Dry…Don’t Die
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Wash, Rinse and Dry
Flood-Tolerant Wall Reconstruction

Existing brick veneer

Flexible 1/4" to 3/8"-thick XPS insulation, 8-foot-long sheets run horizontally. Sheets fed into cavity between brick and studs, lapped 2" horizontally, shingled fashion.

Wedges made from 1" XPS insulation help hold insulation sheets in place. Align wedges with studs; place one wedge at top of sheet and one at bottom.

2"-thick 2-lb.-density closed-cell foam sprayed in stud bays against new XPS rigid insulation.

Paint exposed studs; closed-cell foam (dotted purple line), bottom and top plates with a water-repellent, vapor-open material such as acrylic latex paint.

New drywall installed horizontally.

3/8" to 1/2"-thick drainage mat

Latex paint

Closed-cell foam sprayed against mat's filter fabric. Spray foam seals retrofit brick ties.

Min. 2'

Existing brick veneer

Weep holes drilled from exterior (vertical mortar joints removed at 16" on-centers). Retrofit weep hole covers inserted into mortar joints to prevent insect/rodent intrusion.

Remaining wall assembly power-washed, particularly at bottom of wall where the bulk of the damage occurred.

Liquid-applied pan flashing applied to bottom of air cavity and run up and over on to horizontal surface of bottom plate. Run fluid up studs approx. 2" to seal bottom of studs to bottom plate.

Building Science Corporation
Spray polyurethane foam (SPF), 2" thick closed cell 2lb/ft³ density

Extruded polystyrene (XPS)sheets installed shingle fashion

Weep opening (retrofitted from exterior)

Fluid applied flashing
Extruded polystyrene (XPS) “wedges” - intermittent blocking (approx. 1 1/2” x 4”) holding sheathing in place prior to spray polyurethane foam (SPF) installation

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Extruded polystyrene (XPS) sheets

Spray polyurethane foam (SPF), 3” thick closed cell 2lb/ft³ density

Acrylic latex paint over all surfaces prior to installation of interior gypsum board.
Spray polyurethane foam (SPF), 3” thick closed cell 2lb/ft³ density

Drainage mat - filter fabric to interior; 1/2” thick or greater

Weep opening (retrofitted from exterior)
Fluid applied flashing
Acrylic latex paint over all surfaces prior to installation of interior gypsum board.

Spray polyurethane foam (SPF), 3” thick closed cell 2lb/ft³ density.

Drainage mat - filter fabric to interior; 1/2” thick or greater.
Existing brick ties

Acrylic latex paint over all surfaces prior to installation of interior gypsum board

Spray polyurethane foam (SPF), 3” thick closed cell 2lb/ft³ density

Drainage mat - filter fabric to interior; 1/2” thick or greater

Fluid applied flashing
Liquid-applied flashing applied to bottom of air cavity and run up and over on to horizontal surface of bottom plate. Run fluid up studs.
Folded sheathing sleeve inserted between the stud. Seal the perimeter of the insert with fluid-applied flashing.
Strip of gypsum board removed at top after moisture event to facilitate drying

Vapor open paint coating

Strip of gypsum board removed at bottom after moisture event to facilitate drying

Remove baseboard after moisture event
Extruded polystyrene (XPS)

Spray polyurethane foam (SPF), 2” closed cell 2lb/ft³ density

Crown moulding

Gap in gypsum board at top of wall

Acrylic latex paint over all surfaces prior to installation of interior gypsum board

Gap in gypsum board to prevent wicking

Horizontal trim

Spray polyurethane foam (SPF), 2” closed cell 2lb/ft³ density

Removable wainscot (or removable gypsum board)

Gap in gypsum board at bottom of wall
Attic roof escape hatch (egress skylight)

Strip of gypsum board removed at top after moisture event to facilitate drying

Spray polyurethane foam (SPF), closed cell 2lb/ft³ density
Acrylic latex paint over all surfaces prior to installation of interior gypsum board

Strip of gypsum board removed at bottom after moisture event to facilitate drying

Remove baseboard after moisture event
Acrylic latex paint over all surfaces prior to installation of interior gypsum board

Strip of gypsum board removed at bottom after moisture event to facilitate drying

Remove baseboard after moisture event

Strip of rigid insulation removed after moisture event to facilitate drying

Continuous polyethylene vapor barrier (all joints overlapped)

Interior grade higher than exterior grade
Vapor permeable coating — greater than 10 perms ("latex paint")
Polymer modified (PM) or standard Portland cement stucco
Masonry wall
Seat in concrete slab
Weep screed

Vapor semi-permeable rigid insulation — expanded polystyrene, extruded polystyrene, fiber-faced isocyanurate
2x2 wood furring
Vapor open paint coating
Non-paper faced gypsum board
Latex paint or other permeable or vapor semi-permeable interior finish
Hold gypsum board up from slab 4"
Wide baseboard

Concrete slab
Granular capillary break and drainage pad (no fines)
Concrete grade beam
Polyethylene vapor barrier extended under grade beam where it also acts as a capillary break

Ground slopes away from wall at 5%
(6 in. per 10 ft.)
Brick veneer/stone veneer

Drained cavity

Exterior rigid insulation - extruded polystyrene, expanded polystyrene, isocyanurate, rock wool, fiberglass

Membrane or trowel-on or spray applied vapor barrier (Class I vapor retarder), air barrier and drainage plane (impermeable)

Concrete block

Vapor open coating

Uninsulated steel frame wall

Non-paper faced gypsum board

Latex paint or vapor semi-permeable textured wall finish

Vapor Profile
Latex paint

Stucco rendering

Concrete block

Rigid insulation (vapor semi-permeable) — unfaced extruded polystyrene, unfaced expanded polystyrene, glass fiber-faced isocyanurate

Vapor open coating

Uninsulated steel frame wall

Non-paper faced gypsum board

Latex paint or vapor semi-permeable textured wall finish

Vapor Profile
Fiber cement siding
1x4 furring
Exterior rigid insulation — extruded polystyrene, expanded polystyrene, isocyanurate, rock wool, fiberglass
Drainage space between exterior rigid insulation and drainage plane
Building paper or house wrap drainage plane
Non-paper faced exterior gypsum sheathing, treated plywood or treated oriented strand board (OSB)
Vapor open coating
Uninsulated wood stud cavity
Non-paper faced gypsum board
Latex paint or vapor semi-permeable textured wall finish

Vapor Profile
Latex paint

Precast concrete

Spray-applied high density foam insulation

Vapor open coating

Uninsulated steel frame wall

Non-paper faced gypsum board

Latex paint or vapor semi-permeable textured wall finish

Vapor Profile
Latex paint

Precast concrete

Rigid insulation (vapor semi-permeable) — unfaced extruded polystyrene, unfaced expanded polystyrene, fiber-faced isocyanurate

Vapor open coating

Uninsulated steel frame wall

Non-paper faced gypsum board

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Vapor Profile