

DIVISION: 09 50 00
Section: 09 51 00 – Acoustical Ceilings
Section: 09 51 33.13 Acoustical Snap in Metal Pan Ceilings

REPORT HOLDER:
ROXUL USA INC. d/b/a ROCKFON
4849 S. Austin Ave.
Chicago IL 60638
www.rockfon.com

REPORT SUBJECT:
Planar® Linear Metal Suspended Ceiling System

1.0 SCOPE OF EVALUATION

1.1 This Research Report addresses compliance with the following Codes:

- 2015 and 2012 *International Building Code*® (IBC)

1.2 Planar® Linear Metal Suspended Ceiling System has been evaluated for the following properties (see Table 1):

- Seismic
- Structural

1.3 Planar® Linear Metal Suspended Ceiling System has been evaluated for the following uses (see Table 1):

- Non-fire rated assemblies primarily located in large open areas such as corridors, passenger terminals and lobby areas.
- Planar® Linear Metal Suspended Ceiling System is acceptable for installations in areas of moderate to severe seismic activity.

2.0 STATEMENT OF COMPLIANCE

The Planar® Linear Metal Suspended Ceiling System complies with the Codes listed in Section 1.1, for the properties stated in Section 1.2 and uses stated in Section 1.3, when installed as described in this report, including the Conditions of Use stated in Section 6.

3.0 DESCRIPTION

3.1 Planar® Linear Metal Ceiling System consists of linear aluminum panels that mount to a concealed suspended framing system.

3.2 Planar® Linear Metal Ceiling Panels are produced from either .024 or .032 inch thick sheet aluminum. The panels are available in widths of 4, 6, and 8 inches with a length of 12-ft. The Planar panels are either 5/8 or 7/8 inches deep with either a square or round edge profile. The exposed surface is available with a perforated or non-perforated finish.

3.3 Planar® Symmetrical Carrier is a formed hat channel with inverted T-shaped teeth evenly spaced along each leg for attachment to flanges of ceiling panels See Figure 2. The Symmetrical Carrier is fabricated from .037-in. thick aluminum with a minimum yield strength of 21,000 ksi.

3.4 Main Runner Carrier Splice: is a 12-in. long U-shaped channel installed to splice two Symmetrical Carriers. The Carrier splice is formed from 0.037-in. thick aluminum.

3.5 Panel Retainer Clip(s): is a 2-1/2 inch clear plastic U shaped clip designed to secure round edge panels securely at the Symmetrical Carrier. The clip is available in widths of 13/16 and 7/8 inches.

3.6 Recessed Filler Strip: is a 12 foot aluminum U shaped strip installed between panels installed open reveal installations with round profile edge panels.

3.7 Perimeter Angle Clip (1425): The Perimeter Angle Clip is 12-ft long 2x2-in wall angle field cut 6 inch lengths. The wall angle is formed from 0.020-in electro galvanized CS Type B steel conforming to ASTM A1008.

3.8 C-Channel Support Track Standard 20 Gauge 1-5/8 in x 1-1/4-in x 10-ft. length steel track.



4.0 PERFORMANCE CHARACTERISTICS

4.1 The Planar® Linear Metal Suspended Ceiling System has been evaluated to the Requirements of ICC-ES AC156 Acceptance Criteria for Seismic Certification by Shake-Table. Testing of Nonstructural Components for use in seismic design Category C in areas of moderate seismic activity and Seismic Categories D, E, and F for areas of severe seismic activity.

5.0 INSTALLATION

5.1 General:

Planar® Linear Metal Suspended Ceiling System must be installed in accordance with the manufacturer's published installation instructions, the applicable Code, and this Research Report. In the event of a conflict between the manufacturer's instructions and this report, this report governs. A copy of the manufacturer's instructions must be available on the jobsite during installation.

5.2 Installations requiring design to seismic design categories C, D, E, and F shall be in accordance to ASTM E580. For seismic design categories D, E, and F required methods of clearance wall and attached wall configurations are detailed in figures 8, 9, and 10.

5.3 Planar® Linear Metal Ceiling Panels mount to the framing utilizing the Symmetrical Carrier Figure-13.

5.4 Panel Retainer Clip(s): are required for installations utilizing the Planar round edge panels. The clips are installed at the connection points of the panel to the Symmetrical Carriers. Retainer Clips are required on every other Symmetrical Carrier down the length of each panel with a minimum of two clips per panel. See Figure- 13 for clip installation detail.

5.5 Recessed Filler Strip: are installed in conjunction with the Panel Retainer clip to fill space between panels.

5.6 Symmetrical Carriers are spaced a maximum of 50 inches apart and supported from structural support by #12 GA hanger wire installed per ASTM C636

5.7 Symmetrical Carrier Splice slips over two adjoining Symmetrical Carrier channels. The splice is installed by

inserting tabs into carrier and bending them over. It is fastened with 8 pop rivets utilizing the predrilled holes in the Symmetrical Carrier and the Carrier Splice. See Table-4 for fastening schedule and Figure-12 for installation

5.8 Perimeter Angle Clip is fastened along the walls at terminal ends supporting Symmetrical Carriers and Track. See Figures- 8, 9, 10.

