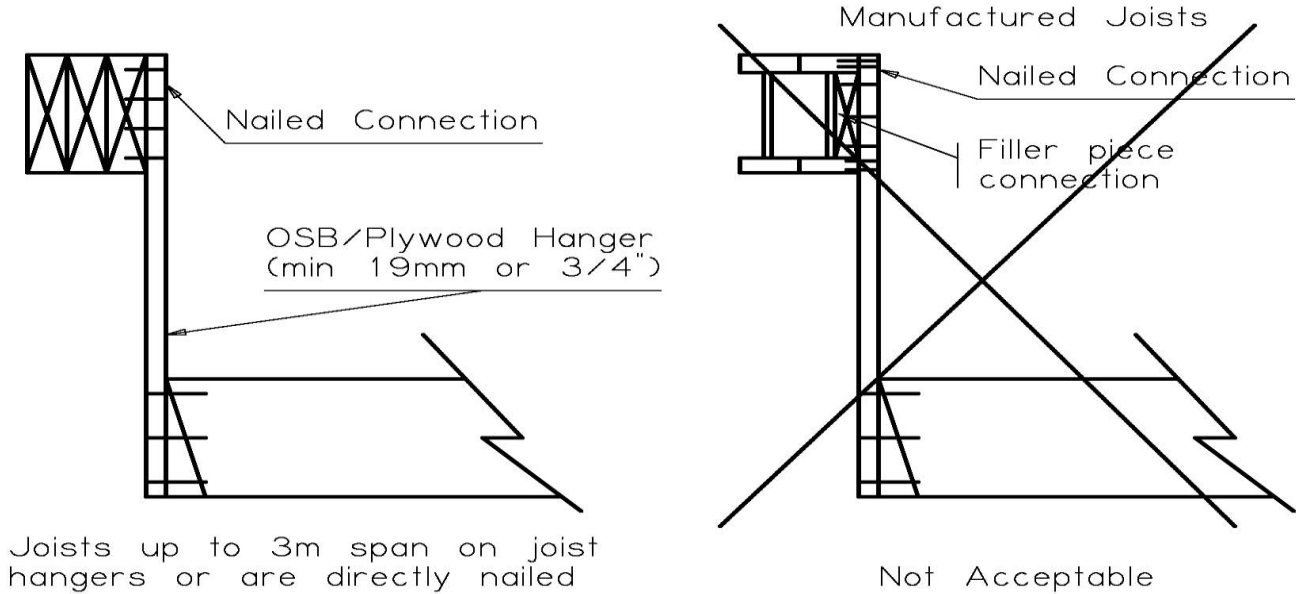


RB14-022

LANDINGS, FLOORS, ETC..., SUPPORTED BY OSBIPLYWOOD HANGERS

Commentary I Relevant Facts:

In the past we have permitted minor areas, e.g. stair landings, to be supported by plywood hangers attached to the sides of built-up beams. Some designers now take this a step further by having such hangers support floor joists spanning 3m or greater. Moreover, some of these hangers are attached not to built-up beams but to sides of manufactured joists which have less lateral and torsional stiffness than solid beams.



Regulation Bulletin General Policy Statement

Unless stated otherwise, the Code references in this Regulations Bulletin are to Division B of the Alberta Building Code 2014 (ABC 2014). Regulation Bulletins do not overrule the ABC 2014 nor constitute a relaxation of the Code. They serve to clarify the Code in areas where the latter is ambiguous or does not cover a specific topic. Regulation Bulletins are City of Calgary clarifications for staff use to enable consistency in the application of the Code. Regulation Bulletins should always be read in the context of the appropriate requirements of the Code

It has been requested to formulate a Divisional policy to standardize the use of such hangers.

There are several weak points in this support system. The beams (or manufactured joists) are subject to torsional forces for which they are not designed. Manufactured joists especially (although adequate in bending in the principal axis) are very weak in the transverse axis and in torsion.

Another problem with this detail is that most of the critical members e.g. nails, OSB/plywood hanger and joist hangers depend on transferring the forces in tension or in bearing on small surfaces, e.g. the OSB/plywood bearing on the nails. These are the least reliable means of transfer, especially over an extended period of time.

Conclusion:

Only stairs and other secondary members spanning not more than 2.1 m may be supported by OSB/plywood hangers attached to the sides of built-up beams.

OSB/plywood hangers may not be supported from the sides of manufactured joists.

The minimum thickness of the OSB/plywood hangers shall be 19mm (3/4").

Alternatively the design may comply with Part 4 of the Code and be certified by a professional engineer registered in Alberta.

Chief Building Inspector