

General Description: The HydroBlok One™ Backer CI panels are a proprietary foam insulation board installed over water-resistive barrier and fastened to approved sheathing over wood framing or exterior gypsum sheathing over steel stud framing:

Exterior finish materials are specified and installed in separate specification sections.

Edit to meet project requirements.

SECTION 061613 – CONTINUOUS INSULATION BACKER BOARD.

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes: Cement-coated extruded polystyrene (XPS) continuous insulation exterior facade panels use as backer boards for various exterior finishes.
- B. Related Sections:

Edit below to those specification sections referenced in body of this specification section.

1. Section 044313 “Adhered Brick Masonry Veneer”
2. Section 044313.16 “Adhered Stone Masonry Veneer”
3. Section 054000 “Cold-Formed Metal Framing”
4. Section 061000 “Rough Carpentry”
5. Section 061600 “Sheathing”
6. Section 061643 “Gypsum Sheathing Board”
7. Section 072413 “Polymer-Based Exterior Insulation and Finish Systems (EIFS).
8. Section 072419 “Water-Drainage Exterior Insulation and Finish Systems (EIFS).
9. Section 072423 “Direct-Applied Finish Systems (DAFS).
10. Section 072500 “Weather Resistant Barriers”
11. Section 076200 “Sheet Metal Flashing and Trim”
12. Section 079200 “Joint Sealants”
13. Section 092216 “Non-Structural Metal Framing”
14. Section 092300 “Gypsum Board”
15. Section 092400 “Cement Plastering”
16. Section 093013 “Ceramic Tiling”
17. Section 093033 “Stone Tiling”
18. Structural General Notes on the Structural Engineer’s Drawings.

1.2 REFERENCES

Edit reference standards to those referenced in body of specification section.

- A. American Standards and Testing of Materials (ASTM) International.
 1. ASTM C578 (2023) - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation
 2. ASTM C1177/C1177M (2017) - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
 3. ASTM C1396/C1396M (2024) - Standard Specification for Gypsum Board.
 4. ASTM E84 (2017) - Standard Test Method for Surface Buring Characteristics of Building Materials.
 5. ASTM E119 (2026) - Standard Test Methods for Fire Tests of Building Construction and Materials
 6. ASTM F1667/F1667M (2021) - Standard Specification for Driven Fasteners: Nails, Spikes, and Staples.

7. ASTM D1784 (2025) - Standard Classification System and Basis for Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds
8. ASTM E2098/E2098M (2025) - Standard Test Method for Determining Tensile Breaking Strength of Glass Fiber Reinforcing Mesh for Use in Exterior Insulation and Finish Systems (EIFS) and EIFS with Drainage Systems, after Exposure to a Sodium Hydroxide Solution.

B. International Code Council Evaluation Service

1. ICC-ES Evaluation Report, ESR-5559 (2025) – HydroBlok Composite Wall Panels.

1.3 SYSTEM DESCRIPTION

Edit to specify submittals required for type and scope of project. Consider field mock-ups in order to limit submittals and determine quality standard.

- A. Nonload-bearing exterior cement coated foam wall backer panels on fire-resistance-rated Type V construction.

1.4 PRE-INSTALLATION CONFERENCE

- A. Attendance: Contractor, installer, Owner, Architect, HydroBlok's representative, and those requested to attend.
- B. Location: Project Site.

1.5 ACTION SUBMITTALS

- A. Product Data: Submit manufacturer's literature for the following:
1. HydroBlok One™ Backer CI panels.
 2. Insulation fasteners.
 3. Accessories
- B. Shop Drawings: Locations and installation of control and expansion joints, including plans, elevations, sections, and attachment details.
- C. Samples for Verification: 24-inch (600 mm) square HydroBlok One™ Backer CI panels for each type of finish-coat color and texture indicated, prepared using same tools and techniques intended for actual work.
1. Include exposed trim and accessories.
 2. Include a typical control joint filled with selected sealant of color, as specified in Section 079200 "Joint Sealants."

