DIVISION: 09 00 00—FINISHES  
Section: 09 24 00—Portland Cement Plastering  

REPORT HOLDER:  
MATERIAL DISTRIBUTOR COMPANY, INC.  

EVALUATION SUBJECT:  
WIRE-TEX ONE COAT STUCCO SYSTEM  

1.0 EVALUATION SCOPE  
Compliance with the following codes:  
- 2009 and 2006 International Building Code® (IBC)  
- 2009 and 2006 International Residential Code® (IRC)  
- 1997 Uniform Building Code™ (UBC)  
- 2013 Abu Dhabi International Building Code (ADIBC)†  
  †The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.  

Properties evaluated:  
- Structural  
- Durability  
- Fire-resistance-rated construction  
- Noncombustible construction  

2.0 USES  
The Wire-Tex stucco system is an exterior cementitious one-coat stucco wall coating system. The 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 one-hour fire-resistance-rated wall assemblies and walls required to be Type I, II, III, or IV construction (IBC and UBC) when installed in accordance with Sections 4.4 and 4.5 of this report, respectively.  

3.0 DESCRIPTION  
3.1 General:  
The Wire-Tex 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, wood structural sheathing or gypsum sheathing.  

3.2 Materials:  
3.2.1 Wire-Tex Stucco Mixture: The materials are factory-prepared mixtures of Type I, II or III portland cement complying with ASTM C150, fibers, and proprietary additives. The dry cementitious mixture is packaged in 80-pound (36 kg) bags. Approximately 4 1/2 to 6 gallons (17 to 23 L) of water and 180 to 280 pounds (81 to 126 kg) of sand must be added for each 80-pound (36 kg) bag of stucco mix, in the field. The components are mixed in accordance with the manufacturer’s published installation instructions. Approved color pigments may be added to the stucco mix 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 C144 or ASTM C897 within the following limits:  

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3.2.3 Insulation Board: EPS insulation board must have a minimum nominal density of 1.5 pounds per cubic foot (24 kg/m³), a flame-spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84 (UBC Standard 8-1), and must comply with ASTM C578 as Type II. Boards must be recognized in a current ICC-ES evaluation report. See Sections 7.2 and 7.3 of this report for board identification. Boards installed without sheathing, over open framing, must have a thickness ranging from 1 to 1 1/2 inches (25 to 38 mm) and have 3/8-inch-high (9.5 mm) tongues with compatible grooves for horizontal joints. See Figure 1 of this report for joint detail.  

Over solid substrates, a square-edge foam plastic board with a minimum 1/2-inch (25.4 mm) thickness and a minimum nominal density of 1pcf (16 kg/m³) is permitted, except when installation is as part of the water-resistive barrier over wood-based sheathing as described in Section 3.2.9.1, which requires 1-inch-thick (25.4 mm) EPS boards with tongue-and-groove edges.  

When foam plastic insulation boards are used over solid sheathing with a code-complying water-resistive barrier, the boards must have 1/4-inch-wide-by 1/8-inch-deep
(6.4 mm by 3.2 mm) grooves spaced 12 inches (305 mm) on center on the back face of the boards.

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 must be recognized in a current ICC-ES evaluation report. Minimum No. 20 gage [0.035 inch (0.889 mm)], 1-inch (25.4 mm) galvanized steel, woven-wire fabric lath must be used. The lath must be furred when applied over all substrates except unbacked EPS insulation board. Furring must comply with the following requirements:

a. When maximum total thickness is 1/2 inch (12.7 mm) or less, the body of the lath must be furred a minimum of 1/4 inch (3.2).

b. When total coating thickness is greater than 1/2 inch (12.7 mm), No. 17 gage [0.058 inch (1.47 mm)] by 1/2-inch (38 mm) woven-wire fabric lath must be used. The body of the lath must be furred a minimum of 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, as applicable. Furring requirements are as set forth in Section 3.2.4.1 for wire fabric lath.

3.2.5 Gypsum Board: Gypsum sheathing board must be water-resistant core gypsum sheathing complying with ASTM C79 or ASTM C1396. Gypsum wallboard must comply with ASTM C36 or ASTM C1396.

