BROADWAY PERFORMANCE HALL

DRAFT

EXTERIOR ENVELOPE CONDITIONS ASSESSMENT

March 2016

SHKS ARCHITECTS

DRAFT

Executive Summary

In February 2016 SHKS Architects, in conjunction with Case Forensics, performed an exterior envelope conditions survey of Seattle Central College's Broadway Performance Hall. This report summarizes observations, analysis and recommendations for repair and continued maintenance of the exterior envelope, including masonry and wood windows, of the Broadway Performance Hall, located on the Seattle Central College in Seattle, Washington.

As of the writing of this report, the Broadway Performance Hall was found to be in fair condition for a building of its age. However, decades of exposure have produced a number of general problems and areas of significant damage, particularly with the masonry envelope. The building envelope deficiencies identified in this report, if left unattended, will lead to more advanced and rapid deterioration requiring extensive and costly repairs. Repair and maintenance of the Broadway Performance Hall exterior envelope is critical to the performance, longevity, and appearance of this historic structure.

Some masonry conditions were found to present an immediate risk to the building, occupants, and pedestrians. Loose, cracked, and spalled stone, particularly on the south elevation of the building are at risk of dislodging from the building and should be removed immediately.

The building is currently pointed with a cementitious mortar which is causing significant damage to the stone. The building should be completely repointed with a lime-based mortar. Missing or damaged stone should be repaired using the dutchman technique. Skyfacing window ledges should be patched with a restoration mortar with a sacrificial mortar wash over the entire ledge to promote positive water drainage.

The condition of the wood windows varies by exposure. In general, windows on the north and east facade are in good condition and can be repainted with little repair or restoration work required. Windows on the west and south elevations should be restored prior to repainting. If left unattended, all windows will continue to deteriorate to the point more extensive repairs or replacement will be required.

Fig. 1 Cracked Stone Over South Entrance (circled in red)

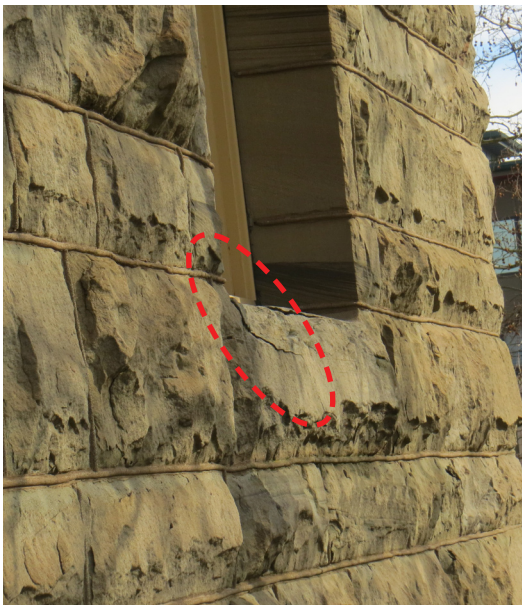

Fig. 2 Cracked Stone at South Elevation Window Sill (circled in red)

Masonry

Observations, analysis, and recommendations for exterior masonry repairs are discussed in greater detail in Appendix A, prepared by Case Forensics. We have categorized repairs by level of priority.

Immediate Repairs

Immediate Repairs are those that either present a life/safety risk presently or would rapidly deteriorate causing more extensive repairs if left unattended.

Spalled and crack stone on vertical faces of the building present a risk of dislodging from the building. This condition is present on the north, west, and south elevations, however the stone on the south elevation is significantly worse (See Fig. 1 & 2) and should be removed immediately. Stone at several window ledges have spalled at both vertical and skyfacing surfaces. Spalled stone at the skyfacing surfaces (Fig. 3 & 4) present a significant water infiltration risk as depressions in the stone inhibits positive drainage and increases the risk of water infiltration to the building interior. Spalled stone at skyfacing surfaces should be removed. The area should be patched with a restoration mortar back to the original profile. And, lastly, a mortar wash should be placed over the surface to promote positive drainage away from the building interior

Fig. 3 Spalled Window Sill at North Elevation

Fig. 4 Spalled Window Sill at North Elevation

Fig. 5 Cracked Stone Frieze Above North Elevation Window Mantel

Fig. 6 Water unable to weep through mortar joints damages the stone surface

General Repairs

General Repairs are those that would continue to deteriorate causing more extensive repairs if left unattended.

Mortar throughout the building is a hard cementitious type that, due to its strength, is causing damage to the adjacent stone (Fig. 6 & 7). The entire building should be repointed with a lime based mortar and tooled to match the historic beaded joint profile. Concurrently with repointing, surface exfoliation, a consequence of the surface sealers previously used, should be addressed. A masonry cleaning program, including low pressure water washing in addiiton to low pressure blasting using a soft blasting medium, is recommended to remove the loose friable material.

Large pieces of stone that have been removed or damaged (Fig. 5), should be replaced using a Dutchman technique.

Fig. 7 Water unable to weep through mortar joints damages the stone surface

Fig. 8 Sealant joints over the east entry cornice

Fig. 9 Effloresence on the underside of the east entry cornice

Skyfacing joints present a greater risk than vertical joints, and if left unrepaired, could present a water infiltration risk. Where skyfacing joints exist over covered areas, such as the (main) east entrance (Fig. 8 & 9), use of a non-reflective metal cover (Fig. 10) may be considered to promote positive drainage of water away from the building in addition to protecting the stone from water infiltration through both the stone surface and mortar or sealant joints.

Fig. 10 Example of a metal cover installed over a wide stone ledge at Washington State Legislative Building in Olympia, WA

Fig. 11 Wood Window Sill on South Elevation Window

Fig. 12 Wood Window Sill on East Elevation Window

Wood Windows

The wood windows at the Broadway Performance Hall have been well maintained for a building of its age. The windows do not appear to be original to the initial construction of the building. The window assessment was conducted primarily through visual observation, accompanied by some tactile observation. In general, windows facing east and north are in fair condition while south and west facing windows appear to be in average condition. General conditions of window components are summarized below:

Fig. 13 Wood Window Sill on West Elevation Window

Sills

Wood sills on the north are in good condition. Wood sills on the east and west (Fig. 12 & 13) facing windows are showing signs of weathering due to age and lack of paint maintenance: raised grain, failed paint and some weather checking. Sills on the south facing windows (Fig. 11) show more advanced signs of weathering and are more likely candidates for dry rot.

Frames, Trim and Brickmold

Wood window frames, trim and brickmold on the norrth are in good condition. Wood window frames, trim and brickmold on the east facing windows are in fair condition showing some signs of weathering: raised grain, paint failure, and some areas of dry rot . In instances where rot was found, the rot appeared to be limited

Fig. 14 Wood window Frame and Trim on West Elevation Window

Fig. 15 Wood window Frame on South Elevation Window

Fig. 16 Perimeter Sealant at Window Opening

towards the bottoms of frames where vertical components met horizontal skyfacing components (sills, trim,etc.). Wood window frames, trim and brickmold on the south and west (Fig. 14 & 15) facing windows show more advanced signs of weathering.

Sash

Windows on the north elevation are in good condition. Windows on the east and west elevation are in fair condition showing signs of weathering, evident in the joints between the lower stile and rails being more visible.

Windows on the south elevation of the building are generally the hardest hit by weather exposure. These windows are in significantly poorer shape than the windows on other elevations. Many of the south windows, particularly those above ground level, exhibit a higher rate of paint failure, joint failure, and wood decay.

Sealant

Perimeter sealant throughout is well adhered and flexible and appears to be in good condition. It is however, unsightly. Perimeter sealant should be replaced with a sanded sealant, custom colored silicone sealant to match the wood windows, or a paintable urethane sealant.

Fig. 17 Window Restoration Workshop

WOOD WINDOW REPAIR

The analysis of wood window parts involves consideration of alternative corrective approaches. Generally, the best approach tends to retain as much of the existing materials as feasibly possible. However, this approach must be balanced in light of feasibility of common repair practices. Varying levels or repair and replacement procedures are noted below and indicated in the window schedule at the beginning of each building facade section. Varying levels of repair are reflected in the cost analysis as well.

