

# VINTAGE OAKS HOA



## BUILDING ENVELOPE INVESTIGATION

PREPARED FOR:  
VINTAGE OAKS HOA BOARD

REPORT DATE:  
5.25.2017



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CLIENT NAME:	VINTAGE OAKS HOA	PROPERTY NAME:	VINTAGE OAKS HOA
CLIENT ADDRESS:	14019 NE 20th AVE VANCOUVER, WA	PROPERTY ADDRESS:	14019 NE 20th AVE VANCOUVER, WA

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## EXECUTIVE SUMMARY

On May 18<sup>th</sup> and 19<sup>th</sup>, 2017, BEAR Consulting Services LLC (BEAR) performed a BUILDING ENVELOPE INVESTIGATION at Vintage Oaks HOA (Project) in general conformance with ASTM E2128 "Standard Guide for Evaluating Water Leakage of Building Walls."

The intent of this investigation was to evaluate the existing condition of the various components comprising Project's building envelope at limited locations, determine areas that represented an elevated risk of water intrusion, document water leakage from such conditions, water leakage pathways, and resultant property damage. The information gathered will be used to assist Project ownership in determining options for an adequate scope of repair and maintenance plan to rectify the conditions of failure and resultant damage.

The following report provides representative photographic documentation, evaluation, and a summary of BEAR's observations and suggests recommendations for further action.

## SCOPE

The scope of the investigation was limited to observing and evaluating selected as-built construction assemblies or building locations listed below, as they existed at the time of the on site evaluation at the Project. The scope of our evaluation consisted of 9 buildings which comprise the Project. Our evaluation provides some selected examples of concerning conditions. All other construction assemblies or building locations not specifically identified below were beyond the scope of our Building Envelope Investigation. Our evaluation was limited to the following:

- Visual review of exterior wall coverings and window assemblies.
- Visual review of elevated landings and deck assemblies.
- Visual review of roof assemblies as seen from the ground or a ladder.
- Examination of concealed building envelope assemblies at twenty (20) specific exploratory inspection opening locations.

## OBSERVATIONS: SYSTEMIC CONCERNS

BEAR noted multiple and systemic conditions that fail to provide adequate weather protection for the Project and that facilitate water infiltration behind exterior coverings or facilitating water absorption by moisture-sensitive building components. BEAR observed multiple systemic conditions that are not in accordance with industry standard for installation, manufacturer's installation specifications, and/or Washington Building Code.

BEAR also observed systemic conditions throughout the Project that result in negated or impeded incidental water egress to the exterior once water infiltration into the underlying building assemblies has occurred, thus facilitating moisture accumulation and saturation within the building envelope.

When repairs are eventually put in place to rectify these conditions, the components throughout the Project will need to be installed in conformance with current and applicable product manufacturer's installation requirements, industry association standards, and building codes.

Examples of these systemic concerns noted throughout all buildings which comprise the Project include (but are not limited to) the following:

- Un-primed field cut edges of trim members.
- Improper installation of vinyl window assemblies.
- Omitted or improperly dimensioned metal flashing.
- Omitted up-turned end dam flashing termination.
- Improper installation of fiber cement siding.
- Negated or improper clearance between siding termination and horizontal surface of metal flashing.
- Improper and/or omitted flexible flashing installation.
- Improper WRB installation.
- Omitted and/or discontinuous WRB.
- Inadequate air leakage control provisions.
- Inadequate clearance of gutter termination and wall assembly.

### EVIDENCE OF WATER INTRUSION AND RESULTANT DAMAGE:

As a result of the conditions noted in the preceding section (either individually or in combination), BEAR observed the following conditions and damage throughout all buildings comprising Project, due to the sustained presence of moisture within the building envelope and/or improper installation of materials:

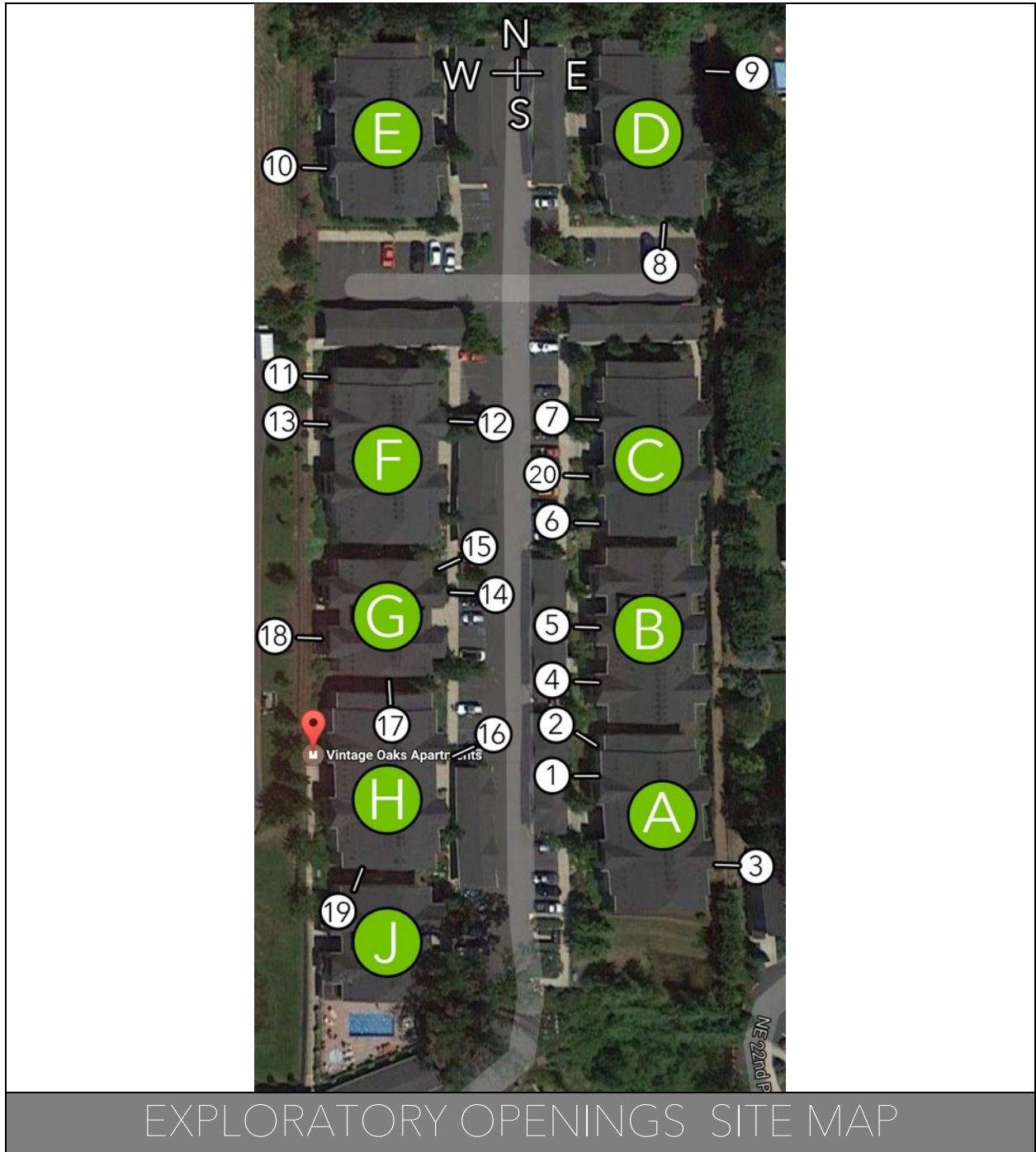
- Moisture-stained wall assembly components.
- Microbial growth/fungal growth on wall assembly components.
- Microbial growth on gypsum sheathing and framing members.
- Microbial growth on underside of deck soffits.
- Insects within wall assembly.
- Corroded fasteners or accessories within wall assembly.
- Elevated moisture content in trim, gypsum sheathing, framing.
- Deterioration of trim members, gypsum sheathing, framing.
- Damaged windows.