5.9 C-Channel Support Track shall be fastened to top side of the Symmetrical Carrier in perpendicular direction. The support tracks shall be spaced no more than 12 feet on center.

6.0 CONDITIONS OF USE

6.1 Installation must comply with this Research Report, the manufacturer's published installation instructions, and the applicable Code. In the event of a conflict, this report governs.

6.2 Planar® Linear Metal Panels shall not support any additional weight. Light fixtures, HVAC vents or any other items must be independently supported.

6.3 Light Fixtures For standard NEMA Type-F light fixtures see figure-11 for installation and the manufacturer's installation instructions.

6.4 Seismic design categories C, D, E, and F installations shall have a maximum supported ceiling weight limited to 1.07 lbs./SF.

6.5 The Planar® Linear Metal Suspended Ceiling System is manufactured under a quality control program with inspections by Intertek Testing Services NA, Inc. (AA-647).

6.6 Suspended ceilings installed in seismic categories C, D, E, and F are subject to periodic special inspection as required by ASCE 7, section 11A. 1.3.9 Item 2. Special inspector shall verify ceiling installation is in compliance with Section 5.1 of this report.

6.7 A statement of special inspection shall be provided for use in Seismic Design Categories C, D, E, and F where seismically qualified through testing as required by 2015 IBC Sections 1705.1.1, 1704.5 and 1705.13.2.





6.8 Planar® Linear Metal Suspended Ceiling System components are manufactured in Chicago Illinois in accordance with and approved quality control system with inspections by Intertek.

Metal Suspended Ceiling System), the Intertek Mark as shown below, and the Code Compliance Research Report number (CCRR-0267).



7.0 SUPPORTING EVIDENCE

7.1 Data in accordance with the ICC-ES Acceptance Criteria for Suspended Ceiling Framing Systems AC368 Approved July 2015.

7.2 Seismic Evaluation Summary Miyamoto International dated June 30, 2015

7.3 Data in accordance with the ICC-ES Acceptance Criteria for Seismic Certification by Shake-table Testing of Nonstructural Components AC156 Revised July 2015.

7.4 Documentation of an Intertek approved quality control system for the manufacturing of products recognized in this report.

7.5 Intertek Listing Report Planar Linear Metal System, on the [Intertek Directory of Building Products](#).

8.0 IDENTIFICATION

The Planar® Linear Metal Suspended Ceiling System is identified with the manufacturer’s name (Rockfon), address and telephone number, the product name (Planar Linear

9.0 OTHER CODES

This section is not applicable.

10.0 CODE COMPLIANCE RESEARCH REPORT USE

10.1 Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

10.2 Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

10.3 Reference to the <https://bpdirectory.intertek.com> is recommended to ascertain the current version and status of this report.

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TABLE 1 – PROPERTIES EVALUATED

PROPERTY	2015 IBC SECTION ¹	2012 IBC SECTION
Seismic	1705.13.2 1705.13.3	1705.12.3
Structural	104.11 1613 2506.2.1	104.11 1613 2506.2.1

¹ Section numbers may be different for earlier versions of the International and Florida codes.

