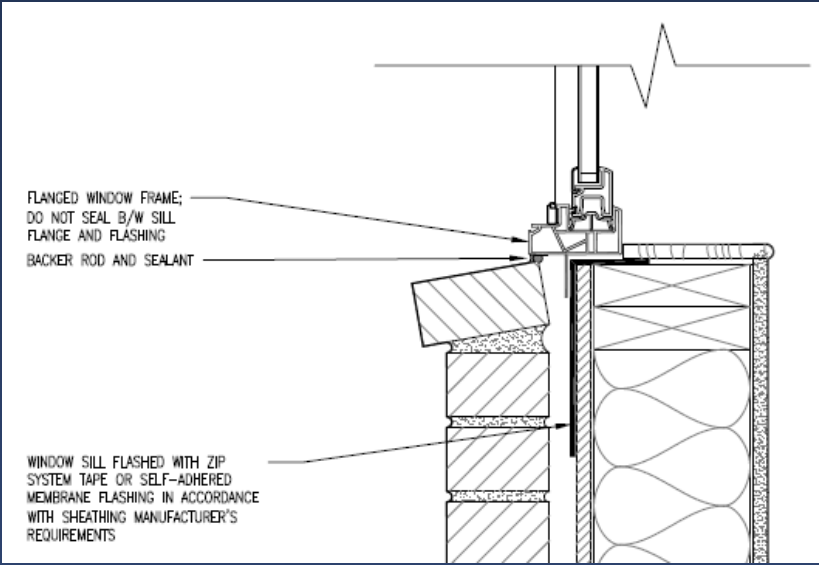
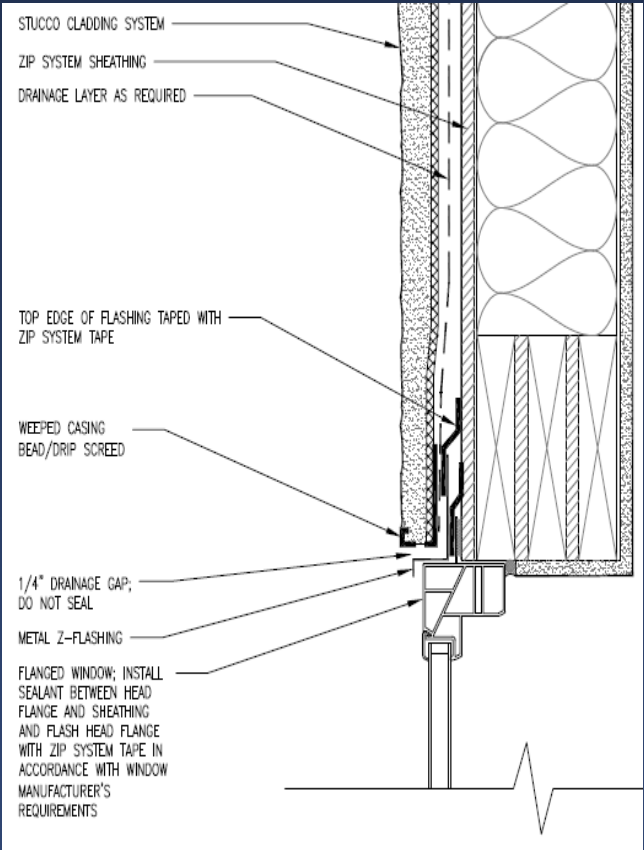
Correctly Stripped-in



Building Wrap Experience?

Window Details

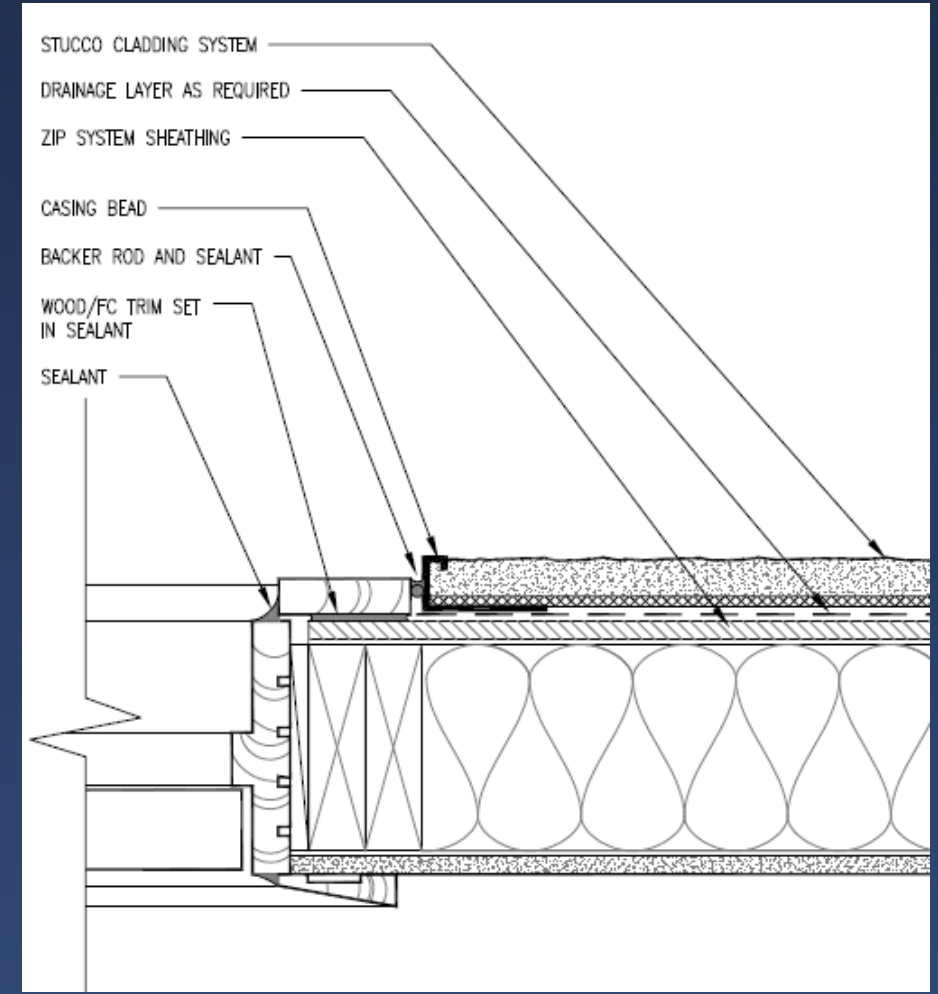
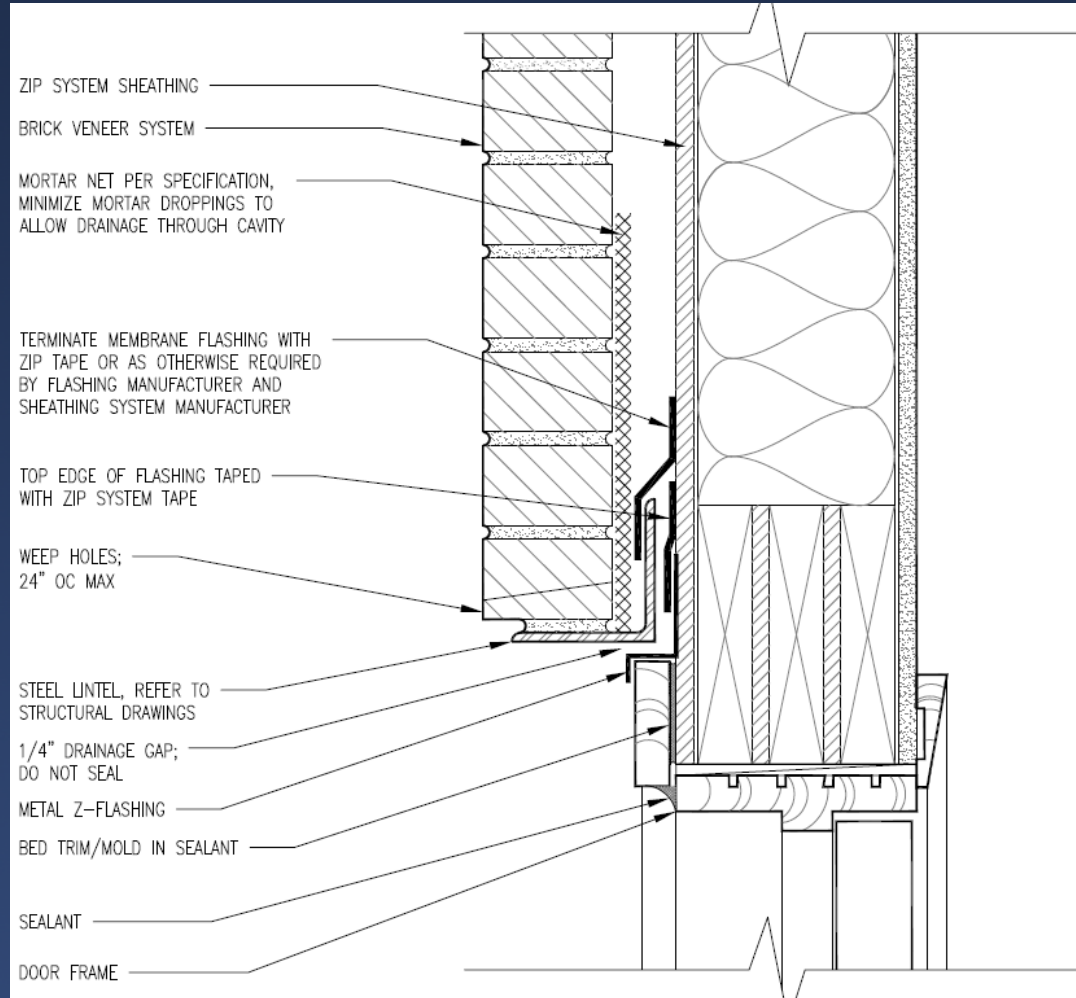
- Stucco Head
- Brick Sill
- Lap Siding Jamb



