

## SECTION 11

### CEILING AND CEILING FINISHES

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## 11.0 CEILING AND CEILING FINISHES

### 11.1 Suspended Ceilings

Suspended Ceilings shall generally be provided in all occupied areas in buildings.

Generally specify removable, non-combustible, two-way suspended acoustic ceiling tiles with a sound absorption coefficient of 0.65 or above. Ceiling tiles are to have an off-white matt finish with a minimum reflectivity rating of 85%. Ceiling tiles are to be durable, rigid and easily removed and replaced without damage. Avoid diagonal ceiling grid layouts. A set plasterboard ceiling (with access panels if required, of a type to be approved by SR) is acceptable for entry foyers and other areas that may be specified on the room data. Any penetrations shall be appropriately sealed (particularly for fixed ceilings).

#### 11.1.1 Ceiling Types

Open Ceilings should be considered as a viable design option in consideration of sustainability, decreasing costs and allowing for service access.

### 11.2 Suspended Grid Ceilings

Where provided, grid ceiling systems shall generally be a two-way grid of exposed T-bars with 1200 x 600mm 'Rondo' or similar approved module. Wall angles shall be of the shadow line type except where the ceiling's fire rating dictates otherwise. Ceiling tiles shall be either Armstrong RH99 (also described as HumiGuard Plus) fine fissured square edge or equivalent mineral fibre suitable for both air-conditioned and non air-conditioned or in wet areas, vinyl-faced fibre cement. The acoustic properties of the tiles shall be considered in relation to the acoustic requirements of the space(s). Lightweight vinyl faced fibreglass tiles shall not be used. Additional acoustic provision such as sections of acoustic blanket on ceilings over ceiling height partitions may be required for satisfactory acoustic performance. Refer Section 18 Acoustic.

#### Accessibility

Wherever access is required to the ceiling to service or remove equipment, the ceiling shall be designed for easy removal including removal of tee-bars.

The spacing and arrangement of the hangers shall in all cases be designed to carry the weight of the ceiling, light fittings etc in accordance with the manufacturer's printed instructions.

#### 11.2.1 Flush Plasterboard Ceilings

Flush plasterboard shall be avoided unless required for specific applications such as Physical Containment (PC) Laboratories, food preparation or medical operating requirements.

Use for aesthetic reasons in feature applications such as Reception areas is subject to the approval of JCU.

Flush plasterboard ceilings shall be installed on a fully concealed system equal to the 'Rondo' system, comprising top cross rails and furring channels at centres in accordance with the manufacturer's printed instructions to suit the application, and 5mm diameter galvanised rod rigid hangers.

The spacing and arrangement of the hangers shall in all cases be designed to carry the weight of the ceiling, light fittings etc. in accordance with the manufacturer's printed instructions. The use of spring clips on hangers to ceilings other than tile ceilings is prohibited.

Wall angles may be either shadow line type or coves depending on application.

### **Accessibility**

Provide access openings to facilitate ready access to above-ceiling services; size and locate access openings to suit access requirements. Locations, quantity and sizes of access openings are subject to the approval of JCU.

Non-fire rated access openings shall be approved proprietary type of solid MDF, metal or similar construction with flush set perimeter frames, minimum size 600 x 600mm. The access panel should hinge down on opening with budget type latch operated by square head key securing panel in closed position. Unless access panel is permanently fixed to perimeter frame, provide safety chain to restrain in event of hinge failure.

Fire rated access openings shall provide a similar appearance but with the required fire-resistance.

### **11.3. Ceiling Fixtures**

Where fixtures or fittings such as light fittings, speakers, thermal alarms and the like are to be mounted on the ceiling tiles, approved timber backing pieces shall be provided which must span the full width of the tile to provide bearing on the ceiling grid. Timber backers are not to be bonded to tiles.

Data projectors shall not be supported off the ceiling grid, but from the slab soffit or steel roof framing above.

### **Pelmets**

Pelmets shall only be used where curtains are nominated on the Space Description Forms. In this instance, the pelmet shall be recessed into the ceiling.

Pelmets are not required where roller blinds are used.

### **11.4. Unacceptable Ceiling Systems**

Ceilings comprising metal or timber slats generally shall not be used.

### **11.5. External Soffit Linings**

Soffit linings shall be prefinished materials such as 'Colorbond' profiled metal sheeting or metal faced cladding systems. The use of timber or metal section battening is prohibited. Painted fibrous cement, adequately fixed and sealed against the ingress of moisture and corrosion, is acceptable only for soffits not more than eight meters above the ground.

Soffit design and selection of materials shall be carried out with a view to minimising spider webs and insect nesting.

The installation of light fittings and other fixtures in profiled metal sheeting shall be avoided.

#### **11.6. Plant Room Ceilings**

All plant room ceilings shall be painted for light reflectance and to ensure that the soffit finish is satisfactory.

Plant rooms on upper levels under a steel framed roof do not require a ceiling, however perimeter walls must extend up to and be sealed to the underside of the roof, and the roof insulation shall extend over the plant room.

#### **11.7. Ceiling Height and Ceiling Space**

In general, the minimum acceptable ceiling height throughout University buildings shall be not less than 2700mm. Ceiling clearance space to be designed to suit installation of the required services. The minimum clearance in the ceiling space to the underside of the slab or roof structure over shall be not less than 400mm.

#### **11.8. Identification of Concealed Services**

Refer specific Sections dealing with services, however as a minimum discreet signage shall be provided to indicate locations of VAV, duct heaters, fire dampers, & valves for all piped services. Where an access hatch is provided place labels on hatch, otherwise if in a grid ceiling place on grid t-bar.

#### **Ceiling Access Hatches**

All accessible roof spaces shall be provided with ceiling access hatches which shall be hinged drop down type e.g. "Trafalgar".

#### **Warranty Period**

Suspended Ceiling Systems: 5 years minimum.

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