MINUTES

CITY COUNCIL MEETNG
September 9, 2019
5:30 p.m.

THE DALLES CITY HALL
313 COURT STREET
THE DALLES, OREGON

PRESIDING:	Mayor Richard Mays
COUNCIL PRESENT:	Russ Brown, Linda Miller, Darcy Long-Curtiss, Tim McGlothlin, Rod Runyon
COUNCIL ABSENT:	None
STAFF PRESENT:	City Manager Julie Krueger, City Attorney Gene Parker, City Clerk Izetta Grossman, Finance Director Angie Wilson, Community Development Director Steve Harris, Public Works Director Dave Anderson, Police Captain Jamie Carrico, Human Resources Director Daniel Hunter, Assistant to the City Manager Matthew Klebes
Number of people present:	40

CALL TO ORDER

The meeting was called to order by Mayor Mays at 5:30 p.m.

ROLL CALL OF COUNCIL

Roll Call was conducted by City Clerk Grossman. All Councilors present.

PLEDGE OF ALLEGIANCE

Mayor Mays asked Councilor McGlothlin to lead the Pledge of Allegiance.

Councilor McGlothlin invited the audience to join in the Pledge of Allegiance.

APPROVAL OF AGENDA

It was moved by Long-Curtiss and seconded by Miller to approve the agenda as submitted. The motion carried; all Councilors voting in favor.

PRESENTATIONS PROCLAMATIONS

Cherry City Crush 2019 Girls 10U Fast Pitch State Champions
Mayor Mays presented the team with Certificates of Recognition.

Introduction – Wasco County Emergency Manager, Sheridan McClellan

Wasco County Sheriff Lane Magill introduced the new Wasco County Emergency Manager, Sheridan McClellan.

CITY MANAGER REPORT

City Manager Julie Krueger reported she had been working with partners to secure full funding for the Riverfront Trail maintenance. She said it was going well; she had received commitments of $50,000 each from the PUD and the Port of The Dalles. She said she hopeful that full funding could be secured.

Krueger reported meeting with Main Street regarding the Gitchell Building. She said they had identified Step 1, which she anticipated taking a month or two to complete. She said they were going to approach the project very methodically.

She said Community Development Director Harris had an update for Council on the Recreation Building.

Harris reviewed his report (attached).

Councilor Brown said the reports indicated that the rain event was not the whole cause of the roof collapse.

Harris said the insurance company (CIS) was still investigating. He said they had hired an engineering firm who would conduct a post demolition inspection to better determine the cause.

CITY ATTORNEY REPORT

City Attorney Gene Parker said he had received a Notice of Appeal from Mrs. Hunt on the Council decision regarding upholding the decision on the Perkins and 13th Street property. He said the City had sent the response to LUBA on August 26. He said no formal objections had been filed.

Parker said if objections were filed it could be the end of the year before the case was settled.

Parker said he would be on vacation September 16 through the 30.

CITY COUNCIL REPORTS

Councilor Miller invited Council to the Sister City BBQ Potluck on September 15, from 1-3pm at Sorosis Park.

Councilor Runyon reported attending:

- 7/25 Q-Life: NWPUD attended. Maupin update
- 8/6 Local Public Safety Coordinating Council
- 8/13 Columbia Gorge Commission in The Dalles
- 8/13 Columbia Gorge Veterans Museum
- 8/28 Next Door Social
- 8/29 Q-Life
- 9/9 Mid-Columbia Veterans Memorial Committee

Councilor Long-Curtiss reported:

- Next week joining the Community Outreach Team in Washington DC with Matthew Klebes, Assistant to the City Manager
- QLife Meeting
- Habitat for Humanity seminar
- Blue Zones sustainability session – many great ideas
- Urban Renewal Meeting – Recreation roof collapse; Hanlon project not moving forward
- Gitchell Building Work Session
- Next Door Social – Alternative School – High School option in the new facility
- Kiwanis Steak Feed

Councilor McGlothlin reported:

- Virgil Choate had passed away; Virgil was an outstanding citizen that will be missed.
- 9/17 3rd Annual Gorge Rail Summit in Stevenson

Mayor Mays said he and the City Manager would also be attending the Gorge Rail Summit.

CONSENT AGENDA

It was moved by Brown and seconded by McGlothlin to approve the Consent Agenda as presented. The motion carried unanimously, all Councilors voting in favor.

Items approved on the consent agenda were: 1) Approval of the July 22, 2019 Regular City Council Meeting Minutes.

CONTRACT REVIEW BOARD ACTIONS

Authorize Purchase, Installation and Start-up of New Monitoring System at the Wastewater Treatment Plan as Required by Department of Environmental Quality Permit

Public Works Director Dave Anderson reviewed the staff report.

