

9.00 Windows

9.01 Generally

The amount of glazing in the building façade shall be determined to satisfy aesthetic and functional needs but shall also take into consideration all of the factors which impact on the total life cycle of the proposed building including capital cost of building elements, services and operating costs, the cost of glare reduction, maintenance, cleaning and energy.

Care shall be taken to minimise the impact of solar load and internal glare through windows by carefully considering the options of sunshading, the use of solar or tinted glass or a combination of these measures. An analysis of the life cycle costs of the proposed solution shall be submitted for consideration by CLF before a final design solution is adopted.

Windows shall be of commercial quality designed in accordance with all relevant codes and shall be suitable for the specific application taking into account the requirements for security, cleaning, ventilation, maintenance and operability.

9.02 Design Criteria

For the purposes of design, Terrain Category 2.5 shall be used as a minimum.

In air conditioned buildings, not less than 10% of the window area shall be openable so as to provide for ventilation in the event of a system breakdown. Every room and every bay of windows on the perimeter must have at least one openable window. This requirement may be waived if alternative means of achieving this outcome can be provided.

In general, the following energy targets shall be used for the window design:

- Window Transmission <math><5.8 \text{ W/2m}^2\text{K}</math>
- Window Shading Coefficient <math><0.45</math> or shaded
- Wall Insulation >math>>R1.5 \text{ m}^2\text{K/W}</math>

The design of the walls at windows and doors shall ensure that the cavities between the inner and outer walls are suitably flashed and the cavities are closed with the wall material and not aluminium angles.

9.03 Window Styles

Louvres shall be avoided except for special approved applications.

Pivot hinge windows can open outwards or inwards but must be able to be cleaned from within the building. Where an external pathway, link bridge or staircase abuts the external wall of the building, any windows in that wall are not to protrude beyond the face of the wall at that level when opened.

9.04 Window Framing

Windows and doors shall have anodised aluminium frames of an approved colour, consistent with other buildings in the vicinity.

The minimum thickness of anodising shall be not less than 20 microns. All exposed screw fixings, rivets and cut edges etc, shall be coloured to match the frames.

Where windows or glazed panels have a common jamb with a door unit, provide strengthening to ensure that the window/door jamb does not twist and prevent the door lock from latching.

9.05 Glazing

All glass to windows shall be 'Viridian EVantage' laminated glass or an alternative of equal or greater performance which provides solar and thermal performance, subtle reflectivity and glare control. The selected glass type and colour is to be approved by the Superintendent.

The approved glass shall meet the following criteria;

- Solar control with low E
- Good light transmission with subtle reflectivity
- Low UV transmittance
- Neutral light transmittance which maintains toned glass colour and clarity
- Readily available with reasonable lead time.

Applied film on windows to achieve thermal and glare control shall only be used when refurbishing existing buildings and is subject to the approval of the Superintendent.

Maintenance of privacy shall be the overriding consideration in the selection of glass for windows in toilet areas.

Any frameless or fully glazed doors, sidelights, shopfronts or glazing which might be mistaken for a doorway or opening which do not incorporate a chair rail, handrail or transom, shall be clearly marked for the full width of the glass panels with a solid and non-transparent contrasting line not less than 75mm wide. The lower edge of the contrasting line shall be located between 900mm and 1000mm above the finished internal floor level. The contrasting line shall also provide a minimum of 30% luminance contrast when viewed against the floor surface/s within 2m of the of the glass when viewed from either side.

9.06 Window Locks

All openable window sashes shall be fitted with a lock equivalent to Lockwood 780 or 880. All locks shall be keyed alike, and keys shall be handed to the Superintendent only at Practical Completion. The locking requirement shall be confirmed with the CLF Property Services Manager.

9.07 Window Cleaning

All external surfaces of glass must be easily accessible for cleaning from the inside. If this is not possible, a proposed methodology for cleaning shall be submitted to CLF for consideration and approval.

All provision shall be made in the design for the approved cleaning methodology including providing safe access to the external glass surface and all safety anchors, tracks, hoisting equipment, harnesses etc.

9.08 Window Curtains & Blinds

Curtains and blinds shall not be used as a substitute for external sun shading or screening of windows, or for general glare control where specialist glass is used.

Where blinds may be required for privacy or other reasons, they shall be 'Verosol' or equal manually operated roller blinds. Blind fabric shall be a type to suit the application of a colour approved by CLF.

Where curtains are requested, they shall be 1200mm wide with headings double pinch pleated (1.5 fullness). Curtain tracks shall be series 2000 hand operated roller.

Teaching spaces and meeting rooms require controllable light conditions which enable the effective use of audio visual facilities. This may be achieved by fitting any windows with roller blinds having a selected fabric with sufficient opaqueness to achieve an appropriate light level within the space.

9.09 Teaching Spaces

Windows in teaching spaces shall be located so that no direct sunlight falls on projection surfaces. The extent of windows, the level of natural light entering the space and the potential for uncontrolled light through reflection off surfaces must be assessed and managed to ensure adequate contrast ratios are achieved on all screens. Consultation must be undertaken with ITS on the extent and location of proposed windows as this will also impact on the selection of projectors.