STUDY SESSION MEMORANDUM

TO: Mayor and Members of City Council

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DATE: February 12, 2019

SUBJECT: Study Session for Feb. 12, 2019
Renovation Analysis of the Medical Office Pavilion

EXECUTIVE SUMMARY

At the Nov. 13, 2018, council study session on Alpine-Balsam, staff provided an update on the sustainable deconstruction of the Boulder Community Health (BCH) hospital. During the discussion, council raised specific questions about accommodating city services through a renovation of the Medical Office Pavilion (Pavilion) and the potential cost. The purpose of this memo is to answer those questions, share with council the benefits of consolidating three city-occupied buildings into the Pavilion at Alpine-Balsam, and to confirm that staff should explore funding options to renovate the Pavilion concurrently with the hospital deconstruction.

The city purchased the 8.8-acre site at Alpine-Balsam at the end of 2015 in part to address the decentralized and inefficient condition of city buildings. Two buildings in particular, Park Central and New Britain, need to be addressed in the near-term. These buildings are in the High Hazard Flood Zone (HHFZ), which restricts the degree of investment that can be made in buildings and structures. Infrastructure within these two buildings is nearing its end of life and cannot be replaced due to both the regulatory restrictions governed by the HHFZ and new energy requirements on system improvements. In short, the city needs to vacate these buildings either by moving into a new city building or by leasing additional space.

On Jan. 9, 2018, city staff presented to council a reuse analysis of the Pavilion, this memo further analyzes the renovation potential to house more than 250 staff and provide better services to the community from a centralized location. Progress toward the city's Climate Commitment goals will also be accomplished through a renovation that is not possible in Park Central and New Britain. The Pavilion would also offer enough square footage to relocate staff at Center Green, which the city currently leases.

While this memo focuses on how the Pavilion could replace the square footage provided in Park Central, New Britain and Center Green buildings, this does not mean that the city services provided in these buildings must be provided in the Pavilion. If council supports exploring funding options for renovating the Pavilion, then a more extensive programming phase would follow to determine more precisely how the space should be laid out and with what specific city services. City staff are preparing more refined cost estimates on deconstruction of the hospital to provide council with an update in April.

KEY ISSUES IDENTIFIED

The city needs a clear strategy to exit Park Central and New Britain due to the inability to replace aging infrastructure and the significant risk to city assets. The city also has an opportunity to end its lease at Center Green, which cost approximately $1 million in rent and utilities in 2018. Leased facilities are challenging to manage and offer no return on investment. The Center Green lease is due for renewal this year. The city plans to extend the lease for the short-term with the hope of vacating the building before the end of the next term. Further analysis of the Pavilion, to test what city services and staff could be accommodated in the building, has revealed that these three city-occupied buildings in most urgent need to be vacated could be accommodated through the renovation.

Questions for Council

1. Should the city explore a funding strategy for renovating the Pavilion to accommodate city services in conjunction with the hospital deconstruction?
2. As part of the funding strategy, should staff explore adding a story on the Pavilion as part of the renovation?

BACKGROUND

The city currently owns and maintains more than 380 buildings and structures. Many of these buildings are strategically placed throughout the city to deliver core services to a specific geographic location such as the fire stations, recreation centers, and libraries. Others, such as the water and wastewater treatment plants, are also strategically located to work with the land as they deliver service. However, many other buildings have been added to the city's portfolio in a less strategic manner out of urgency or opportunity to provide additional service delivery and office space. Over time, this has led to a scattered arrangement of government functions and services across the city. Now is an opportune time to reconsider the best use of city properties, consolidate services, and position the city government to best deliver services over the next century.

In 2015, the city purchased the property at Alpine-Balsam, which presents an opportunity to address many of these challenges by consolidating staff located in buildings scattered across the city into one centralized location to better serve the community, work more efficiently, and be more streamlined in operating and maintaining buildings. Meeting the city's Climate Commitment goals is also a key objective for city buildings that will only be accomplished with large investments in either current buildings or through replacement of inefficient buildings with new or renovated facilities.

