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**DIVISION: 09—FINISHES**  
**Section: 09220—Portland Cement Plaster**

**REPORT HOLDER:**

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**EVALUATION SUBJECT:**

**ATLAS TUFF-KOTE™ FIBER REINFORCED EXTERIOR STUCCO SYSTEM**

**1.0 EVALUATION SCOPE**

**Compliance with the following codes:**

- 2006 *International Building Code*® (IBC)
- 2006 *International Residential Code*® (IRC)
- 1997 *Uniform Building Code*™ (UBC)

**Properties evaluated:**

- Structural
- Weathering and durability
- Fire-resistance-rated construction
- Noncombustible construction

**2.0 USES**

The Atlas Tuff-Kote Fiber Reinforced Stucco System is an alternative exterior wall covering to that specified in IBC Chapter 25, IRC Section R703 and UBC Chapter 25. The system may be used in a one-hour fire-resistance-rated wall assembly and walls required to be Type I, II, III, or IV construction when installed in accordance with Sections 4.4 and 4.5 of this report, respectively.

**3.0 DESCRIPTION**

**3.1 General:**

The Atlas Tuff-Kote Fiber Reinforced Stucco System is a proprietary mixture of portland cement, sand, fibers, water and proprietary ingredients reinforced with wire fabric or metal lath and applied to substrates of expanded polystyrene (EPS) insulation board, fiberboard, plywood or gypsum sheathing. The system is installed on exterior walls of wood-framed, steel-framed, masonry or concrete construction.

**3.2 Materials:**

**3.2.1 Atlas Tuff-Kote Stucco Mixture:** Atlas Tuff-Kote stucco is a factory-prepared mixture consisting of Type I or II portland cement complying with ASTM C 150, fibers, lime and

proprietary additives. The stucco mixture is packaged in 50- and 80-pound (22.7 and 36.3 kg) bags. Approximately 2<sup>1</sup>/<sub>2</sub> to 3<sup>1</sup>/<sub>2</sub> gallons (9.5 to 13.2 L) of water and 125 to 150 pounds (56.7 to 68.0 kg) of sand are added to each 50-pound (22.7 kg) bag of stucco mixture in the field. Approximately 4<sup>1</sup>/<sub>2</sub> to 6 gallons (17 to 22.7 L) of water and 200 to 240 pounds (90.7 to 108.9 kg) of sand are added to each 80-pound (36.3 kg) bag of stucco mixture in the field. Alternately, Atlas Tuff-Kote is available as a factory-prepared concentrate mixture, containing sand and stucco mixture in 50- and 80-pound (22.7 and 36.3 kg) bags. Approximately 1<sup>1</sup>/<sub>2</sub> to 2<sup>1</sup>/<sub>2</sub> gallons (5.7 to 9.5 L) of water are added to each 50-pound (22.7 kg) bag, and 2<sup>1</sup>/<sub>2</sub> to 3<sup>3</sup>/<sub>4</sub> gallons (9.5 to 14.2 L) of water are added to each 80-pound (36.3 kg) bag. These components are mixed in the field in accordance with the manufacturer's published installation instructions. Coloring oxides and bonding adhesives may be added in the field in accordance with the manufacturer's published installation instructions.

**3.2.2 Sand:** Sand must be clean and free from deleterious amounts of loam, clay, silt, soluble salts and organic matter. Sampling and testing must comply with ASTM C 144 or ASTM C 897 within the following limits:

RETAINED ON U.S. STANDARD SIEVE	PERCENT RETAINED BY WEIGHT ± 2 PERCENT	
	Minimum	Maximum
No. 4	—	0
No. 8	0	10
No. 16	10	40
No. 30	30	65
No. 50	70	90
No. 100	95	100

**3.2.3 Grooved Insulation Board:** When installed over open framing, EPS insulation boards must have a minimum nominal density of 1.5 pounds per cubic foot (24 kg/m<sup>3</sup>), and a flame-spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E 84 (UBC Standard 8-1); and must comply with ASTM C 578 as Type II with a thickness of 1 to 1<sup>1</sup>/<sub>2</sub> inches (25.4 to 38 mm) and <sup>3</sup>/<sub>8</sub>-inch-high (9.5 mm) tongues with compatible grooves for horizontal joints. See Figure 1 for joint detail. When installed over solid sheathing, the EPS boards must comply with ASTM C 578 as Type I or II with a minimum nominal density of 1.0 pound per cubic foot (16 kg/m<sup>3</sup>), have a thickness of no less than <sup>1</sup>/<sub>2</sub> inch (12.7 mm) and have <sup>1</sup>/<sub>4</sub>-inch-wide-by-<sup>1</sup>/<sub>8</sub>-inch-deep (64 mm by 3.2 mm) vertical grooves spaced at 12 inches (405 mm) on the back face of the boards. Square-edge boards can be used over solid substrates, except when installed as part of the water-resistive barrier over wood-based sheathing as described in Section 3.2.9.1, in which case the boards must have horizontal tongue-and-groove edges complying with Figure 1, and have a minimum thickness of 1 inch (25.4 mm) and a maximum thickness of 1<sup>1</sup>/<sub>2</sub> inches (38 mm). All boards must be recognized in a current ICC-ES evaluation report. See Section 7.3 for board identification.