It was moved by McGlothlin and seconded by Brown to authorize the purchase, installation and start-up of new Monitoring Systems at the wastewater treatment plant from Portland Engineering Inc. in an amount not to exceed $58,550. The motion carried 5 to 0; all Councilors voting in favor; none opposed.

Award Contract No. 2019-009 Wicks Filter Building Reroof

Public Works Director Dave Anderson reviewed the staff report.

It was moved by Miller and seconded by Long-Curtiss to authorize the City Manager to enter into contract with Rev Construction for the Wicks Filter Building Reroof Project, Contract No. 2019-009, in an amount not to exceed $62,580. The motion carried 5 to 0; all Councilors voting in favor; none opposed.

ACTION ITEMS

Improvement Plan for West 2nd and Cherry Heights intersection and amendment to the City's Transportation System Plan

Public Works Director Dave Anderson reviewed the staff report.

Miller asked if it would be similar to the intersection at 6th and Cherry Heights.

Anderson said it would be similar.

Runyon asked if there would be some traffic calming from the off-ramp of I-84.

Anderson said the consultants had been asked to recommend traffic calming actions. He said features would include radar speed feedback signs.

McGlothlin thanked staff for moving this project forward.

Resolution No. 19-024 A Resolution Amending the City of The Dalles Transportation System Plan

It was moved by McGlothlin and seconded by Miller to adopt Resolution No. 19-024, A Resolution adopting the August 23, 2019 report from Kittleson and Associates as an Amendment to the City of The Dalles Transportation System Plan. The motion carried 5 to 0; all Councilors voting in favor; none opposed.

Resolution No. 19-025 Authorizing the Acceptance of an Additional $100,000 from Google Inc. and an Additional $22,490 from Google Inc. and an Appropriation to the Special Grant Fund for $44,735 and an Appropriation to the Library Fund for $77,755, for Fiscal Year Ending June 30, 2020

Finance Director Angie Wilson reviewed the staff report.

It was moved by Long-Curtiss and seconded by Miller to adopt Resolution No. 19-025 Authorizing the Acceptance of an Additional $100,000 from Google Inc. and an Additional $22,490 from Google Inc. and an Appropriation to the Special Grant Fund for $44,735 and an Appropriation to the Library Fund for $77,755, for Fiscal Year Ending June 30, 2020. The motion carried 5 to 0; all Councilors voting in favor; none opposed.

EXECUTIVE SESSION

Mayor Mays recessed to executive session in accordance with ORS 192.660(2)(h) to Consult with Counsel Concerning the Legal Rights and Duties of a Public Body with Regard to Current Litigation or Litigation Likely to be Filed

RECONVENE TO OPEN SESSION

ADJOURNMENT

Being no further business, the meeting adjourned at 6:48 p.m.

Submitted by/
Izetta Grossman, CMC
City Clerk

SIGNED: Richard A Mays
Richard A. Mays, Mayor

ATTEST: Izetta Grossman, CMC
Izetta Grossman, CMC City Clerk

CITY of THE DALLES
313 COURT STREET
THE DALLES, OREGON 97058

(541) 296-5481 ext. 1125
COMMUNITY DEVELOPMENT DEPARTMENT

MEMORANDUM

September 9, 2019

To: Julie Krueger, City Manager

Fr: Steven Harris, Community Development Director

Re: Status of Recreation Building, 213-215 East 2nd Street

An extreme weather event the evening of August 9-10, 2019, resulted in a weakening of a portion of the roof of the Urban Renewal Agency-owned property known as the Recreation Building, due to excessive water load. The damage to the roof was reported to City staff the following weekend (August 17th) by Todd Carpenter (building owner). Mr. Carpenter reported that the roof over the westerly portion of the building (previously used as a bowling alley) had partially collapsed and the East 2nd Street exterior wall had partially separated from the building.

Public safety barricades were put in place closing the sidewalk and restricting the vehicular travel lanes on East 2nd Street for the block between Washington Street and Court Street. The travel lanes barricades were replaced by concrete barriers the week of August 19th.

Mr. Carpenter directed his work crew to install temporary bracing and shoring in the interior of the building to stabilize the situation shortly following the event. The shoring remains in place. Mr. Carpenter retained Tenneson Engineering to inspect the building. The inspection was conducted on August 21st (copy of report dated August 28th is attached).

City staff contacted CIS Insurance, the Agency's insurance company, informing the agent of the loss. CIS insurance adjuster and a structural engineer from EFI Global, Inc. inspected the building on August 29th (a copy of the report dated August 30th is attached). The building was posted as a "Dangerous Building" on August 30th.