The Civic Area Masterplan identified Park Central and New Britain as two city-owned buildings for removal from the HHFZ. Restrictions on improvements to buildings and structures in the HHFZ further limits the use of these buildings. Modifications to these buildings including remodeling, repairs to mechanical and electrical equipment and other improvements is limited to no more than half of the assessed value of the building in any 12-month rolling period. In Park Central, the annual limit on any improvements requiring a permit is $759,990 and for New Britain it is $472,950. Equipment replacement such as a chiller has been recently estimated on other projects at over $700,000. These buildings are increasingly nearing a point where major repair to mechanical, electrical and/or controls systems will need to be made to maintain appropriate temperatures in the buildings and operate equipment such as elevators. However, these major equipment repairs and/or replacements are expected to exceed in cost what is allowed by the floodplain development regulations. In addition, these thresholds and requirements are expected to become more stringent as the energy code is updated in the future.

Medical Office Pavilion reuse analysis

City staff presented the reuse analysis of the Pavilion at a council study session on Jan. 9, 2018. This analysis evaluated the costs of a renovation versus constructing a new replacement building, in consideration of the nature and quality of the building that would result. The analysis established baseline assumptions and tested the existing building against the program requirements and goals of the city and the Alpine-Balsam site. Through the reuse analysis, it was determined that the Pavilion is well-suited for reuse and is structurally sound, aligned with the Alpine-Balsam vision, and both financially and sustainably responsible perspectives. City Council supported moving forward with the reuse of the Pavilion building.

ANALYSIS

The Pavilion reuse analysis serves as the foundation for further study presented in this memo to evaluate what existing city buildings could be consolidated through a renovation. The Pavilion provides enough square footage to accommodate consolidation of staff from the three buildings the city has identified as the most urgent to address in the next five years: Park Central, New Britain and Center Green.

Building	**Square Footage (sf)**	**Staff Accommodated Full Time Equivalent (FTE)**	**Energy Use Intensity (EUI)**	**Estimated 2018 O&M and Lease Costs (approximate)**
Park Central	20,910 sf	96 FTE	84.7	$162,000
New Britain	13,852 sf	53 FTE	126.1	$67,000
Center Green	31,000 sf	107 FTE	80.4	$978,000
TOTAL	**65,762 sf**	**256 FTE**	**97 avg EUI**	**$1,207,000**

Test Fit of the Pavilion

City staff, along with consultant support, developed two “test fit” scenarios for the Pavilion to understand what programmatic elements could be provided, in addition to accommodating the cumulative number of staff currently working in Park Central, Center Green and New Britain. A test fit is a design exercise that explores what can fit in terms of square footage in a given space and demonstrates one way a space could be organized to “test” basic programmatic criteria. The

two test fit options in no way exhaust all possibilities to develop the space, nor should this be taken as a way the city proposes to proceed in terms of design and city services provided in the Pavilion. A more extensive programming phase would follow to determine how the space should be laid out and with what city services.

The first test fit explored the building as it stands today (minus a hospital attached) with no additional floor. The second test fit looked at what additional amenities and staff could be accommodated with an additional partial story. Three assumptions have been revised since the original reuse analysis and are reflected in updated cost estimates on each test fit scenario and on the alternative new replacement building. These three assumptions are:

1. **Cost:** A revised construction start date of January 2022 has been assumed in lieu of the 2019 construction start date assumed in the reuse analysis. New information on how long deconstruction will take as well as time required for the design and regulatory review phase of the Pavilion renovation informs us construction could begin in 2022 or later. The new cost estimate reflects escalation costs of delaying a construction start until 2022. Additional escalation costs would be incurred for construction start dates beyond this time.
2. **Energy:** The building in this analysis assumes achieving a much more aggressive energy target that is close to net zero rather than only meeting the regulatory requirements of the city's 2018 Energy Conservation Code. An incremental cost for additional energy conservation measures to achieve a higher degree of energy efficiency is included in all of the test fits and new replacement building cost estimates.
3. **Flood:** Currently the 100-Year Floodplain extends south from Balsam Avenue and touches a portion of the Pavilion. In the reuse analysis, floodproofing of the building was presumed to be required as mitigation of the floodplain across the site was still undetermined. This impacted what space could be occupied in the garden level, which is a partially buried floor. In this analysis, the project assumes flood mitigation efforts will be included to remove the building from the 100-Year Floodplain. The cost difference between floodproofing the building versus mitigating the floodplain on the site is negligible in the context of the total cost of the project. The benefit to removing the Pavilion from the 100-Year Floodplain results in more space that may be occupied and better used in the garden level. This change is now in the baseline assumption.

