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Legacy report on the 1997 Uniform Building Code™

DIVISION: 07—THERMAL AND MOISTURE PROTECTION
Section: 07240—Exterior Insulation and Finish Systems

DRYVIT FASTRAK SYSTEM 4000 DIRECT-APPLIED EXTERIOR FINISH SYSTEM

DRYVIT SYSTEMS, INC.
ONE ENERGY WAY
WEST WARWICK, RHODE ISLAND 02893

1.0 SUBJECT

Dryvit Fastrak System 4000 Direct-applied Exterior Finish System.

2.0 DESCRIPTION

2.1 General:

Fastrak System 4000 is a direct-applied exterior finish system consisting of four components to cover wood or steel framing. The four components are Dens-Glass™ Gold sheathing, base material, reinforcing mesh and finish coat. The finish has a flame-spread rating of less than 25 and a smoke-developed rating of 450 or less. The Dryvit Fastrak System 4000 is used in regions not exceeding 4,000 heating degree (°F) days. See Figure 2 for acceptable locations south of the 4,000 line.

2.2 Materials:

2.2.1 Sheathing: The sheathing is 1/2-inch-thick (12.7 mm) or 5/8-inch-thick (15.9 mm) Dens-Glass Gold gypsum board manufactured by G-P Gypsum Corporation and recognized in the current evaluation report ER-4305.

2.2.2 Base Material: The NCB base material is a ready-mixed, noncementitious acrylic copolymer coating.

2.2.3 Reinforcing Mesh: The reinforcing mesh is a woven, treated glass-fiber fabric weighing a minimum of 4.3 ounces per square yard (145.93 g/m²). It has a minimum tensile strength of 150 pounds per inch width (2.681 kg/mm), and has 12 strands per inch (0.4724 strand per mm) in the warp direction and 6 strands per inch (0.2362 strand per mm) in the fill direction.

2.2.4 Synthetic Finish Coat: The Dryvit finish coat is composed of natural mineral aggregates and fillers, color pigments, and an acrylic latex emulsion. It is packaged in 70-pound (26.1 kg) plastic pails and has a shelf life of two years when protected from extended periods of freezing and extreme heat. Storage temperatures should generally range from 40°F to 120°F (4.4°C to 48.9°C).

2.3 Installation:

Framing consists of minimum 2-by-4 (51 by 102 mm) wood studs or minimum No. 18 gage [0.0451 inch (1.15 mm)] steel studs. When sheathing is 1/2-inch-thick (12.7 mm) Dens-Glass Gold, framing is spaced a maximum of 16 inches (406 mm) on center. When sheathing is 5/8-inch-thick (15.9 mm) Dens-Glass Gold, framing is spaced a maximum of 24 inches (610 mm) on center. The framing system must be designed to resist all positive and negative transverse loads with a maximum allowable deflection of L/240 of the span. Prior to installing the Dens-Glass Gold sheathing, Grade D kraft waterproof building paper, complying with UBC Standard 14-1, must be attached to the framing in accordance with Section 1402.1 of the code. Dens-Glass Gold gypsum sheathing panels are applied with the long dimension parallel to framing and all edges backed by framing.

For steel framing, minimum 1/2-inch-thick (12.7 mm) sheathing panels are fastened with 1-inch-long (25.4 mm), No. 6, Type S-12, bugle-head, corrosion-resistant, self-tapping drywall screws. Five-eighths-inch-thick (15.9 mm) sheathing panels are fastened with 1 1/4-inch-long (31.7 mm) screws. Fasteners are spaced 8 inches (203 mm) on center along all studs and around the perimeter. The sheathing must be flat to 1/8 inch (3.2 mm) within any 4-foot-0-inch (1219 mm) radius.

All components must be applied over dry surfaces and out of direct sunlight. Temperature during application and curing must be 40°F (4.4°C) and above. Supplementary heat and moisture protection may be provided as needed. Surfaces must be sound, clean, dry, unpainted and free from any residue that may affect bond. Any surface contaminants such as dirt or dust must be removed without damaging the substrate surface.

The NCB base material is mixed to a smooth homogeneous consistency using a 1/2-inch (12.7 mm) drill at 400 to 500 rpm. A small quantity of clear water may be added for workability. The base material is applied in a uniform thickness of approximately 1/16 inch (1.6 mm) to the surface of the sheathing, using a flat stainless steel trowel. The reinforcing mesh is immediately placed against the wet NCB and embedded into the base material with the trowel. The NCB base coat must cure at least 24 hours.

