



SUMMIT ENGINEERING GROUP LLC

STRUCTURAL ENGINEERS

June 25, 2024

Mr. Nihad Babic
Fox Architects
1 S. Memorial Drive, Suite 1800
St. Louis, MO 63102

Re: Comfort Station and Band Stand Building
Clifton Heights Park
6100 Simpson Ave.
St. Louis, MO 63139

Dear Mr. Babic:

Per your request, I visited the building at above referenced address on Dec. 14, 2023 and May 1, 2024 to observe the conditions of the existing comfort station building. It was sunny when both field observations were conducted.

The building is a single story masonry structure. The front entry of the building faces northeast. Please see attached figure 1 for location of the building on overall site plan.

My field observations were noted as follows:

1. The figures 2 and 3 show the rear and front elevations of the comfort building. The front of the building faces the lake with 2 concrete stairs leading up to the rear of the building. The building roof level is for band stand and building lower ground level consists of tool room, coal bin, man's and woman's bathrooms.
2. There was sitting water on the roof during the site visit on May 14, 2024 as shown on figures 4 and 5. Two existing roof drain outlets appeared to be clogged.
3. Viewing inside the lower level tool room, the existing reinforced concrete roof slab system over clay tile forms seemed to be in severe condition as shown on figures 6-9. Some clay tiles forms had fell off and rusted reinforcement and loose concrete were visible at the time of observation.
4. Viewing inside the man's and woman's bathroom, both ceilings have long cracks in the middle span of the existing concrete ceiling roof as shown on figures 10 and 11.
5. Water penetrations were noticed at multiple exterior walls and bathroom wall locations as indicated on figures 12 and 13. The moisture contents readings were very high at multiple wall locations by using moisture-measuring device during our site visit on May, 14, 2024.
6. Multiple wall cracks were observed for exterior walls and interior walls at multiple locations as shown on figures 14 and 15.

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Imagery ©2024 Airbus, Map data ©2024 20 ft
Figure 1. Building Site Plan



Figure 2. Rear Elevation



Figure 3. Front Elevation

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Figure 4. Roof Left View



Figure 5. Roof Right View



Figure 6. Ceiling View at Tool room



Figure 7. Ceiling View at Tool Room



Figure 8. Ceiling View at Tool room



Figure 9. Ceiling View at Tool Room

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Figure 10. Bathroom Ceiling View



Figure 11. Bathroom Ceiling View



Figure 12. Man's bathroom wall



Figure 13. Front Wall View



Figure 14. Bathroom wall view



Figure 15. Front wall view

My comments and recommendations are as follows:

1. The existing roof structure has failed due to years of water leak over the time. The roof structure should be removed.
2. The existing exterior and interior walls consist of hollow clay tile walls based on field observation and existing building drawings provided by City public works department. Majority of hollow tile walls have high moisture contents and may have reduced load bearing capacities due to freeze and thaw cycles during the water seasons over the time.
3. All concrete stairs and foundation walls appear to be in fair condition.

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4. I would recommend that all existing roof structure and all hollow clay tile walls to be removed. All existing concrete stairs and concrete foundation walls should stay. New roof structural elements and new reinforced CMU walls to be installed on top of the existing building foundations.
5. The city should hire licensed architect and structural engineer to provide signed and sealed construction drawings for the existing roof and walls replacement.

I trust this is the information you need at this time. Please call if you have any questions.

Sincerely,
Summit Engineering Group LLC

David Yiquan Sha
P.E., S.E.