3.2.6 Fiberboard: Fiberboard must be minimum 1/8-inch-thick (12.7 mm), asphalt-impregnated fiberboard complying with ANSI/AHA A194.1 as a regular-density sheathing.

3.2.7 Wood Structural Sheathing: Wood structural sheathing must be a minimum of 9/16 inch thick (7.9 mm) for studs spaced 16 inches (406 mm) on center, and a minimum of 3/8 inch thick (9.5 mm) for studs spaced 24 inches (610 mm) on center. Wood structural sheathing must be exterior grade or Exposure 1 and must comply with U.S. DOC PS-1, U.S. DOC PS-2 or UBC Standard 23-2, as applicable.

3.2.8 Calking: Calking must be either acrylic latex caulking material complying with ASTM C834 or polyurethane, polyurethane modified, polysulfide or silyleminated polyether elastomeric sealant complying with ASTM C920.

3.2.9 Weather Protection:

3.2.9.1 Water-resistive Barrier: Application of the barrier must comply with IBC Section 1404.2, IRC Section 703.2 or UBC Section 1402.1, as applicable. 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 D226, Type I, or a water-resistive barrier recognized as equivalent to ASTM D226, Type I or better, in a current ICC-ES evaluation report.

When application is over any wood-based sheathing, the barrier must be one of the following:

1. A minimum of two layers of Grade D building paper complying with UBC Standard 14-1 as set forth in IBC Section 2510.6 or UBC Section 2508.4; or an equivalent recognized in a current ICC-ES evaluation report.

2. One layer of EPS insulation board, having horizontal tongue-and groove edges as described in Section 3.2.3 of this report, over one layer of Grade D building paper having a minimum water-resistance rating of 60 minutes; or an equivalent recognized in a current ICC-ES evaluation report.

When Tyvek® StuccoWrap, recognized in ESR-2375, is used as the water-resistive barrier, grooved insulation boards described in Section 3.2.3.1 are not required. The Tyvek® StuccoWrap must be installed as described in ESR-2375.

3.2.9.2 Vapor Retarder: Protection against condensation must be provided in accordance with 2009 IBC Section 1405.3 or 2006 IBC Section 1403.2, as applicable. Under the 2009 IRC, a vapor retarder must be provided in accordance with Section R601.3, unless its omission is permitted under the exceptions in 2009 IRC Section R601.3. Under the 2006 IRC, a vapor retarder must be provided in accordance with Section R318.1, unless its omission is permitted under the exceptions in 2006 IRC Section R318.1.

3.2.9.3 Flashing: Flashing complying with 2009 IBC Section 1405.4, 2006 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 comply with the requirements of the ICC-ES Acceptance Criteria for Flexible Flashing (AC148). Rigid flashings 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: Trim, scribe 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 3/8-inch (9.5 mm) thickness. A minimum stucco thickness of 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. Fasteners for lath must penetrate a minimum of 1 inch (25.4 mm) into wood studs. An exterior stucco finish coat, if required, may be applied without a bonding agent if applied within 24 hours of basecoat application unless the latter is sprayed/brushed with an acrylic-bonding adhesive, or bonding treatment complying with MIL-B-19235 is added to the finish coat stucco mix prior to application. The ambient air temperature range during application of the coating must be between 40°F to 110°F (4°C and 43°C). The coating must be applied by applicators approved by Material Distributor Company, 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 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 1/2-inch (38 mm) end and sidela,
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 galvanized staples with a minimum crown width of \( \frac{1}{8} \) inch (12.7 mm), spaced 6 inches (152 mm) on center. Fasteners must penetrate wood framing at least 1 inch (25.4 mm). Over-driving of fasteners must be avoided.

The Wire-Tex stucco system may also be applied over minimum No. 20 gage [0.0396 inch (0.91 mm) base-metal thickness] steel studs spaced 24 inches (610 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 No. 7S12-20, self-tapping, self-drilling panhead screws installed at 6 inches (152 mm) on center to all studs and track. Screw-head diameter must be a minimum of \( \frac{1}{4} \) inch (8.5 mm). Screws must penetrate studs and tracks a minimum of \( \frac{1}{8} \) inch (6.4 mm) with a \( \frac{1}{4} \) inch (3.18 mm) minimum length.