TABLE 2 – PANEL PROPERTIES

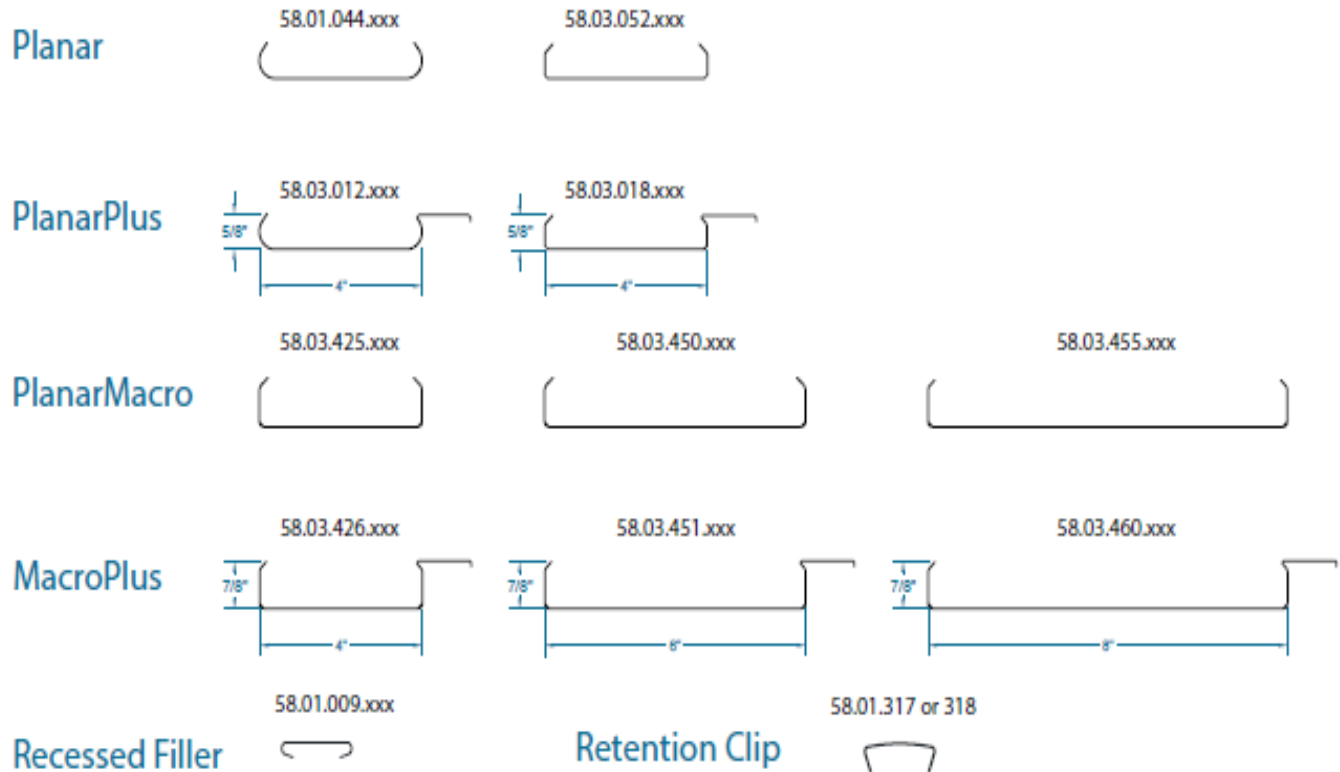


TABLE 3- GRID SUSPENSION COMPONENTS

Component	Designation	Dimensions
Panel retainer clip	58.01.318	7/8 x 2-1/2 x .042
	58.01.317	13/16 x 2-1/2 x .042
Wall angle	1420	L 15/16 x 15/16 x .020
Support Track	By others	C 1-5/8 x 1-1/4 (20 GA)
Carrier	58.01.007	U 2 x 26/32 x .037
Carrier Splice	58.01.403.008	U 2 x 1-5/8 x 1-3/8 x .037
Recessed filler strip	58.01.009	1-13/16 x 144 .024



TABLE 4- FASTENING SCHEDULE

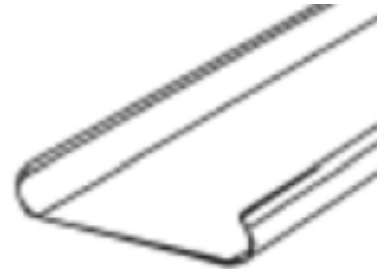
Connection	Description
Track splice	8 (4 each member) #8 sheet metal screws (SMS)
Carrier splice	8 #10 self-drilling SMS or 8 3/16in. diameter open domed aluminum pop rivets with aluminum mandrel Grip range .063”-.125”
Carrier to track attachment	2 #8 - #8 x 3/4” long Slotted Hex Head Sharp Point Sheet Metal Screw

TABLE 5 –SYMETRICAL CARRIER LOAD CAPACITY (58.01.007)

