

# CELLOCK™ MH PLANK SECURITY CEILING SYSTEMS

## SECTION 09 57 53

### **PART 1 – GENERAL**

#### **1.01 SECTION INCLUDES:**

- A. This specification covers the material, installation, and related requirements for the CELLOCK™ MH Plank Security Ceiling Systems – including all necessary Acoustical Insulation, Suspension Systems, and Fasteners.

#### **1.02 RELATED DOCUMENTS/SECTIONS:**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions.
- B. Division 1 Specification sections apply to work of this Section.
- C. Finish Schedule or Finish Legend apply to work of this Section.

#### **1.03 REFERENCES:**

- A. GENERAL
  - 1. Comply with applicable requirements of the following, except where more stringent requirements are indicated by building codes.
- B. American Architectural Manufacturers Association (AAMA)
  - 1. AAMA 2604-21 Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels
- C. American Society for Testing and Materials (ASTM)
  - 1. ASTM B-117 Standard Practice for Operating Salt Spray (Fog) Apparatus
  - 2. ASTM C423-17 Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method
  - 3. ASTM C636-19 Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels
  - 4. ASTM D2247-15 Standard Practice for Testing Water Resistance of Coatings in 100 % Relative Humidity
  - 5. ASTM E795-16 Standard Practices for Mounting Test Specimens During Sound Absorption Tests
- D. American National Standards Institute (ANSI)
  - 1. ANSI S12.60-2002 Acoustical Performance Criteria, Design Requirements, And Guidelines for Schools
- E. American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE)
  - 1. ASHRAE 55-2023 Thermal Environmental Condition for Human Occupancy
- F. CISCA Ceiling Systems Installation Handbook.
  - 1. Chapter 9: Metal Ceiling Systems

#### **1.04 DESIGN/PERFORMANCE REQUIREMENTS:**

- A. All components of the CELLOCK™ MH Plank Security Ceiling Systems shall be provided by one (1) Manufacturer to ensure single source responsibility and quality control.

#### **1.05 SUBMITTALS:**

- A. Submission must be made within ten (10) working days of the General Contract Award to avoid project delay.
  - 1. After award of contract, standard Shop Drawings shall be submitted and approved prior to fabrication of the CELLOCK™ MH Plank Security Ceiling Systems or their structural supports.
- B. Product Data: Submit Manufacturer's:
  - 1. Product data
  - 2. Installation Instructions
- C. Shop Drawings: Submit Shop Drawings for fabrication and installation of CELLOCK™ MH Plank Security Ceiling Systems.
- D. Sustainability:
  - 1. Materials and Resources
    - a. Building Life-Cycle Impact Reduction
      - i. LCAs for aluminum and steel are available.
        - a) Aluminum - [http://www.gordon-inc.com/literature/pdf/cisca\\_background\\_report\\_aluminum\\_2020-04-24.pdf](http://www.gordon-inc.com/literature/pdf/cisca_background_report_aluminum_2020-04-24.pdf)
        - b) Steel - [http://www.gordon-inc.com/literature/pdf/cisca\\_background\\_report\\_steel\\_2020-04-24.pdf](http://www.gordon-inc.com/literature/pdf/cisca_background_report_steel_2020-04-24.pdf)
    - b. Building Product Disclosure and Optimization - Environmental Product Declarations
      - i. Industry-average EPDs for aluminum and steel are available.
        - a) Aluminum - [http://www.gordon-inc.com/literature/pdf/101.1\\_cisca\\_industry\\_wide\\_epd\\_aluminum\\_specialty\\_products.pdf](http://www.gordon-inc.com/literature/pdf/101.1_cisca_industry_wide_epd_aluminum_specialty_products.pdf)
        - b) Steel - [http://www.gordon-inc.com/literature/pdf/102.1\\_cisca\\_industry\\_wide\\_epd\\_steel\\_specialty\\_products.pdf](http://www.gordon-inc.com/literature/pdf/102.1_cisca_industry_wide_epd_steel_specialty_products.pdf)
    - c. Building Product Disclosure and Optimization - Sourcing of Raw Materials
      - i. Regional Materials – Raw materials can be purchased from Vendors within 100 miles of the project location and fabrication of all materials in Bossier City, LA, U.S.A.
      - ii. Gordon's mission is to locate recycled materials that are not only of high recycled content, but extracted, produced, or extruded in the U.S.A.
    - d. Building Product Disclosure and Optimization - Material Ingredients
      - i. Full disclosure of material recycled content is available.

