

BRIDGEPORT CONDOMINUMS

1000 N Holladay Drive Seaside, OR 97138

PRELIMINARY BUILDING ENCLOSURE AND LIMITED STRUCTURAL ASSESSMENT



Prepared For:

Bridgeport Condominiums HOA

REV. April 18, 2018

J2 Project #5151201



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EXECUTIVE SUMMARY

J2 Building Consultants, Inc. (J2) has performed a preliminary building enclosure and limited structural assessment at Bridgeport Condominiums located in Seaside, Oregon. Our review included on-site visual and invasive observations, as well as review of original construction documents, photos during construction, permit records, and building enclosure reports and photos by others. We concluded that a large percentage of the existing exterior rear decks and front entry landings are currently structurally compromised to the extent that emergency shoring is needed. This shoring was installed by a remediation contractor during our on-site invasive observations. Water intrusion has caused extensive wood decay in these supporting exterior beams and columns. Water intrusion and wood decay has also been observed in framing members of the stair towers and in sheathing at the base of wall under stone veneer and around windows. In addition to these and other cladding defects, the existing windows are not properly rated for the required wind driven rain loads. The following report further describes our findings for these and other concerns. Extensive exterior repairs, including a full "strip and re-clad," and extensive framing repairs are needed to correct these deficient items.

PROJECT BACKGROUND

Bridgeport Condos is a 44 unit, 4-story multifamily building originally constructed in 2007. The building exteriors consist of a steep slope composition roof; a combination of fiber cement siding, cedar siding, and adhered concrete masonry veneer; vinyl frame windows; and wood framed decks and entry landings that are waterproofed and covered by a concrete topping slab. J2 was recently retained by the Board to evaluate deck and entry landing guardrails that are loose, as well as to evaluate a beam on the second-floor entry landing that appeared to be "sagging." There were also complaints with leaking windows, leaking plumbing, cracks in the topping slab at the landings, and deterioration of trim. In addition to reviewing these concerns, J2 was asked to provide an overall assessment as to the condition of the building envelope and the deck and landing structures.

SCOPE OF WORK

In order to provide a preliminary structural and building enclosure assessment, J2 Building Consultants, Inc. (J2) visited the site on November 21, 2017 to preview the building and the owner's concerns. J2 then returned to the site on January 30 – February 1, 2018 to perform visual and invasive observations of the exterior envelope, including cladding, windows, decks, roofs and related components. J2 observed 16 invasive openings in the exterior wall and deck assemblies. In addition to our field review, J2 also reviewed several field observation reports, assessment and repair scope by others, as well as photos taken during construction and the original construction documents. The intent of our observations and review was to document the current condition of the building exteriors and underlying components, and to determine if repairs and/or maintenance are required.

DOCUMENTS REVIEWED

Description:	Date:
FBC Scope of Repair	9/26/17
FBC Building Envelope Condition Assessment	6/14/17
FBC Building Envelope Condition Assessment	11/22/16
FBC Preliminary Repair Assessment	9/25/17
FBC Field Report	3/06/07
FBC Field Report	4/03/07
FBC Field Report	5/14/07
FBC Photos during construction	3/06/07
FBC Photos during construction	4/03/07
FBC Photos during construction	5/14/07
FBC Photos during construction	7/22/07
Permit Set of Plans by Mentrum Architecture	11/13/06
City of Seaside permit records	2007 (varies)

BUILDING DESCRIPTION

Number of Buildings	1	
Number of Stories	4	
Number of Units	44	
Original Dates of Construction	2006-2007	
Facility Type	Multifamily	
Occupancy	R-2	
Construction Type	V-A, sprinklered	
Building Code at time of Construction	2004 Oregon Structural Specialty Code (OSSC)	
Current Building Code	2014 OSSC	

EXISTING ASSEMBLIES

The following summarizes the different types of roof, deck, and wall assemblies observed on-site.