### RECOMMENDED NEXT STEPS:

BEAR believes that the systemic nonconforming and water leakage-facilitating conditions identified in this report need to be remediated to ensure that the longevity and weather-resistance of the Property are not compromised. We therefore recommend pursuing the following course of action in a timely manner:

### SCOPE OF REPAIR

Have BEAR generate a preliminary scope of repair the Property, which will provide an outline of the steps necessary to remediate the conditions identified throughout this report. The preliminary repair scope can then be used to solicit initial repair bids in order to analyze initial cost assessments to correct the defects and to repair the resulting damage.

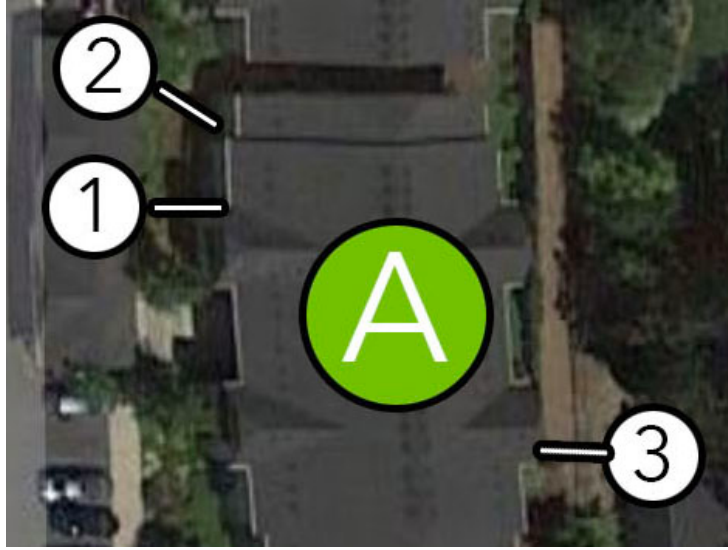


EXPLORATORY OPENINGS SITE MAP

EXTERIOR WALL  
ASSEMBLIES:  
PHOTOS AND  
OBSERVATIONS



### 1. EXPLORATORY OPENINGS: OPENING 1



1.1.1 Exploratory Opening 1.  
Building A, West Elevation, 2nd  
Story Window.



1.1.2 Exploratory Opening 1.  
Building A, West Elevation, 2nd  
Story Window.

### 1. EXPLORATORY OPENINGS: OPENING 1



1.1.3 Omitted egress at horizontal siding termination.

*Condition negates incidental water egress and facilitates moisture accumulation within the exterior wall assembly.*



1.1.4 Minimum 1/4" egress required between horizontal siding termination and head of window frame.

*Condition does not allow for the installation of properly dimensioned dynamic sealant joint application.*

### 1. EXPLORATORY OPENINGS: OPENING 1



1.1.5 Improper clearance between siding and window frame: Less than 3/8".

*Condition does not allow for the installation of properly dimensioned dynamic sealant joint application.*



1.1.6 Improper clearance between siding and window frame: Less than 3/8".

*Condition does not allow for the installation of properly dimensioned dynamic sealant joint application.*

### 1. EXPLORATORY OPENINGS: OPENING 1



1.1.7

Improper clearance between siding and window frame: Less than 3/8".

*Condition does not allow for the installation of properly dimensioned dynamic sealant joint application.*



1.1.8

Omitted metal flashing atop projecting wood trim.

*Condition does not adequately shed water infiltration within exterior wall assembly.*

### 1. EXPLORATORY OPENINGS: OPENING 1



1.1.9

Picture of exploratory opening after cladding had been removed.



1.1.10

WRB reverse lapped at sill mounting flange.

*Condition negates incidental water egress and facilitates moisture accumulation within the exterior wall assembly.*

### 1. EXPLORATORY OPENINGS: OPENING 1



1.1.11

WRB reverse lapped at sill mounting flange.

*Condition negates incidental water egress and facilitates moisture accumulation within the exterior wall assembly.*



1.1.12



Cracked mounting flange.

*Damage results from improper fastener placement which does not accommodate thermal movement of vinyl window assembly.*

### 1. EXPLORATORY OPENINGS: OPENING 1



	<p>1.1.13 Deteriorated gypsum sheathing.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>
	<p>1.1.14 Improper window installation. Fastener installed less than 3" from window assembly corner.</p> <p><i>Condition does not accommodate thermal movement of vinyl window assembly.</i></p>

### 1. EXPLORATORY OPENINGS: OPENING 1

	1.1.15	<p>Deteriorated gypsum sheathing.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>
	1.1.16	<p>Demonstration of deteriorated gypsum sheathing.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>



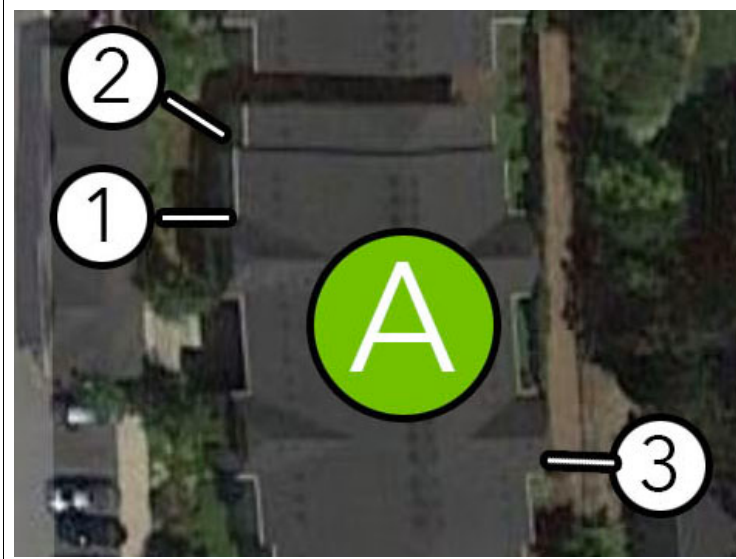
### 1. EXPLORATORY OPENINGS: OPENING 1

	<p>1.1.17 Cracked mounting flange.</p> <p><i>Damage results from improper fastener placement which does not accommodate thermal movement of vinyl window assembly.</i></p>
	<p>1.1.18 Demonstration of deteriorated gypsum sheathing.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>

1. EXPLORATORY OPENINGS: OPENING 1

	<p>1.1.19 Omitted flexible flashing around entire window perimeter.</p> <p><i>Condition does not adequately shed water infiltration within exterior wall assembly.</i></p>
	<p>1.1.20 Omitted or discontinuous sealant bedding beneath fenestration mounting flange.</p> <p><i>Condition fails to provide adequate air leakage control and facilitates moisture transport through exterior wall assembly at fenestration rough opening.</i></p>

### 1. EXPLORATORY OPENINGS: OPENING 2



1.2.1



Exploratory Opening 2.  
Building A, West Elevation,  
Gutter to Wall Termination.



1.2.2

Exploratory Opening 2.  
Building A, West Elevation,  
Gutter to Wall Termination.

### 1. EXPLORATORY OPENINGS: OPENING 2

	<p>1.2.3</p> <p>Improper clearance between termination and wall assembly. 1" clearance required by siding manufacturer.</p> <p><i>Condition facilitates water intrusion into exterior wall assembly.</i></p>
	<p>1.2.4</p> <p>Improper clearance between termination and wall assembly. 1" clearance required by siding manufacturer.</p> <p><i>Condition facilitates water intrusion into exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 2



1.2.5

Omitted and/or improperly dimensioned diverter flashing at roof to wall transition.

*Condition fails to adequately convey water from the roof into gutter. Condition facilitates water intrusion into exterior wall assembly.*



1.2.6

Discontinuous WRB.