Wall bracing in accordance with IBC Section 2308.9.3 or 2308.12, IRC Section R602.10 or R602.11, UBC Sections 2320.11.3 and 2320.11.4, or an alternate, is required. Outside wall corners and parapet corners must be covered with extra metal corner reinforcements attached to the framing members with approved fasteners spaced a maximum of 18 inches (457 mm) on center, or as necessary to hold plumb. Weep screws must be installed at the bottom of the wall and must comply with IBC Section 2512.1.2, IRC Section R703.6.2.1 or UBC Section 2506.5. Galvanized metal, \( \frac{1}{8} \) inch (35 mm), J-shaped trim pieces must be installed in other areas where insulation board is exposed. At windows and doors, flashing must be installed in accordance with IBC Section 1405.3, IRC Section R703.8 or UBC Section 1402.2. 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 directly installed 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 insulation board is used, the foam plastic boards must have grooves as described in Section 3.2.3; or ungrooved foam plastic boards may be used provided the water-resistive barrier is Tyvek StuccoWrap, described in Section 3.2.9.1. When grooved foam plastic boards are used, the grooves must face the water-resistive barrier and must be aligned vertically but the grooves can be offset a maximum of 6 inches (152 mm). When installed, 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), or UBC Table 23-II-B-1, whichever is more restrictive.

The sheathing may also be applied to minimum No. 20 gage [0.0396 inch (0.91 mm)] steel studs spaced 24 inches (610 mm) on center. The fiberboard is temporarily held in place with self-tapping screws followed by two layers of building paper. Self-furring or furred lath is secured through the water-resistive barrier and sheathing using No. 7S12-20, self-drilling, self-tapping panhead screws spaced as for wood screws. When the lath is placed over optional insulation board, the specified fastener length must be increased by the insulation board thickness. Screw-head diameter is a minimum of \( \frac{1}{3} \) inch (8.5 mm). The screws must be long enough to penetrate the studs and tracks \( \frac{1}{4} \) inch (6.4 mm), with a \( \frac{1}{4} \) inch (3.18) minimum length.

Wall bracing in accordance with IBC Section 2308.9.3 or 2308.12, IRC Section R602.10 or R602.11, UBC Sections 2320.11.3 and 2320.11.4 or an acceptable alternative, is required. Outside wall corners and parapet corners must be covered with extra metal corner reinforcements attached to the framing members with approved fasteners spaced 18 inches (457 mm) on center, or as necessary to hold plumb. Weep screws must be installed at the bottom of the wall and must comply with IBC Section 2512.1.2, IRC Section R703.6.2.1 or UBC Section 2506.5. Galvanized steel, \( \frac{1}{8} \) 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. Flashing must be installed in accordance with IBC Section 1405.3, IRC Section R703.8 or UBC Section 1402.2. 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 C1280 (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 or optional insulation board. 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. The remainder of the installation is as described in Section 4.3.1 for fiberboard. Exposed sheathing edges must be 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 may be applied to minimum No. 20 gage [0.0396 inch (0.91 mm)] steel studs spaced at a maximum of 24 inches (610 mm) on center, using No. 7S12-20, self-drilling, self-tapping panhead 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 \( \frac{1}{2} \) inch-long (31.7 mm), self-drilling, tapping waferhead screws spaced 6 inches (152 mm) on center. Screws fastening sheathing and screws fastening lath must be staggered from each other.

4.3.3 Wood-based Structural Sheathing: Sheathing is applied directly to wood studs under the conditions set forth in Section 3.2.7 and IBC Tables 2308.9.3(3) and 2304.9.1, IRC Table 602.3(3), or UBC Tables 23-IV-D-1 and 23-II-B-1. The water-resistive barrier, optional foam board, wire fabric lath, and coating are applied as described in Section 4.3.1 for fiberboard.