Main Roof

- Asphalt composition shingles
- Unknown underlayment
- 7/16" OSB sheathing
- Manufactured trusses
- Blown-in fiberglass insulation
- Interior GWB (thickness and number of layers not verified)

Low Slope Roofs at Crickets

- Single Ply membrane
- Unknown underlayment
- 7/16" OSB sheathing
- Manufactured trusses
- Blown-in fiberglass insulation
- Interior GWB (thickness and number of layers not verified)

Entry Landings and Rear Decks

- 2-3" Concrete topping slab
- Drain mat
- Waterproofing membrane (material not verified)
- ¾" plywood sheathing
- 2x framing
- 5/8" GWB soffit
- 5/8" GWB wrapped beam and column
- ¾" T&G wood soffit

Cedar Siding

- Panelized cedar siding (manufacturer not verified)
- Furring strips
- 60 min building paper (JumboTex)
- OSB

- 2x6 studs
- Fiberglass batt insulation
- Interior GWB (thickness and number of layers not verified)

Fiber Cement Siding

- HardiPlank lap siding
- 60 min building paper (JumboTex)
- OSB
- 2x6 studs
- Fiberglass batt insulation
- Interior GWB (thickness and number of layers not verified)

Adhered Concrete Masonry Veneer

- Adhered concrete masonry veneer (manufacturer not verified)
- Drainage medium (Delta Dry)
- 60 min building paper (JumboTex)
- OSB
- 2x6 studs
- Fiberglass batt insulation
- Interior GWB (thickness and # of layers not verified)

SITE PLAN



J2 Openings

- 1 Second floor beam
- 2 Second floor column
- 3 Third floor column
- 4 Second floor beam
- 5 Second floor beam
- 6 First floor column
- 7 Second floor stair tower
- 8 Second floor column
- 9 Second floor stair tower
- 10 Third floor deck soffit
- 11 First floor masonry veneer
- 12 Second & third floor windows
- 13 Third floor window

- 14 Second floor deck beam
- 15 First floor masonry veneer
- 16 Second floor window

FBC Openings

- 1 Second floor window
- 2 Third floor window
- 3 Third floor window and adjacent deck
- 4 First floor vent and window head
- 5 Corner trim
- 6 Second floor window and corner
- 7 Louver
- 8 Roof-to-wall transition

9 – Bottom of stair tower10 – Masonry veneer below first floor window

11 – Beam below second floor front walkway

12 – Base of wall to flat roof transition and masonry veneer below

- 13 Second floor walkway and adjacent masonry veneer
- 14 Water table
- 15 Third floor window
- 16 Section of concrete at second floor walkway

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MOISTURE READINGS

All moisture readings were done using a Delmhorst BD – 2100 Meter. The table below describes the significance of moisture levels given in the readings.

	Sufficiently Dry	Organic Growth Risk	Significant Deterioration Risk
Wood	<15%	19%+	26%+
Gypsum	0% to 0.5%	.7%+	1.5%+

The above values are industry guidelines and should be used for reference only. The actual risk of organic growth and decay/deterioration depends on other factors such as, but not limited to, temperature, duration of moisture exposure, exact composition of materials, etc.

OBSERVATIONS

1.1 – Opening #1









1.8 – Opening #1 Lag bolt hole present in waterproofing. Unit #: 104 2.1 – Opening #2 Overview of third floor soffit above Opening #2 at second floor column near Unit 209 on east elevation. Unit #: 209



2.4 – Opening #2



3.2 – Opening #3

















7.2 – Opening #7 WRB is deteriorated and sheathing under louver is decayed. Unit #: South stair tower 7.3 – Opening #7 GLB is severely detached. Note that the purpose of this beam is to support outof-plane loads, as well as gravity loads, since the stair landings do not act as a diaphragm at this location.

















11.3 – Opening #11





















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15.1 – Opening #15 Overview of masonry veneer prior to Opening #15 at Unit 107 on west elevation. Unit #: 107 15.2 - Opening #15 Decayed and saturated (40 mass percent) OSB sheathing at base of wall. Unit #: 107











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17.11 – Misc.



17.12 – Misc.





