

Structalath Twin Trac 316 System

Section 09 24 23

Corporate • P.O. Box 397 • Fortson • Georgia • 31808 • 800-755-0825 • FAX 706-569-6704

Technical • 800-760-2861

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Materials and installation of a Master Wall® Cemplaster Fiberstucco system.
- B. System shall consist of the following components:

Item	Description
	Weather Resistive Barriers (WRB), Continuous Insulation (CI) and Drainage Spacers (DRS)
WRB01	2- ASTM D226 Asphalt Felt (minimum over sheathing)
	Cemplaster Fiberstucco (CFS)
CFS03	Master Wall® Cemplaster Fiberstucco with Structalath Twin Trac 316 reinforcement, 1/2" thick
	Primers (PRIME), Finish Additives (FA), Finish Options (FIN)
PRIME01	Primecoat or Sanded Primecoat tinted primer
FIN01	Superior Finish

1.02 RELATED SECTIONS

- A. Provide all materials, labor, and equipment to install the Field Applied and/or Panelized Master Wall Inc.® Cemplaster Fiberstucco System.
- B. Related Sections:
 1. Concrete 03300
 2. Unit Masonry 04200
 3. Light Gauge Steel Framing 05400
 4. Sheathing 06100
 5. Sheet Metal Flashing and Trim 07620
 6. Sealants 07900
 7. Doors and Windows 08000

1.03 REFERENCED DOCUMENTS

- A. ASTM Standards:
 1. C 847 Standard Specification for Metal Lath
 2. C 897 Aggregates for Job Mixed Portland Cement-Based Plaster
 3. C 926 Standard Specification for Application of Portland cement-Based Plaster
 4. C 1032 Standard Specification for Woven Wire Plaster Base
 5. C 1063 Installation of Lathing and furring for Portland Cement-Based Plaster

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1.04 TERMS/DEFINITIONS

- A. Accessories – The closure trims, control joints metal reinforcement and mechanical fasteners used in the installation of Cemplaster Fiberstucco.
- B. Applicator – The contractor that applies the Cemplaster Fiberstucco.
- C. Building Expansion Joint – A joint through the entire building structure designed to accommodate structural movement.
- D. Control Joint – a joint in the Cemplaster Fiberstucco designed to reduce and control thermal and shrinkage cracking.
- E. Designer – The person or firm that is responsible to create the plans and specifications for the entire project.
- F. Finish Coat – An acrylic based, factory mixed decorative and protective coating that is applied to the Cemplaster Fiberstucco or Master Wall base coat.
- G. Mechanical Fastener – Corrosion-resistant fastener intended for use with Cemplaster Fiberstucco.
- H. Metal Reinforcement – Structa Wire Corp. metal welded wire lath.
- I. Cemplaster Fiberstucco – A cementitious material consisting of Portland cement, fibers and proprietary components.
- J. Sheathing – A substrate in a sheet form.
- K. Substrate – The material to which the Cemplaster Fiberstucco is attached.
- L. Trims – Specially manufactured products designed to terminate the Cemplaster Fiberstucco.

1.05 DESIGN REQUIREMENTS

- A. Structural
 - 1. Design for maximum allowable system deflection, normal to the plane of the wall, of L/360.
 - 2. Design for wind load in conformance with code requirements. Also consult applicable code compliance report.
- B. Moisture Control
 - 1. Prevent the accumulation of water into or behind the Cemplaster Fiberstucco, either by condensation or leakage into the wall construction, in the design and detailing of the wall assembly.
 - a. Provide corrosion resistant flashing to direct water to the exterior where it is likely to penetrate components in the wall assembly, including, above window and door heads, beneath window and door sills, at roof/wall intersections, decks, abutments of lower walls with higher walls, above projecting features, and at the base of the wall.
 - b. Wall System Design – design wall to eliminate vapor condensation within the wall assembly.
 - c. Weather Resistant Barrier – Provide a barrier over framed construction consisting of a minimum of two-layers asphalt felt meeting ASTM D-226, Type 1, Grade D or building code-approved alternate. Verify requirements with local building code authority.
 - d. Protect sills of rough openings with water resistant barrier or “peel and stick” type membranes recognized by local codes. Where casing bead is used back-to-back at expansion joints back joints with barrier membrane. Refer to Master Wall® details.
- C. Grade Condition
 - 1. Keep Cemplaster Fiberstucco a minimum of 6” (152 mm) above grade in framed construction.

