



DEC Architectural Composites

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**SECTION 064000
ARCHITECTURAL WOODWORK
MAGDALENO STONE™ - INTERIOR MOLDED STONE**

PART 1. GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, Conditions of the Contract and Division 1 Specifications sections, apply to work of this section.

1.02 SUMMARY

- A. Section Includes: Magdaleno Stone™ fabrication and installation as scheduled and shown on the architectural drawings.

1.03 RELATED WORK IN OTHER SECTIONS

- A. Section 06100- Rough Carpentry
- B. Section 06200- Finish Carpentry
- C. Section 06600- Plastic Fabrications
- D. Section 06610- Glass Fiber Reinforced Plastic
- E. Section 07900- Joint Sealers: Sealant materials for open joints

1.04 REFERENCE STANDARDS

- A. ASTM C947: Test Method for Flexural Strength
- B. ASTM E-84: Test Method for Surface Burning Characteristics of Building Materials.
- C. MNL-128: Range of Premix Properties Recommended to PCI.

1.05 SUBMITTALS

- A. Shop Drawings: Submit shop drawings delineating all details required for fabrication and installation. Show location in plan view. Shop drawings to indicate the necessary blocking and attachment to the building or framing as required to support and secure the Magdaleno Stone material only. Framing details and structural support of framing is not the responsibility of the Magdaleno Stone manufacturer, and it is to be engineered by others unless previously agreed to by contractor/subcontractor and DEC, and noted accordingly in the material supply contract.
- B. Submit list of part numbers.
- C. Product Data: Submit manufacturer's product data and installation and maintenance instructions.

- D. Manufacturer's Instructions: Submit manufacturer's instructions and recommendations for product delivery, storage and handling.
- E. Product Sample: Submit four (4) each, 12" x 12" samples demonstrating finish to be supplied (finish per contract).
- F. Submit manufacturer's warranty.

1.06 QUALITY ASSURANCE

- A. Manufacturer: Firm with manufacturing and delivery capacity required for the project, shall have successfully completed at least ten projects within the past five years, utilizing systems, materials and techniques as herein specified.
- B. Fabricator must own and operate its own manufacturing facilities for all material components. "Stick Built" or "kit of Parts Systems" consisting of components from a variety of manufacturers will not be considered or accepted.
- C. All Magdaleno Stone forms shall match approved samples.
- D. All Magdaleno Stone forms will be installable according to details submitted in shop drawings.

1.07 MANUFACTURER'S QUALIFICATIONS

- A. Firms specified in Approved Manufacturer (section 2.01) must demonstrate their capabilities and experience by including lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

1.08 DELIVERY, STORAGE AND HANDLING

- A. Handle, store and transport Magdaleno Stone parts according to manufacturer's recommendations in a manner that prevents damage. All materials shall be protected during fabrication, shipment, site storage and erection to prevent damage to the finished work from other trades. Store materials inside a well-ventilated area, away from uncured concrete and masonry, and protected from weather moisture, soiling, abrasion, and extreme temperatures.
- B. Protect fabrications from damage by retaining or duplicating shipping protection in place until installation.
- C. Damage Responsibility: Except for damage caused by others, the installer is responsible for chipping, cracking, or other damage to Magdaleno Stone parts, after delivery to the job site and until installation is complete and inspected and approved by the contractor and architect.

1.09 WARRANTY

- A. Warrant fabrications to be free from defects due to materials and workmanship for one year.

PART 2. PRODUCTS

2.01 MANUFACTURER

A. DEC ARCHITECTURAL COMPOSITES

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- B. The listed manufacturer shall not be construed as closing the specifications to other prospective manufacturers, but rather as establishing a level of quality in a composite fabrication system. Other manufacturers may be submitted for approval, as provided for in the specifications at least 14 working days prior to submission of bids. Companies desiring to submit a proposal shall submit all descriptive information of the system proposed including photographs and shop drawings of at least three projects similar in detail and scope.

2.02 MATERIALS

A. Description: Magdaleno Stone™ – Interior Molded Stone

1. Pre-molded interior stone parts are fabricated to details and dimensions shown.
2. Finished product shall conform to the following standards:

2.03 PHYSICAL PROPERTIES OF DEC MAGDALENO STONE™

Property Value Test Method

<u>Property Value</u>	<u>Test Method/Result</u>
Barcol Hardness	ASTM-D-2583 105 Points
Compression	ASTM-C-39 5,800 psi
CTE Average	ASTM-D-696 5.4×10^{-6} in./in./F°
Density	ASTM-D-792 110 lbs/cu.ft.
Flammability – Class I Materials	ASTM-E-84 0 Flame/0 Smoke
Flexural Strength	ASTM-D-790 4,192 psi
Impact Strength	ASTM-D-256 12.9 ft. lbs./in.
Tensile	ASTM-D-638 1,340 psi
Unit Weight (lbs./sq.ft. at ½")	2 lbs.