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### 3.2.4 Lath:

**3.2.4.1 Wire Fabric Lath:** Wire fabric lath must comply with the ICC-ES Acceptance criteria for Metal Plaster Bases (Lath) (AC191) and ASTM C 1029. Minimum No. 20 gage [0.035 inch (0.89 mm)], 1-inch (25.4 mm) galvanized steel, woven-wire fabric must be used. Lath must be furred when applied over all substrates except unbacked EPS insulation board. Furring must comply with the following requirements:

1. When maximum total coating thickness is  $\frac{1}{2}$  inch (12.7 mm) or less, the body of the lath must be furred a minimum of  $\frac{1}{8}$  inch (3.2 mm)
2. When total coating thickness is greater than  $\frac{1}{2}$  inch (12.7 mm), No. 17 gage [0.058 inch (1.47 mm)] by  $1\frac{1}{2}$ -inch (38 mm) woven-wire fabric lath must be used. The body of the lath must be furred a minimum of  $\frac{1}{4}$  inch (6.4 mm) from the substrate after installation.

**3.2.4.2 Expanded Metal Lath:** Metal lath must comply with AC191 and IBC Table 2507.2, IRC Section R703.6 or UBC Table 25-B. Furring requirements are as set forth in Section 3.2.4.1 for wire fabric lath.

**3.2.5 Gypsum Board:** The gypsum sheathing board is water-resistant core gypsum sheathing complying with ASTM C 79. Gypsum wallboard complies with ASTM C 36.

**3.2.6 Fiberboard:** The fiberboard is a minimum  $\frac{1}{2}$ -inch-thick (12.7 mm), asphalt-impregnated fiberboard complying with ANSI/AHA A194.1 as a regular-density sheathing.

**3.2.7 Wood Structural Panels:** The panels are minimum  $\frac{5}{16}$ -inch-thick (7.9 mm) plywood for studs spaced 16 inches (406 mm) on center, and minimum  $\frac{3}{8}$ -inch-thick (9.5 mm) plywood for studs spaced 24 inches (610 mm) on center. Plywood is exterior grade or Exposure 1 complying with US DOC PS-1 or UBC Standard 23-2, as applicable.

**3.2.8 Caulking:** The caulking is acrylic latex complying with ASTM C 834.

### 3.2.9 Weather Protection:

**3.2.9.1 Water-resistive Barrier:** Application of the barrier must comply with the IBC Section 1404.2, IRC Section 703.2 or UBC Section 1402.1, as applicable. A water-resistive barrier is not required when the system is installed over concrete or masonry substrates. When installation is over open framing, the water-resistive barrier is installed behind the insulation board. For jurisdictions adopting the IBC or IRC, except when installation is over wood-based sheathing, the water-resistive barrier must be either a minimum of one layer of No. 15 asphalt felt, complying with ASTM D 226, Type I, or a water-resistive barrier recognized as equivalent to ASTM D 226, Type I or better, in a current ICC-ES evaluation report.

When installation is over wood-based sheathing, weather-resistive barriers must be minimum Grade D kraft building paper complying with UBC Standard 14-1, or a weather-resistive barrier recognized as equivalent to Grade D or better in a current ICC-ES evaluation report.

For jurisdictions adopting the IBC, IRC and UBC, when applied over any wood-based sheathing, the barrier must be one of the following:

- (a) A minimum of two layers of Grade D kraft building paper as set forth in IBC Section 2510.6 or UBC Section 2506.4.
- (b) One layer of insulation board, having horizontal tongue-and-groove edges as described in Section 3.2.3 of this report, over one layer of Grade D kraft building paper having a minimum water-resistance rating of 60 minutes; or an equivalent recognized in a current ICC-ES evaluation report.

**3.2.9.2 Vapor Retarder:** A vapor retarder complying with IBC Section 1403.3 or IRC Section R318.1 must be provided, unless its omission is permitted under the exceptions in IBC Section 1403.3 or IRC Section R318.1.

**3.2.9.3 Flashing:** Flashing complying with IBC Section 1405.3, IRC Section R703.8 or UBC Section 1404.2, as applicable, must be provided. Where membrane flashing is used, it must be a self-adhering, flexible rubberized asphalt and polyethylene material, 0.030 inch thick (0.8 mm) and shingle-lapped with the water-resistive barrier. Rigid flashing must be sloped towards the exterior, with an upturned leg on the interior side and at the ends. Flashing must extend beyond the surface of the exterior wall.

**3.2.10 Trim and Accessories:** All trim, screeds and corner reinforcement must be galvanized steel or approved plastic.