1.6 INFORMATIONAL SUBMITTALS

- A. Installation instructions: HydroBlok One™ Backer CI's published installation instructions.
1. These instructions shall always remain at the jobsite.
- B. ICC-ES Evaluation Reports.
- C. Qualification Data: For Installer.
- D. Product Certificates: For each type of product, including product use classification.

1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data

1.8 QUALITY ASSURANCE

- A. Installer Qualifications:

1. Company specializing in work of this Section.
2. Able to document minimum 5 years' experience installing work of comparable size and scope.
3. Trained by HydroBlok Inc. as qualified to fabricate and erect HydroBlok One™ Backer CI's panel system using skilled and trained workers.

1.9 MOCKUPS

- A. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, to set quality standards for materials and execution, and to set quality standards for fabrication and installation.
1. Build mockup of typical wall area as shown on Drawings.
 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Conform to HydroBlok One™ Backer CI's written instructions.
- B. Deliver materials to the construction site in their original, unopened packaging with labels intact.
- C. Protect materials from contamination or damage throughout construction.
- D. Store off ground, under cover to protect from dampness.
1. Stack backer boards on pallets, flat and secure to prevent warping. Use sticker boards to avoid pressure on boards.

1.11 ENVIRONMENTAL REQUIREMENTS

- A. Cold Weather Requirements: Do not use frozen materials.

1.12 COORDINATION

- A. Section 061000 "Sheathing" for OSB / CDX plywood sheathing or Section 061643 "Gypsum Sheathing Board" for exterior gypsum sheathing as necessary to achieve flat and true substrate, suitable for work of this Section.

1.13 WARRANTY

Refer to HydroBlok's website for more information and exclusions on warranties.

- A. Backer Panel Limited Warranty: For product failure in manufacturing, substrate irregularity, and/or loss of R-value.
1. Warranty Period: 20 years from Substantial Completion.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. HydroBlok Inc.
1. Local Product Representative
 - a. John D. Gallup CSI, Director of Architectural & Commercial Resources, (206) 718-6024, john.gallup@hydroblok.com

HydroBlok One™ Backer CI panels are manufactured in the USA. This is important for Build America Buy America (BABA) projects.

2. Manufacturing Plant Address
 - a. 8080 West 1400 North #200
 - b. Salt Lake City, UT 84116
 - c. Product Support (855) 223-2929
 - d. Web Site: www.hydroblok.com/backer-board.

2.2 PERFORMANCE REQUIREMENTS

- A. Structural Performance: System must withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated in accordance with ASCE/SEI 7:

The following is based on HydroBlok One™ Backer CI panels when installed over 15/32-inch thick OSB over 2x4 studs spaced at 16 inches on center.

- B. Allowable Transverse Wind Loads
 1. Deflection Limits: L/360
 - a. Positive: 34.2 psf (1.64 kPa)
 - b. Negative: 29.7 psf (1.42 kPa)
 2. Deflection Limits: L/240
 - a. Positive: 46.9 psf (2.25 kPa)
 - b. Negative: 40.9 psf (1.96 kPa)
 3. Deflection Limits: Ultimate / 3
 - a. Positive: 55.2 psf (2.64 kPa)
 - b. Negative: 53.2 psf (2.55 kPa)
- C. System Performance Characteristics:
 1. Surface Burning Characteristics (ASTM E84): Class A.
 2. Fire Resistance (ASTM E119): 1 hour.
 3. Water Absorption (ASTM C578) Less than 1 percent.
 4. Water Vapor Transmission (ASTM C578): Meets ASTM E96

2.3 INTERIOR GYPSUM BOARD

Fire-rated construction must use Type X gypsum boards on the interior (room side) of the assembly.

- A. Minimum 5/8-inch (16 mm) thick Type X gypsum wall board conforming to ASTM C1396/C1396M.
- B. Refer to Section 092300 "Gypsum Board".

2.4 SUBSTRUCTURE

Choose one of the following from below. In some cases, there may be both wood studs and metal studs.

- A. Wood Stud Wall Framing: Minimum 2x4 solid sawn framing members with a specific gravity of 0.55.
 1. Refer to Section 061000 "Rough Carpentry".
- B. Metal Stud Wall Framing:
 1. Refer to Section 092216 "Non-Structural Metal Framing".