- A. All parts to contain supports as required to keep within allowable tolerances.
- B. Finish surfaces shall be true or textured, according to design requirements.
- C. Color and texture will vary from material samples.

2.04 FABRICATION

- A. Molds to be constructed and properly reinforced to produce units conforming to the required profiles, dimensions and tolerances.
- B. Allowable Tolerances:
 1. Dimensional Tolerances: $\pm 1/8$ "
 2. Shell Thickness: $3/16$ "
 3. Out of Plumb: $\pm 1/8$ "
 4. Bowing: L/ 360 Maximum

2.05 IDENTIFICATION

- A. Identify each part with a permanent part number.
- B. Number parts to coordinate with shop drawings.

2.06 CURING AND CLEANING

- A. Cure and clean components prior to shipment.

2.07 ANCHORS AND FASTENERS

- A. The installer is to provide anchors and fasteners and other accessories required for proper installation of fabrications as recommended and approved by the composite fabricator and the project architect; however, the necessary blocking and attachment to the building or framing as required to support and secure the Echo-Stone material, as well as any framing details and structural support of framing, is not the responsibility of the Magdaleno Stone manufacturer, and it is to be engineered by others unless previously agreed to by contractor/subcontractor and DEC, and noted accordingly in the material supply contract.

PART 3. EXECUTION

3.01 PRE-INSTALLATION EXAMINATION

- A. Installer to observe field conditions and verify that substrates are ready for installation of fabrications.
- B. Installer to check field dimensions affecting the installation of Magdaleno Stone fabrications.
- C. Installer to verify that bearing surfaces are true and level.
- D. Installer to verify that support framing has been constructed to allow accurate placement, alignment and connection of fabrication to structure.
- E. Installer to report discrepancies between design dimensions and field dimensions, which could adversely affect installation, to the contractor and architect.
- F. Do not proceed with installation until discrepancies are corrected, or until installation requirements are modified and approved by the contractor and architect.
- G. Start of installation constitutes acceptance of existing conditions.

3.02 INSTALLATION

- A. Storage and Handling
Store Magdaleno Stone™ units on a clean and dry surface in an area protected from weather and damage. Do not lean or brace the units as warpage may occur. Treat all material as a finished product.
- B. Workmanship
Install work of this section complete, straight, plumb, level, in true alignment and securely anchored.
- C. Erection
Magdaleno Stone™ forms shall be installed per drawings, including the approved shop drawings, and the manufacturer's written recommendations and instructions for this project.
- D. Sealing and Caulking

Shall conform to requirements of Caulking and Sealing Section 07900 and requirements indicated and specified herein.

1. Joints and Sealants
Joints (quantity, sizes, and shapes) indicated on contract drawings are minimum requirements.

E. Finishing Materials

1. Fasteners
As indicated on approved shop drawings and in accordance with manufacturer's printed recommendations. Use carbide bits and drills and countersink screw holes for Magdaleno Stone™ grout. Apply adhesive on flat panels or cleats for parts. 18 gauge air gun nails can be used to temporarily secure on plywood.
2. Joint treatment materials
 - a. Butt Joints: Use a dry butt on all joints unless indicated otherwise.
 - b. Grouted joints: Use Magdaleno Stone™ Grout material only. Follow the label instructions for application procedure.
 - c. Caulked joints: Most available caulking compounds are compatible.
3. Patching Materials
 - a. General: Use Magdaleno Stone™ patching materials only. Follow the label directions for application procedure.

F. Cutting of Material

1. Unless noted otherwise, Magdaleno Stone™ parts come in standard sizes and will require field cutting and/ or mitering.
2. Use diamond blades, metal abrasive wheels or carbide tip blades.
3. Do not use a wet cutting wheel.
4. Sand all cut edges with #40 - #60 grit paper to desired edge condition.

G. Replacements

1. Molded stone forms may be rejected for the following reasons.
 - a. Nonconformance to detail requirements specified previously.
 - b. Nonconformance with approved samples.
 - c. Nonconformance to specified fabrication or installation tolerance.
 - d. Damage beyond satisfactory field repair, as determined by the Architect.

3.03 CLEANING

- A. Clean installed Magdaleno Stone™ fabrications using cleaning methods and materials approved by manufacturer.

3.04 PROTECTION OF INSTALLED FABRICATIONS

- A. Comply with General Contractor's recommendations and instructions for protecting installed Fabrications during construction activities.

END OF SECTION