

LOCKDOWN® SUSPENDED METAL SECURITY PANEL CEILING SYSTEM

SECTION 09 57 53

PART 1 – GENERAL

1.01 SECTION INCLUDES:

- A. This specification covers the material, installation, and related requirements for the Suspended Metal Acoustical Security Panel Ceiling System – 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 applies to work of this Section.
- D. The following items of related work are not included in this Section of the specification:
 - 1. Ceiling Lighting Systems – Their components, layout, coordination, installation, or support systems. Compatible recessed security lighting fixtures are to be furnished and installed by Division 16 – Electrical.
 - 2. Ceiling Air Supply and Return Systems – Their components, layout, coordination, installation, or support systems. Compatible air supply and return systems are to be furnished and installed by Division 15 – Mechanical.

1.03 REFERENCES:

- A. GENERAL
 - 1. Comply with applicable requirements of the following, except where more stringent requirements are indicated by building codes.
- B. ASTM (American Society for Testing and Materials)
 - 1. ASTM C635, Standard Specifications for Metal Suspension Systems for Acoustical Tile and Lay-In Panel Ceilings.
 - 2. ASTM C636, Recommended Practice for Installation of Metal Suspension System for Acoustical Tile and Lay-In Panels.
- C. CISCA Ceiling Systems Installation Handbook.

1.04 DESIGN/PERFORMANCE REQUIREMENTS:

- A. All components of the Lockdown® Suspended Metal Security Panel Ceiling System 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. If not adhered to, Architect will designate exact product to be used and the Contractor will have no recourse.
 - 1. After award of contract, standard Shop Drawings shall be submitted and approved prior to fabrication of the Ceiling Panels 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 Lockdown® Suspended Metal Security Panel Ceiling System.
- D. Samples:
 - 1. A 1' x 1' assembled sample of each Ceiling Panel and its Suspension System shall be submitted for approval.
- E. 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. Manufacturer Qualifications: Furnish components from one (1) Manufacturer that specializes and is regularly engaged in the domestic manufacture of suspended metal security panel systems with a minimum of five (5) years of experience in the fabrication of security ceiling systems.
- B. Erector Qualifications: Firm with not less than three (3) years of successful experience in the installation of ceiling systems similar to those required by this project and acceptable to the Manufacturer of the system. Erector should specialize in the installation of suspended metal security panel systems.
- C. Single Source Responsibility: To ensure proper compatibility, all ceiling components listed herein shall be provided by a single source.

1.07 PRODUCT DELIVERY, STORAGE AND HANDLING:

- A. Deliver panels and all system hardware to the job site in Manufacturer's original packaging, unopened and undamaged, just prior to installation.
- B. Avoid warpage and damage by storing panels and all system hardware above floor, flat and in a dry, humidity and temperature controlled interior location.
- C. Follow Manufacturer's instructions and exercise care during off loading, handling and installation to avoid damage and marring of finishes.

1.08 SEQUENCING:

- A. Substitute Products: Alternate proposals for substitute products will not be accepted unless approval is issued in addenda.
- B. Contract Execution: Submittals shall be completed and approved prior to award of subcontract for system components.
- C. Manufacturer's Production Schedule: Sub-contract for the work of this section shall be planned to allow sufficient time for Manufacturer's production and delivery scheduling.

1.09 WARRANTY:

- A. Furnish Manufacturer's:
 - 1. Warranty that materials furnished will perform as specified for a period of not less than one (1) year from date of material shipment when installed in accordance with Manufacturer's recommendations.

PART 2 - PRODUCTS

2.01 MANUFACTURERS:

- A. Acceptable System: Suspended Metal Security Panel Ceiling System shall be Lockdown® as manufactured by Gordon, Inc. For all inquiries contact, Gordon, Inc., 5023 Hazel Jones Road, Bossier City, LA 71111, (800) 747-8954.
- 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 PRODUCT CONSTRUCTION:

- A. Product Components:
 - 1. Suspended Metal Panel Ceilings: Ceiling Panels shall be nominally 24" x 24" (24" x 48") 1" deep with sloping vertical legs on all four sides. All ceiling panels shall be factory-formed from perforated 18 Gauge minimum A60 galvanized steel. Where noted on the Drawings for high-humidity areas, the Ceiling Panels shall be formed of aluminum with a minimum thickness of 0.040". All Perforated Panels shall have 0.080" diameter holes on 0.220" staggered 45 degree centers. When installed, the face of the Panels shall rest on the inside surface of the exposed horizontal flanges of the main runners and cross tees. The sloping vertical legs of the Panels shall lock-down positively and continuously under the bottom surface of the bulb of the tee sections, providing a visual concealment barrier without the use of concealed clips or fasteners.
 - 2. Support Systems for Suspended Metal Panel Ceiling: The Ceiling Panel support system shall consist of main runners, cross tees, hanger wires, perimeter channel with hold down, and compression struts.
 - a. Main Runners and Cross Tees: Shall conform to the requirements of a heavy-duty classification in accordance with ASTM C-635. They shall be rolled with a double web and a rectangular bulb from Hot-Dipped Galvanized Steel, minimum 0.020" thick, to an overall height of 1-1/2" with a flange width of 15/16". The cross tees shall provide a positive mechanical lock into the main runners.

- b. Hangers: Supporting the main runners shall be 12 Gauge Galvanized Steel wire hung on minimum 48" centers from the structure above the ceiling.
- c. Compression Struts: Shall be composed of telescoping 1/2" diameter and 3/4" diameter steel galvanized tubing. The 1/2" diameter tube shall be notched on one end to fit over the bulb of the main runner. At the other end, a length of 3/4" diameter tube is to be telescoped over the top portion of the 1/2" diameter tube and screw fastened to it with two TEK screws (3/8" long) so that the top of the 3/4" diameter tube bears on the structure above and the bottom of the 1/2" diameter tube fits snugly over the bulb of the main runner. A compression strut is required at each hanger wire and shall be tied to the hanger wire at the top and bottom.
- d. Wall Moldings: Exposed wall moldings shall be channel-shaped and be of the same material and have the same finish as the suspension system runners and shall include closure channels to hold perimeter panels in place.
- e. Fasteners: All exposed fasteners shall be tamper-proof and shall be a minimum No. 12 size. Fasteners are to be selected and furnished by the contractor and approved by the architect/engineer.
- f. Acoustical Material: The inside surface of all perforated 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.
- g. Optional Gordon, Inc. Accessories – LockLite Security Lights, Lockdown Air Distribution, Lockdown Access Doors, Lockdown Access Panels: Can be furnished by the Ceiling System Manufacturer. All light and air units are to be system-compatible and sized so as to fit into the trim or full module opening and shall be independently supported from the structure above by the installing trade.

B. Product Performance:

- 1. Accessibility: Suspended Metal Panel Ceiling Systems shall be designed and installed to resist access to the plenum area above except through pre-designated removable ceiling panels which shall be secured to the suspension system with tamper-proof screws. System compatible hinged locking downward accessible doors are to be provided in locations indicated on architectural reflected ceiling plans.
- 2. Acoustical Requirements: The ceiling systems shall provide a noise reduction coefficient (NRC) of no less than 0.80 when tested in accordance with ASTM C423 in an E-400 mounting as defined in ASTM E795.

2.03 FINISHES:

- A. Ceiling Panels:
 - 1. The Ceiling Panels 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.
- B. Suspension Systems:
 - 1. The main runners, cross tees, and wall moldings shall have a factory applied finish coat to match the color of the Ceiling Panels.

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. Site Inspection: Prior to installation of the Ceiling Systems, the General Contractor shall verify that the structure and surfaces provided by other trades are properly built to the dimensions shown on the approved ceiling Shop Drawings, and that the structure is ready to receive the ceiling system. All discrepancies shall be corrected prior to commencing installation.

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 Standards applicable to work.
- B. Space Enclosure: Do not install any work until space is enclosed and weatherproofed, wet-work in space is completed and nominally dry, work above ceilings is complete, and temperature and humidity shall be continuously maintained at values near those of final occupancy.

- C. The Lockdown® Suspended Metal Acoustical Security Panel Ceiling System 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. 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 Ceiling Panels shall be field cut by the trades requiring the openings.

3.04 CLEANING:

- A. Cleaning of factory-finished parts, if necessary, should be accomplished with a detergent solution such as TSP-90 or Ivory.

3.05 PROTECTION:

- A. Material Protection: Material shall not be delivered to the job site, nor installed, until all exterior openings have been closed in and all concrete and other wet work is completed and dry.
- B. Procedures: Care should be taken during the remainder of construction to protect the Lockdown® Suspended Metal Security Panel Ceiling System from damage.
- C. Damage to Finished Work: Finished units of the Lockdown® Suspended Metal Security Panel Ceiling System 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.

3.06 GENERAL RESPONSIBILITY:

- A. Variation from Specification: Any variation from this Specification resulting in additional cost to any other Contractor or Subcontractor on this project shall be the sole financial responsibility of the Contractor for the work of this section.

END OF SECTION