Repair Class 1 - Routine Maintenance

Upgrade components to "like new" condition and extended life. Repair scope includes: limited exterior paint removal and spot priming, wood putty filler and sanding, repainting and perimeter sealant replacement.

Repair Class 2 - Stabilization

Repair partially deteriorated windows to sound condition, good appearance, and extended life. Same as repair class 1, except requires more substantial repair of deteriorated window components. Additional repair scope includes: more extensive exterior paint removal, treat decayed areas with preservative treatment, fill cracks with wood putty filler or epoxy consolidant and, prime and repaint.

Repair Class 3 - Part Replacement

Same as repair class 2, except requires replacement of major deteriorated window components (sash and frame components) with new matching pieces and requires full reglazing and repainting. None of the windows observed falls under this category.

Fig. 18 Paint Failure at Ornamental Gutter Cover

Fig. 19 Window Restoration Workshop

Fig. 20 Building Lettering on East Elevation

Miscellaneous Repairs

The ornamental metal gutter cover, at roof level, exhibits signs of paint failure (Fig 18). In addition, it is detached in several locations. The cover should be removed, restored (including repainting), and reinstalled.

Building identification lettering (Fig. 20) should be modified to reflect the College's current name, "Seattle Central College" as opposed to "Seattle Central Community College". Existing abandoned dimensional-letter holes and new ones created by the rearrangement should be patched with a restoration mortar to match the existing adjacent stone.

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APPENDIX A

MASONRY CONSULTING REPORT

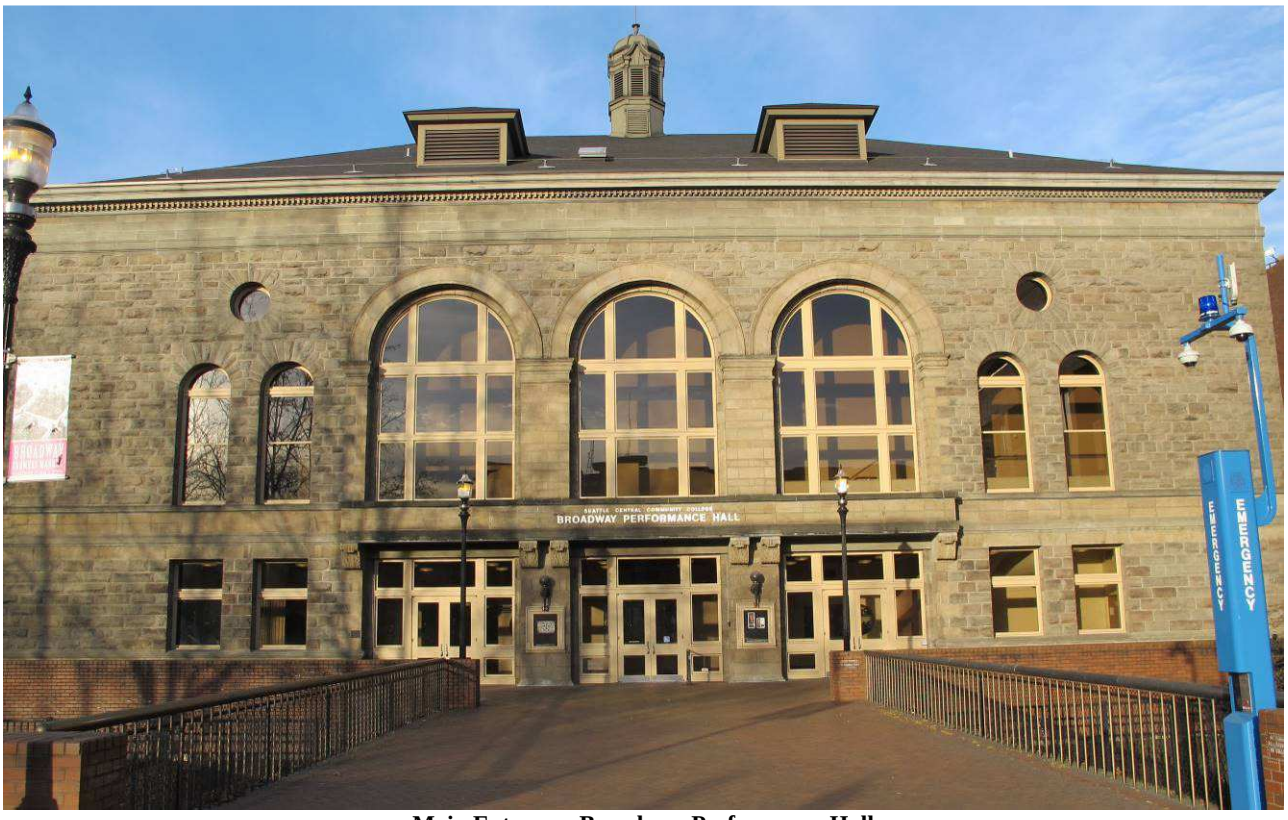
March 11, 2016

Mr. David Strauss
SHKS Architects
1050 N. 38th St.
Seattle, WA 98103

Re: Broadway Performance Hall Masonry Consulting
Project # 2065006

STATEMENT/BACKGROUND INFORMATION

On Friday, February 26, 2016, CASE Forensics (CASE) visited the Broadway Performance Hall to visually assess the exterior masonry. The assessment was performed by Mark Liebman, Senior Forensic Investigator and Alec Liebman, Forensic Investigator. They were accompanied by Matt Inpanbutr and Sean Kelly of SHKS Architects who provided logistical support and surveyed the existing conditions. The survey utilized a 65' man lift which was positioned along Harvard Avenue and on pedestrian walkways around the building to provide access to the upper floors.



Main Entrance, Broadway Performance Hall

PURPOSE, SCOPE, AND SUMMARY OF FINDINGS

The purpose of the assessment was to determine the current condition of the sandstone and mortar that comprise the building envelope and make recommendations for any remediation work. It is important to note the relationship between the stone and mortar. The performance hall is a classic example of the effects which mortar can have on stone.

In a historic masonry wall system, the moisture content and dew point in the wall is largely controlled by the thickness of the walls, the interior finish on the walls, the way in which air flow is managed in the building, and type of mortar used to point the masonry. Moisture in the walls takes the path of least resistance when leaving the wall system, typically exiting to the exterior via the mortar joints. When a dense, hard cementitious mortar is used, as is the case at the performance hall, the moisture is forced to exit through the face of the stone. This is very detrimental to the stone. When (as in the case of the Performance Hall) the stone has been coated or sealed, the conditions are exacerbated.

Typically, the sides of a building that are most exposed to the prevailing weather patterns (south and west sides in the Pacific NW) experience the greatest deterioration as a result of extensive exposure to moisture and the buildup of hydrostatic pressure in the wall. The moisture can't exit through the dense mortar so pressure builds up as water is trapped behind the face of the stone. The pressure results in the water finding egress to the detriment of the stone. The damage is exacerbated when the stone has been coated or sealed. Add occasional freeze/thaw cycles effecting the trapped water to the equation and conditions are even worse.

Following are images of the conditions found at the Performance Hall.