City staff has had numerous discussions with CIS representatives regarding the loss, policy coverage and the history of the building. The property was purchased by the Agency in 2010 with the intent of demolishing the building and incorporating the property into a proposed hotel development.

Three demolition bids have been secured, based on the need to remove the partially collapsed roof and the East 2nd Street exterior wall. A special meeting of the Agency has been scheduled for September 11th to authorize a declaration of an emergency and to award the contractor bid. It is anticipated the demolition work will take two-three weeks.

TENNESON
ENGINEERING CORPORATION
CONSULTING ENGINEERS • SURVEYORS • PLANNERS

3775 CRATES WAY
THE DALLES, OR 97058

PHONE (541) 296-9177
FAX (541) 296-6657

August 28, 2019

Mr. Todd Carpenter
P.O. Box 2688
The Dalles, Oregon 97058

Structural Inspection at 213 East Second Street, The Dalles, Oregon (Recreation Building)

Tenneson Engineering Corporation was retained by Todd Carpenter, the building owner, to inspect the roof structure of the commercial building located at 213 East Second Street in The Dalles, Oregon, also known as the Recreation Building or the Rec Building. Mr. Carpenter, who is also the owner of the buildings to the east and west of the subject parcel, had noticed a partial roof collapse occur over the weekend of August 17 and 18. He contacted our office on August 19 to conduct a preliminary inspection. The purpose of Tenneson's inspection was to examine the roof and its support system to determine the safety of the structure and its possible influence on adjacent structures. On August 21, 2019, representatives of Tenneson Engineering Corporation conducted the inspection. At this time Mr. Carpenter also provided us with an eleven page plan set dated 1958 and prepared by Jensen & Gilham Architects of Portland, Oregon, for a bowling alley at the same location. The drawings appear to depict an addition to and remodel of the original structure. The following are the findings, conclusions, and recommendations of said inspection.

EXISTING CONDITIONS

The existing structure is a two-story building with a wood-framed roof and main level floor area and a concrete slab-on-grade within the basement. It should be noted that the basement was the original first main floor level when the structure was built prior to the raising of the roadways in the downtown area. The structure is approximately 58 feet in plan dimension east-west by 119 feet in the north-south direction (perpendicular to East Second Street). It appears, based upon the 1958 plans, that this structure was constructed as infill between two existing buildings to the east and west. Thus, it utilizes the brick walls of the adjacent building on the east side and the southerly 100 feet of brick wall on the west side to enclose the building space and it does not have an independent exterior wall on the east side or for a majority of the west side. It appears, based on the 1958 plans, that the original building was 100 feet in the north-south direction. With the 1958 remodel to convert it to a bowling alley, the existing north, or rear wall, was removed and the building was extended by 19 feet with construction of a concrete spandrel beam and column system, along with concrete masonry unit (CMU) infill between the concrete beams and columns. This extension was done to create a long enough area to create the bowling lanes within the building from north to south. In addition, the building roof it appears had originally been supported by a 12" x 12" beam that was installed slightly off-center in the east-west direction spanning approximately 24.5 feet between supports. With the conversion of the structure to a bowling alley, a series of posts supporting the 12" x 12" roof beam had to be

removed and the beam re-supported by a glu-lam truss that spanned from the new exterior north wall to a new 8" diameter steel pipe column located approximately 13.5 feet in from the south wall. In addition, the south wall was reconstructed of new 2" x 4" stud construction. The 12" x 12" beam, which had joints at approximately 24 to 25 feet apart, was then hung off of the bottom chord of the glu-lam truss utilizing 1 inch diameter hanger rods that were drilled through the 12" x 12" beam and suspended by a steel angle iron that sat atop the bottom chord of the truss. These anchor rods were placed at the beam ends and at mid-span of each beam. The glu-lam truss had a top chord in an arch configuration with the bottom chord being flat and level. The truss actually sat slightly above the original roof system, which was left intact as much as possible, and then flashed down to the built up roof. The existing roof system consists of built up roofing over 2" x 8" rafters at 32" on-center with a 2" x 12" ceiling joists at 16" on-center below it. These members were part of the original building and appear to have been pocketed approximately 2 inches into the brick walls on either side and then supported by the 12" x 12" beam that runs longitudinally through the structure. There is no information provided in the plans that describe the glu-lam truss or its design data.