The Dryvit finish material is mixed similarly to the NCB base material. The finish material is applied over the reinforced NCB base coat to the desired finish pattern and thickness. The finishes are applied using a clean, flat, stainless steel trowel, and are leveled to a uniform thickness. The texture is

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achieved by uniform hand motion and/or type of tool. The Freestyle finish is applied, using a clean, flat, stainless steel trowel, to an initial thickness of approximately $\frac{1}{16}$ inch (1.6 mm). The finish texture is either pulled out of this initial material to a maximum thickness of $\frac{1}{4}$ inch (6.4 mm), or the texture is achieved by adding more Freestyle to the base coat up to the maximum thickness of $\frac{1}{4}$ inch (6.4 mm).

See Figure 1 for typical details.

2.4 Allowable Loads:

The following allowable loads are recognized for Dryvit Fastrak 4000:

1. Steel framing [No. 18 gage by $3\frac{5}{8}$ -inch-deep (92 mm) studs], $\frac{1}{2}$ -inch (12.7 mm) sheathing 16 inches (406 mm) on center: 40 psf (275 kPa) positive pressure, 16.7 psf (115 kPa) negative pressure.
2. Steel framing (No. 18 gage by $3\frac{5}{8}$ studs), $\frac{5}{8}$ -inch (15.9 mm) sheathing 16 inches (406 mm) on center: 40 psf (275 kPa) positive pressure, 26 psf (181 kPa) negative pressure.
3. Steel framing (No. 18 gage by $3\frac{5}{8}$ studs), $\frac{5}{8}$ -inch (15.9 mm) sheathing 24 inches (610 mm) on center: 23.2 psf (160 kPa) positive pressure, 16.3 psf (112 kPa) negative pressure.

2.5 Identification:

Material containers are identified by the manufacturer's name and address, the product name, the evaluation report number (ICBO ES ER-5032), the batch number, the net weight of material (lb./kg) and storage instructions.

3.0 EVIDENCE SUBMITTED

Reports of tests in accordance with the ICC-ES Interim Criteria for Direct-applied Exterior Finish Systems (DEFS)

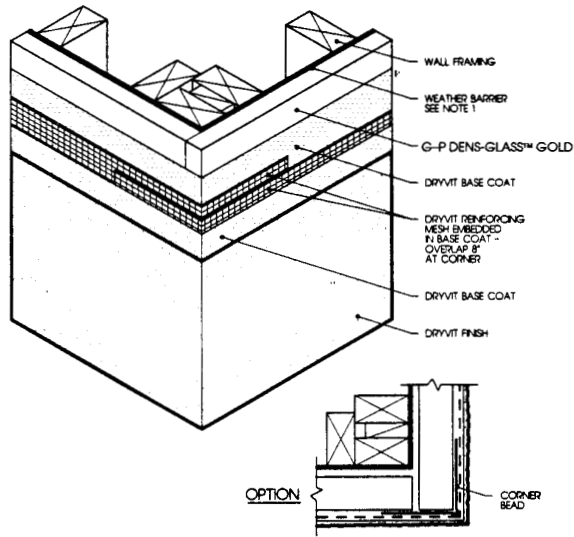
(AC59), dated July 2002, application instructions and product brochures.

4.0 FINDINGS

That the Dryvit Fastrak System 4000 Direct-applied Exterior Finish System described in this report complies with the 1997 *Uniform Building Code*TM, subject to the following conditions:

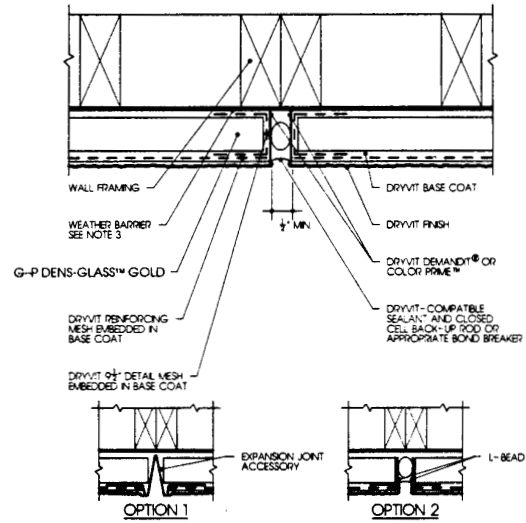
- 4.1 **Construction is as set forth in this report and the manufacturer's instructions. The system is limited to installation in areas described in Section 2.1 of this report.**
- 4.2 **Installation must be by a contractor recognized by Dryvit Systems, Inc., as being trained to perform installation of the Dryvit Fastrak System 4000.**
- 4.3 **Contractor's Certificate and Sealant Installer's Certificate, as shown in Exhibits A and B, must be completed by the Fastrak System 4000 applicator and the sealant installer and must be presented to the building official at the completion of each project.**
- 4.4 **Walls must be braced to resist wind and seismic forces.**
- 4.5 **Installation is limited to exterior walls of Type V construction.**
- 4.6 **Dens-Glass Gold (ER-4305) is a compatible substrate with Fastrak System 4000.**