- e. Construction and Demolition Waste Management
  - i. Most products shipped from our plant are engineered to fit and reduce field cutting during installation.
    - a) Fewer indoor air quality problems
    - b) Less scrap and debris – cleaner work environment
    - c) Less noise pollution caused by field cutting of materials.
    - d) Maintain comfort and well-being of workers and occupants.
- 2. Indoor Environmental Quality
  - a. Low-Emitting Materials
    - i. Gordon's State-of-the-art Powder Coating line produces the highest quality powder coated surfaces while also contributing to our sustainability drive.
      - a) No heavy Metals used in pre-treatment.
      - b) Processed water is fully compliant for introducing into waste stream.
      - c) Extremely efficient use of powder coating through reclamation system reducing powder wastage.
      - d) Factory finished products shipped from our plant eliminates field painting.
        - 1. Prevents odorous and irritating air contaminants.
        - 2. Introduces no hazardous waste.
        - 3. Contributes no VOCs.
        - 4. Maintains comfort and well-being of workers and occupants.
  - b. Thermal Comfort
    - i. Gordon acoustical ceilings and walls aid in providing Thermal Comfort Control with encapsulated acoustical media containing insulation or nonwoven acoustical fabric for insulative purposes to meet the requirements of ASHRAE Standard 55–2010, Thermal Comfort Conditions for Human Occupancy.
  - c. Interior Lighting
    - i. Gordon's AAMA 2604 powder coat finishes can provide the proper light reflectance to improve illumination in the space and reduce lumen output requirements.
  - d. Acoustic Performance
    - i. Gordon manufactures a vast array of ceiling and wall systems that provide acoustical performance to meet Noise Reduction Coefficient (NRC) and Reverberation Time (RT) requirements.
    - ii. Gordon acoustical ceiling and wall systems reduce noise to 45 dBA max as well as meet the Reverberation Time (RT) requirements of ANSI Standard S12.60-2002, Acoustical Performance Criteria, Design Requirements and Guidelines for Schools.

- iii. Gordon systems utilize effective acoustical design, providing improved speech intelligibility and background noise control in secured areas. As a result, background noise is reduced in these areas to 40 dBA or less.
- 3. Innovation
  - a. Innovation
    - i. Gordon is a strategic partner with the design community and continuously finds ways to design products that can aid in improving environmental performance.
  - b. LEED Accredited Professional
    - Gordon has LEED Accredited Professionals on staff to assist with your sustainability requirements.
- 4. Detailed explanation of LEED Credits and Gordon, Inc.'s Contribution can be located at <http://www.gordon-inc.com/company/sustainability/>.
- E. Samples:
  - 1. A 1' x 1' assembled sample of each CELLOCK® Ceiling Panel and its Suspension System shall be submitted for approval.
- F. Closeout Submittals
  - 1. Provide Manufacturer's Cleaning and Maintenance Instructions
  - 2. Warranty Documents
  - 3. Manufacturer's certification of compliance with the acoustical performance required as described in this specification.

#### **1.06 QUALITY ASSURANCE:**

- A. Source Limitations:
  - 1. All components of the CELLOCK™ MH Plank Security Ceiling Systems shall be provided by a single Manufacturer to ensure responsibility and quality control.
- B. Manufacturers' Qualifications:
  - 1. Firm with manufacturing and delivery capacity required for the project, shall have successfully completed at least ten (10) projects within the past five (5) years, utilizing systems, materials, and techniques as herein specified.
  - 2. Manufacturer must own and operate its own manufacturing facilities for all metal components. "Stick Built" or "Kit of Parts Systems" consisting of components from a variety of Manufacturers/Fabricators will not be considered or accepted.
  - 3. Manufacturer must own and operate its own painting and finishing facility to assure single source responsibility and quality control.
- C. Installer's Qualifications:
  - 1. Firm with not less than five (5) years of successful experience in the installation of systems similar to those required by this project and acceptable to the Manufacturer of the System.

#### **1.07 PRODUCT DELIVERY, STORAGE AND HANDLING:**

- A. All materials shall be protected during fabrication, shipment and installation to prevent damage to the finished work from other trades.
- B. To avoid lasting deformation of the CELLOCK™ MH Plank Security Ceiling Systems components when exposed to temperature and humidity extremes, store this material at or near room temperature. Allow a minimum of 48 hours for the product to adjust to

internal room temperature and humidity conditions before installing the CELLOCK™ MH Plank Security Ceiling Systems.