Building Wrap Experience?

Door Details

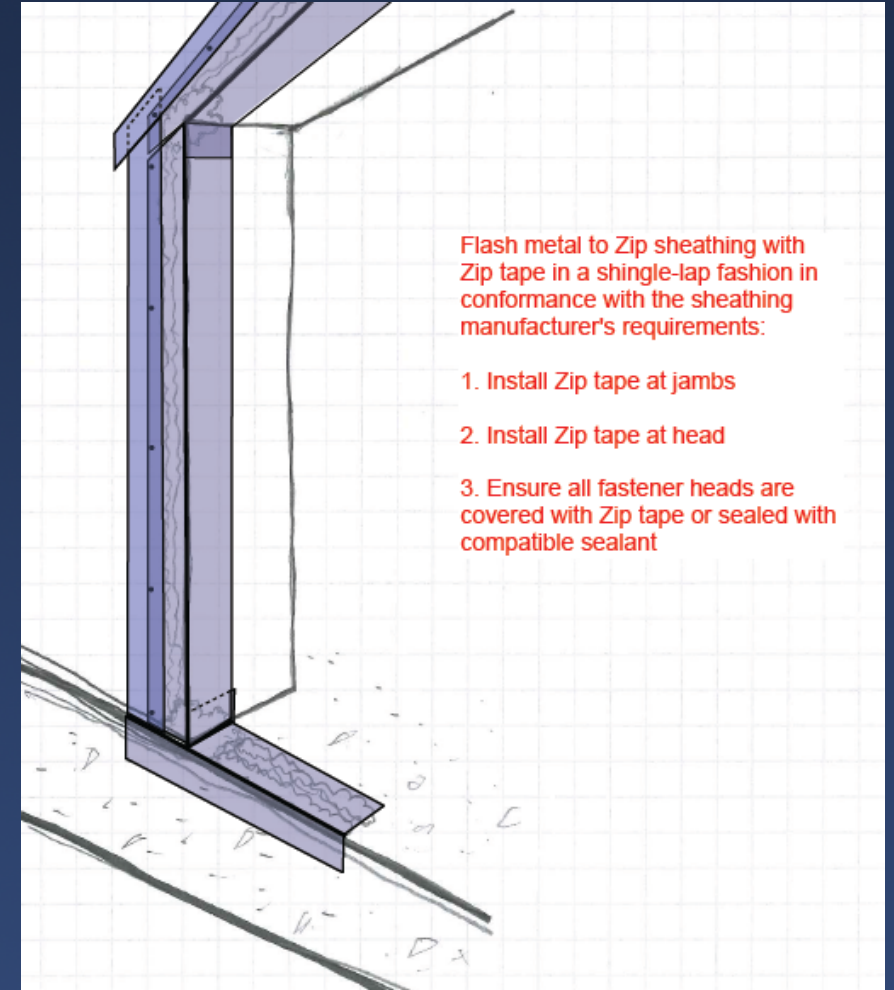
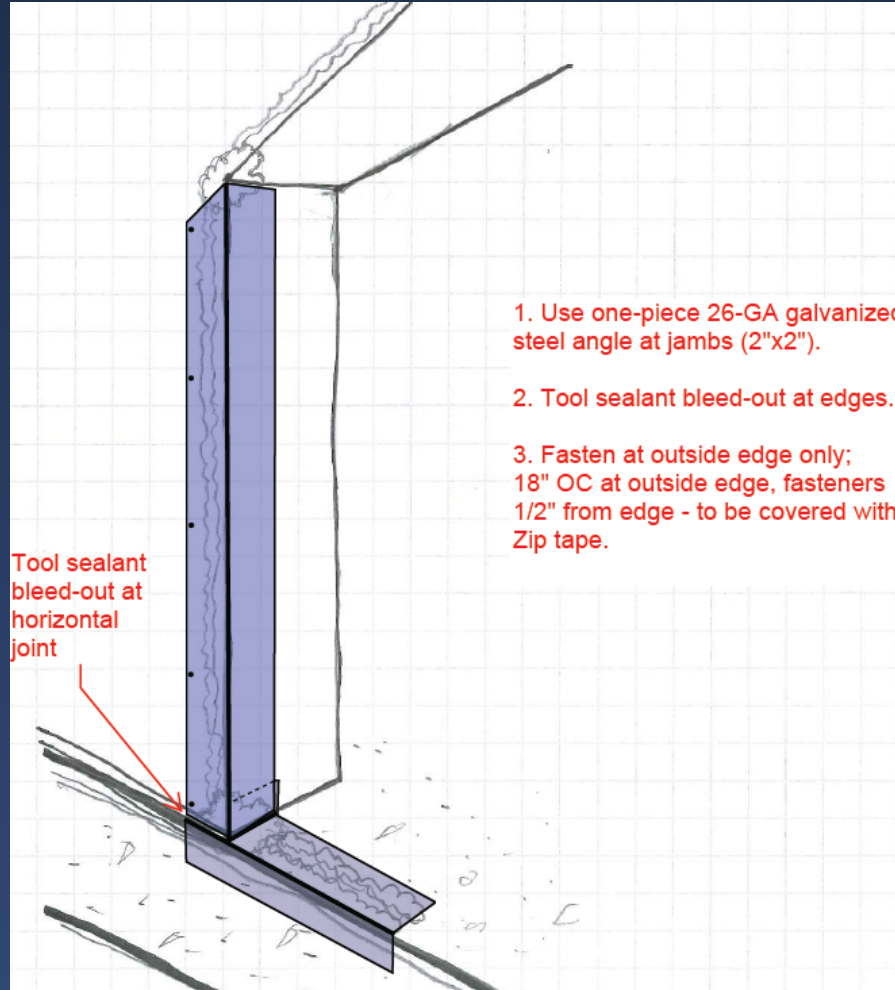
- Brick Head
- Stucco Jamb



Building Wrap Experience?