Damaged window ledge, north façade

Spalling stone, east end north façade

Damaged window ledge, north façade

Minor damage above and at arch, north façade

Damaged stone and overly large mortar joint

Damaged, spalling stone on north façade

Spalling stone, north façade

Spalling stone, north façade

Damaged and spalling stone, west end, north façade

Spalling stone, north façade

Spalling stone, north façade

Delaminating stone on north façade

Spalling stone, west end, north façade

Damaged spalling stone, north façade

Spalling stone, west end, north façade

Spalling stone, west end, north façade

Spalling stone, west end, north façade

Damaged stone ledge, east end. north façade

Spalling stone, east end, north façade

Spalling stone, east end, north façade

Graffiti, spalling stone, lower steps, north façade

Spalling stone, lower steps, north façade

Spalling stone, north end, west façade

Spalling stone, north end, west façade

Spalling stone, lower wall, north end, west façade

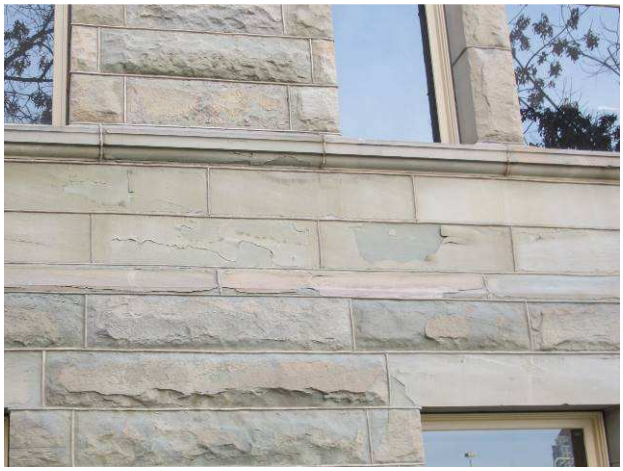
Spalling stone, west façade

Damaged stone and repointing mortar above window

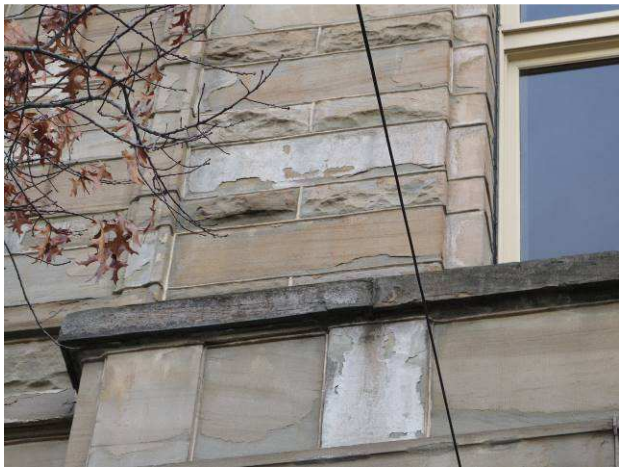
Spalling stone, west façade

Spalling stone, west façade

Missing mortar in sky facing joints, west façade



Spalling stone, west façade



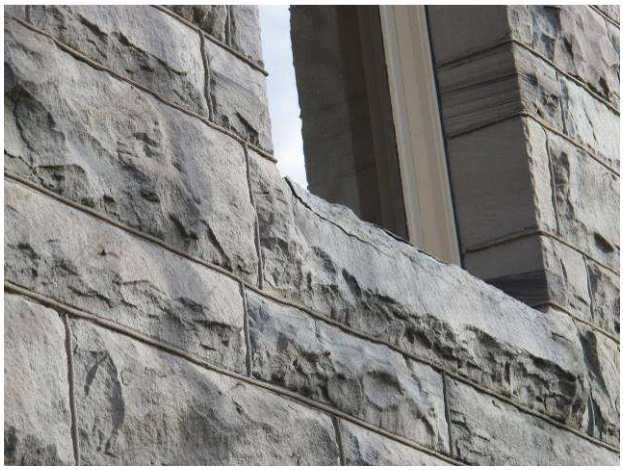
Spalling stone, west façade

Spalling stone, top of ledge, west façade

Damaged ledge and spalling stone, south end, west façade

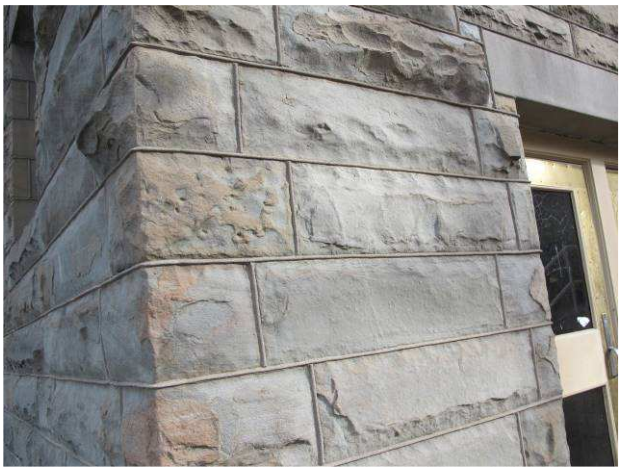
Vertical crack, ground level window, south end, west façade

Spalling stone, loss of detail, south end, west façade



Cracked stone at window ledge, south end, west façade

Damaged spalling stone ledge, west end, north façade



Spalling stone, detail loss, west end, south façade

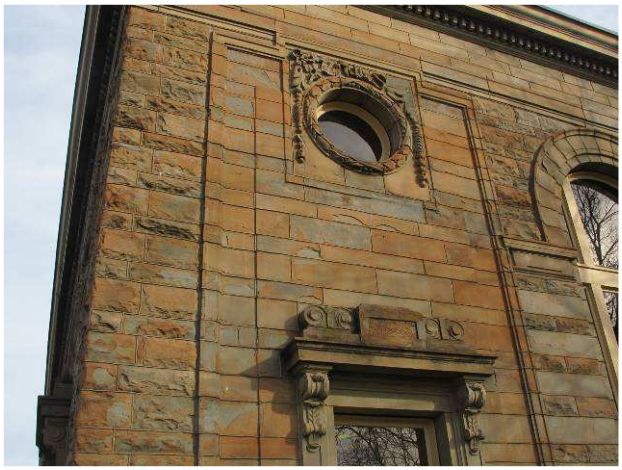
Spalling stone, detail loss, west end, south façade

Spalling stone, loss of detail, SW corner

Spalling stone, loss of detail, SW corner

Spalling stone, SW corner

Damaged ledge and spalling stone, south façade



Spalling stone, detail loss, west end, south façade

Significantly deteriorated window ledges, south façade

Significantly deteriorated window ledge, south façade

Damaged window ledge, south façade

Damaged, delaminating ledge, south façade

Close up of damaged, delaminating stone, south façade

Close up of damaged, delaminating stone, south façade

Close up of damaged, delaminating stone, south façade

Spalling stone, south façade

Spalling stone, south façade

Spalling, exfoliating stone, south façade

Spalling, exfoliating stone, south façade

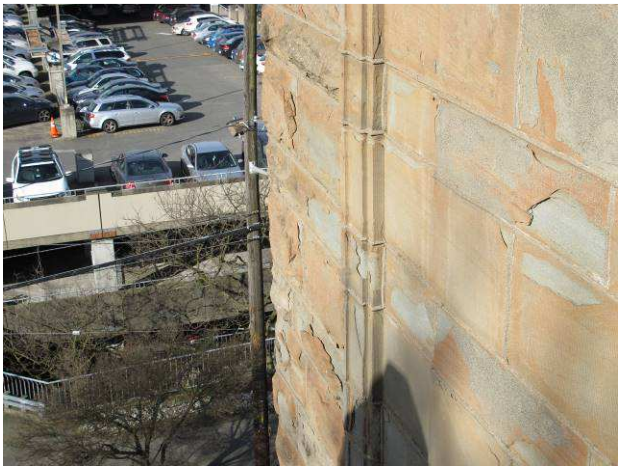
Spalling, exfoliating stone, south façade

Spalling, exfoliating stone, south façade

Spalling stone, above doorway, south façade

Spalling stone, above doorway, south façade

Spalling stone, west end, south façade



Spalling stone, west end, south façade

Deteriorated stone, west end, south façade

Open, sky facing joint, south façade

Loss of stone detail, stairway, south façade

Loss of stone detail, south façade

Relatively good conditions, north end, east façade

Caulked, sky facing joints above main entry

Cracked mortar, above entry, east façade

Spalling stone, east façade

Damaged, spalling stone, east façade

Spalling stone, east façade

Subtle loss of stone detail, south end, east façade

Spalling stone, south of main entry

Efflorescence from concrete on carved stone, east façade

Efflorescence on underside of concrete, east façade

Spalling, delaminating stone, east façade

Spalling stone, east façade

Exfoliating stone, east façade

Exposed rebar, in cast stone, south end, east façade

It is unfortunate but not unique that the walls of the Performance Hall were pointed with a cementitious mortar. At the time, "stronger is better" was the prevailing philosophy and a cement based mortar has a higher strength and greater life expectancy than a lime mortar. The problems inherent in coating the stone were also not understood. The coating was meant to keep water out but wound up keeping water in to the detriment of the stone.

