

## Appendix D - Concourse C Structural Limitations for Tenant Improvements

A.

OPEN WEB STEEL JOISTS: Location	Allowable eccentric load (on side of bottom chord) POUNDS. Total if no existing hangers/loads present.	Allowable load centered on bottom chords (total between each panel point if no existing hangers/loads present) POUNDS	Allowable load centered on bottom chords if existing hangers/loads present. POUNDS	Allowable eccentric load (on one side of top chord) POUNDS. Total between each panel point if no existing hangers/loads present	Allowable load centered on top chords POUNDS. Total between each panel point if no existing hangers/loads present	Allowable load centered on top chords if existing hangers/loads are present POUNDS
1. Area C3 and Area C4, Level 3	0	40	0	50	150	0
2. Area C4, Level 4	0	60	0	50	200	0
3. Level 5 (Grids C2 to C30 between Grids CC.4 and CC)	0	250	0	50	300	0
4. Lvl 5 (Grids C1 to C30 West of Grid CC)	0	80	0	50	200	0
5. All other areas of building with roof joists	0	40	0	50	150	0
<p>A. See attached sketch 1 / TI for loading diagram</p> <p>B. If these loading conditions are not exceeded additional angle braces (connecting top and bottom chords) are not required.</p> <p>C. Where loads are exceeded, additional supports shall be added to reduce point loads or alternate support detail shall be submitted to the DEPARTMENT for review and approval prior to installation.</p> <p>D. No items which may impose lateral loads on bottom chords of joists (braces, kickers etc) may be attached to the bottom chords of steel joists under any</p>						

### DEFINITIONS:

Tributary width: Width of decking above (and associated loads on the decking) that is supported by each joist (perpendicular to joist span). Typically is the sum of half the distance from the joist to each adjacent structural support member.

Eccentric Load : Vertical loads where line of action is not aligned with the vertical axis of the joist. Typical eccentric loads are attached to only one of the two bottom (or top) chord angles.

Chord: Horizontal angles that form top and bottom of joist. Each joist has 2 back to back steel angles which form the top chord and 2 angles which form the bottom chord.

Panel point: Location where web members (vertical or diagonal) connect to the top or bottom chords (typically by welding).

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B.

<p>CONCRETE HANGERS: <i>(These are structural support items that are attached to concrete from below that will support items to be hung below the concrete slab):</i> Location</p>	<p>Maximum allowable gravity point load. POUNDS (Concrete span only. Contractor to design hanger and connection to concrete)</p>	<p>Notes</p>
<p>1. Concrete on metal decking: Level 1 and 2 Area C1 and C2. Levels 2, 3, and 4 in remaining concrete on metal deck areas</p>	<p>500</p>	<p>Contractor to locate and avoid damage to all rebar, embedded conduit, etc. 3 inch maximum embedment into existing slab. Cutting of welded wire fabric is acceptable. Newly installed hangers shall be spaced 8 feet on center minimum.</p>
<p>2. Two way slab Level 1 Area C4 and Area C6</p>	<p>750</p>	<p>Contractor to locate and avoid damage to all rebar. Newly installed hangers shall be spaced 8 feet on center minimum.</p>
<p>3. Large loads on precast concrete panels Area C1 and C2 Level 1 and Level 2 (old C mechanical building)</p>	<p>500</p>	<p>Attachment to the existing threaded rods at panel seams only. See the attached sketch 2/T1. No drilling of concrete allowed (Connection to threaded rods only by addition of Unistrut or other bracket). Maximum of 1 additional 500 pound load for each existing threaded rod. May not attach to existing Unistrut.</p>
<p>4. Small loads on precast concrete panels Area C1 and C2 Level 1 and Level 2 (old C mechanical building)</p>	<p>less than 100</p>	<p>No drilling of concrete allowed. Connection to existing threaded rods or existing Unistrut. Maximum 1 additional hanger for each existing Unistrut span. Place minimum approximately 12 inches away from existing hanger. Contractor to verify Unistrut capacity as required if existing hangers present.</p>

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c.