*Condition fails to provide adequate incidental water protection for the underlying exterior wall assembly components.*

### 1. EXPLORATORY OPENINGS: OPENING 2



1.2.7

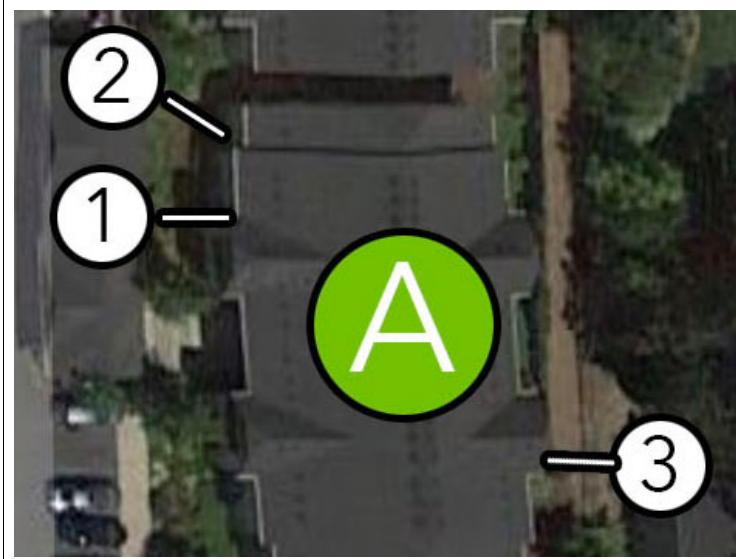
Gypsum sheathing appears dry at this location. Slight signs of staining from water infiltration.



1.2.8

Moisture content of gypsum sheathing within acceptable limits.

### 1.EXPLORATORY OPENINGS: OPENING 3



1.3.1

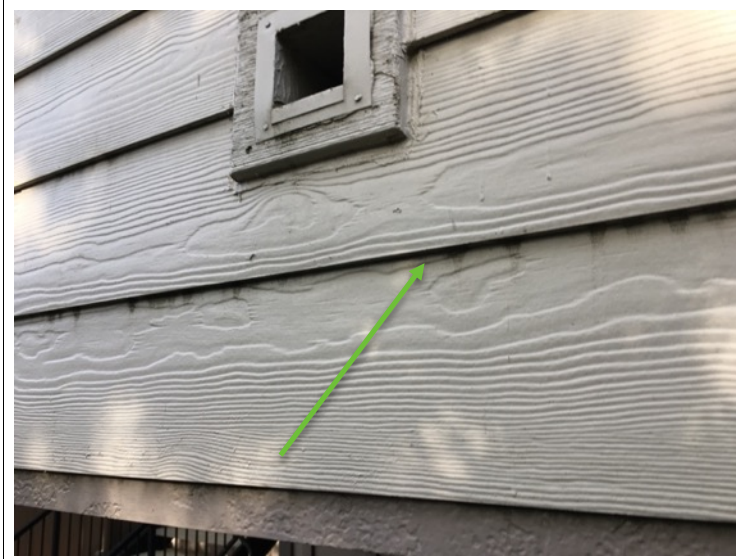
Exploratory Opening 3.  
Building A, East Elevation,  
Deck Assembly.



1.3.2

Exploratory Opening 3.  
Building A, East Elevation,  
Deck Assembly.

### 1.EXPLORATORY OPENINGS: OPENING 3



1.3.3

Staining observed emanating from within exterior cladding components.



1.3.4

Omitted egress at horizontal siding termination.

Omitted metal flashing atop projecting wood trim.

*Condition negates incidental water egress and facilitates moisture accumulation within the exterior wall assembly.*



### 1.EXPLORATORY OPENINGS: OPENING 3



1.3.5

Picture of exploratory opening after cladding had been removed.



1.3.6

Microbial growth, moisture staining, corroded fasteners observed on underlying gypsum sheathing.

*Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.*



1.3.7

Demonstration of deteriorated plywood deck floor sheathing.

*Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.*



1.3.8

Deteriorated gypsum sheathing.

*Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 3



1.3.9

Deteriorated gypsum sheathing.

*Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.*





1.3.10

Demonstration of deteriorated gypsum sheathing.

*Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 3

	<p>1.3.11 Deteriorated gypsum sheathing.</p> <p><i>Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.</i></p>
	<p>1.3.12 Deteriorated gypsum sheathing.</p> <p><i>Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 3



1.3.13

Deteriorated gypsum sheathing. Moisture stained framing members.

*Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.*

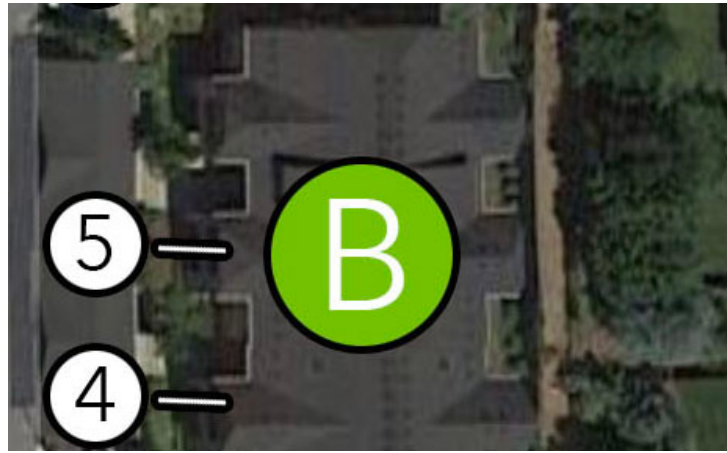


1.3.14

Deteriorated gypsum sheathing. Moisture stained framing members.

*Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 4



1.4.1

Exploratory Opening 4.  
Building B, West Elevation,  
2nd Story Deck Assembly.



1.4.2

Exploratory Opening 4.  
Building B, West Elevation,  
2nd Story Deck Assembly.

1.EXPLORATORY OPENINGS: OPENING 4

	<p>1.4.3</p> <p>Omitted flashing provisions atop horizontal wood cap.</p> <p>Omitted isometric flashing at horizontal to vertical interface.</p> <p><i>Condition facilitates water intrusion into exterior wall assembly.</i></p>
	<p>1.4.4</p> <p>Omitted egress at horizontal siding termination.</p> <p>Omitted metal flashing atop projecting wood trim.</p> <p><i>Condition negates incidental water egress and facilitates moisture accumulation within the exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 4



1.4.5

Omitted flashing and sealant at perimeter base of column assembly. Improper materials used for column construction.

*Conditions fail to provide adequate protection of underlying deck and wall assembly components from water infiltration.*





1.4.6

Omitted flashing provisions atop horizontal wood trim.



*Condition facilitates water intrusion into exterior wall assembly.*



### 1.EXPLORATORY OPENINGS: OPENING 4

	<p>1.4.7 Fungal growth observed emanating from wall assembly components.</p> <p><i>Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.</i></p>
	<p>1.4.8 Demonstration of deteriorated wall assembly components.</p> <p><i>Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 4

	<p>1.4.9 Demonstration of deteriorated wall assembly components.</p> <p><i>Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.</i></p>
	<p>1.4.10 Picture of exploratory opening after cladding had been removed.</p>

### 1.EXPLORATORY OPENINGS: OPENING 4

	<p>1.4.11 Omitted metal flashing and/or flexible flashing atop underlying wall assembly below wood trim.</p> <p>Discontinuous WRB.</p> <p><i>Condition fails to provide adequate protection of underlying wall assembly components from water infiltration.</i></p>
	<p>1.4.12 Demonstration of deteriorated wall assembly components.</p> <p><i>Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 4



1.4.13

Demonstration of deteriorated wall assembly components.

*Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.*

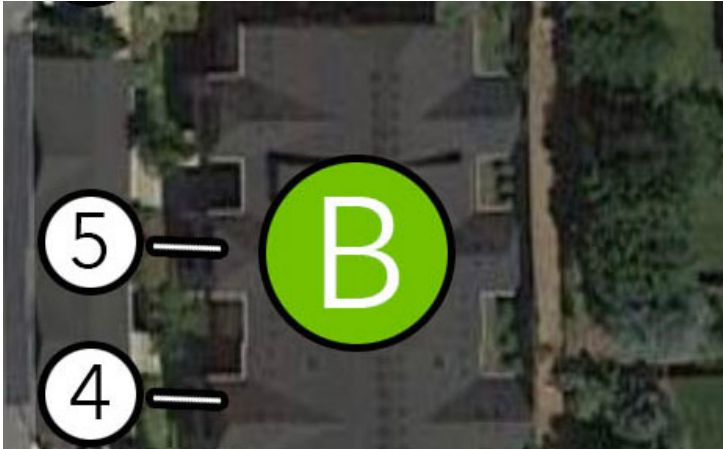



1.4.14

Elevated moisture content (.6%) of gypsum sheathing. 1% and above MC reading of gypsum sheathing is considered saturated.

*Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.*

1.EXPLORATORY OPENINGS: OPENING 5

	<p>1.5.1 Exploratory Opening 5. Building B, West Elevation, 1<sup>st</sup> Story Deck Wall.</p>
	<p>1.5.2 Exploratory Opening 5. Building B, West Elevation, 1<sup>st</sup> Story Deck Wall.</p> <p>Omitted flashing provisions atop horizontal wood cap.</p> <p>Omitted isometric flashing at horizontal to vertical interface.</p> <p><i>Condition facilitates water intrusion into exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 5



1.5.3

Picture of exploratory opening after cladding had been removed.



1.5.4

Discontinuous WRB.

*Condition fails to provide adequate protection of underlying wall assembly components from water infiltration.*

### 1.EXPLORATORY OPENINGS: OPENING 5



1.5.5

Omitted metal flashing and/or flexible flashing atop underlying wall assembly below wood trim.

*Condition fails to provide adequate protection of underlying wall assembly components from water infiltration.*



1.5.6

Microbial growth, fungal growth, deteriorated gypsum sheathing observed.

*Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.*

### 1. EXPLORATORY OPENINGS: OPENING 5



1.5.7

Deteriorated gypsum sheathing.

*Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.*



1.5.8

Microbial growth, fungal growth, water staining observed on WRB.

*Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.*



### 1. EXPLORATORY OPENINGS: OPENING 5



1.5.9

Deteriorated gypsum sheathing.

*Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.*



1.5.10

Microbial growth, fungal growth, deteriorated gypsum sheathing observed.

*Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.*

### 1. EXPLORATORY OPENINGS: OPENING 5



1.5.11

Microbial growth, fungal growth, deteriorated gypsum sheathing observed.

*Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.*



1.5.12



Deteriorated gypsum sheathing.

*Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.*

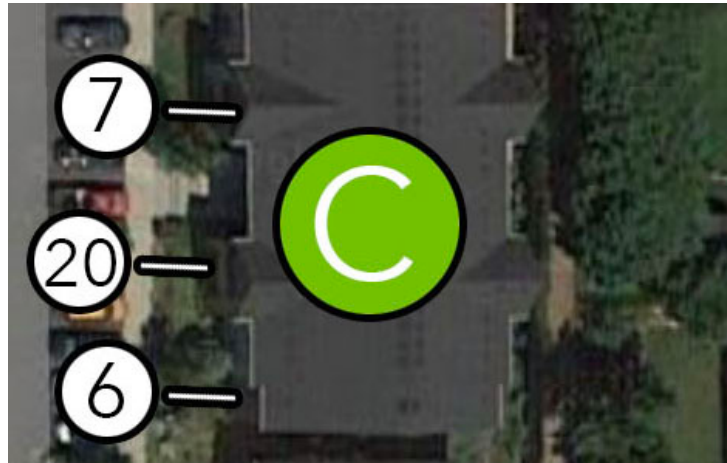
### 1. EXPLORATORY OPENINGS: OPENING 5

	<p>1.5.13</p> <p>Moisture staining observed on gypsum sheathing within deck wall cavity.</p> <p><i>Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.</i></p>
	<p>1.5.14</p> <p>Deteriorated gypsum sheathing.</p> <p><i>Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.</i></p>

### 1. EXPLORATORY OPENINGS: OPENING 5

	<p>1.5.15 Demonstration of deteriorated framing members</p> <p><i>Damage due to water infiltration and/or moisture accumulation within exterior wall assembly.</i></p>
	<p>1.5.16 Unprimed field cut edges of wood trim member.</p> <p><i>Condition facilitates moisture absorption and premature deterioration of trim members.</i></p>

### 1. EXPLORATORY OPENINGS: OPENING 6



1.6.1



Exploratory Opening 6.  
Building C, West Elevation,  
1st Story Window.



1.6.2

Exploratory Opening 6.  
Building C, West Elevation,  
1st Story Window.

### 1. EXPLORATORY OPENINGS: OPENING 6

	<p>1.6.3 Omitted egress at horizontal siding termination.</p> <p><i>Condition negates incidental water egress and facilitates moisture accumulation within the exterior wall assembly.</i></p>
	<p>1.6.4 Improper clearance between siding and window frame: Less than 3/8".</p> <p><i>Condition does not allow for the installation of properly dimensioned dynamic sealant joint application.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 6



1.6.5

Exploratory opening after cladding had been removed.



1.6.6

Improper installation of WRB. WRB does not adequately overlap flexible flashing at window jamb.

*Condition does not adequately shed water infiltration within exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 6



1.6.7

Improper installation of flexible flashing. Flexible flashing should have minimum 9" width.

*Condition does not adequately shed water infiltration within exterior wall assembly.*



1.6.8



### 1.EXPLORATORY OPENINGS: OPENING 6



1.6.9

Improper installation of flexible flashing. Head flashing should cover vertical extension of jamb flashing.

*Condition does not adequately shed water infiltration within exterior wall assembly.*




1.6.10

Improper installation of flexible flashing window head. Flexible flashing should be 9" in width.

*Condition does not adequately shed water infiltration within exterior wall assembly.*

1.EXPLORATORY OPENINGS: OPENING 6

	<p>1.6.11 Window assembly not adequately secured to underlying wall assembly</p>
	<p>1.6.12 Omitted or discontinuous sealant bedding beneath fenestration mounting flange.</p> <p><i>Condition fails to provide adequate air leakage control and facilitates moisture transport through exterior wall assembly at fenestration rough opening.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 6



1.6.13

Improper fastener installation. Fastener installed within 3" of window corner.

*Condition may distort window frame and not allow for accommodation of thermal movement of the window assembly.*



1.6.14

Omitted fasteners along entire span at window head.

*Condition does not adequately secure window to the underlying wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 6



1.6.15

Omitted fasteners along entire span at window head.

*Condition does not adequately secure window to the underlying wall assembly.*

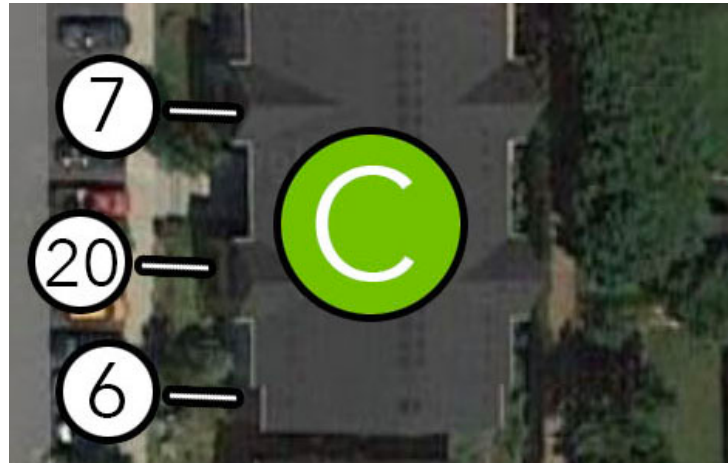


1.6.16

Omitted or discontinuous sealant bedding beneath fenestration mounting flange.

*Condition fails to provide adequate air leakage control and facilitates moisture transport through exterior wall assembly at fenestration rough opening.*

### 1.EXPLORATORY OPENINGS: OPENING 7



1.7.1

Exploratory Opening 7.  
Building C, West Elevation,  
1<sup>st</sup> Story Deck Wall.