All other variables regarding level of finish and quality of space have remained the same as those outlined in the reuse analysis. **Attachment A** provides illustrations of the two test fit floor plans along with conceptual computer models that demonstrate potential design ideas for the renovation. Photo imagery of existing spaces in other buildings have also been provided to describe the quality and character of some of the spaces proposed.

Test Fit ONE: Renovation of Existing 3 Floors and Basement
The first test fit option is 75,000 square feet (sf) total and accommodates 260 - 275 full-time employees (FTEs). The design also contains a customer hub of 3,000 sf, and a small ground-floor café similar in size and scale to Seeds Café at the Boulder Library as well as 2,200 sf of flexible open shared space. The remainder of the building would be dedicated to city staff workspace and other building support. The cost estimate for the first test fit option is $48,000,000 including enhancements for net zero.

Test Fit TWO: Renovation of Existing 3 Floors and Basement, plus Additional Top Floor
The second test fit option is 93,000 sf (including outdoor roof terrace) and accommodates 260 - 300 FTEs. Additional space is provided by adding a partial 14,000sf floor to the top of the Pavilion and 4,000 sf roof top terrace. Test fit two demonstrates that with the additional square footage, there is increased flexibility to either provide space for additional staff or shared community amenity spaces with views to the mountains that could be used for formal meetings, informal gatherings or flexible work space. This scheme also shows an event space in the basement that could hold approximately 250 people. The cost estimate for the second test fit option is $57,000,000 including enhancements for net zero. In other words, test fit two adds approximately 18,000 sf of additional space for $9M.

A replacement building equal to the size of the second test fit option (with the additional story) is $60,000,000. An additional $1.5M to deconstruct the Pavilion would be added to current cost estimates between $8M-$12M to deconstruct the hospital. City staff are preparing more refined cost estimates on deconstruction of the hospital to provide council with an update in April. As discussed in the reuse analysis, there are benefits of a brand-new building; however, it would likely be constructed of steel as opposed to concrete lessening the quality of the structure. It would also likely be nearly the same form and entries would be roughly located in similar locations due to grade constraints around the building at the Alpine-Balsam site.

Cost Summary

Test Fit ONE Renovation of Pavilion

3 floors + basement	~ $45,000,000
3 floors + basement + net zero improvements	~ $48,000,000

Test Fit TWO Renovation of Pavilion

3 floors + basement + additional top story	~ $54,000,000
3 floors + basement + additional top story + net zero improvements	~ $57,000,000

New Replacement Building (Test Fit TWO Equivalent)

3 floors + basement + additional top story	~ $56,000,000
3 floors + basement + additional top story + net zero improvements	~ $60,000,000

Deconstruction Costs

Deconstruct Pavilion along with hospital	~ $1,500,000
Deconstruct Park Central and New Britain	~ $2,000,000

Cost-Benefit Analysis

The city has compared the costs associated for two scenarios:

(1) renovation and ongoing operations and maintenance (O&M) of the Pavilion, using the cost to renovate the 3 existing floors + basement + additional top stop + net zero improvements, and

(2) the "leased space option" to continue leasing space at Center Green and adding additional lease space within the next five years to address the needs of relocating staff from Park Central and New Britain.

