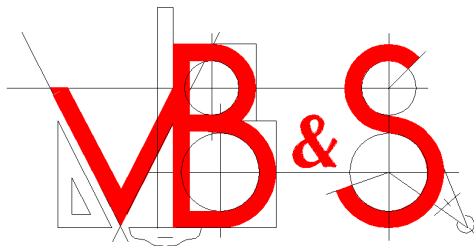


**UNDERSTANDING THE HISTORIC USE OF
REINFORCED AUTOCLAVED AERATED
CONCRETE (RAAC) IN BUILDING
CONSTRUCTION IN ONTARIO**
INVESTIGATION, ASSESSMENT AND GUIDANCE

WHITE PAPER PEER REVIEW

2024 06 24



OUR PROJECT#

24210

PREPARED FOR :

RIMKUS

(RIMKUS MATTER# 100237742)

Background

VanBoxmeer & Stranges Structural Engineering Ltd. (VB&S) has been engaged by Rimkus to complete a peer review of the White Paper they have authored entitled “UNDERSTANDING THE HISTORIC USE OF REINFORCED AUTOCLAVED AERATED CONCRETE (RAAC) IN BUILDING CONSTRUCTION IN ONTARIO: Investigation, Assessment, and Guidance” dated April 23, 2024, and prepared for Infrastructure Ontario and the Ministry of Infrastructure (Rimkus Matter Number 100237742).

VB&S has reviewed the content contained in the White Paper emailed to us on June 10, 2024, but did not review the ‘References’ cited on Page 26.

We understand that the White Paper was created in response to ongoing life cycle and structural integrity concerns related to the use of reinforced autoclaved aerated concrete (RAAC) products designed and installed as structural elements in provincially owned buildings constructed in the mid 1950’s to the mid 1970’s. The content is meant to assist operators of such buildings to identify and assess the risk related to common resilience issues related to RAAC structural elements, and to formulate a strategy to address them to safely extend their lifespan.

Review Comments

1. On page 20, the risk associated with bearing failures is discussed under the heading ‘End Bearing’. It is unclear from the narrative of the specific risk as it relates to the length of bearing. It is suggested that the section be rewritten to deemphasize the length of bearing characteristic and focus assessment of risk on signs of distress related to shear stresses at the bearing location.
2. On page 22, the tables should be named ‘Table 2’ and ‘Table 3’ to be consistent with final paragraph on page 21.
3. On page 25, under Section 8 ‘RAAC MANAGEMENT STRATEGY’ there is wording that is unclear (see Figure 1 below). The sentences highlighted in red should be reviewed and it is suggested that this portion be rewritten to clearly incorporate these statements as it relates to this section of the report.

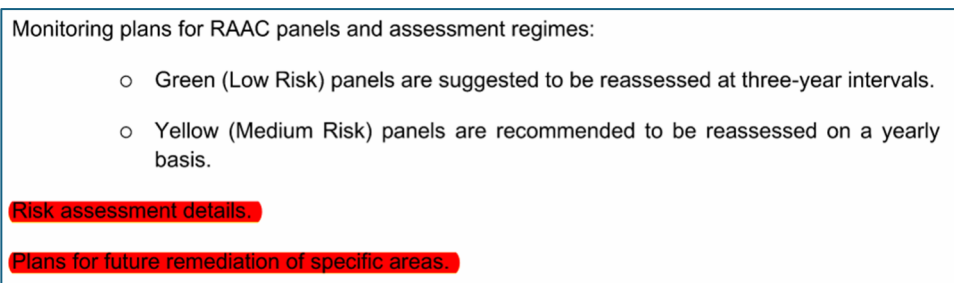
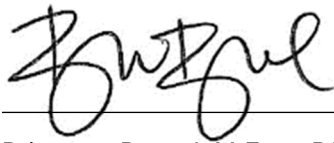


Figure 1 – Excerpt of Page 25 of White Paper

Conclusions

From our review of this White Paper, we conclude that it is a concise and comprehensive narrative that adequately addresses the risks associated with RAAC elements in existing buildings. Further, it provides a practical approach to assessing the risks and provides clear guidance in formulating a strategy to address the risks and extend the service life of RAAC building components.

Author:



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Reviewer:



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