Storefront with Metal Buck

- Install bottom to top
- Ensure proper lengths, tolerances, and sealant application
- Install ZIP tape in a shingle-lap manner at the head and jambs (leave sill open)

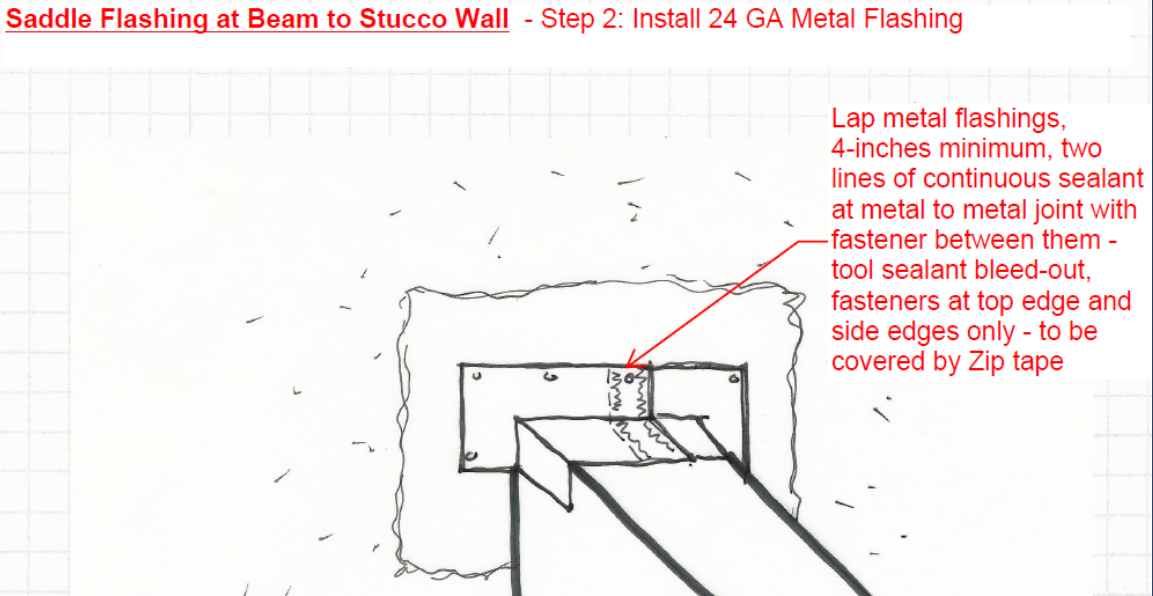


Building Wrap Experience?

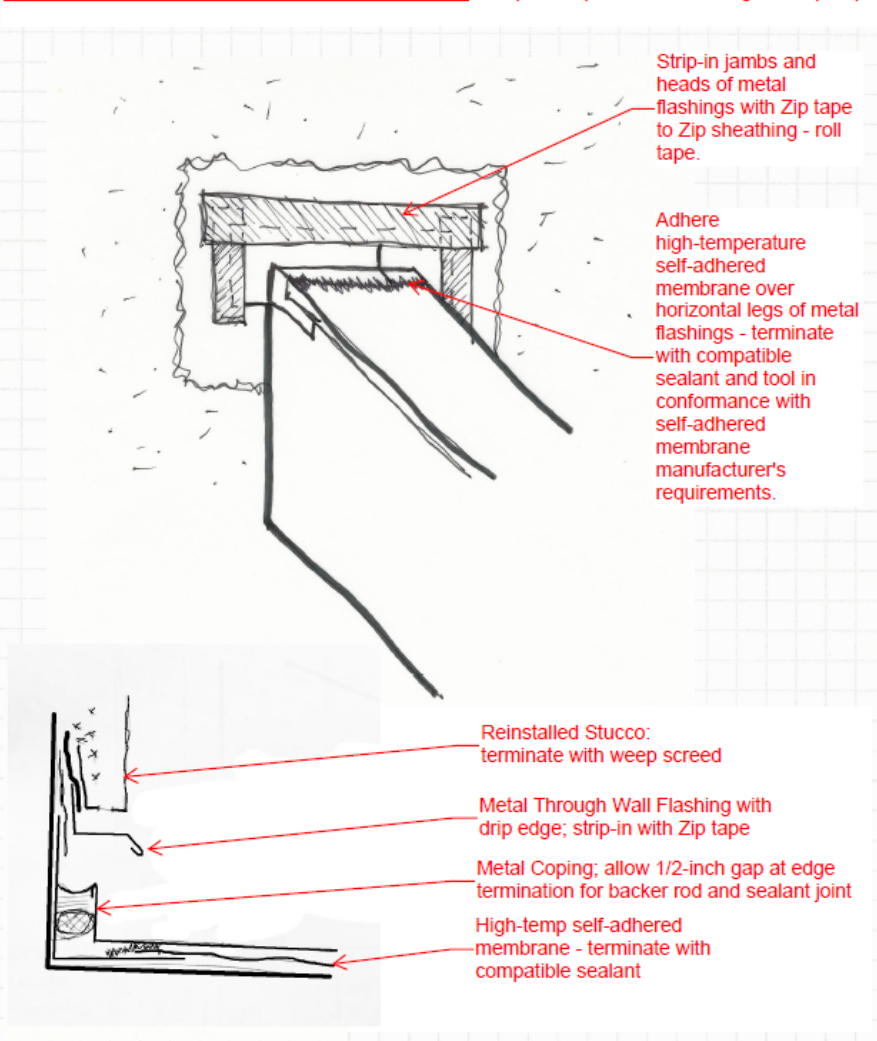
Saddle Flashing

- Careful Demo as Required
- 4-inch laps of sheet metal with dual continuous sealant lines
- Shingle lap ZIP tape to integrate with ZIP sheathing

Saddle Flashing at Beam to Stucco Wall - Step 2: Install 24 GA Metal Flashing



Saddle Flashing at Beam to Stucco Wall Interface - Step 3: Strip-In Metal Flashing with Zip Tape



Durability and Warranty

- Real-life Durability only proven to less than a decade
- Reported by Huber to have lasted 75+ years in accelerated aging tests
- Covered by a 30-year system limited warranty



