SUSPENDED CEILING ASSEMBLY POLICY

A. General

The structural members of ceiling systems used primarily to support acoustical panels or acoustical panels lay-in tiles, with or without lighting fixtures, ceiling-mounted air terminals and ceiling-mounted services, shall have their allowable loads based on design calculations or on load tests.

B. Design Criteria

1. Suspended ceiling systems shall comply with ASCE 7 section 13.5.6.

    a. EXCEPTION: Ceiling areas of 144 square feet or less surrounded by walls, which connect directly to the structure above shall be exempt from the lateral load standards.

2. The suspended ceilings and lighting systems shall be limited to 14 feet (1828 mm) below the structural deck unless a licensed engineer or architect designs the entire system.

C. Minimum Installation Requirements

1. Suspended ceiling systems shall be installed as outlined in ASTM C636

    EXCEPTION:

    a. Lateral Support: Where ceiling loads do not exceed four pounds per square foot, lateral support for the ceiling system may be provided by four wires of minimum No. 12 gauge splayed in four directions 90 degrees apart and connected to the main runner within two inches of the cross runner and to the structure above at an angle not exceeding 45 degrees from the plane of the ceiling. These lateral support points shall be placed 12 feet on center in each direction with the first point within six feet from each wall. Lighting fixtures and air diffusers shall be supported directly by wires to the structure above.

    b. Recessed lighting fixtures not over 20 pounds in weight and suspended and pendent hung fixtures not over 20 pounds in weight may be supported and attached directly to the ceiling system runners by a positive attachment such as screws or bolts.

c. Air diffusers which weigh not more than 20 pounds and which receive no tributary loading from ductwork may be positively attached to and supported by the ceiling runners.

2. Perimeter members: This provision shall be required only when the span of the proposed suspended ceiling system between perimeter walls exceeds 25 feet in both directions. Perimeter walls shall be considered as those existing/proposed interior partitions that are laterally braced as required by Section 1614A of the City of Palmdale Building Code. A minimum wall angle size of at least a two-inch (51 mm) horizontal leg shall be used at perimeter walls and interior full height partitions. The first ceiling tile shall maintain 3/4 inch (19 mm) clear from the finish wall surface. An equivalent alternative detail that will provide sufficient movement due to anticipated lateral building displacement may be used in lieu of the long leg angle subject to the approval of the Building Official.

D. Plans and Specifications

1. General: The building plans and specifications submitted to the Department for approval shall clearly identify all suspended ceiling systems and shall define or show all supporting details, light fixture attachments, lateral bracing, partition supports, etc.

2. Typical Details:

   a. Show wires sizes and spacing.

   b. Provide typical detail for the compression post on the plan. Until otherwise revised by the Building Department, the size of the compression post may be picked from the table attached. Show the connection details of the posts to the roof-framing members. In the case of trusses, the connection should only be made to the top cord.

   c. Splay wires, compression posts & vertical wires must be supported at the top chord of the truss or at the upper most portion of the framing above. Provide details on the plan. Support wires shall not be supported by truss bottom chord unless the trusses were designed specifically for supporting the suspended ceiling (provide truss documents).

   d. The strut shall be vertical, and shall not hang more than 1 in 6 out-of-plumb. Some examples of acceptable struts are as follows:

E. Compression Posts

ELECTRICAL METALLIC TUBING

½”	To 2” 8”
¾”	To 4’ 4”
1”	To 6’ 7”
1 ¼”	To 10’ 5”
1 ½”	To 12’ 11”
2”	To 18’ 4”

Conduit can be flattened at the ends and connected to the T-Bar main runner with one #10 sheet metal screw and to the structural roof/floor member with two #10 wood screws. Other connections may be acceptable, but should first be submitted to the Building Department for review.

METAL STUDS:

The following spans are based upon studs having a 1-5/8" leg with a 3/8" return.

Double studs are connected together in the shape of a with one #6 sheet metal screw at 16" on center.

STEEL STUDS

3 5/8” X 20 ga	To 9’ 6”
DBL 2 ½” X 20 ga	To 16’ 6”
DBL 3 5/8” X 20 ga	To 24’

Attach the metal stud to the T-Bar main runner and structure roof/floor member with two #8 screws.

MANUFACTURED STRUTS:

Manufactured struts may be acceptable if listed by an approved testing agency or Engineering is submitted to the Building Department for review.

F. Special Inspection per ASCE 7-05 Section 13.5.6.2.2

Special Inspection is required if the Suspended Ceiling is 40’-0” or more in any dimension or 1000 square feet of area between support walls.