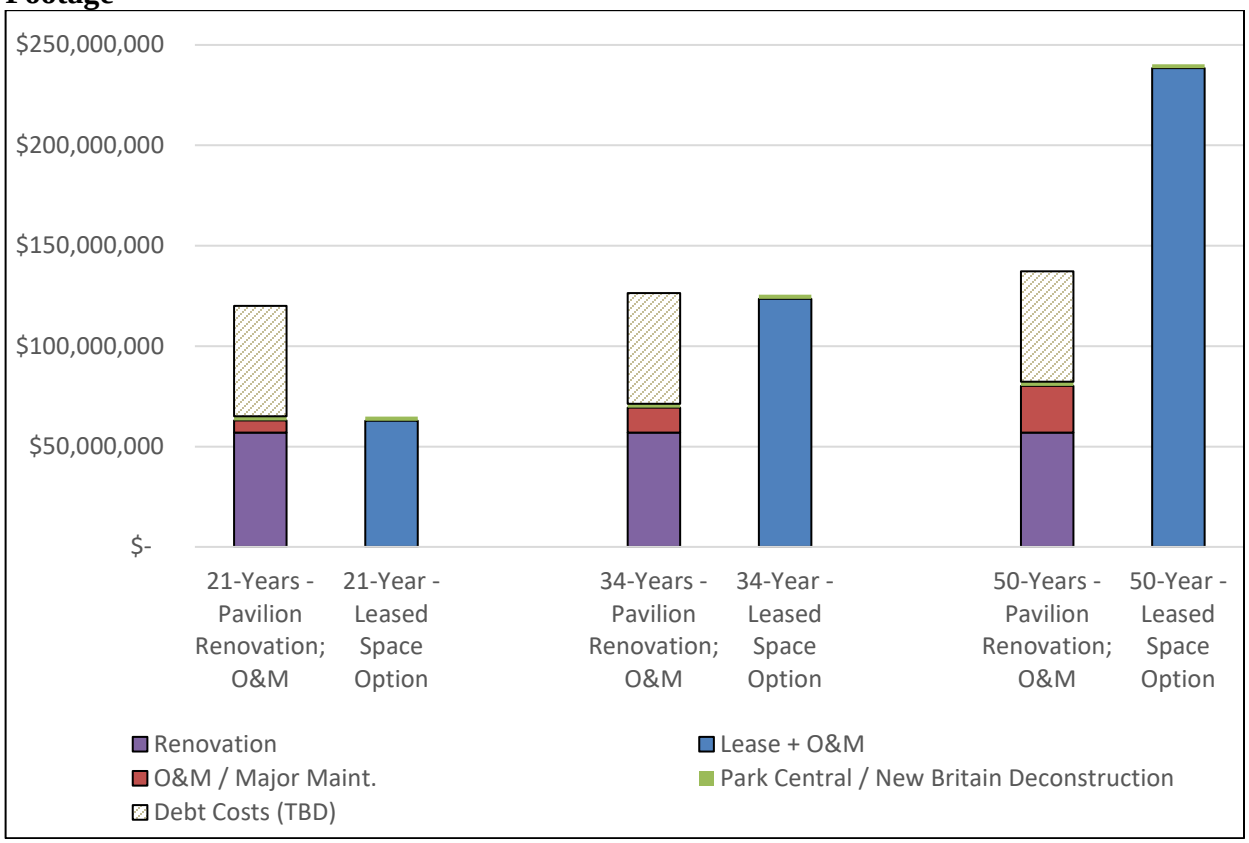
Both scenarios include the cost to deconstruct Park Central and New Britain, which is approximately $2M.

The Pavilion Renovation option includes an initial estimate of debt service costs, totaling $3.5M per year for 30-years. This estimate is based on the current renovation estimate of $57 million and interest estimates assuming a 2022 issuance. It is important to note that interest rates are still near historic lows and can be affected by future economic conditions. As the project proceeds, staff will work with the city's financial advisor to update interest rate assumptions and cost projections at key decision points.

The graph below (Figure 1) depicts that within 21 years, the costs avoided by leased space equates to the cost to renovate as well as O&M for the Pavilion, which is approximately $64M. Within 34 years, the avoided costs equate to the same plus estimated debt costs (if needed) for the renovation, which is approximately $126M.