## 4.0 INSTALLATION

### 4.1 General:

The exterior cementitious coating is applied by hand-troweling or machine-spraying in one coat to a minimum  $\frac{3}{8}$ -inch (9.5 mm) thickness. A minimum coating thickness of  $\frac{1}{4}$  inch (6.4 mm) is permitted around openings and penetrations, provided the stucco is installed over a solid substrate in accordance with Section 4.3 of this report. The lath must be embedded in the minimum coating thickness and cannot be exposed. The finish coat, if required, must be applied in accordance with InCide Technologies' instructions. The coating is applied at ambient air temperatures between 35°F and 117°F (1.7°C and 47.2°C). The coating is applied by applicators approved by InCide Technologies, Inc. An installation card as illustrated in Figure 3 must be on the jobsite with the name of the applicator and the product to be used before any water-resistive barrier or exterior sheathing is installed. Also, see Section 5.5 of this report.

### 4.2 Application over Open Framing:

The water-resistive barrier is placed, as set forth in Section 3.2.9.1, over open wood studs, with a specific gravity of 0.5 or greater, spaced a maximum of 24 inches (610 mm) on center. The EPS insulation board, described in Section 3.2.3, is then placed horizontally with tongues facing upward, and is temporarily held in place with galvanized staples or roofing nails. Vertical butt joints must be staggered a minimum of one stud space from adjacent courses and occur directly over studs. The lath is applied tightly, with  $1\frac{1}{2}$ -inch (38 mm) endlaps and sidelaps, over the EPS insulation board, and is fastened through the EPS insulation board and water-resistive barrier to wood studs, sills and plates. Fasteners are No. 11 gage galvanized roofing nails with  $\frac{1}{2}$ -inch-diameter (12.7 mm) heads, spaced 6 inches (152 mm) on center, or No. 16 gage [0.065-inch leg diameter (1.65 mm)] galvanized staples with a minimum crown width of  $\frac{15}{16}$  inch (23.8 mm), spaced 6 inches (152 mm) on center. Fasteners must penetrate wood framing at least 1 inch (25.4 mm). Care should be taken to avoid overdriving fasteners.

The Atlas Tuff-Kote Fiber Reinforced Stucco System may also be applied over minimum No. 20 gage [0.0396-inch base-metal thickness (0.91 mm)] steel studs spaced 16 inches (406 mm) on center. The wire fabric lath is applied tightly over the foam plastic board and is fastened through the board and water-resistive barrier to the metal studs, using minimum No. 8, corrosion-resistant, self-drilling, tapping screws having 0.40-inch-diameter (10.2 mm) waferheads, at 6 inches (152 mm) on center to all studs and track. Screws must penetrate the studs a minimum of  $\frac{1}{2}$  inch (12.7 mm).

Wall bracing in accordance with IBC Section 2308.9.3 or 2308.12, IRC Section R602.10 or R602.11, or UBC Sections 2320.11.3 and 2320.11.4 is required. Outside wall corners and

parapet corners are covered with extra metal corner reinforcement attached to the framing members with approved fasteners spaced 18 inches (457 mm) maximum on center. Weep screeds are installed at the bottom of the wall and are to comply with IBC Section 2512.1.2 or UBC Section 2506.5. Galvanized metal,  $1\frac{3}{8}$ -inch (35 mm), J-shaped trim pieces are installed at other areas where insulation board is exposed. At windows and doors, flashing described and installed in accordance with IBC Section 1405.3, IRC Section R703.8 or UBC Section 1402.2, butting J-trim metal edges, is to be caulked. Holes for hose bibbs, electrical panels and other penetrations of substrate surfaces, except those caused by fasteners, must be caulked. The coating is applied as described in Section 4.1.

### 4.3 Application over Solid Substrates:

**4.3.1 Fiberboard:** Fiberboard sheathing is installed directly over wood studs spaced a maximum of 24 inches (610 mm) on center. The fiberboard is temporarily held in place with corrosion-resistant staples or roofing nails. A water-resistive barrier, as set forth in Section 3.2.9.1, is applied over the fiberboard prior to installation of lath. When the optional EPS insulation board is installed, the grooves must face the water-resistive barrier and must be aligned vertically, but may be offset a maximum of 6 inches (152 mm) from adjacent boards. The vertical joints of EPS insulation boards are staggered from adjacent courses a minimum of 3 inches (76 mm). Insulation boards are attached to the framing, but the vertical joints of the insulation board are not required to align with the framing. The wire fabric or expanded metal lath and optional EPS insulation board are attached to studs, through the water-resistive barrier and sheathing, with fasteners and spacings as described for EPS insulation boards (Section 4.2), or as described for fiberboard in IBC Table 2304.9.1, IRC Table R602.3(1), UBC Table 23-II-B-1, whichever is more restrictive.