Upon visual inspection of the building, it was immediately noted that the south wall facing East Second Street has bowed out approximately 12 to 16 inches at the top of the wall at mid-point of the building. The roof was then inspected from the adjacent building to the west. In looking at the roof system the diaphragm had detached from the brick wall to the west with some joists/rafters actually coming out of the pocket recesses and a gap of 4 to 6 inches between the roof flashing/diaphragm and the brick wall had occurred at mid-span. A similar detachment between the roof diaphragm and flashing had occurred on the south wall. The north and east walls were not visible from the vantage point that was utilized. During this top side inspection it was also noted that the bracing rods utilized to stabilize the top chord of the glu-lam truss were slack and had no tension within them and the truss had actual deformation noted within the bottom chord and damage within its exterior siding.

I then entered the building from the East Second Street entrance and stayed on the main floor. Upon entering the structure, it was noted that the 12" x 12" beam had deformed and deflected up to approximately 3 feet from its original location. The 8" diameter steel pipe column at the south end of the glu-lam truss was tipped out of plumb approximately 6 inches to 1 foot with the top being south of the base. In addition, there was separation at numerous joints within the 12" x 12" beam and the cap block that was placed underneath the joints to support them. From the interior I also witnessed where the roof rafters were unseating themselves from the pockets within the brick wall on the west side of the Rec Building and it appeared that there was some detachment of the roof diaphragm and rafters from the easterly wall; however, it was not possible to determine if these were seated or if they were attached with a ledger. From the north side, damage to the concrete column that supported the glu-lam beam was noted with shear cracks occurring from the truss seat extending downward to the top of spandrel beam and possibly through the spandrel beam. It was not possible to access this north wall or any further than approximately the southerly 30 feet of the building nor the basement level for fear of collapse.

On the day of our meeting, Mr. Carpenter presented me with a series of three photographs dated July 17, 2019 that he had taken. These photographs are of the glu-lam truss and were taken after the exterior siding had been removed, which had been done by a construction crew due to the

appearance of deformation within the truss. It appears that the glu-lam truss consisted of two glu-lam beam members for the bottom chord that had what appears to be solid sawn 6" x 6" for web members. The photo also shows the angle iron bracket that was utilized to suspend the original 12" x 12" roof beam below it but more importantly the photos show that at least at this node location the vertical member was completely cracked through above and through the joint and it appears that one of the glu-lam bottom chords was also cracked with possible damage to one of the web members. Once again, it should be noted that these photos appear to have been taken at 7:46 a.m. on July 17, almost one month prior to the reports of significant roof damage. It should also be noted that you had a crew working within the Recreation Building prior to the weekend of August 17 and 18 placing support columns underneath the original 12" x 12" beam and supporting those on the 9" x 21" glu-lam beams that are within the floor system.

CONCLUSIONS

It is my professional opinion that the roof system deformation has occurred due to ongoing damage within the glu-lam truss. This damage, evidenced by your photos of July 17, indicate that members and connections within the glu-lam truss were likely compromised when you had already noticed deformation within the roof system occurring prior to the weekend of August 17 as evidenced by your temporary bracing underneath the original 12" x 12" beam. A significant rainfall event occurred on August 9 where the City of The Dalles saw approximately 3/4 of an inch of rainfall occur over a period of 20 minutes. It is my opinion that this intense rainfall ponded on the roof system possibly due to blockage within the drainage system or just due to the settlement and deformation that had already occurred. This ponding created significant additional loading on the already stressed glu-lam truss and possibly caused additional damage and/or failure. This mode of failure caused the roof to sag approximately another 3 feet vertically. This vertical deformation then created longitudinal force on the supports of the glu-lam truss; thus, pushing the 8" steel pipe column to the south and causing the south wall to bow out over the sidewalk and also likely causing the stress fractures in the concrete column at the north end of the glu-lam truss. With the significant deformation and failure of the glu-lam truss, this then allowed the original 12" x 12" roof beam to sag a similar distance and with that vertical deformation the roof and ceiling rafters that were pocketed or attached to the adjacent buildings then began to disengage.

It is my professional opinion that the structural integrity of the roof system has been compromised to the point that it has become dangerous and must be removed in a controlled fashion. Failure to do so will likely result in sudden and catastrophic collapse of the roof system with that collapse possibly also causing the north and south walls to collapse as well and also possibly doing damage to the adjacent building walls on the east and west sides of the structure. A sudden and catastrophic collapse could also cause the main floor system of the Rec Building to be damaged and/or collapse as well.