2.5 SHEATHING

Choose one of the following below. Oriented Strand Board (OSB) or CDX plywood is typically installed over wood studs and exterior gypsum sheathing is typically installed over metal studs.

A. Exterior Sheathing:

1. Oriented Strand Board (OSB): Sheathing Exposure 1, minimum 15/32-inch (12 mm) thick, complying with DOC PS-2.
 - a. Refer to Section 062160 "Sheathing" and the General Structural Notes.
2. Plywood: Sheathing Exposure 1, minimum 15/32-inch (12 mm) thick, complying with DOC PS-1.
 - a. Refer to Section 062160 "Sheathing" and the General Structural Notes.
3. Exterior Gypsum Sheathing Board: 5/8-inch (16 mm) thickness, Type X, ASTM C1177/C1177M (Glass Mat Gypsum Sheathing).
 - a. Refer to Section 061643 "Gypsum Sheathing".

2.6 WATER RESISTIVE BARRIER MEMBRANE

Below is based on DuPont Tyvek products. VaproShield, Henry, etc. also acceptable weather resistant barriers. Consult with HydroBlok before specifying alternative weather resistive barrier membrane products.

- A. Water-Resistive Barrier: The approved water-resistive barrier as specified in Section 072500 "Weather Resistive Barriers".
 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. DuPont™ Tyvek® StuccoWrap® Style 1062X (grooved for drainage).
 - b. DuPont™ Tyvek® HouseWrap (nongrooved) ESR-2375
- B. Material: Spunbonded polyolefin, non-woven, non-perforated, weather barrier. Grooved to function as a drainage plane.
 1. Performance Characteristics:
 - a. Air Penetration: 0.004 cfm/ft² at 75 Pa, when tested in accordance with ASTM E2178. Type I per ASTM E1677.
 - b. Water Vapor Transmission: 50 perms, when tested in accordance with ASTM E96, Method B.
 - c. Water Penetration Resistance: 210 cm when tested in accordance with AATCC Test Method 127.
 - d. Surface Burning Characteristics: Class A, when tested in accordance with ASTM E84 Flame Spread: 5, Smoke Developed: 25

2.7 TRIM, SUSPENSION SYSTEMS, AND ACCESSORIES

- A. Flashing and Sheet Metal: As specified Section 076200 "Sheet Metal Flashing and Trim".
- B. Joint Sealant and Backer Rod: Silicone sealant and pre-compressed foam backer, as specified Section 079200 "Joint Sealants".
- C. Flashing Tape: As approved by HydroBlok Inc.

2.8 CONTINUOUS INSULATION BACKER BOARD

- A. The HydroBlok One™ Backer CI panel is a composite panel consisting of an extruded polystyrene (XPS) foam plastic core reinforced with a layer of alkali-resistant fiberglass mesh embedded in a cementitious coating on both faces of the panel.

- B. Fire Testing: ASTM C578 XPS foam plastic core when tested in accordance with ASTM E84 at a thickness of 2 inches (51 mm).
 - 1. Flame spread index of 25 or less.
 - 2. Smoke developed index of 450 or less,
- C. Thickness / R-Values:

Revise for thickness of board on the project.

- 1. 1/2 inch (12.7 mm) Thick: R-2.5
- 2. 1 inch (25.4 mm) Thick: R-5.0
- 3. 1-1/2 inch (38.1 mm): R-7.5
- 4. 2 inch (51 mm) Thick: R-10

- D. Panel Sizes:

Revise for size of boards used on the project.

- 1. 3 feet by 5 feet (914 mm by 1371 mm)
- 2. 4 feet by 8 feet (1219 mm by 2438 mm)
- 3. 4 feet by 12 feet (1219 mm by 3657 mm)

- E. Thickness / Weights: per 4'-0" by 8'-0"

Revise for thickness of boards used on this project.

- 1. 1/2 inch (12.7 mm): 23 pounds (10.43 kg)
- 2. 1 inch (25.4 mm): 28 pounds (12.70 kg)
- 3. 1-1/2 inch (38.1 mm): 38 pounds (14.51 kg)
- 4. 2 inches (51 mm): 36 pounds (16.32 kg)

2.9 EXTERIOR FINISH MATERIALS

Revise to exterior finishes applied over HydroBlok One™ Backer Cl.

