



PINE CREEK HOMES

CLEAR INTENTIONS

Homeowners in the market for windows search for *walls of glass*

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TRANSPARENCY is the word of this architectural era. Stunning buildings are created with glass walls and expansive views. The “transparency trend” is gathering momentum, as technology improves to create the best insulating windows to date. In the past, glass walls were not typical, since they were culprits of significant energy loss. Now, with the advent of less conductive frames, advanced insulating glass, and warm-edge spacers, glass walls are not only viable, but very popular in new construction and major renovations. Home owners can achieve exceptional views with a surprising level of comfort at times of extreme cold or heat.

DESIGN EVOLUTION Fifteen to twenty years ago, windows were a design statement in and of themselves. Millwork details, rich colours, and ornate casing were the norm. Now, instead of being the picture, a window is purely the frame; the less noticeable, the better. Studies show that views of the outdoors and exposure to natural sunlight are both calming and cheering. Make the frames disappear, and look at the trees!

Simultaneously, the choice of colour frame has evolved. In the era of wood windows, the natural woodgrain was enhanced with a stain. With the advent of vinyl windows, the colour transitioned into white. However, white, particularly in a

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retrofit, can be very stark against an otherwise harmonious colour scheme. Fiberglass, invented in Canada as modern framing material, offers prime characteristics to allow for colour flexibility. In new construction, colours veer more towards greys, blacks, dark browns, and even metallics. Homeowners can create exactly the colour scheme they want, inside and out. The windows then complement the décor without standing out, which means the view of the outdoors doesn't have to compete with its frame.



PHOTO COURTESY OF H5 ARCHITECTURE



COMPONENTS THAT AFFECT CLEAR VIEWS The desire for clear views has encouraged the development of slimmer frames. Vinyl, by nature of being flexible, sometimes requires bulkier, thicker frames and steel reinforcement. In contrast, stronger materials can achieve surprisingly slim frames. Fiberglass, used in the automotive industry for its strength-to-weight ratio, is also used in window framing for its slim sightlines and ability to support triple pane glass in extra-large openings.

Insulating glass units (IGUs) can also have a significant impact on the view. With essentially a lighter coating of Low-E, you can increase your “Visible Light Transmittance” (VLT) and appreciate more vivid colours of the outdoors. As a benchmark, a dual-pane with no Low-E coating has a VLT of 82% (not 100%

as some may expect). Most manufacturers offer IGUs with Visible Light Transmittance in the 60s range – but if natural lighting and the clearest view is desired, IGUs with higher transmittance are available, with equally good insulation values. Typically, these IGUs are accompanied with higher heat gain, which needs to be considered due to our hot summer season.

NEWEST PRODUCTS TO TACKLE TRANSPARENCY & FRESH AIR “Bringing the outside in” typically means three things: Enjoy the outdoor scenery, use natural lighting, and breathe fresh air. Access to extra-large views and natural lighting is achievable with a robust frame system, and oversized tempered insulating glass units. But fresh air,

on the other hand, is harder to obtain without interrupting the view. Window manufacturers are now facing the challenge of making extremely large operable units that can support triple pane units that weight 150 to 200 pounds! Again, window systems and enhanced technology are responding to consumer demands. More commercial hardware, multi-point locks, and even stronger frames are making oversized casements and awnings achievable.

Similarly, there are some swinging doors on the market that can be coupled to windows for practical mobility purposes. The effect is best achieved with the use of a door with a full glass cut-out. Multi-point locking hardware and tempered glass ensure good security levels, while an all-glass door continues the streamlined effect of the windows.

Helio Rodrigues from h5 architecture comments, “As an office, we work in an effort to maximize thoughtful transparency in our work while paying critical attention to glazing performance in our harsh climate. The newest systems on the market allow us to custom fabricate glazing elements that previously would not have been available.”

In the near future, we can expect the “transparency trend” to continue - and we’ll continue to see beautiful, architectural buildings enhance Manitoba’s cityscape.