

Structural Engineers Association of Arizona
Code Committee

MEMORANDUM

Date: 4 June 2018

To: Metal Building Manufacturer's Association (MBMA)

From: Structural Engineer's Association of Arizona (SEAOA)

Subject: Recommended Best Practices in Listing Building Reactions

Background

Recently, some of the metal building manufacturers have discontinued the practice of providing building reactions for the most severe load combination. This practice makes it very tedious, time consuming, and error-prone for the engineer of record to determine these values for use in design of the foundations and anchorages. Because these values can be determined very easily and accurately by the software already employed by the building manufacturer, we request that MBMA and its member organizations adopt the following as best practices for the industry.

Recommended Best Practices for Listing Most Severe Building Reactions

1. METAL BUILDING SUBMITTAL SHALL INCLUDE REACTIONS TO FOUNDATION AT EACH FRAMING MEMBER FOR MOST SEVERE LOAD COMBINATION FOR ALLOWABLE STRESS DESIGN PER IBC SECTION 1605.3.1.
2. METAL BUILDING SUBMITTAL SHALL INCLUDE REACTIONS TO FOUNDATION AT EACH FRAMING MEMBER FOR MOST SEVERE LOAD COMBINATION FOR STRENGTH DESIGN PER IBC SECTION 1605.2.

Purpose and Intent

Obviously, either, or both, of these requirements may be specified in the contract documents for the project. These requirements then become a contractual obligation. In recent months, however, some metal building manufacturers have ignored these contractual requirements and insisted that they will only provide results of basic loads cases. Many projects have been affected by time delays and/or extra costs because of this. These recommendations are intended to alleviate this problem by making the requirements clear so that metal building manufacturers can set their software to easily provide the required information.

Discussion

Item 1 above is a minimum requirement and information therein will typically be used for foundation design. With an easily estimated load factor, the design engineer can also use this information for anchorage design. This item should be provided for every project even if not requested in the contact documents for the project.

Information in Item 2 above will typically be used for anchorage design. This information is nice to have for the design engineer and provides a more accurate value for anchorage load requirements.