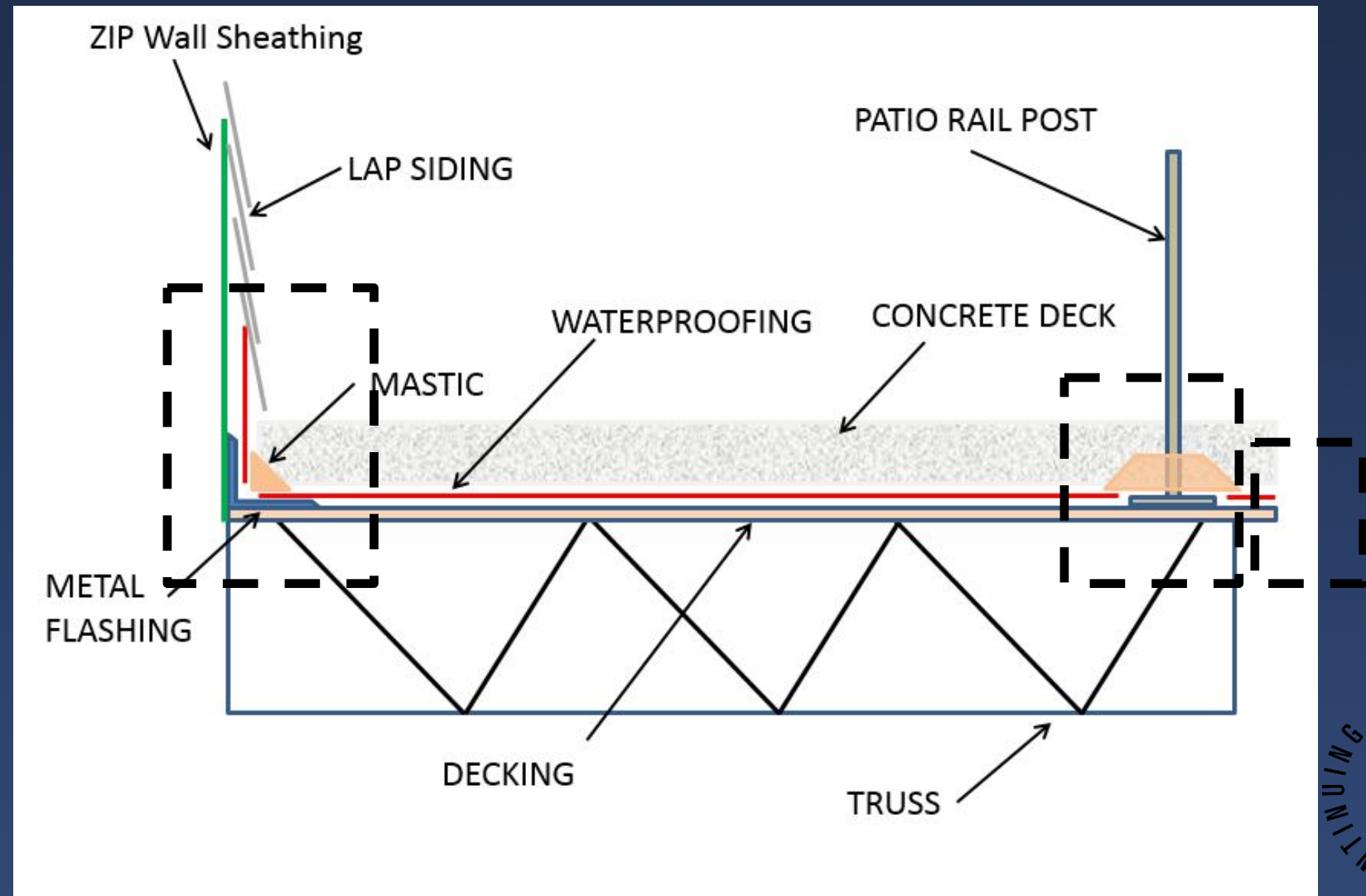
Balcony Horizontal Waterproofing



Demo & Investigation



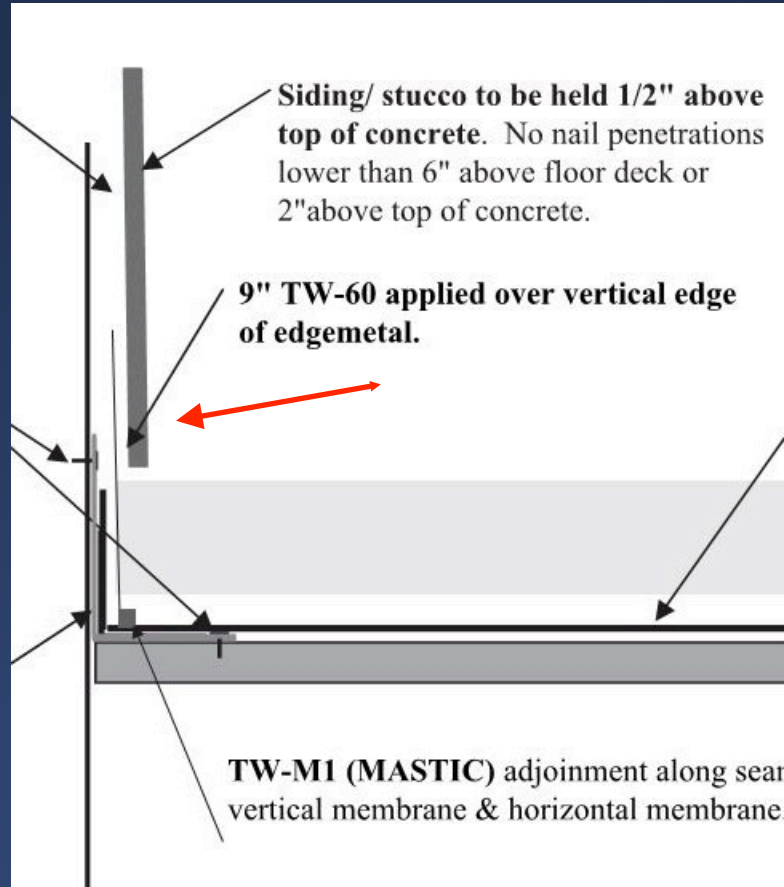
Typical Balcony WP Section



- Transitions
- Terminations
- Penetrations

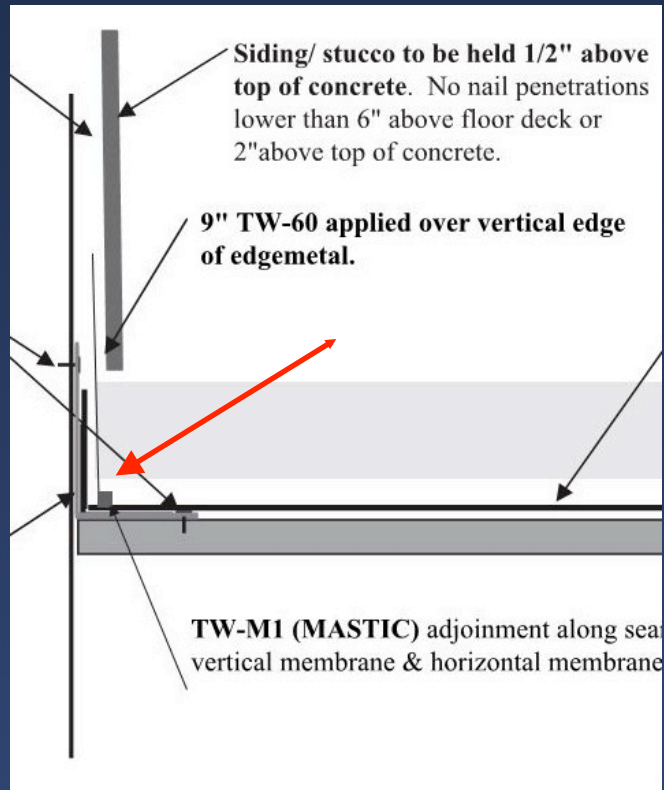
Tie-in at Wall

- Primer
- Roller
- Termination
- UV exposure



Membrane Termination