Most importantly, the renovated Pavilion would last 50+ years. Within 50 years, the city would avoid $240M in lease space, which exceeds the renovation, O&M, and debt costs by $100M. This $100M in avoided costs also exceeds the Alpine-Balsam purchase price and debt costs, hospital deconstruction, and Brenton building renovation.

Figure 1: Costs to Renovate and Maintain the Pavilion versus Leasing Comparable Square Footage



Both scenarios modeled above are mostly unfunded. The city's current budget includes the Center Green lease and O&M for Center Green, Park Central and New Britain buildings. This means that the city will face an unfunded need soon, either to renovate the Pavilion or lease additional space to relocate Park Central and New Britain (a more expensive option in the long-term). The next step in analysis, should council be interested in continuing to explore the Pavilion renovation option, is to identify preferred and potential funding opportunities. In addition to identifying funding opportunities, the next steps will include performing a similar cost-benefit analysis for all city buildings that could potentially be consolidated. If this cost-benefit analysis shows similar avoided cost potential, the city could benefit financially as more consolidation occurs and use savings over time to support other city services.

Energy Benefit Analysis

City staff analyzed the benefit of carbon emissions reductions achieved by a renovation of the Pavilion over maintaining status quo. The city's Climate Commitment has targeted an 86 percent reduction in carbon emissions and a 55 percent reduction in the use of natural gas in city buildings by 2030. To date, city buildings and facilities have reduced carbon emissions by 41 percent and natural gas use by 31 percent from the city's 2008 baseline. By 2030, city facilities will be at 67 percent simply through more renewable resources contributing to the utility grid. The remaining 19 percent must be addressed through deep energy retrofits in city buildings. Energy consumption of a building is reduced primarily by insulating and sealing building envelopes and then heating, cooling and providing fresh air to buildings by employing the latest energy efficient technology.

Consolidating Park Central, New Britain and Center Green – poor energy performing buildings – into a newly renovated Pavilion that achieves near net zero energy consumption would result in an estimated additional 2 percent contribution toward the city's emission reduction goals and an estimated 3 percent contribution to natural gas reduction goals. Over 10 years, the 2 percent reduction in emissions represents over 4,000 metric tons of carbon dioxide equivalent, which is roughly the equivalent of taking 850 vehicles off the road.

Conclusions on Benefits of Renovating the Pavilion

The Pavilion can accommodate the programmatic requirements of consolidating Park Central, New Britain and Center Green. With the addition of an extra story, the city can achieve additional goals for city buildings to be welcoming and provide exceptional customer service, shared community space and healthy, collaborative work environments. Renovation of the Pavilion can contribute to the overall vision for the site identified in the vision plan: **"Alpine-Balsam will be a vibrant multi-generational hub for community life and local government services—a welcoming and inclusive new model for equitable, affordable, and sustainable living."**

The cost-benefit analysis of the potential renovation of the Pavilion demonstrates that in 22 years, upfront capital costs to renovate the Pavilion are less than leasing costs for equivalent time. Renovation or similar major capital investments are necessary to meet the city's emissions and natural gas reduction targets. The Brenton building, which the city has already renovated and is performing better than designed from an energy perspective, along with the proposed Pavilion renovation, can serve as case studies for developing additional high-performing buildings to meet energy conserving objectives.

In any long-term strategy, the financial analysis demonstrates investment in the Pavilion has a positive benefit and the Alpine-Balsam site is a key location for the city to provide services now and well into the future. The city will maintain a presence in the Civic Area, but it will be limited in square footage. The Broadway Corridor provides an excellent framework to link the Alpine-Balsam site to the Civic Area, creating a civic corridor between these two nodes to provide city services on the western edge of town.

Opportunities at the Municipal Services Center (MSC)

As mentioned earlier, consolidation of city functions and services will result in greatly improved efficiency across the city. However, consolidating at just one site does not appear to be an option. Instead, the focus is on the development of a few key civic hubs, service centers or nodes throughout the city. Beyond the key hubs in the Civic Area and Alpine-Balsam is the eastern location of the Municipal Service Center (MSC). Currently, the MSC houses maintenance operations related to Utilities, Transportation, and Fleet. Initial analysis of the MSC revealed that the property can accommodate more in terms of square footage than is currently used, however this will take reorganizing of the buildings and infrastructure to maximize utilization of the site. Reorganizing current services provided at the MSC will need to be accomplished before additional services could be considered for consolidation. A redevelopment of the MSC will take significant time to phase and considerable investment. This will continue to be evaluated, especially in relation to the potential municipalization.

