



ASU SkySong, Pheonix Arizona

NDN Software

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# Automatic Member Sizing:

This feature allows you to build and analyze a structure using some initial "best guess" member sizes. From there, NDN will review the results, checks those results against any one of the building codes contained in NDN (US, EU, Australian, or British) and recommend member sizes that allow your structure to operate at peak efficiency.

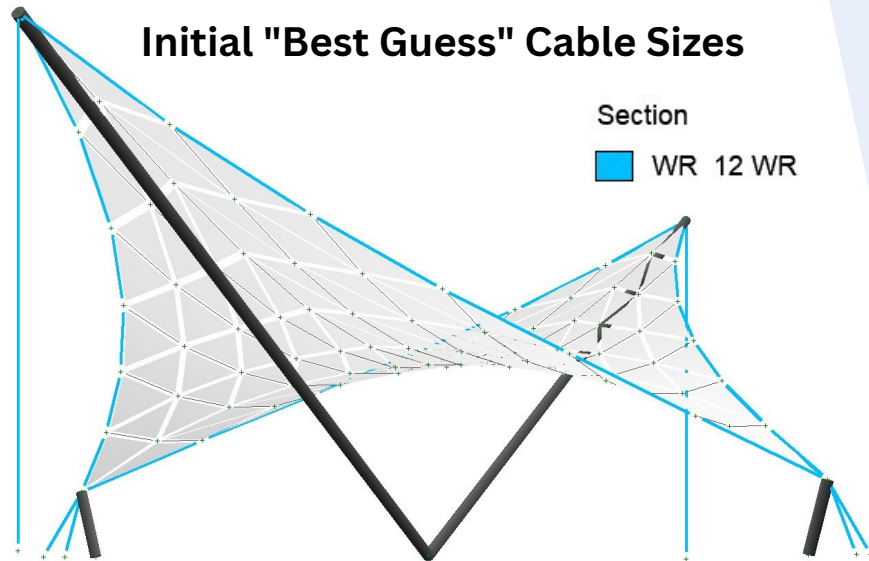
## Building Code

-  ☒ Australian
-  ☐ British
-  ☐ Euro
-  ☐ USA

## Member Design:

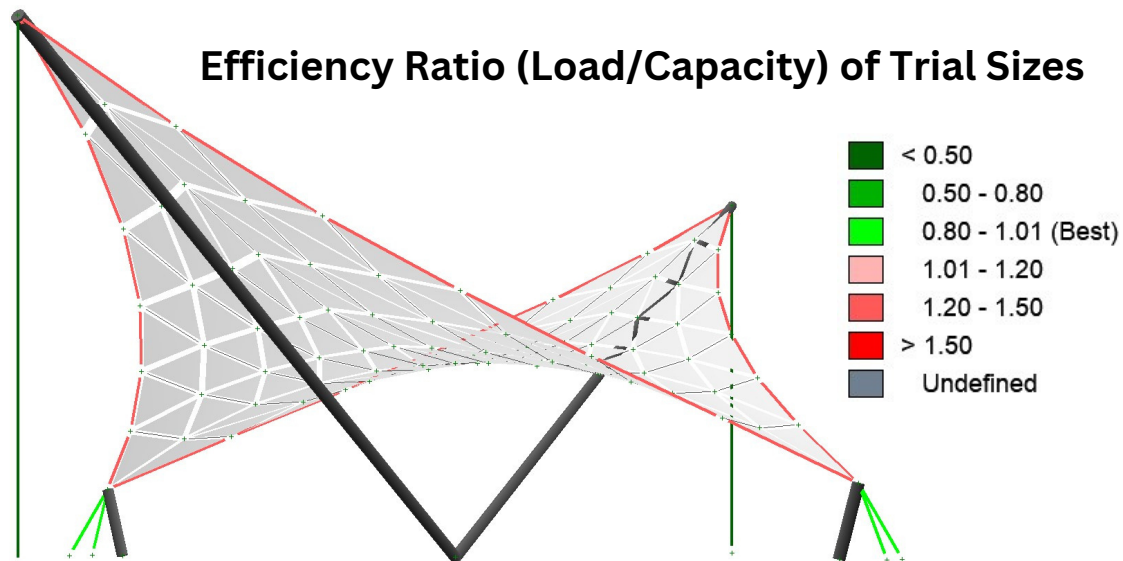
Once you've run your analysis, this is where you can play with "Trail Sizes". See how your member types (beams, cables, struts, etc.) hold up against the analysis without having to change the properties and rerun the analysis each time. Here you can also have NDN size members for you to insure the structure is built to peak efficiency (an efficiency ratio of 0.8 to 1.01). This way you'll know you are building a structure that is safe, without wasting money on overbuilt components.

## Initial "Best Guess" Cable Sizes



Upon checking of the initial section sizes, we see that the perimeter cables are overstressed and will need to get larger. The tie cables (the vertical cables at each end) are understressed. Their size can be reduced. The edge post cables however appear to be at peak efficiency.

## Efficiency Ratio (Load/Capacity) of Trial Sizes



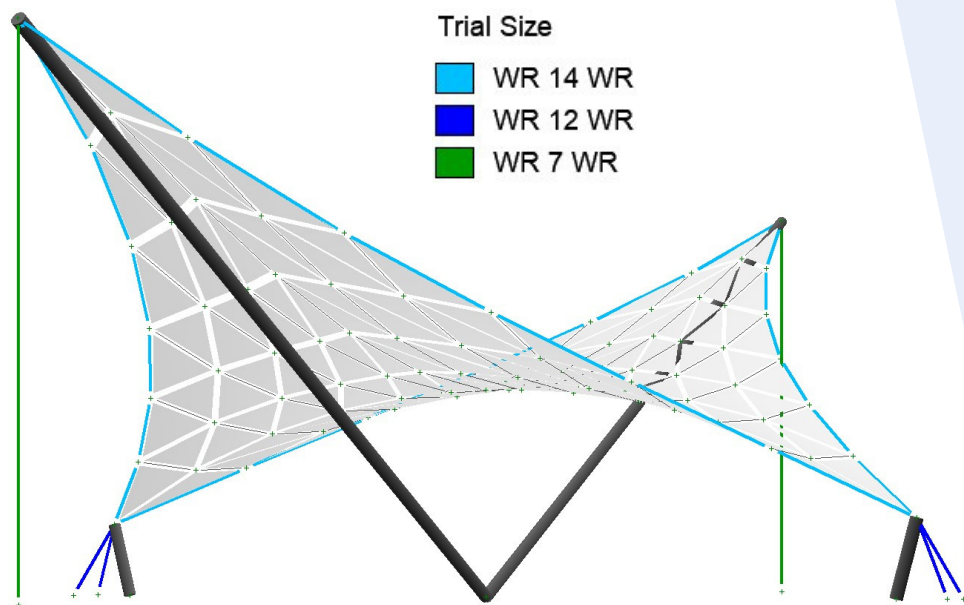


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# Automatic Member Sizing:

## Member Sizes Recommended by NDN

To the right you will see the section sizes we get when we ask NDN to size the (cable) members for us. These are the recommended trial sizes. As indicated when the initial check was performed, our perimeter cables have increased in size while the tie cables have decreased in size.



## Efficiency Ratio - Recommended Sizes

Checking the recommended section sizes (trial sizes) against the analysis cases reveals that all cable assemblies are now operating at peak efficiency.