- A. Thin Brick Veneer: Refer to Section 044313 "Adhered Brick Masonry Veneer".
- B. Stone Adhered Veneer: Refer to Section 044313.16 "Adhered Stone Masonry Veneer"
- C. Exterior Insulation and Finish Systems: Refer to Section 072413 "Polymer-Based Exterior Insulation and Finish Systems (EIFS).
- D. Exterior Insulation and Finish Systems with Drainage Grooves: Refer to Section 072419 "Water-Drainage Exterior Insulation and Finish Systems (EIFS).
- E. Direct-Applied Finish Systems: Refer to Section 072423 "Direct-Applied Finish Systems (DAFS).
- F. Portland Cement Stucco: Refer to Section 092400 "Cement Plastering".
- G. Exterior Ceramic Tile: Refer to Section 093013 "Ceramic Tiling".
- H. Exterior Stone Tile: Refer to Section 093033 "Stone Tiling".

2.10 TRIM AND ACCESSORIES

- A. Mesh: HydroBlok's approved alkali resistant mesh, with a weight of 4 oz/yd² (135 g/m²).
- B. Fasteners:

Revise for specific fastener materials.

Coordinate with Structural Engineer for wood sheathing fasteners..131

1. Wood Stud Nails: (16d) 0.162 inch diameter by 3 inches / 3-1/2 inches (3.8 mm diameter by 76 mm / 89 mm) long smooth shank framing nails complying with ASTM F1667/F1667M.
 2. Wood Sheathing Nails: (8d) 0.131-inch diameter by 2-1/4 inches (3.3 mm diameter by 76 mm) or (10d) 0.148 inch diameter by 2-1/2 inches (3.8 mm by 64 mm) long smooth shank framing nails complying with ASTM F1667/F1667M.
 3. Gypsum Board Screws: No. 6 by minimum 1-1/4 inches (32 mm) long bugle-head Type W drywall screws.
 4. Sheathing Screws: No. 6 by minimum 1-1/4 inches (32 mm) long bugle-head Type S drywall screws.
 5. Composite Panel Screws: No. 8 by minimum 1 5/8 inches (41 mm) long zinc flat head screws and 1-1/4-inch diameter (32 mm) galvanized tabbed washers.
- C. Trim Accessories: Type as designated or required to suit conditions indicated and to comply with HydroBlok One™ Backer CI's written instructions; manufactured from UV-stabilized PVC; and complying with ASTM D1784.
1. Casing Bead: Prefabricated, one-piece type for attachment behind insulation, of depth required to suit thickness of coating and insulation, with face leg perforated for bonding to coating and back leg.
 2. Drip Screed/Track: Prefabricated, one-piece type for attachment behind insulation, with face leg extended to form a drip, of depth required to suit thickness of coating and insulation, with face leg perforated for bonding to coating and back leg.
 3. Expansion Joint: Closed-cell polyethylene backer rod and elastomeric sealant, 3/4-inch (19-mm) minimum.
 4. Windowsill Flashing: Prefabricated type for both flashing and sloping sill over framing beneath windows; with end and back dams; designed to direct water to exterior.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify conditions ready to receive work of this Section before beginning.

Revise for wall sheathing materials.

1. Wall Construction: Install OSB wall sheathing of Section 061000 "Sheathing" flat and true to plane.
2. Wall Construction: Install gypsum sheathing of Section 061643 "Gypsum Sheathing" flat and true to plane.
3. Weather-Resistive Barriers Including Building Paper and Vapor Barrier Tape: Conforming to Section 072500 "Weather Resistive Barriers".
4. Flashings and Counterflashings: As specified Section 076200 "Sheet Metal Flashing and Trim".

3.2 PREPARATION

- A. Protect surrounding areas and surfaces to preclude damage from work of this Section.
- B. Check building for any out of plane framing more than 1/4 inch over 10 feet. Use weather resistant shims as desired to proactively correct any out of plane sheathing panels.