Span Length in.	Lbs./ LF
18	73.8
24	36.2
36	11.0
48	4.7



Planar Macro Panel



Planar Round Edge

Figure- 1 Planar Linear Metal Panels

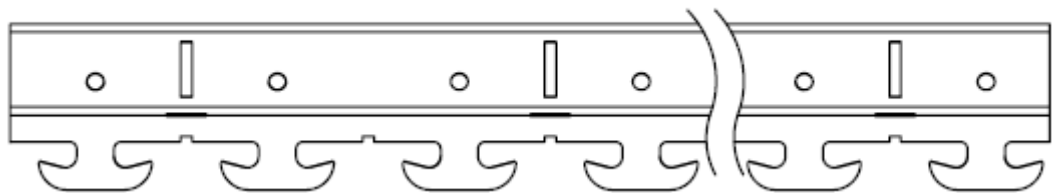


Figure-2 Symmetrical Carrier



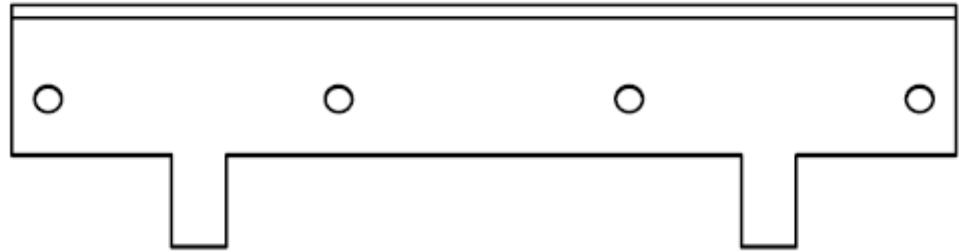


