

# SECTION 09 57 53

## ARROYO SECURE METAL PLANK ACOUSTICAL SECURITY CEILING SYSTEM

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. SECTION INCLUDES:
  - a. Metal ceiling panels
  - b. Suspension system
  - c. Wire hangers, fasteners and wall moldings
- B. RELATED DOCUMENTS/SECTIONS:
  - a. Drawings and general provisions of the Contract, including General and Supplementary Conditions.
  - b. Division 1 Specification sections apply to the work of this Section.
  - c. Finish Schedule or Finish Legend apply to the work of this Section.
- C. Alternates:
  - a. Prior to approval: Unless otherwise provided for in the contract documents, proposed product substitutes may be submitted no later than 10 working days prior to the date established for receipt of bids. Approval of a proposed substitution is contingent upon the Architect's review of the proposal for acceptability and approved products will be set forth by addenda
  - i. If substitute products that have not been approved by Addenda are included in a bid, the specified products shall be provided without additional compensation.

#### 1.2 REFERENCES:

- A. GENERAL
  - a. 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)
  - a. ASTM C636, Recommended Practice for Installation of Metal Suspension System for Acoustical Tile and Lay-In Panels.
- C. CISCA Ceiling Systems Installation Handbook.

#### 1.3 SUBMITTALS:

- A. Submission must be made within ten (10) working days of the General Contract Award to avoid project delay.
  - a. After the award of the contract, standard Shop Drawings shall be submitted and approved prior to fabrication of the Metal Planks or their structural supports.
  - b. Product Data: Submit Manufacturer's product data and installation instructions.
- B. Shop Drawings: Submit Shop Drawings for fabrication and installation of ARROYO SECURE Security Ceiling System.
- C. Samples:

- a. A 1' x 1' sample of each ceiling system and its suspension shall be submitted for approval.
- D. Closeout Submittals
  - a. Provide Manufacturer's Cleaning and Maintenance Instructions
  - b. Warranty Documents

#### 1.4 QUALITY ASSURANCE:

- A. Fabricator: The manufacturer must be a single-source supplier, furnishing all metal fabrications with factory finishes.
- B. Installer's Qualifications: Installer must have no less than three (3) years of successful experience in the installation of systems similar to those required by this project and acceptable to the Manufacturer of the System.

#### 1.5 PRODUCT DELIVERY, STORAGE AND HANDLING:

- A. Deliver materials in manufacturer's unopened packages, suitably store to protect against exposure to moisture, sunlight, surface contamination and other unacceptable conditions
- B. Handle components with care to prevent damage

#### 1.6 SEQUENCING:

- A. Substitute Products: Alternate proposals for substitute products will not be accepted unless approval is issued in an addendum.
- B. Contract Execution: Submittals shall be completed and approved prior to the 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.

#### 1.7 WARRANTY:

- A. Acoustical Panels: Submit a written warranty executed by the manufacture agreeing to repair or replacement of acoustical panels that fail within the warranty period, Failures include but are not limited to:
  - a. Acoustical metal panels: Warping, rusting and manufacturer's defects
  - b. Acoustical suspension: Rusting and manufacturer's defects
- B. Warranty period for Acoustical Metal Pan Ceiling is 1 years from date of Substantial Completion

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS:

- A. Subject to compliance with requirements, provide products from the following manufacturer:  
**CARRITEC**  
575 blvd. Morgan, Baie-D'Urfé, QC H9X 3T6  
Phone 514-457-7779 • Fax 514-457-5559  
Contact: [info@carritec.com](mailto:info@carritec.com)

### 2.2 MATERIALS AND FABRICATION

#### A. PRODUCT COMPONENTS:

- a. Metal Plank Ceilings: The ARROYO SECURE Ceiling System is to be fabricated and installed in accordance with the Manufacturer's approved Shop Drawings. Metal Planks shall be factory formed from (12/14/16/18) Gauge (perforated/non-perforated) galvanized (minimum A60) steel as indicated on the Shop Drawings. Planks shall be formed (12"/18"/24") wide in lengths of up to 12'-0" as shown on Reflected Ceiling Plans. Vertical legs of Metal Planks are to be factory formed so that Panels overlap tightly to provide positive self-alignment with adjacent Panels.
- b. Metal Plank Suspension: Perimeter Angles and Main Runners shall be factory fabricated from (12/14/16) Gauge factory-finished galvanized (minimum A60) steel. Angles and Runners shall be factory drilled to receive Fasteners. Angles shall be fastened to all

adjacent walls using drilled-in anchors or Fasteners approved by the architect at a minimum of 16" O.C., with actual spacing to be confirmed by an engineer. Runner sections shall be suspended by 14 Gauge galvanized compression posts bolted to Main Runners at a minimum of 5'-0" O.C., hung from structural members or drilled in anchors of appropriate type and dimension as approved by the Architect. Where required, 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 using concealed Hold Down Angle mechanically fastened to abutting vertical surfaces].