- C. Store CELLOCK™ MH Plank Security Ceiling Systems inside a well-ventilated area, away from uncured concrete and masonry, and protected from the weather, moisture, soiling, abrasion, extreme temperatures, and humidity.
- D. Maintain environmental conditions (temperature, humidity and ventilation) within limits recommend by Manufacturer for optimum results. Do not install products under environmental conditions outside Manufacturer's recommendations.
- E. Exercise care in loading, unloading, storing and installing units to preclude bending, warping, twisting and other surface damage.

#### **1.08 WARRANTY:**

- A. Standard Warranty:
  - 1. Furnish Manufacturer's Standard Warranty of one (1) year for workmanship and for finish against defects in materials and/or workmanship.
- B. Extended Workmanship Warranty:
  - 1. Furnish Manufacturer's Standard Workmanship Warranty (must be requested at time of quotation) may be extended up to a maximum of twenty (20) years from date of material shipment, when installed in accordance with Manufacturer's recommendations.
- C. Extended Finish Warranty:
  - 1. Furnish Manufacturer's Standard Finish Warranty (must be requested at time of quotation) may be extended up to a maximum of twenty (20) years from date of material shipment, when installed in accordance with Manufacturer's recommendations.

#### **1.09 SUBSTITUTIONS**

- A. No substitutions are permitted for the CELLOCK™ MH Plank Security Ceiling Systems.
- B. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00. Companies desiring to submit a proposal shall submit all descriptive information of the system proposed including photographs and Shop Drawings of at least ten (10) projects within the past five (5) years, utilizing systems, materials and techniques as herein specified.

### **PART 2 - PRODUCTS**

#### **2.01 MANUFACTURERS:**

- A. Basis-of-Design: Subject to compliance with requirements, provide CELLOCK™ MH Plank Security Ceiling Systems manufactured by Gordon, Inc. For all inquiries contact:

**Gordon, Inc.**  
**5023 Hazel Jones Road**  
**Bossier City, LA 71111**  
**(800) 747-8954**  
[sales@gordon-inc.com](mailto:sales@gordon-inc.com)

- B. The listed Manufacturer shall not be construed as closing specifications to other prospective Manufacturers, but rather as establishing a level of quality in a metal system. Other systems may be submitted for approval, as provided for in the specifications at least ten (10) 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 (3) projects similar in detail and scope.

## **2.02 MATERIALS:**

A. Product Components:

1. CELLOCK™ MH Plank Security Ceiling Systems: The CELLOCK™ MH Plank Security Ceiling System is to be fabricated and installed in accordance with the Manufacturer's approved Shop Drawings. CELLOCK® Metal Planks shall be factory formed from (12) (14) (16) (18) Gauge perforated (non-perforated) galvanized (minimum A60) steel as indicated on the Drawings. Planks shall be formed (12") (18") (24") wide in lengths of up to 12'-0 (10' for 12 Gauge) as shown on Reflected Ceiling Plans. Vertical legs of CELLOCK® Metal Planks are to be factory formed so that Panels overlap tightly to provide positive self-alignment with adjacent Panels.
2. CELLOCK® Metal Plank Suspension: Perimeter Angles and Main Tee Runners shall be factory fabricated from (12) (14) (16) Gauge factory finished galvanized (minimum A60) steel. Angles and Tees shall be factory pre-punched to receive Fasteners. Angles shall be fastened to all abutting vertical surfaces through the use of drilled in anchors or other approved Fasteners at a minimum of 16" O.C. Tee sections shall be suspended by 14 Gauge 1-1/2" x 1-1/2" galvanized slotted Angles bolted to Main Tees at minimum of 5'-0" O.C., hung from structural members or drilled in anchors of appropriate type and dimension as approved by the Architect. Panels shall be securely fastened to all Angles and Tee sections with (steel rivets) (Torx® security fasteners)<sup>1</sup> of appropriate dimension (painted to match Panels) minimum 6" O.C. [or through the use of concealed Hold Down Angle mechanically fastened to abutting vertical surfaces].
  - a. Acoustical Material: The inside surface of all perforated CELLOCK® Ceiling Panels shall be covered with Class A fiberglass Insulation wrapped in black Fire-Retardant Poly. Insulation shall be of sufficient thickness and density to provide the acoustical requirements as outlined herein.
  - b. Lights and Air: All light and air units are to be system compatible and sized so as to fit into and trim off full module opening in CELLOCK™ MH Plank Security Ceiling Systems and shall be independently supported from above by installing trade.
  - c. Access Doors: All security Access Doors to be installed in the CELLOCK™ MH Plank Security Ceiling Systems shall be supplied by the CELLOCK™ MH Plank Security Ceiling

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<sup>1</sup> Torx® is a registered trademark of Camcar

Systems Manufacturer in quantities indicated on the Architectural Drawings or as approved by the Architect.

