



Section 09 50 Ceilings

Part 1 – General

1.01 Scope

Furnish and install the Curved Metal Ceiling System as manufactured by Steel Ceilings Inc., Johnstown, Ohio

1.02 Related Sections

- Section 09 20 Plaster and Gypsum Board
- Section 23 00 Heating, Ventilating and Air-conditioning
- Section 26 50 Lighting

1.03 References

- American Society for Testing and Materials (ASTM)

C635 Standard specification for the manufacture, performance and testing of metal suspension systems for acoustical tile and lay-in panel ceilings

C636 Standard practice for installation of metal ceiling suspension systems for acoustical tile and lay-in panels

E84 Test method for surface burning characteristics of building materials

CISCA Ceilings and Interior Systems Construction Association

1.04 Submittals

- Provide product data sheets listing dimensions, style, edge detail, perforation pattern and finish
- Alternates require prior approval no later than 21 days prior to bid date. In addition to the requirements above, submittals for approved alternates must include samples of actual products to be substituted together with test certificates supporting performance claims, a mock up and a written warranty.

1.05 Project Conditions

Environmental Requirements

- Area to receive ceiling systems shall be protected from the weather
- Wet trades work shall be complete and dry prior to installation of ceiling system

- Installation shall not proceed until the temperature and humidity conditions closely approximate finish condition

1.06 Attic Stock

Provide 2% (3% etc) of the ceiling system area materials to be used as attic stock

1.07 Performance

- Materials and installation must comply with Local Building Code and Regulations
- Materials should be stored and handled in accordance with CISCA's *Acoustical Ceilings – Use and Practice*
- Materials to comply to CISCA's *Metal Ceilings Technical Guidelines*
- There are no special seismic requirements

Part 2 – Products

2.01 Manufacturer

Concealed J-bar suspension system, clips, molding and metal pans shall be as manufactured by Steel Ceilings Inc., Johnstown, Ohio:
www.steelceilings.com

2.02 Materials Suspension System (Direct Installation)

- J-bars shall be galvanized steel — minimum A40/G40 (aluminum) hung directly with ¼" threaded rod
- Where required, wall molding shall be formed from galvanized steel (aluminum, stainless steel) in C-shape to receive metal pans
- Hold downs shall be formed from the same materials as the molding
- As an additional safety measure, the panels shall be loosely connected to the J-bar with a wire loop and clip

Curved Hook-On Metal Panels

- Metal pans shall be formed from 18-gauge galvanized steel — minimum A40/G40 (aluminum, stainless steel) with hook-on bars permanently fastened to the end of the panels to insure proper engagement

- Panels shall measure ___" x ___" with a radius of _____
- Panels shall be square edge
- Panels shall be perforated (non-perforated) with pattern B (C, D, F, FF, G, R or custom perforation)
- Panels shall be post painted to seal all perforations with polyester powder global white (color) gloss level 12% to 15% (preferred mill, natural anodized, brushed number 4)

Acoustical Infill

- Panels shall be supplied with 1" (2", etc.) thick 1pcf (2 pcf, etc.) glass fiber insulation wrapped in flame-retardant black polyfilm (nonwoven acoustic fleece) to provide sound absorption NRC of 0.75 (0.95, etc.)