RECOMMENDATIONS

The current conditions along the south façade pose a life/safety issue to students and others using the stairway or the southwest theatre exit. These repairs should consist of removing detached material on the window ledges and scaling all loose and spalling stone along the ledges and vertical face of the stone.

Once the life/safety issues have been addressed, there are steps that need to be taken to mitigate against recurring damage. It would be difficult to remove all the remaining coating from the surface and pores of the stone. However, consideration should be given to using a soft blasting medium (i.e. sponges or walnut shells) at low pressure to both help remove friable material and the remaining surface coating from the stone. It will also be necessary to remove the cementitious beaded joints and replace them with a lime based mortar.

Lime as a mortar binder is more vapor permeable than cement mortar and will help preserve the sandstone. The hydrostatic pressure would be released via the mortar joints helping preserve the remaining surface texture and carved elements of the stone. Lime was the principle mortar binder for thousands of years and its use on historic brick and stone buildings is the reason we still have much of our built masonry heritage.

In addition to the above, Dutchman should be installed where large pieces of stone have been lost or are damaged, for structural and aesthetic reasons. Along the window ledges, mortar should be used to create a sloped surface facilitating drainage off the ledge. All sky facing joints should be prepped and infilled with sealant. Most of the carved stone (which we believe is limestone rather than Chuckanut sandstone) is in good condition but localized areas may require recarving. This is mainly an aesthetic issue.

Conditions along the west, north and east façades of the building are not nearly as extreme as on the south side. All of the above recommendations apply, but life/safety is not an immediate concern. If steps are not taken as funding becomes available, the conditions will continue to deteriorate.

CASE reserves the right to supplement or amend this report should additional information become available.

If you have any questions or comments regarding any element of our report, please do not hesitate to contact us at 425-775-5550.

Respectfully Submitted:

Mark Liebman
Senior Forensic Investigator
CASE Forensics Corporation

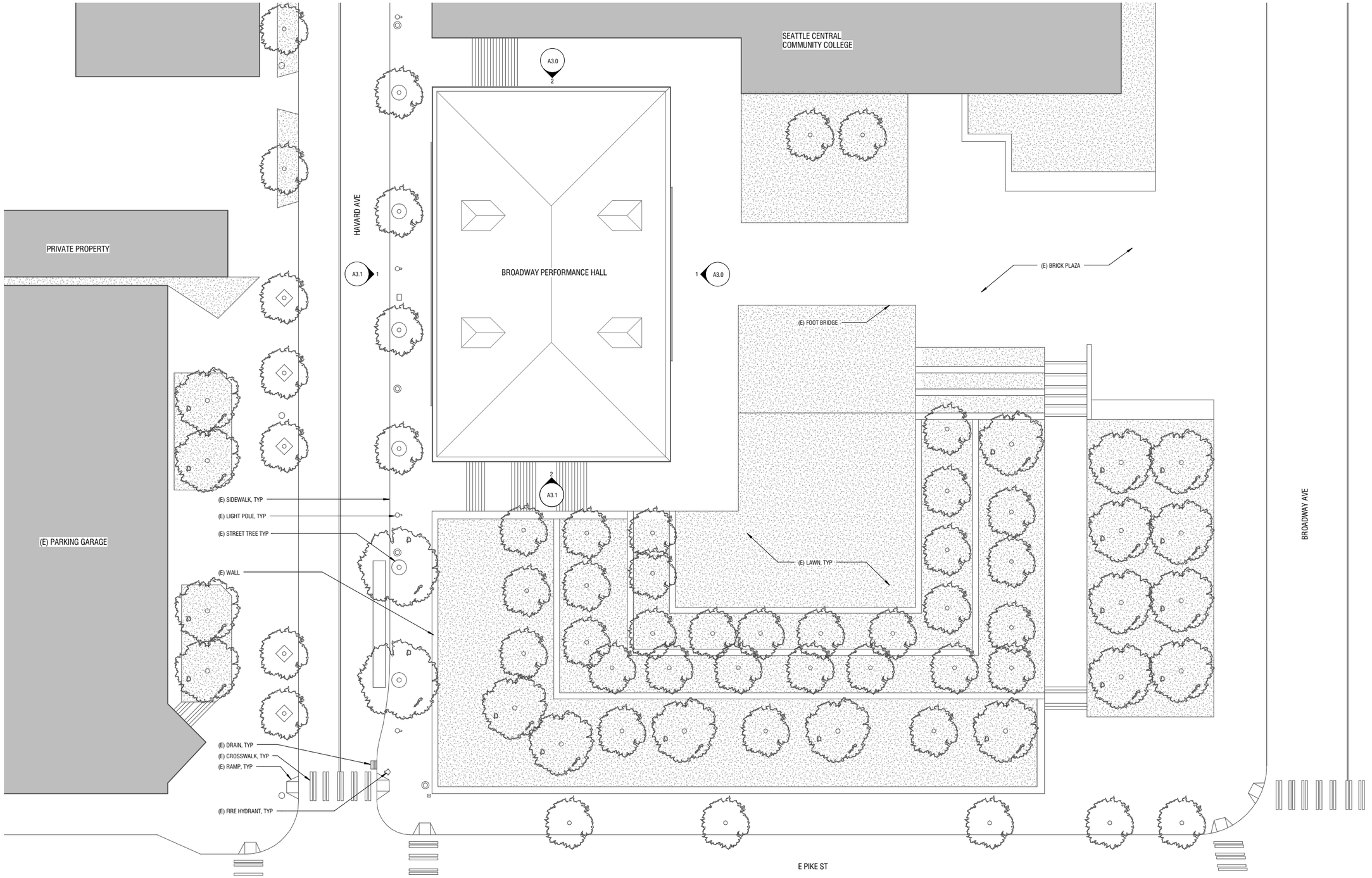
Alec Liebman
Forensic Investigator
CASE Forensics Corporation

Reviewed by:

Steve Pignotti
Principal, Mechanical Engineer
CASE Forensics Corporation

APPENDIX B

RECOMMENDED REPAIR DRAWINGS



1 SITE PLAN
1/16" = 1'-0"

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SHKS ARCHITECTS

1050 N. 38th St.
Seattle, WA 98103
PH: 206.675.9151
www.shksarchitects.com

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BROADWAY
PERFORMANCE
HALL EXISTING
CONDITIONS
ASSESSMENT

1625 BROADWAY AVE

Drawn by:	SK
Checked:	MI
Date:	3/9/16
Scale:	1/16" = 1'-0"

Revisions:

No.	Date	Remarks

SITE PLAN
A1.0

EXTERIOR REPAIR LEGEND

EMERGENCY REPAIR

REPAIR CRACKED AND SPALLED STONE AS REQ, TYP

REMOVE DETACHED MATERIAL ON WINDOW LEDGES. PATCH WITH RESTORATION MORTAR AND INSTALL SLOPED MORTAR WASH TO DIRECT WATER AWAY FROM WINDOW SILLS. SCALE ALL LOOSE AND SPALLING STONE ALONG THE LEDGES AND VERTICAL FACE OF STONE