4.3.4 Concrete and Masonry: Surface preparation must be in accordance with IBC Section 2510.7 or UBC Section 2508.8, as applicable. The surface must be clean, free of dust and other particles, and sufficiently damp to ensure proper bonding. Wire-Tex stucco coating is applied directly to the prepared surface at a minimum thickness of \( \frac{1}{2} \) inch (9.5 mm) in accordance with applicable provisions of Section 4.1 and the Material Distributor Company, Inc., instructions.
4.4 One-hour Fire-resistance-rated Wall Assemblies:

4.4.1 First Assembly:

4.4.1.1 Interior Face: A minimum of one layer of 5/8-inch-thick (15.9 mm), Type X gypsum wallboard, water-resistant backer board complying with ASTM C630 or veneer base complying with ASTM C588 is applied parallel or at right angles to the interior face of 2-by-4 wood studs spaced a maximum of 24 inches (610 mm) on center. The gypsum boards are attached using 6d coated nails, 1/8 inches (48 mm) long with 1/4-inch-diameter (6.4 mm) heads, at 7 inches (178 mm) on center to studs, plates and blocking. All gypsum board joints must be backed with wood framing and must be taped and, along with fastener heads, treated with joint compound.

4.4.1.2 Exterior Face: One layer of minimum 5/8-inch-thick (15.9 mm), Type X, water-resistant core gypsum sheathing is applied parallel to studs using No. 11 gage, galvanized roofing nails, 1 1/4 inches (34.5 mm) long with 1/4-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 complying with Section 3.2.9 of this report must be installed over the sheathing. The wire fabric lath and wall coating must be applied as described in Section 4.3 of this report.

4.4.1.3 Axial Load Design: Axial loads applied to the wall assembly are limited to the lesser of the following:

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-05 (IBC and IRC) or ANSI/NFPA NDS-91 (UBC) is limited to 0.78 \( F'_{c} \).

2. The maximum stress must not exceed 0.78 \( F'_{c} \) at a maximum \( \ell_{b}/d \) ratio of 33.

4.4.2 Second Assembly:

4.4.2.1 Interior Face: Type X gypsum wallboard, 5/8 inch thick (15.9 mm), is applied horizontally to the interior face of minimum 2-by-4 wood studs spaced a maximum of 16 inches (406 mm) on center. The wallboard is attached to the studs with 5d gypsum wallboard nails at 6 inches on center, along plates and studs at board edges and intermediate locations. Minimum R-13 rock wool insulation batts, with a minimum 2.0 pcf density (32 kg/m\(^3\)) and 3/4 inches (86 mm) thick are fitted between and fastened to studs. All wallboard joints must be backed by minimum of 2-by-4 wood framing, taped and treated with joint compound. Fastener heads are treated with joint compound.

4.4.2.2 Exterior Face: Type II EPS insulation board, 1 inch thick (25 mm) and with a 1.5 pcf (24 kg/m\(^3\)) density, is applied to studs and temporarily fastened as described in Section 4.2.1. One-inch (25.4 mm) by No. 20 gage wire lath is then applied over foam plastic and fastened with No. 11 gage galvanized nails, 2 inches (51 mm) long and having 5/8-inch-diameter (9.5 mm) heads. Nail spacing is 6 inches (152 mm) on center to studs and plates. Lath is lapped a minimum of 2 inches (51 mm). The Wire-Tex coating is applied as set forth in Section 4.1.

4.4.2.3 Axial Load Design: Axial loads applied to the wall assembly must be limited to the least of the following:

1. 1,100 pounds (4895 N) per stud for 2-by-4 wood construction.

4.4.3 Third Assembly:

4.4.3.1 Interior Face: Type X gypsum wallboard, 5/8 inch thick (15.9 mm), is applied vertically to the interior face of minimum 2-by-4 wood studs spaced a maximum of 6 inches (406 mm) on center. The wallboard is attached to the studs with 5d-inch-long (41.3 mm), galvanized steel, cup-head drywall nails at 8 inches (203 mm) on center along plates and studs at board edges and intermediate locations. Minimum R-11 fiberglass insulation must be fitted between and fastened to studs. All wallboard joints must be backed by minimum of 2-by-4 wood framing, taped and treated with joint compound. Fastener heads are treated with joint compound.

4.4.3.2 Exterior Face: Type II EPS insulation board, 1 inch thick (25 mm) and with a 1.5 pcf (24 kg/m\(^3\)) density, is applied to studs and temporarily fastened as described in Section 4.2.1. One-inch (25.4 mm) by No. 20 gage wire lath is then applied over foam plastic and fastened with No. 11 gage galvanized nails, 2 1/2 inches (63.5 mm) long and with 5/8-inch-diameter (9.5 mm) heads. Nail spacing is 6 inches (152 mm) on center to studs and plates. Lath is lapped a minimum of 2 inches (51 mm). The Wire-Tex coating is applied as set forth in Section 4.1.

