



# BOB D. CAMPBELL & CO.

Structural Engineers Since 1957

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October 12, 2022

Lori Haun  
Executive Director  
Downtown Joplin Alliance  
931 E 4<sup>th</sup>  
Joplin, MO 64801

RE: Review of Joplin Union Depot Building  
205 N Main Street  
Joplin, Missouri

Dear Lori:

Per your request, we visited the above referenced building on Thursday, September 1, 2022. The purpose of our visit was to review the structural condition of this existing 121-year-old reinforced concrete structure. In summary, we find this building to be in good structural condition. Our items of concern with this structure are typical maintenance items found with a building of this age that has been exposed to weather elements over the last 50-years with some minor reinforcing steel corrosion in need of repair. From a structural standpoint, this building is well-designed and a good candidate for rehabilitation.

The Joplin Union Depot opened in 1911. It was designed by Lewis Curtiss of Kansas City, Missouri. The building structure is constructed of reinforced concrete and is one of the oldest reinforced concrete structures in this country. In 1973, this building was registered in to the National Registry of Historic places by the National Park Service. Lewis Curtiss utilized reinforced concrete as the material of choice for this structure due to its fire-resistant capabilities.

This building has a floor area of approximately 23,816 SF with approximately 18,216 SF at the first level and a center second level of 5,600 SF. Unlike other older reinforced concrete structures, this building did utilize longer spans with deeper girders than you would typically find with other buildings of this era which does allow a good degree of flexibility for rehabilitation of this structure. The follow pictures depict some of the deeper beams in this structure:





Although there is presently a significant level of graffiti and paint on this structure, this damage is superficial and this concrete can be restored to its original look. At some areas of this building, some initial steel corrosion deterioration was observed as shown in the following pictures:



Because this building's use did not expose the structure to a high degree of chlorides over time, the level of corrosion is quite limited and minor in nature. Its repair would consist of the cleaning of corroded reinforcing steel and patching the concrete. This is a fairly commonplace repair with reinforced concrete structures of this age.

Although the load carrying capabilities of this structure will require some degree of future load testing and evaluation, our past experience would indicate that the second floor and roof level have significant live-load capacities available based upon their long service life and visual observation of their structure members to be square and plumb with minimal signs of any distress to this concrete frame observed. The following pictures depict some of these areas:





Additionally, there are substantial concrete walls as part of the reinforced concrete frame for this building which would give it substantial lateral system capabilities well over and above anything required by modern building code.

In summary, we find this building to be in good structural condition. Our items of concern with this structure are typical maintenance items found with a building of this age that has been exposed to weather elements over the last 50-years with some minor reinforcing steel corrosion in need of repair. From a structural standpoint, this building is well-designed and a good candidate for rehabilitation.

Please call if you have any questions.

Sincerely,

**BOB D. CAMPBELL & CO., INC.**  
*Structural Engineers*

A handwritten signature in dark ink that reads "Michael J. Falbe".

Michael J. Falbe, P.E., President  
MJF/js

cc: File/J2203