

When is Window Wall Suitable to Use in Lieu of Curtain Wall?



Advantages of Window Wall in Lieu of Curtain Wall on Residential Projects

The primary benefit of using Window Wall (WW) over Curtain Wall (CW) on residential projects is the simplicity of façade transitions at balconies. Unlike CW, WW and balcony glazing are dead loaded with the inter-story drift being accommodated at the underside of the slab. Because of this, the vertical connections between WW and balcony glazing are rigid and therefore easily maintain the building envelope. CW on the other hand accommodates inter-story drift using a stack joint just above the slab and therefore the vertical connection to balcony glazing must be designed to accommodate significant movement – not only is this challenging to design but also very difficult to install systematically.

Another benefit/advantage of using WW over CW is the increased speed of installation. WW is installed from the interior of the building without the use of cranes or hoisting systems while CW installation is. And the simplified transitions at balconies mentioned above increases the installation efficiency as well.

Other benefits of WW over CW are as follows:

- WW coupler depths are optimized for lower ceiling heights associated with residential towers versus commercial buildings – resulting in lower unit cost and mass.
- Replacement of the IGU's from the interior.
- No embeds required.
- Dead load is evenly distributed on the top of slab.
- No smoke seal required.
- The building envelope is completed at every floor slab allowing for subsequent trades to mobilize without water ingress as the building progresses – unlike CW where the building envelope isn't completed until the roof level.
- In-slab ducts are outside the building envelope.

Window Wall and Unitized Curtain Wall Module Sizing Parameters

The below chart provides the recommended sizing parameters for Starline Windows WW & UCW products.

PRODUCT	MAX. WIDTH (FEET)	MAX. HEIGHT (FEET)	MAX. AREA (SQ.FT.)
Window Wall	6	11 ¹	45
Unitized Curtain Wall	8	15	75

¹ WW comfortably spans 11'. WW can span taller in some cases – reviewed on a project specific basis.

When is Window Wall Suitable in Lieu of Curtain Wall?

Generally, WW is better suited to all residential projects. However, this needs to be reviewed on a project specific basis.

Starline will often use its 6" WW system in lieu of CW for limited scopes when the floor spans require it. (I.e., more than 11' to an 18' tall maximum span). This is regularly done on projects at amenity locations or feature floors with taller floor to floor heights (I.e., Amenity and Penthouse locations).

WW may also be suitable for a project which has commercial space on the lower floor(s). Depending on the window module layout, the project may be suitable for WW. The following needs to be considered:

- Starline does not manufacture high traffic doors or doors which require special hardware, such as automatic openers, key fobs, panic hardware, etc. A rough opening can be left in the WW system for doors by others to be inserted into the WW system.
- If there is only a run of a few windows and large commercial entry doors – this entire location would be best suited for a commercial supplier.
- Starline powder coats their products whereas traditional CW is typically anodized. Something to consider if a project has conditions where both WW and CW is used in close proximity to one another.

Window Wall to Curtain Wall Transitions

The best way to detail a transition from WW to CW is to provide an insulated structural framed separation between the two systems. This will allow for each trade to waterproof their respective openings and building envelope tie-in. And this allows for each system to accommodate inter-story drift separately.