RECOMMENDED REPAIR

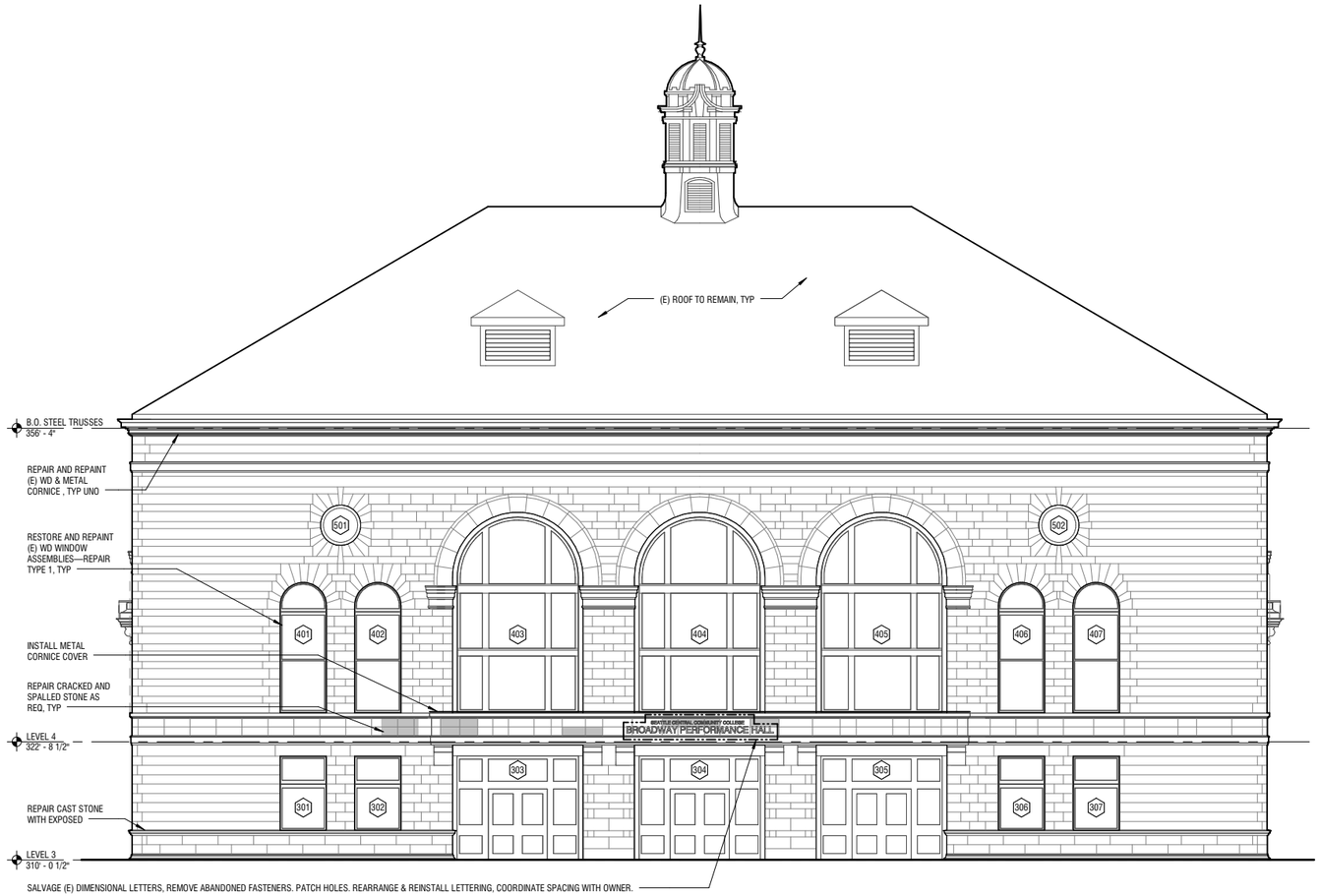
INSTALL SANDSTONE PATCH TO MATCH (E) PROFILE AT WINDOW LEDGES

PATCH (E) WD WINDOW FRAME AT SOUTH FACADE

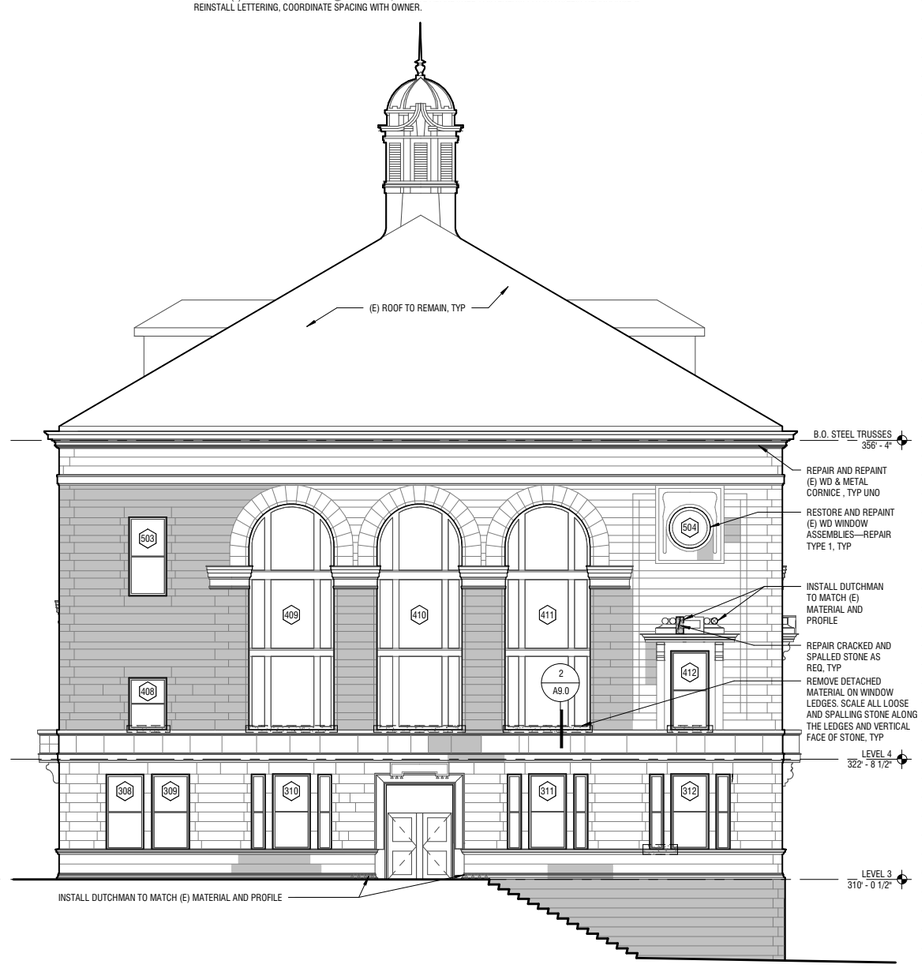
INSTALL DUTCHMAN TO MATCH (E) MATERIAL AND PROFILE

GENERAL REPAIRS:

- INSTALL MORTAR WASH AT WINDOW LEDGES. SLOPE TO FACILITATE DRAINAGE OFF LEDGE, TYP
- PREP SKY-FACING JOINTS AND INSTALL SEALANT, TYP
- REMOVE FRIABLE MATERIAL AND REMAINING SURFACE COATING USING THE GENTLEST MEANS NECCESSARY, TYP
- REPOINT (E) MORTAR JOINTS USING LIME-BASED MORTAR. MATCH (E) BEADED PROFILE
- PREP & REPAINT (E) WD & METAL CORNICE
- RESTORE AND REPAINT (E) WD WINDOW ASSEMBLIES—REPAIR TYPE 1 @ NORTH AND EAST WINDOWS, REPAIR TYPE 2 @WEST AND SOUTH WINDOWS
- SALVAGE (E) DIMENSIONAL LETTERS @ EAST ENTRY, REMOVE ABANDONED FASTENERS. PATCH HOLES. REARRANGE & REINSTALL LETTERING, COORDINATE SPACING WITH OWNER.