- Primer
- Roller
- Termination
- Mastic

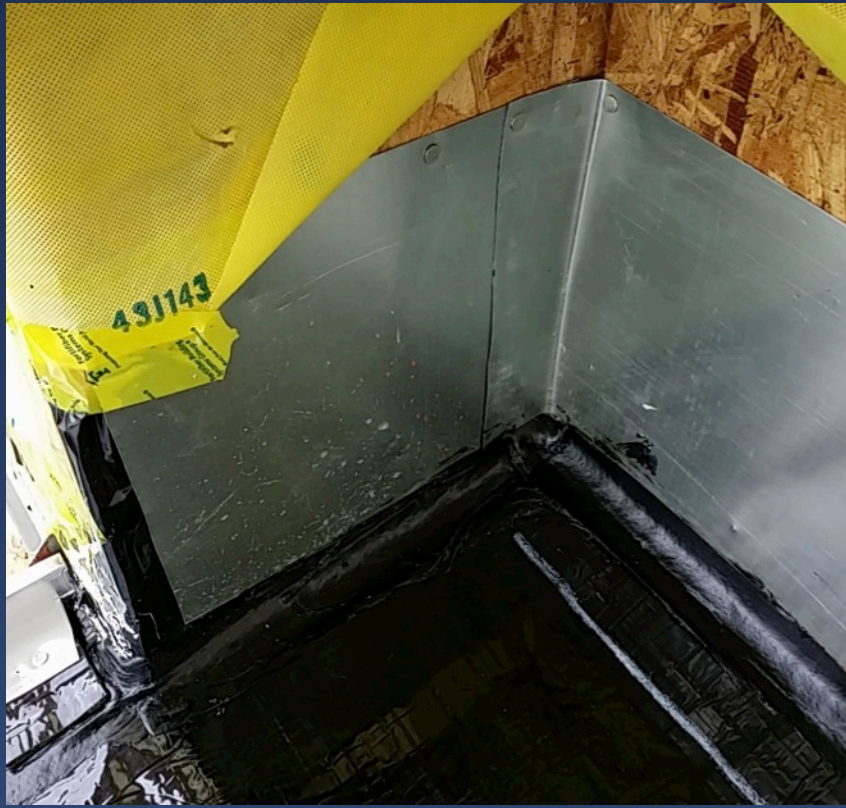


Use of a Roller



Membrane Termination

- Cove Bead
- Bridge Joint
- Termination
- UV exposure



Membrane Termination



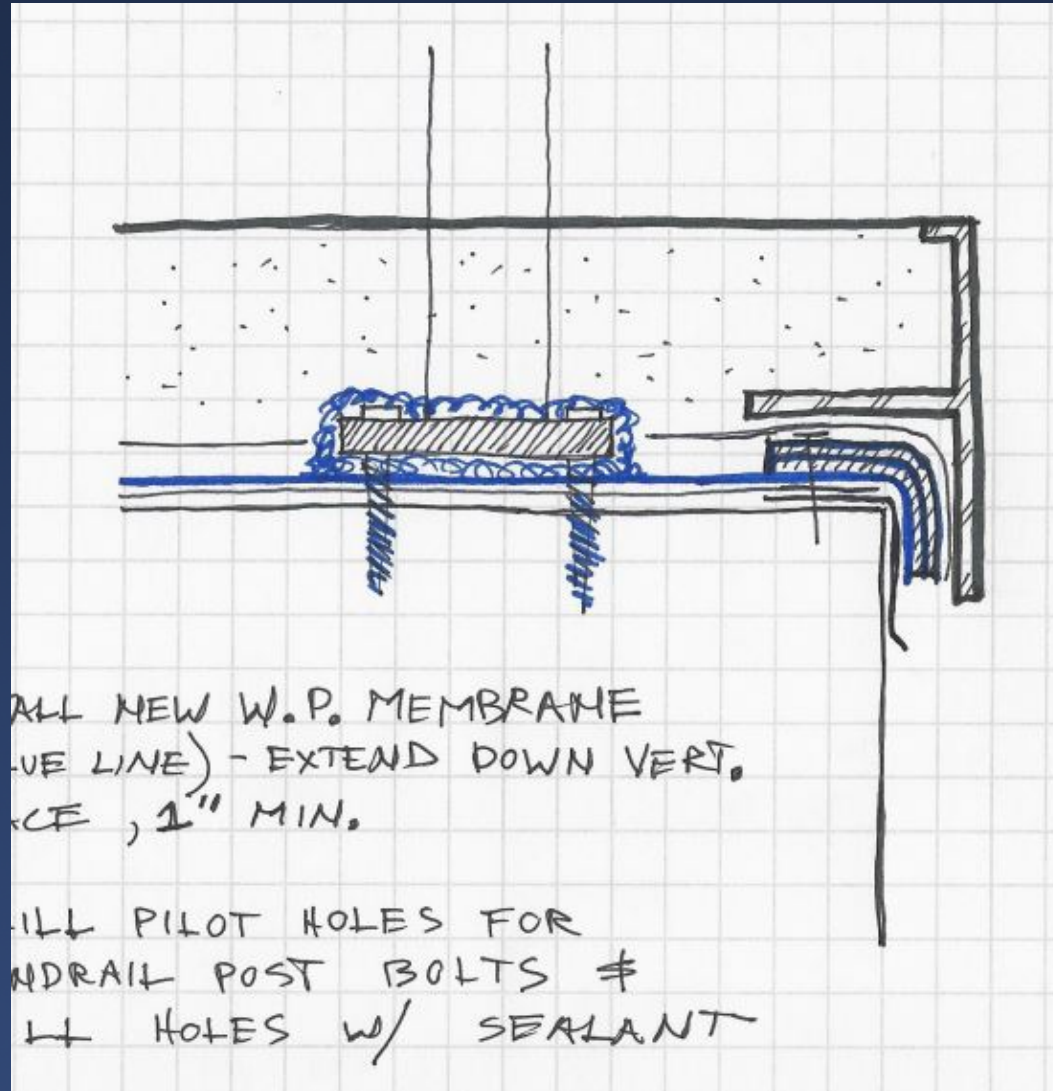
Handrail Penetrations



Handrail Penetrations



Handrail Penetrations