<p>CONCRETE ANCHORS AND CORE DRILLING: <i>(Anchors are structural support items that will prevent items that are sitting on top of concrete slabs from sliding or overturning. These would be attached to the concrete from above)</i> Location:</p>	<p>Allowable gravity point load. POUNDS. Concrete span only. Contractor to design anchor and connection to concrete)</p>	<p>Notes</p>
<p>1. Concrete on metal decking: Level 1 Area C1 and C2. Level 2, 3, and 4 and remaining concrete on metal deck areas</p>	<p>500</p>	<p>Contractor to locate and avoid damage to all rebar, embedded conduit, etc. 3 inch maximum embedment into existing slab. Cutting of welded wire fabric is acceptable. Newly installed hangers shall be spaced 8 feet on center minimum.</p>
<p>2. Two way slab level 1 (Same as level 0 ceiling) Area C4 and Area C6</p>	<p>750</p>	<p>Contractor to locate and avoid damage to all rebar, embedded conduit, etc. Cutting of welded wire fabric in 2 inch topping slab is acceptable. Newly installed hangers shall be spaced 8 feet on center minimum.</p>
<p>3. Core drilling 2 way slab level 1 Area C4 and Area C6</p>	<p>0 (See 1 above for allowable loads)</p>	<p>All rebar (top and bottom bars) shall be located by the contractor prior to drilling. No rebar shall be damaged in any way under any circumstances. All core drill locations shall be documented and submitted to Department for approval prior to</p>
<p>4. Precast concrete panels Area C1 and C2 Level 1 and Level 2 (old C mechanical building)</p>	<p>500</p>	<p>Contractor to locate and avoid damage to all rebar, embedded conduit, etc. Cutting of welded wire fabric in 2 inch topping slab is acceptable. 2 1/2 inch maximum embedment for all items.</p>
<p>5. Core drilling precast concrete panels Area C1 and C2. Level 1 and Level 2 (old C mechanical building)</p>	<p>0 (See 4 above for allowable loads)</p>	<p>All rebar and tendons shall be located by the contractor prior to drilling. No rebar or tendons shall be damaged in any way under any circumstances. All core drill locations shall be documented and submitted to Department for approval prior to drilling.</p>
<p><i>NOTE 1: For core drilling concrete on metal deck or installing anchors (from above or below), no rebar shall be cut or damaged (typically rebar occurs as trim bars at openings and diaphragm chord steel along perimeter of each area). Contractor shall locate all rebar prior to drilling and avoid damaging this rebar in any way. Cutting of WWF is acceptable.</i></p>		
<p><i>NOTE 2: For core drilling concrete on metal deck or installing anchors (from above or below), no embedded conduits shall be cut or damaged (there is approximately 80 miles of conduit in the concrete slab on metal decks). Contractor shall locate all conduits prior to drilling and avoid any and all damage.</i></p>		

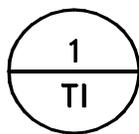
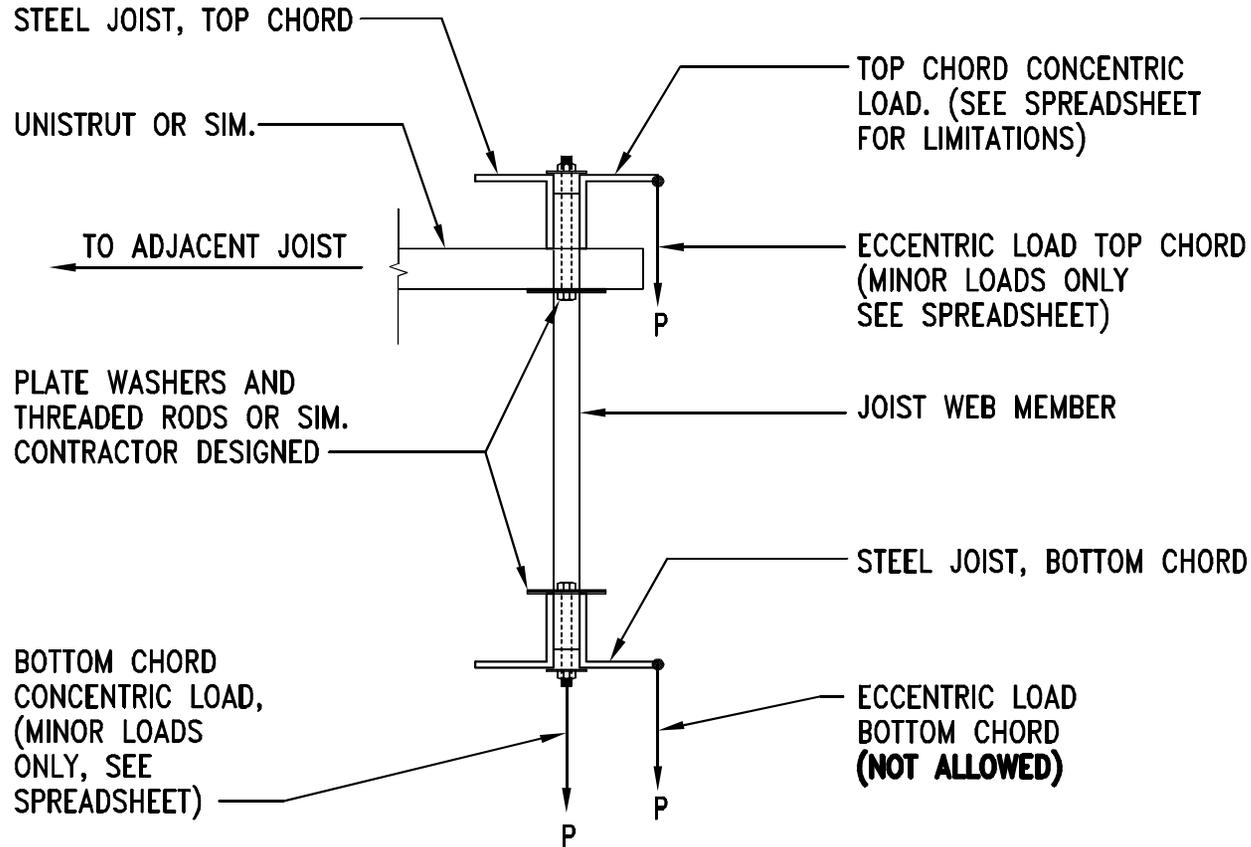
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D.

