

Tips From Engineering...

COLLATERAL LOADS

Collateral loads often seem to be a point of confusion in regards to scope definition. To that end, I thought I might discuss with you the purpose of collateral dead loads, the methods we offer for specifying them, and some of their correct and incorrect usages we have encountered.

Collateral loading values specified by the customer should contain the weights of items to be supported but not supplied by Nucor. Items that should be considered collateral load are fire-suppression systems, suspended ceilings, mechanical and electrical systems, or lighting.

Nucor's order documents allow the customer to specify two separate values for collateral load, 'primary' and 'secondary'. The intent of the two categories is to permit the customer to separate collateral items to be suspended directly from the primary (or frames) from that to be suspended from the secondary (or purlins/joists).

Our order documents also request the user to clarify what they are including in the collateral load. We do this in order to accomplish two things: (1) we need to provide appropriate primary or secondary member vertical deflections if we are supporting items that are sensitive to deflection, such as suspended ceilings, and (2) we need to watch for situations that are not actually collateral loads so that we can work with our customer to get the building loaded correctly.

I would like to elaborate for a moment on some items that should not be simply included in the collateral loads. Items that will significantly affect a portion of the building and that, by their method and frequency of connection to our steel, create individual point loads greater

than 200 pounds should not be considered collateral load. Instead, we ask that such loads be called out individually and located. In this way, we can ensure that we provide adequate support.

For example, basketball goals, skylights, heavy mechanical piping, cranes of

any type, suspended walkways or conveyors, roof-top units, and related special loading conditions should be called out separately on our order documents and not included in the collateral load.

Nucor Building Systems, in fact, will make every attempt to clarify or question the definition of collateral load shown on the order. If, for example, the user specifies no collateral load, we will proceed with the order but warn them on the Drawing Coversheet that having no collateral load at all specified allows for NO suspensions of any sort from our roof structural members. If the user specifies collateral loads greater than 10 psf, we will assume that they are attempting to include items that should be called out on their own for support, attempt to clarify what is included in this load value, and require the use of bar joists instead of purlins.

We at Nucor are focused on providing you the best quality, service, and safest product possible. Part of this effort

includes the proper clarification of the loads to be supported. We thank you for your business!

Thanks, Scott



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