RECOMMENDATIONS

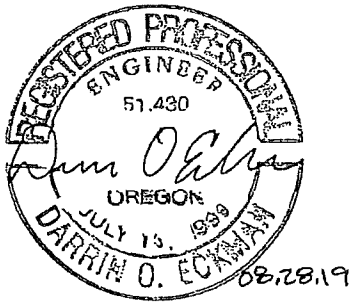
Based on this inspection, I do feel that there is imminent danger of collapse of the roof system and the resulting damage/collapse to the exterior walls and would recommend that the roof system be removed in a controlled fashion. This likely would occur first with removal or support of the glu-lam truss to remove the weight of it from the roof. Also this glu-lam truss has a high possibility of overturning due to the lack of tension within the bracing rods. This truss, if it fell

on its side uncontrolled, could be the instigator of a sudden and catastrophic collapse. Once the glu-lam truss has been supported and/or removed, bracing should then be placed under the original 12" x 12" beam at a minimum of the joint locations. The roof framing should then be removed in sections that are manageable and controllable and do not impact the adjacent structures to the east and west. During the removal process, the northerly and southerly walls should be braced to prevent collapse once the roof diaphragm is removed. At some point, the southerly wall should be demolished as well due to it being severely compromised from the longitudinal force of the glu-lam truss. The northerly wall, if properly braced, could be left in place until a proper inspection of it could be conducted. The same can be said of the main floor system of the building, which, once again, could not be inspected at this time due to the danger of collapse. It should be noted that the roof system, once again, must be supported as the demolition occurs and that the roof rafters must be disengaged and disconnected from the adjacent structures to prevent damage to said structures.

Please feel free to contact me should you have any questions concerning this report.

Sincerely,

TENNESON ENGINEERING CORPORATION
Darrin O. Eckman, P.E.



EXPIRES 12.31.19

DOE:kb
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9316 Lakeview Avenue SW, Bldg 21-C
Lakewood, WA 98496
Tel: 253-588-2730

Structure Damage Assessment

EFI Global File No.: 027.00739
August 30, 2019

Columbia Gateway Urban Renewal Agency
200-298 E. 2nd Street
The Dalles, OR 97058

Date of Loss: 8/10/19
Claim No. PRCGUR2019084637

Prepared For:

CIS City County Insurance

Attn: Carol Drouet
P.O. Box 1469
Lake Oswego, OR 97035

Insured: Columbia Gateway Urban Renewal Agency
EFI Global File #: 027.00739

ASSIGNMENT

The assignment was received by EFI Global, Inc. (EFI), on August 22, 2019 from Carol Drouet with CIS City County Insurance. The scope of this assignment was to determine the cause of the failure of the roof structure of the subject building.

In response to this request, Kirk Vance, P.E. (EFI) visited the site on August 29, 2019. A representative of Columbia Gateway Urban Renewal Agency (CGURA), Steve Harris, was present during the inspection and provided access. Carol Drouet was also present during the inspection.

This report contains a discussion of the information gathered during the assessment and an analysis and conclusions with respect to the condition of the subject site at the time of EFI's assessment. The conclusions contained herein are based on information available to date.

BACKGROUND

The subject property consisted of three attached individual structures which were primarily one-story with one section that was two-story. The area of failure was previously a bowling alley. The bowling alley structure was a single-story wood and masonry structure and had an address of 213 East 2nd Avenue. The structure was purchased by the insured with the intent to redevelop the subject land. The front of the structure, which faced East 2nd Avenue, faced approximately southwest. For the purposes of this report it will be considered to face south.

The following information was gathered during the site visit and through a conversation with Mr. Harris:

- The structure was originally built as three different buildings in the early 1900s.
- It was subsequently renovated in the 1950's to convert it to a bowling alley and recreation center.
- During this renovation, the three buildings were merged into one.
- The subject property was originally purchased by the CGURA 5-10 years ago with the intent of demolishing the structure and developing the property as a hotel.
- The developer subsequently backed out of the project and the structure sat vacant since purchase.
- He was not sure if an inspection was performed on the structure prior to purchase.
- He was not sure what, if any, maintenance had been performed on the structure since its purchase by the CGURA.
- The structure was subsequently sold to Todd Carpenter. Approximately $15,000 was included from the CGURA as part of this sale to perform roof repairs.
- A large rainstorm occurred on or about the date of loss with more than 0.7 inches of rain and the roof structure collapsed.

METHODOLOGY FOR SITE ASSESSMENT

The assignment was conducted utilizing a systematic approach identified as the scientific method. The scientific method is a principle of inquiry that forms a basis for legitimate scientific and engineering processes. The following is a list of the procedures used in this investigation.

1. A visual site examination was conducted by Kirk Vance, PE, on August 29, 2019.
2. The scene was photographed and measured.
3. A representative of the CGURA, Mr. Harris, was interviewed during the scene examination.
4. The original rehabilitation drawings provided by Mr. Harris were reviewed.
5. Weather data was reviewed.