Figure-3 Symmetrical Carrier Splice



Figure- 4 Retainer Clip



Figure- 5 Filler Strip

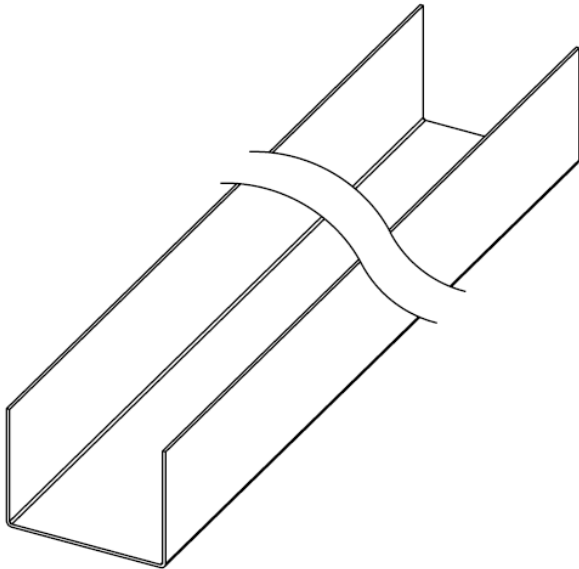


Figure-6 C-Channel Support Track

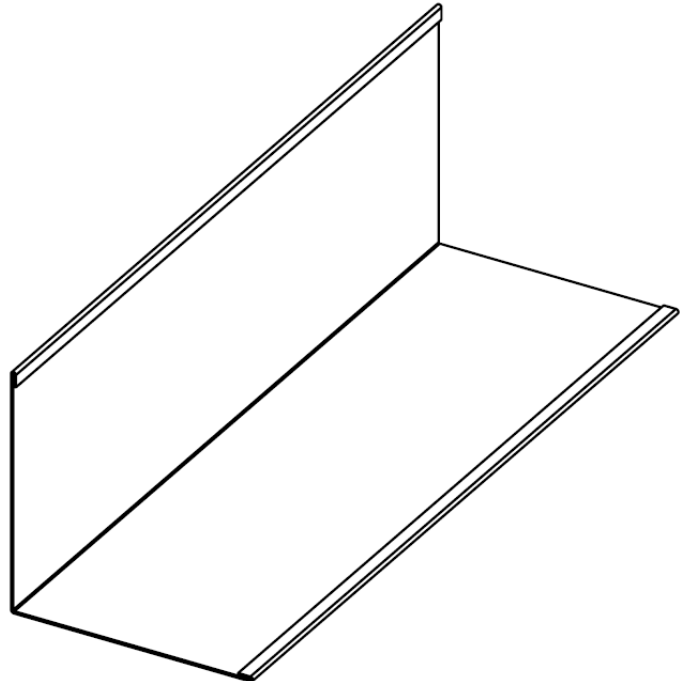


Figure-7 Perimeter Angle Clip