NEXT STEPS

Depending on feedback from council, the next steps will include exploring a funding strategy to renovate the Pavilion in conjunction with the hospital deconstruction. The first phase of the renovation project, assuming funding is in place, would be to complete an extensive programming phase to determine options for how the space should be laid out and with what specific city services, followed by opportunities for council input. For a renovation project of this scope and scale, it would take roughly 18 months to 2 years to complete the design phase including bringing the project through the city's regulatory process. Construction could take another two years to complete. From the time funding for the project becomes available, it would take four to five years before the city would be delivering services at this new location in the Pavilion.

Regardless of whether the Pavilion is renovated, staff will develop a plan and identify funding to vacate city staff and services from the Park Central and New Britain buildings. In the meantime, small investments will continue to be made in these buildings to support staff and customers.

Renovation of the Pavilion would be a first step toward a strategic consolidation of city services at key hubs across the city. As mentioned earlier, the key civic hubs include the Civic Area, Alpine-Balsam and perhaps the Municipal Service Center. Through 2019, staff will be developing a strategic plan that looks at the many variables and factors presented in the renovation analysis of the Pavilion but at a scale that address all city buildings that could be consolidated. It is anticipated that the City Facilities Strategic Plan will be brought to council later in 2019.

ATTACHMENTS

Attachment A – Pavilion Test Fit Illustrations

PAVILION RENOVATION STUDY

February 12, 2019

Test Fit ONE (3 stories + basement)

Total square footage: **75,000** square feet

260-275 Full Time Equivalent Staff (FTE)

PROGRAM LEGEND

- BUILDING SUPPORT
- CIRCULATION
- COMMUNITY SHARED SPACE
- CUSTOMER SERVICE
- FLEXIBLE OPEN SHARED
- NON-PROFIT RETAIL
- OFFICE AREA
- BUILDING SHARED
- OUTDOOR TERRACE

2

1

1

3

3

4

2

1

First Level

First floor space in **Test Fit ONE** shows a 1 **3,000 square feet (sf) centralized customer service hub,** a 2 **300 sf non-profit retail space** such as Seeds Café at the Boulder Public Library, and a 3 **2,200 sf flexible open shared space** that can be used by community and staff as casual meeting space or informal flexible work space and 4 **staff break area** in flexible space that could also serve community and ground floor needs.

PAVILION RENOVATION STUDY

February 12, 2019

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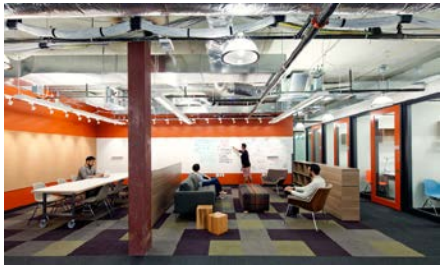


1 2

2

Basement Level

Second Level

Third Level

The basement level, which is mostly underground could house 1 **building shared spaces** such as building storage, lockers, bike storage, collaboration space, and some 2 **office space** in areas that can achieve access to natural light. Second and third levels would be predominantly 2 **office space with office support functions.**

PAVILION RENOVATION STUDY

February 12, 2019

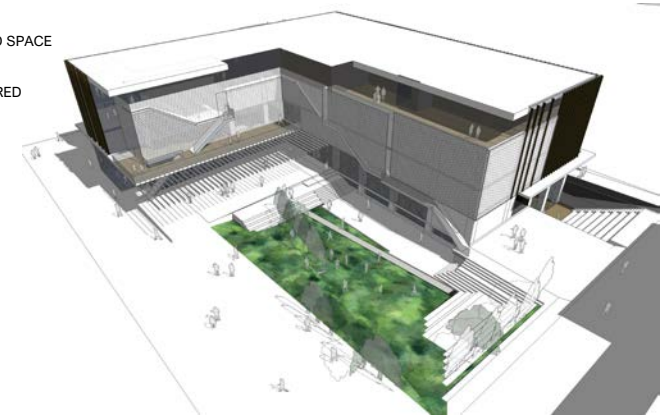
Test Fit TWO (4 stories + basement)