6. Building Codes were reviewed.

BUILDING SYSTEM DESCRIPTION

The subject structure in the area of failure was a single-story commercial structure configured as a bowling alley. The structure was constructed with joists oriented in the east-west direction supported by exterior masonry walls and an interior wood beam. The interior wood beam was oriented in the north-south direction and supported by exterior masonry walls and intermediate brackets connected to a wood truss constructed above the roof. The truss was contained in a superstructure above the roof. The structure had partially collapsed at the time of inspection; as such, it was considered unsafe to access the roof to inspect the condition of the truss.

OBSERVATIONS

Observations were photographed to document distress and relevant conditions at the subject property on the date of the site visit. Not all damage or distress that may be present was necessarily observed or photographed; however, the selected photographs provide an indication of their types, severity, and distribution. They may also document unusual or contributing conditions that may exist. Photographs taken to document our findings and observations are attached to this report. The following observations were noted during the claim examination:

Exterior Observations

1. The front of the structure faced approximately south.
2. The south face of the façade was visibly tilting towards the south.

Roof Observations

3. The roof of the subject structure was observed from the third floor of the adjacent building to the west. The roof examination was limited to what was visible from this location.
4. The roofing material appeared to have been patched in some areas somewhat recently.
5. The roofing material had been pulled away from the masonry wall to the west. A visible gap was present.
6. The lateral braces supporting the superstructure were visibly sagging.
7. The roof was visibly sagging.
8. The area of roof that was visible generally appeared to be in poor condition.

Interior Observations

9. The interior was inspected in the area of the roof collapse.
10. A beam oriented in the north-south direction which spanned from the north wall to the south wall was fractured.
11. The beam had intermediate support brackets spaced approximately every 15 feet.
12. The supports roughly corresponded to locations where it appeared intermediate columns had been removed.
13. Temporary shoring had been installed to support the failed beam; however, it was bearing directly on the existing bowling alley and was not braced laterally.
14. The roof joists appeared to be weathered and there were indications of long-term water intrusion and deterioration in some locations.

Insured: Columbia Gateway Urban Renewal Agency
EFI Global File #: 027.00739

RESEARCH

Review of Rehabilitation Drawings

The rehabilitation drawings converting the subject structure to a bowling alley were reviewed. These drawings were dated June 1958. These drawings included the installation of a truss spanning from the front to the back of the structure which supported the existing beam. This was done in order to eliminate the columns supporting the beam. Hangers were installed approximately every 15 feet per these drawings to support the beam using the newly installed truss. The cables which were noted to be loose during the inspection were lateral bracing for the truss. Selected details from these drawings are included below as Figures 1 and 2.