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D. Expansion Joints

1. Provide expansion joints where directed by the design professional at locations of building movement. Common locations include the following:
 - A. Where building movement is anticipated (substrate thermal joints, masonry control joints, etc.).
 - B. At dissimilar substrates.
 - C. At floor lines in certain wood framed constructions.
 - D. Where the Cemplaster Fiberstucco meets dissimilar materials.
2. Expansion joint design depends upon the anticipated movement. Master Wall® suggests the following minimum sizes, subject to design acceptance: Windows/Doors – 3/8" (9.5 mm), Building Expansion/Dissimilar Substrates & Materials – 1/2" (13 mm), Floor Line (shrinkage) – 3/4" (19 mm), masonry control joints (1/2" (13 mm) or use a control joint).

E. Control Joints

1. Provide control joints for stucco thermal movement when lath is used where directed by the design professional. Common locations include the following:
 - A. To limit cracking in the system at a maximum area of 144 ft² (13.4 m²).
 - B. Length to width ratio should not be more than 2.5:1.
 - C. Off the corners of window/door heads or jamb.
 - D. At dissimilar substrates.
2. Increase joint requirements where thicker stucco or special structural conditions exist.
3. Typically control joints are tied to the metal lath, which is cut to make two discontinuous slabs.
4. When Cemplaster Fiberstucco is bonded to a solid substrate such as concrete or masonry the control joint requirements may be revised. Control joints may be aligned with any control joints in the plaster base.

F. Provide appropriate sealant at stucco terminations using a sealant designed for concrete/stucco and accessory material type use (sealant trades, Section 07920).

G. Indicate location of joints, accessories and accessory type on architectural drawings.

H. Fire Protection

1. Refer to manufacturer's applicable code compliance report for other limitations and fire-resistive assemblies that may apply.

I. Solid Substrates

1. Provide surface plane tolerance not to exceed 1/4 inch in 10 feet (6.4 mm in 3.05 m).
2. Concrete—prevent the use of form oil, curing compounds or other bond breakers that inhibit bond to the surface or provide for their removal.
3. Concrete Masonry—provide open texture concrete masonry units with flush joints.
4. Brick – soft to medium fired, porous to provide acceptable bond for stucco.

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1.06 PERFORMANCE REQUIREMENTS

A. System Performance

The Cemplaster Fiberstucco shall conform to the following minimum standards:

ASTM Standard	Description	Results
C67	Freeze/Thaw	Pass ICBO ACII Criteria
C109	Compressive Strength	1900 psi
E84	Surface Burning	Flame Spread=0, Smoke Developed=0
E119	Fire Rating	One Hour
E330	Transverse Load	+/- 150 psf Ultimate. Allowable varies by Code
G26	Accelerated Weathering	Pass 2000 Hours

1.07 SUBMITTALS

- A. The Applicator shall submit a list of completed projects of like size and complexity.
- B. The Applicator shall submit a certificate of training indicating that they have been given instructions on the proper installation of the Cemplaster Fiberstucco.
- C. The Applicator shall submit Manufacturer's current literature, brochures, specifications, and details if required.
- D. The Applicator shall submit sufficient samples of each finish texture and color selected. The samples shall be prepared with the same tools and techniques required for the actual project. Color and texture should be approved based on the job site mock-up samples.
- E. The Applicator shall provide any shop drawings that may be applicable to the project for approval by the project architect.

1.08 DELIVERY, STORAGE AND HANDLING

- A. Deliver all materials in original unopened packages with labels intact. Verify all quantities, colors, and textures against bill of lading.
- B. Store all materials protected from direct exposure to weather conditions and at temperatures not less than 40° F (5° C) or greater than 110° F (43° C).
- C. Material safety data sheets (MSDS) shall be supplied for the components of the Cemplaster Fiberstucco and be available at the job site.

1.09 JOB CONDITIONS

- A. Ambient air temperatures shall be 40° F (5° C) or greater and rising at the time of installation of the Master Wall Inc.® products and shall remain at 40° F (5° C) or greater for at least 24 hours after application.
- B. Provide supplemental heat and protection as required when the temperature and conditions are not in accordance with installation requirements. Sufficient ventilation and time shall be provided to ensure that materials have sufficiently dried prior to removing supplemental heat.
- C. Adequate protection shall be provided to prevent weather conditions (humidity, temperature, and precipitation) from having an affect on the curing or drying time of Master Wall Inc.® materials.
- D. Adjacent materials and the Cemplaster Fiberstucco shall be protected during installation and while curing from weather and shall be protected from site damage.