This report is subject to re-examination in two years.



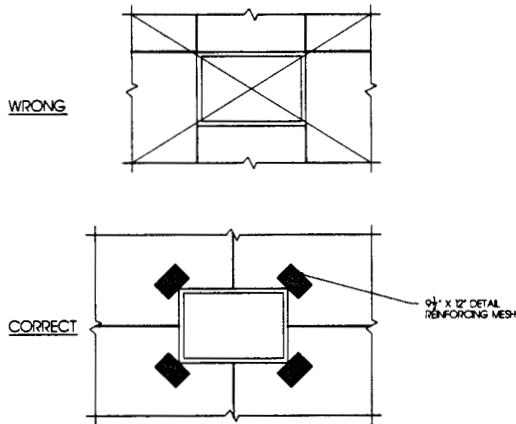
NOTE: 1. REQUIRED WEATHER BARRIER PER U.B.C. STANDARD 14-1 GRADE D. THE WEATHER BARRIER SHALL BE VAPOR PERMEABLE

OUTSIDE CORNER



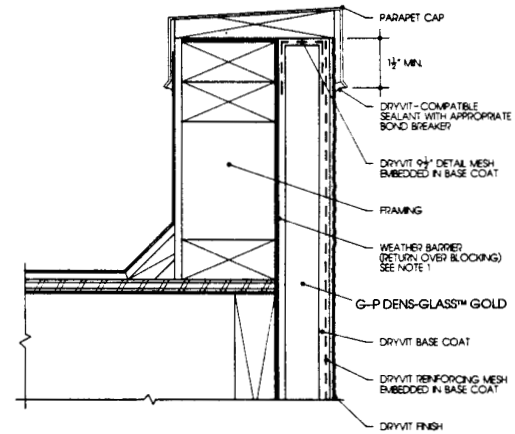
NOTES: 1. DOUBLE STUDS REQUIRED AT CONTROL JOINT.
 2. SYSTEM CONTROL JOINTS ARE REQUIRED AT A MINIMUM OF 20 LINEAR FEET
 3. REQUIRED WEATHER BARRIER PER U.B.C. STANDARD 14-1 GRADE D. THE WEATHER BARRIER SHALL BE VAPOR PERMEABLE

SYSTEM CONTROL JOINT



NOTES: 1. LOCATE G-P DENS-GLASS™ GOLD SUCH THAT TIE EDGES DO NOT ALIGN WITH CORNERS OF THE PENETRATION
 2. EMBED 9/16" x 12' DETAIL REINFORCING MESH IN BASE COAT DIAGONALLY AT EACH CORNER