1 EAST ELEVATION
1/8" = 1'-0"



2 NORTH ELEVATION
1/8" = 1'-0"

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Seattle, WA 98103
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1625 BROADWAY AVE

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Revisions:

No.	Date	Remarks

EXTERIOR ELEVATIONS

A3.0

EXTERIOR REPAIR LEGEND

EMERGENCY REPAIR

REPAIR CRACKED AND SPALLED STONE AS REQ, TYP

REMOVE DETACHED MATERIAL ON WINDOW LEDGES. PATCH WITH RESTORATION MORTAR AND INSTALL SLOPED MORTAR WASH TO DIRECT WATER AWAY FROM WINDOW SILLS. SCALE ALL LOOSE AND SPALLING STONE ALONG THE LEDGES AND VERTICAL FACE OF STONE

RECOMMENDED REPAIR

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PATCH (E) WD WINDOW FRAME AT SOUTH FACADE

INSTALL DUTCHMAN TO MATCH (E) MATERIAL AND PROFILE

GENERAL REPAIRS:

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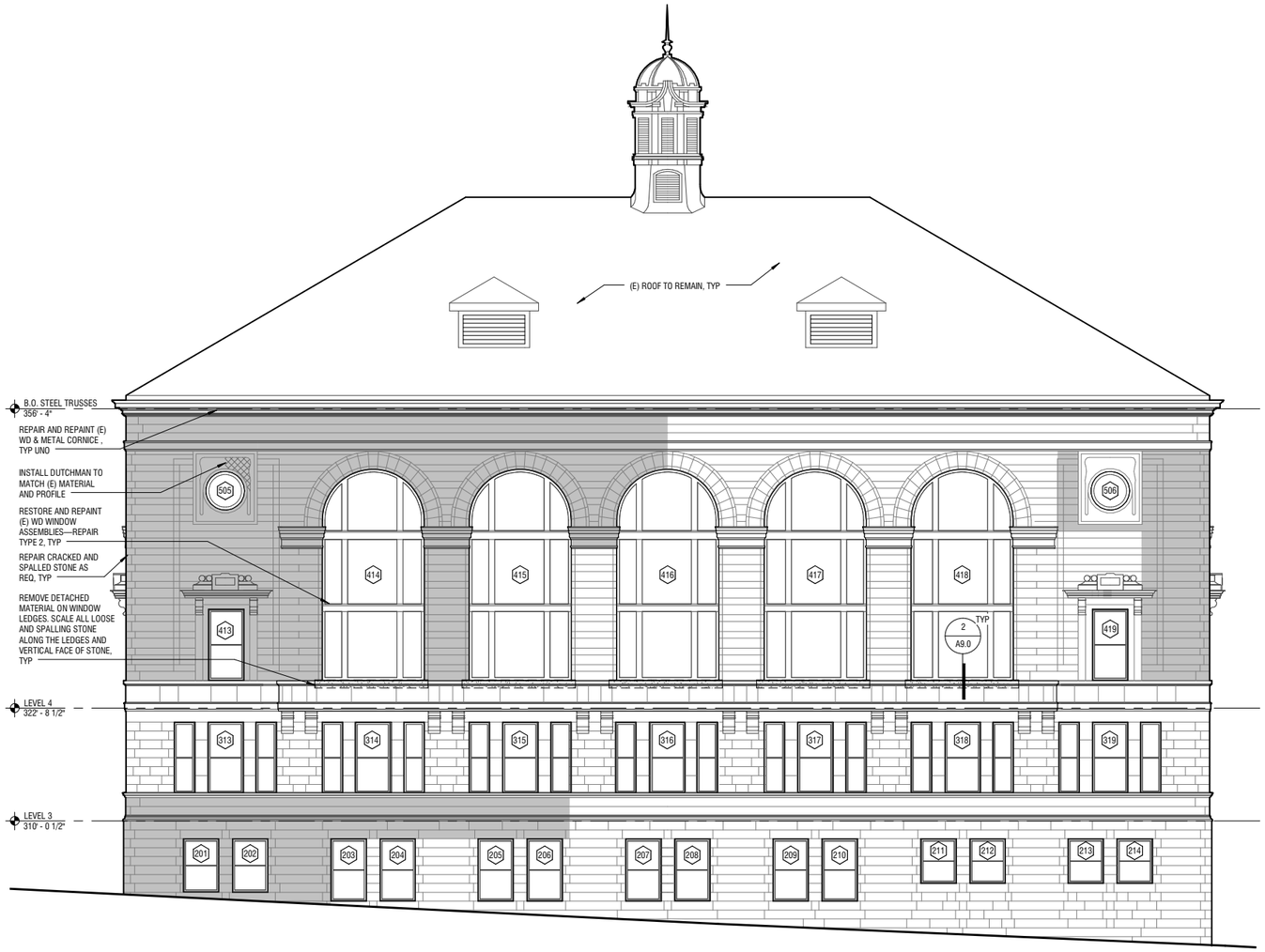
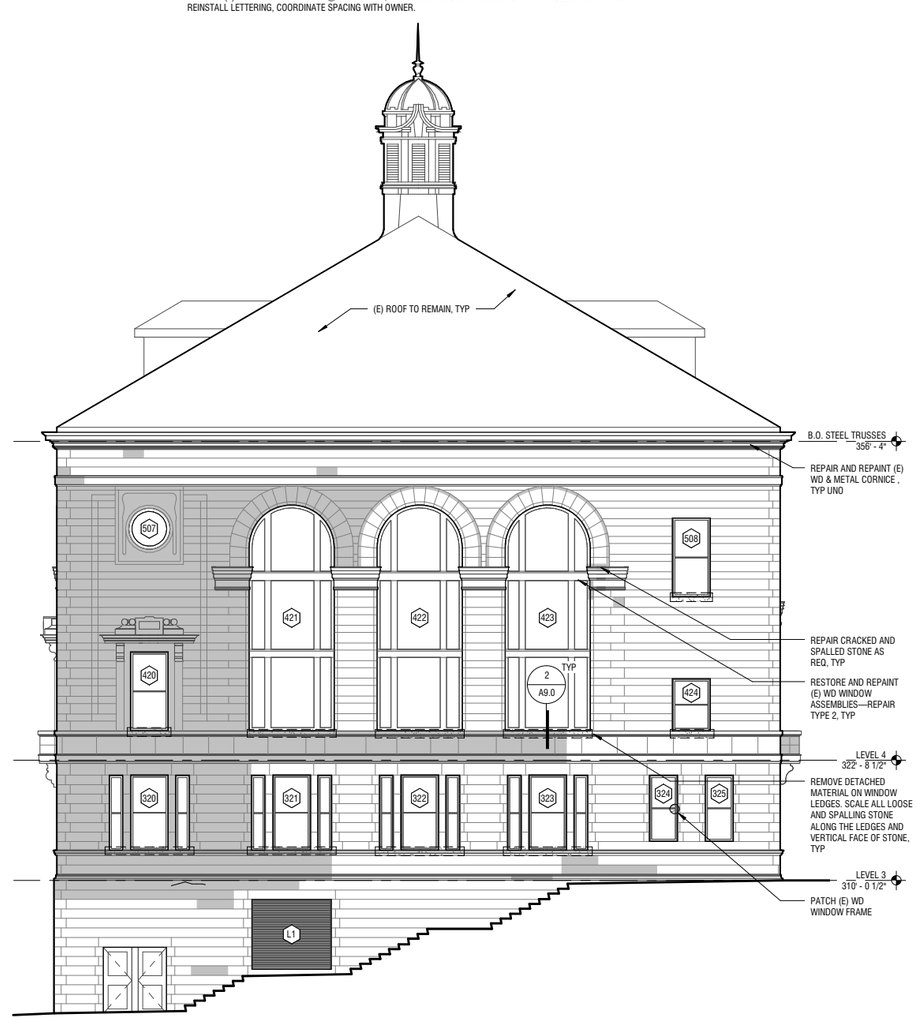


1 WEST ELEVATION
1/8" = 1'-0"



2 SOUTH ELEVATION
1/8" = 1'-0"

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Seattle, WA 98103
PH: 206.675.9151
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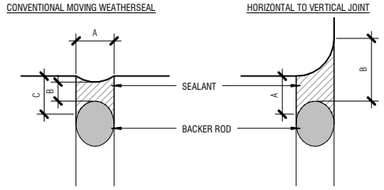
Scale: As indicated

Revisions:

