RESULTS

BALCONY & STAIR INSPECTION

SUMMIT YACHT CLUB

Prepared for:

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Prepared by:

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1.0 SUMMARY

The balconies and stairs inspection for Summit Yacht Club was completed on 6/19/19 by John Cona-PE.
Criterium-Cona Engineers is acting as an independent third-party Owners Representative on this project.

2.0 PROPERTY DESCRIPTION

The property called Sumit Yacht Club is located at 340 Labonte Street in Dillon, CO. 80435. The property is estimated at 25-35 years old with three similar buildings. These are 4-story structures with brick veneer, stucco and lapped wood siding. The roof is a standing seam metal mansard with a flat roof with parapet.
The balconies are located on the rear of the three buildings.

The focus of the inspection is the exterior stairs and rear balconies (decks) on the structures. Structural conditions outside the scope of this report have not been investigated.

The construction can be considered typical for all units and observations and recommendations can be used across the complex.

OBSERVATIONS

The decks and stairs are similar in construction on all buildings and appear to be original construction to the buildings. The lower level of decks are accessed by stairs from the ground. The upper level decks are accessed from the individual units.

- The decks are supported by 2x10” joists on 12” centerlines. The joists are continuous and penetrate the exterior wall of the units and continue into the structure framing.

3 level Deck view

- No rot was observed on the top of the deck joists where rot typically forms. Double joists on the outer edge of the deck are both load bearing. Double joists on the internal structure of the deck have one load bearing joist and one sistered joist.

Typical deck joists

- Deck joist length is a 6ft. cantilever span.

- Wooden stair stringers are in good condition except for the bottom of the stringer which is in contact with the cement slab on grade. Some early rot development observed at this location with 1/8” knife penetration. The concrete slab appears to be stable without any visible settlement.

- 4x4” support posts for stairs have elevated base above the concrete to minimize moisture penetration and these are in good condition. The concrete base is a pier of unknown depth.

- Joist hangers are not utilized at rim joist location- minimal separation observed at this location on some of the decks.
- Deck boards, fascia and rails are a GAF composite product with some surface discoloration issues.

- Firewood is stored on some of the decks with up to two piles of firewood 6 ft.x 3ft x 3ft. approx. piles observed.

Firewood on upper deck-right side

CONCLUSION/RECOMMENDATIONS

DECK/STAIRS

The deck structure is in good condition with the exception of the bottom of the stair stringer which is in contact with the concrete slab. Monitor this area annually for rot progression and repair when there is any movement of the stair stringer. Recommend cutting the rotted section of the stringer off horizontally and supporting stringer off steel angle so that no wood is in contact with the concrete slab.

FIREWOOD

Snow Load-70 PSF
Live Load- 40 PSF (people)
Dead Load 15 PSF (structure)
FireWood load (Oak) - 6 ft x 3 x3 @ 45#/ft3= 2430 # for an assumed load of 810#/joist

The original design conditions for these decks for snow+ dead+ live load is approx. 700#/joist.

Assume the worst-case situation for a loaded deck joist with firewood plus a full snow load and there is the potential for a joist failure at 1400#/joist (200% of design load listed above). A single joist failure would most likely occur on the top-level deck and cascade to lower decks. This could lead to structural damage to the building and possible injury or loss of life.

Recommend that firewood on decks be prohibited for this property.

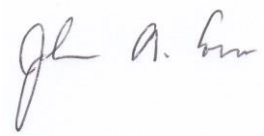
The other option if firewood is to remain on the decks is to install new support columns down to grade level with new concrete piers to increase the capacity of the decks to support load.

Note that all observations were made on grade and first level decks. All observations were visual and no destructive testing or analysis was performed.

Please contact this engineer if you have any questions.

Thank you for the opportunity to provide you engineering services on this project.

Respectfully submitted,



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President