WALL PENETRATIONS

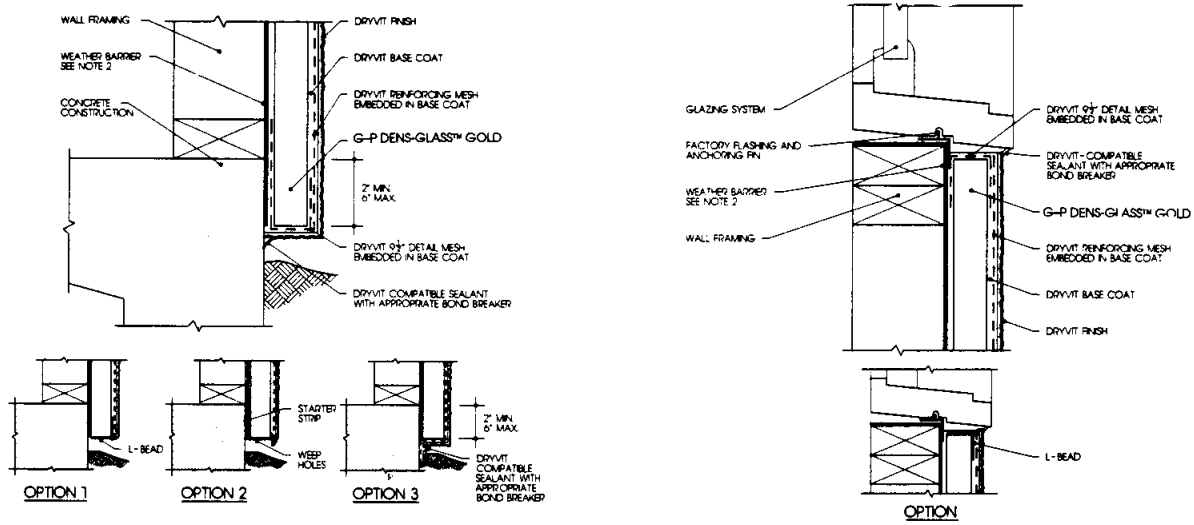


NOTE: 1. REQUIRED WEATHER BARRIER PER U.B.C. STANDARD 14-1 GRADE D. THE WEATHER BARRIER SHALL BE VAPOR PERMEABLE

PARAPET DETAIL

For SI: 1 inch = 25.4 mm.

FIGURE 1

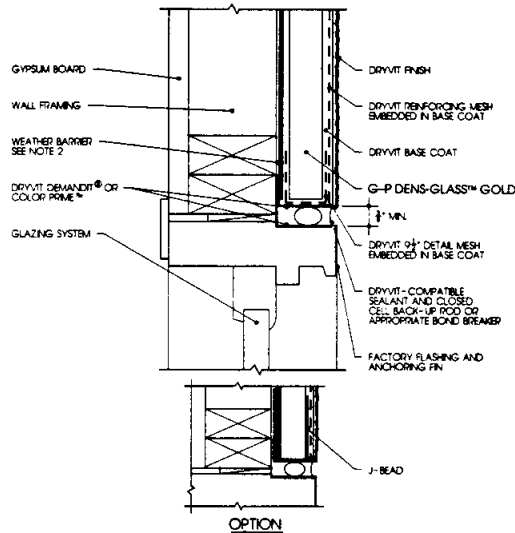


- NOTES 1. DO NOT EXTEND G-P DENS-GLASS™ GOLD BELOW GRADE
 2. REQUIRED WEATHER BARRIER PER U.B.C. STANDARD 14-1 GRADE D. THE WEATHER BARRIER SHALL BE VAPOR PERMEABLE

GRADE LEVEL FRAMING AT CONCRETE SLAB

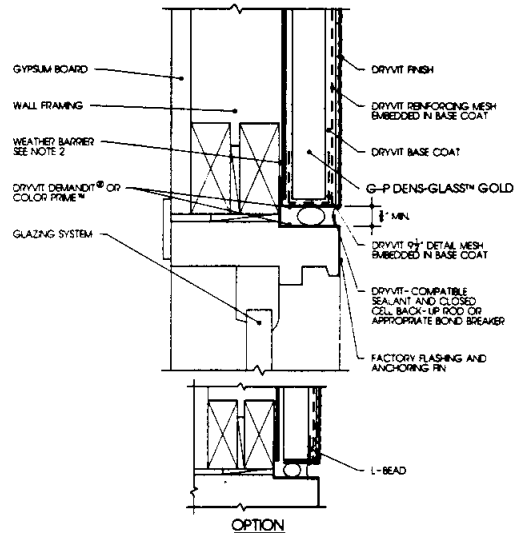
- NOTES 1. TUCK THE WEATHER BARRIER BENEATH THE FACTORY FLASHING AND ANCHORING FIN.
 2. REQUIRED WEATHER BARRIER PER U.B.C. STANDARD 14-1 GRADE D. THE WEATHER BARRIER SHALL BE VAPOR PERMEABLE

SILL DETAIL



- NOTES 1. SET WINDOW PRIOR TO APPLYING THE WEATHER BARRIER.
 2. REQUIRED WEATHER BARRIER PER U.B.C. STANDARD 14-1 GRADE D. THE WEATHER BARRIER SHALL BE VAPOR PERMEABLE

JAMB DETAIL



- NOTES 1. SET WINDOW PRIOR TO APPLYING THE WEATHER BARRIER.
 2. REQUIRED WEATHER BARRIER PER U.B.C. STANDARD 14-1 GRADE D. THE WEATHER BARRIER SHALL BE VAPOR PERMEABLE

HEAD DETAIL

For SI: 1 inch = 25.4 mm.