17.16 – Misc.



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CONCLUSIONS

- 1. Wood decay has occurred at many locations at the front entry landings and rear decks. Many of these areas were deemed unsafe at the time of our observations. Temporary shoring was installed to support the areas in question and remedy the unsafe condition. Note that it is not possible to verify the condition of the structure without removing trim. Areas identified were based on actual removal of trim, as well as visual review of settlement and water staining that was shown to indicate wood decay at similar areas reviewed. There may be more locations that need shoring installed.
- 2. The installed temporary shoring is an interim measure only. Extensive structural repairs to the decks and entry landings are needed in the near future.
- 3. The unit decks and entry landings are not constructed in a weatherproof manner. Water leaks are occurring where the support columns penetrate the deck waterproofing at the base. Leaks are also occurring at the top mounted guardrail fastener locations.
- 4. The drain mat, between the concrete topping slab and deck waterproof membrane, is installed upside down. The perimeter flashings are "raised," and a lack of proper deck slope also inhibits water to drain out of the system.
- 5. Exposed deck framing members (beams and columns) are not wrapped with a water resistive barrier and are not preservative treated as required by code.
- 6. Saddle flashings at deck-to-wall locations are installed improperly. Consequently, water is entering behind the wall cladding below and causing damage to the structure.
- 7. Guardrails are inadequately attached to the building.
- 8. Water damage has occurred to the glulam girts supporting the stair towers. This is due to inadequate weatherization of the rough openings of the fresh air louvers.
- 9. Sheathing damage has occurred at the base of wall under the adhered concrete masonry veneer. There is no separation between grade and veneer as required by the manufacturer.
- 10. The concrete masonry veneer is installed too tight to window frames, the lath is improperly fastened, and transition flashings are not installed in a weatherboard manner.
- 11. The windows used are not rated appropriately for wind and/or wind driven rain. The performance class and grade should be at least LC35 (arguably LC45+) and the actual window performance class and grade is R20.
- 12. Broken window frames have been observed. The moisture content in the wall sheathing was found to be elevated in some areas. Windows are not installed in sill pans. Window trim is back caulked at the base of trim, blocking water drainage, and in some cases the siding is sealed to window trim blocking water egress.
- 13. Trim is typically white wood (SPF), which is not primed on the ends, and trim is decaying. Barge boards are also decaying.
- 14. The exposed glulam beams at the carports are delaminating and decaying. It is likely that they are not properly preservative treated.

- 15. The low-slope roof crickets are directing water towards dormer/transition walls. Roof leaks are occurring at these locations. In addition, unsealed seams and damage to single ply membranes were observed.
- 16. Roof diverters are omitted in some locations, causing rain water to enter behind the cladding and damage walls at these locations.
- 17. Shingle blow-off has occurred. There are also areas of unsealed fasteners and granule loss at some shingles.
- 18. Attics appear to be under-ventilated, however, no organic growth was observed.

RECOMMENDATIONS

Decks and Entry Landings

- 1. Remove guardrails and store for later use.
- 2. Remove and dispose of concrete topping slab, drain mat, waterproofing, flashings, deck sheathing, deck soffit (wood and GWB), column, and beam wraps (wood and GWB).
- 3. Assume 50% of deck and landing beams and columns are decayed and need to be replaced.
- 4. Assume 10% of deck joists are decayed and need to be replaced.
- 5. After framing repairs, install new deck sheathing, flashings (perimeter, deck-to-wall, saddle, base of column, etc.), waterproofing, drain mat, and concrete topping slab.
- 6. Replace new GWB and wood soffit, beam, and column wraps. Columns to be wrapped with WRB and properly weather lapped at the top.
- 7. Reinstall guardrails on rear decks. Modify guardrails on front entry landings to be fascia mounted and reinstall.
- 8. Make repairs to walls as indicated below in conjunction with deck repairs.
- 9. Provide allowance (separate line item) to remove and reinstall doors in sill pans integrated with new waterproofing.