4.4.3.3 Axial Load Design (2-by-4 Wood Construction): Axial loads applied to the wall assembly are limited to the least of the following:

1. 1,100 pounds (4895 N) per stud.

2. A maximum of 47.5 percent of the load calculated in accordance with Sections 3.6 and 3.7 of ANSI AF&PA NDS-05 (IBC and IRC) or ANSI/NFPA NDS-91 (UBC).

3. Design stress of 0.78 \( F'_{c} \) calculated in accordance with Sections 3.6 and 3.7 of ANSI AF&PA NDS-05 (IBC and IRC) or ANSI/NFPA NDS-91 (UBC).

4. Design stress of 0.78 \( F'_{c} \) calculated in accordance with Sections 3.6 and 3.7 of ANSI AF&PA NDS-05 (IBC and IRC) or ANSI/NFPA NDS-91 (UBC).

4.4.3.4 Axial Load Design (2-by-6 Wood Construction): Axial loads applied to the wall assembly are limited to the least of the following:

1. 3,000 pounds (13 350 N) per stud up to 10 feet high or 1,100 pounds per stud for greater heights.

2. A maximum of 47.5 percent of the load calculated in accordance with Sections 3.6 and 3.7 of ANSI AF&PA NDS-05 (IBC and IRC) or ANSI/NFPA NDS-91 (UBC).

3. Design stress of 0.78 \( F'_{c} \) calculated in accordance with Sections 3.6 and 3.7 of ANSI AF&PA NDS-05 (IBC and IRC) or ANSI/NFPA NDS-91 (UBC).
4. Design stress of $0.78 \ F' c$ at a maximum $l / d$ of 33 calculated in accordance with Sections 3.6 and 3.7 of ANSI/AF&PA NDS-05 (IBC and IRC) or ANSI/NFPA NDS-91 (UBC).

4.4.4 Fourth Assembly:

4.4.4.1 Interior Face: Type X gypsum wallboard, $\frac{5}{8}$ inch thick (15.9 mm), is applied vertically to the interior face of minimum 2-by-4 wood studs spaced a maximum of 16 inches (406 mm) on center. The wallboard is attached to the studs with $\frac{1}{2}$-inch-long (12.7 mm) Type I insulation board with a 1.0 pcf (16 kg/m$^3$) density is applied to studs and temporarily fastened as described in Section 4.2.1. One-inch (25.4 mm) by No. 20 gage wire lath is then applied over foam plastic and fastened with No. 11 gage galvanized nails, 21/2 inches (63.5 mm) long and having $\frac{3}{16}$-inch-diameter (9.5 mm) heads. Nail spacing is 6 inches on center to studs and plates. Lath is lapped a minimum of 2 inches (51 mm). The Wire-Tex coating is applied as set forth in Section 4.1.

4.4.4.2 Exterior Face: Maximum $\frac{1}{6}$-inch-thick OSB is applied to the studs with $\frac{1}{4}$-inch-long 6d nails spaced at 8 inches on center. Minimum $\frac{1}{2}$-inch-thick (12.7 mm) Type I insulation board with a 1.0 pcf (16 kg/m$^3$) density is applied to studs and temporarily fastened as described in Section 4.2.1. One-inch (25.4 mm) by No. 20 gage wire lath is then applied over foam plastic and fastened with No. 11 gage galvanized nails, 21/2 inches (63.5 mm) long and having $\frac{3}{16}$-inch-diameter (9.5 mm) heads. Nail spacing is 6 inches on center to studs and plates. Lath is lapped a minimum of 2 inches (51 mm). The Wire-Tex coating is applied as set forth in Section 4.1.

