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November 8, 2021

Ms. Carrie Koenig
The Bartolotta Restaurants
520 West McKinley Avenue
Milwaukee, WI 53212

PROJECT:

Lake Park Bistro Floor

Dear Ms. Koenig,

On October 21, 2021, REYN Engineering, Inc. performed observations of the kitchen floor at Lake Park Bistro. The purposed of the visit was to assess areas of the floor that were soft to foot traffic. The floor structure consists of 2x12 joists at 16" on center. The floor decking appears to have multiple layers of sheathing. The original diagonal sheathing was present in some locations but was removed in other locations. The kitchen has a protective rubber flooring over the wood. Per Amber MacCracken of Kahler Slater, the protective flooring is a product called Protect-All (protect-allflooring.com). There are two drains located in the area that was reviewed.

The ceiling was removed under the drain areas and the structure was observed. Our observations follow:

1. Significant long term water damage was noted. Deck material was deteriorated and compromised due to the water damage. Refer to Photographs 1 through 6.
2. Mold was also present on the underside of the sheathing, indicating moisture is reaching the sheathing. Refer to Photograph 7.
3. At least one joist had rot. Refer to Photograph 8.

The area of damage was approximately 32"x8', running approximately from the main support beam and 8' west of the main beam line, nearly centered on the lower level building column. When plywood type sheathing gets wet, the wood material swells, and the plies separate. This along with some small areas of missing sheathing caused the soft feeling of the floor. Our recommendations are as follows:

1. To repair the rotten joists, we recommend sistering a new 8'-0" long 2x12 joist to the compromised joist. The sistered member should lap 3" on the existing wood main member and extend towards the west exterior wall. The member should be attached to the existing with (2) rows of 12d nails spaced at 12" on center.
2. All mold should be removed from the flooring. It is possible that mold exists below the rubber flooring and the top of the sheathing. If this is a significant concern to the tenant, portions of the rubber flooring should be removed, and the top of the sheathing be reviewed.
3. Our primary recommendation for repair is to completely remove the floor sheathing that is compromised. We do have concern regarding the structural capacity of the sheathing present. The main concern would be the possibility of the sheathing being unable to support occupants above which may result in a localized sheathing failure. As stated, this area is estimated to be 32"x8'. At a minimum, the floor sheathing should consist of ¾" APA rated sheathing attached to the joists with 10d nails at 12" on center. Due to the existing flooring build-up, additional sheathing layers may be necessary, but the base layer of sheathing should be ¾" sheathing. Build-up layers should still be APA Rated sheathing attached to the base sheathing with 8d nails at 12" o/c in all directions. We understand that this recommendation may present significant disruption to kitchen activities.

4. If item 3. Is not feasible, ¾" APA rated sheathing can be placed from below, however, this method will not alleviate all of the soft feel of the floor but will safely support the occupants above. The secondary option would consist of setting new sheathing tight to the existing sheathing from below and supporting the sheathing with a 2x4 ledger attached to the existing joists. Pieces of sheathing to match the existing thickness would need to be added as shims to make-up the differences in sheathing thicknesses. Refer to attached Sketch SK-1. This option should be considered temporary until the floor can be removed and replaced according to item 3.
5. All seams and termination points in the rubber flooring should be sealed with the manufacturers recommended sealant or tape. Water must be kept from reaching the wood sheathing.

Thank you for contacting REYN Engineering, Inc. to review the flooring issues at Lake Park Bistro. Please review this report in whole and contact us with any questions or concerns.

Sincerely,



Patrick D. Reynolds, PE, SE
President
REYN Engineering, Inc.

DISCLAIMER:

Information contained in this observation report by REYN Engineering, Inc. has been prepared to the best of our knowledge according to observable conditions at the site. Any dangerous or perceived compromised conditions that appear due to work performed by the contractor shall immediately be brought to the attention of REYN Engineering, Inc.

This visual observation is limited to those areas and sections of the property fully accessible and visible to REYN Engineering at the time and on the date of observation. The observation comprised a visual assessment of the property to identify major defects and to form an opinion regarding the general condition of the property at the time of the inspection. This report is limited to (unless otherwise noted) the described area observed.



Photograph 1: Sheathing Deterioration



Photograph 2: Sheathing Deterioration



Photograph 3: Sheathing Deterioration



Photograph 4: Sheathing Deterioration



Photograph 5: Sheathing Deterioration



Photograph 6: Sheathing Deterioration



Photograph 7: Mold on Sheathing



Photograph 8: Joist with Signs of Rotting

Project Name		Lake Park Bistro Flooring		
Calculation Section		Job No. 21193		
Calculated by	Date	Checked by	Date	Sheet No.
PDR	11/08/21			SK-1