Stair Towers

- 1. Remove and dispose of all cladding, WRB, flashing, and site-built louvers.
- 2. Assume that 50% of the existing glulam beam/girts will be replaced.
- 3. Assume 25% of the wood sheathing is decayed and needs to be replaced.
- 4. Replace siding materials as noted in sections below.
- 5. Install new louvers with preservative treated material; sills to have metal coping and saddle flashing.

Siding and Trim

- 1. Remove and dispose of all wood trim, including window and door trim, corner boards, utility blocks, etc.
- 2. Remove all head flashings as well as 1-2 courses of siding above head flashings and 1-2 courses below window sills. In conjunction with deck work, remove deck saddle flashings and at least 3 courses of siding adjacent to deck-to-wall intersections.
- 3. Temporarily remove and reinstall light fixtures and other wall mounted equipment as necessary to complete work.
- 4. Repair all damage to extinction and determine the ingress point of all leaks. Allow for 10% of the wood sheathing to be replaced, as well as an additional 20% of siding replacement in order to repair underlying damage.
- 5. Install new head flashings at all bands, trim, and mounting blocks. All flashing to be stainless steel. Integrate new flashings with WRB and install new WRB to match existing at all damage repair locations.
- 6. Install new deck saddle flashing in conjunction with deck repairs.
- 7. Install new fiber cement trim. Install new siding, to match existing, at all repair areas.
- 8. See below for window replacement, which is to be in conjunction with siding repairs.
- 9. Apply new sealants, per industry standard, at all work areas. Apply two coats of high quality acrylic latex paint to match existing.

Adhered Concrete Masonry Veneer

- 1. Remove and dispose of all veneer, drain mat, WRB, furring, and flashing.
- 2. Assume that 10% of the wood sheathing is decayed and needs to be replaced.
- 3. Install new WRB, drain mat, flashings, and adhered concrete masonry veneer per manufacturer's instructions.
- 4. Lath fasteners will need to penetrate into framing as per manufacturer's instructions.
- 5. See below for window replacement, which is to be in conjunction with siding repairs.

Windows

- 1. Remove and replace all windows with new vinyl frame windows of similar configuration and having a class and grade of LC45.
- 2. Install windows in flexible sill pan with back angle around frame interior.
- 3. Leave a 3/8" min. gap between window frame and all cladding materials (concrete masonry veneer or fiber cement trim) and install a dynamic sealant joint.

Roof, Gutter, and Downspout

- 1. Re-slope crickets at all locations where water is directed into dormer walls. This includes patching/replacing the single ply membrane and integrating with surrounding roof and walls.
- 2. Replace all diverter flashings with new punch-locked and sealed diverters.
- 3. Provide an allowance of \$10,000 for general roof repairs including blow-off repairs, sealing exposed fasteners, replacing damaged shingles, and repairing seams and cuts in single ply membrane.
- 4. Replace decayed barge boards assume 20% replacement.
- 5. Remove and reinstall gutters and downspouts as needed to perform work.

Miscellaneous

1. Replace carport beams that are delaminating and showing signs of decay.

General

- 1. Provide project supervision, quality control, insurance, job site facilities, daily clean-up, and all other general conditions appropriate for this type of rehabilitation work
- 2. Access to the units must be possible at all times units are occupied. Assume that arrangements will be made to have individual unit occupants not on-site between 8am and 5pm for a one-week period of time for each unit (phased). Access after-hours will need to be maintained.
- 3. Provide allowances for permits, landscape repairs, interior repairs, and a 10% general contingency. (Note that framing repair allowances are noted in other sections above.)

PROJECT LIMITATIONS

J2's scope of work was limited to visual and limited invasive observations of the building exteriors at a sampling of locations. Our focus was on the weatherization functions of the buildings and current structural condition of the decks and landings. It does not include a full review of structural, life safety, mechanical, electrical, plumbing, or other systems not related to the building exteriors. No testing or detailed analysis was performed. J2's opinion is based on the information that we had at the time of this report. We may modify our opinion if more information becomes available. This report is not intended to be a comprehensive repair scope.