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- E. Coordinate installation of the Cemplaster Fiberstucco with related work specified in other sections to ensure that the wall assembly is protected to prevent water from getting behind the system. The cap flashing shall be installed as soon as possible after the finish coat has been applied. When this is not possible, temporary protection shall be provided immediately in this area.
- F. All sealants shall be installed in a timely manner. Protect open joints from water intrusion during construction with backer rod, or temporary covering, until permanently sealed.
- G. Sufficient manpower and equipment shall be employed to ensure a continuous operation, free of cold joints, scaffolding lines, and texture variations, etc.
- H. Solid substrates shall be allowed to cure long enough to support the stucco work. Minimum 28 days for concrete and masonry units.

1.10 REPAIR AND MAINTENANCE

- A. Refer to Master Wall Inc.® specific repair and maintenance procedures.

1.11 LIMITED MATERIALS WARRANTY

- A. A 5-year Limited Materials Warranty shall be issued upon the receipt of a properly completed warranty request form. Warranty shall include both the Structa Wire Corp. Twin Trac lath and the Cemplaster Fiberstucco.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. [Master Wall Inc.®](#)
- B. Provide Cemplaster Fiberstucco system from single source manufacturer.

2.02 MOISTURE BARRIER (WRB) *(supplied by various manufacturers)*

- A. **WRB01** Minimum 2-layers of 15-lb/100 ft² (0.683 kg/m²) vapor permeable asphalt saturated felt in compliance with ASTM D 226, Type I or similar in accordance with building code.
- B. Peel & Stick Tape: Compatible with moisture barrier, optional behind control joints. [<edit>](#)
- C. Other weather barrier meeting the local building code criteria and accepted by Master Wall Inc.®

2.03 Cemplaster Fiberstucco (CFS) *(select one)*

- A. [Master Wall® Cemplaster Fiberstucco](#) —factory proportioned, fiber reinforced Portland cement based stucco for trowel or pump application, field mixed with graded sand (ASTM C 897) and water.
- B. [Master Wall® Ready Cemplaster Fiberstucco](#) — factory proportioned, fiber reinforced Portland cement based stucco for trowel or pump application, field mixed with water.
- C. Approved Quikrete® stucco supplied by an authorized Master Wall® distributor and approved in Master Wall Inc.® warranty program.
- D. Installed thickness shall be: 1/2" (12.7 mm) **CFS03**.

2.04 FOAM TRIM [<edit>](#)

- A. Decorative foam trim pieces using Master Wall® materials and recommendations in accordance with the [Foam Shapes](#) product data sheet.

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2.05 PRIMER (PRIME)

- A. **PRIME01** Master Wall® [Primecoat](#) or [Sanded Primecoat](#): acrylic-based tinted primer.

2.06 FINISH COAT (FIN)

- A. **FIN01** [Superior Finish](#): Master Wall Inc.® Superior Finishes are acrylic-based wall coatings available in a variety of colors and textures. The following textures are available:
1. Perfect - riled texture
 2. Spray – sand type texture
 3. R-Coarse – coarse riled texture
 4. Desert Sand – coarse sand texture
 5. Refinish – Fine texture used to create numerous finishes

2.07 [LATH](#) (supplied by Master Wall® authorized distributors)

- A. **Structalath Twin Trac 316**: Welded wire lath reinforcement manufactured by Structa Wire Corp. and recognized in ICC-ES ESR-2017.
- B. **Striplath** Minimum 4" x 12" (102 mm x 305 mm), in types and weights noted above.

2.08 MECHANICAL FASTENING & ATTACHMENT (by others) <edit>

- A. Appropriate non-corroding fasteners, depending on the type framing or substrate:
1. Wood Framing--minimum 11 gauge, 7/16 inch (11 mm) diameter head galvanized roofing nails with minimum ¾ inch (19mm) penetration into studs or minimum #8 Type S wafer head fully threaded corrosion resistant screws with minimum ¾ inch (19 mm) penetration into studs.
 2. Steel Framing—minimum #8 Type S or S-12 wafer head fully threaded corrosion resistant screws with minimum 3/8-inch (9.5 mm) penetration into studs.
- B. Tie Wire—18 gauge galvanized and annealed low-carbon steel in compliance with ASTM A 641 with Class I coating, 18 ga stainless steel wire for stainless steel lath and accessories.