3.3 INSTALLATION, GENERAL

- A. Install in accordance with HydroBlok's published installation instructions and requirements for IBC Chapter 23 or IRC Chapter 6.

3.4 WALL FRAMING INSTALLATION

- A. Install wood studs at 16 inches (406 mm) on-center and 12 inches (305 mm) edge to center.

- B. Nail studs to the single bottom plate and double top plate consisting of the same minimum 2x4 wood studs.
- C. Staggered mid-height full depth blocking, and nonstaggered full depth blocking 2 feet (0.61 m) from the bottom of the wall framing.

3.5 INTERIOR GYPSUM BOARD INSTALLATION

- A. Install in accordance with gypsum board manufacturer's published installation instructions.
- B. Install interior gypsum board vertically where long edges installed on framing members.
- C. Install using sheathing Type W drywall screws spaced 8 inches (203 mm) on-center along the perimeter and 12 inches (305 mm) on-center in the field.
- D. Cover all joints using paper joint tape and joint compound. Cover all screw heads with joint compound.

Revise in accordance with sheathing type.

3.6 WOOD SHEATHING INSTALLATION

- A. Install plywood or OSB sheathing in accordance with Building Code and General Structural Notes on Drawings.

Revise in accordance with sheathing type.

3.7 EXTERIOR GYPSUM SHEATHING INSTALLATION

- A. Install exterior gypsum sheathing in accordance with exterior gypsum sheathing manufacturer's published installation instructions.
- B. Install exterior sheathing vertically where long edges align with framing members.
- C. Install using exterior sheathing screws spaced 8 inches (203 mm) on-center along the perimeter and 12 inches (305 mm) on-center in the field.

3.8 WEATHER RESISTANT BARRIER INSTALLATION

- A. Weather Barrier: Install in accordance with weather resistant barrier manufacturer's published installation instructions and Section 072500 "Weather Resistant Barriers".
- B. Install weather resistant barrier as necessary to create a drainage plane between composite panel and substrate.

3.9 HYDROBLOK ONE™ BACKER CI INSTALLATION

- A. Fasteners: Fasten screws and washers through the composite backer board panels, through the sheathing and into the framing members. the face of the HydroBlok One™ Backer CI panels spaced 16 inches (406 mm) on-center on the edges and 16 inches (406 mm) on-center in the field.

Termination in accordance with IBC Section 2603.8 and 2024 IRC Section R305.4 and 2021 IRC Section R318.4

- A. Stagger HydroBlok One™ Backer CI panelboards 24 inches (610 mm) apart. Install panels in a running bond pattern to stagger joints.
- B. Fasteners to penetrate through HydroBlok One™ Backer CI panels a minimum 1 inch (25.4 mm) into framing.
- C. Space fasteners at maximum 16-inch (407 mm) intervals.

- D. Do not overdrive or underdrive screws. Washers should sit flush with panels.
- E. Seal flashing with stucco compatible felt flashing tape.
- F. Tack in cornerbeads. Embed into base coat and finish.
- G. Install expansion joints at a maximum 15 feet (1525 mm) in accordance with ASTM E2098/E2098M.
- H. Not to exceed 144 square feet (13.4 square meters).
- I. Terminate panel not less than 6 inches (152 mm) above finished grade,

3.10 ACCESSORY INSTALLATION

- A. Install a metal or PVC bottom flashing along the base of the wall to protect the HydroBlok One™ Backer CI from insects.
 - 1. A metal L-flashing shall be applied after the HydroBlok One™ Backer CI panels are installed.
 - 2. A stucco compatible felt-faced tape must be used to seal a solid metal lashing to the face of the board.
- B. Layout and install any Code-approved weather resistant expansion joints, control and/or reveal joints per plan and in compliance with Code.
- C. Control joints shall be cut in after the composite backer panels are installed.
- D. Install corner trim to all outside corners to cover the exposed foam.
- E. Install L-flashing at transitions and around windows as needed.

3.11 CLEANING

- A. Clean foreign material from control and expansion joints.
- B. Leave area clean, free from debris and residue from work of this Section.

END OF SECTION