Part 3 – Execution

3.01 Examination

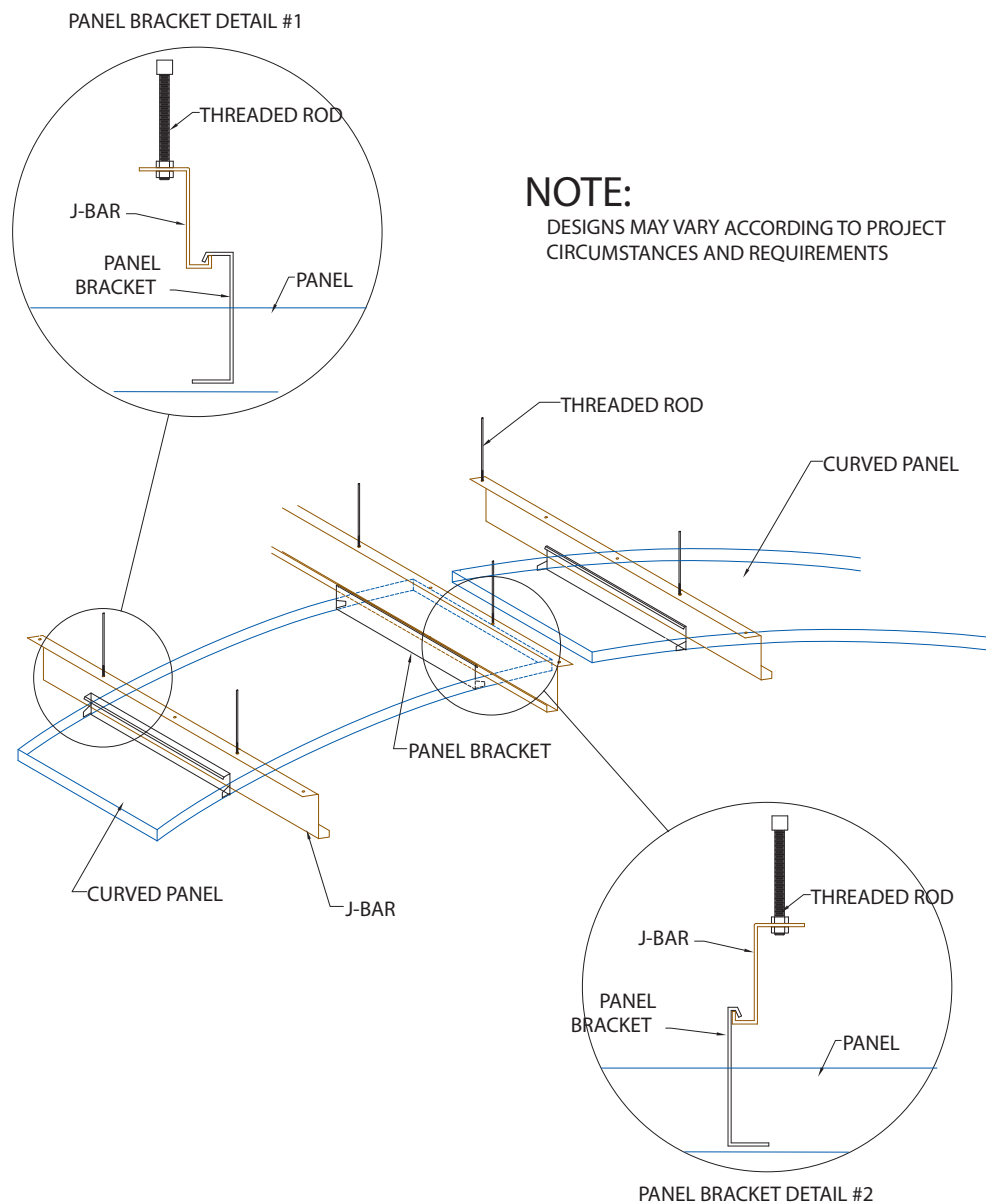
- Installer must inspect the area that is to receive the metal ceiling system for conditions that may affect the installation and notify, in writing, any conditions that must be rectified before commencing
- All work above the ceiling shall be completed before proceeding with this installation
- All wet work shall be completed and thoroughly dry before proceeding with this installation

3.02 Installation

- Metal Ceiling components shall be delivered in unopened cartons and shall be clearly marked with manufacturer's name
- Material shall be stored in dry and protected areas
- Install the ceiling system in accordance with the manufacturer's recommendations and the approved shop drawings
- Cut panels shall, where possible, not be less than one half of full size
- Panels shall be free from defects and damaged panels shall be removed and replaced

CURVED METAL PAN SYSTEM

SIZE (INCHES)	Min. 12x48, Max. 36x120
ACCESSIBILITY	Downward
VISUAL	Concealed
EDGE DETAIL	Square
MATERIALS	Steel, Aluminum, Stainless
FINISHES	Painted, Natural
RELATIVE COST	\$\$\$



OVERVIEW

The Steel Ceilings Curved Metal Pan System is available in several design applications. The system most recommended is based on the Hook-On suspension concept with the panels hooked on to a concealed J-bar. This affords the end user 100% accessibility into the plenum space at any point in the ceiling.

MODULE

Curved panels can be made in a variety of sizes.

METAL

The metal panels are manufactured from 18- to 24-gauge galvanized steel. Panels can also be produced in stainless steel or aluminum in varying thicknesses.

PERFORATIONS

A full range of perforation patterns are available with or without plain borders. Steel Ceilings maintains a range of perforating dies in-house and custom perforations can be provided. Perforation patterns can be staggered, diagonal or straight row and the perforations can be provided in round, square or oblong holes in various diameters and sizes. The panels can also be provided without perforations.

EDGE TREATMENTS

The panels are made with a standard edge of 1" to 2" and panels can be manufactured with a built-in molding of 4".

ACOUSTICS

The perforated metal panels can be provided with either a non-woven fabric or a fiberglass pad that is wrapped at the factory in black flame-retardant polyfilm. Noise reduction coefficients of up to .95 can be achieved depending upon the thickness and density of the fiberglass pad that is used. In areas where sound transmission needs to be controlled, attenuation pans can be provided on the back of the perforated pans that can achieve a CAC rating of up to 40 dB.

TYPE OF INSTALLATION

The Curved system consists of a curved panel with integral hook-on details at each end that simply engage on the J-bar that is suspended with angle or threaded rod. The panels are installed from below and use safety wires for added security.

MAINTENANCE BENEFIT

The standard Curved System from Steel Ceilings is easy to access and the panels are simply removed for maintenance after unhooking the safety wire.

CONCEALED OR EXPOSED SUSPENSION SYSTEM

The entire ceiling assembly has no visible grid.

FINISHES

The finished appearance of the ceiling system is either a powder paint finish in white or color or a variety of metals including stainless steel, anodized or brushed aluminum, copper steel, brass steel or chrome steel.

APPLICATIONS

This fully accessible ceiling can be used for interior applications. When used in an exterior application special bracing details need to be used.

FIRE PERFORMANCE

The ceiling system has been tested in accordance with ASTM E-84 and is considered incombustible. The material has a Flame Spread of less than 25 and Smoke Generation of less than 50.

IMPACT

All materials are 100% recyclable with a high recycled content.