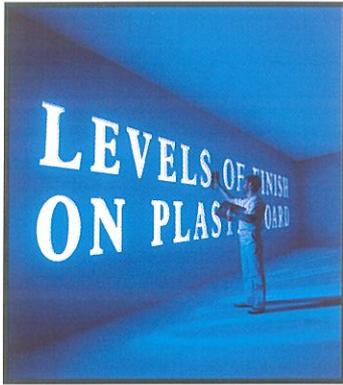


FWCIANZ



PLASTERBOARD EXPECTATIONS

GLANCING LIGHT

Lighting design is very much a matter of cause and effect. By understanding the role that fittings play and the consequences of their position it is possible to minimise adverse effects on quite normal standards of workmanship.

When specifiers, builders and home owners are considering the type of finish they require from plasterboard, it is important to understand how the overall appearance is likely to be affected by glancing light and the choice of

decoration.

Although a flat finish is the common requirement this is not always possible with present building technology. No matter how flat a surface may appear, there are always undulations and deviations from flatness. What is possible is the appearance of flatness, though this is dependent on the level of finish and the way the lining is perceived.

LIGHTING VARIATIONS AND CONDITIONS

Where possible ceiling and wall joints should run in the direction of the light source e.g. at right angles to windows or large openings. Avoid butt joints wherever possible.

Finished joints are subjected to a variety of lighting conditions. Light intensities are constantly changing throughout the day, depending on the position of the sun, sky conditions, window, door or the location of light source, reflections from surrounding buildings, ground etc, subjecting the ceilings to diffused light from all directions.

At night, the intensity varies again.

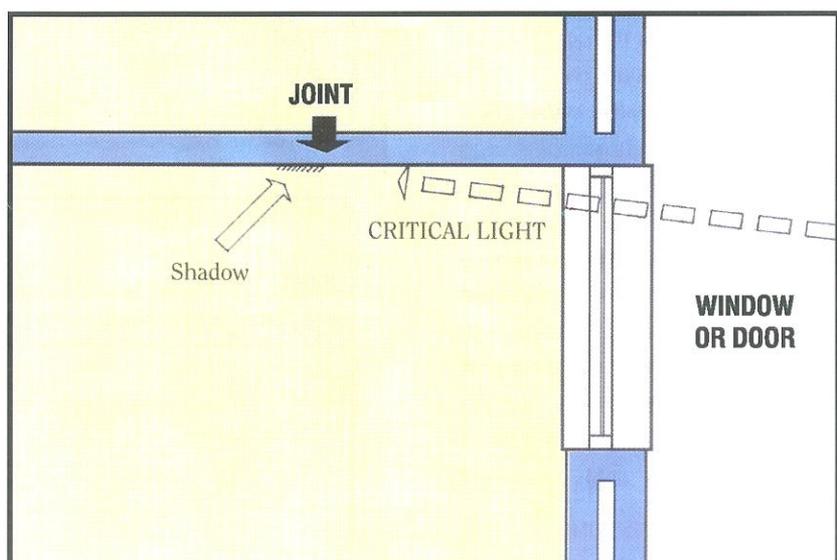
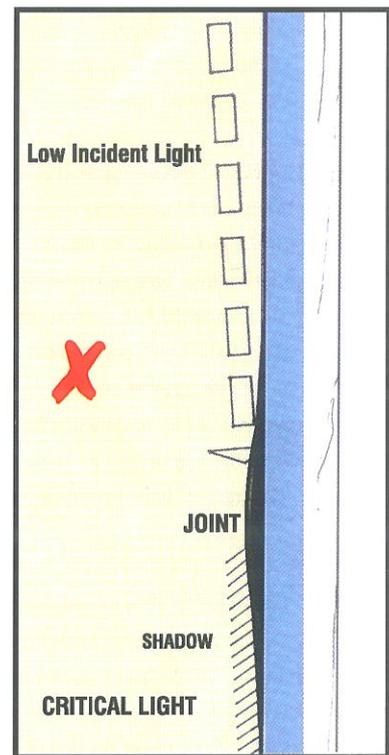
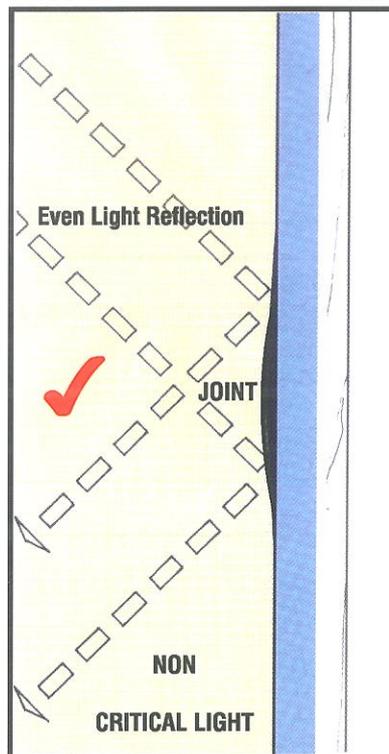
Glancing light is the light that shines obliquely across the surface of the wall or ceiling. The worst instances of glancing light occur with single unshaded light bulbs fixed directly to the ceilings or walls or in rooms with windows up to ceiling level or windows adjacent to walls.