Wall bracing in accordance with IBC Section 2308.9.3 or UBC Sections 2320.11.3 and 2320.11.4 is required. When the fiberboard is used as wall bracing, it is to be fastened to the framing in accordance with the requirements of the applicable code, prior to application of the optional EPS insulation board. The lath and optional EPS insulation board is to be fastened in accordance with Section 4.2 of this report. Outside wall corners and parapet corners must be covered with extra metal corner reinforcement attached to the framing members with approved fasteners spaced 18 inches (457 mm) on center. Weep screeds are installed at the bottom of the wall and are to comply with IBC Section 2512.1.2, IRC Section R703.6.2.1 or UBC Section 2506.5. Galvanized steel,  $1\frac{3}{8}$ -inch (35 mm), J-shaped trim pieces must be installed in other areas where insulation board is exposed. See Figure 2 for typical installation details. At windows and doors, butting J-trim metal edges are caulked. Holes for hose bibbs, electrical panels and other penetrations of substrate surfaces, except those caused by fasteners, are also caulked. The coating is applied as described in Sections 4.1 and 4.2.

**4.3.2 Gypsum Sheathing:** Water-resistant core gypsum sheathing is installed directly over wood studs spaced a maximum of 24 inches (610 mm) on center. Gypsum sheathing is fastened in accordance with ASTM C 1280 (IBC), IRC Table R702.3.5, or UBC Table 25-G. A water-resistive barrier is applied over the gypsum sheathing before application of lath. The lath is attached to studs through the sheathing, with fasteners and spacings as described for insulation board in Section 4.2 of this report. All walls are braced in accordance with the applicable code. Exposed sheathing edges are protected with screeds. Holes in the substrate surface are caulked, and the coating is applied as described in Sections 4.1 and 4.2.

The system is applied to minimum No. 20 gage [0.0396-inch base-metal thickness (0.91 mm)] steel studs spaced at a maximum of 16 inches (406 mm) on center, using No. 8 by 0.420-inch-diameter-head (10.7 mm), minimum  $1\frac{3}{16}$ -inch-long (30.2 mm), self-drilling, tapping screws spaced at 6 inches (152 mm) on center to secure sheathing to studs. Lath is secured with No. 8 by 0.420-inch-diameter-head (10.7 mm), minimum  $1\frac{1}{4}$ -inch-long (31.7 mm), self-drilling, tapping waferhead screws spaced 6 inches (152 mm) on center. Screws fastening sheathing, and screws fastening lath, are staggered from each other. Minimum screw penetration is  $\frac{1}{2}$  inch (6.4 mm) beyond the stud. The balance of the system installation must be in accordance with Section 4.2.

**4.3.3 Wood Structural Panel Sheathing:** Plywood sheathing is applied directly to wood studs under the conditions set forth in Section 3.2.7 and either IBC Table 2308.9.3(3), IRC Table 602.3(3), or UBC Table 23-IV-D-1 and Table 23-II-B-1. The water-resistive barrier, optional EPS insulation board, wire fabric lath, and coating are applied as described in Section 4.3.1 for fiberboard. The system may also be installed over plywood attached to minimum No. 20 gage [0.0396-inch base-metal thickness (0.91 mm)] steel studs spaced a maximum of 16 inches (406 mm) on center or wood stud framing as described in Section 4.3.1 for fiberboard. The sheathing is temporarily held in place with self-tapping screws. The water-resistive barrier and coatings are applied as described for fiberboard in Section 4.3.1. The lath is applied over the plywood as set forth in Section 4.2.

**4.3.4 Concrete and Masonry:** Surface preparation must be in accordance with IBC Section 2510.7 or UBC Section 2508.8, as applicable. Surface must be clean, free of dust and other particles, and sufficiently damp to ensure proper bonding. The Atlas Tuff-Kote coating is applied directly to the prepared surface at a minimum thickness of  $\frac{3}{8}$  inch (9.5 mm) in accordance with applicable provisions of Section 4.1 and the manufacturer's published installation instructions.

### 4.4 One-hour Fire-resistance-rated Wall Assembly:

**4.4.1 Interior Face:** One layer of  $\frac{5}{8}$ -inch-thick (15.9 mm), Type X gypsum wallboard is applied parallel or at right angles to the interior face of 2-by-4 wood studs (minimum specific gravity of 0.50) spaced a maximum of 24 inches (610 mm) on center. The wallboard is attached with 6d coated nails,  $1\frac{7}{8}$  inches (47.6 mm) long with  $\frac{1}{4}$ -inch-diameter (6.4 mm) heads, at 7 inches (178 mm) on center to studs, plates and blocking. All wallboard joints are backed with minimum 2-by-4 wood framing, and are taped and treated with joint compound in accordance with ASTM C 840 or GA216. Fastener heads are also treated with joint compound in accordance with ASTM C 840 or GA216.

**4.4.2 Exterior Face:** One layer of minimum  $\frac{5}{8}$ -inch-thick (15.9 mm), Type X, water-resistant core gypsum sheathing, 48 inches (1219 mm) wide, is applied parallel to studs with No. 11 gage galvanized roofing nails,  $1\frac{3}{4}$  inches (44.5 mm) long with  $\frac{7}{16}$ - or  $\frac{1}{2}$ -inch-diameter (11.1 or 12.7 mm) heads, at 4 inches (102 mm) on center at board edges and 7 inches (178 mm) on center at intermediate studs. The sheathing is nailed to top and bottom plates at 7 inches (178 mm) on center. A water-resistive barrier is required over the sheathing. The lath and coating are applied, without insulation board, as described in Section 4.2.