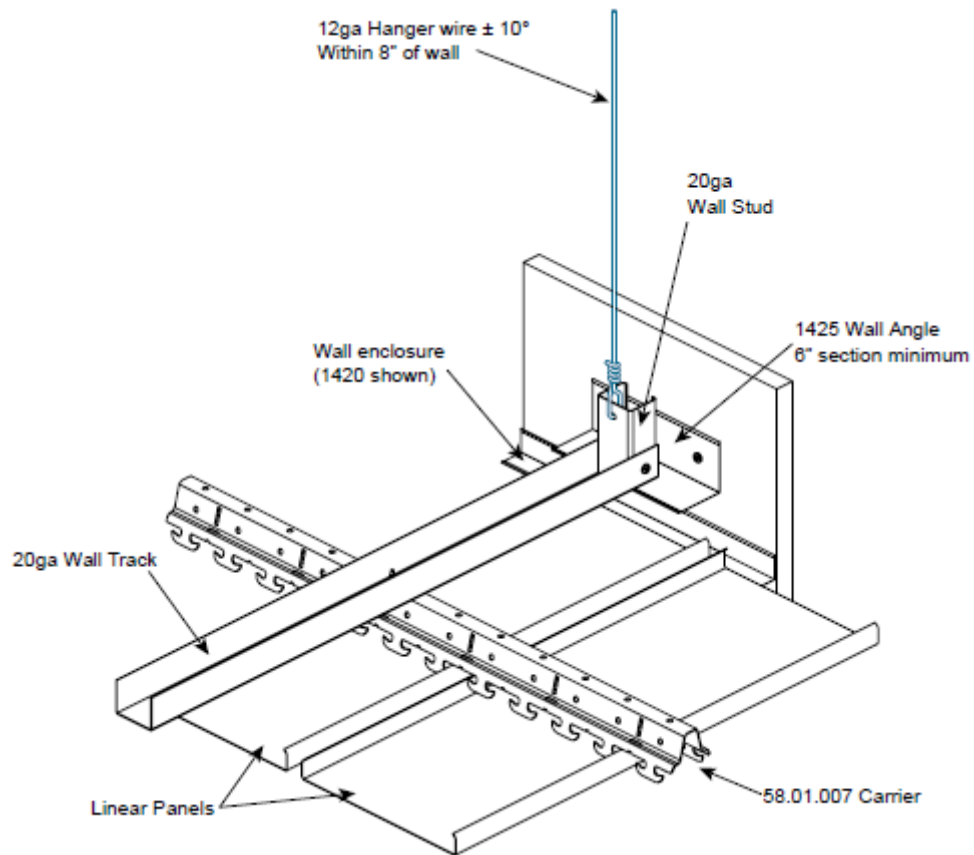


Figure- 8 Seismic Installation Clearance Wall C-Channel Support Sides

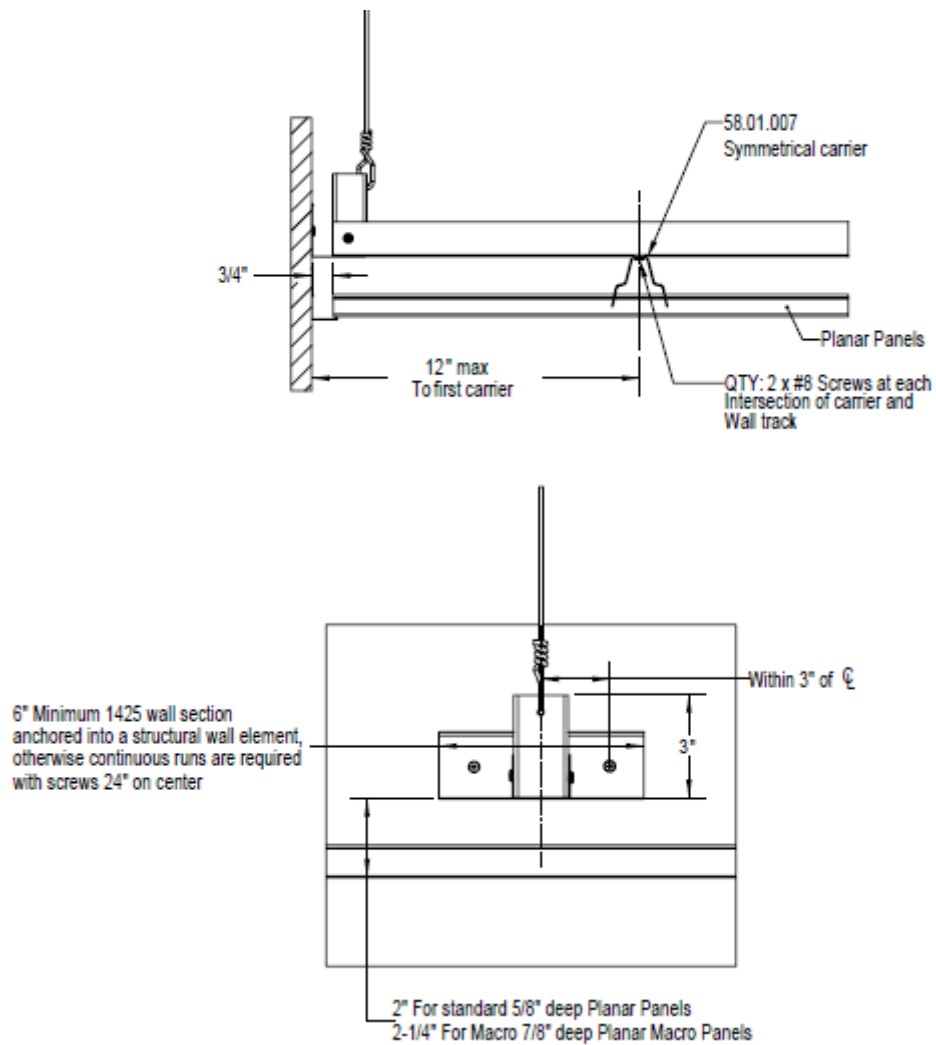


Figure- 8 Continued Seismic Installation Clearance Wall C-Channel Support Sides