4.4.4.3 Axial Load Design (2-by-4 Wood Construction): Axial loads applied to the wall assembly are limited to the least of the following:

1. 1,100 pounds (4895 N) per stud.
2. A maximum of 47.5 percent of the load calculated in accordance with Sections 3.6 and 3.7 of ANSI/AF&PA NDS-05 (IBC and IRC) or ANSI/NFPA NDS-91 (UBC).
3. Design stress of $0.78 \ F' c$ calculated in accordance with Sections 3.6 and 3.7 of ANSI/AF&PA NDS-05 (IBC and IRC) or ANSI/NFPA NDS-91 (UBC).
4. Design stress of $0.78 \ F' c$ at a maximum $l / d$ of 33 calculated in accordance with Sections 3.6 and 3.7 of ANSI/AF&PA NDS-05 (IBC and IRC) or ANSI/NFPA NDS-91 (UBC).

4.4.4.4 Axial Load Design (2-by-6 Wood Construction): Axial loads applied to the wall assembly are limited to the least of the following:

1. 3,000 pounds (13 350 N) per stud up to 10 feet high or 1,100 pounds per stud for greater heights.
2. A maximum of 47.5 percent of the load calculated in accordance with Sections 3.6 and 3.7 of ANSI/AF&PA NDS-05 (IBC and IRC) or ANSI/HFPA NDS-91 (UBC).
3. Design stress of $0.78 \ F' c$ calculated in accordance with Sections 3.6 and 3.7 of ANSI/AF&PA NDS-05 (IBC and IRC) or ANSI/HFPA NDS-91 (UBC).
4. Design stress of $0.78 \ F' c$ at a maximum $l / d$ of 33 calculated in accordance with Sections 3.6 and 3.7 of ANSI/AF&PA NDS-05 (IBC and IRC) or ANSI/NFPA NDS-91 (UBC).

4.5 Noncombustible Construction:

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

4.5.1 Interior Finish: One layer of $\frac{3}{8}$-inch-thick (15.9 mm), Type X gypsum wallboard as described in Section 3.2.5 must be applied vertically to steel framing with all edges blocked. Fasteners are No. 8 by 11/4-inch-long (32 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 must be taped and treated with joint compound. Intermediate fasteners must be treated with compound.

4.5.2 Steel Framing: Minimum $\frac{3}{8}$-inch-deep (92 mm), minimum No. 20 gage [0.036 inch (0.914 mm)] steel studs spaced a maximum of 16 inches (406 mm) on center.

4.5.3 Openings: Wall openings must be framed with minimum $\frac{3}{8}$-inch-thick (3.2 mm) tubular aluminum or steel framing.

4.5.4 Exterior Finish: One layer of minimum $\frac{1}{2}$-inch-thick (12.7 mm) gypsum sheathing is applied horizontally to the steel framing using No. 8 by 11/4-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, Thermafiber insulation must be fitted into each stud cavity. The insulation must have a minimum nominal density of 4 pcf (64 kg/m$^3$), must be 4 inches (102 mm) thick, and must be approximately 6 to 8 inches (152 to 203 mm) wide. To fit within a stud cavity, it must be long enough to achieve a friction fit.

4.5.6 Stucco System: The stucco system includes application of one layer of vapor retarder that has a maximum flame spread index of 25 and a maximum smoke-developed index of 30, and qualifying as a Type 1, Grade A, water-resistive barrier in accordance with UBC Standard 14-1. The vapor retarder must be installed over the sheathing in accordance with the requirements of the applicable code. One-inch-thick (25.4 mm) EPS insulation board with a nominal 1.5 pcf (24 kg/m$^3$) density is installed horizontally, in running bond, to the sheathing. Reinforcement consists of 1-inch (25.4 mm) by No. 20 gage, galvanized steel, self-furring, woven-wire fabric lath. The lath, insulation board, and vapor retarder are fastened to the steel framing using No. 8 by $\frac{3}{4}$-inch-long (63.5 mm), wafer-head, self-drilling screws spaced at 8 inches (203 mm) on center to all framing members. The stucco is applied to a minimum thickness of $\frac{3}{8}$ inch (9.5 mm) in accordance with Section 4.1 of this report.

4.6 Miscellaneous:

4.6.1 Inspection Requirements: Building department inspection is required on lath installation prior to application of the coating, as noted in Section 109.3.5 of the IBC for areas enforcing the IBC or IRC, or in Section 108.5.5 of the UBC. The Wire-Tex 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 the operations, by an authorized inspector, trained and approved by Material Distributor Company, Inc., must be used. The authorized inspector must be independent of the plastering contractor.