**4.4.3 Axial Load Design:** Axial loads applied to the wall assembly are limited by one of the following that produces the lesser load:

1. The wood stud axial design stress for the wall assembly calculated in accordance with Sections 3.6 and 3.7 of ANSI AF&PA NDS (IBC and IRC) or ANSI/NFoPA NDS-91 (UBC) is limited to  $0.78 F'_c$ .

2. The maximum stress must not exceed  $0.78 F'_c$  at a maximum  $l_e/d$  ratio of 33.

#### 4.5 Noncombustible Construction:

When installed in accordance with Sections 4.5.1 through 4.5.6, the stucco system is recognized for use on exterior walls required to be of Type I, II, III or IV construction.

**4.5.1 Interior Finish:** One layer of  $5/8$ -inch-thick (15.9 mm), Type X gypsum wallboard complying with ASTM C 36 is applied vertically to steel framing with all edges blocked. Fasteners are No. 8 by  $1\frac{1}{4}$ -inch-long (31.7 mm) buglehead screws fastened to board joints at 8 inches (203 mm) on center and to intermediate locations at 12 inches (305 mm) on center. All joints are taped and treated with joint compound in accordance with ASTM C 840 or GA216. Intermediate fasteners are treated with joint compound in accordance with ASTM C 840 or GA216.

**4.5.2 Steel Framing:** Minimum  $3\frac{5}{8}$ -inch-deep (92 mm), minimum No. 20 gage [0.0396-inch base-metal thickness (0.91 mm)] steel studs spaced a maximum of 16 inches (406 mm) on center.

**4.5.3 Openings:** Wall openings are framed with minimum 0.125-inch-thick (3.2 mm) tubular aluminum or steel framing.

**4.5.4 Exterior Finish:** One layer of minimum  $1/2$ -inch-thick (12.7 mm) gypsum sheathing complying with ASTM C 79 is applied horizontally to the steel framing using No. 8 by  $1\frac{1}{4}$ -inch-long (32 mm) buglehead screws spaced 8 inches (203 mm) on center at all framing locations.

**4.5.5 Stud Cavity:** Where studs continue past floor levels, stud cavities at each floor level are blocked with Thermafiber insulation. The Thermafiber insulation is fit into each stud cavity at the floor. The insulation has a minimum 4 pcf (64 kg/m<sup>3</sup>) density, is 4 inches (102 mm) thick and 6 to 8 inches (152 to 203 mm) wide, and is to be long enough to friction-fit between studs.

**4.5.6 Stucco System:** The stucco system includes application of one layer of Pyro-Cure 600 vapor retarder, manufactured by Fortifiber. Pyro-Cure vapor retarder has a maximum flame-spread index of 25 and a maximum smoke-developed index of 30, and qualifies as a Type 1, Grade A, water-resistive barrier in accordance with UBC Standard 14-1. The vapor retarder is installed over the sheathing and EPS in accordance with IBC Section 1404.2, IRC Section R703.2, or UBC Section 1402.1. One-inch-thick (25.4 mm) EPS insulation board with a nominal 1.5 pcf (24 kg/m<sup>3</sup>) density is installed horizontally, in running bond, to the sheathing. Reinforcement consists of wire fabric lath as described in Section 3.2.4.1. The lath is fastened over the insulation board and vapor retarder to the steel framing using No. 8 by  $2\frac{1}{2}$ -inch-long (63.5 mm), wafer-head, self-drilling screws spaced at 8 inches (203 mm) on center to all framing members. The coating is applied to a minimum thickness of  $3/8$  inch (9.5 mm) in accordance with Section 4.1.

#### 4.6 Miscellaneous for Stucco System:

**4.6.1 Inspection Requirements:** Building department inspection is required on lath installation prior to application of the coating, as noted in IBC Section 109.3.5 in jurisdictions enforcing the IBC or IRC, or in UBC Section 108.5.5 for jurisdictions enforcing the UBC. The Atlas Tuff-Kote Fiber Reinforced Stucco System requires special inspections, in accordance with IBC Section 1704 or UBC Section 1701, for field-batching and mixing of components. As an alternative, when approved by the code official, continuous field inspection of all batching and mixing operations, by an authorized inspector, trained and approved by InCide Technologies, Inc., may be used. The authorized inspector must be independent

of the plastering contractor. A declaration, such as that shown in Figure 4, must be completed and signed in duplicate, for presentation to the building owner and the code official with the plastering contractor's installation card.

**4.6.2 Control Joints:** Control joints must be installed as specified by the architect, designer, builder or exterior coating manufacturer, in that order. In the absence of other details, conventional three-coat plastering details must be used.

**4.6.3 Curing:** For proper curing where temperatures exceed 60°F (15.6°C), mortar sections must be water-sprayed within two to three hours after initial set has occurred. Water spraying must commence after seven hours or prior to end of day, whichever occurs first. A light water spray is required before and after the finish coat is applied. Additional water spray is applied within 48 hours of application.