1.7.2

Exploratory Opening 7.  
Building C, West Elevation,  
1<sup>st</sup> Story Deck Wall.

### 1.EXPLORATORY OPENINGS: OPENING 7



1.7.3

Omitted flashing provisions atop horizontal wood cap.

Omitted isometric flashing at horizontal to vertical interface.

*Condition facilitates water intrusion into exterior wall assembly.*



1.7.4

Omitted flashing provisions atop horizontal wood cap.

Omitted isometric flashing at horizontal to vertical interface.

*Condition facilitates water intrusion into exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 7



1.7.5

Picture of exploratory opening after cladding had been removed.



1.7.6

Omitted metal flashing and/or flexible flashing atop underlying wall assembly below wood trim.

*Condition fails to provide adequate protection of underlying wall assembly components from water infiltration.*

### 1.EXPLORATORY OPENINGS: OPENING 7



1.7.7

Deteriorated framing member.

*Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.*



1.7.8

Discontinuous WRB.

*Condition fails to provide adequate protection of underlying wall assembly components from water infiltration.*



### 1.EXPLORATORY OPENINGS: OPENING 7



1.7.9

Discontinuous WRB.

*Condition fails to provide adequate protection of underlying wall assembly components from water infiltration.*



1.7.10

Deteriorated gypsum sheathing, corroded fasteners.

*Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 7

	<p>1.7.11 Demonstration of deteriorated framing member.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>
	<p>1.7.12 Demonstration of deteriorated framing member.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 7

	<p>1.7.13 Demonstration of deteriorated framing member.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>
	<p>1.7.14 Elevated moisture content (22.1%) of framing member.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 7

	<p>1.7.15 Elevated moisture content (40%) of framing member.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>
	<p>1.7.16 Demonstration of deteriorated framing member.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 7



1.7.17

Deteriorated gypsum sheathing, corroded fasteners.

*Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.*



1.7.18

Demonstration of deteriorated gypsum sheathing.

*Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 7



1.7.19

Demonstration of deteriorated gypsum sheathing.

*Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.*

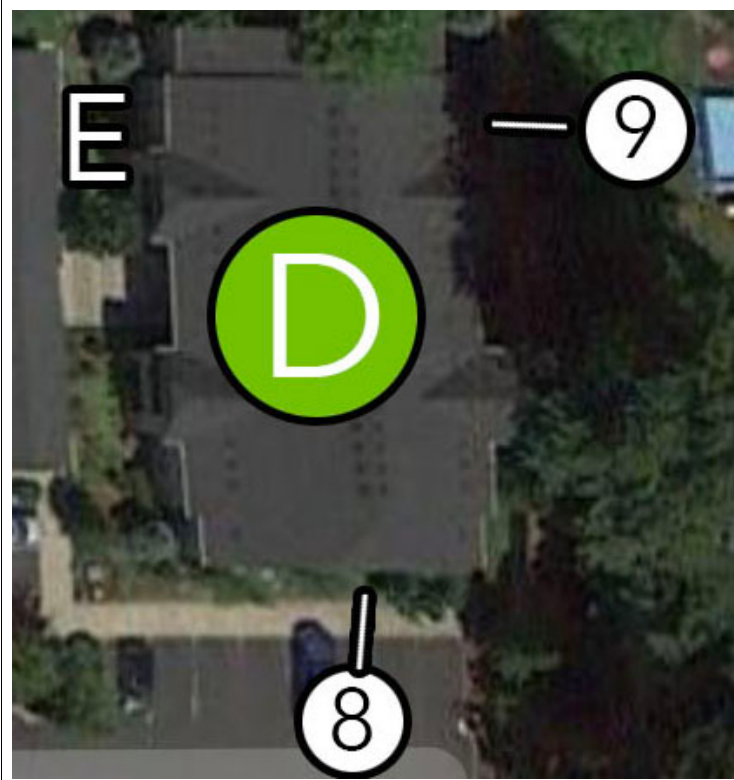


1.7.20

Demonstration of deteriorated gypsum sheathing.

*Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 8



1.8.1

Exploratory Opening 8.  
Building D, South Elevation,  
1st Story Window.



1.8.2

Exploratory Opening 8.  
Building D, South Elevation,  
1st Story Window.

### 1.EXPLORATORY OPENINGS: OPENING 8



1.8.3

Exploratory Opening 8.  
Building D, South Elevation,  
1st Story Window.



1.8.4

Picture of window after  
cladding had been removed.



### 1.EXPLORATORY OPENINGS: OPENING 8



1.8.5

Reverse lap of flexible flashing at mounting flange sill.

*Condition negates incidental water egress and facilitates moisture accumulation within the exterior wall assembly.*



1.8.6

Reverse lap of flexible flashing at mounting flange sill.

*Condition negates incidental water egress and facilitates moisture accumulation within the exterior wall assembly.*

1.EXPLORATORY OPENINGS: OPENING 8

	<p>1.8.7</p> <p>Demonstration of deteriorated gypsum sheathing. Corroded fasteners observed.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>
	<p>1.8.8</p> <p>Back side of fiber cement panel exhibiting moisture staining and deterioration.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 8



1.8.9

Deteriorated WRB. Fungal growth observed emanating from WRB.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*



1.8.10

Moisture accumulation observed between WRB and flexible flashing.

1.EXPLORATORY OPENINGS: OPENING 8

	<p>1.8.11 Omitted or discontinuous sealant bedding beneath fenestration mounting flange.</p> <p><i>Condition fails to provide adequate air leakage control and facilitates moisture transport through exterior wall assembly at fenestration rough opening.</i></p>
	<p>1.8.12 Water staining and corroded fasteners observed.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 8



1.8.13

Demonstration of deteriorated gypsum sheathing. Corroded fasteners observed.

*Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.*

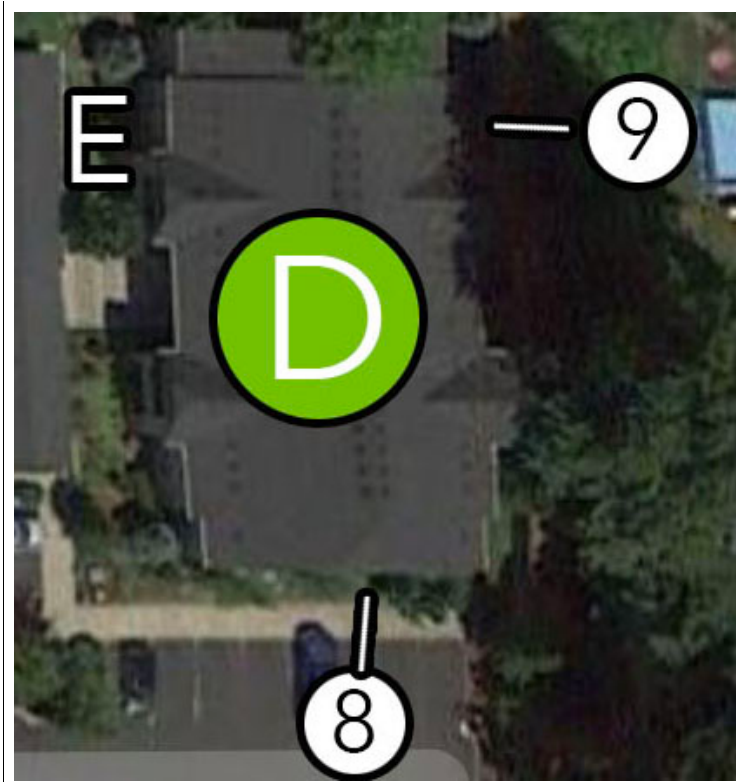


1.8.14

Improper installation of window assembly: fasteners not installed through pre-punched slots in mounting flange.

*Condition may distort window frame and not allow for accommodation of thermal movement of the window assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 9



1.9.1

Exploratory Opening 9.  
Building D, East Elevation,  
2<sup>nd</sup> Story Deck Assembly.



