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ATTACHMENT A  
COMPLETE DOCUMENT AVAILABLE  
UPON REQUEST

## ROOF SYSTEM ASSESSMENT

**Waukesha County  
Old Health and Human Services Building  
514 Riverview Avenue  
Waukesha, WI 53188**

**STR-SEG Project #14720**



Prepared for  
Mr. Jeff Lisiecki  
Waukesha County DPW - Facilities  
505 W. Moreland Boulevard, Rm G1  
Waukesha, WI

Prepared by  
STR-SEG  
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### CONCLUSION & RECOMMENDATIONS

It is the opinion of STR-SEG that Roof Area 13 be addressed as soon as funding is available. The interior view of the roof deck substrate revealed the deck is in poor condition and structural members may also be affected. Replacement in-kind would likely require 50% deck replacement and 10% joist replacement. Replacement would require access to the roof through the interior as the roof is likely unsafe to be trafficked across. Opinion of probable construction cost for the wood framed structure and decking consisting of 10% wood framing components, 50% wood decking is \$95,000 – \$133,000. That budget would be double for replacement utilizing a steel structure. The roof system recommended over the new structure for Roof Area 13 would consist of a 2-ply asphalt vapor retarder, two layers of polyisocyanurate insulation, insulation cover board, and a 4-ply asphalt built-up roof with gravel surfacing. New sheet metal flashings would also be included around the perimeter. The probable construction budget for the roof system is \$60,000. The total anticipated construction budget for Roof Area 13 is between \$155,000 and \$193,000.

The other asphalt built-up roof systems are in poor condition and are contributing to significant moisture infiltration. During the tour large areas of active leaks were observed at the interior space. Structural decking is likely being affected and access to areas was not attempted due to safety concerns. These built-up roof areas are not included in the repair budget due to contractor accessibility and safety concerns. The interior air quality and old roofing materials that likely contain asbestos may require additional funding when construction is deemed necessary. For that reason, we recommend a 25% contingency be added to the overall construction budget. It is the professional opinion of STR-SEG that roof areas 10, 12, 16, 17, 18, 19, 20, 21, 24, 25, 26, 28, 30, and 31 be budgeted for replacement. Assuming the roof system would be replaced in-kind, the recommended roof system would consist of: 2-ply asphalt vapor retarder, two layers of polyisocyanurate insulation, insulation cover board, and a 4-ply asphalt built-up roof with gravel surfacing.

The anticipated Construction budget for the above listed Roof Areas: \$545,000.

Total Construction Budget for all roof areas including Roof Area 13: \$874,000

A/E Design Fees: \$87,400

Construction Contingency: \$136,000

Total Project Budget: \$1,097,400

A/E Design fee based on 10% fee as several unknowns affecting this project are expected including; structural, environmental, hazardous materials, and historical elements.

It is the professional opinion of STR-SEG that the EPDM roof systems are generally in fair condition but are nearing the end of their useful service life. Additionally, several active leaks into the building, and poor indoor air quality were noted during the tour. Despite the lack of rain at the time of the survey numerous areas of internal damage to gypsum board and acoustical ceiling tiles will need to be repaired if the building is brought back into service. As

noted above, while we have included repairs to the asphalt roofs in the Repair List, STR-SEG anticipates replacement of said roofs and therefore we have included only costs for repair of the EPDM roof areas. Additional costs to replace the EPDM roofs should be anticipated in the near future as they age past their expected useful lives.

Estimated cost provided to perform all work on the Repair List: \$12,000.00

Estimated cost for yearly maintenance budget: \$10,000.00

Recommended Re-Survey Year: 2020