**4.6.4 Soffits:** The system may be applied to soffits, provided the coating is applied over expanded metal lath complying with ASTM C 847 or UBC Table 25-B in lieu of the coating's being applied over wire fabric lath. Metal lath fastening must comply with IBC Section 2510.3, IRC Section R703.6.1.3.5 or UBC Table 25-C, except the length of the fastener must be increased by the thickness of the substrate.

**4.6.5 Sills:** The system may be applied to sills at locations such as windows and other similar areas. Sills with depths of 6 inches (152 mm) or less must have the coating and lath applied to any substrate permitted in this report, provided the coating, lath, water-resistive barrier and substrate are installed in accordance with the appropriate section of this report. Sills with depths exceeding 6 inches (152 mm) must have substrates of solid wood or plywood. The substrate must be fastened in accordance with IBC Table 2304.9.1, IRC Section R602.3., or UBC Table 23-II-B-1, and a double layer of a code-complying Grade D water-resistive barrier must be applied over the substrate. The coating, lath, and optional EPS board must be applied in accordance with Section 4.2.

#### 5.0 CONDITIONS OF USE

The Atlas Tuff-Kote Fiber Reinforced Stucco System described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1** Materials and methods of installation must comply with this report and the manufacturer's published installation instructions. In the event of a conflict between the installation instructions and this report, this report governs. The manufacturer's published installation instructions must be available at the jobsite at all times during installation.
- 5.2** Installation must be by contractors approved by InCide Technologies, Inc.
- 5.3** The system is limited to Type V-B construction (IBC), Type V-N construction (UBC), or construction permitted by the IRC, except when installed in accordance with Section 4.5 of this report.
- 5.4** The interior of the building must be separated from the foam plastic boards by a thermal barrier complying with IBC Section 2603.4, IRC Section R314.1.2 and IRC Table R702.3.5 or UBC Section 2602.4 and UBC Table 25-G.
- 5.5** An installation card, such as that shown in Figure 3 of this report, must be completed and left at the jobsite for the owner, and a copy must be filed with the building department.
- 5.6** Inspections must be performed in accordance with Section 4.6.1 of this report.

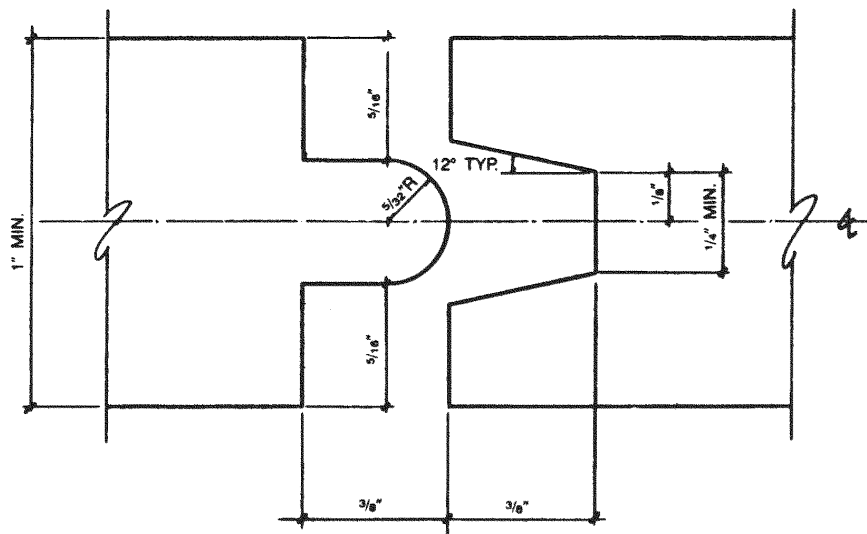
- 5.7 Where hazard of termite damage is very heavy in accordance with IRC Section R320.5, foam plastic insulation board must not be placed on exterior walls of wood construction located within 6 inches (152 mm) of the ground.
- 5.8 The allowable wind load on the system applied to wood studs a maximum of 24 inches (610 mm) on center with the lath attached with nails, and the system applied to steel studs a maximum of 16 inches (406 mm) on center, is 25 psf (1197 Pa), positive or negative. The allowable wind load on the system with wood studs a maximum of 24 inches (610 mm) on center and lath attached with staples, is 35 psf (1676 Pa), positive or negative. Support framing must be adequate to resist the required wind load.
- 5.9 The system is recognized as a one-hour fire-resistance-rated assembly when installed in accordance with Section 4.4.

## 6.0 EVIDENCE SUBMITTED

- 6.1 Data in accordance with the ICC-ES Acceptance Criteria for Cementitious Exterior Wall Coatings (AC11), dated June 2007.
- 6.2 Reports of tests in accordance with NFPA 285 (UBC Standard 26-4).
- 6.3 Reports of tests in accordance with ASTM E 119 (UBC Standard 7-1).