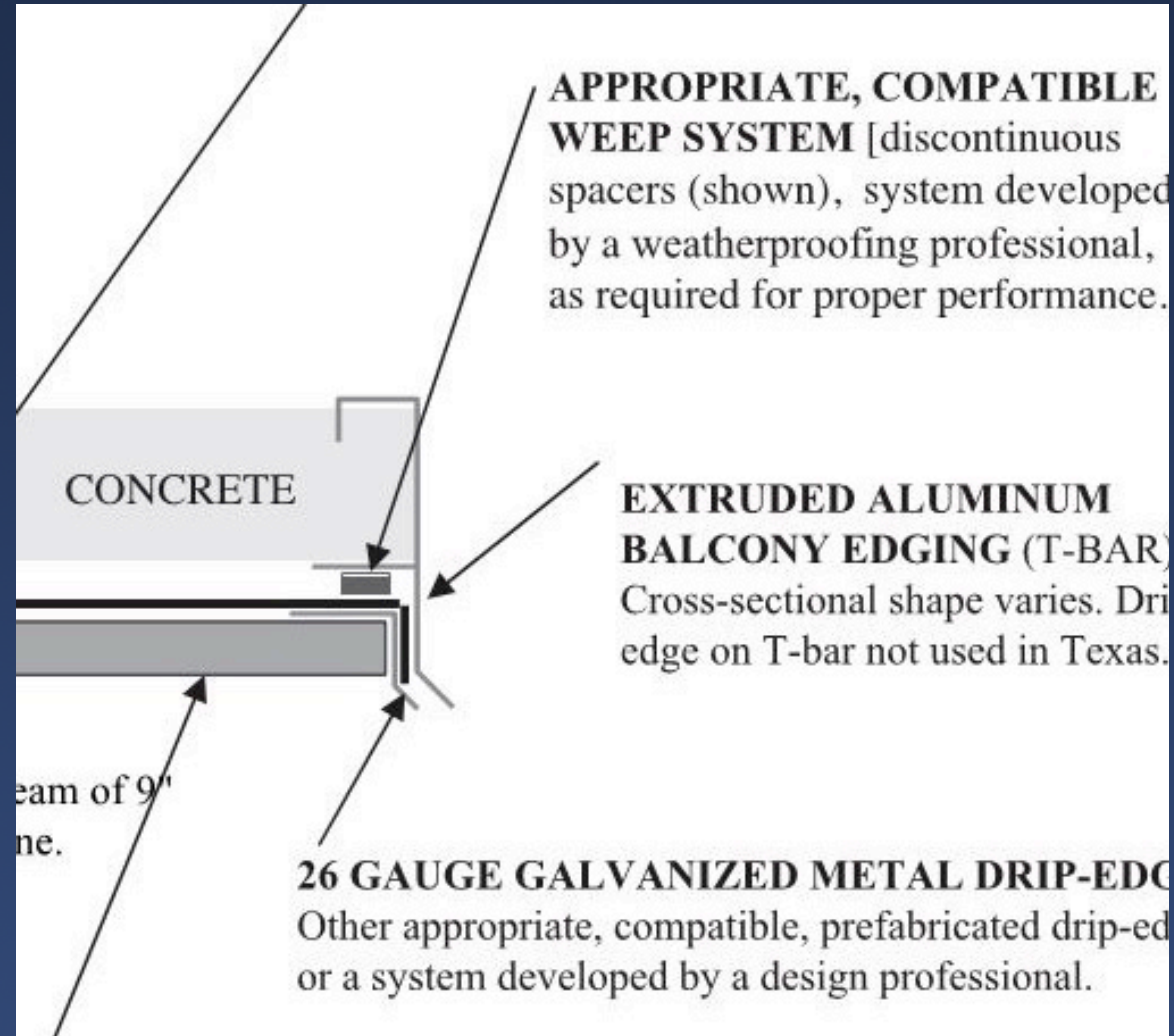
Handrail Penetrations



Wood Post Tie-Ins



T-Bar Shims



- Thickness
- Extend down vertical
- Avoid “sticky to sticky”

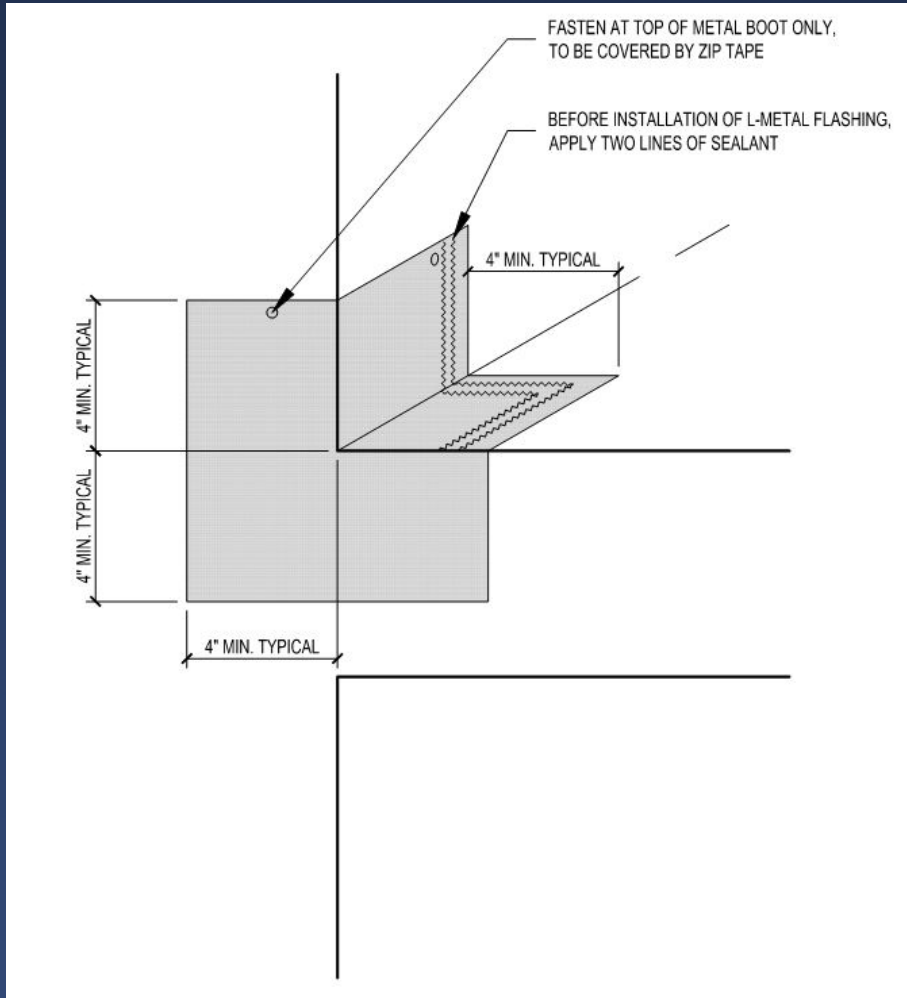
T-Bar Shims and End Dams



Preformed Metal Corners:

Step 1

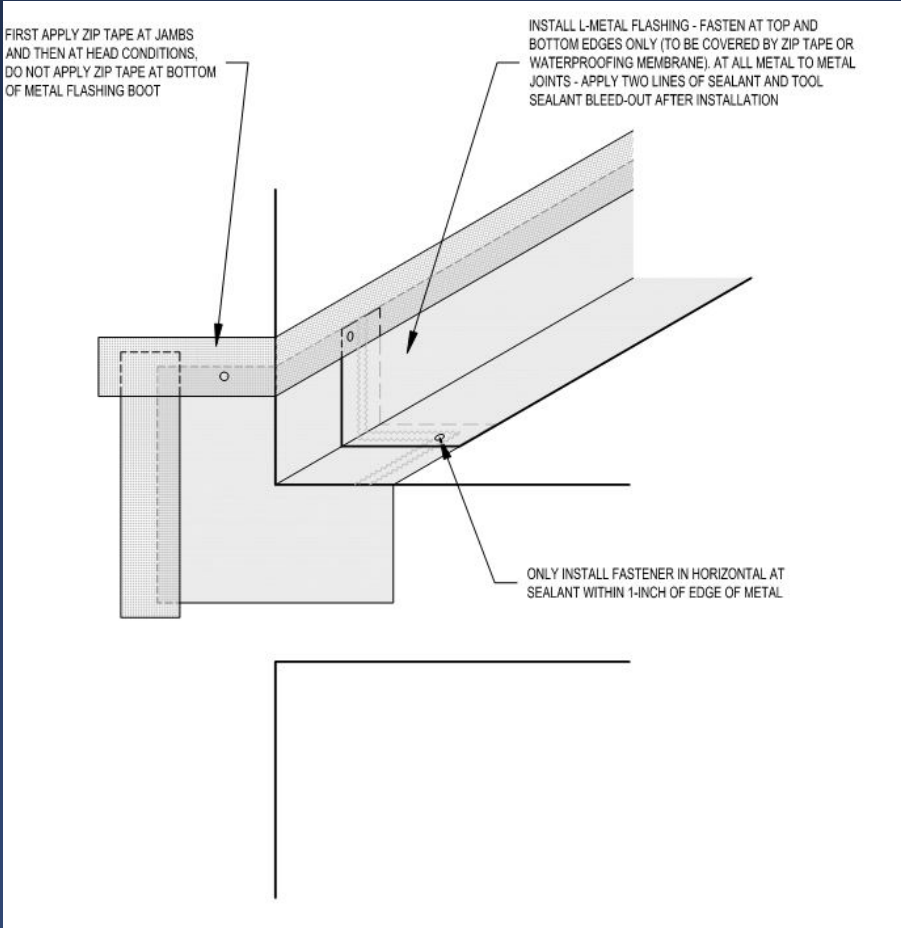
- Geometry
- Dimension
- Fasteners
- Material