1.9.2

Exploratory Opening 9.  
Building D, East Elevation,  
2<sup>nd</sup> Story Deck Assembly.

### 1.EXPLORATORY OPENINGS: OPENING 9



1.9.3

Trim and sealant failure at base of column assembly.



1.9.4

Picture of exploratory opening after cladding had been removed.

### 1.EXPLORATORY OPENINGS: OPENING 9



1.9.5

Improper installation of WRB. WRB should fully wrap corners of the underlying wall assembly.

*Condition fails to provide adequate incidental water protection for the underlying exterior wall assembly components.*



1.9.6

Omitted metal flashing atop projecting wood trim.



### 1.EXPLORATORY OPENINGS: OPENING 9



1.9.7

Moisture staining, microbial growth observed on gypsum sheathing. Corroded fasteners observed.

*Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.*



1.9.8

Moisture staining, microbial growth observed on gypsum sheathing. Corroded fasteners observed.

*Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 9

	<p>1.9.9</p> <p>Moisture staining, microbial growth observed on gypsum sheathing. Corroded fasteners observed.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>
	<p>1.9.10</p> <p>Deterioration and fungal growth observed on plywood deck floor sheathing.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>


1.EXPLORATORY OPENINGS: OPENING 9

	<p>1.9.11</p> <p>Demonstration of deteriorated plywood sheathing which comprises deck floor substrate.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>
	<p>1.9.12</p> <p>Demonstration of deteriorated plywood sheathing which comprises deck floor substrate. This damage observed along the entire span of the deck floor substrate.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>

1.EXPLORATORY OPENINGS: OPENING 9

	<p>1.9.13 Demonstration of deteriorated plywood sheathing which comprises deck floor substrate. This damage observed along the entire span of the deck floor substrate.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>
	<p>1.9.14 Demonstration of deteriorated plywood sheathing which comprises deck floor substrate. This damage observed along the entire span of the deck floor substrate.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 9

	<p>1.9.15 Demonstration of deteriorated plywood sheathing which comprises deck floor substrate. This damage observed along the entire span of the deck floor substrate.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>
	<p>1.9.16 Demonstration of deteriorated gypsum sheathing.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 10

	<p>1.10.1 Exploratory Opening 10. Building E, West Elevation, 1st Floor Deck Wall Assembly.</p>
	<p>1.10.2 Exploratory Opening 10. Building E, West Elevation, 1st Floor Deck Wall Assembly.</p>

### 1.EXPLORATORY OPENINGS: OPENING 10



1.10.3

Picture of exploratory opening after cladding had been removed.



1.10.4

Discontinuous WRB. Omitted isometric saddle flashing. Omitted metal and/or flexible flashing.

*Condition fails to provide adequate incidental water protection for the underlying exterior wall assembly components.*

### 1.EXPLORATORY OPENINGS: OPENING 10



1.10.5

Deteriorated gypsum sheathing.

*Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.*



1.10.6

Deteriorated gypsum sheathing.

*Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.*



### 1.EXPLORATORY OPENINGS: OPENING 10



1.10.7

Deteriorated gypsum sheathing.

*Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.*



1.10.8

Demonstration of deteriorated gypsum sheathing.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 10



1.10.9

Demonstration of deteriorated gypsum sheathing.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*



1.10.10

Demonstration of deteriorated framing member.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 10



1.10.11 Demonstration of deteriorated gypsum sheathing.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*



1.10.12 Deteriorated gypsum sheathing.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 10



1.10.13 Deteriorated gypsum sheathing.

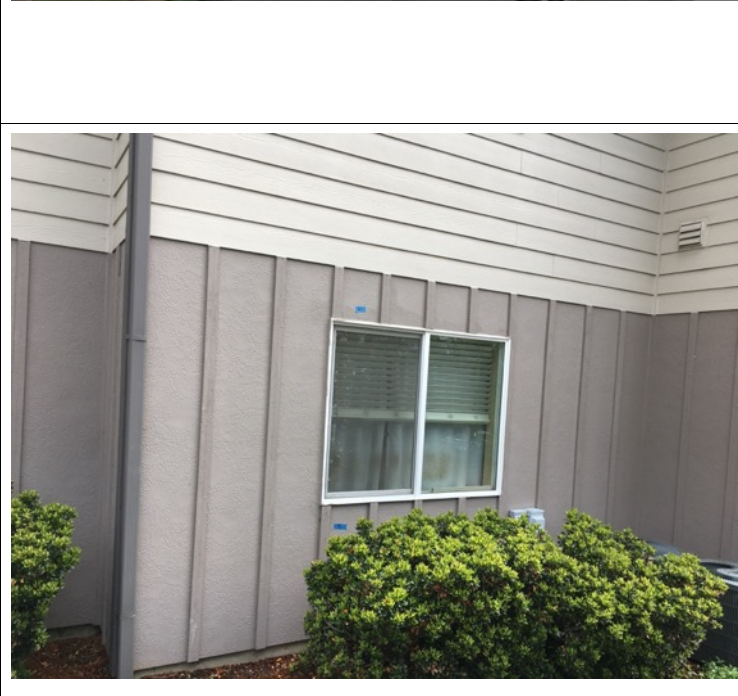
*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*



1.10.14 Demonstration of deteriorated gypsum sheathing.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 11

	<p>1.11.1 Exploratory Opening 11. Building F, West Elevation, 1st Story Window.</p>
	<p>1.11.2 Exploratory Opening 11. Building F, West Elevation, 1st Story Window.</p>

### 1.EXPLORATORY OPENINGS: OPENING 11



1.11.3

Omitted dynamic sealant joint between window frame and fiber cement panel.

*Condition fails to accommodate thermal movement of vinyl window assembly.*



1.11.4

Omitted egress at horizontal siding termination.

*Condition negates incidental water egress and facilitates moisture accumulation within the exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 11



1.11.5

Picture of exploratory opening after cladding had been removed.



1.11.6

Unprimed field cut edges of wood trim member.

*Condition facilitates moisture absorption and premature deterioration of trim members.*

### 1.EXPLORATORY OPENINGS: OPENING 11



1.11.7

Deteriorated wood trim member.

*Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.*





1.11.8

Improper installation of WRB. WRB is tucked inside window frame.

*Condition impedes incidental water egress and facilitates moisture accumulation within exterior wall assembly.*



1.EXPLORATORY OPENINGS: OPENING 11

	<p>1.11.9 Moisture staining observed on gypsum sheathing.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>
	<p>1.11.10 Omitted or discontinuous sealant bedding beneath fenestration mounting flange.</p> <p><i>Condition fails to provide adequate air leakage control and facilitates moisture transport through exterior wall assembly at fenestration rough opening.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 11



1.11.11 Improper installation of window assembly: fasteners not installed through pre-punched slots in mounting flange. Fastener installed within 3" of window corner.

*Condition may distort window frame and not allow for accommodation of thermal movement of the window assembly.*



1.11.12 Improper installation of window assembly: fasteners not installed through pre-punched slots in mounting flange.

*Condition may distort window frame and not allow for accommodation of thermal movement of the window assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 11



1.11.13 Omitted or discontinuous sealant bedding beneath fenestration mounting flange.

*Condition fails to provide adequate air leakage control and facilitates moisture transport through exterior wall assembly at fenestration rough opening.*



1.11.14 Demonstration of deteriorated gypsum sheathing.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 11



1.11.15

Reverse lap of WRB and flexible flashing at mounting flange sill.

*Condition negates incidental water egress and facilitates moisture accumulation within the exterior wall assembly.*



1.11.16

Reverse lap of WRB and flexible flashing at mounting flange sill.

*Condition negates incidental water egress and facilitates moisture accumulation within the exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 11



1.11.17 Improper installation of window assembly: fasteners not installed through pre-punched slots in mounting flange. Fastener installed within 3" of window corner.