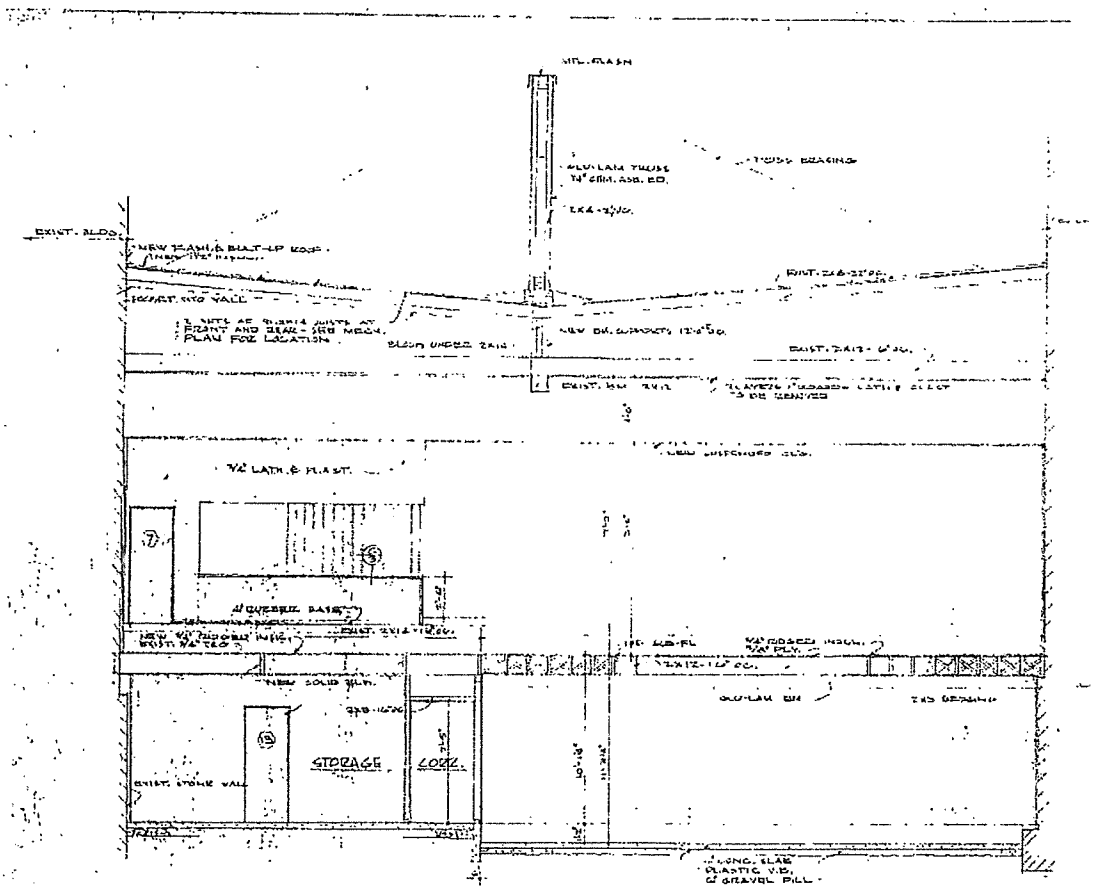

Figure 1 - Rehabilitation Drawings - Roof Assembly and Truss Lateral Bracing

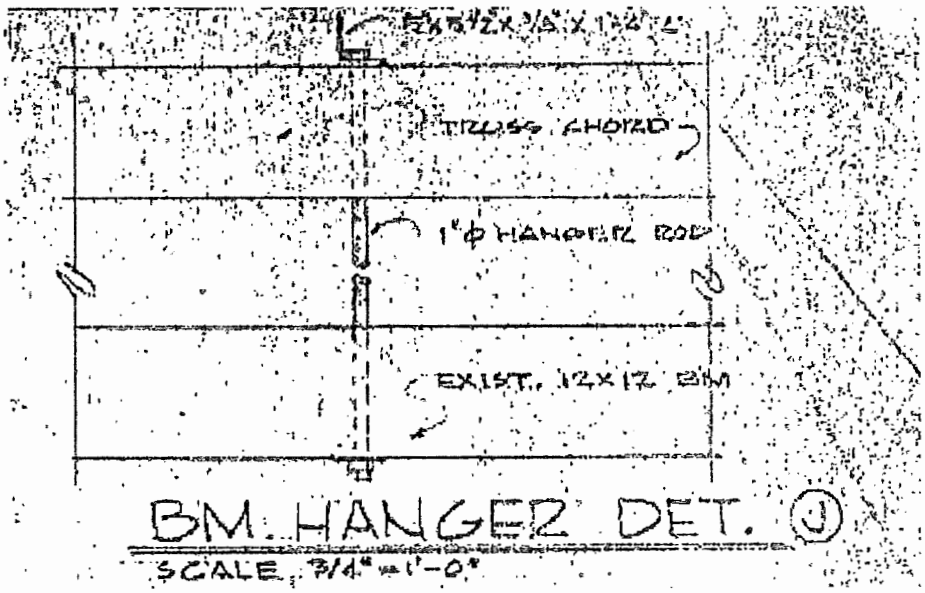

Figure 2 - Rehabilitation Drawings - Beam Hanger Detail

Weather Data

Historic weather data for the subject vicinity was researched. The listed date of loss was August 10, 2019. Mr. Harris reported a substantial rain event occurred which may have resulted in the failure of the roof structure. Historic weather data was researched via the National Centers for Environmental Information from the NOAA[1]. Weather for the month of August 2019 was not yet available using this resource. The nearest weather station to the subject property was The Dalles Airport, USW00024219, at an elevation of 235 feet. The weather from January 2010 to May of 2019 is presented in Appendix C. The maximum observed 24-hour precipitation during this period was 1.63 inches on December 7, 2015. Observations of nearly an inch were observed on several other instances during this period. The maximum 24-hour precipitation from January to May of 2019 was 0.99 inches on April 7, 2019. The total rainfall over the storm from April 6 to April 7 was 1.27 inches.

A review of historic weather data for Portland, Oregon from Weather Underground noted a substantial storm on August 9 and 10 which recorded approximately 0.79 inches[2]. Local news stories noted the City of The Dalles waste treatment plant was flooded during an extreme rain event on August 9, 2019[3]. This source did not list the quantity of rainfall.

0.79 inches of rainfall if it remained trapped and ponded on a roof would correspond to approximately 4 psf of load, 1.64 inches would correspond to approximately 8 psf of roof load.

Building Code Review

A commonly used building code during the period of rehabilitation of the subject structure was the 1958 Uniform Building Code. Table 32-B of this code specifies a minimum design roof live load of 12 psf.