An installation card, such as that shown in Figure 3, 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: Moist curing must be provided for 24 hours
after coating application.

4.6.4 Soffits: The system may be applied to soffits,
provided the coating is applied over metal lath complying
with ASTM C847 or Table 25-B of the UBC in lieu of
applying the coating over wire fabric lath. Metal lath
fastening must comply with IRC 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-resistant 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 over the substrate a double
layer of a code-complying, Grade D water-resistant barrier
must be applied. The coating, lath, and optional EPS board
must be applied in accordance with Section 4.2 of this
report.

5.0 CONDITIONS OF USE

The Wire-Tex One Coat Stucco System described in this
report complies with, or is a suitable alternative to that
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 must govern. 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
Material Distributor Company, Inc.

5.3 The system may be applied to walls of Type I, II, III or
IV noncombustible construction, when installed in
accordance with Section 4.5 of this report.

5.4 The system is recognized for use as a one-hour fire-
resistance-rated assembly when installed as for the
assemblies described in Section 4.4.

5.5 The interior of the building must be separated from
the foam plastic insulation boards by a thermal barrier
complying with IBC Section 2603.4, 2009 IRC Section
R316.4, 2006 IRC Section R314.1.4 and Table
R702.3.5, or UBC Section 2602.4 and Table 25-G.

5.6 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.

5.7 Inspections must be performed in accordance with
Section 4.6.1 of this report.

5.8 In areas where the probability of termite infestation is
very heavy in accordance with IBC Section 2603.8,
2009 IRC Section R318.4 or 2006 IRC Section
R320.5, foam plastic boards must not be placed on
exterior walls located within 6 inches (152 mm) of the
ground.

5.9 The allowable wind load on the stucco system with
wood framing a maximum of 24 inches (610 mm) on
center is 35 psf (1.68 kN/m²), positive (outward) or
negative (inward). The allowable wind load on the
stucco system with steel framing a maximum of
24 inches (610 mm) on center is 41 psf (1.96 kN/m²),
positive (outward) or negative (inward). Support
framing must be adequate to resist the design load.

6.0 EVIDENCE SUBMITTED

6.1 Data in accordance with the ICC-ES Acceptance
Criteria for Cementitious Exterior Wall Coatings
(AC11), dated March 2010.

6.2 Report of testing in accordance with NFPA 285 (UBC
Standard 26-4).

6.3 Reports of tests in accordance with ASTM E119 (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 Material Distributor
  Company, Inc.
◼ The evaluation report number (ESR-2278).
◼ 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.

Polystyrene foam plastic insulation boards must be
identified in accordance with their respective ICC-ES
evaluation reports. Additionally, the board density
must be noted.

For foam plastic insulation boards applied to walls
required to be of Type I, II, III or IV construction, as
noted in Section 4.5 of this report, 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-2278),
the system name, and the ICC-ES evaluation report
number for the foam plastic.

7.2 The report holder’s contact information is the
following:

MATERIAL DISTRIBUTOR COMPANY, INC.
1133 SOUTH SIRRINE
MESA, ARIZONA 85210
(480) 962-6614
www.mdcarizona.com
FIGURE 1—TONGUE AND GROOVE

For SI: 1 inch = 25.4 mm.
FIGURE 2—TYPICAL INSTALLATION DETAILS

NOTES: 1. WHEN USING SHEATHING OTHER THAN FOAM, THESE DETAILS SHALL APPLY. IF OTHER THAN 1" THICK SUBSTRATES ARE USED, GROUNDS MUST BE ALTERED TO MAINTAIN PROPER PLASTER THICKNESS.  
2. A WEATHER-RESISTIVE BARRIER IS REQUIRED BEHIND FOAM PLASTIC SUBSTRATES AND OVER OTHER SUBSTRATES.
FIGURE 2—TYPICAL INSTALLATION DETAILS (Continued)
INSTALLATION CARD
Wire-Tex Stucco System
Material Distributor Company, Inc., 1133 South Sirrine, Mesa, Arizona 85210. Telephone: (480) 962-6614

Project Address


Date Completed: __________________________


Plastering Contractor
Name: ________________________________
Address: ________________________________
Telephone No. (                  )________________________

Approved contractor number as issued by Material Distributor Company, 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—INSTALLATION CARD