Because of the angle of the light, illumination of one side of the most minute undulation creates a shadow on the other side. This highlights perceived imperfections or the different light reflection characteristics of surface texture variations (joints, patches) which under more diffused light would not be visible.

NATURAL GLANCING LIGHT

The best way to present circumstances that accentuate glancing light effect is by illustrating common conditions.

Windows that extend up to (or close to) the corner of the room, allow natural light to fall upon the side wall at a very shallow angle. The angle of light will, vary during the day.



Accordingly, the plasterboard joint will be more apparent at certain times.

A similar situation to that described above occurs with windows that extend to the ceiling surface. Obviously, dawn or dusk will produce the most pronounced 'glancing light' but reflection from an outside surface can extend the duration of the effect considerably.

Another situation is a raked ceiling coupled with high level windows facing critical light or louvered windows. In this case, the problem is invariably complicated by reflections from adjacent roof surfaces.

REMEDIAL MEASURES

Where the physical circumstance producing glancing light effect already exists, the situation can be improved by appropriate soft furnishings, pelmets, curtaining, blinds or redecorating with light matt finishes.

ARTIFICIAL LIGHTING - CEILINGS

The most common way of providing artificial lighting is by a surface mounted ceiling fitting in the centre of the ceiling. This also provides the worst characteristic for producing glancing light effect. The light source is close to the ceiling surface and therefore the angle of incidence onto the ceiling is very shallow. Placing the fitting centrally in a room means that the shallow angle of light occurs in all directions.

Clearly, from the point of view of reducing apparent defects the ideal lighting technique is to use a series of fittings hung as low as possible below the ceiling. The angle of light striking the surface is as great as possible and the multiple light sources cancel out each other's shadows.

ARTIFICIAL LIGHTING - WALLS

The same effect applies to wall fittings. Wall mounted lights may well show up a ceiling in a kindly manner, because they are some distance below it. They will, however, tend to accentuate minor imperfections not normally seen in the walls. Similarly, high output light sources are more severe in their effect because they create deeper shadows. The whiter the light, the stronger the contrast, the greater the perceived imperfection.

Soft low wattage diffused lighting provides the best result.

The most severe case occurs when a surface mounted fluorescent batten fitting is mounted in the centre of a surface. It produces high output white light at a shallow angle of incidence.

The positioning of feature lighting using small spots or floodlights should be well planned. The fittings should allow for a generous angle of

incidence to the featured surface if they are to minimise perceived defects.

In general terms, recessed fittings and ceiling surfaces are compatible. However they should be kept well away from walls. This is assuming that they are deeply recessed and do not have a flush mounted diffuser, which transmits light to the ceiling surface.

