

Two-span girder simply-supported for DL and continuous for LL

Test Problem

Name:	Two-span girder simply-supported for DL and continuous for LL
Description:	Modeling demonstration for a two-span girder which is simply-supported for DL and continuous for LL.
Program:	SAP2000
Version:	12.0.1
Model ID:	130

To simulate a two-span structure which is simply supported under dead load, and continuous under live load, a [staged-construction](#) load case is defined with five stages, outlined as follows:

- Stage 1: Add two [frame](#) objects, one for each span.
- Stage 2: Define frame end releases through Define > Named Property Sets > Frame Releases, then assign these moment releases to the start [joint](#) of the second span.

Additional information is available in the [Staged-construction tips](#) and [Staged-construction operations](#) articles.

- Stage 3: Apply load to the structure. Response will be as though the system is simply supported.
- Stage 4: Fix the moment end releases which are applied in Stage 2.
- Stage 5: Apply additional load to the structure. Response will now be as though the system is continuous.

Structural response is presented in Figure 1:

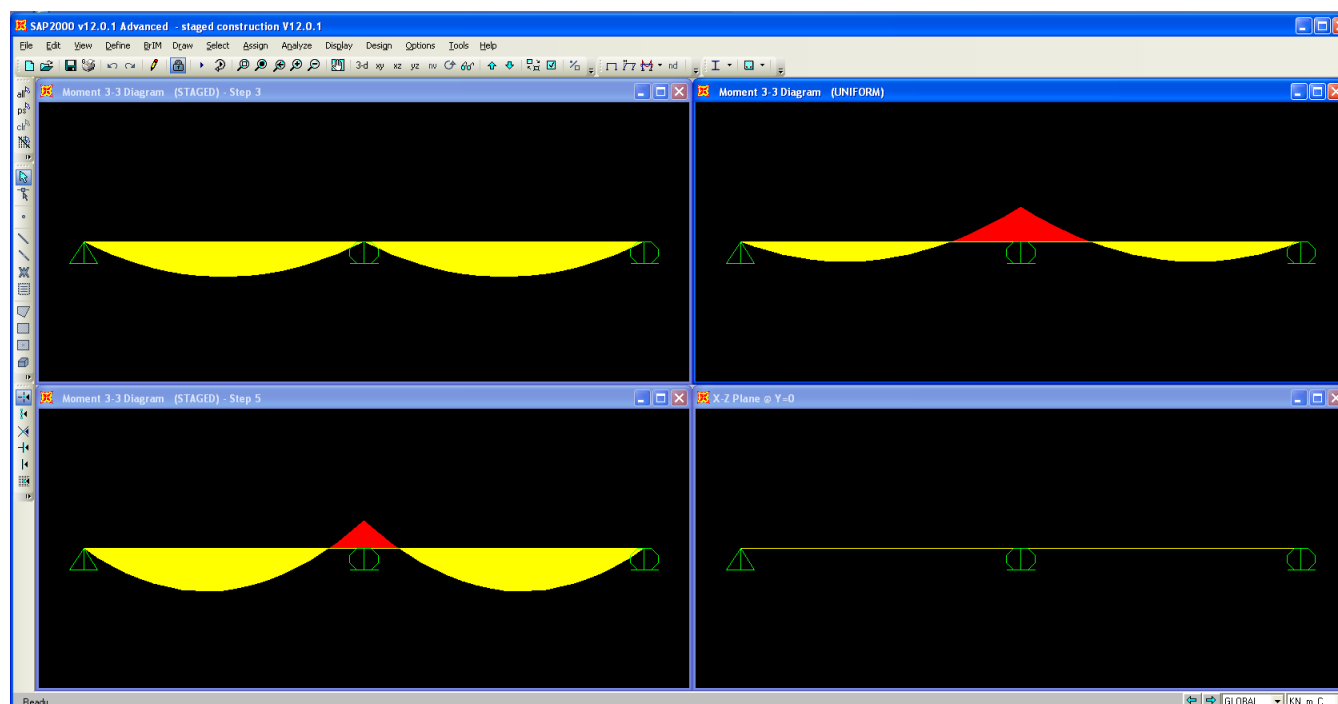


Figure 1 - Structural response

Attachments

- [SAP2000 V12.0.1 model](#) (zipped SDB file)