Access Doors shall have the following characteristics:

- i. Size: 24" x 24", which fits an opening of 23-3/4" x 23-3/4"
  - ii. Door: 16 Gauge steel
  - iii. Frame: 16 Gauge steel
  - iv. Hinge: Full-length semi-concealed piano hinge that opens 180 degrees
  - v. Anchors: Heavy steel, welded to frame
  - vi. Lock: Theft-proof, security bolt, with key
  - vii. Finish: Factory white polyester powder coated paint finish
- d. Fasteners: All exposed Fasteners shall be tamper-proof and shall be a minimum No. 12 size. Fasteners for securing the Wall Molding to the wall are to be selected and furnished by the Contractor and approved by the Architect/Engineer.

**B. Product Performance:**

- 1. Accessibility: Suspended CELLOCK™ MH Plank Security Ceiling Systems shall be designed and installed to resist access to the plenum area. System compatible hinged locking downward accessible Doors are to be provided in locations indicated on architectural Reflected Ceiling Plans. Access Doors are to be sized so as to fit into and trim off full module opening in Ceiling System.
- 2. Acoustical Requirements: The perforated CELLOCK™ MH Plank Security Ceiling Systems shall provide a Noise Reduction Coefficient (NRC) of no less than 0.80 when tested in accordance with ASTM C423-84a in an E-400 mounting as defined in ASTM E795-83.

**2.03 FINISHES:**

**A. CELLOCK™ MH Plank Security Ceiling Systems:**

- 1. The CELLOCK® Metal Planks shall have a factory-applied white super-durable polyester powder coating finish. Finish to be applied after perforation (if applicable) to ensure coating of perforated holes. Panels shall be coated to a minimum thickness of 2.0 mils on the finish side.
- 2. Prior to painting, galvanized steel surfaces shall be cleaned, rinsed, and properly treated to receive the powder coating finish.
- 3. Finish to achieve the following performance characteristics:
  - a. Salt Spray per ASTM B-117 – 1,000 hours PASS at less than 1/8" from score.
  - b. Humidity Resistance per ASTM D-2247 – 1,000 hours PASS at less than 1/8" from score.

**2.04 FABRICATION:**

- A.** The Ceiling Contractor shall verify all dimensions, elevations, and job site conditions before fabrication commences.

## **PART 3 - EXECUTION**

### **3.01 EXAMINATION:**

- A. Examination of Surfaces: Installer must examine conditions under which work is to be performed and must notify Contractor in writing of unsatisfactory conditions.
- B. Verify that field measurements and block-out dimensions are as shown on Shop Drawings.

### **3.02 PREPARATION:**

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the Manufacturer to achieving the best result for the project conditions.

### **3.03 INSTALLATION:**

- A. General: Comply with Manufacturer's printed instructions, governing regulations for Seismic Codes, and the Ceiling & Interior Systems Construction Association (CISCA) Standards applicable to work.
- B. The CELLOCK™ MH Plank Security Ceiling Systems shall be installed in accordance with ASTM C636 and CISCA guidelines, in layouts as reflected on the approved Shop Drawings, all in compliance with the Manufacturer's Installation Instructions.
  - 1. The Suspension System and Wall Moldings shall be installed plumb and level.
  - 2. Start installation of CELLOCK™ MH Plank Security Ceiling Systems at location as shown on Reflected Ceiling Plans. Slide and lift over previously installed Metal Plank along Perimeter Angle and lift and rotate to lock Panels together to create a ship lapped joint between adjoining Panels. Ensure self-aligning legs overlap each other. **Side stitch Panels together along ship lapped Panel joints with self-tapping fasteners per approved Shop Drawings or at a minimum of 24" O.C.**
  - 3. In order to achieve secure and tightly engaged Panel joint details, Panels must be installed progressively from the start Panel through the closure Panel. Except for the openings for light, air, fire protection, or access shown on the Reflected Ceiling Plans, all openings or cut outs required in the CELLOCK® Ceiling Planks shall be field cut by the trades requiring the openings.

### **3.04 CLEANING:**

- A. Follow Manufacturer's cleaning instructions for specified finish.

### **3.05 PROTECTION:**

- A. Procedures: Care should be taken during the remainder of construction to protect the CELLOCK™ MH Plank Security Ceiling Systems from damage.
- B. Damage to Finished Work: Finished units of the CELLOCK™ MH Plank Security Ceiling Systems shall be without damage. Damage shall be repaired by the Contractor at the expense of the party damaging the material, as in accordance with the contract requirements.

## **END OF SECTION**