*Condition may distort window frame and not allow for accommodation of thermal movement of the window assembly.*



1.11.18 Demonstration of deteriorated gypsum sheathing.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 11



1.11.19

Demonstration of deteriorated gypsum sheathing.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*





1.11.20

Improper installation of window assembly: fasteners not installed through pre-punched slots in mounting flange.

*Condition may distort window frame and not allow for accommodation of thermal movement of the window assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 12

	<p>1.12.1 Exploratory Opening 12. Building F, East Elevation, 2<sup>nd</sup> Story Deck.</p>
	<p>1.12.2 Exploratory Opening 12. Building F, East Elevation, 2<sup>nd</sup> Story Deck.</p>

### 1.EXPLORATORY OPENINGS: OPENING 12



1.12.3

Omitted isometric saddle flashing.

*Condition does not adequately protect underlying wall assembly components from water infiltration.*



1.12.4

Fungal growth observed emanating from wall assembly components.

*Condition negates incidental water egress and facilitates moisture accumulation within the exterior wall assembly.*



### 1.EXPLORATORY OPENINGS: OPENING 12



1.12.5

Demonstration of deteriorated wall assembly components.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*



1.12.6

Demonstration of deteriorated wall assembly components.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 12



1.12.7

Omitted flashing atop projecting wood trim.

*Condition facilitates moisture absorption and premature deterioration of unprotected trim members.*



1.12.8

Picture of exploratory opening after cladding had been removed.

### 1.EXPLORATORY OPENINGS: OPENING 12

	<p>1.12.9 Discontinuous WRB. Omitted metal flashing and/or flexible flashing atop underlying wall assembly components.</p> <p><i>Condition does not adequately shed water infiltration within exterior wall assembly.</i></p>
	<p>1.12.10 Reverse lap of WRB.</p> <p><i>Condition negates incidental water egress and facilitates moisture accumulation within the exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 12



1.12.11 Improper installation of WRB: WRB should wrap corner of wall assembly.

*Condition does not adequately shed water infiltration within exterior wall assembly.*



1.12.12 Demonstration of deteriorated wall assembly components.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 12



1.12.13

Deteriorated gypsum sheathing. Microbial growth, water staining and corroded fasteners observed.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*



1.12.14

Demonstration of deteriorated wall assembly components.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 12



1.12.15 Demonstration of deteriorated wall assembly components.



*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*



1.12.16 Elevated moisture content (40%) of framing member.

*Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 13

	<p>1.13.1 Exploratory Opening 13. Building F, West Elevation, 2<sup>nd</sup> Story Deck.</p>
	<p>1.13.2 Exploratory Opening 13. Building F, West Elevation, 2<sup>nd</sup> Story Deck.</p>

### 1.EXPLORATORY OPENINGS: OPENING 13



1.13.3

Picture of exploratory opening after cladding had ben removed.



1.13.4

Omitted WRB and flexible flashing atop exterior wall assembly.

Fungal growth and deteriorated WRB observed.



### 1.EXPLORATORY OPENINGS: OPENING 13



1.13.5

Fungal growth and deteriorated WRB observed.



1.13.6

Fungal growth observed emanating from exterior wall assembly components.

### 1.EXPLORATORY OPENINGS: OPENING 13



1.13.7

Demonstration of deteriorated wall assembly components.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*



1.13.8

Fungal growth observed emanating from exterior wall assembly components.

### 1.EXPLORATORY OPENINGS: OPENING 13

	<p>1.13.9 Reverse lap of WRB.</p> <p><i>Condition negates incidental water egress and facilitates moisture accumulation within the exterior wall assembly.</i></p>
	<p>1.13.10 Deteriorated gypsum sheathing.</p> <p><i>Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 13



1.13.11 Deteriorated gypsum sheathing.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*



1.13.12 Fungal growth observed emanating from exterior wall assembly components.

### 1.EXPLORATORY OPENINGS: OPENING 13



1.13.13 Fungal growth observed emanating from exterior wall assembly components.



1.13.14 Demonstration of deteriorated gypsum sheathing.  
*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 13

	<p>1.13.15 Water stained framing member.</p>
	<p>1.13.16 Demonstration of deteriorated framing member.</p> <p><i>Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 13



1.13.17 Elevated moisture content (28%) of framing member.

*Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.*



1.13.18 Elevated moisture content (40%) of wood trim.

*Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 13

	<p>1.13.19 Elevated moisture content (27.9%) of framing member.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>
	<p>1.13.20 Elevated moisture content (26.8%) of framing member.</p> <p><i>Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.</i></p>



### 1.EXPLORATORY OPENINGS: OPENING 14



1.14.1

Exploratory Opening 15.  
Building G, East Elevation,  
1st Story Deck Wall



1.14.2

Exploratory Opening 15.  
Building G, East Elevation,  
1st Story Deck Wall

### 1.EXPLORATORY OPENINGS: OPENING 14



1.14.3

Picture of exploratory opening after cladding had been removed.





1.14.4

Discontinuous WRB and omitted flexible flashing atop exterior wall assembly.

Fungal growth and deteriorated WRB observed.

### 1.EXPLORATORY OPENINGS: OPENING 14

	<p>1.14.5 Corroded fasteners observed.</p> <p><i>Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>
	<p>1.14.6 Demonstration of deteriorated gypsum sheathing.</p> <p><i>Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 14



1.14.7

Demonstration of deteriorated gypsum sheathing.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*



1.14.8

Demonstration of deteriorated wood trim.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 14



1.14.9

Elevated moisture content (1.7%) of gypsum sheathing.

*Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.*





1.14.10

Elevated moisture content (2.4%) of gypsum sheathing.

*Damage results from sustained moisture absorption by exterior wall assembly components and/or moisture accumulation within exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 15

	1.15.1	Exploratory Opening 15. Building G, 1st Story Window
	1.15.2	Exploratory Opening 15. Building G, 1st Story Window

### 1.EXPLORATORY OPENINGS: OPENING 15

	<p>1.15.3 Reverse lap of WRB and flexible flashing at mounting flange sill.</p> <p><i>Condition negates incidental water egress and facilitates moisture accumulation within the exterior wall assembly.</i></p>
	<p>1.15.4 Reverse lap of WRB and flexible flashing at mounting flange sill.</p> <p><i>Condition negates incidental water egress and facilitates moisture accumulation within the exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 15



1.15.5

Deteriorated gypsum sheathing.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*



1.15.6

Demonstration of deteriorated gypsum sheathing.



*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*



### 1.EXPLORATORY OPENINGS: OPENING 15

	<p>1.15.7 Deteriorated gypsum sheathing.</p> <p><i>Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>
	<p>1.15.8 Demonstration of deteriorated gypsum sheathing.</p> <p><i>Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 16

 <p>An aerial photograph of the Vintage Oaks Apartments complex. A red location pin is placed on the building. A green circle with a white 'H' is overlaid on the building. Two white circles with black outlines and numbers '17' and '16' are also overlaid, with lines pointing to specific areas on the building's facade.</p>	<p>1.16.1 Exploratory Opening 16. Building H, East Elevation, Deck Soffit.</p>
 <p>A close-up photograph of the exterior of Building H. The image shows a dark-colored deck soffit area. A white circle with a black outline and the number '16' is overlaid on the soffit, indicating the location of the exploratory opening. A staircase with a black metal railing is visible in the background.</p>	<p>1.16.2 Exploratory Opening 16. Building H, East Elevation, Deck Soffit.</p>

### 1.EXPLORATORY OPENINGS: OPENING 16



1.16.3

Picture of exploratory opening after plywood soffit had been removed.

Extensive microbial growth observed on underlying gypsum sheathing.



1.16.4

Extensive microbial growth observed on back side of soffit panel.

### 1.EXPLORATORY OPENINGS: OPENING 16

	<p>1.16.5 Heavy microbial growth observed on underlying gypsum sheathing in soffit.</p> <p><i>Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>
	<p>1.16.6 Deteriorated fiber cement siding.</p> <p><i>Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 16



1.16.7

Heavy microbial growth observed on underlying gypsum sheathing in soffit.

*Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.*



1.16.8

Discontinuous and/or omitted WRB.

*Condition does not allow for adequate protection of underlying wall assembly components from water infiltration and/or moisture accumulation.*

### 1.EXPLORATORY OPENINGS: OPENING 16



1.16.9

Heavy microbial growth observed on underlying gypsum sheathing in soffit.

*Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.*



1.16.10

Heavy microbial growth observed on underlying gypsum sheathing in soffit.

*Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 16



1.16.11 Plywood sheathing which comprises the deck floor substrate is completely deteriorated at the face of the deck.



*Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.*



1.16.12 Plywood sheathing which comprises the deck floor substrate is completely deteriorated at the face of the deck.



*Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 16



	<p>1.16.13 Plywood sheathing which comprises the deck floor substrate is completely deteriorated at the face of the deck.</p> <p><i>Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>
	<p>1.16.14 Plywood sheathing which comprises the deck floor substrate is completely deteriorated at the face of the deck.</p> <p><i>Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>



### 1.EXPLORATORY OPENINGS: OPENING 16

	<p>1.16.15 Gypsum sheathing completely deteriorated.</p> <p><i>Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>
	<p>1.16.16 Deck framing members deteriorated.</p> <p><i>Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 17

	<p>1.17.1 Exploratory Opening 17. Building G, South Elevation, 1st Story Vents.</p>
	<p>1.17.2 Exploratory Opening 17. Building G, South Elevation, 1st Story Vents.</p>

### 1.EXPLORATORY OPENINGS: OPENING 17



1.17.3

Omitted metal flashing atop projecting wood trim at vent blocks.



1.17.4

Cracked fiber cement lap siding.

*Damage due to the improper installation of siding material.*

### 1.EXPLORATORY OPENINGS: OPENING 17



1.17.5

Cracked fiber cement lap siding.



*Damage due to the improper installation of siding material.*



1.17.6

Improper installation of fiber cement panel siding and wood trim. Trim member should be installed to cover the seam between panels.

### 1.EXPLORATORY OPENINGS: OPENING 17

	<p>1.17.7</p> <p>Improper installation of fiber cement panel siding and wood trim. Trim member should be installed to cover the seam between panels.</p>
	<p>1.17.8</p> <p>Improper installation of fiber cement panel siding and wood trim. Trim member should be installed to cover the seam between panels.</p>

### 1.EXPLORATORY OPENINGS: OPENING 17



1.17.9

Picture of exploratory opening after cladding had been removed.



1.17.10

Picture of exploratory opening after cladding had been removed.

### 1.EXPLORATORY OPENINGS: OPENING 17



1.17.11

Omitted flexible flashing around the through wall vent penetration rough opening.

*Condition does not allow for adequate protection of underlying wall assembly components from water infiltration and/or moisture accumulation.*



1.17.12

Deteriorated gypsum sheathing.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 17



1.17.13

Deteriorated gypsum sheathing. Heavy microbial growth observed on gypsum sheathing.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*



1.17.14

Deteriorated gypsum sheathing. Heavy microbial growth observed on gypsum sheathing.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*



### 1.EXPLORATORY OPENINGS: OPENING 17



1.17.15 Demonstration of deteriorated gypsum sheathing.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*



1.17.16 Deteriorated gypsum sheathing. Heavy microbial growth observed on gypsum sheathing.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 18

	<p>1.18.1 Exploratory Opening 18. Building G, West Elevation, Deck Soffit</p>
	<p>1.18.2 Exploratory Opening 18. Building G, West Elevation, Deck Soffit</p>

### 1.EXPLORATORY OPENINGS: OPENING 18



1.18.3

Picture of exploratory opening after soffit had been removed.



1.18.4


Elevated moisture content (.5%) of gypsum sheathing.

*Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 18

	<p>1.18.5 Elevated moisture content (.5%) of gypsum sheathing.</p> <p><i>Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>
	<p>1.18.6 Elevated moisture content (.5%) of gypsum sheathing.</p> <p><i>Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 18

	<p>1.18.7</p> <p>Moisture staining and microbial growth observed on gypsum sheathing in deck soffit.</p> <p><i>Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>
	<p>1.18.8</p> <p>Moisture staining, microbial growth observed, and deterioration of plywood sheathing which comprised deck floor substrate.</p> <p><i>Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 18

	<p>1.18.9</p> <p>Moisture staining, microbial growth observed, and deterioration of plywood sheathing which comprised deck floor substrate.</p> <p><i>Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>
	<p>1.18.10</p> <p>Deteriorated gypsum sheathing.</p> <p><i>Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 19

	<p>1.19.1 Exploratory Opening 19. Building H, South Elevation, 1st Story Window.</p>
	<p>1.19.2 Exploratory Opening 19. Building H, South Elevation, 1st Story Window.</p>

1.EXPLORATORY OPENINGS: OPENING 19

	<p>1.19.3 Reverse lap of WRB and flexible flashing at mounting flange sill.</p> <p><i>Condition negates incidental water egress and facilitates moisture accumulation within the exterior wall assembly.</i></p>
	<p>1.19.4 Improper installation of window assembly: fasteners not installed through pre-punched slots in mounting flange.</p> <p><i>Condition may distort window frame and not allow for accommodation of thermal movement of the window assembly.</i></p>



### 1.EXPLORATORY OPENINGS: OPENING 19

	<p>1.19.5</p> <p>Fastener used to attach siding to the wall assembly penetrated vinyl window mounting flange.</p> <p><i>Condition may distort window frame and not allow for accommodation of thermal movement of the window assembly.</i></p>
	<p>1.19.6</p> <p>Demonstration of deteriorated gypsum sheathing.</p> <p><i>Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 19

	<p>1.19.7 Deteriorated gypsum sheathing.</p> <p><i>Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>
	<p>1.19.8 Deteriorated gypsum sheathing.</p> <p><i>Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 19

	<p>1.19.9 Demonstration of deteriorated gypsum sheathing.</p> <p><i>Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>
	<p>1.19.10 Improper installation of window assembly: fasteners not installed through pre-punched slots in mounting flange.</p> <p><i>Condition may distort window frame and not allow for accommodation of thermal movement of the window assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 19

	<p>1.19.11 Omitted or discontinuous sealant bedding beneath fenestration mounting flange.</p> <p><i>Condition fails to provide adequate air leakage control and facilitates moisture transport through exterior wall assembly at fenestration rough opening.</i></p>
	<p>1.19.12 Demonstration of deteriorated gypsum sheathing.</p> <p><i>Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 20

	1.20.1	Exploratory Opening 20. Building C, West Elevation, Deck Soffit.
	1.20.2	Moisture staining observed on gypsum sheathing in deck soffit assembly.  <i>Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.</i>

### 1.EXPLORATORY OPENINGS: OPENING 20



1.20.3

Moisture staining and deterioration observed on plywood sheathing which comprised deck flooring substrate.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*



1.20.4

Moisture staining and deterioration observed on gypsum sheathing in deck soffit assembly.

*Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.*

### 1.EXPLORATORY OPENINGS: OPENING 20



	<p>1.20.5 Elevated moisture content (40%) of trim member.</p> <p><i>Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>
	<p>1.20.6 Elevated moisture content (40%) of plywood substrate.</p> <p><i>Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>

### 1.EXPLORATORY OPENINGS: OPENING 20

	<p>1.20.7</p> <p>Moisture staining and deterioration observed on plywood sheathing which comprised deck flooring substrate.</p> <p><i>Damage results from sustained moisture absorption water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>
	<p>1.20.8</p> <p>Demonstration of deteriorated framing member in deck wall assembly.</p> <p><i>Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>



### 1.EXPLORATORY OPENINGS: OPENING 20

	<p>1.20.9 Demonstration of deteriorated framing member in deck wall assembly.</p> <p><i>Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>
	<p>1.20.10 Demonstration of deteriorated framing member in deck wall assembly.</p> <p><i>Damage results from sustained moisture to water leakage and/or moisture accumulation within the exterior wall assembly.</i></p>

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