CONSULTING STRUCTURAL ENGINEER, INC.
53 Knox Trail, Suite 201 978-461-6100
Acton, MA 01720 www.cse-ma.com

May 27, 2016

Mark Barbadoro
Building Inspector
Oak Bluffs, MA 02557

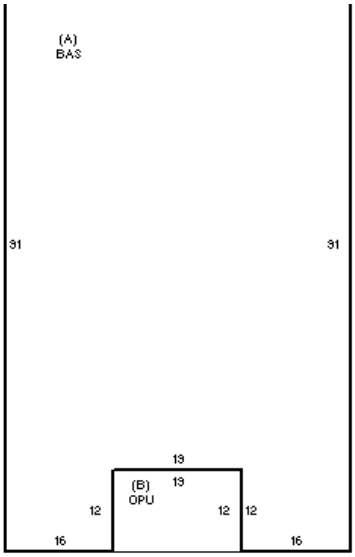
Re: Structural Inspection of the Island Theatre at 1 Circuit Avenue, Oak Bluffs, MA

Dear Mr. Barbadoro:

In response to your request, we reviewed the building and framing plans and performed a structural inspection of existing conditions on May 10, 2016 with you, town clerk Colleen Morris and building owner Brian Hall for the purposes of assessing dangerous conditions affecting the safety and stability of the Island Theatre at 1 Circuit Avenue, Oak Bluffs, MA.

FINDINGS

During our inspection, we documented existing conditions of the Theatre Building, which was originally constructed in 1935 facing east, measuring 51 feet wide by 91 feet long and last purchased by Seagate, Inc. in 1986 (see Assessor's photo & sketch below).



The building is constructed with timber roof trusses spanning 51' at 8'9" o/c supported by 16"x16" concrete masonry unit (CMU) pilasters and 8" thick concrete masonry unit walls up to 18' tall. The observed CMU pilasters and walls are hollow and unreinforced. The masonry block walls are interlaced in running bond on the east side of pilaster courses; however, the walls are not mechanically anchored to the timber roof plate and significant gaps exist up to ¼" wide in the butted joints on the west side of the pilasters and the gaps are visible on both the interior and exterior of the building (see photo 1, 2, 3 and 4).

According to the owner, the building has been vacant since 2012, roof repairs designed by the engineer of record Reid Silva, PE were initiated in 2013; however, final inspection has not occurred and the building permit was not been closed out (see photos 5 and 6).

Our inspection is requested under Section 104.4 of the International Building Code 2009 as amended by the Massachusetts State Building Code, 8th ed. to evaluate the building for dangerous conditions as defined in Section 202 of the International Existing Building Code and referred from Section 3402.1 of the International Building Code (see below):

104.4 Inspections. The *building official* shall make all of the required inspections, or the *building official* shall have the authority to accept reports of inspection by *approved agencies* or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such *approved agency* or by the responsible individual. The *building official* is authorized to engage such expert opinion as deemed necessary to report upon unusual technical issues that arise, subject to the approval of the appointing authority.

SECTION 202 GENERAL DEFINITIONS

DANGEROUS. Any building or structure or portion thereof that meets any of the conditions described below shall be deemed dangerous:

1. The building or structure has collapsed, partially collapsed, moved off its foundation or lacks the support of ground necessary to support it.
2. There exists a significant risk of collapse, detachment or dislodgment of any portion, member, appurtenance or ornamentation of the building or structure under service loads.

PROFESSIONAL OPINION

We offer the following professional opinion regarding the documented findings:

The concrete masonry unit walls are part of both the gravity and lateral force resisting systems and are a critical structural component necessary to support the service loads. Cracks and gaps at the junction between the walls and pilasters are evidence that the building is detached with differential movement due to service loads and represents a significant risk of future additional detachment and/or dislodgment, since the walls are unreinforced and not mechanically anchored to the roof framing at the top of the walls.

The height (18') to width (8") ratio of the subject CMU walls is 27, which significantly exceeds a height to width ratio limit of 20, an empirical and rational design recommendation used to evaluate the slenderness of unreinforced CMU walls that were not designed or engineered for safety. ANSI A41.1, an empirical code first published in 1944 doesn't allow masonry walls to be higher than 20 times their thickness and ACI 531, a rational design code for concrete masonry first published in 1979 doesn't allow unreinforced CMU walls higher than 20 times their thickness.

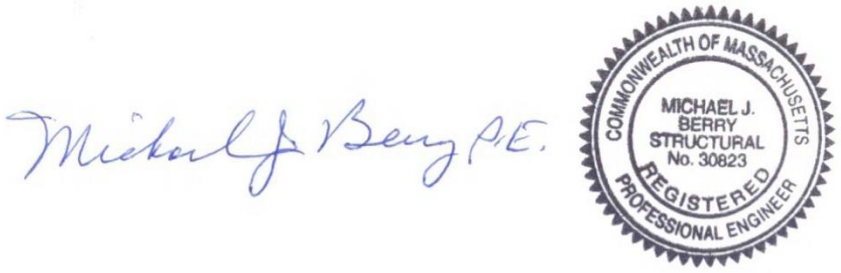
Further, repair of water damage to the roof initiated in 2013 is incomplete and the building permit has lapsed without a final affidavit from the engineer of record. Timely implementation of repairs and regular maintenance of the building envelope are essential in extending the serviceable condition of the building structure as it was originally constructed.

CONCLUSION

It is our professional opinion, as of the date of our inspection as requested by the local building inspector, that the subject building at 1 Circuit Avenue, Oak Bluffs, MA in its current condition can be classified as ***dangerous*** in accordance with the Massachusetts State Building Code, 8th ed. and the International Existing Building Code, 2009.

We reserve the right to amend these findings and professional opinion should additional information become available. If you wish to discuss this report, please contact us directly at 978-461-6100.

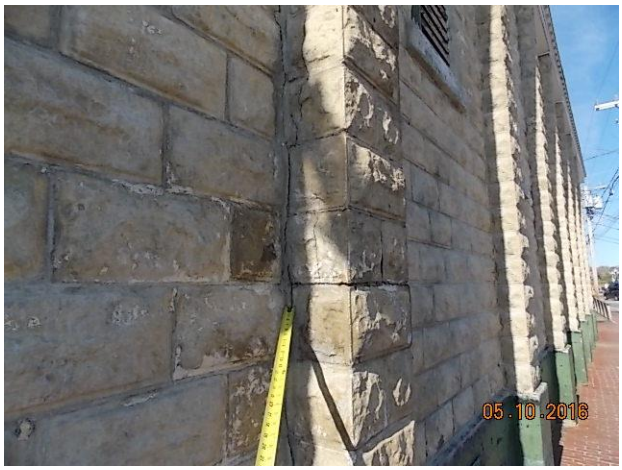
Yours truly,



Michael J. Berry, P.E., SECB
CONSULTING STRUCTURAL ENGINEER, INC.

Attachment: Photographs 1-6 Taken on May 10, 2016

1) Gaps in the masonry wall at each pilaster



2) Gap between the masonry wall and pilaster

3) Gap along the west side of masonry pilaster

4) Gap between masonry block wall and pilaster

5) Incomplete roof repairs on the north side

6) Masonry pilaster gapped and misaligned