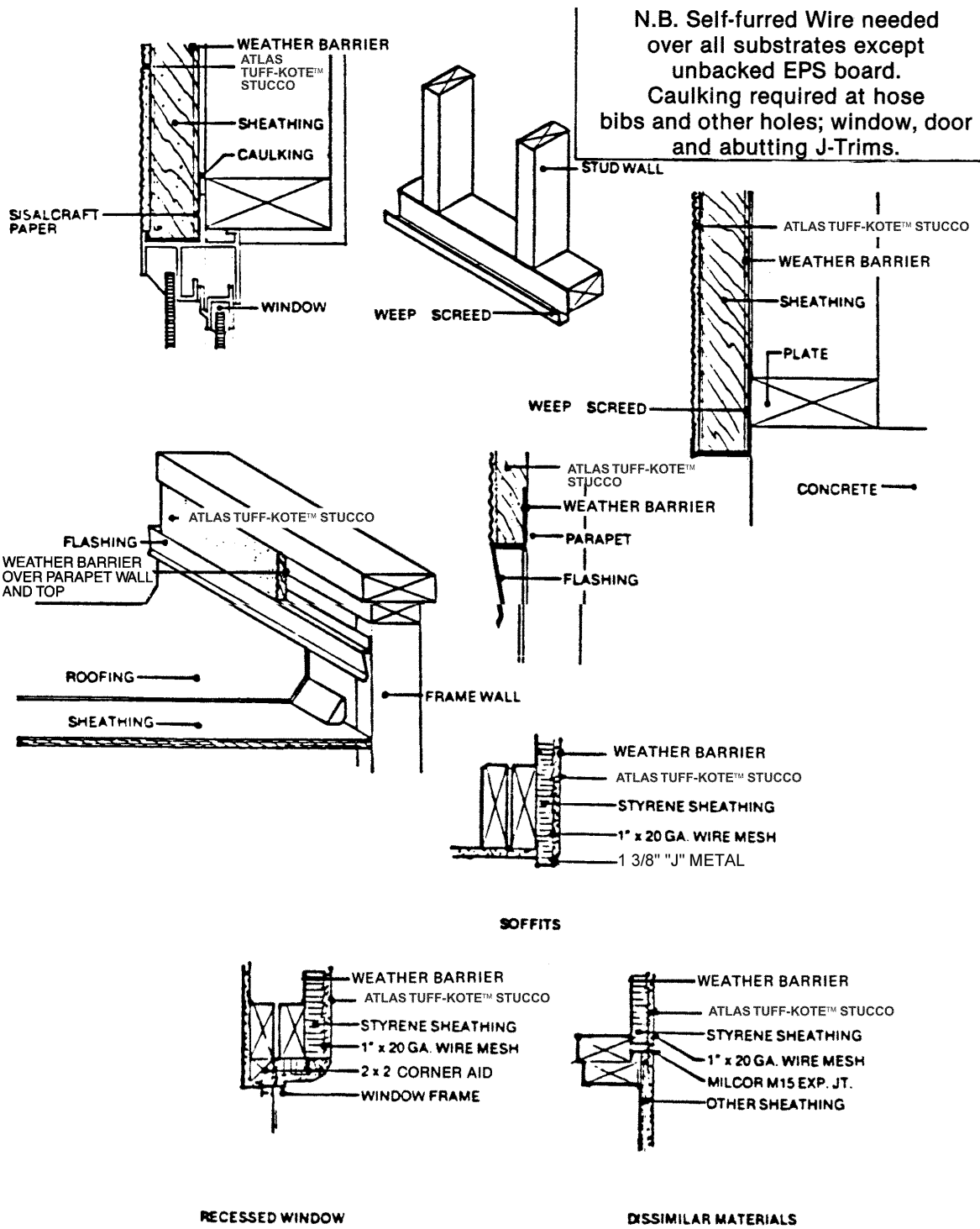
## 7.0 IDENTIFICATION

- 7.1 The factory-prepared mix is delivered to the jobsite in water-resistant bags that have labels bearing the following information:
- The name and address of Incide Technologies, Inc.
  - The evaluation report number (ESR-2099).
  - Identification of components.
  - Weight of packaged mix.
  - Storage instructions.
  - Maximum amount of water and other components that may be added, and conditions that must be considered in determining actual amounts.
  - Curing instructions.
- 7.2 Polystyrene foam plastic insulation boards must be identified in accordance with their respective ICC-ES evaluation reports. Additionally, the board density must be noted.
- 7.3 For EPS insulation boards applied to walls required to be of Type I, II, III or IV construction, as noted in Section 4.5, each board must be identified along one edge, and one board from each insulation package must be identified on both faces, with the evaluation report number (ESR-2099) and with the system name as set forth in the ICC-ES evaluation report on the EPS insulation boards.



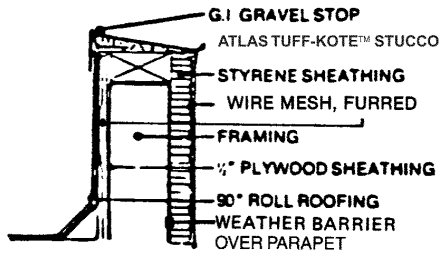
For SI: 1 inch = 25.4 mm.