FIGURE 1—Continued

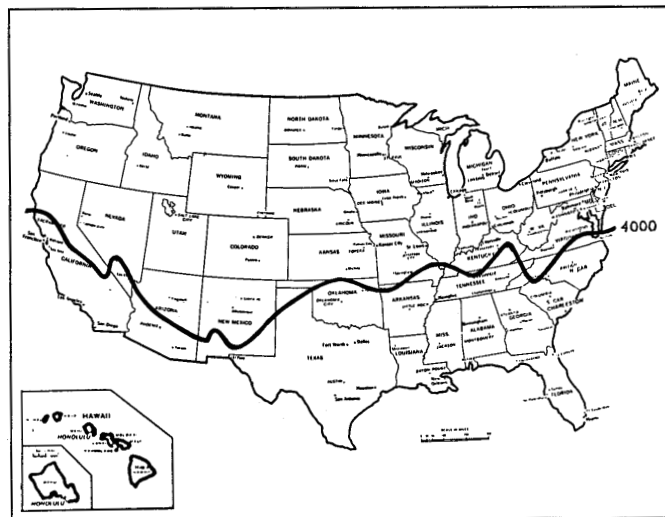


FIGURE 2—GEOGRAPHICAL LIMITATIONS

CONTRACTORS CERTIFICATE
(To be completed by DEFS contractor)

Completion Date: _____

THE DIRECT-APPLIED EXTERIOR FINISH SYSTEM (DEFS) INSTALLED ON THE STRUCTURE LOCATED AT THE ADDRESS INDICATED BELOW:

_____ CONFORMS

TO (DEFS MANUFACTURER NAME) RECOMMENDED INSTALLATION PRACTICES AND SECTION(S) _____ OF ICC-ES ER-_____.

Address of Structure:

Product Component Names:

Adhesive(s) _____
Fasteners (mech) _____
Base Coat _____
Reinforcing Fabric _____
Finish Coat(s) _____

INSTALLATION

CONFORMS

- A. Substrate Type and Tolerance _____
- B. DEFS _____
 - 1. Adhesive and/or Fasteners _____
 - 2. Reinforcing Fabric _____
 - 3. Base Coat _____
 - 4. Finish _____

C. The information entered above is offered in testimony that the DEFS installation conforms with the DEFS manufacturer's installation methods and procedures, and the DEFS manufacturer's ES report.

NOTE: An installation card shall be received from the sealant installer indicating that the sealant installation conforms with the DEFS evaluation report and sealant manufacturer's installation methods and procedures must accompany this declaration.

DEFS Contractor Company Name and Address:

Signature of Responsible Officer: _____

Typed Name and Title of Officer: _____

Telephone Number (____) _____

cc: Original: Building Department (Must be submitted with sealant installer declaration.)
Copy: DEFS Manufacturer

SEALANT INSTALLERS CERTIFICATE
(To be completed by Sealant Installer)

Completion Date: _____

THE SEALANT INSTALLED IN CONJUCTION WITH A DIRECT-APPLIED EXTERIOR FINISH SYSTEM (DEFS) INSTALLED ON THE STRUCTURE LOCATED AT THE ADDRESS INDICATED BELOW:

_____ CONFORMS

TO (DEFS MANUFACTURER'S NAME) AND (SEALANT MANUFACTURER'S NAME) RECOMMENDED INSTALLATION PRACTICES AND SECTIONS(S) _____ OF ICC-ES ER-_____.

Address of Structure:

Product Component Names:

Primer(s) _____
Sealers _____
Bond Breakers _____
Sealant Materials _____

INSTALLATION

CONFORMS

- A. Designer's requirements, details and instructions _____
- B. Sealant manufacturer's details and requirements _____
- C. DEFS manufacturer's requirements _____
- D. The information entered above is offered in testimony that the sealant installation conforms with the sealant manufacturer's installation methods and procedures, and the DEFS manufacturer's evaluation report.

Sealant Installer Company Name and Address:

Signature of Responsible Officer: _____

Typed Name and Title of Officer: _____

Telephone Number (____) _____

cc: Original: Building Department (Must be submitted with DEFS contractor declaration.)
Copies: DEFS Manufacturer
DEFS Sealant Manufacturer.

EXHIBIT B