No.	Date	Remarks

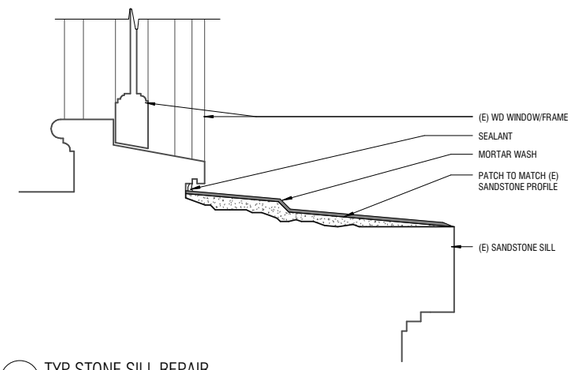
EXTERIOR ELEVATIONS
A3.1



NOTES:
1. DIMENSIONS C AND A MUST AT LEAST 1/4"
2. RATIO OF A:B SHOULD BE 2:1 MIN
3. JOINT SURFACE TOOLED CONCAVE
4. DIMENSION B SUGGESTED MAXIMUM = 3/8"

NOTES:
1. DIMENSIONS A AND B ARE BOTH GREATER THAN 1/4"
2. SEALANT TOOLED TO ENSURE POSITIVE RUNOFF OF WATER

1 TYP SEALANT JOINT & BACKER ROD
3" = 1'-0"



2 TYP STONE SILL REPAIR
3" = 1'-0"

WINDOW SCHEDULE

Mark	Comments	Area	Width	Height
East				
301	Fixed	40 SF	5' - 0"	8' - 0"
302	Fixed	40 SF	5' - 0"	8' - 0"
303	Fixed Entry	145 SF	13' - 0"	11' - 1 1/2"
304	Fixed Entry	145 SF	13' - 0"	11' - 1 1/2"
305	Fixed Entry	145 SF	13' - 0"	11' - 1 1/2"
306	Fixed	40 SF	5' - 0"	8' - 0"
307	Fixed	40 SF	5' - 0"	8' - 0"
401	Fixed Arch (small)	67 SF	5' - 0"	11' - 6"
402	Fixed Arch (small)	67 SF	5' - 0"	11' - 6"
403	Fixed Arch (Large)	253 SF	13' - 0"	14' - 6"
404	Fixed Arch (Large)	253 SF	13' - 0"	14' - 6"
405	Fixed Arch (Large)	253 SF	13' - 0"	14' - 6"
406	Fixed Arch (small)	67 SF	5' - 0"	11' - 6"
407	Fixed Arch (small)	67 SF	5' - 0"	11' - 6"
501	Fixed Circular	15 SF	3' - 6"	6' - 11"
502	Fixed Circular	15 SF	3' - 6"	6' - 11"
East: 16		1652 SF		
North				
308	Fixed	32 SF	4' - 0"	8' - 0"
309	Fixed	32 SF	4' - 0"	8' - 0"
310	Fixed	32 SF	4' - 0"	8' - 0"
310 L	Fixed	12 SF	1' - 6"	8' - 0"
310 R	Fixed	12 SF	1' - 6"	8' - 0"
311	Fixed	32 SF	4' - 0"	8' - 0"
311 L	Fixed	12 SF	1' - 6"	8' - 0"
311 R	Fixed	12 SF	1' - 6"	8' - 0"
312	Fixed	32 SF	4' - 0"	8' - 0"
312 L	Fixed	12 SF	1' - 6"	8' - 0"
312 R	Fixed	12 SF	1' - 6"	8' - 0"
408	Fixed	22 SF	4' - 0"	5' - 6"
409	Fixed Arch (Large)	205 SF	9' - 0"	19' - 4"
410	Fixed Arch (Large)	205 SF	9' - 0"	19' - 4"
411	Fixed Arch (Large)	205 SF	9' - 0"	19' - 4"
412	Fixed	33 SF	4' - 0"	8' - 4"
503	Fixed	33 SF	4' - 0"	8' - 4"
504	Fixed Circular	15 SF	3' - 6"	6' - 11"
North: 18		949 SF		
South				
320	Fixed	32 SF	4' - 0"	8' - 0"
320 L	Fixed	12 SF	1' - 6"	8' - 0"
320 R	Fixed	12 SF	1' - 6"	8' - 0"
321	Fixed	32 SF	4' - 0"	8' - 0"
321 L	Fixed	12 SF	1' - 6"	8' - 0"
321 R	Fixed	12 SF	1' - 6"	8' - 0"
322	Fixed	32 SF	4' - 0"	8' - 0"
322 L	Fixed	12 SF	1' - 6"	8' - 0"
322 R	Fixed	12 SF	1' - 6"	8' - 0"
323	Fixed	32 SF	4' - 0"	8' - 0"
323 L	Fixed	12 SF	1' - 6"	8' - 0"
323 R	Fixed	12 SF	1' - 6"	8' - 0"
324	Fixed	21 SF	3' - 0"	7' - 0"
325	Fixed	21 SF	3' - 0"	7' - 0"

WINDOW SCHEDULE

Mark	Comments	Area	Width	Height
420	Fixed	33 SF	4' - 0"	8' - 4"
421	Fixed Arch (Large)	205 SF	9' - 0"	19' - 4"
422	Fixed Arch (Large)	205 SF	9' - 0"	19' - 4"
423	Fixed Arch (Large)	205 SF	9' - 0"	19' - 4"
424	Fixed	22 SF	4' - 0"	5' - 6"
507	Fixed Circular	15 SF	3' - 6"	6' - 11"
508	Fixed	33 SF	4' - 0"	8' - 4"
L1	Metal Louvers	60 SF	8' - 3"	7' - 3"
South: 22		1043 SF		
West				
201	Fixed	24 SF	4' - 0"	6' - 0"
202	Fixed	24 SF	4' - 0"	6' - 0"
203	Fixed	28 SF	4' - 0"	7' - 0"
204	Fixed	28 SF	4' - 0"	7' - 0"
205	Fixed	28 SF	4' - 0"	7' - 0"
206	Fixed	28 SF	4' - 0"	7' - 0"
207	Fixed	28 SF	4' - 0"	7' - 0"
208	Fixed	28 SF	4' - 0"	7' - 0"
209	Fixed	28 SF	4' - 0"	7' - 0"
210	Fixed	28 SF	4' - 0"	7' - 0"
211	Fixed	20 SF	4' - 0"	5' - 0"
212	Fixed	20 SF	4' - 0"	5' - 0"
213	Fixed	20 SF	4' - 0"	5' - 0"
214	Fixed	20 SF	4' - 0"	5' - 0"
313	Fixed	32 SF	4' - 0"	8' - 0"
313 L	Fixed	19 SF	2' - 4"	8' - 0"
313 R	Fixed	19 SF	2' - 4"	8' - 0"
314	Fixed	32 SF	4' - 0"	8' - 0"
314 L	Fixed	19 SF	2' - 4"	8' - 0"
314 R	Fixed	19 SF	2' - 4"	8' - 0"
315	Fixed	32 SF	4' - 0"	8' - 0"
315 L	Fixed	19 SF	2' - 4"	8' - 0"
315 R	Fixed	19 SF	2' - 4"	8' - 0"
316	Fixed	32 SF	4' - 0"	8' - 0"
316 L	Fixed	19 SF	2' - 4"	8' - 0"
316 R	Fixed	19 SF	2' - 4"	8' - 0"
317	Fixed	32 SF	4' - 0"	8' - 0"
317 L	Fixed	19 SF	2' - 4"	8' - 0"
317 R	Fixed	19 SF	2' - 4"	8' - 0"
318	Fixed	32 SF	4' - 0"	8' - 0"
318 L	Fixed	19 SF	2' - 4"	8' - 0"
318 R	Fixed	19 SF	2' - 4"	8' - 0"
319	Fixed	32 SF	4' - 0"	8' - 0"
319 L	Fixed	19 SF	2' - 4"	8' - 0"
319 R	Fixed	19 SF	2' - 4"	8' - 0"
413	Fixed	32 SF	4' - 0"	8' - 0"
414	Fixed Arch (Large)	257 SF	11' - 6"	18' - 0"
415	Fixed Arch (Large)	257 SF	11' - 6"	18' - 0"
416	Fixed Arch (Large)	257 SF	11' - 6"	18' - 0"
417	Fixed Arch (Large)	257 SF	11' - 6"	18' - 0"
418	Fixed Arch (Large)	257 SF	11' - 6"	18' - 0"
419	Fixed	32 SF	4' - 0"	8' - 0"
505	Fixed Circular	15 SF	3' - 6"	6' - 11"
506	Fixed Circular	15 SF	3' - 6"	6' - 11"
West: 44		2218 SF		
		5863 SF		