Total square footage: **93,000** square feet

260-300 Full Time Equivalent Staff (FTE)

PROGRAM LEGEND

- BUILDING SUPPORT
- CIRCULATION
- COMMUNITY SHARED SPACE
- CUSTOMER SERVICE
- FLEXIBLE OPEN SHARED
- NON-PROFIT RETAIL
- OFFICE AREA
- BUILDING SHARED
- OUTDOOR TERRACE



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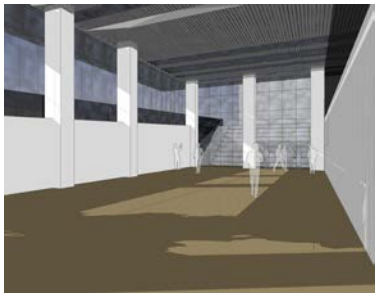

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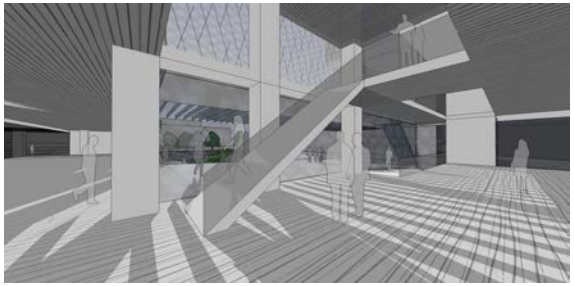

5

Basement Level

First Level

In **Test Fit TWO** a portion of the basement has been daylit and made accessible off of a 1 **plaza** to provide a 2 **2,800 sf double height event space** that could hold roughly 250 people and could be shared with the community. The first shows a 3 **3,000 sf customer service hub**, expanded 4 **600 non-profit retail space** to show potential for multiple shops and 5 **4,000 sf of flexible open shared space** as described in Test Fit ONE.

PAVILION RENOVATION STUDY

February 12, 2019

Test Fit TWO (4 stories + basement)

Total square footage: **93,000** square feet

260-300 Full Time Equivalent Staff (FTE)

PROGRAM LEGEND

- BUILDING SUPPORT
- CIRCULATION
- COMMUNITY SHARED SPACE
- CUSTOMER SERVICE
- FLEXIBLE OPEN SHARED
- NON-PROFIT RETAIL
- OFFICE AREA
- BUILDING SHARED
- OUTDOOR TERRACE

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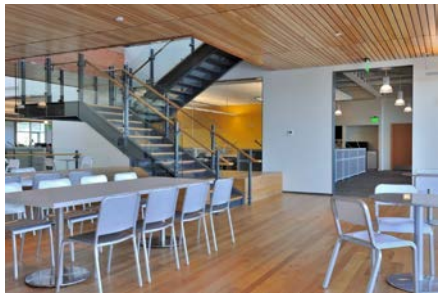

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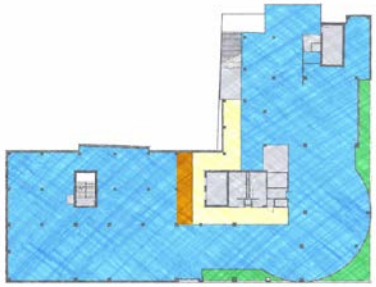
Second Level



Third Level

Fourth Level

The second and third levels contain office space as has been described. The additional top floor could provide 1 **flexible casual and formal meeting spaces** that can be used by staff and shared with the community. 2 **Outdoor rooftop decks** have been provided to share views and the outdoors from this ideal location. 3 **Customer service** areas can extend to other floor levels to provide additional open or private meeting spaces.

The Pavilion – Side by Side Comparison of Building Form










Test Fit One

Test Fit Two