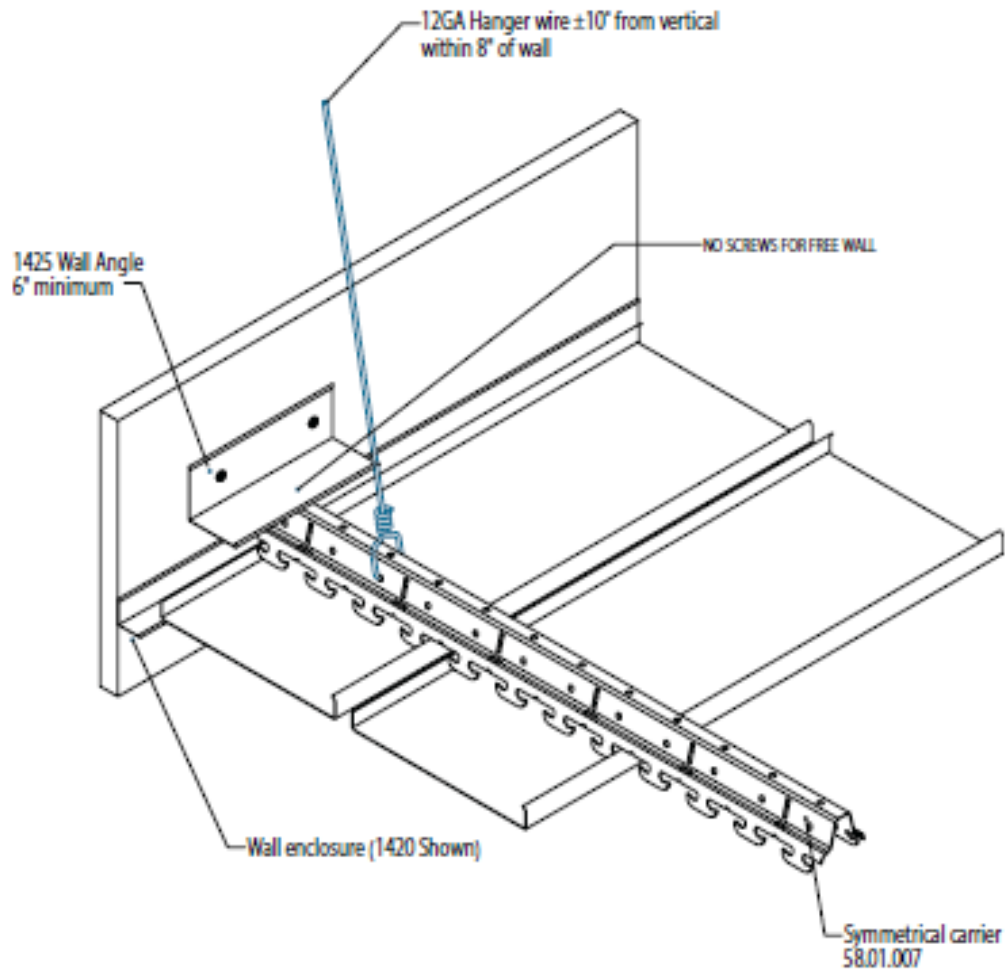


Figure- 9 Seismic Installation Clearance Wall Carrier Channel

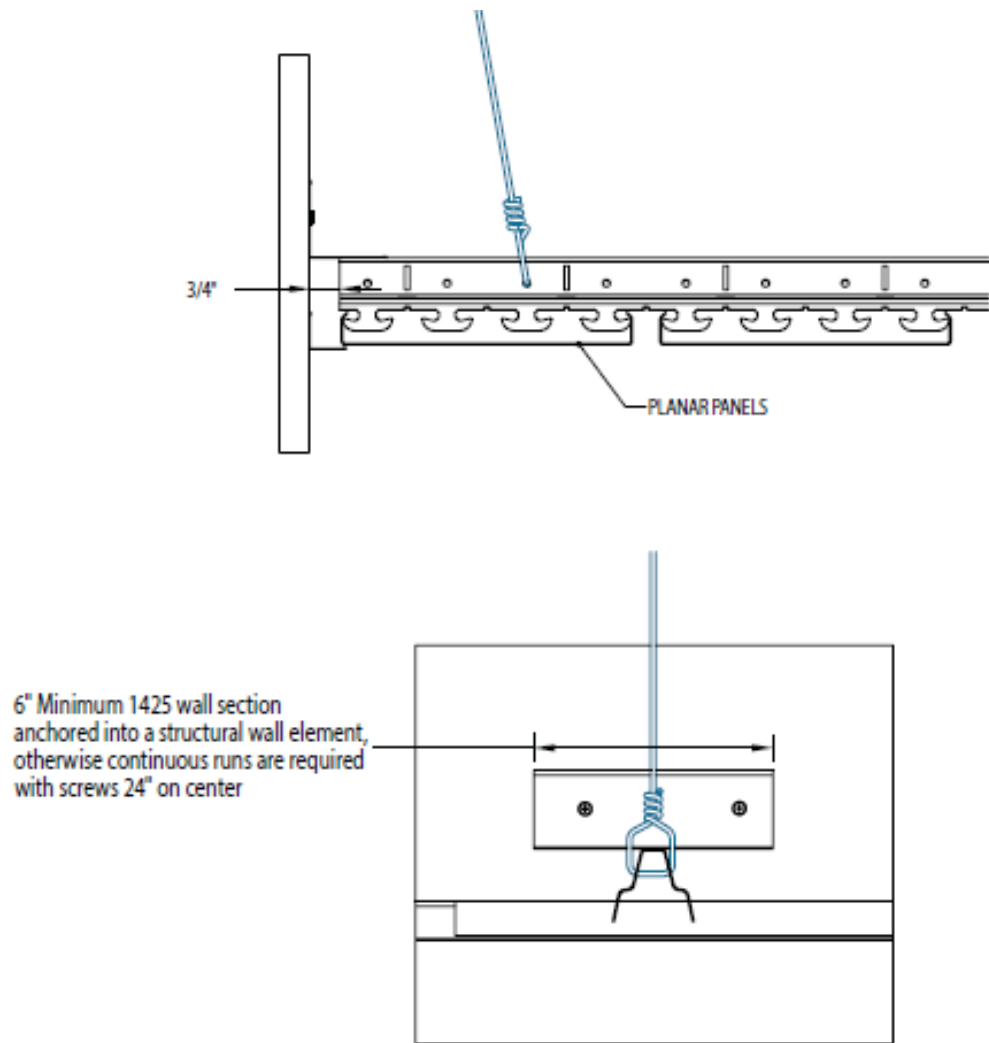
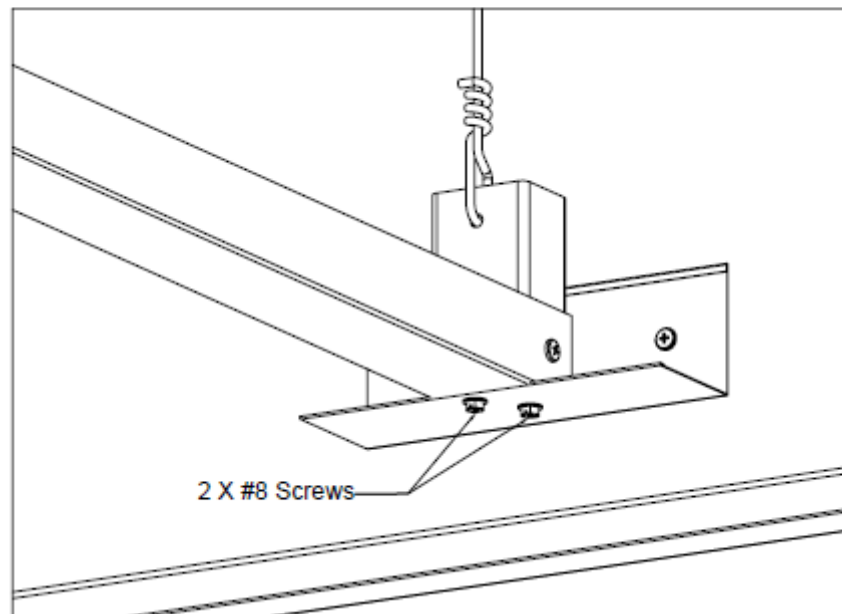
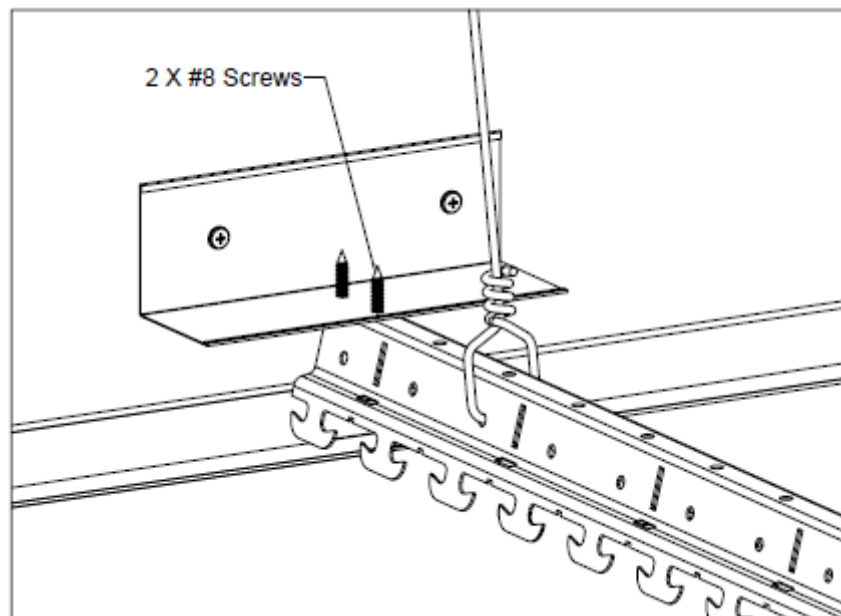