DCI APPROVAL STAMPS

SHKS ARCHITECTS
1050 N. 38th St.
Seattle, WA 98103
PH: 206.675.9151
www.shksarchitects.com

SCC BROADWAY PERFORMANCE HALL EXISTING CONDITIONS ASSESSMENT

1625 BROADWAY AVE

Drawn by: SK
Checked: MI
Date: 3/9/16
Scale: 3" = 1'-0"

Revisions:
No. Date Remarks

EXTERIOR DETAILS & SCHEDULE

A9.0

3/14/2016 9:29:36 AM

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APPENDIX C

OUTLINE SPECIFICATION

Division 00: Procurement and Contracting Requirements

1. By Owner.

Division 01: General Requirements

01 11 00 Summary of Work

1. Building will be occupied during construction.
2. Masonry repairs including cleaning, crack repair, scaling, removing detached material, patching, and repointing.
3. Repair existing metal cornice covers
4. Restoration of existing wood windows.

01 51 00 Temporary Utilities:

1. The power will be drawn from the existing building.

01 56 39 Temporary Tree and Plant Protection

1. Protection of trees per plan.

Division 02: Existing Conditions

02 41 19 Selective Structure Demolition

1. Salvage of building lettering as required for reinstallation.
2. Salvage of existing stone as required for reproduction.
3. Protect existing finishes.

02 80 00 Facility Remediation

1. Identification and remediation of hazardous materials by Owner (recommend testing mortar and window sealant.

Division 03: Concrete (Not Used)

Division 04: Masonry

04 00 00 Masonry

1. Scaling
   a. Remove detached and loose material including surface exfoliation, spalled stone, cracked stone.
2. Stone repair
   a. Dutchman repairs where large pieces of stone are missing or damaged
   b. Skyfacing window ledges: patch to match existing profile with restoration mortar. Jahn M70 by Cathedral Stone or System 45 by Edison Coatings. After patching to original profile, install limewash (mortar wash), 6 coats, tint w/ mineral or iron oxide pigment.
   c. Patch holes from abandoned building letter fasteners w/ restoration mortar.
3. Mortar:
   a. Lime putty mortar.
   b. Match historic profiles. (beaded and flush)
4. Remove surface coating
   a. Blasting medium, soft. Sponge medium or crushed walnut shells at low pressure, highest working pressure determined through mockup approval.
5. Cleaning
   a. Warm water, low pressure, 400 psi max., highest working pressure determined through mockup approval.

Division 05: Metals –not used

Division 06: Wood, Plastics and Composites

06 91 00 Wood Restoration

1. Liquid Wood Consolidant and Replacement Compounds:
   a. Abatron "Liquid Wood",
   b. Abatron "WoodEpox",
   c. System Three Resins "Sculpwood",
   d. Or approved equal.
2. Surface protectant with Insecticide and Fungicide
   a. PRG "Timbor",
   b. System Three Resins "Board Defense",
   c. Wood Care Systems "Liquid Bora-Care,
   d. Wood Care Systems "Bora-Care Mold-Care,
   e. Or approved equal.
3. Wood Preservative: Borate wood preservative
   a. TimberSaver,
   b. Abatron "Bora-Care",
   c. Or approved equal.
4. Wood Primer/Sealer:
   a. Abatron "Abkote/Primekote 8006-1" penetrating epoxy primer.
   b. System Three Resins "S-1", clear penetrating epoxy sealer,
   c. Or approved equal.

Division 07: Thermal and Moisture Protection

07 62 00 Sheet Metal Flashing and Trim

1. Material:
   a. Sheet stainless steel: ASTM A167; 24 gauge.
2. Fabricate new cornice cover over broad skyfacing surface over east entrance.

07 92 00 Joint Sealants

1. Perimeter joint sealant at window openings. Single component silicone, sanded.
   a. Manufacturer, provide one of the following:
      i. Tremco Spectrum 4
      ii. Dow 790
      iii. Or approved.
2. Sealant for sheet metal flashing and trim lap joints.
   a. Manufacturer, provide one of the following:
      i. Dow 795
      ii. Sikaflex 15LM
      iii. Or approved.

Division 08: Openings

08 52 00 Wood Window Restoration

1. Repair and restoration of existing wood windows – frames, sill, sash, and trim per 069100.
2. Window Repair types identified on drawings.

Division 09: Finishes

09 91 00 Painting

1. Manufacturer: SCC preferred manufacturers?
2. Exterior painted finish
   a. Wood windows.
   b. Gutter level cornice cover.

Division 10-49: Not Used

END OF SPECIFICATION

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APPENDIX D

COST PLAN

Project: SCC Broadway Performance Hall Exterior Repairs
Pre-Design Cost Plan

Exterior	Qty	Unit	$/Unit	Cost
Envelope Repair				
Window Repair Type 1				
Repaint exterior frame, sill sash, brickmold	34	ea	350	$11,900
Remove sealant	1,080	lf	6.50	$7,020
Install sealant	1,080	lf	6.50	$7,020
Spot repair wood - 10%	108	lf	20	$2,160
Spot restore wood - 10%	108	lf	50	$5,400
Window Repair Type 2				
Repaint exterior frame, sill sash, brickmold	66	ea	350	$23,100
Remove sealant	1708	lf	6.50	$11,102
Install sealant	1708	lf	6.50	$11,102
Salvage and reinstall glazing	66	ea	200	$13,200
Restore wood frame components	66	ea	600	$39,600
Replace deteriorated frame components - 10%	171	lf	75	$12,810
Restore wood sill	66	ea	700	$46,200
Restore wood sash	66	ea	800	$52,800
Remove sash, provide temp sash, install restored sash	66	ea	850	$56,100
Install weatherstripping	66	ea	50	$3,300
Building Metal				
Repair and repaint gutter cornice cover	410	lf	14	$5,740
Metal cornice cover over skyfacing surface above east entrance	143	sf	50	$7,150
Masonry				
Immediate repairs				
Remove cracked, exfoliated, and loose stone (3601 sf)	5	DY	3,000	$15,000
Remove loose stone at window ledges (south elevation)	10	ea	75	$750
Patch window ledges w/ restoration mortar	10	ea	300	$3,000
Limewash over restoration mortar at window ledges	10	ea	450	$4,500
Repairs				
Repair cast stone (exposed rebar)	8	ea	75	$600
Repoint w/ lime based mortar, beaded profile	14,214	sf	22	$312,708
Remove surface exfoliation, soft blasting	14,214	sf	3	$42,642
Cleaning	14,214	sf	2	$28,428
Rearrange and patch building letters	1	allow	1,800	$1,800
Dutchman repairs	5	allow	500	$2,500
Site Preparation				
Scaffolding	21,000	sf	8	$168,000
Site Protection	8,660	sf	1.25	$10,825
Lift Rental for Immediate repairs	5	dy	350	$1,750
Street Use for Immediate repairs	1	wk	1,500	$1,500
Miscellaneous				
Tree Protection				
Allowance for tree protection	4	ea	250	$1,000
Subtotal				
Subtotal				***$877,207***
General Conditions	15%			$131,581
Contractors Overhead, Profit & Fee	10%			$100,879
Design/Estimating Contingency	20%			$221,933
Escalation to Start	4.0%	6/1/17	1.2 yr	$64,792
TOTAL MACC				**$1,397,000**