Preformed Metal Corners:

Step 2

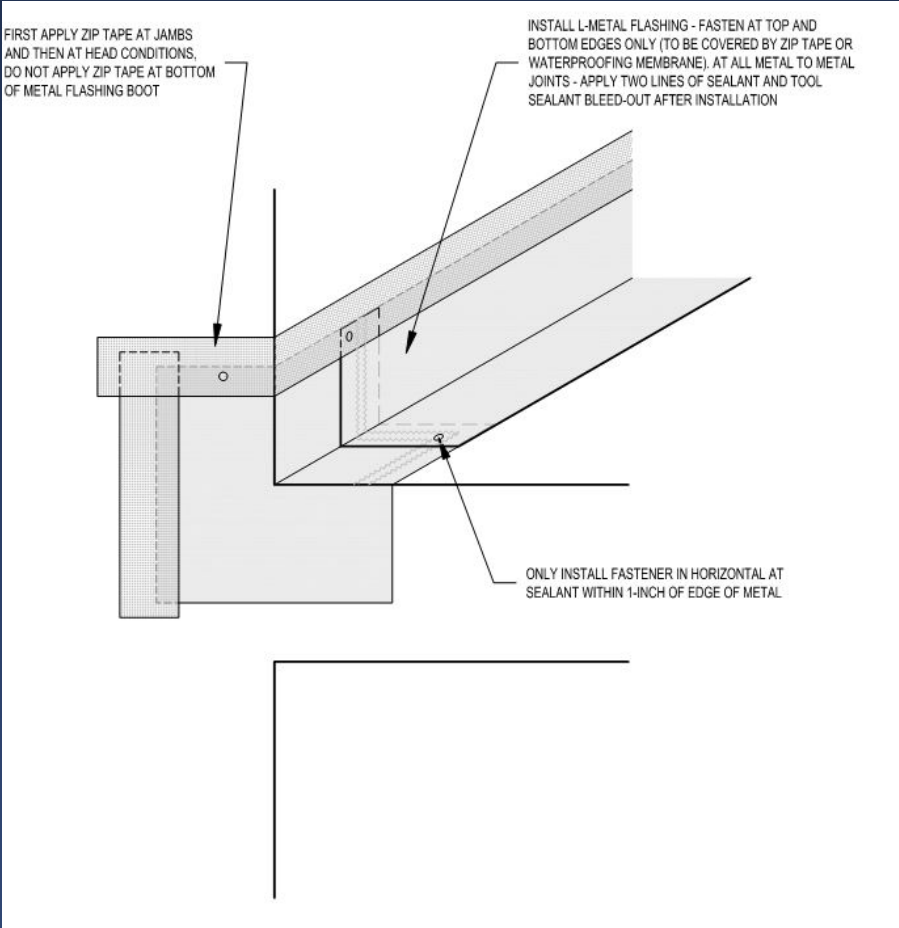
- Two lines of sealant at all metal to metal laps
- Shingle-lap Zip tape
- Fasteners



Preformed Metal Corners:

Step 2

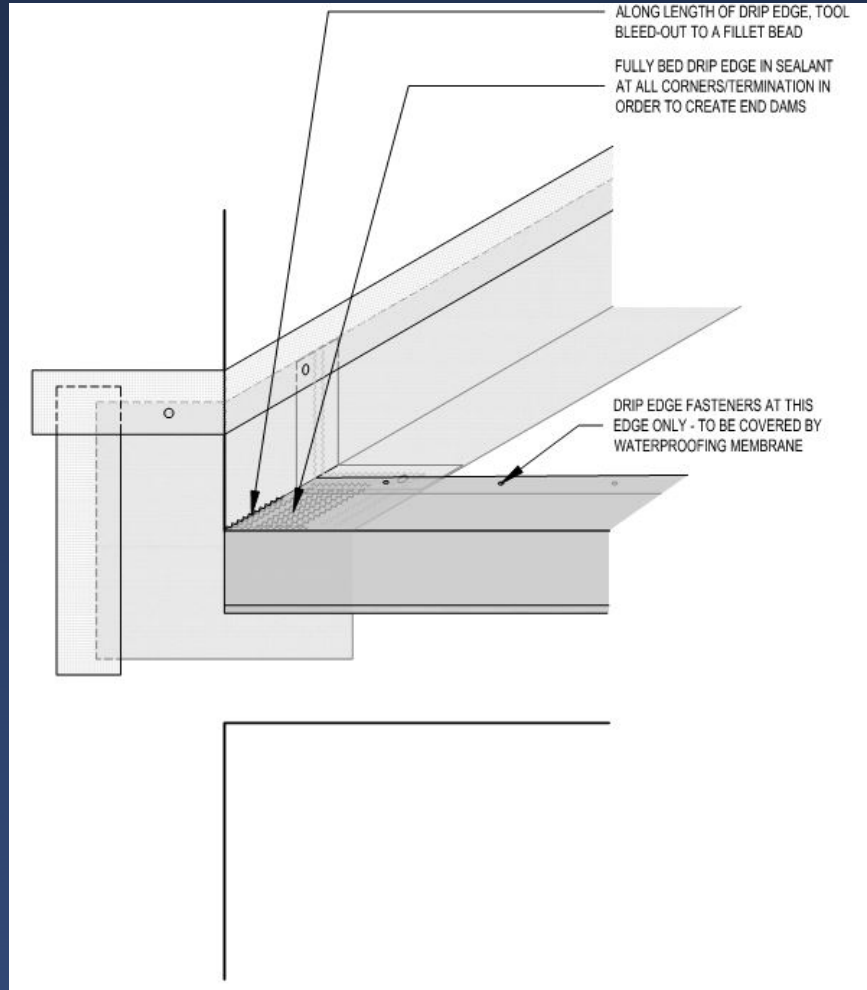
- Two lines of sealant at all metal to metal laps
- Shingle-lap Zip tape
- Fasteners



Preformed Metal Corners:

Step 3

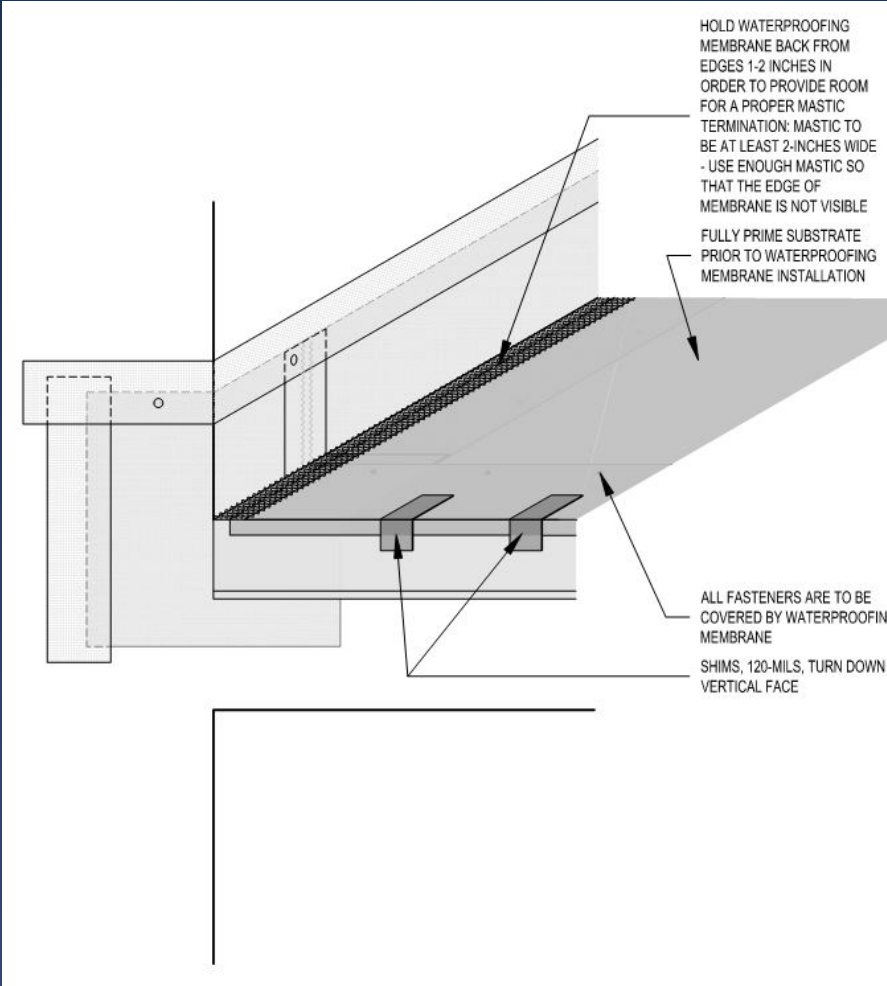
- Two lines of sealant at all metal to metal laps
- Weather-lap wall membrane
- Fasteners



Preformed Metal Corners:

Step 4

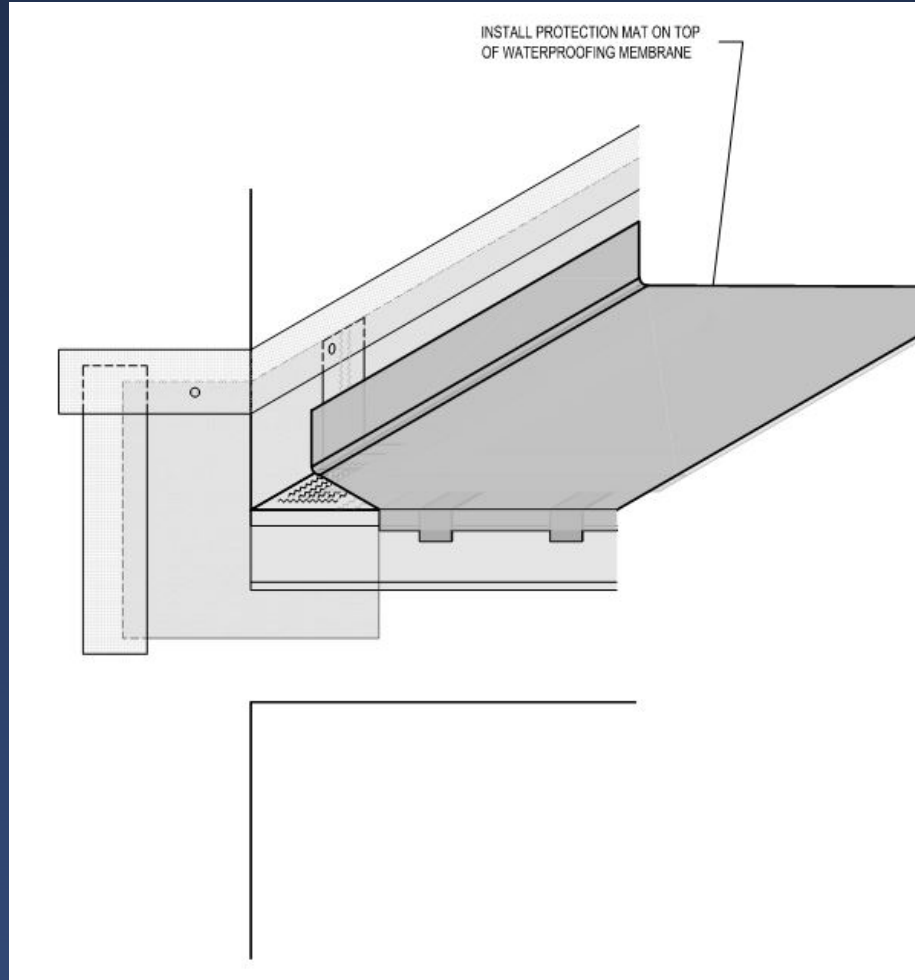
- Thickness
- Extend down vertical
- Avoid “sticky to sticky”



Preformed Metal Corners:

Step 5

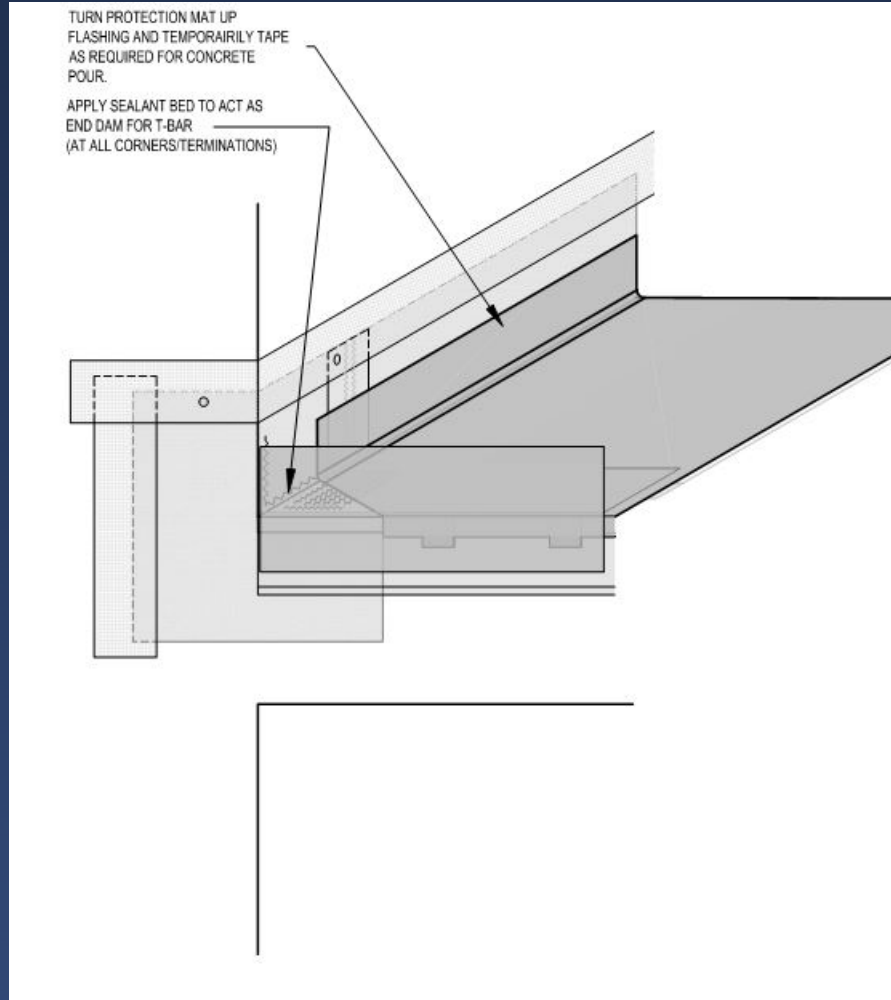
- Notch mat at shims, corners
- Sealant beds at corners



Preformed Metal Corners:

Step 6

- Notch mat at shims, corners
- Sealant beds at corners



Repair and Remediation



This concludes The American Institute of Architects Continuing Education Course



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