Figure- 9 Continued Seismic Installation Clearance Wall Carrier Channel



C-Channel



Carrier Channel

Figure- 10 Seismic Installation Attached Wall

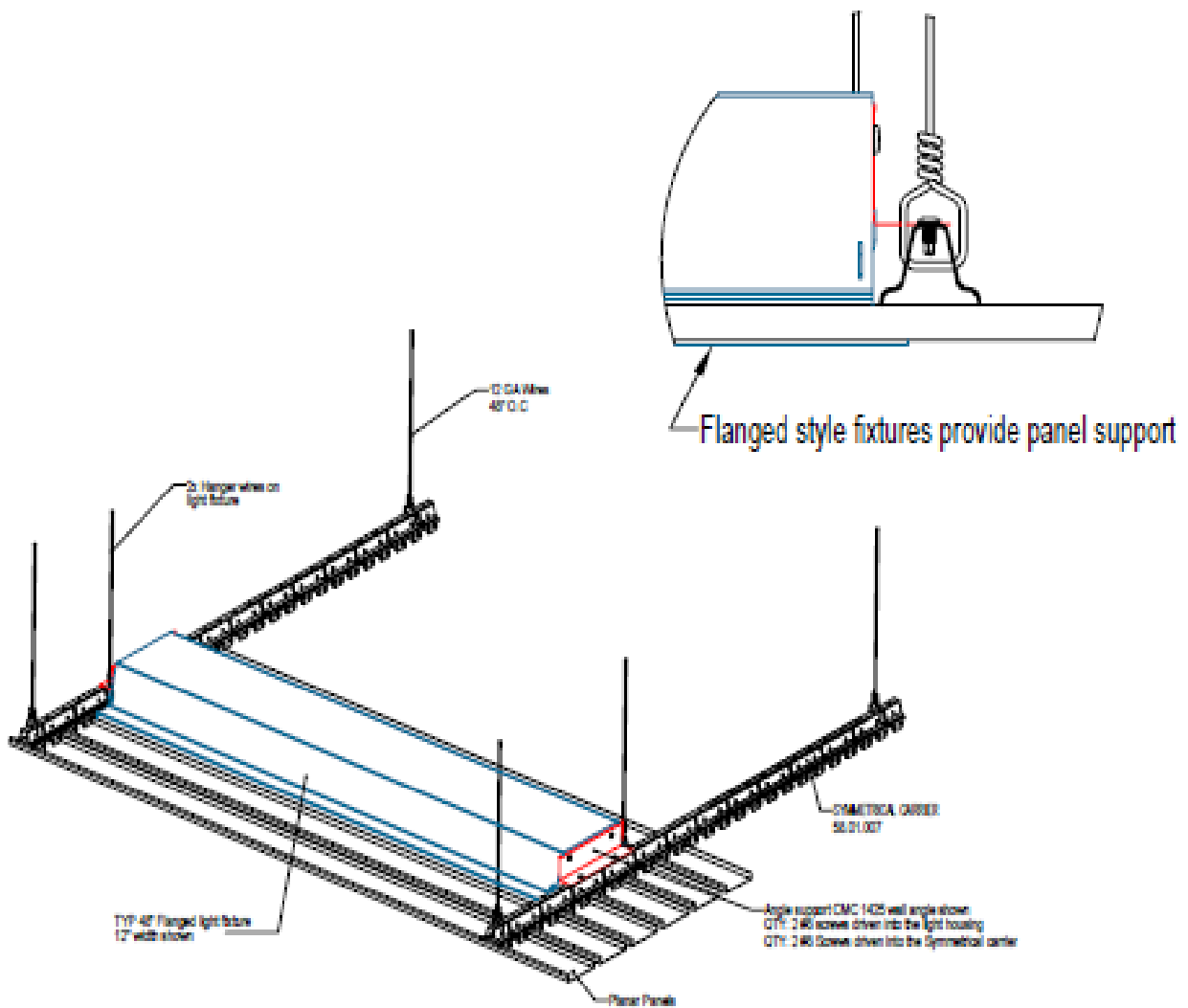


Figure 11- Light Fixture Mounting

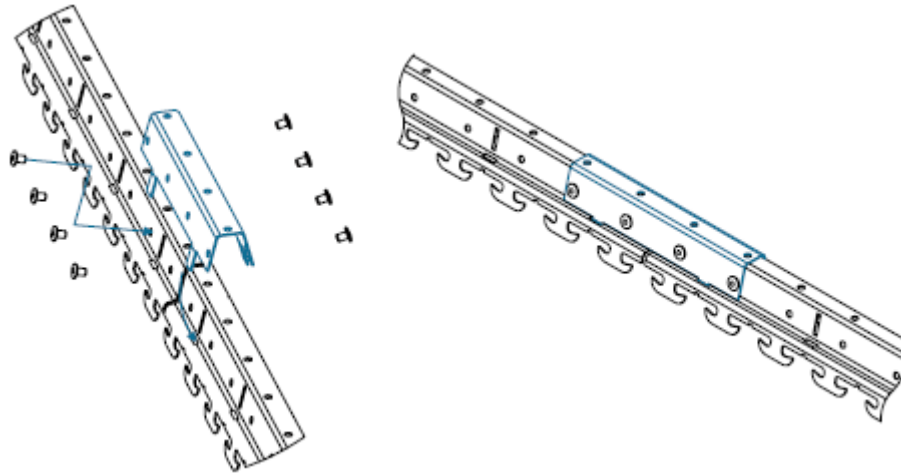


Figure 12- Carrier Channel Splice Connection

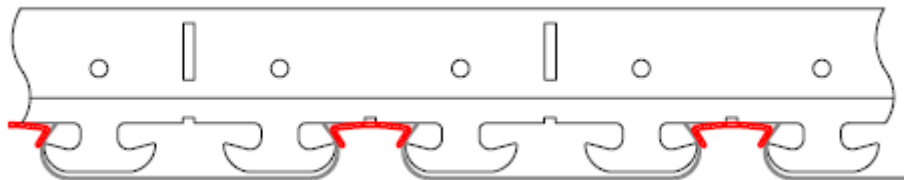


Figure 13- Panel and Retention Clip Installation