METAL DECKING:	Maximum allowable gravity point load POUNDS. Deck span only. Contractor to design hanger and connection to metal decking	Notes
Hangers to be attached to decking to support items hung from below decking. All areas	No loads exceeding 40 pounds	All hangers shall be spaced a minimum of 3 feet from any adjacent hanger (existing or new).
Roof penetrations	1000 total load distributed along perimeter of penetration	For all roof penetrations provide 6x6 angles along each edge. Angles parallel with deck span shall span between adjacent steel framing members (joists or beams). See Sketch 3/TI and 4/TI attached. Where loads exceed 1000 pounds contractor to submit a structural support system to the DEPARTMENT for review and approval prior to start of work.

FOR ANY LOCATIONS WHERE CONTRACTOR FEELS THAT THE COST TO COMPLY WITH THE BELOW REQUIREMENTS IS PROHIBITIVE, A SPECIFIC ALTERNATE PLAN OF WORK SHALL BE SUBMITTED TO THE DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO INITIATION OF SUCH WORK.

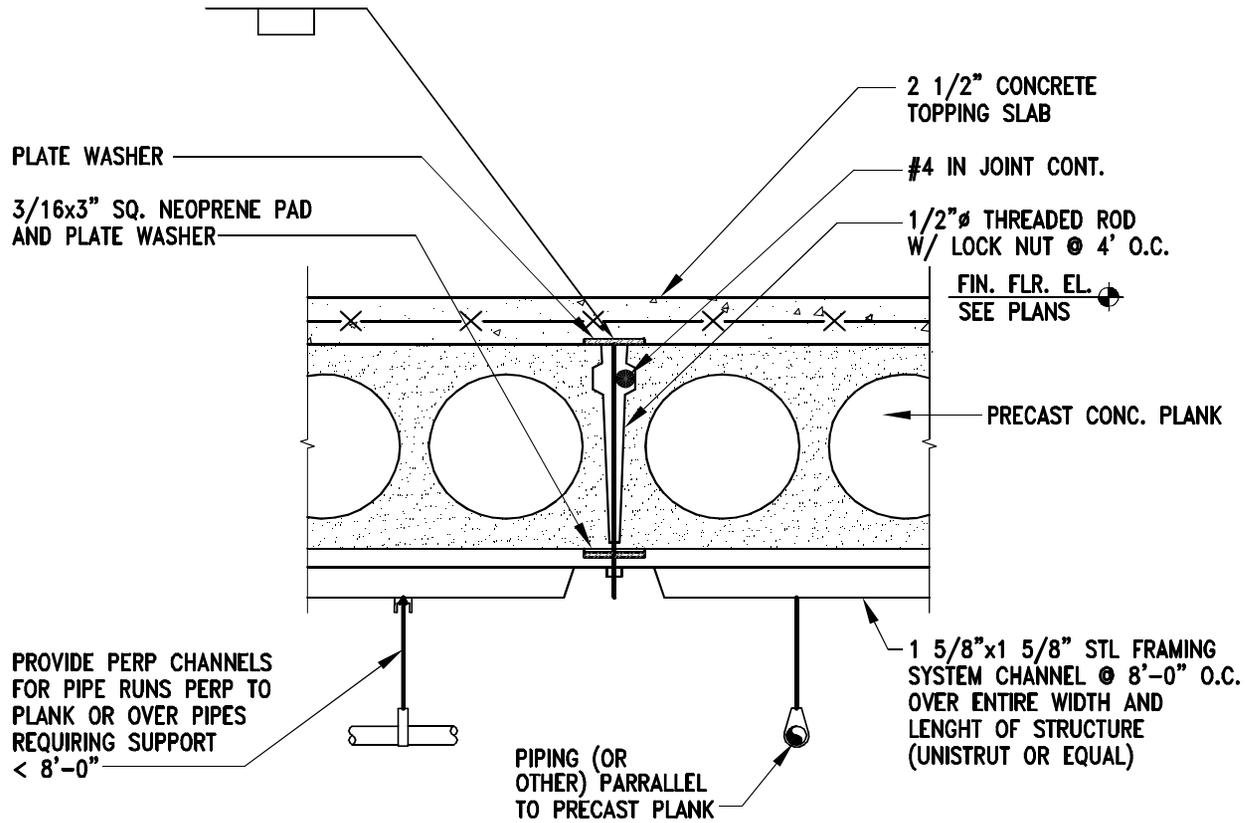
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## JOIST LOADING DIAGRAM

SCALE: 1 1/2" = 1'-0"

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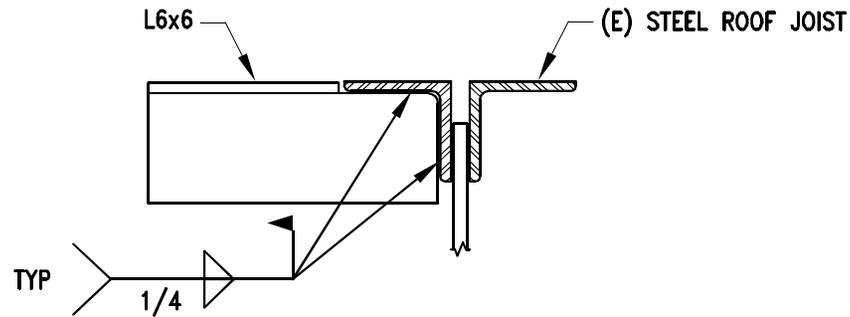


## RECORD DOCUMENT SUPPORT DETAIL IN C MECH BLDG

2  
TI

SCALE: 1 1/2" = 1'-0"

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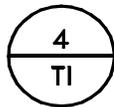
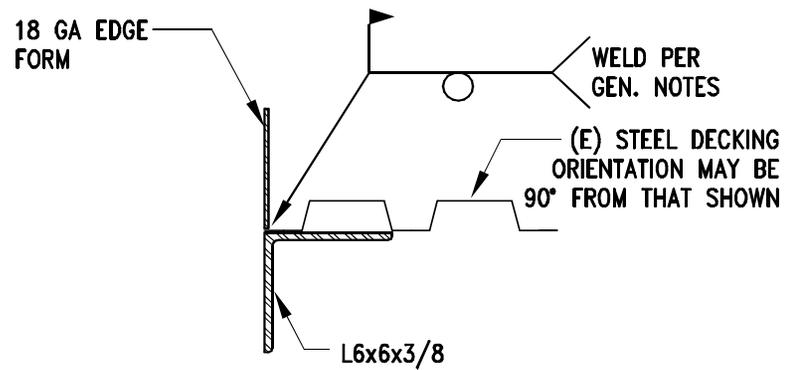


3  
TI

## EDGE ANGLE TO ROOF JOIST

SCALE: 1 1/2" = 1'-0"

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## EDGE ANGLE AT ROOF OPENING

SCALE: 1 1/2" = 1'-0"