2.09 [ACCESSORIES](#) (by others) <edit>

- A. Weep screed, casing bead, corner bead, corner lath, expansion and control joint accessories. All accessories shall meet the requirements of ASTM C 1063 and its referenced documents:
1. PVC plastic in compliance with ASTM D 1784, cell classification 13244C.
 2. Zinc in compliance with ASTM B 69.
 3. Galvanized metal in compliance with ASTM A 653 with G60 coating.
 4. 304 stainless steel trim manufactured in accordance with ASTM C841
- B. All accessories shall have perforated or expanded flanges and shall be designed with grounds for the specified thickness of the Cemplaster Fiberstucco.

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2.10 JOB MIXED INGREDIENTS

- A. Water: Clear, clean and potable without any foreign matter in the solution that may affect the color and setting qualities of the cement, adhesive, base or finish coat.
- B. Sand: Clean, well graded sand free of deleterious materials in compliance with ASTM C 897.
- C. Cement: Type I or I-II Portland cement meeting ASTM C-150.

2.11 MIXING

- A. Mix products in accordance with manufacturer's recommendations.

PART 3 EXECUTION

3.01 EXAMINATION

A. Prior to installation of the Cemplaster Fiberstucco, the contractor shall verify that the substrate and water barrier:

- 1. Is of a type listed in this specification.
- 2. Is installed to shed water in accordance with this specification.
- 3. Is flat within 6.4 mm (1/4 in) in a 3 m (10 ft) radius.
- 4. Is sound, dry, connections are tight, has no surface voids, projections or other conditions that may interfere with the Cemplaster Fiberstucco installation or performance.

B. Prior to the installation of the Cemplaster Fiberstucco, the architect or general contractor shall insure that all needed flashings and other waterproofing details have been completed, if such completion is required prior to the coatings application. Additionally, the Contractor shall ensure that:

- 1. Metal roof flashing has been installed in accordance with Asphalt Roofing Manufacturers Association (ARMA) Standards.
- 2. Openings are flashed in accordance with window manufacturer requirements, Cemplaster Fiberstucco Installation Details or as otherwise necessary to prevent water penetration.
- 3. Chimneys, Balconies, and Decks have been properly flashed.
- 4. Windows, Doors, etc. are installed and flashed per manufacturer's requirements and the Cemplaster Fiberstucco Installation Details.

C. Prior to the installation of the Cemplaster Fiberstucco, the contractor shall notify the general contractor, and/or architect, and/or owner of all discrepancies.

3.02 PREPARATION

A. The Cemplaster Fiberstucco materials shall be protected by permanent or temporary means from inclement weather and other sources of damage prior to, during, and following application until completely dry.

B. Protect adjoining work and property during Cemplaster Fiberstucco installation.

C. The substrate shall be prepared as to be free of foreign materials, such as, oil, dust, dirt, form release agents, efflorescence, paint, wax, water repellents, moisture, frost and any other condition that inhibit adhesion.

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3.03 INSTALLATION

- A. The system shall be installed in accordance with the current Structa Wire Corp. and Master Wall Inc.® Cemplaster Fiberstucco Application Instructions.
- B. The overall minimum Cemplaster Fiberstucco scratch and brown coat thickness shall be sufficient to fully embed the reinforcing mesh/lath.
- C. Sealant shall not be applied directly to textured finishes.

3.04 FIELD QUALITY CONTROL

- A. The contractor shall be responsible for the proper application of the Cemplaster Fiberstucco materials.
- B. Master Wall Inc.® assumes no responsibility for on-site inspections or application of its products.
- C. If required, the contractor shall certify in writing the quality of work performed relative to the substrate system, details, installation procedures, workmanship and as to the specific products used.
- D. If required, the sealant contractor shall certify in writing that the sealant application is in accordance with the sealant manufacturers and Master Wall Inc.® recommendations.

3.05 CLEANING

- A. All excess Cemplaster Fiberstucco materials shall be removed from the job site by the contractor in accordance with contract provisions and as required by applicable law.
- B. All surrounding areas, where the Cemplaster Fiberstucco has been installed, shall be left free of debris and foreign substances resulting from the contractor's work.

3.06 PROTECTION

- A. The Cemplaster Fiberstucco shall be protected from inclement weather and other sources of damage until dry and permanent protection in the form of flashings, sealants, etc. are installed.

End of Specification

Disclaimer

This Specification is published for general informational purposes only and is not intended to imply that these are the only materials, procedures, or methods, which are available or suitable. Materials, procedures, or methods may vary according to the particular circumstances, local building code requirements, design conditions, or statutory and regulatory requirements. While the information in this specification is believed to be accurate and reliable, it is presented without guarantee or responsibility on the part of Master Wall Inc.®