- i. Acoustical Material: The inside surface of all perforated Ceiling Panels shall be covered with Class A fibreglass Insulation wrapped in black Fire-Retardant Polybags. Insulation shall be of sufficient thickness and density to provide the acoustical requirements as outlined herein.
- ii. Lighting and HVAC: All lighting and HVAC units are to be sized so as to fit into and trim off full module opening in Ceiling System and must be independently supported from above by installing trade.
- iii. Access Doors: All Access Doors to be installed in the ARROYO SECURE Metal Security Ceiling System shall be supplied by the Metal Security Ceiling System Manufacturer. Access Doors shall have the following characteristics:
  - (i) Size: 24" x 24", or as required by the architect
  - (ii) Door: 16 Gauge steel
  - (iii) Frame: 16 Gauge steel
  - (iv) Hinge: Full-length piano hinge
  - (v) Lock: Theft-proof, security bolt, with key
  - (vi) Finish: Factory white polyester powder-coated paint finish
- iv. 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:**

- a. Accessibility: Suspended Metal Plank 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 to fit into and trim off full plank width in Ceiling System.
- b. Acoustical Requirements: The perforated Ceiling Systems shall provide a Noise Reduction Coefficient (NRC) of no less than (to be selected by architect) when tested in accordance with ASTM C423-84a

## 2.3 FINISHES:

**A. Metal Planks and Related Suspension:**

- a. The Metal Planks shall have a factory-applied white super-durable polyester powder 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.
- b. Prior to painting, galvanized steel surfaces shall be cleaned, rinsed, and properly treated to receive the powder coating finish.
- c. Other finishes available upon request. Please contact Carritec for selection.

## 2.4 FABRICATION:

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

# PART 3 - EXECUTION

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

### 3.1 EXAMINATION:

- A. Examine job-site conditions for conditions that may adversely affect installation of the ceiling panels.
- B. Verify dimensions of the ceiling panels prior to installation to assure compatibility with job-site conditions.
- C. Verify suspension system is installed level and true. Ensure all wire hangers are properly secured to structure according to local codes.
- D. Ceiling panels shall be inspected before installation to be free of dents, scratches and other defects prior to installation finished surfaces to assure that blemished or dented surfaces are not present prior to installation.

### 3.2 PREPARATION:

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

### 3.3 INSTALLATION:

- A. Install ceiling panels in accordance with manufacturer's written instructions and approved shop drawings.
- B. Use white cotton gloves when handling ceiling tiles.
- C. The ARROYO SECURE Security 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.
  - a. The Suspension System and Wall Moldings shall be installed plumb and level.
  - b. Start the installation of Metal Plank at the location shown on Reflected Ceiling Plans. Slide Metal Plank along Perimeter Angle 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.
  - c. 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 cutouts required in the Ceiling Planks shall be field cut by the trades requiring the openings.

### 3.4 PRODUCT HANDLING

- A. Delivery: Deliver ceiling components to job site in unopened containers designed to protect product on site as well as in transit, properly identified with product manufacturer's name, trade name and other applicable identification.
- B. Storage: Store all materials in dry and protected locations until installation.
- C. Veneer based ceiling tiles must be immediately stored in a stable temperature environment at 70 -72 degrees and with an ambient humidity of 40% to 60%. Do not stack panels directly on concrete floor.
- D. Remove protective film material from ceiling tiles only when space is completely clean and dust free of airborne particles. Clean, cotton white gloves shall be used for final installation.
- E. Remove and replace units that have been damaged or cannot be satisfactorily cleaned to the owner's or architect's acceptance, at no additional cost to the owner. To clean materials follow manufacturer's written cleaning procedures.

### 3.5 CLEANING:

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

### 3.6 PROTECTION:

- A. Procedures: Care should be taken during the remainder of construction to protect the ARROYO SECURE Security Ceiling System from damage.
- B. Damage to Finished Work: Finished units of the ARROYO SECURE Security 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.

***END OF SECTION***