FIGURE 1

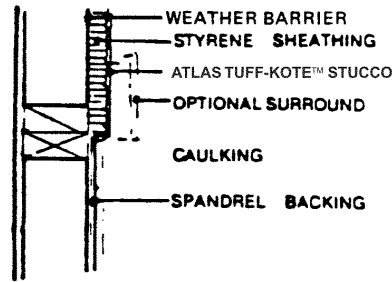


**NOTE:** When installation is over solid substrates, the water-resistive barrier shall be installed over all substrates (including optional EPS insulation board described in Section 4.3 of this report), except in jurisdictions adopting the UBC, where the barrier may be installed behind the optional EPS insulation board. When installation is over open framing, the water-resistive barrier is installed behind the EPS insulation board. See Section 3.2.9.1 of this report.

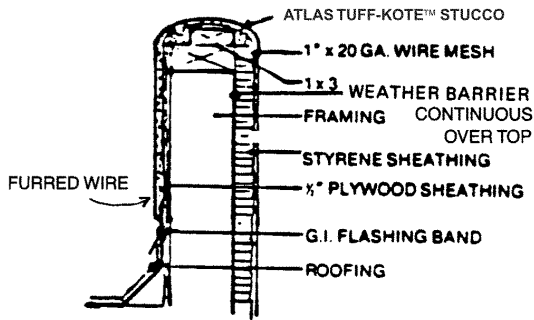
FIGURE 2



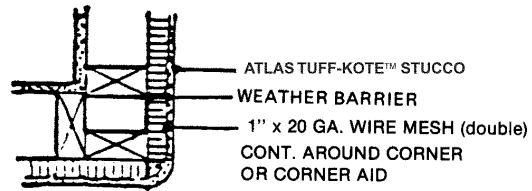
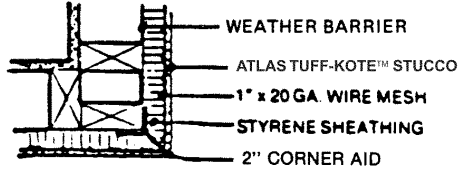
SINGLE-FACED PARAPET



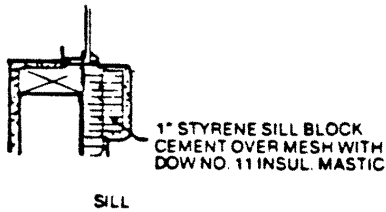
SPANDREL/INSERT



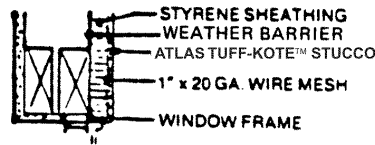
DOUBLE-FACED PARAPET



EXTERIOR CORNERS



SILL



HEAD—JAMB

WINDOW DETAILS

FIGURE 2 (Continued)

**INSTALLATION CARD**  
**Atlas Tuff-Kote Fiber Reinforced Stucco System**  
**InCide Technologies, Inc. 50 North 41<sup>st</sup> Avenue 85009, Phoenix, Arizona 85009. Telephone: (602) 233-0756**

**Project Address**

ICC Evaluation Service, Inc.  
Report ESR-2099

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Date Completed: \_\_\_\_\_

**Plastering Contractor**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone No. (\_\_\_\_) \_\_\_\_\_

Approved contractor number as issued by InCide Technologies, Inc. \_\_\_\_\_

This is to certify that the exterior coating system on the building exterior at the above address has been installed in accordance with the evaluation report and the manufacturer's instructions.

\_\_\_\_\_  
Signature of authorized representative of plastering contractor

\_\_\_\_\_  
Date

This installation card must be presented to the building inspector after completion of work and before final inspection.

**FIGURE 3**

**DECLARATION**  
**Atlas Tuff-Kote Fiber Reinforced Stucco System**  
**InCide Technologies, Inc.**  
**50 North 41<sup>st</sup> Avenue 85009**  
**Phoenix, Arizona 85009.**  
**Phone: (602) 233-0756 Fax: (602) 278-4864**

**Project Address:**

**Date:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

The field batching and mixing of all components of the exterior wall coating at the address noted above have been continuously inspected. The field batching and mixing have been found to comply with current evaluation report ESR-2099 and approved plans.

Authorized Inspector's Signature: \_\_\_\_\_

Authorized Inspector's Name (print): \_\_\_\_\_

Employer's Name: \_\_\_\_\_

Employer's Address: \_\_\_\_\_

Telephone Number: (\_\_\_\_) \_\_\_\_\_

Fax Number: (\_\_\_\_) \_\_\_\_\_

\*This is to certify that the above noted inspector, approved by InCide Technologies, Inc., was authorized to inspect the project so noted and was trained to properly discharge his duties.

InCide Officer Signature: \_\_\_\_\_

Signer's Name (print:) \_\_\_\_\_

Date: \_\_\_\_\_

\*Signature required only if inspector is not an employee of InCide Technologies, Inc.

**FIGURE 4**