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[1] https://www.ncdc.noaa.gov/cdo-web/datatools/findstation

[2] https://www.wunderground.com/history/daily/us/or/portland/KPDX/date/2019-8-10

[3] https://gorgenewscenter.com/2019/08/12/wastewater-treatment-plant-was-flooded-during-an-extreme-rain-event/

Insured: Columbia Gateway Urban Renewal Agency
EFI Global File #: 027.00739

Discussion and Analysis

The subject structure experienced a partial roof structural failure which resulted in the apparent failure of a beam running the length of the structure. The structure had been previously modified to replace the intermediate column supports for the subject beam with a full-length truss spanning the length of the structure supporting the subject beam. Given the condition of the structure, the exact cause of the failure could not be determined as the truss system could not be safely accessed to assess the nature of the failure.

The failure was consistent with the failure of the main truss supporting the subject beam. This failure subsequently resulted in the beam being over-spanned and failing as well. The estimated load experienced on the subject roof on the date of loss, even if the roof drainage system was fully clogged and all water from the rainstorm was retained on the structure, was approximately 4 psf. This load would be insufficient to cause the failure of a properly designed and maintained roof in otherwise good condition. Common building codes used during the time of the rehabilitation of the structure specified minimum design roof live loads of 12 psf. The failure is thus attributed to long-term deterioration of truss components due to lack of maintenance.

The out-of-plumb condition of the front façade resulted from the beam and truss failure which pushed the top of the wall outward.

EFI advised Mr. Harris during the inspection that the structure in its current condition is unsafe and should be demolished or properly shored immediately. The condition of the front façade poses an immediate safety risk to pedestrians and vehicles on 2nd Street. The shoring that has been installed to support the failed beam and truss is inadequate. The subject structure should be demolished or properly shored immediately.

EFI can return to the scene when the structure is demolished to confirm the conclusions in this report.

Conclusions and Recommendations

The analysis of available evidence related to this project supports the following:

1. The roof structure failure was the result of long-term deterioration of the truss supporting the beam which spanned the length of the structure.
2. The estimated applied loading due to the rain event on the listed date of loss was insufficient to cause a structural failure to a properly designed and maintained structure.
3. The structure in its current condition poses an immediate safety risk to the public. It should be demolished or properly shored immediately.
4. These construction activities should be executed by a licensed and experienced contractor who is familiar with these types of activities. Note that the means and methods of these repairs, and obtaining a building permit, are the responsibility of the chosen contractor. Additional required code related upgrades including energy efficiency, mechanical, plumbing and electrical should be reviewed with the local Building Code Official.

Appendices

Representative photographs are included with this report. Additional photographs taken at the time of the inspection are available upon request.

- Appendix 1 – Satellite view of structure from Google Earth
- Appendix 2 – Photographs
- Appendix 3 – Historic weather data

Insured: Columbia Gateway Urban Renewal Agency
EFI Global File #: 027.00739

LIMITATIONS

The information presented in this report addressed the limited objectives related to the evaluation of the subject property. This report only describes the conditions present at the time of our evaluation and is based upon a visual and cursory observation of the subject property. Removal of finish materials, qualitative testing, excavation, or other work not specifically described herein was not conducted. This report is not intended to fully delineate or document every defect or deficiency throughout the subject property. If any additional information is encountered which relates to this evaluation, EFI reserves the right to alter the opinions contained in this report. In some cases, additional studies may be warranted to fully evaluate concerns noted.

The findings noted herein do not constitute a scope of work for repair or offer of repair. Detailed design documents should be prepared to accurately reflect the scope of any repair work and competitive bids be obtained to determine actual repair costs. All means and methods of construction are the responsibility of others and not that of EFI. All existing portions of the building should be properly supported and stabilized during the repair process.

Our services have been performed using that degree of skill and care ordinarily exercised under similar conditions by reputable members of EFI's profession practicing in the same or similar locality at the time of performance. Any verbal statements made before, during, or after the course of the assessment were made as a courtesy only and are not considered a part of this report. This report is furnished as privileged and confidential to the addressee. Release to any other company, concern, or individual is solely the responsibility of the addressee.

CLOSING

EFI appreciates this opportunity to provide consulting services in this matter. Please contact us should any questions arise concerning this report, or if we may be of further assistance.

Respectfully submitted,

Kirk Vance, P.E.
Forensic Engineer
OR P.E. #91837

I hereby certify that this engineering document was prepared under my supervision and that I am a duly licensed Professional Engineer under the laws of Oregon. This seal covers pages 1 through 7 and attachments.

Reviewed by,

Michael J. OConnor
Senior Principal Forensic Engineer